CITY OF OXNARD CALIFORNIA

COMMUNITY DEVELOPMENT DIRECTOR
STAFF REPORT

TO: Community Development Director

FROM: Joe Pearson II, Planning Manager
Susan Hernandez, Contract Planner

DATE: December 16, 2025

SUBJECT: **Project Name: South Oxnard Aquatics Center;** Planning and Zoning Permit No. 23-200-10 (Development Design Review Permit), Property Located at 3250 South Rose Avenue (APN: 224-0-012-285)

1. **Recommendation:** That the Community Development Director ("Director"):
   - **a.** Adopt Final Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program No: 23-04 (State Clearinghouse No. 2023110316); and
   - **b.** Adopt a resolution approving Planning and Zoning Permit No. 23-200-10 (Development Design Review Permit), subject to certain findings and conditions.

2. **Project Description and Applicant:** A request for the construction of an approximately 57,233 square-foot outdoor pool area with four pool areas, one slide area, a one-story "L" shaped building totaling approximately 19,664 square feet, a 98-stall parking lot, and ancillary facilities. Pool areas would consist of a 30-meter competition pool, 25-yard instructional pool, splash pad, recreation pool, and slide area. The one-story building would frame the western and northern sides of the pool deck and would be used to house locker rooms, administrative space, utility rooms, a concession stand, and other ancillary facilities. The Project site is located at 3250 South Rose Avenue (Assessor's Parcel Number 224-0-012-285). The property is zoned as Community Reserve (CR) and is designated as Park (PRK) in the General Plan. For purposes of this staff report, the foregoing project description shall be referred to as the "Project". The project was filed by Reza Bagherzadeh 305 W. Third St. East Wing 2nd Floor, Oxnard CA 93030.

3. **Existing & Surrounding Land Uses:** The project site is located at 3250 South Rose Avenue (Assessor's Parcel Number 224-0-012-285), however, the project site is centrally located within College park, so is substantially surrounded by park uses. The property is zoned as Community Reserve (CR) and is designated as Park (PRK) in the General Plan.

Table 1-Existing and Surrounding Land Uses

LOCATION	ZONING	GENERAL PLAN	EXISTING LAND USE
Project Site	Community Reserve (CR)	Park (PRK)	College Park
North	Community Reserve (CR)	Park (PRK)	College Park
South	Community Reserve (CR)	School (SCH)	Oxnard College
East	Community Reserve (CR))	Park (PRK)	College Park
West	Community Reserve (CR)	Park (PRK)	College Park

4. **Background Information:** Between the 1940's to the 1980's the project site was part of a 75 acre site that was partially developed as a ranch used for dry farming and row crop agriculture. Other portions of the site remained undeveloped and vacant. During the 1960's the area to the south of the proposed project site was developed with Oxnard College. During the 1980's recreational facilities were developed to the east of the project site. From 2008 to 2013 additional recreational facilities were developed to the east of the project site along with College Park road. To this day while the majority of the park has been developed, the location of the proposed aquatic center has remained undeveloped but is subject to regular maintenance.

5. **Environmental Determination:** Pursuant to the California Environmental Quality Act (CEQA) Section 15060, the City of Oxnard as the Lead Agency, prepared an Initial Study/Mitigated Negative Declaration (IS/MND) in accordance with the requirements of CEQA (Public resources Code § 21000, et seq.), the regulations promulgated thereunder (14 California Code of Regulations, §15000, et seq., CEQA Guidelines), and the City's Environmental Review Guidelines. The IS/MND identified and discussed potential impacts, mitigation measures, monitoring requirements, and residual impacts for identified subject areas. The IS/MND (IS/MND) No. 23-04 (State Clearinghouse No. 2023110316) was available for public review from November 13, 2023, to December 13, 2023. The City of Oxnard received comment letters on the IS/MND from agencies, organizations, and interested parties. The written comments and responses to each of those comments received during the public review period of the Administrative Draft of the IS/MND are included in the Final IS/MND (Attachment C). The project site is not on a list of hazardous material sites enumerated under Section 65962.5 of the Government Code.

The IS/MND did not identify any potentially significant and unavoidable impacts (impacts that cannot be reduced to a less than significant level). The MND found that the implementation of the proposed Project would result in potentially significant impacts associated with biological resources and cultural resources. Mitigation measures have been required to reduce each potentially significant impact to less than significant. The mitigation measures that have been required within the MND would reduce potential significant impacts. The IS/MND concludes that after implementation of standard conditions and mitigation measures, all less than significant impacts associated with the proposed project would be reduced to less than significant levels. The Project has been reduced in scope from the project analyzed in the IS/MND to reduce the overall development footprint by removing the Picnic Area. Also, the size of the Competition Pool has been reduced from 50 meters to 30 meters. With these proposed changes the project is still within the scope of the analysis prepared in the IS/MND, as the changes all result in a reduction of impacts and no potential of impacts not analyzed in the IS/MND. The IS/MND includes a Mitigation Monitoring and Reporting Program (MMRP) that details the process to implement the required mitigation measures.

Therefore, staff has determined that there is no substantial evidence that the Project will have a significant effect on the environment and recommends that the Planning Commission certify that: (1) The final IS/MND has been completed in compliance with CEQA; (2) The final IS/MND was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the final IS/MND prior to approving the project; and (3) The final IS/MND reflects the lead agency‘s independent judgment and analysis.

6. Analysis:

a. ***General Discussion:*** The existing project site located on a portion of College Park that is primarily vacant, with existing trees encroaching into the project site’s eastern border. The proposed project would include construction of a 57,233 square foot outdoor pool area with four pool areas, one slide area totaling 822 square feet, a one-story “L” shaped building totaling approximately 18,342 square feet, a 98-stall parking lot, and ancillary facilities. Pool areas would consist of a 30-meter competition pool, 25-yard instructional pool, splash pad, recreation pool, and slide area. The one-story building would frame the western and northern sides of the pool deck and would be used to house locker rooms, administrative space, utility rooms, a concession stand, and other ancillary facilities

As discussed below, the project has been found to be consistent with the 2030 General Plan, and the OCC. The Community Development Director is the decision maker for Development Design Review Permit pursuant to OCC §16-525. The Project is being processed with a Development Design Review Permit; therefore, the Community Development Director is the decision maker for the project.

If the Development Design Review Permit is approved, the project entitlement would be valid for three years, with a possible administrative extension of up to one year. During that time the project would need to obtain all required building and engineering permits. Additionally, as this is a City Project, sufficient funding must be allocated for the project in order for it to move forward. At this time sufficient funding is not in place to allow for the construction of the project, however, with the approval of the entitlement and associated CEQA document the City can focus on pursuing funding options for the construction of the new aquatic center.

b. ***General Plan Consistency:*** The City's 2030 General Plan land use designation for the subject site is Park which allows City, County, State, and National-owned parks, beaches, regional parks, community parks, neighborhood parks, special purpose facilities, golf courses, athletic fields, and open space areas. The proposed project is surrounded by existing development including roads, Oxnard College, residential development, and College Park. Approval of this Design Development Review Permit has been determined to be consistent with the General Plan and the property's land use designation.

Consistency with the 2030 General Plan is defined by the relationship between 2030 General Plan policies and the proposed project. The three consistency classification levels are:

1. Direct Applicability to a Proposed Project or Program (full text of the policy and an explanation).

2. Related or Indirect Applicability to the Proposed Project or Program (policy title and an explanation for each or groups of related or indirectly related policies).

3. No or Distant Applicability to the Proposed Project or Program (all policies not listed as Level I and II are assumed to be consistent).

Table 2-General Plan Consistency

POLICY	LEVEL	POLICY OR TITLE	EXPLANATION
CD 1.6	I	*Public Facilities* Enhance resident quality of life by providing adequate space for schools, libraries, parks and recreation areas, as well as space for the expansion of public facilities to support the community's vision.	The proposed project will expand parks and recreation facilities in the central portion of the City, thus enhancing the quality of life.

CD 1.8	I	*Natural Resource Conservation* Promote a high quality of life within the community, incorporating the retention of natural open space areas, greenbelts, and the provision of adequate recreational facilities.	The proposed project will provide additional open space and recreation areas, thus increasing the quality of life in the subject area.
CD 1.11	I	*Recreation Opportunities* Promote improved coastal access and enhanced recreation opportunities with access from all areas of the City.	The proposed project will expand the recreation opportunities in the central part of the city
CD 3.1	I	Protect existing residential neighborhoods from the encroachment of incompatible activities and land uses as determined through environmental review and/or determination by the Planning Commission.	The proposed Community Park will support the surrounding neighborhoods and does not encroach with incompatible activities or land uses.
CD 8.5	I	*Impact Mitigation* Ensure that new development avoids or mitigates impacts on air quality, traffic congestion, noise, and environmental resources to the maximum extent feasible.	The proposed project will adequately mitigate all anticipated environmental effects, and no effects were identified as being potentially significant impacts.
CD 8.8	II	Provide appropriate service areas for existing and planned public facilities such as a museum, secondary and elementary schools, fire stations, branch libraries, community centers, parks, and infrastructure utility for support facilities.	The proposed project is for a community park, as conditioned, the project will provide appropriate service areas
CD 14.1	I	*Design Review Process* In the evaluation of development proposals, continue to ensure that public and private development projects comply with City design policies, plans, and guidelines.	The project was reviewed by the Development Advisory Committee.
CD 14.2	I	Continue to require that a staff Development Advisory Committee review new development projects for consistency with the City's	The Development Advisory Committee reviewed this project, and the committee's comments

		development policies and appropriateness for the proposed sites.	are included in the Resolution as Conditions of Approval.
CD 15.2	I	*City Image and Vision Enhance* Oxnard's image as a city that is responsive to the vision desired and expressed by its residents.	The proposed project will increase the amount of community park space in the city, thus enhancing the city's image.
All	III	All policies not listed above	No or Distant Applicability to the Proposed Project.

A. ***Conformance with Zoning Development Standards:*** The proposed development is located within the Community Reserve (CR) zone district and is subject to the Community Reserve (CR) zone development standards. In accordance with the City Code, the proposed project may be permitted with an approval of a Development Design Review Permit.

Table 3 - Zoning Consistency

DEVELOPMENT STANDARD	REQUIREMENT	PROPOSED	COMPLIES?
Max. building height 16-260	2 stories not to exceed 25 feet.	One story with a max height of approximately 21 feet.	Complies
Front yard setback* 16-261	Not less than 25% of the depth of the parcel, not to exceed 50 feet	Approximately 1275 feet	Complies
Side yard setback* 16-262	Not less than 10% of the width of the parcel, provided such yard need not exceed 50 feet The street side yard shall not be less than 5 feet of a minor street or less than 10 feet on a major thoroughfare	Approximately 120 feet to building	Complies
Rear yard setback* 16-263	Not less than 25% of lot depth, provided that such rear yard need not exceed 50 feet 15 feet if >16 feet in height; 10 feet if abuts an alley.	Approximately 640 feet to building	Complies
Off Street parking: - ADA Accessible	- See attached parking memo	- 98 parking stalls,	Complies, subject to

- Motorcycle (16-264) - Bicycle (16-623)		additional bicycle parking will be provided	Director approval (OCC 16-622 (B))
Parking space sizes & design: 4. Standard (16-636 & 16-638)	9'W x 19'L	Parking spaces 9' W x 19' L	Complies
A. Trash enclosures & transformers	B. To be screened at installation.	Trash shall be screened	Complies, as conditioned
Fence (16-310)	● Cannot be located in the FY setback area ● No chain link in FY, 8' max height	Fence is a metal wrought iron style fence and not located in the front setback.	Complies

A. ***Site Design, Circulation, and Parking:*** The project site has access from South Rose Avenue through the existing College Park driveway. The existing driveway provides access to the proposed site, and the existing shared parking areas. The proposed aquatic center has been designed for pedestrian access and circulation. It is expected that the aquatic center would only serve the local community of Oxnard and would not serve the regional community.

The proposed project includes a parking lot with a total of 98 parking spaces including EV capable spaces and ADA compliant spaces. The parking lot would be supplemented by existing parking along Oxnard College Park's one-lane ring road as well as existing adjacent parking lots with a total of 616 off-street parking stalls. The applicant provided a parking analysis that compares the project's layout and capacity to three existing aquatics facilities of similar scale- the Elk Grove Aquatics Center, Morgan Hill Aquatics Center, and the Ventura Aquatic Center. All four facilities have similar gross building areas, fenced-in site areas, and have similar amenities such as lesson pools, activity pools and water slides. Table 3 demonstrates a comparison of the size and parking provided by each facility.

Table 4 - Parking Comparison

Facility	Gross Building Area	Fenced-in Site Area	Parking provided
Oxnard Aquatics Center	13,691 sf	63,000 sf	99 spaces
Elk Grove Aquatics Center	13,390 sf	102,000 sf	200 spaces
Morgan Hill Aquatics Center	9,690 sf	112,000 sf	134 spaces
Ventura Aquatic Center	10,410 sf	114,000 sf	211 spaces

The IS-MND prepared for the project demonstrated that the project would have no impacts or less than significant impacts on transportation and circulation. Per the City of Oxnard Traffic Study Guidelines, a Level of Service (LOS) analysis was performed using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections.The Traffic Analysis Report conducted for the project found

The proposed design includes a east west planter along the middle of the parking lot with the Planning Department. This alternative configuration provides a large canopy tree growth that will provide 50% shading, more trees, and more shade at noon in order to meet state parking lot shading requirements.

Bicycle Parking

The Project is required to provide bicycle parking pursuant to OCC § 16-623. Community facilities such as swim clubs, community centers and other similar facilities require one space per 33 automobile spaces. The Project will provide eight bicycle racks with a four bicycle capacity each (total 32 bicycle capacity) that would be installed at the entry/exit point of the aquatics center.

The City finds that the proposed project, as conditioned, and in the context of documentation provided and reviewed demonstrate that there is sufficient on-site parking during both peak weekday and weekend parking demand forecast and vehicle queuing.

e) ***Building Design:*** The proposed project will have an “L” shaped building made up of two

wings. The building will incorporate a modern minimalist design consisting of cement, glass and steel features. The main entrance of the aquatic center located in the northwest corner, will have large glass panels. The walls of the building will be made of cement panels that are three colors (equitone natura 154m equitone natura 991, and equitone natura 961). The doors of the buildings will be accented with two shades of blue (Twilight 2058-10 and Thousand Oceans 1645). The building design will incorporate backlit stainless steel signage mounted on the building. Outside of the main entrance there will also be a large free standing signage with an exterior metal coating. The rooftop mechanical equipment will be screened with painted perforated metal panels.

f) Landscaping: The landscaping will provide parkways and landscape areas throughout the project site and parking lot that will feature low water use, native and regionally adapted plants including grasses, shrubs, and trees. The perimeter of the project site will be landscaped with trees and shrubs. The landscaping plan also includes stormwater treatment grasses such as california gray rush, canyon prince wild rye, and deergrass. The trees on the street will include Fremont Cottonwood trees. These trees will be placed along the outer perimeter of the project site along College Park driveway. The existing trees across College Park driveway will remain. The parking lot will have London Plan trees that will be placed along the perimeter and on the center island. Along the perimeter of the pool there will be Valley Oaks.

7. Development Advisory Committee: On July 26, 2023, the project was reviewed by the DAC which resulted in changes to the project. A second DAC meeting was held on November 6, 2023. Subsequent to the review, the applicant continually worked with select members of the DAC on revisions of the plans while DAC members drafted project conditions. The DAC conditions of approval are included in the attached resolution.

8. Community Workshop and Public Input:
Various engagement events were held to obtain feedback on the aquatics center. On December 11, 2021 a community information meeting was held where more than 1,000 residents provided design feedback. Then on June 29, 2022 a community Design Preview meeting was held where the attendees provided feedback on the different design concepts for the aquatic center. Participants were shown three different concepts and provided feedback. The concepts presented different orientations of the main building, pools, and amenities. Ultimately community members believed that Concept C provided the best wind protection and pool layout that met their desires. Finally on August 1, 2022 a Community Final Design meeting was held where additional comments were received to refine the design of the aquatic center. Ultimately the preferred concept includes an "L" shape building that protects the pool and activity areas from oncoming traffic winds from the northeast and west. The site also includes a parking lot and a "drop-off" zone.

9. Appeal Procedure: In accordance with Section 16-525 of the OCC, the Community Development Director's action may be appealed to the Planning Commission within 10 days after the decision date. Appeal forms may be obtained from the City Clerk and must be

submitted with the appropriate fees before the end of the appeal period. If an appeal to the Planning Commission is not filed within 10 calendar days of the Planning Commission decision, the decision of the Community Development Director shall be considered final.

Attachments:

A. Maps (Vicinity, General Plan, Zoning)
B. Project Plans
C. IS-MND 23-04
D. Parking Analysis
E. Resolution (Development Design Review Permit)

ATTACHMENT
A

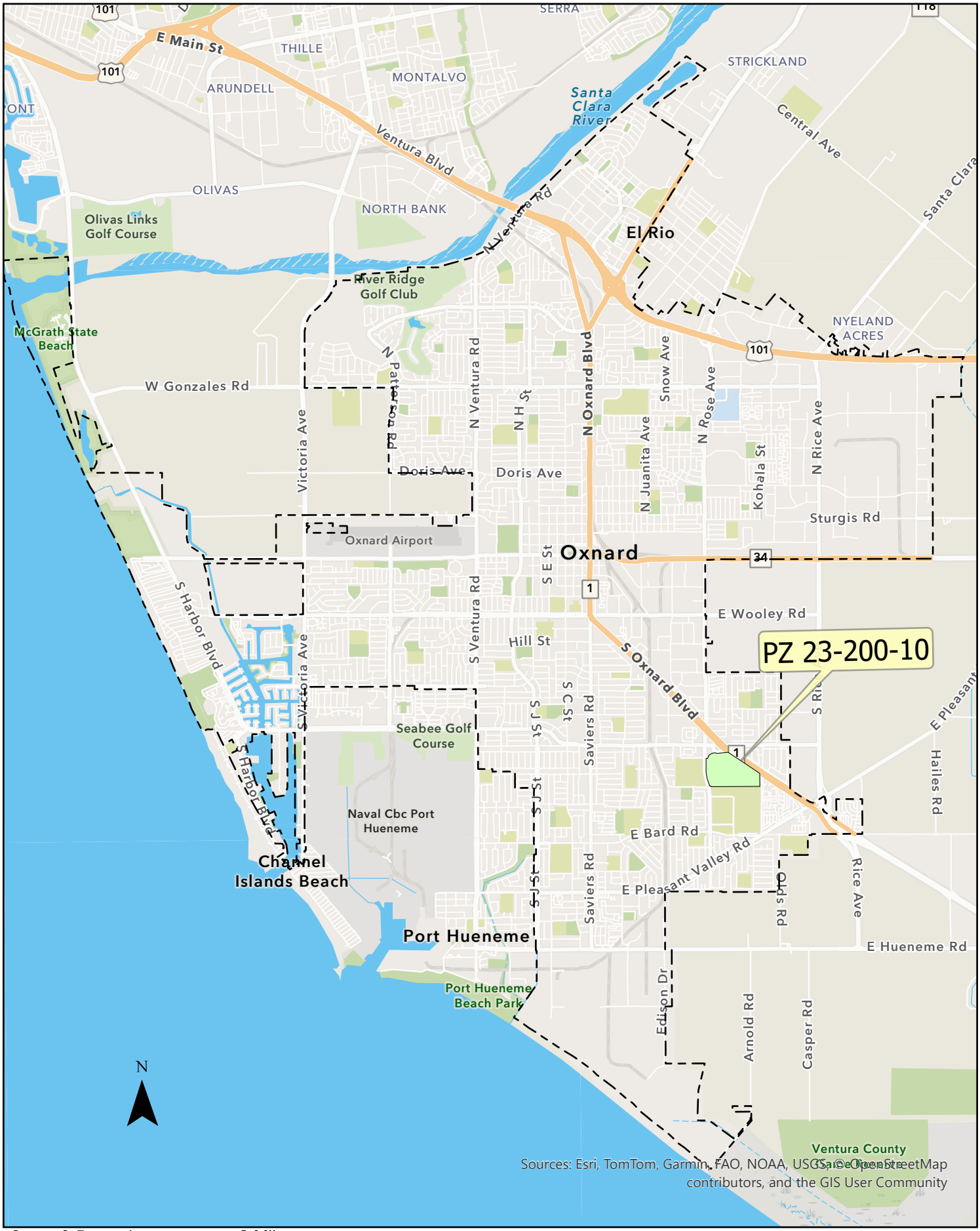
MAPS
(VICINITY, GENERAL PLAN, ZONING, AERIAL)



0 170 340 680 Feet

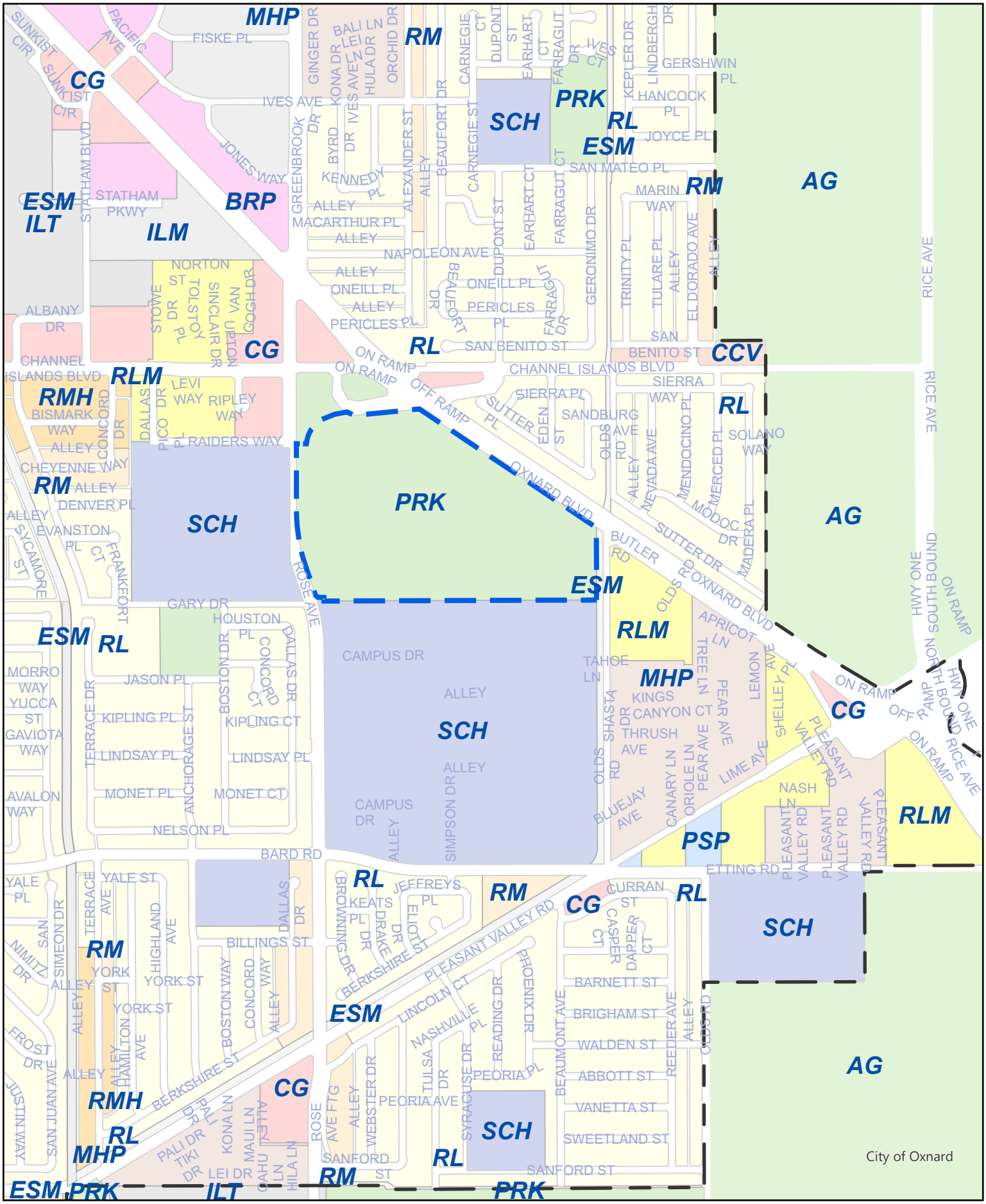
Aerial Map

PZ 23-200-10



Vicinity Map

PZ 23-200-10

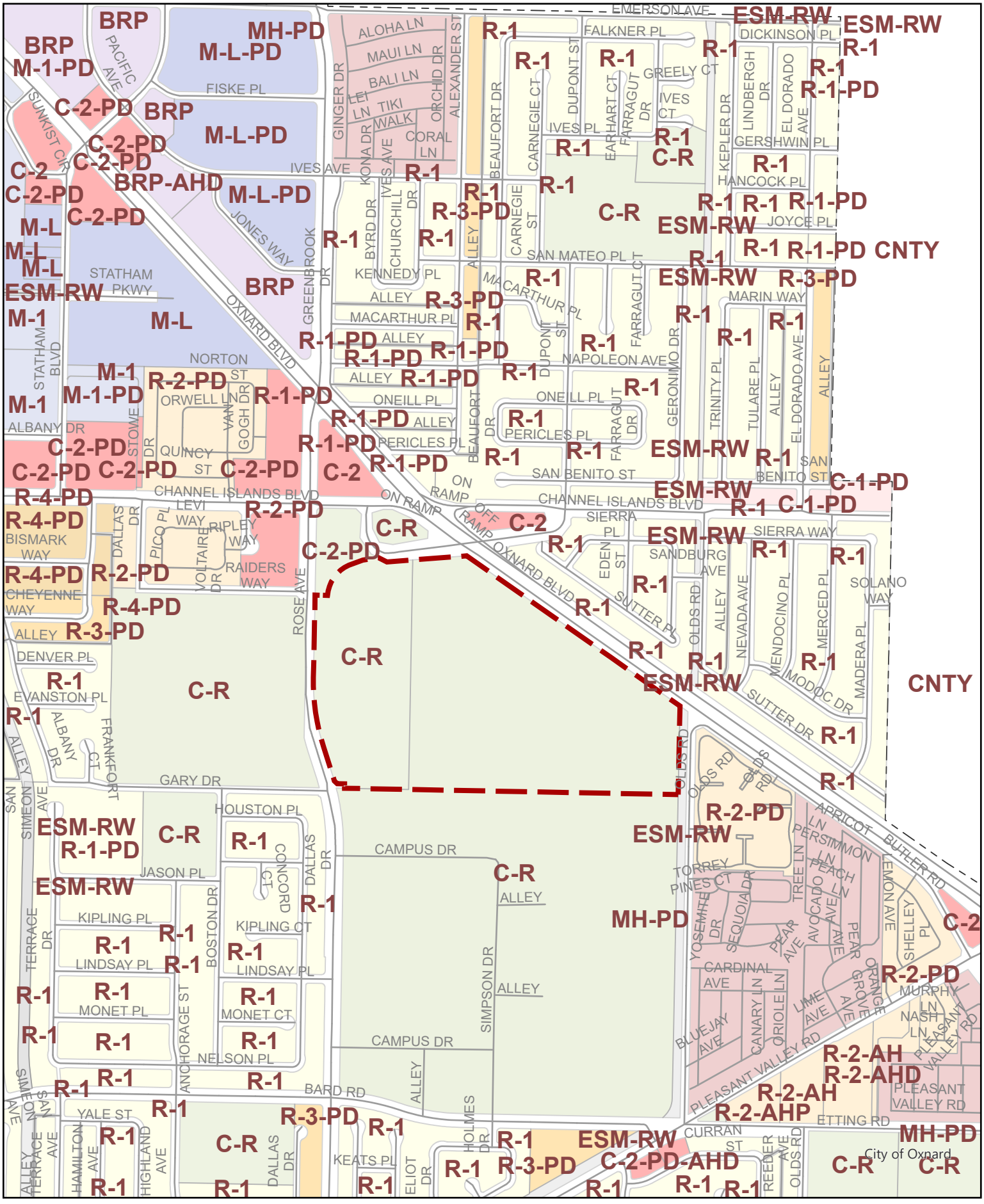


0 435 870 1,740 Feet

N

General Plan 2030 Map

PZ 25-500-01


EMERSON AVE
ESM-RW
DICKINSON PL
FALKNER PL
GREELY CT
IVES CT
IVES PL
GERSHWIN PL
HANCOCK PL
JOYCE PL
R-1-PD CNTY
R-3-PD
MARIN WAY
SAN MATEO PL
KENNEDY PL
MACARTHUR PL
MACARTHUR CT
NAPOLEON AVE
ONEILL PL
PERICLES PL
SAN BENITO ST
CHANNEL ISLANDS BLVD
SIERRA PL
SIERRA WAY
SANDBURG AVE
SUTTER PL
SUTTER DR
MODOC DR
MADERA PL
SOLANO WAY
MERCED PL
MENDOCINO PL
NEVADA AVE
OLDS RD
ALLEY
ON RAMP
OFF RAMP
OXNARD BLVD
ROSE AVE
DENVER PL
EVANSTON PL
GARY DR
HOUSTON PL
CAMPUS DR
JASON PL
KIPLING PL
KIPLING CT
LINDSAY PL
MONET PL
MONET CT
NELSON PL
BARD RD
YALE ST
KEATS PL
HOLMES DR
SIMPSON DR
ANCHORAGE ST
BOSTON DR
CONCORD CT
DALLAS DR
TERRACE DR
SIMEON AVE
SAN SIMEON AVE
HAMILTON AVE
HIGHLAND AVE
ELIOT DR
REEDER AVE
CURRAN ST
ETTING RD
PLEASANT VALLEY RD
APRICOT
BUTLER RD
LEMON AVE
PERSIMMON LN
PEACH LN
TREE LN
AVOCADO AVE
PEAR AVE
ORANGE GROVE AVE
LIME AVE
CANARY LN
ORIOLE LN
BLUEJAY AVE
CARDINAL AVE
YOSEMITE DR
SEQUOIA DR
TORREY PINES CT
SHELLEY PL
NASH LN
MURPHY LN
R-2-AH
R-2-AHD
R-2-AHP
MH-PD
C-1-PD
C-2-PD-AHD
City of Oxnard
0 0.05 0.1 0.2 Miles
N
Zoning Map
PZ 24-530-05

ATTACHMENT B

PROJECT PLANS

SOUTH OXNARD AQUATICS CENTER



CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT NUMBER: 202210

REVISION

NUMBER	DATE	DESCRIPTION

DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2
11 DECEMBER 2023

els architecture+ urban design

NOT FOR CONSTRUCTION

ABBREVIATIONS

d	PENNY (NAIL)
PL	PROPERTY LINE
&	AND
∠	ANGLE
@	AT
CL	CENTERLINE
ϕ	DIAMETER, ROUND
⊥	PERPENDICULAR
#	POUND, NUMBER
(E)	EXISTING
(N)	NEW
A.B.	ANCHOR BOLT
ABV.	ABOVE
A.C.	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ACOUS.	ACOUSTICAL
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE, ADJACENT
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALUM.	ALUMINUM
ALT.	ALTERNATE
A.P.	ACCESS PANEL
APPROX.	APPROXIMATE
ARCH.	ARCHITECT
ASPH.	ASPHALT
A.T.	ASHTRAY
BC	BOTTOM OF CURB
BSMT.	BASEMENT
BTW.	BETWEEN
BD.	BOARD
BITUM.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BLW.	BELOW
BM.	BEAM
B.O.	BOTTOM OF
B.S.	BOTTOM OF SILL
B.R.	BOTTOM OR RISER
B.O.C.	BOTTOM OF CURB
BOT.	BOTTOM
B.U.R.	BUILT-UP ROOFING
CAB.	CABINET
C.B.	CATCH BASIN
CEM.	CEMENT
CEM. PLAS.	CEMENT PLASTER
CER.	CERAMIC
C.I.	CAST IRON
C.J.	CONTROL JOINT
CLG.	CEILING
CLKG.	CAULKING
CH.	COAT HOOK
C.J.	CONSTRUCTION JOINT
CLO.	CLOSET
C.O.	CLEAN_OUT
CLR.	CLEAR
COL.	COLUMN
COMP.	COMPOSITION
CONC.	CONCRETE
C.M.U.	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
C.T.	CERAMIC TILE
CTSK.	COUNTERSINK
CNTR.	COUNTER
CPT.	CARPET
CTR.	CENTER
CUSP.	CUSPIDOR
CW.	CURTAIN WALL
D.	DEEP
DBL.	DOUBLE
D.C. TYPE 1 (ETC.)	DECK COATING TYPE 1 (ETC.)
D.D	DECK DRAIN
DEMO.	DEMOLISH
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DOUGLAS FIR, DRINKING FOUNTAIN
DIAM.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DWG.	DRAWING
D.W.P.	DESIGN WORKING POINT
DWR.	DRAWER
D.S.	DAVIT SOCKET
D.S.P.	DRY STANDPIPE
E.	EAST
EA.	EACH
E.B.	EXPANSION BOLT
E.F.	EXHAUST FAN
E.F.S.	EXTER. FINISH SYSTEM
E.I.F.S.	EXTER. INSUL. & FIN. SYST.
E.J.	EXPANSION JOINT
ELECT.	ELECTRICAL
EL.	ELEVATION
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENAM.	ENAMELED
ENCL.	ENCLOSURE
E.P.	ELECTRICAL PANEL
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
(E)	EXISTING
EXPO.	EXPOSED
EXP.	EXPANSION
EXT.	EXTERIOR
F.A.	FIRE ALARM
F.B.	FOOTBOARD
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.H.	FIRE HYDRANT
F.F.	FINISH FLOOR
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIXT.	FIXTURE
FLR.	FLOOR
FLASH.	FLASHING
FLUOR.	FLUORESCENT
F.O.	FACE OF
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUDS
FPRF.	FIREPROOF
FRMG.	FRAMING
F.S.R.	FIRE SPRINKLER RISER
F.S.	FLOOR SINK
FT.	FOOT, FEET
FTG.	FOOTING
FND.	FOUNDATION
FURR.	FURRING
FUT.	FUTURE
GA.	GAUGE
GALV.	GALVANIZED
G.B.	GRAB BAR
GWB.	GYPSUM WALL BOARD
G.I.	GALVANIZED IRON
G.F.I.	GROUND FAULT INTERRUPTER
G.F.R.C.	GLASS FIBER REINF. CONC.
GL.	GLASS
GND.	GROUND
GR.	GRADE
G.R.G.	GLASS REINFORCED GYPSUM
GYP.	GYPSUM
H.R.	HAND RAIL
H.	HIGH
H.B.	HOSE BIBB
HC.	HANDICAPPED
H.C.	HOLLOW CORE
HDR.	HEADER
HDWD.	HARDWOOD
HDWE.	HARDWARE
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
I.D.	INSIDE DIAMETER (DIMENSION)
INSUL.	INSULATION
INT.	INTERIOR
INTERM.	INTERMEDIATE
JAN.	JANITOR
JST.	JOIST
J.H.	JOIST HANGER
JT.	JOINT
KIT.	KITCHEN
L.B.	LAG BOLT
LAM.	LAMINATE
LAV.	LAVATORY
LKR.	LOCKER
LOC.	LOCATION
L.	LONG
LT.	LIGHT
MACH.	MACHINE
MAX.	MAXIMUM
M.B.	MACHINE BOLT
M.C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MTD.	MOUNTED
MTL.	METAL
MTP.	METAL TOILET PARTITION
MTL.	METAL SIDING
MUL.	MULLION
(N)	NEW
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.A.	OVERALL
OBSC.	OBSCURE
O.C.	ON CENTER
OD	OVERFLOW DRAIN
O.D.	OUTSIDE DIAMETER
O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
OFF.	OFFICE
O.H.	OVERHEAD
OPNG.	OPENING
OPP.	OPPOSITE
PART'N.	PARTITION
P & SH.	POLE AND SHELF
P.B.	PARTICLE BOARD
P.D.	PLANTER DRAIN
PLUMB.	PLUMBING
PRCST.	PRECAST
PREFAB.	PRE-FABRICATED
PTDF	PRESSURE TREATED DOUGLAS FIR
PL.	PLATE
P. LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PTP	PLASTIC TOILET PARTITION
PR.	PAIR
PT.	POINT, POINT
PTD	PAINTED
PTN, PART.	PARTITION
P.T.R.	PAPER TOWEL RECPTACLE
Q.T.	QUARRY TILE
r.	RADIUS
R.	RISER
(R)	REMOVE
R.D.	ROOF DRAIN
REF.	REFERENCE
REFER.	REFRIGERATOR
RGTR.	REGISTER
REINF.	REINFORCED
REQ'D	REQUIRED
RESIL.	RESILIENT
RET.	RETAINING
REV.	REVISION, REVISED
RM.	ROOM
R.O.	ROUGH OPENING
RDWD.	REDWOOD
R.W.L.	RAIN WATER LEADER
R.B.	RUBBER BASE
S.	SOUTH
S.C.	SOLID CORE
S.C.D.	SEAT COVER DISPENSER
SCH.	SCHEDULE
S.D.	SOAP DISPENSER
SECT.	SECTION
S.E.D.	SEE ELECTRICAL DRAWINGS
SH.	SHELF
S.H.V.C.	SURFACE MOUNTED HOSE VALVE CABINET
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
S.L.D.	SEE LANDSCAPE DRAWINGS
S.M.	SHEET METAL
S.M.D.	SEE MECH. DRAWINGS
S.N.D.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SPEC.	SPECIFICATION
S.P.R.	SINGLE-PLY ROOFING
SQ.	SQUARE, SQUARE FOOT, SQUARE FEET
S.S.	STAINLESS STEEL
S.S.D.	SEE STRUCTURAL DRAWINGS
S. SK.	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SAT	SUSPENDED ACOUSTICAL TILE
S.V.	SHEET VINYL
SYM.	SYMMETRICAL
T.B.	TOWEL BAR
T.C.	TOP OF CURB
T.O.C.	TOP OF CONCRETE
T.D.	TIE DOWN
TEL.	TELEPHONE
TEMP.	TEMPERED
TER.	TERRAZZO
T. & G.	TONGUE AND GROOVE
THK.	THICK
THR.	THRESHOLD
T.O.	TOP OF
T.O.B.	TOP OF BENCH
T.O.C	TOP OF CONCRETE
T.O.S.	TOP OF STRUCTURE
T.P.D.	TOILET PAPER DISPENSER
TRANSF.	TRANSFORMER
T.O.W.	TOP OF WALL
TYP.	TYPICAL
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
UR.	URINAL
V.T.	VINYL TILE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
W	WIDE
W.	WEST
W/	WITH
W.C.	WATER CLOSET
W.I.	WROUGHT IRON
WD.	WOOD
W.F.	WIDE FLANGE
W.O.	WHERE OCCURS
W/O	WITHOUT
WP.	WATERPROOF
WP. TYPE 1 (ETC.)	WATERPROOFING TYPE 1 (ETC.)
WR	WATER RESISTANT
W.S.	WOOD SCREW
WSCT.	WAINSCOT
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC

GENERAL NOTES

1. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE CONTRACT DOCUMENTS WITH EACH OTHER AND SHALL AT ONCE REPORT TO THE ARCHITECT ERRORS, INCONSISTENCIES OR OMISSIONS DISCOVERED. IF THE CONTRACTOR PERFORMS ANY CONSTRUCTION ACTIVITY KNOWING IT INVOLVES A RECOGNIZED ERROR, INCONSISTENCY OR OMISSION IN THE CONTRACT DOCUMENTS WITHOUT SUCH NOTICE TO THE ARCHITECT, THE CONTRACTOR SHALL ASSUME APPROPRIATE RESPONSIBILITY FOR SUCH PERFORMANCE AND SHALL BEAR AN APPROPRIATE AMOUNT OF THE ATTRIBUTABLE COSTS FOR CORRECTION.
2. WHERE NEW CONSTRUCTION ABUTS EXISTING CONSTRUCTION TO REMAIN, ALL CONDITIONS AFFECTING WORK PROGRESS AND CONFORMANCE TO PLANS AND SPECIFICATIONS SHALL BE VERIFIED BY CONTRACTOR PRIOR TO START OF WORK.
3. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED MEASUREMENTS. WHERE DISCREPANCIES IN DIMENSIONS OCCUR THEY SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
4. ALL WORK AND MATERIALS SHALL BE IN ACCORD WITH THE LATEST RULES AND REGULATIONS OF ALL APPLICABLE STATE AND/OR LOCAL CODES, LAWS, ORDINANCES, STATUTES AND REGULATIONS. NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED AS REQUIRING OR PERMITTING WORK CONTRARY TO THESE RULES, REGULATIONS, AND CODES.
5. THE DRAWINGS INDICATE LOCATIONS, DIMENSIONS, AND TYPICAL DETAILS OF CONSTRUCTION. THE DRAWINGS DO NOT ILLUSTRATE EVERY CONDITION; WORK NOT EXPRESSLY DETAILED SHALL BE OF CONSTRUCTION SIMILAR TO PARTS THAT ARE DETAILED. WHERE DISCREPANCIES OCCUR, THEY SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
6. SITE BOUNDARY LINES, BOUNDARY DIMENSIONS, BOUNDARY DECLINATIONS, AND EXISTING GRADES ARE BASED UPON THE SURVEY DRAWING. THE CONTRACTOR SHALL BE DEEMED TO HAVE INSPECTED THE SITE AND SATISFIED HIMSELF AS TO ACTUAL GRADES, LEVELS, DIMENSIONS, AND DECLINATIONS AND THE TRUE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED.
7. MASONRY DIMENSIONS ARE GIVEN TO THE NOMINAL FACE OF MASONRY. DIMENSIONS ARE TO BE FACE OF FINISH UNLESS OTHERWISE NOTED. DO NOT SCALE THE DRAWINGS. LAY OUT WORK FOLLOWING WRITTEN DIMENSIONS. IF WRITTEN DIMENSIONS ARE LACKING, NOTIFY THE ARCHITECT AT ONCE. IF NO LOCATING DIMENSIONS ARE SHOWN, DOOR OPENINGS ARE LOCATED BY THE DOOR DETAILS.
8. DIMENSIONS AND ELEVATIONS ON THESE DRAWINGS REFER TO BUILDING DATUM. UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING.

GREEN BUILDING GENERAL NOTES

1. CONSTRUCTION WASTE MANAGEMENT - 100% OF MIXED DEBRIS MUST BE TRANSPORTED BY A REGISTERED HAULER TO A REGISTERED FACILITY AND BE PROCESSED FOR RECYCLING, IN COMPLIANCE WITH THE SAN FRANCISCO CONSTRUCTION & DEMOLTION DEBRIS ORDINANCE

2. ADHESIVES, SEALANTS, AND CAULKS: COMPLY WITH VOC LIMITS SCAQMD RULE 1168 VOC LIMITS AND CALIFORNIA CODE OF REGULATIONS TITLE 17 FOR AEROSOL PAINTS.

3. PAINTS AND COATINGS: COMPLY WITH VOC LIMITS IN THE AIR RESOURCES BOARD ARCHITECTURAL COATINGS. SUGGESTED CONTROL MEASURE AND CALIFORNIA CODE OF REGULATIONS TITLE 17 FOR AEROSOL PAINTS.

4.COMPOSITE WOOD: MEET CARB AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD INCLUDING MEETING THE EMISSION LIMITS IN CALGREEN TABLE 5.504.4.5.

5.RESILIENT FLOORING SYSTEMS: FOR 80% OF FLOOR AREA RECEIVING RESILIENT FLOORING, INSTALL RESILIENT FLOORING COMPLYING WITH:

1. CERTIFIED UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM.
2. COMPLIANT WITH THE VOC-EMISSION LIMITS AND TESTING REQUIREMENTS OF CALIFORNIA DEPARTMENT OF PUBLIC HEALTH 2010 STANDARD METHOD FOR THE TESTING AND EVALUATION CHAMBERS V.1.1,
3. COMPLIANT WITH THE COLLABORATIVE FOR HIGH PERFORMANCE SCFHOOLS (CHPS) EQ2.2 AND LISTED IN THE CHPS HIGH PERFORMANCE PRODUCT DATABASE; OR
4. CERTIFIED UNDER THE GREENGUARD CHILDREN & SCHOOLS PROGRAM TO COMPLY WITH CALIFORNIA DEPARTMENT OF PUBLIC HEALTH CRITERIA.

6.ENVIRONMENTAL TOBACCO SMOKE: PROHIBIT SMOKING WITHIN 25 FEET OF BUILDING ENTRIES, OUTDOOR AIR INTAKES, AND OPERABLE WINDOWS.

6. CARPET: COMPLY WITH REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMIAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMETAL CHAMBERS," VERSION 1.2, JANUARY 2017 (EMISSION TESTING METHOD OF CALIFORNIA SPECIFICATION 01350).

DEFERRED SUBMITTAL

DEFERRED SUBMITTAL ITEMS, LISTED BELOW, ARE DEPICTED IN THE CONTRACT DOCUMENTS TO SHOW DESIGN INTENT AND RELATIONSHIPS WITH OTHER BUILDING COMPONENTS AND SYSTEMS. CONTRACTOR SHALL PROVIDE COMPLETE DESIGN AND STRUCTURAL CALCULATIONS FOR DEFERRED SUBMITTAL ITEMS. CONTRACTOR TO INCORPORATE THE REVIEW AND APPROVAL TIME FOR DEFERRED SUBMITTALS IN THE PROJECT SCHEDULE. IF THE CONTRACTOR PROPOSES DEVIATIONS FROM THE SHOWN DESIGN INTENT, THE CONTRACTOR IS RESPONSIBLE FOR ANY ADDITIONAL EFFORT, MATERIALS, AND DESIGN AT NO ADDITIONAL COST.

DEFFERED SUBMITTAL SHALL BE SUBMITTED ACCORDING TO SPECIFICATION REQUIREMENTS, INCLUDING, SUBMISSION TO THE PROJECT ARCHITECT AND/OR ENGINEER FOR REVIEW AND COORDINATION. AFTER REVIEW AND COORDINATION, A SUBMITTAL SHALL BE MADE TO THE CITY. APPROVAL AGENCIES AND/OR ARCHITECT FOR REVIEW AND APPROVAL. ALL OF THIS IS TO BE DONE PRIOR TO INSTALLATION.

DEFERRED SUBMITTAL ITEMS:

1. FIRE PROTECTION, SPRINKLER, AND FIRE ALARM SYSTEM AT AREA OF WORK WILL BE SUBMITTED SEPARATELY FOR PERMIT.

SYMBOLS LEGEND

GRID / GRID — GRID LINE REFERENCE

3 TITLE / SCALE — DRAWING TITLE

1 VIEW / 4 SHEET 2 / 3 — INTERIOR ELEVATION

1 VIEW / SHEET — EXTERIOR ELEVATION

NO. / SHEET — SECTION KEY

NO. / SHEET — DETAIL SECTION KEY

NO. / SHEET — DETAIL PLAN KEY

LEVEL 0'-0" — ELEVATION TARGET

+21'-0" — SPOT ELEVATION

WORK POINT

W - # — WINDOW TYPE

L - # — LOUVER TYPE

P - # — PAINT TYPE

T — TEMPERED AND/OR LAMINATED GLASS

101 — DOOR NUMBER

1 HR ASSEMBLY

2 HR ASSEMBLY

TYPE / FIRE RATING (HRS) / P1| 1 | - / ACOUSTICAL — PARTITION TYPE

— KEY NOTE

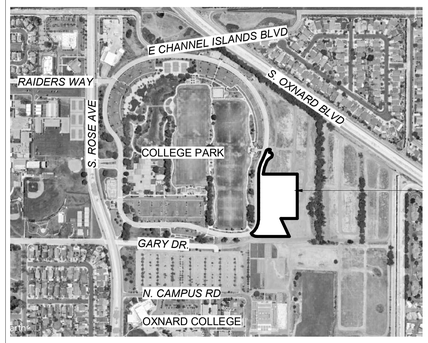
ROOM — ROOM NAME / 123 — ROOM #

0 2' 4' 8' / SCALE: 1" = 4'-0" — GRAPHIC SCALE

DRAWING REVISION

XX/A.XX — MATCHLINE

PROJECT LOCATION



PROJECT DESCRIPTION

SOUTH OXNARD AQUATIC CENTER IS A ONE-STORY FACILITY WITH AN OFFICE, ONE 30M X 25YD COMPETITIVE SWIMMING POOL, ONE 6-LANE 25YD TRAINING POOL, A SPLASH PAD, A FUN-WATER RECREATION POOL, AND A DOUBLE FLUME RECREATION SLIDE. THE FACILITY IS LOCATED ON THE SOUTH-EAST CORNER OF COLLEGE PARK OFF S ROSE AVE. IN OXNARD, CA.

BID ALTERNATE

ALTERNATE 1 - FIBER CEMENT PANEL EXPOSED FASTENER SYSTEM IN LIEU OF CONCEALED FASTENER SYSTEM

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els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
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P: 510.549.2929

CIVIL ENGINEER:
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700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
1901 Harrison St., Suite 1570
Oakland, CA 94612
P: 510-500-1823
950 South Grand Ave., 4th Floor
Los Angeles, CA 90015
P: 213-483-6490

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
GUTTMANN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
GUTTMANN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

AQUATICS
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:

DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:

11 DECEMBER 2023

STAMP:

NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:

INDEX SHEET & GENERAL NOTES

SHEET NUMBER:

A001*

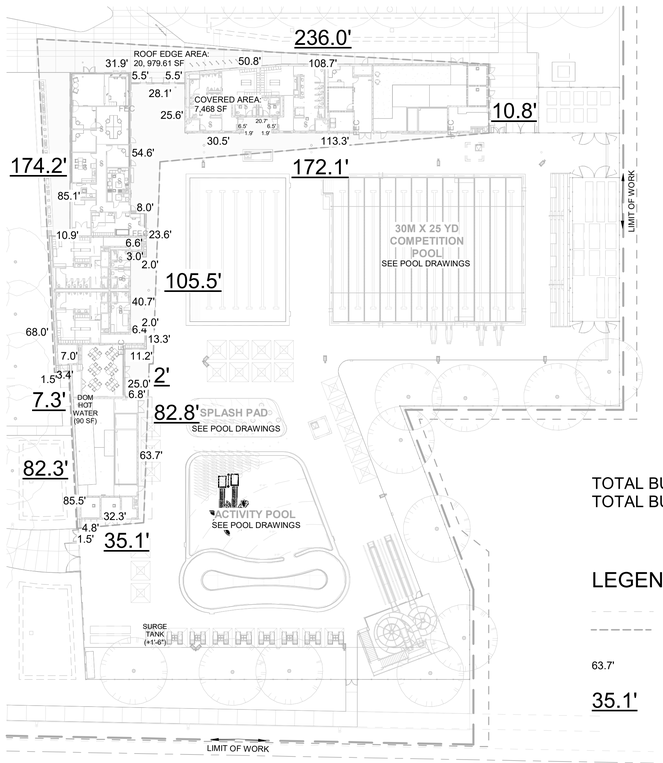
EV PARKING ANALYSIS

CALGREEN TABLE 5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)
75-100	17	4

TOTAL NUMBER OF ACTUAL PARKING SPACES PROVIDED	NUMBER OF EV CAPABLE SPACES PROVIDED	NUMBER OF EVCS PROVIDED (EV CAPABLE SPACES PROVIDED WITH EVSE)
99	17 (1 ACC EV+3EV+13 EV CAPABLE)	4

EV PARKING ANALYSIS



TOTAL BUILDING FRONTAGE = 908.1'
TOTAL BUILDING PERIMETER = 1053.5'

LEGEND

BUILDING FRONTAGE

BUILDING PERIMETER

63.7' LENGTH OF BUILDING PERIMETER

35.1' LENGTH OF BUILDING FRONTAGE

1 FRONTAGE DIAGRAM
1/32" = 1'-0"

PLUMBING FIXTURE ANALYSIS

PLUMBING FIXTURE COUNT

We have analyzed both CBC Chapter 31B and CPC requirements and determined that CPC requirements are more stringent.

Provided Fixture Count	WC	Urinals	Lavs	Showers	Drinking Fountain
Men's Rec. Locker Room 121A	1	4	2	2	
Women's Rec. Locker Room 120A	5	/	2	2	
Men's Comp. Lockers 150A	3	5	2	2	
Women's Comp. Lockers 153A	5	/	4	2	
Family Changing Rooms	5	/	5	5	
Staff Restroom 107	1	/	1	/	
Pool Deck - See Sheet A102	/	/	/	12	6
Total Fixtures Provided	**20**	**9**	**16**	**25**	**6**

Required Fixture Count per CPC	3	1	2	/	2
Required Fixture Count per CBC Chapter 13B	20	9	16	25	6

PLUMBING FIXTURE REQUIREMENTS PER CPC

Plumbing Fixture Calculation per CPC 422 Table 422.1 and Occupant Load Factor Table 4-1
CPC Occupant Loads

Room No.	Name	Area	Load Factor	Load
100	LOBBY	292 SF	150	2
100-1	RECEPTION	223 SF		
101	CASH ROOM / OFFICE	147 SF	150	1
102	OPEN OFFICE	336 SF	150	4
103	OFFICE	147 SF	150	1
104	OFFICE	136 SF	150	1
105	BREAK ROOM	198 SF	30	7
106	CONCESSIONS	198 SF	50	4
108	ELEC	154 SF	4000	1
109	DATA	39 SF	4000	1
111	LIFE GUARD / FIRST AID	336 SF	150	3
112	WET POOL STORAGE 1	997 SF	4000	1
120-D	JAN.	34 SF	4000	1
121-D	JAN.	35 SF	4000	1
130-A	MULTIPURPOSE ROOM	606 SF	30	21
130-B	STOR	65 SF	4000	1
131	ELEC	101 SF	4000	1
132	POOL MECH	1163 SF	4000	1
133	POOL STOR	71 SF	4000	1
134	ACID.	107 SF	4000	1
135	CHLOR	105 SF	4000	1
150-D	JAN.	40 SF	4000	1
153-D	JAN.	38 SF	4000	1
161	DRY STOR/ LAUNDRY	122 SF	4000	1
162	DATA	149 SF	4000	1
163	MAINTENANCE OFFICE	138 SF	200	1
164	FIRE RISER	44 SF	4000	1
165	MAINT. WORK ROOM	267 SF	4000	1
166	POOL MECH/EQUIP	1260 SF	4000	1
167	ELEC	421 SF	4000	1
168	ACID	101 SF	4000	1
169	CHLOR	102 SF	4000	1
		TOTAL OCCUPANT LOAD		**66**

A-3 Occupancy (most restrictive occupancy)

Total Required Fixture Count	Occ.	WC	Urinals	Lavs	Drinking Fountain
Men	33	1	1	1	
Women	33	2	/	1	
Totals	66	3	1	2	2

PLUMBING FIXTURE REQUIREMENTS PER CBC CHAPTER 31B

Plumbing Fixture Count – Swimming Pools

Plumbing Fixture Calculation per CBC Section 3116B.2 - Dept. of Public Health

Plumbing fixture calculations are based on Pool surface area only. per CBC Chapter 31B Section 3116B DRESSING, SHOWER AND TOILET FACILITIES and 3117B DRINKING FOUNTAINS.

3116B.2.1 Showers. One shower shall be provided for every 50 pool users.
3116B.2.2 Toilets. Separate toilet facilities shall be pro-vided for each sex. One toilet shall be provided for every 60 women or less and one toilet plus one urinal for every 75 men or less.
3116B.2.3 Lavatories. One lavatory shall be provided for every 80 pool users.

	Size (SF)	Load Factor	Occ. Load	Male	Female	
Competition Pool 200A- 30 M x 25 YD	7,431	15	496	248	248	
Lap Pool 200B - 6 Lane x 25 YD	3,750	15	250	125	125	
Fun Water Pool	5,563	15	371	185	186	
Splash Pad	950	15	63	32	31	
Slide	/	/	50	25	25	
Totals			**1,230**	**615**	**615**	
Required Fixture Count	**Occ.**	**WC**	**Urinals**	**Lavs**	**Showers**	**Drinking Fountain**
		1/60 men 1/60 women	1/75 men /	1/80 users	1/50 users	1 for first 250 users, then 1/200 users
Men	615	10	9			
Women	615	10	/			
Totals	1,230	20	9	16	25	6

CODE ANALYSIS

Applicable Codes:

California Code of Regulations, Title 24, Published by the California Building Standards Commission:
Part 1, "2022 California Administrative Code" (CAC) with City of Oxnard Amendments
Part 2, "2022 California Building Code" (CBC) with City of Oxnard Amendments
Part 3, "2022 California Electrical Code" (CEC) with City of Oxnard Amendments
Part 4, "2022 California Mechanical Code" (CMC) with City of Oxnard Amendments
Part 5, "2022 California Plumbing Code" (CPC) with City of Oxnard Amendments
Part 6, "2022 California Energy Code"
Part 9, "2022 California Fire Code" with City of Oxnard Amendments
Part 11, "2022 California Green Building Standards Code" with City of Oxnard Amendments
Part 12, "2022 California Reference Standards Code" with City of Oxnard Amendments

2010 ADA Standards for Accessible Design, as published by the Department of Justice, September 15, 2010

CBC Chapter 3: Occupancies

A-2	Assembly uses intended for food and/or drink consumption	CBC Section 303
A-3	Assembly uses not classifed elsewhere in Group A	CBC Section 303
A-5	Recreation Use with Outdoor Spectator Seating	CBC Section 303
B	Offices	CBC Section 304
S-2	Low Hazard Storage	CBC Section 311

CBC Chapter 5: Occupancy Separation

Occupancy Unseparated, Mixed-Use Occupancy
Building Occupancy shall be **A-3** per most restrictive criteria.

Mixed Use and Occupancy

No separation is required between accessory occupancies and the main occupancy CBC 508.2.4

No separation is required between nonseparated occupancies. CBC 508.3.3

CBC Chapter 5: General Building Heights and Areas

The building is to be of Type VB construction and will be fully sprinklered.

The proposed area of the building is a total of 13,691 SF on one story. The proposed building height is 21'-2 1/2".
While composed of separated wings the proposed building is analyzed as a single building per CBC Section 503.1.2.

Actual Building Area CBC CHAPTER 2 DEFINITIONS
The area included within surrounding exterior walls, or exterior walls and fire walls, exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

Building Area in Square Feet (per Section 202)		
Level 1		
Enclosed Building Area	GSF	12,540
Circulation and Restrooms	GSF	1,151
Total Gross Square Footage (GSF)		13,691
Covered Outdoor Area		7,470
Total Gross Square Footage (GSF)		**21,161**

Construction Type	Most Restrictive Occupancy	Area (SF) per Equation 5-1, Section 506.2.1 Single-Occupancy Buildings	Height (Stories and Feet)
VB	A-3	Aa = At + (NS x If)	
ALLOWABLE	A-3	28, 500 SF = 24,000 + (6,000 X 0.75)	1 ST / 40'
PROPOSED	A-3	21, 161 SF	1 ST / 21'-2 1/2"

If = (F/P - .25) W/30

F (Total Building Frontage) = 908.1'
P (Total Building Perimeter) = 1053.5'

If = [908.1 / 1053.5 - .25] 30/30
If = 0.6119

Frontage Increase Factor for 30' or greater CBC Table 506.3.3
If = 0.75

Definitions

Aa = Allowable area (square feet)
At = Tabular allowable area factor CBC Table 506.2
NS = Tabular allowable area factor CBC Table 506.2 for nonsprinklered building (regardless of whether the building is sprinklered)
If = Area factor increase due to frontage (percent) CBC Section 506.3
F = Building perimeter that fronts on a public way or open space having 20 foot minium open width CBC Section 506.3.2
P = Perimeter of entire building CBC Section 506.3.1
W = Width of pulic way or open space CBC Section 506.2.1

Building Element	Type VB Construction
Primary Structural Frame	0 hours
Bearing Walls - Exterior	0 hours
Bearing Walls - Interior	0 hours
Nonbearing Walls and Partitions - Exterior	0 hours
Nonbearing Walls and Partitions - Interior	0 hours
Floor Construction and Associated Secondary Members	0 hours
Roof Construction and Associated Secondary Members	0 hours

Chapter 9: Fire Protection Systems
Fire Area: Fire area is defined as the floor area enclosed by exterior building walls. Horizontal projections of the roof or floor above shall be included in the fire area.

Section 903.2.1.5: An automatic sprinkler system shall be provided for all enclosed Group A-5 accessory use areas in excess of 1,000 square feet.

City of Oxnard Code Amendments
Automatic fire sprinkler protection is required in all new buildings, including dwellings, in accordance with Oxnard City Code, Chapter 14, section 14-26.

CBC Chapter 10: Means of Egress

Means of egress is to be provided per the calculated occupant loads for the various occupancy groups per Table 1004.1.2. The number of exits provided are based on the calculated occupant loads per Tables 1006.3.1 and 1006.3.2(2) with 2 exits provided where there are more than 49 occupants, 3 exits for more than 500 occupants and 4 exits for more than 1,000 occupants. The egress component widths for the exterior areas such as the pool and pool deck will be calculated per CBC Sections 1005.3.1 and 1005.3.2 as unsprinklered areas. All building exits and pool exits will be accessible.

CBC Chapter 11B: Accessibility

The building is a public accommodation and is to be accessible per the requirements of CBC Chapter 11B.

Water slides, raised diving boards and diving platforms shall not be required to comply with these requirements or to be on an accessible route; an accessible route complying with Division 4 shall be provided to the ground- or floor-level entry points, where provided, of stairs, ladders or other means of reaching the raised elements or area

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urban design

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SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

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305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

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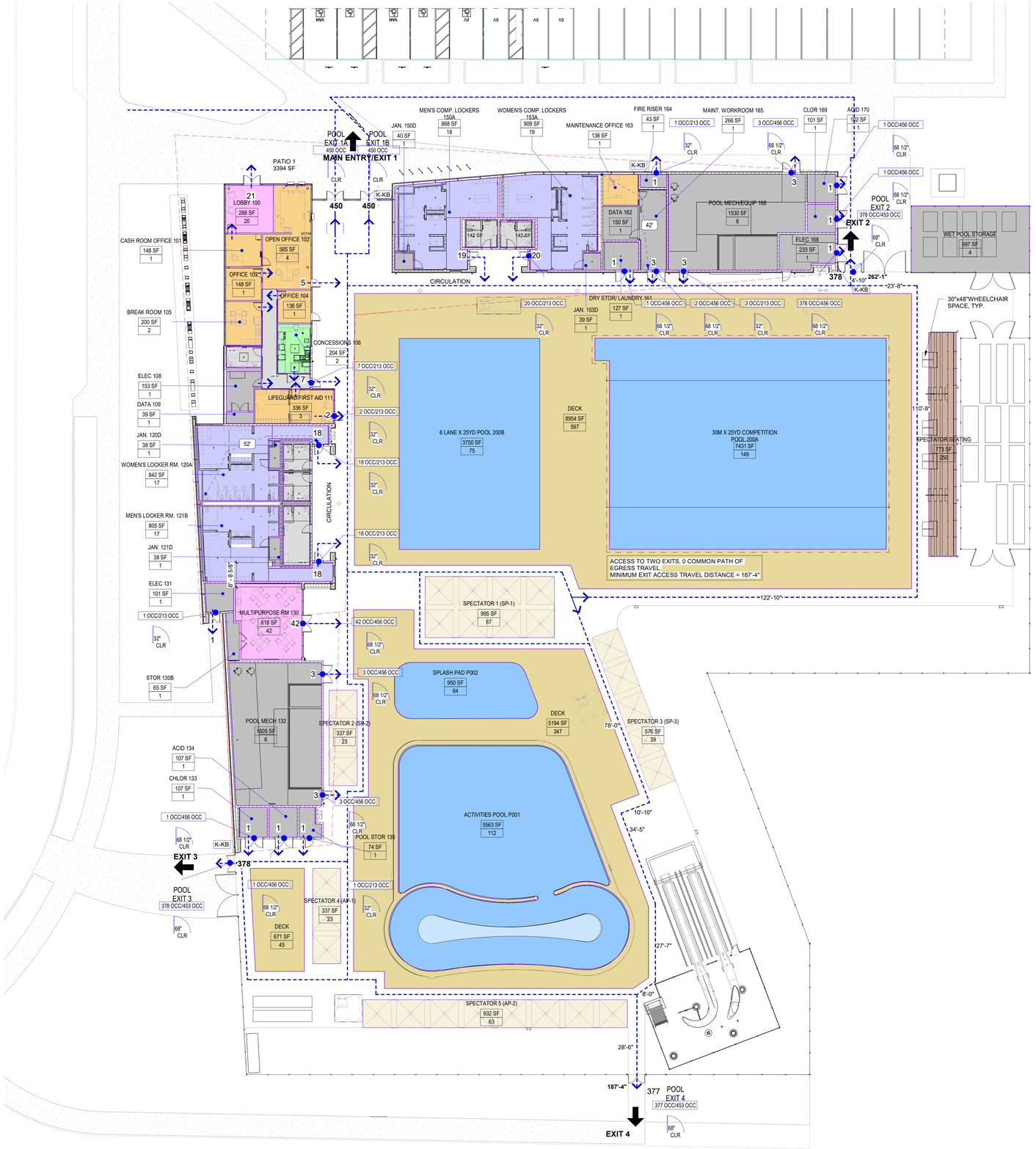
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APPROVED:

DATE

SHEET TITLE:
CODE ANALYSIS

SHEET NUMBER:
A002



1 EGRESS PLAN
1/16" = 1'-0"

OCCUPANCY SCHEDULE

Level	ROOM #	ROOM NAME	OCCUP. GROUP	OLF	NET AREA	OCCUP. LOAD
EXTERIOR						
A-5						
LEVEL 1	116	DECK	A-5	15	671 SF	45
LEVEL 1	120F	SPLASH PAD P002	A-5	15	950 SF	64
LEVEL 1	120K	DECK	A-5	15	5,194 SF	347
LEVEL 1	135	SPECTATOR 1 (SP-1)	A-5	15	995 SF	67
LEVEL 1	137	SPECTATOR 2 (SP-2)	A-5	15	337 SF	23
LEVEL 1	138	SPECTATOR 3 (SP-3)	A-5	15	576 SF	39
LEVEL 1	139	SPECTATOR 4 (AP-1)	A-5	15	337 SF	23
LEVEL 1	140	SPECTATOR 5 (AP-2)	A-5	15	932 SF	63
LEVEL 1	200	SPECTATOR SEATING	A-5	15	773 SF	250
LEVEL 1	201	6 LANE X 25YD POOL 200B	A-5	50	3,750 SF	75
LEVEL 1	202	30M X 25YD COMPETITION POOL 200A	A-5	50	7,431 SF	149
LEVEL 1	204	ACTIVITIES POOL P001	A-5	50	5,563 SF	112
LEVEL 1	205	DECK	A-5	15	8,954 SF	597
					36,464 SF	1854
INTERIOR						
A-2						
LEVEL 1	110	CONCESSIONS 106	A-2	200	204 SF	2
					204 SF	2
A-3						
LEVEL 1	100	LOBBY 100	A-3	15	288 SF	20
LEVEL 1	120L	MULTIPURPOSE RM 130	A-3	15	618 SF	42
					907 SF	62
B						
LEVEL 1	100B	OPEN OFFICE 102	B	150	565 SF	4
LEVEL 1	101	CASH ROOM OFFICE 101	B	150	148 SF	1
LEVEL 1	102	OFFICE 103	B	150	148 SF	1
LEVEL 1	104	BREAK ROOM 105	B	150	200 SF	2
LEVEL 1	108	LIFEGUARD/FIRST AID 111	B	150	336 SF	3
LEVEL 1	117	OFFICE 104	B	150	136 SF	1
LEVEL 1	120A	WOMEN'S LOCKER RM. 120A	B	50	842 SF	17
LEVEL 1	121	MEN'S LOCKER RM. 121B	B	50	805 SF	17
LEVEL 1	150A	MEN'S COMP. LOCKERS 150A	B	50	868 SF	18
LEVEL 1	151A	WOMEN'S COMP. LOCKERS 153A	B	50	909 SF	19
LEVEL 1	163	MAINTENANCE OFFICE 163	B	150	138 SF	1
					5,094 SF	84
S-2						
LEVEL 1	106	DATA 109	S-2	300	39 SF	1
LEVEL 1	107	ELEC 108	S-2	300	153 SF	1
LEVEL 1	113	ELEC 131	S-2	300	101 SF	1
LEVEL 1	118	JAN. 153D	S-2	300	39 SF	1
LEVEL 1	122	JAN. 120D	S-2	300	38 SF	1
LEVEL 1	123	JAN. 121D	S-2	300	38 SF	1
LEVEL 1	130A	STOR 130B	S-2	300	65 SF	1
LEVEL 1	131	POOL MECH 132	S-2	300	1,609 SF	6
LEVEL 1	132	CHLOR 133	S-2	300	107 SF	1
LEVEL 1	133	ACID 134	S-2	300	107 SF	1
LEVEL 1	134	POOL STOR 135	S-2	300	74 SF	1
LEVEL 1	152	JAN. 150D	S-2	300	40 SF	1
LEVEL 1	161	DRY STOR/ LAUNDRY 161	S-2	300	127 SF	1
LEVEL 1	162	FIRE RISER 164	S-2	300	43 SF	1
LEVEL 1	164	DATA 162	S-2	300	150 SF	1
LEVEL 1	165	MAINT. WORKROOM 165	S-2	300	266 SF	1
LEVEL 1	166	POOL MECH/EQUIP 166	S-2	300	1,530 SF	6
LEVEL 1	167	WET POOL STORAGE	S-2	300	997 SF	4
LEVEL 1	168	ELEC 168	S-2	300	233 SF	1
LEVEL 1	169	CLOR 169	S-2	300	101 SF	1
LEVEL 1	170	ACID 170	S-2	300	102 SF	1
					5,961 SF	34
Grand total					48,629 SF	2036

4 EXITS

THE BUILDING IS TO BE TYPE VB CONSTRUCTION AND WILL BE FULLY SPRINKLERED.
THE OCCUPIED GROSS BUILDING AREA UNDER THE ROOF IS 21,161 SF.

LEGEND

- Name — AREA NAME (SEE EGRESS SCHEDULE)
- 95000 — OCCUPANT LOAD
- 100 — AREA (SF)
- 36" CLR — DOOR WIDTH (CLEARANCE WHEN IN OPEN POSITION PER CBC 1010.1.1)
- 36" — STAIRWAY WIDTH
- EXIT / 200 OCC/220 OCC — EXIT NUMBER; EXIT CAPACITY; ACTUAL NUMBER OF OCCUPANT FLOW
- ACCESSIBLE PATH OF TRAVEL
- 100' — PATH OF TRAVEL DISTANCE TO EXIT
- K-KB — KNOX BOX - SURFACE MOUNTED
- K-KS — KNOX KEY SWITCH
- PH — PANIC HARDWARE
- CR — CARD READER (ON KEY SWITCH CIRCUIT)

GENERAL NOTES

COMMON PATH OF EGRESS TRAVEL LIMIT (SPACES WITH 1 EXIT):
A OCCUPANCIES = 75'
B & S OCCUPANCIES = 100'

A & B OCCUPANCIES ARE PERMITTED UP TO 49 OCCUPANTS
S OCCUPANCIES ARE PERMITTED UP TO 29 OCCUPANTS

EXIT ACCESS TRAVEL DISTANCE (CBC TABLE 1017.2):
A & S OCCUPANCIES = 250', FULLY-SPRINKLERED
B OCCUPANCY = 300', FULLY-SPRINKLERED

EGRESS WIDTH CALCULATION:
EGRESS COMPONENT OTHER THAN STAIR: OCCUPANT LOAD X 0.20 = REQUIRED WIDTH (TENNIS COURTS)
EGRESS COMPONENT OTHER THAN STAIR, FULLY SPRINKLERED W/ VOICE ALARM COMMUNICATION SYSTEM: OCCUPANT LOAD X .15 = REQUIRED EXIT WIDTH (INCHES)
EXIT STAIRS: OCCUPANT LOAD X 0.20 = REQUIRED EXIT WIDTH (INCHES)
PER CBC 1009.74 STAIRS SERVING AN AREA OF ASSISTED RESCUE SHALL PROVIDE MINIMUM 48" CLEAR BETWEEN HANDRAILS.

NOTE: OCCUPANT LOAD FACTORS ARE CALCULATED USING EXCEPTIONS UNDER 1005.3.1 (STAIRS) & 1005.3.2 (OTHER EGRESS COMPONENTS) FOR BUILDINGS EQUIPPED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM AND AN EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM.

SHEET NOTES

POOL DECK EXITING

2,037 (TOTAL OCCUPANTS)

2,037 OCCUPANTS X .15 INCHES = 305.55 INCHES OF EXITING WIDTH

305.55 INCHES / 68 INCH CLEAR DOORS = 4.49 (5 DOORS FROM POOL DECK)

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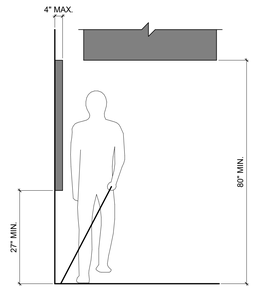
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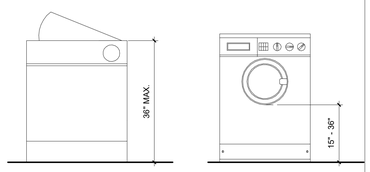
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SHEET TITLE:
EGRESS PLAN

SHEET NUMBER:
A003

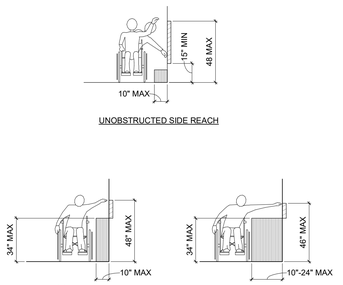


20 LIMITS OF PROTRUDING OBJECTS
1/4" = 1'-0"



TOP LOADING FRONT LOADING

23 ACCESSIBLE LAUNDRY MACHINE
3/4" = 1'-0"

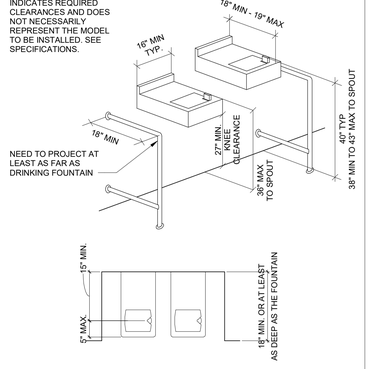


UNOBSTRUCTED SIDE REACH

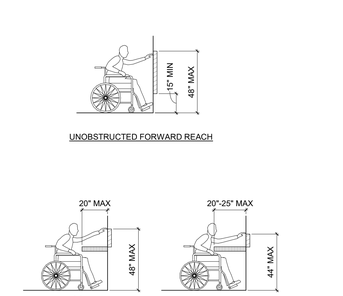
OBSTRUCTED HIGH SIDE REACH

19 SIDE REACH REQUIREMENTS
1/4" = 1'-0"

NOTE: ILLUSTRATION INDICATES REQUIRED CLEARANCES AND DOES NOT NECESSARILY REPRESENT THE MODEL TO BE INSTALLED. SEE SPECIFICATIONS.



22 TYPICAL HIGH/LOW DRINKING FOUNTAIN

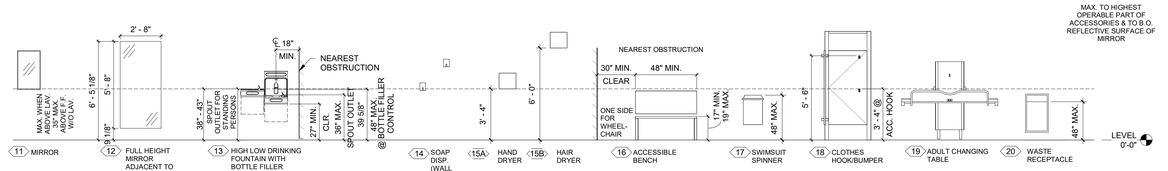


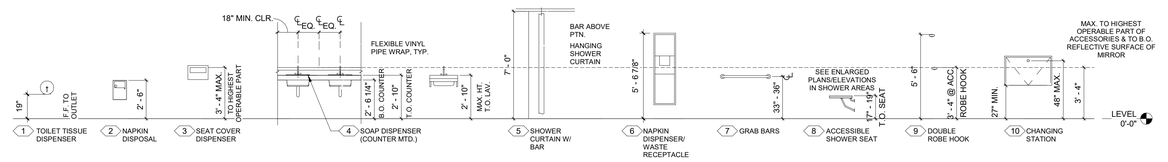
OBSTRUCTED HIGH FORWARD REACH

18 FORWARD REACH REQUIREMENTS
1/4" = 1'-0"

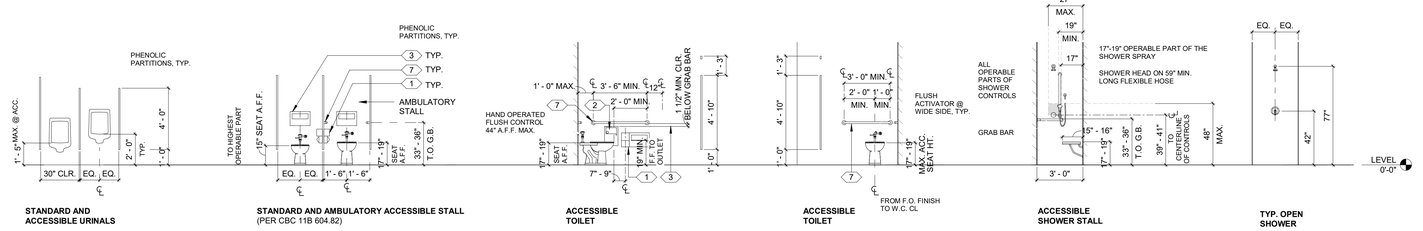
TYP. DIMENSIONS AND MOUNTING HEIGHTS



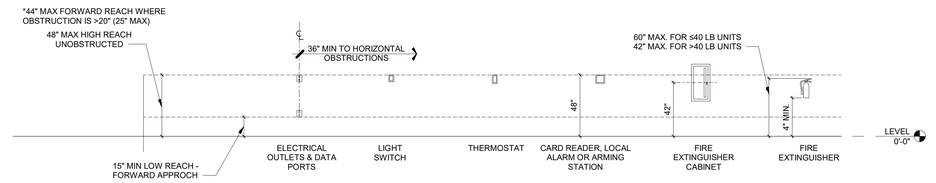




TOILET ACCESSORIES MOUNTING HEIGHT SCHEDULE



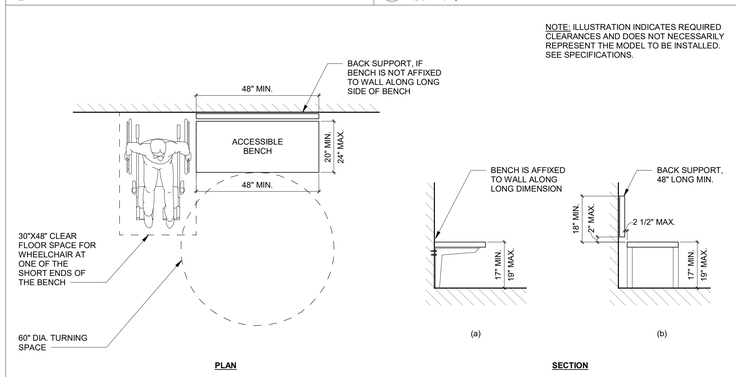
TYPICAL STALL/FIXTURE DIMENSIONS



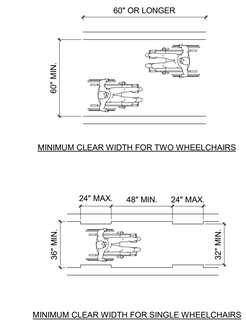
COMMON USE ELEMENT MOUNTING HEIGHTS

ACCESSORY KEY

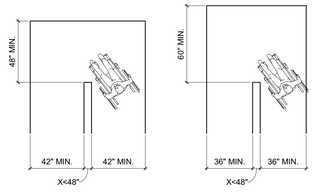
1 TOILET TISSUE DISPENSER
2 NAPKIN DISPOSAL
3 SEAT COVER DISPENSER
4 SOAP DISPENSER (COUNTER MTD.)
5 SHOWER CURTAIN W/ BAR
6 NAPKIN DISPENSER / WASTE RECEPTACLE
7 GRAB BARS
8 ACCESSIBLE SHOWER SEAT
9 DOUBLE ROBE HOOK
10 CHANGING STATION
11 MIRROR
12 FULL HEIGHT MIRROR ADJACENT TO ACCESSIBLE BENCH
13 HIGH LOW DRINKING FOUNTAIN WITH BOTTLE FILLER
14 SOAP DISPENSER (WALL MTD.)
15A HAND DRYER
15B HAIR DRYER
16 ACCESSIBLE BENCH
17 SWIMSUIT SPINNER
18 CLOTHES HOOK/BUMPER AT EA. TOILET STALL
19 ADULT CHANGING TABLE
20 WASTE RECEPTACLE
21 UTILITY SHELF W/ BROOM HOLDERS
22 WALL-MOUNTED SHELF



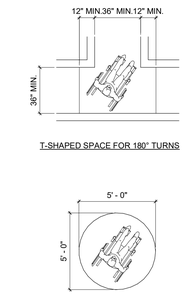
21 ACCESSIBLE BENCH DETAILS
1/2" = 1'-0"



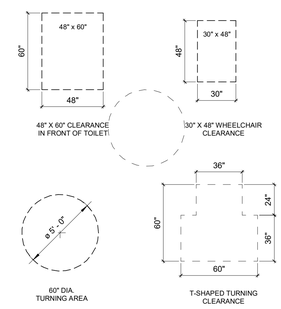
13 MIN CLEAR WIDTH OF ACCESSIBLE ROUTES
1/4" = 1'-0"



9 CLEAR WIDTH @ 180 DEGREE TURN
1/4" = 1'-0"



5 WHEELCHAIR TURNING RADIUS & T-SHAPED SPACE
1/4" = 1'-0"



(CODES MAY REQUIRE OTHERS)

1 REQUIRED CLEARANCES SHOWN
1/4" = 1'-0"

els architecture+ urban design

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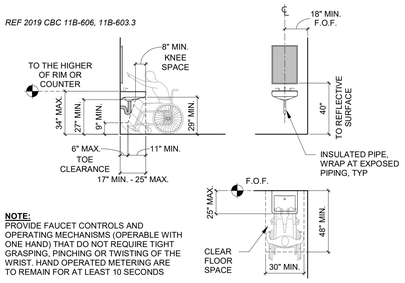
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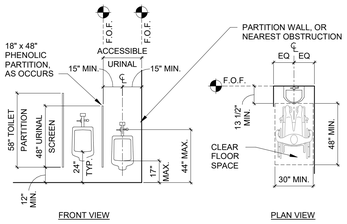
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SHEET TITLE:
ACCESSIBILITY DETAILS - PUBLIC & COMMERCIAL BUILDINGS

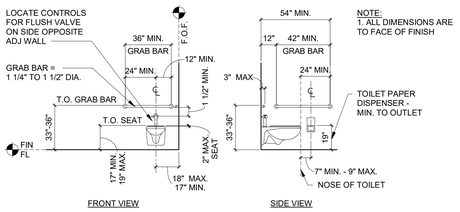
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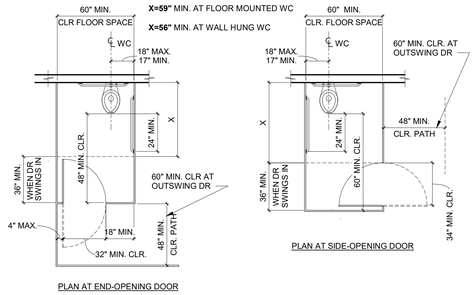
15 000 CBC 11B ACCESSIBLE LAVATORY
1/4" = 1'-0"



14 000 CBC 11B ACCESSIBLE URINAL
1/4" = 1'-0"
REF 2019 CBC 11B-605

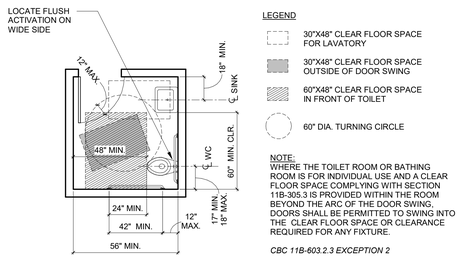


13 000 CBC 11B ACCESSIBLE WATER CLOSET
1/4" = 1'-0"
REF 2019 CBC 11B-603, 11B-609

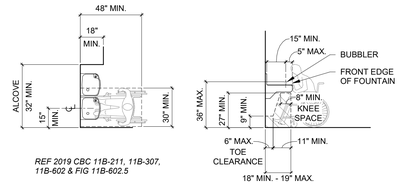


REF 2019 CBC 11B-604.8.1.1.3

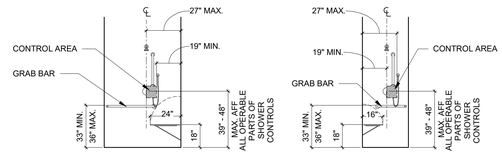
12 000 CBC 11B ACCESSIBLE WATER CLOSET - MULTIPLE ACCOMODATION TOILET
1/4" = 1'-0"

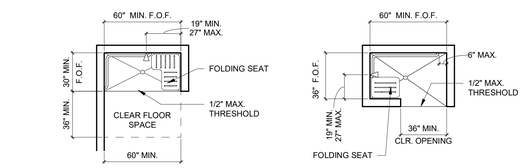


11 000 CBC 11B ACCESSIBLE WATER CLOSET - SINGLE ACCOMODATION
1/4" = 1'-0"



10 000 CBC 11B ACCESSIBLE DRINKING FOUNTAIN
1/4" = 1'-0"

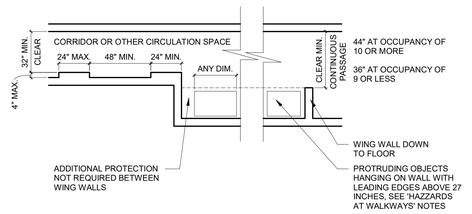




NOTES:

1. PROVIDE FLOOR SLOPES OF 2% MAX. IN AN DIRECTION
2. MAX OPENING IN DRAIN COVER TO BE 1/4"

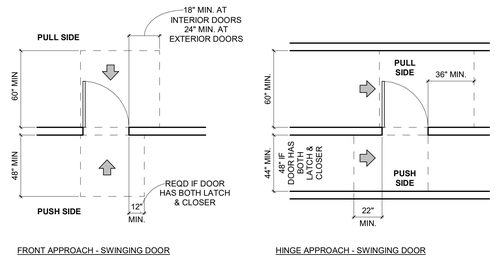
9 000 CBC 11B ROLL-IN SHOWER STALLS
1/4" = 1'-0"
2019 CBC 11B-608



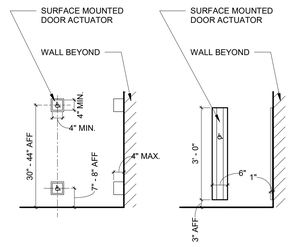
8 000 CBC 11B PROJECTING OBJECTS
1/4" = 1'-0"
REF. 2019 CBC 11B-403.5

1. PROVIDE 80" HEADROOM FROM THE WALKWAY SURFACE TO ANY OVERHANGING OBSTRUCTION AT WALKS, CORRIDORS, AISLES AND PASSAGEWAYS.
   2019 CBC 11B-307.4
2. WHERE VERTICAL CLEARANCE IS LESS THAN 80", PROVIDE A BARRIER WITH THE LEADING EDGE LOCATED 27" MAXIMUM ABOVE THE FLOOR.
   2019 CBC 11B-307.4
3. LIMIT PROJECTING OBJECTS WITH LEADING EDGES BETWEEN 27" AND 80" ABOVE THE WALKWAY SURFACE TO A MAXIMUM OF 4" AT WALKS, CORRIDORS, AISLES AND PASSAGEWAYS.
   2019 CBC 11B-307.2
4. OBJECTS WITH LEADING EDGES MOUNTED AT OR BELOW 27" ABOVE THE WALKWAY SURFACE MAY PROTRUDE ANY AMOUNT INTO THE WALK SO LONG AS MINIMUM PASSAGE WIDTHS ARE MAINTAINED.
5. PROVIDE A MINIMUM 6" TALL WARNING CURB WHERE THERE ARE ABRUPT CHANGES IN LEVEL EXCEEDING 4" IN VERTICAL DISTANCE, EXCEPT BETWEEN A WALK OR SIDEWALK AND AN ADJACENT STREET OR DRIVEWAY.
   2019 CBC 11B-303.5
6. PROVIDE ROUNDED OR EASED EDGES OF A MINIMUM RADIUS OF 1/8" AT FREE-STANDING SIGNS MOUNTED ON POSTS WHERE THE BOTTOM EDGE OF THE SIGN IS LESS THAN 80" ABOVE THE WALKWAY SURFACE, AND WHERE THE SIGN PROTRUDES FROM ITS MOUNTING POST.
   2019 CBC 11B-307.3.1

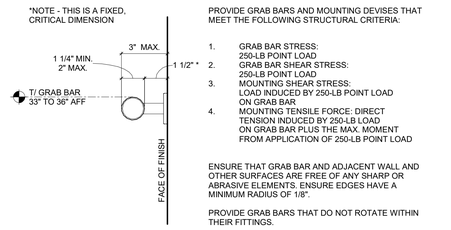
7 000 CBC 11B HAZARDS AT WALKWAYS
1/4" = 1'-0"



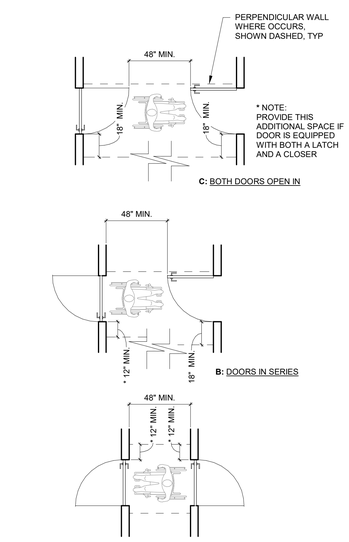
6 000 CBC 11B CLEAR SPACE AT DOOR
1/4" = 1'-0"
2019 CBC FIG. 11B-404.2.4.1



5 000 POWER ASSISTED DOOR ACTUATORS
1/2" = 1'-0"



4 000 CBC 11B GRAB BAR CLEARANCE
3" = 1'-0"
2019 CBC 11B-609



TWO HINGED DOORS IN SERIES FOR DOORS SERVING OTHER THAN A REQUIRED EXIT STAIRWAY

2 000 CBC 11B VESTIBULES
1/4" = 1'-0"
2019 CBC 11B-404.2.6

NOTES:

1. PROVIDE 36" WIDE DOORS (MIN.) WITH 32" MIN. CLEAR OPENING AS MEASURED WITH THE DOOR OPENED AT 90 DEGREES.
2. PROVIDE A LEVEL AND CLEAR AREA AT MANEUVERING CLEARANCES AT DOORS.

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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P: 510.549.2929

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LANDSCAPE ARCHITECT:
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STRUCTURAL ENGINEER:
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San Francisco, CA 94111
P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
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AQUATIC DESIGN GROUP
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San Francisco, CA 94104
P: 415 335-3940

REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:

DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:

11 DECEMBER 2023

STAMP:

NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:

ACCESSIBILITY DETAILS - PUBLIC & COMMERCIAL BUILDINGS

SHEET NUMBER:

A022



EXTERIOR - AERIAL VIEW



EXTERIOR - BUILDING ENTRY VIEW



EXTERIOR - COMPETITION POOL VIEW

els
architecture+
urban design

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11 DECEMBER 2023

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NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
RENDERINGS

SHEET NUMBER:

A030

GENERAL NOTES:

1. WORK SHOWN HEREON SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION", LATEST EDITION AND SUPPLEMENTS.
2. ALL GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT, "GEOTECHNICAL EVALUATION SOUTH OXNARD AQUATIC CENTER PROJECT OXNARD COLLEGE PARK", BY NINYO & MOORE DATED JUNE 22, 2022.
3. EXISTING TOPOGRAPHY SHOWN HEREON WAS TAKEN FROM A SURVEY DATED JULY 7, 2022 BY ENCOMPASS CONSULTANT GROUP.
4. THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS.
5. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL JOIN CONDITIONS FOR GRADING, DRAINAGE AND UNDERGROUND FACILITIES INCLUDING LOCATION AND ELEVATION OF EXISTING UNDERGROUND FACILITIES AT CROSSINGS WITH PROPOSED UNDERGROUND FACILITIES. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITIONS HAVE BEEN EVALUATED.
6. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
7. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
8. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
9. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITY INFORMATION SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
10. IF AT ANY TIME DURING GRADING OPERATIONS, ANY UNFAVORABLE GEOLOGICAL CONDITIONS ARE ENCOUNTERED, GRADING IN THAT AREA WILL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED.
11. THE PROPOSED GRADE IS THE FINAL GRADE AND NOT THE ROUGH GRADE. THE CONTRACTOR SHALL SUBTRACT THE THICKNESS OF THE PAVED SECTION AND/OR LANDSCAPE TOPSOIL SECTION TO ARRIVE AT THE ROUGH GRADE ELEVATION.
12. STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN CONTOUR LINES AND SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
13. ALL DEBRIS AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT APPROVED DISPOSAL SITES. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FOR THE TRANSPORTATION OF MATERIAL TO AND FROM THE SITE.
14. ALL FILL SOILS OR SOILS DISTURBED OR OVEREXCAVATED DURING CONSTRUCTION SHALL BE COMPACTED PER THE REQUIREMENTS OF THE SOILS REPORT BUT NOT LESS THAN 90% MAXIMUM DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D-1557.
15. THE CONTRACTOR SHALL OBTAIN AN O.S.H.A. PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE CONSTRUCTION OF TRENCHES OR EXCAVATIONS WHICH ARE FIVE FEET OR DEEPER.
16. DIMENSIONS TO PIPELINES ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
17. ALL WATER LINES SHALL BE INSTALLED WITH 36" MINIMUM COVER FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.
18. THRUST BLOCKS SHALL BE INSTALLED AT WATERLINE HORIZONTAL AND VERTICAL BENDS, TEES, CAPPED ENDS AND REDUCERS ACCORDING TO THE DETAILS PROVIDED ON THESE PLANS.
19. CONSTRUCTION STAKING FOR IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR. CONSTRUCTION STAKING SURVEYOR SHALL BE RESPONSIBLE FOR COORDINATION OF THESE PLANS WITH SOURCE DRAWINGS PREPARED BY ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER, MEP CONSULTANT AND ANY OTHER DISCIPLINE PRIOR TO START OF STAKING AND CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED.
20. THE CONTRACTOR SHALL REPLACE ALL EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION TO MATCH EXISTING, INCLUDING PERMANENT TRENCH RESURFACING.
21. CONTRACTOR TO CONTACT UNDERGROUND SERVICE ALERT (800-227-2600) PRIOR TO EXCAVATION.
22. ALL DIMENSIONS ARE IN FEET OR DECIMALS THEREOF.
23. ALL CURB DIMENSIONS AND RADII ARE TO PAVEMENT FACE OF CURB.
24. CONTRACTOR TO BE AWARE OF ALL OVERHEAD LINES AT ALL TIMES, SO AS NOT TO DISTURB THEM.
25. WATER SHALL BE PROVIDED ONSITE AND USED TO CONTROL DUST DURING CONSTRUCTION OPERATIONS.
26. CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS FROM THE CITY OF OXNARD FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
27. STORM DRAINAGE SYSTEMS SHOWN ON THESE PLANS HAVE BEEN DESIGNED FOR THE FINAL SITE CONDITION AT COMPLETION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF THE SITE, DURING INTERIM CONDITIONS OF CONSTRUCTION.
28. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, INCLUDING NPDES, FROM THE APPROPRIATE JURISDICTIONAL AGENCIES FOR DISCHARGE OF GROUNDWATER THAT MAY BE NECESSARY TO ACCOMPLISH EXCAVATIONS SHOWN ON THESE PLANS.

LEGEND:

GENERAL

- CIVIL LIMITS OF WORK
- SHEET LINE
- PROPERTY LINE

ANNOTATION

- 100.00 XX — SURFACE ELEVATION/UTILITY ELEVATION
- (100.00)XX — EXISTING SURFACE ELEVATION/UTILITY ELEVATION
- XX — CONSTRUCTION NOTE
- 2.0% — FLOW (DIRECTION AND GRADE)
- 2:1 — SLOPE (DIRECTION AND RUN:RISE)
- XX — HORIZONTAL CONTROL POINT LABEL
- CX — CURVE DATA LABEL
- FF=100.00 — PAD/FINISHED FLOOR ELEVATION

SITE

- CURB/BACK OF CURB/GUTTER
- RETAINING WALL/SITE WALL
- PROPERTY LINE/RIGHT OF WAY
- CENTER LINE
- FENCE
- TO BE DEMOLISHED

EROSION CONTROL

- GRAVEL BAGS
- FIBER ROLL
- PROPOSED BUILDING EXCAVATION OUTLINE
- EXISTING DRAINAGE DIRECTION OF FLOW
- PROTECT TREE IN PLACE

GRADING

- 100 — PROPOSED MAJOR CONTOUR
- 102 — PROPOSED MINOR CONTOUR
- FLOW LINE
- GB — GRADE BREAK LINE
- R — RIDGE LINE
- EARTHEN SWALE
- SAWCUT
- LIMITS OF GRADING
- GRADING BENCH
- TOP / TOE — GRADED SLOPE (HORIZONTAL:VERTICAL)

UTILITY

- SS — SANITARY SEWER
- W — WATER
- DW — DOMESTIC WATER
- FW — FIRE WATER
- SD — STORM DRAIN
- G — GAS
- E — ELECTRIC
- T — TELEPHONE
- PERFORATED PIPE
- POINT OF CONNECTION
- COORDINATION POINT
- CAP OR PLUG
- UTILITY MANHOLE
- UTILITY CLEANOUT
- STORM DRAIN INLET
- AREA DRAIN/PLANTER DRAIN
- TRENCH DRAIN
- FIRE HYDRANT
- THRUST BLOCK
- FIRE DEPARTMENT CONNECTION (FDC)
- POST INDICATOR VALVE (PIV)
- WATER VALVE
- BACKFLOW ASSEMBLY
- UTILITY METER VAULT

ABBREVIATIONS:

AC	ASPHALTIC CONCRETE	MH	MANHOLE
BCR	BEGIN CURVE RETURN	(N)	NORTH
BW	BACK OF WALK	NTS	NOT TO SCALE
BLDG	BUILDING	PA	PLANTER AREA
BM	BENCH MARK	POC	POINT OF CONNECTION
BOS	BOTTOM OF STAIRS	PIV	POST INDICATOR VALVE
BMP	BEST MANAGEMENT PRACTICES	PCC	POINT OF COMPOUND CURVE
CB	CATCH BASIN	PRC	POINT OF REVERSE CURVE
CI	CAST IRON	PRV	PRESSURE REDUCING VALVE
CL	CENTER LINE	PVC	POLYVINYL CHLORIDE
CMU	CONCRETE MASONRY UNIT	R	RADIUS
CO	CLEANOUT	RCIP	RECTANGULAR CAST IRON PIPE
CONC	PORTLAND CEMENT CONCRETE	RD	ROOF DRAIN
CF	CURB FACE	RW	RIGHT-OF-WAY
DW	DOMESTIC WATER	(S)	SOUTH
(E)	EAST	S=	SLOPE EQUALS
ECR	END CURVE RETURN	SD	STORM DRAIN
EG	EDGE OF GUTTER	SSMH	SANITARY SEWER MANHOLE
EL. OR ELEV	ELEVATION	SS	SANITARY SEWER
ELEC	ELECTRIC, ELECTRICAL	STD	STANDARD
EX. OR EXIST.	EXISTING	SDMH	STORM DRAIN MANHOLE
FDC	FIRE DEPARTMENT CONNECTION	TC	TOP OF CURB
FF	FINISHED FLOOR	TEL	TELEPHONE
FG	FINISHED GRADE (LANDSCAPE)	TG	TOP OF GRATE
FS	FINISHED SURFACE (HARDSCAPE)	TOS	TOP OF STAIRS
FH	FIRE HYDRANT	TW	TOP OF WALL
FL	FLOW LINE	TS	TRAFFIC SIGNAL
FT	FOOT OR FEET	TSB	TRAFFIC SIGNAL BOX
FU	FIXTURE UNITS	TYP	TYPICAL
FW	FIRE WATER	TV	TELEVISION
GPM	GALLONS PER MINUTE	VIF	VERIFY IN FIELD
GV	GATE VALVE	VLT	VAULT
HDPE	HIGH DENSITY POLYETHYLENE	VCP	VITRIFIED CLAY PIPE
HP	HIGH POINT	(W)	WEST
INV.	INVERT	W	WATER
LP	LOW POINT	WM	WATER METER
MAX.	MAXIMUM	WV	WATER VALVE
MIN.	MINIMUM		

PATTERN LEGEND:

- CONCRETE PAVING (REFER TO SHEET C5.01 FOR DETAILS)
- HEAVY CONCRETE PAVING (REFER TO SHEET C5.01 FOR DETAILS)
- LIGHT DUTY ASPHALT (REFER TO SHEET C5.01 FOR DETAILS)
- HEAVY DUTY ASPHALT (REFER TO SHEET C5.01 FOR DETAILS)
- GRAVEL (REFER TO ARCHITECTURAL PLANS FOR DETAILS)
- PLANTER AREA/LANDSCAPE (REFER TO LANDSCAPING PLANS FOR DETAILS)

PROJECT DIRECTORY:

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SAN FRANCISCO, CA 94111
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CONTACT: FAITH TURAN

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IRVINE, CA 92618
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CONTACT: JENNIFER SCHMIDT

SURVEYOR:
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CAMARILLO, CA 93010
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CONTACT: BEN HARDIN

SHEET INDEX:

CIVIL DRAWINGS	
C0.01	TITLE SHEET
C1.00	SURVEY (FOR REFERENCE ONLY)
C1.01	SURVEY (FOR REFERENCE ONLY)
C1.02	SURVEY (FOR REFERENCE ONLY)
C1.30	GRADING PLAN
C1.31	GRADING PLAN
C1.32	GRADING PLAN
C1.33	GRADING PLAN
C1.40	UTILITY PLAN
C1.41	STORM WATER TREATMENT PLAN
C1.50	FIRE ACCESS PLAN
C1.60	PAVING PLAN
C3.00	UTILITY PROFILES
C5.00	DETAILS
C5.01	DETAILS

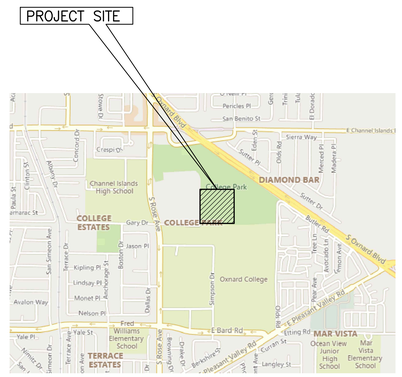
1-800-227-2600
CALL USA/SC FOR UNDERGROUND LOCATING 48 HOURS BEFORE YOU DIG!

IMPORTANT NOTICE
SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIGALERT IDENTIFICATION NUMBER BE ISSUED BEFORE A "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIGALERT I.D. NUMBER CALL UNDERGROUND SERVICE ALERT TOLL FREE 1-800-227-2600 TWO WORKING DAYS BEFORE YOU DIG

REFER TO RINCON CONSULTANTS CONCLUSIONS AND RECOMMENDATIONS IN "PHASE II ENVIRONMENTAL SITE ASSESSMENT" DOCUMENT FOR OXNARD AQUATIC CENTER.

THIS PLAN HAS BEEN REVIEWED AND CONFORMS TO RECOMMENDATIONS OF SOILS ENGINEERING/GEOLOGICAL REPORT BY NINYO & MOORE DATED JUNE 22, 2023.

SIGNATURE _____ DATE _____ STAMP



VICINITY MAP
NOT TO SCALE

els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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FOOD SERVICE
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P: 775-782-1110

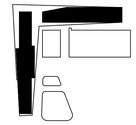
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THE PREVIEW GROUP
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SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER — BRIAN G. KAHLE — No. C59894 — Exp. 12/31/23 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
C0.01

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MAPPING LEGEND *(ITEMS LISTED BELOW MAY NOT BE SHOWN ON MAP)*

ABBREVIATIONS

AC	ASPHALT CONCRETE	LTT	LEAD, TACK & TAG
BTM	BOTTOM	M	MEASURED
BW	BACK OF WALK	N'LY	NORTHERLY
CATV	CABLE TV	NE'LY	NORTHEASTERLY
CAB	CABINET	NW'LY	NORTHWESTERLY
CB	CATCH BASIN	N	NORTH
CL	CENTERLINE	OAK	OAK TREE
CLF	CHAIN LINK FENCE	OHW	OVERHEAD WIRES
CMP	CORRUGATED METAL PIPE	PB	PULLBOX
CO	CLEAN OUT	PVC	POLYVINYL CHLORIDE (PIPE)
COMM	COMMUNICATIONS	RCP	REINFORCED CONCRETE PIPE
CONC	CONCRETE	R/W	RIGHT OF WAY
CP	CONTROL POINT	S'LY	SOUTHERLY
DI	DRAIN INLET	SE'LY	SOUTHEASTERLY
DS	DOWN SPOUT	SW'LY	SOUTHWESTERLY
E'LY	EASTERLY	S	SOUTH
E	EAST	SS	SANITARY SEWER
EP	EDGE OF PAVEMENT	SD	STORM DRAIN
ELEC	ELECTRIC	SYC	SYCAMORE TREE
EUC	EUCALYPTUS TREE	TC	TOP OF CURB
FC	FACE OF CURB (AT BOTTOM)	TG	TOP OF GRATE
FF	FINISHED FLOOR	TS	TRAFFIC SIGNAL
FL	FLOW LINE	TW	TOP OF WALL
FND	FOUND	TXR	TRANSFORMER
FOC	FIBER OPTIC CABLE	UM	UTILITY MARK
FS	FINISHED SURFACE	UNK	UNKNOWN
HCR	HANDICAP RAMP	VT	VAULT
HDPE	HIGH DENSITY POLYETHYLENE (PIPE)	W	WEST
INV	INVERT	W'LY	WESTERLY
IP	IRON PIPE	WTR	WATER

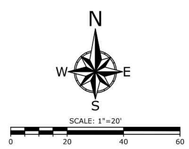
SYMBOLS

- BFP - BACK FLOW PREVENTER
- B - BOLLARD
- DI - DRAIN INLET
- FDC - FIRE DEPARTMENT CONNECTION
- FH - FIRE HYDRANT
- GUY - GUY-ANCHOR
- HB - HOSE BIB
- MB - MAILBOX
- GM - GAS METER
- WM - WATER METER
- TMH - TELEPHONE MANHOLE
- FOMH - FIBER OPTIC MANHOLE
- SDMH - STORM DRAIN MANHOLE
- SMH - SEWER MANHOLE
- MH - MANHOLE
- CATV - CABLE TV PULLBOX
- COMM - COMMUNICATION PULLBOX
- ELPB - ELECTRIC PULLBOX
- GAS - GAS PULLBOX
- SLPB - STREET LIGHT PULLBOX
- TSPB - TRAFFIC SIGNAL PULLBOX
- WPB - WATER PULLBOX
- PILASTER
- PIV - POST INDICATOR VALVE
- GUY-P - GUY POLE
- POLE - LIGHT
- POLE - TRAFFIC SIGNAL ARM
- POLE - TRAFFIC SIGNAL
- UP - POLE - UTILITY
- R - UTILITY RISER
- SCO - SEWER CLEAN OUT
- SIGN - SIGN
- SIGN - SIGN W/ DOUBLE POST
- TREE
- UTILITY MARK
- GV - GAS VALVE
- ICV - IRRIGATION CONTROL VALVE
- V - VALVE (UNSPECIFIED)
- WV - WATER VALVE
- CP1 - CONTROL POINT
- FOUND MONUMENT AS NOTED
- SPOT ELEVATION (GROUND SURVEY)
- SPOT ELEVATION (GROUND SURVEY)
- SPOT ELEVATION (AERIAL SURVEY)

LINETYPES

- BOUNDARY LINE
- EASEMENT LINE
- RIGHT OF WAY LINE
- FLOWLINE
- BUILDING OVERHANG
- BUILDING FACE
- CONTOUR LINE
- CURB
- CENTERLINE
- EDGE OF PAVEMENT
- CHAINLINK/BARBWIRE FENCE
- POST FENCE
- WOOD FENCE
- GUARD RAIL
- WALL
- CABLE TV
- COMMUNICATIONS
- ELECTRIC
- FIBER OPTIC CABLE
- IRRIGATION
- NATURAL GAS
- SANITARY SEWER
- STORM DRAIN
- TRAFFIC SIGNAL
- UTILITY CONDUIT
- WATER
- OVERHEAD WIRE
- PAINTED STRIPING

SEE CONTROL POINT TABLE ON SHEET 3



SURVEY NOTES

1. MAPPING

TOPOGRAPHIC MAPPING WAS COMPILED AT A SCALE OF 1"=20', WITH A 1' FOOT CONTOUR INTERVAL FROM DATA COLLECTED IN A FIELD SURVEY PERFORMED USING CONVENTIONAL & GPS EQUIPMENT AND PROCEDURES IN JUNE, 2022, AT THE REQUEST OF ELS ARCHITECTURE AND URBAN DESIGN.

2. BASIS OF BEARINGS AND COORDINATES

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA COORDINATE SYSTEM NAD83, ZONE 5, EPOCH 2017.50 AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING STATIONS (CGPS) AND/OR CONTINUOUS OPERATING REFERENCE STATIONS (CORS) CSCI & VNCO BEING NORTH 56°18'26" WEST AS DERIVED FROM GEODETIC VALUES PUBLISHED BY THE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC).

3. ELEVATIONS

THE VERTICAL DATUM OF THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), PER GPS TIES AND GEOID MODELING (GEOID12B). TO CITY OF OXNARD BENCHMARK "ROSE/BARD", BEING AN ALUMINUM DISK SET IN CONCRETE CURB AT ROSE AVE. AND BARD RD. AND HAVING AN ELEVATION OF 27.88 FEET.

4. UTILITIES

SURFACE UTILITY FEATURES SHOWN HEREON WERE LOCATED AS A PART OF THE FIELD SURVEY PERFORMED BY ECG BASED ON VISIBILITY ON THE DATE OF SURVEY. MAPPING OF SUBSURFACE UTILITIES HAS BEEN SHOWN HEREON BASED UPON PLANS PROVIDED BY THE CITY OF OXNARD FOR THE DEVELOPMENT OF COLLEGE PARK PHASES 1C. UNDERGROUND UTILITY LINE SHOWN HEREON ARE BEST FIT TO ABOVE GROUND IMPROVEMENTS AND HAVE NOT BEEN POTHOLED OR FIELD VERIFIED.

REVISIONS

MARK	DATE	DESCRIPTION	BY
1	9/26/2022	ADDED 6-FOOT WIDE SCE EASEMENT (SHEET 3)	BPH

REVIEWED BY: _____ DATE _____ DATE _____

PROFESSIONAL LAND SURVEYOR — BENJAMIN P. HARDIN — NO 8552 — STATE OF CALIFORNIA

ECG Encompass Consultant Group
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PHONE: 805.322.4443 WEBSITE: WWW.ECGCIVIL.COM

PROJECT SURVEYOR P.L.S. 8552 — DATE: 9/26/2022

TOPOGRAPHIC SURVEY
SOUTH OXNARD AQUATIC CENTER
COLLEGE PARK
OXNARD, CA

SCALE: HORIZ. 1" = 20" VERT. N/A
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WORK ORDER 0707
DRAWN BY: MJU
CHECKED BY:
SHEET NO. 1 OF 3

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FOR REFERENCE ONLY

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER: **202210**

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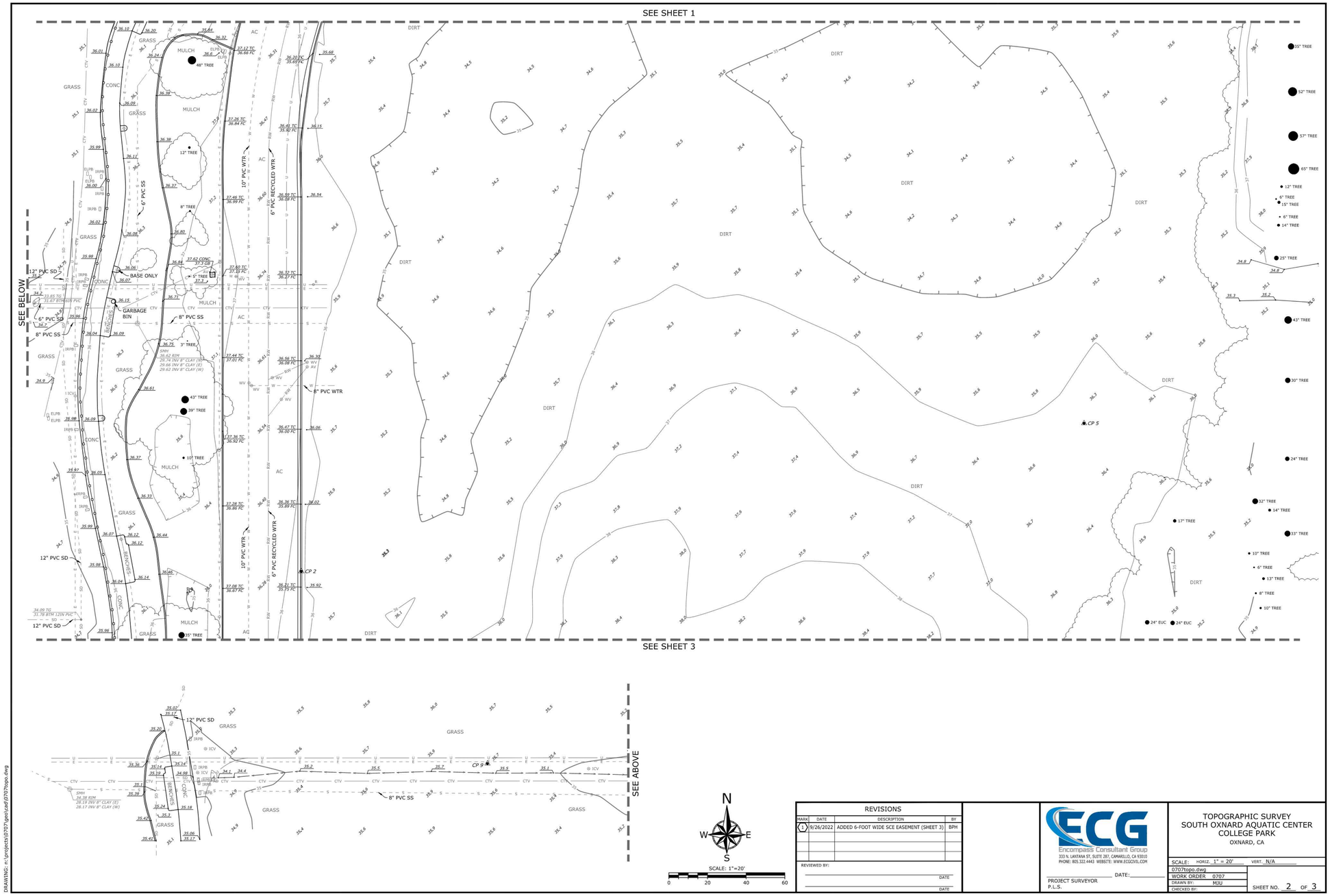
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SURVEY (FOR REFERENCE ONLY)

SHEET NUMBER:
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REVISIONS			
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REVIEWED BY:

DATE

DATE

PROJECT SURVEYOR
P.L.S.

DATE:

Encompass Consultant Group
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PHONE: 805.322.4443 WEBSITE: WWW.ECGCIVIL.COM

TOPOGRAPHIC SURVEY
SOUTH OXNARD AQUATIC CENTER
COLLEGE PARK
OXNARD, CA

SCALE: HORIZ. 1" = 20' VERT. N/A
0707topo.dwg
WORK ORDER 0707
DRAWN BY: MJU
CHECKED BY:
SHEET NO. 2 OF 3

FOR REFERENCE ONLY

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PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

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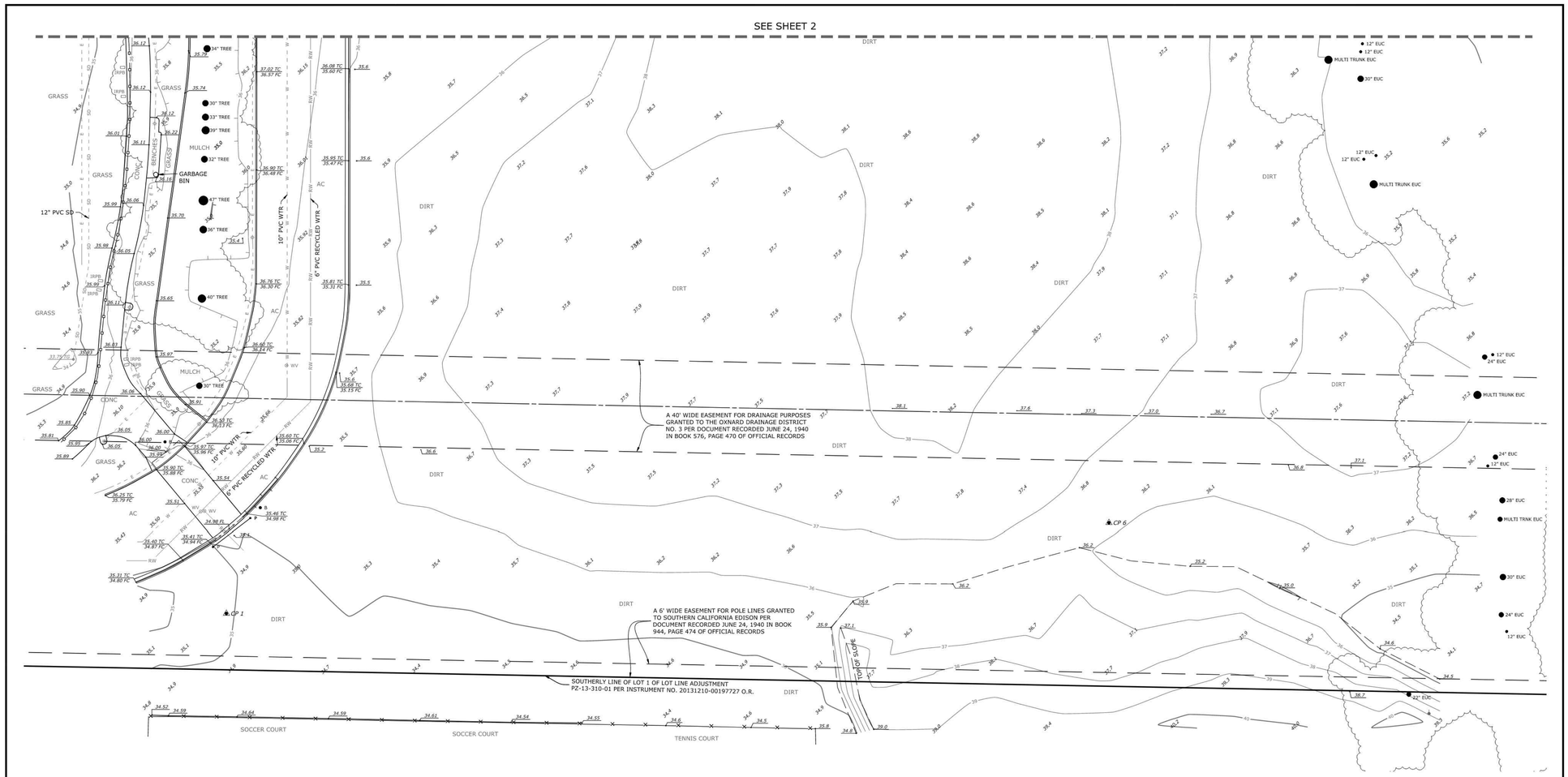
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DATE

SHEET TITLE:
SURVEY (FOR REFERENCE ONLY)

SHEET NUMBER:
C1.01



CONTROL POINT TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1885548.15	6212110.89	35.22	SET 60D MAG NAIL
2	1885834.38	6212164.59	36.26	SET SCRIBED X
3	1886214.77	6212213.94	35.74	SET SCRIBED X
4	1886249.22	6212469.56	35.76	SET 60D MAG NAIL
5	1885910.85	6212569.48	36.60	SET 60D MAG NAIL
6	1885587.62	6212496.35	36.20	SET 60D MAG NAIL
7	1886272.12	6212081.63	35.96	SET SCRIBED X
8	1886428.44	6212163.29	34.47	SET MAG NAIL ECG CONTROL WASHER
9	1885979.47	6211951.06	35.68	SET 60D MAG NAIL
200	1886920.17	6210819.12	35.26	FND LTT COO
201	1886832.79	6210818.26	34.94	FND LTT COO
202	1884249.33	6210945.71	28.08	FND 3/4IN IP W/ NAIL TAG ILLEG.
203	1883399.86	6211018.48	27.85	FND LTT LS 5411
204	1883478.89	6211017.18	27.92	FND LTT LS 5411
205	1883506.66	6210982.30	27.88	FND BM
206	1883482.52	6210848.60	28.16	FND LTT LS 5411
207	1883287.12	6212026.90	28.92	FND 3/4IN IP TAG ILLEG.

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SCALE: 1"=20'
0 20 40 60

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REVISIONS			
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1	9/26/2022	ADDED 6-FOOT WIDE SCE EASEMENT (SHEET 3)	BPH

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_____ DATE _____

ECG Encompass Consultant Group
333 N. LANTANA ST, SUITE 287, CAMARILLO, CA 93010
PHONE: 805.322.4443 WEBSITE: WWW.ECGCIVIL.COM

_____ DATE: _____
PROJECT SURVEYOR
P.L.S.

TOPOGRAPHIC SURVEY
SOUTH OXNARD AQUATIC CENTER
COLLEGE PARK
OXNARD, CA

SCALE: HORIZ. 1" = 20' VERT. N/A
0707topo.dwg
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DRAWN BY: MJU
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SHEET NO. 3 OF 3

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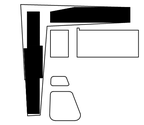
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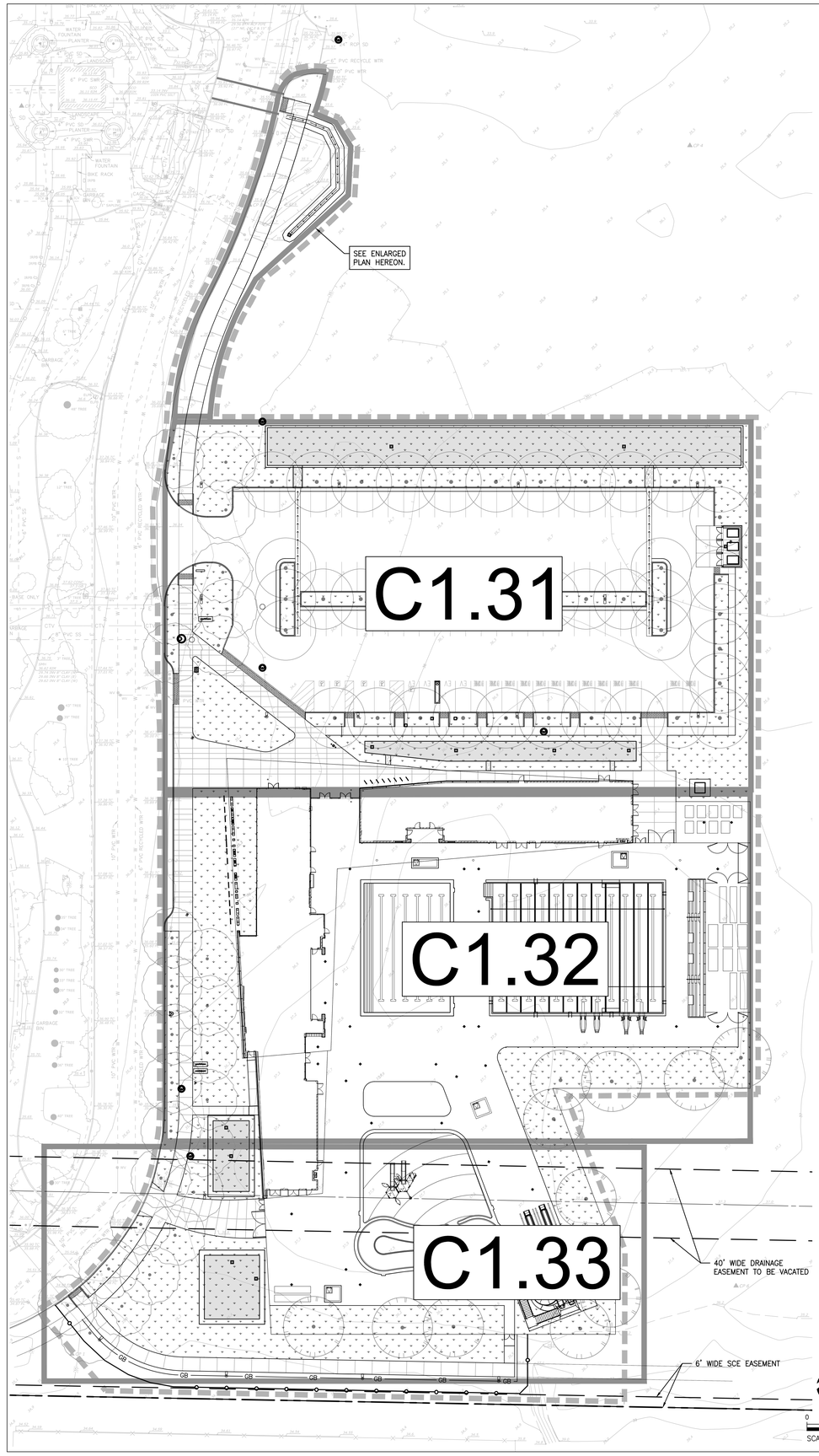
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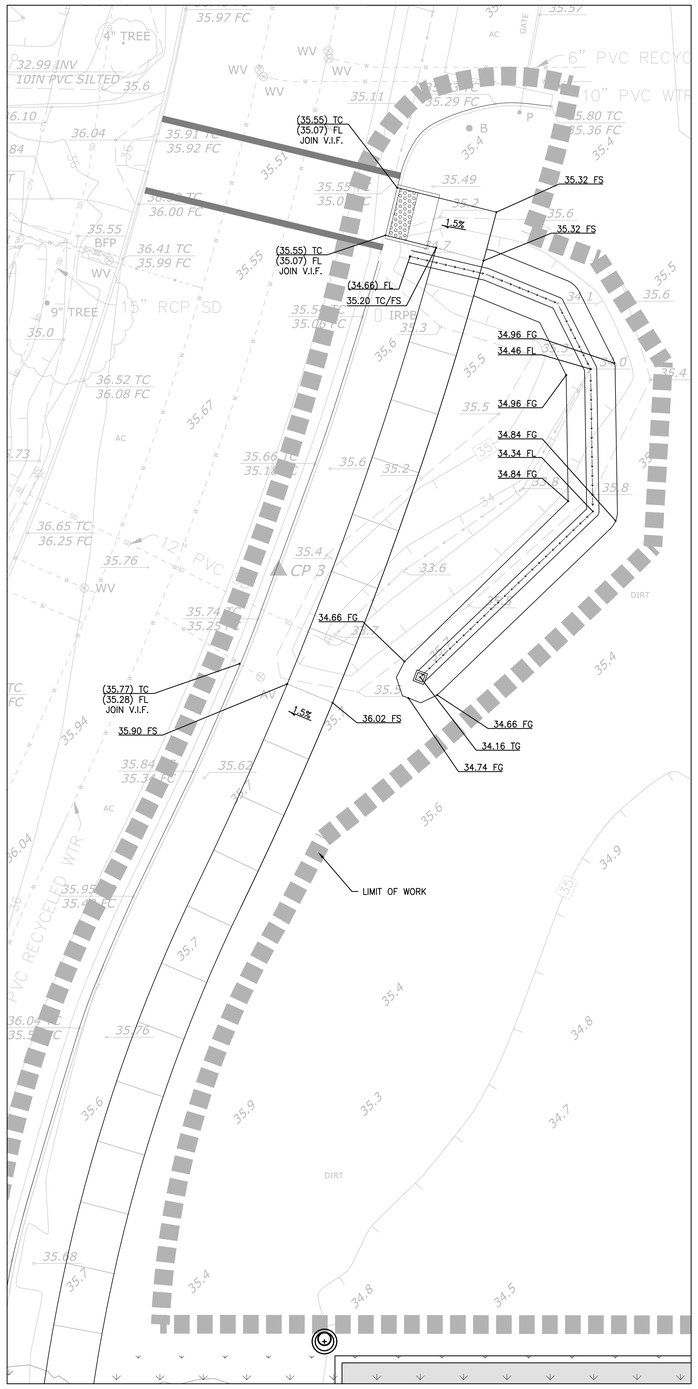
SHEET TITLE:
SURVEY (FOR REFERENCE ONLY)

SHEET NUMBER:
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NOTES:

1. ALL GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT, "GEOTECHNICAL EVALUATION SOUTH OXNARD AQUATICS CENTER PROJECT OXNARD COLLEGE PARK", BY NINYO & MOORE DATED JUNE 22, 2022.
2. SITE SUBGRADE SOIL CONDITIONS SHALL BE TESTED FOR R-VALUE PRIOR TO CONSTRUCTION OF PAVEMENT SECTIONS. R-VALUE OF 29 SHALL BE USED IN ACCORDANCE WITH CALTRANS GUIDELINES.



LEGEND

- LIMIT OF WORK
- SHEET LIMIT
- PROPERTY LINE
- FLOW LINE
- GB — GRADE BREAK
- R — R — R — RIDGE LINE
- EARTHEN SWALE
- SAWCUT AND JOIN
- TOP / TOE — GRADE SLOPE (HORIZONTAL:VERTICAL)
- LIMITS OF GRADING
- GRADING BENCH
- 100 — PROPOSED MAJOR CONTOUR
- 102 — PROPOSED MINOR CONTOUR
- CONCRETE PAVING
- BIORETENTION PLANTER
- PLANTER AREA/LANDSCAPE (REFER TO LANDSCAPING PLANS FOR DETAILS)

ESTIMATED EARTHWORK QUANTITIES (POOLS QUANTITIES)

CUT:	6,500 CUBIC YARDS
FILL:	0 CUBIC YARDS
NET (CUT):	6,500 CUBIC YARDS

ESTIMATED EARTHWORK QUANTITIES (EXCLUDING POOL QUANTITIES)

CUT:	400 CUBIC YARDS
FILL:	6,000 CUBIC YARDS
NET (FILL):	5,600 CUBIC YARDS

NOTES:

1. THE ESTIMATED QUANTITIES PROVIDED ABOVE ARE TO BE USED FOR JURISDICTIONAL PLAN CHECKING AND PERMITTING PURPOSES ONLY.
2. ESTIMATED EARTHWORK ABOVE IS BASED ON DESIGN FINISH GRADES TO EXISTING GRADES AND/OR CONTOURS AS PROVIDED ON THE BASE SURVEY. THE ESTIMATED EARTHWORK DOES NOT ACCOUNT FOR THE THICKNESS OF PAVEMENTS, FOUNDATIONS AND SLABS ON GRADE, FOOTINGS, CLEARING AND GRUBBING, OVER EXCAVATION AND RECOMPACTION, AND CONSTRUCTION MEANS AND METHODS.
3. THE ESTIMATED EARTHWORK QUANTITIES DO NOT INCLUDE SHRINKAGE AND/OR EXPANSION FACTORS DUE TO COMPACTION OR OVER EXCAVATION QUANTITIES.
4. THE CONTRACTOR SHALL CALCULATE HIS OWN EARTHWORK QUANTITIES NECESSARY FOR HIS BID AND WORK.
5. ESTIMATED EARTHWORK QUANTITIES ABOVE ASSUME THAT ALL ONSITE MATERIALS ARE SUITABLE FOR BACKFILLING. HOWEVER, ACTUAL EXISTING ONSITE MATERIALS AND IMPORTED MATERIALS MUST FIRST BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION, REMOVAL, OR REPLACEMENT.
6. EXCAVATION OF POOL SHALL NOT OCCUR UNTIL POOL CONSTRUCTION DRAWINGS HAVE BEEN APPROVED.
7. COMPACTION REPORT SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO FOOTING INSPECTION.

10.1.5 Subgrade Preparation

Undocumented fill soils are not suitable for the support of foundations, pools, and new fill. The following remedial grading recommendations are provided for the proposed improvements.

10.1.5.1 Structures with Shallow Foundations, Fun Pool, and Splash Pad

In order to provide suitable support and reduce the potential settlement of proposed new structures with shallow foundations (including light poles, seating elements, and shade structures), we recommend that the soil beneath the planned shallow foundations be overexcavated and recompacted to a depth that provides 3 or more feet of compacted fill beneath the bottom of the foundations, or to a depth that removes existing undocumented fill, whichever is deeper. The limits of excavation should extend laterally so that the bottom of the excavation is approximately 5 feet beyond the outside edge of the structure's footprint, or a distance corresponding to the depth of the excavation, whichever is farther. If light poles are to be supported on deep foundations (e.g., precast concrete piers or drilled piers), then no overexcavation will be needed below the bottom elevations of the piers unless the soil condition exposed at the pier bottoms are deemed unsuitable for providing structural support by the project geotechnical consultant.

For fun pool and splash pad, no structural foundation is anticipated. The soil underlying these improvements should be overexcavated and recompacted to a depth that provides 1 foot or more of compacted fill beneath the bottoms of these improvements. The excavation bottom should be evaluated by our representative during the excavation work. Additional excavation of loose, soft, and/or wet areas may be appropriate, depending on our observations during construction. Prior to placing new compacted fill in areas that are excavated and/or in areas where the existing subgrade will be raised with new fill, the exposed bottom should be scarified, moisture-conditioned, and recompacted to a depth of approximately 8 inches.

10.1.5.2 50-Meter and 25-Yard Pools

In order to provide suitable support and reduce the potential settlement of the proposed new deeper pools, we recommend that the soil beneath the planned pool areas be overexcavated to a depth of 1 foot or more below the design subgrade elevation and replaced with newly compacted fill. The excavations should expose relatively dense native alluvial deposits. The excavation bottoms should be evaluated by our representative during the excavation work. Additional excavation of loose, soft, and/or wet areas may be appropriate, depending on our observations during construction. Prior to placing newly compacted fill, the exposed bottom should be scarified, moisture-conditioned, and recompacted to a depth of approximately 8 inches.

GEOTECHNICAL REPORT N.T.S.

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER: **202210**

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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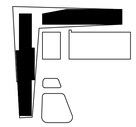
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SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
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REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER
JEFFREY R. GAVARES
No. C59894
exp. 12/31/23
CIVIL
STATE OF CALIFORNIA

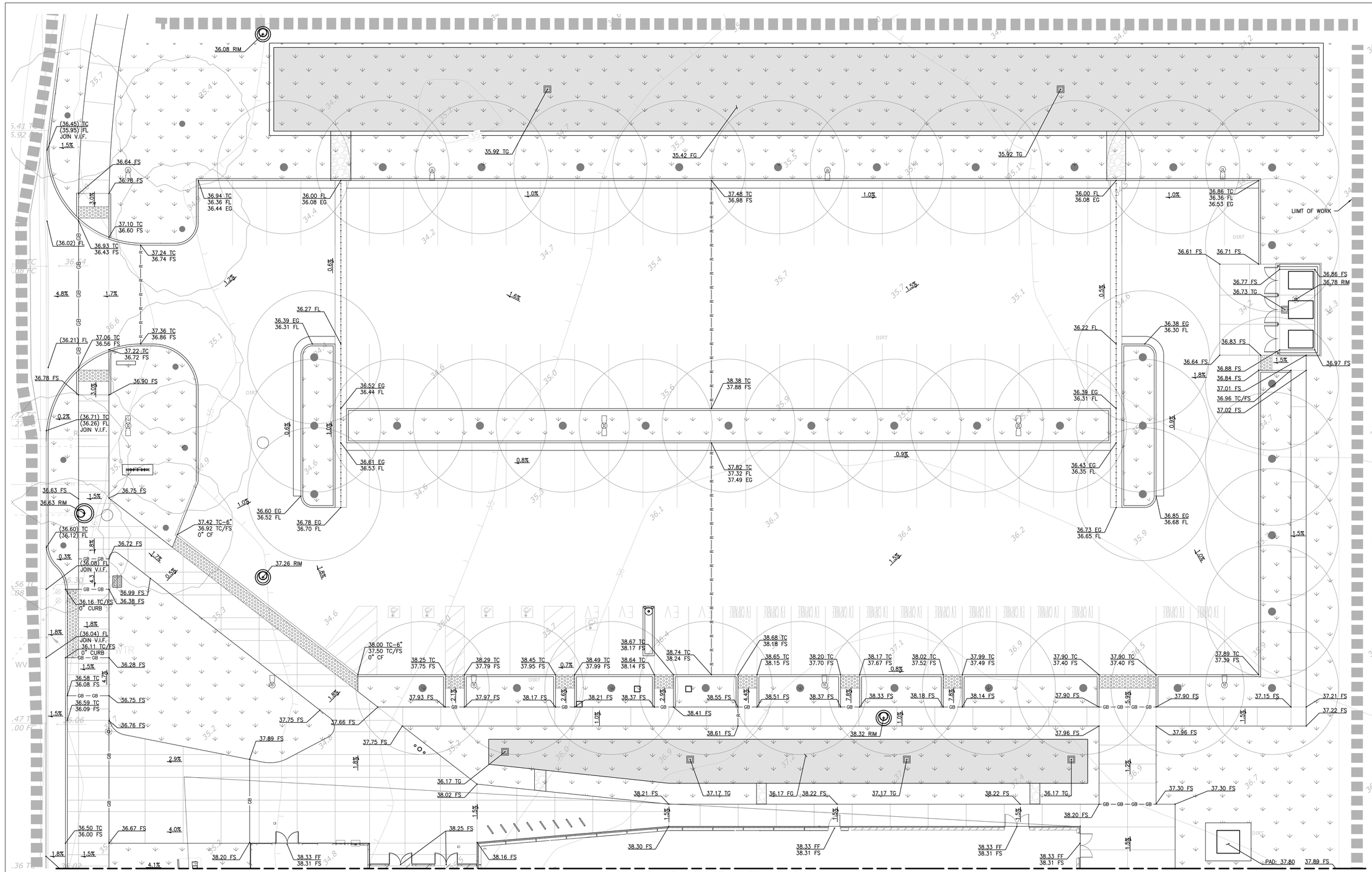
APPROVED:

DATE

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C1.30

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MATCH LINE – SEE SHEET C1.32 FOR CONTINUATION

LEGEND

- LIMIT OF WORK
- PROPERTY LINE
- FLOW LINE
- GB — GRADE BREAK
- R — R — R — RIDGE LINE
- EARTHEN SWALE
- SAWCUT AND JOIN
- TOP / TOE — GRADE SLOPE (HORIZONTAL:VERTICAL)
- LIMITS OF GRADING
- GRADING BENCH
- 100 — PROPOSED MAJOR CONTOUR
- 102 — PROPOSED MINOR CONTOUR
- CONCRETE PAVING
- BIORETENTION PLANTER
- PLANTER AREA/LANDSCAPE (REFER TO LANDSCAPING PLANS FOR DETAILS)

N

0 5' 10'

SCALE: 1"=10'

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

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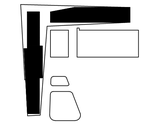
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P: 415 335-3940

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REGISTERED PROFESSIONAL ENGINEER — No. C59894 — Exp. 12/31/23 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE

SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

C1.31

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MATCH LINE – SEE SHEET C1.31 FOR CONTINUATION

REFER TO AQUATIC DESIGN GROUP DRAWINGS FOR POOL DECK GRADING DESIGN

LIMIT OF WORK

MATCH LINE – SEE SHEET C1.33 FOR CONTINUATION

LEGEND

- LIMIT OF WORK
- PROPERTY LINE
- FLOW LINE
- GB — GRADE BREAK
- R—R—R — RIDGE LINE
- EARTHEN SWALE
- SAWCUT AND JOIN
- TOP / TOE — GRADE SLOPE (HORIZONTAL:VERTICAL)
- LIMITS OF GRADING
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- 102 — PROPOSED MINOR CONTOUR
- CONCRETE PAVING
- BIORETENTION PLANTER
- PLANTER AREA/LANDSCAPE (REFER TO LANDSCAPING PLANS FOR DETAILS)
- POOL DECK (REFER TO SHEETS DP–1 AND DP–2 FOR POOL DECK GRADING DESIGN)

N

0 5' 10'

SCALE: 1"=10'

P:\2021\2101010 South Oxnard Aquatic Ctr Improvement\5 CAD\Sheets\2101010-C-1.32GP.dwg, Dec 08, 2023 - 11:55am

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

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REGISTERED PROFESSIONAL ENGINEER
JEFFREY B. GRAY
No. C59894
Exp. 12/31/23
CIVIL
STATE OF CALIFORNIA

CERTIFIED

APPROVED:

DATE

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C1.32

MATCH LINE – SEE SHEET C1.32 FOR CONTINUATION

REFER TO AQUATIC DESIGN GROUP DRAWINGS FOR POOL DECK GRADING DESIGN

A 6' WIDE EASEMENT FOR ELECTRICAL LINES GRANTED TO SOUTHERN CALIFORNIA EDISON PER DOCUMENT RECORDED JUNE 24, 1940 IN BOOK 944, PAGE 474 OF OFFICIAL RECORDS

SOUTHERLY LINE OF LOT 1 OF LOT LINE ADJUSTMENT PZ-13-310-01 PER INSTRUMENT NO. 20131210-00197727 O.R.

LEGEND

- LIMIT OF WORK
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- EARTHEN SWALE
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- POOL DECK (REFER TO SHEETS DP–1 AND DP–2 FOR POOL DECK GRADING DESIGN)

N

0 5' 10'

SCALE: 1"=10'

P:\2021\2101010 South Oxnard Aquatic Ctr Improvement\5 CAD\Sheets\2101010-C-1.33GP.dwg, Dec 08, 2023 - 11:55am

els architecture+ urban design

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COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

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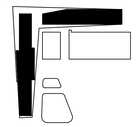
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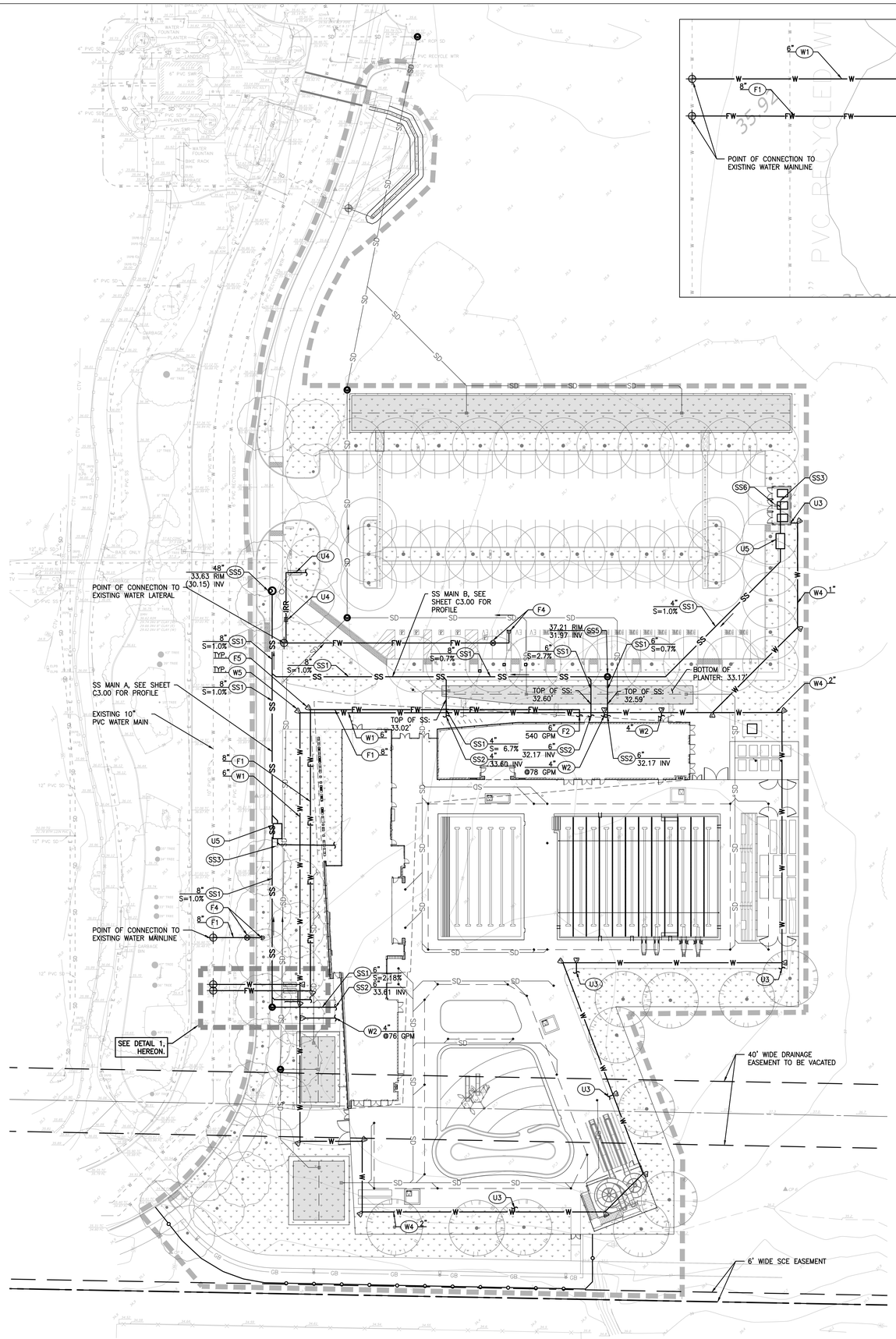
REGISTERED PROFESSIONAL ENGINEER JEFFREY R. GAVIN No. C59894 Exp. 12/31/23 CIVIL STATE OF CALIFORNIA

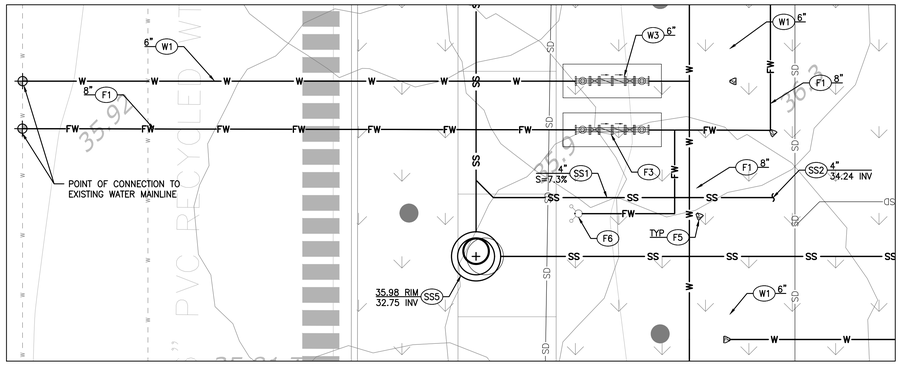
APPROVED:

DATE

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C1.33





DETAIL 1

SCALE: 1"=5'

UTILITY CONSTRUCTION NOTES:

SANITARY SEWER

(SS1) PVC, SDR-35 SANITARY SEWER PIPE PER DETAIL 1, SHEET C5.00. SIZE AND SLOPE PER PLAN.

(SS2) POINT OF CONNECTION 5 FEET FROM BUILDING FACE. SEE PLUMBING DRAWINGS FOR CONTINUATION.

(SS3) CLEANOUT. PER CITY STANDARD PLATE 407.

(SS4) CONNECT TO EXISTING SEWER MAIN.

(SS5) PRECAST CONCRETE MANHOLE. PER CITY STANDARD PLATE 400.

(SS6) JENSEN PRECAST CONCRETE CATCH BASIN OR APPROVED EQUAL. VEHICULAR RATED GRATE. 12"X12" UNLESS OTHERWISE NOTED. PER DETAIL 5 SHEET C5.00.

DOMESTIC WATER

(W1) PVC C-900 DOMESTIC WATER PIPE PER DETAIL 1, SHEET C5.00. SIZE PER PLAN.

(W2) POINT OF CONNECTION 5 FEET FROM BUILDING FACE. SEE PLUMBING DRAWINGS FOR CONTINUATION.

(W3) BACKFLOW PREVENTION DEVICE AND WATER METER. PER CITY STANDARD PLATE 310, PROVIDED FOR REFERENCE ON DETAIL 3, SHEET C5.00. CONTRACTOR TO COORDINATE WATER SERVICE CONNECTION WITH LOCAL PROVIDER.

(W4) COPPER TYPE K PIPE. SIZE PER PLAN.

(W5) THRUST BLOCK PER CITY STANDARD PLATE 320, PROVIDED FOR REFERENCE ON DETAIL 6, SHEET C5.00.

FIRE WATER

(F1) PVC C-900 FIRE WATER PIPE PER DETAIL 1, SHEET C5.00. SIZE AND MATERIAL PER PLAN.

(F2) POINT OF CONNECTION 5 FEET FROM BUILDING FACE. SEE PLUMBING DRAWINGS FOR CONTINUATION.

(F3) BACKFLOW PREVENTION DEVICE. PER CITY STANDARD PLATE 310, PROVIDED FOR REFERENCE ON DETAIL 3, SHEET C5.00.

(F4) FIRE HYDRANT AND GATE VALVE. PER CITY STANDARD PLATE 300.

(F5) THRUST BLOCK PER CITY STANDARD PLATE 320, PROVIDED FOR REFERENCE ON DETAIL 6, SHEET C5.00.

(F6) FIRE DEPARTMENT CONNECTION. PER DETAIL 2, SHEET C5.00.

OTHER UTILITIES

(U1) ELECTRICAL CONDUIT. SEE ELECTRICAL DRAWINGS FOR DETAILS AND SPECIFICATIONS. SHOWN FOR COORDINATION PURPOSES ONLY.

(U2) GAS LINE. SEE GAS COMPANY DRAWINGS FOR DETAILS AND SPECIFICATIONS. SHOWN FOR COORDINATION PURPOSES ONLY.

(U3) HOSE BIB. SEE PLUMBING PLANS FOR HOSE BIB AT TRASH ENCLOSURE (HB-2). SEE AQUATIC PLANS FOR HOSE BIBS AT POOL DECK. SHOWN FOR COORDINATION PURPOSES ONLY.

(U4) METER AND BACKFLOW PREVENTER. SEE IRRIGATION PLANS FOR DETAIL AND SIZE. SHOWN FOR COORDINATION PURPOSES ONLY.

(U5) GREASE INTERCEPTOR. JENSEN PRECAST MODEL MU-750-EE-G OR APPROVED EQUIVALENT.

LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SS — SANITARY SEWER
- W — WATER
- DW — DOMESTIC WATER
- FW — FIRE WATER
- SD — STORM DRAIN
- G — GAS
- E — ELECTRIC
- T — TELEPHONE
- PERFORATED PIPE
- POINT OF CONNECTION
- COORDINATION POINT
- CAP OR PLUG
- UTILITY MANHOLE
- UTILITY CLEANOUT
- STORM DRAIN INLET
- AREA DRAIN/PLANTER DRAIN
- TRENCH DRAIN
- FIRE HYDRANT
- THRUST BLOCK
- FIRE DEPARTMENT CONNECTION (FDC)
- POST INDICATOR VALVE (PIV)
- WATER VALVE
- BACKFLOW ASSEMBLY
- UTILITY METER VAULT

NOTE:
IRRIGATION WATER METER, LINES AND APPURTENANCES BY OTHERS.

NOTE:
ALL BMP'S PROPOSED AS A PART OF THIS PROJECT ARE TO BE INSPECTED BY THE ENGINEER OF RECORD AFTER INSTALLATION AND PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY.

NOTE:
PRIOR TO THE INSTALLATION OF ALL STORM DRAIN AND SEWER MAIN LINE CONNECTIONS, THE CONTRACTOR SHALL POTHOLE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE MAIN LINE. IF CONDITIONS DIFFER FROM THOSE ON THE PLAN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITION HAS BEEN EVALUATED.

els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

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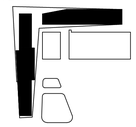
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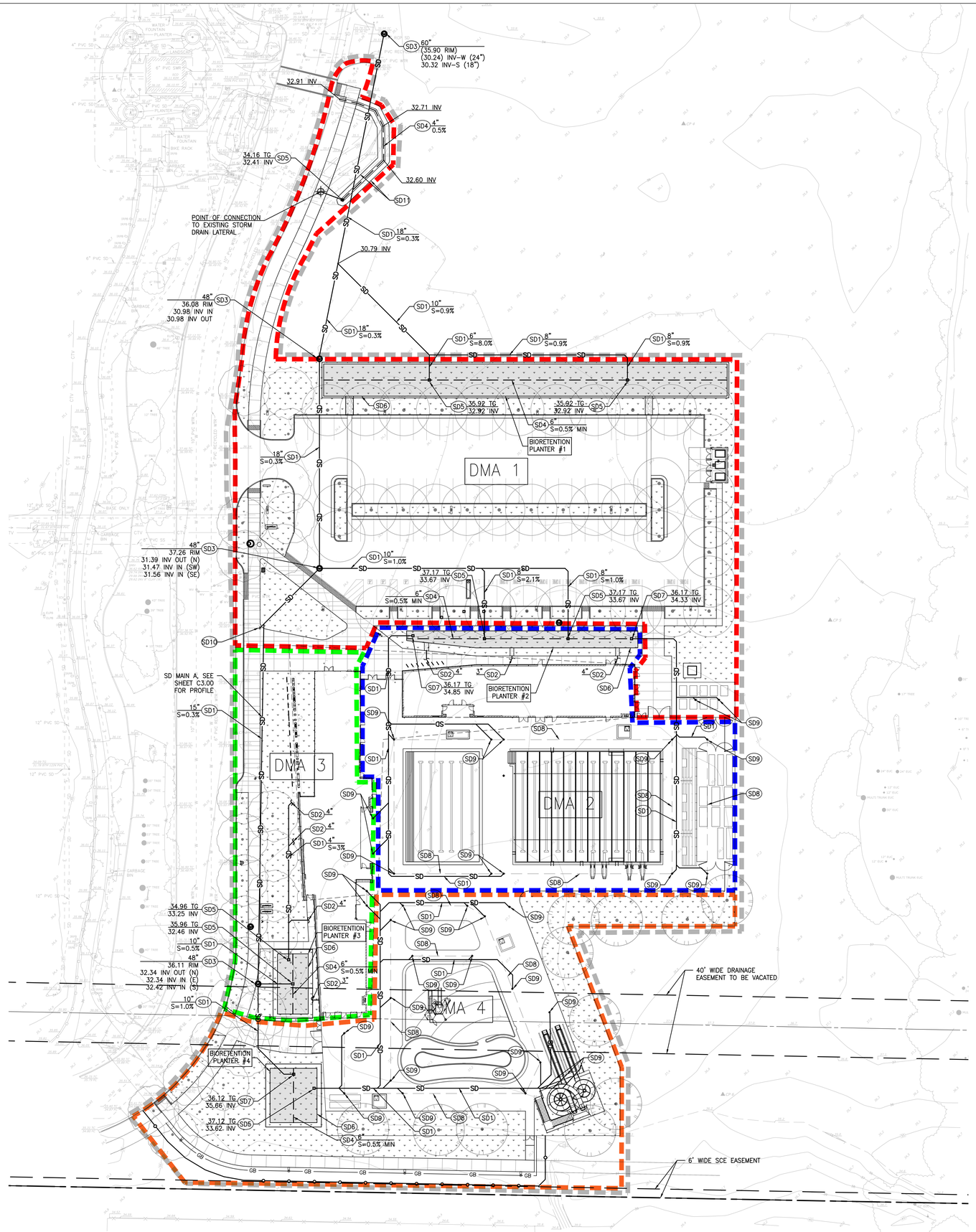
APPROVED:

DATE

SHEET TITLE:
UTILITY PLAN

SHEET NUMBER:
C1.40

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UTILITY CONSTRUCTION NOTES:

STORM DRAIN

- (SD1) DUAL WALL HDPE STORM DRAIN PIPE PER DETAIL 1, SHEET C5.00. SIZE AND SLOPE PER PLAN.
- (SD2) POINT OF CONNECTION 5 FEET FROM BUILDING FACE. SEE PLUMBING DRAWINGS FOR CONTINUATION.
- (SD3) PRECAST CONCRETE MANHOLE PER APWA STANDARD PLAN 321-2.
- (SD4) PERFORATED PIPE. PER DETAIL 4, SHEET C5.00 SIZE AND SLOPE PER PLAN.
- (SD5) PRECAST CONCRETE CATCH BASIN. JENSEN PRECAST PRODUCTS OR APPROVED EQUIVALENT. SIZE AND GRATE BEARING TYPE PER PLAN.
- (SD6) BIORETENTION PLANTER. PER DETAIL 4, SHEET C5.00.
- (SD7) PRECAST CONCRETE BUBBLER CATCH BASIN PER DETAIL 7, SHEET C5.00.
- (SD8) SLOT DRAIN. PER DETAIL 2, SHEET CP-12.
- (SD9) DECK/AREA DRAIN. PER DETAIL 3, SHEET CP-12.
- (SD10) CLEANOUT. PER CITY STANDARD PLATE 407.
- (SD11) VEGETATED SWALE PER FIGURE 6-12 ON VENTURA COUNTY TECHNICAL GUIDANCE MANUAL FOR STORMWATER QUALITY CONTROL MEASURES.

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- G — GAS
- E — ELECTRIC
- T — TELEPHONE
- PERFORATED PIPE
- POINT OF CONNECTION
- COORDINATION POINT
- CAP OR PLUG
- UTILITY MANHOLE
- UTILITY CLEANOUT
- STORM DRAIN INLET
- AREA DRAIN/PLANTER DRAIN
- TRENCH DRAIN
- FIRE HYDRANT
- THRUST BLOCK
- FIRE DEPARTMENT CONNECTION (FDC)
- POST INDICATOR VALVE (PIV)
- WATER VALVE
- BACKFLOW ASSEMBLY
- UTILITY METER VAULT

STORM WATER TREATMENT CALCULATIONS				
TOTAL AREA: 176,678 SF; 4.06 AC				
POOL AREA (UNTREATED): 19,584 SF; 0.45 AC				
TREATED AREA (DMA 1-4): 157,094 SF; 3.61 AC				
DRAINAGE MANAGEMENT AREAS (DMA)	TOTAL AREA (SF)	PERVIOUS AREA (SF)	PERCENT IMPERVIOUS	Ponding Depth
1	68,721	23,303	66%	6"
2	28,889	3,376	88%	1'
3	22,462	9,380	58%	1'
4	37,022	19,020	49%	1'

N

0 15' 30'

SCALE: 1"=30'

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
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P: 510.549.2929

CIVIL ENGINEER:
KPFF
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Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
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2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
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Oakland, CA 94612
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San Francisco, CA 94111
P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
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2226 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

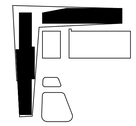
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:

DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:

11 DECEMBER 2023

STAMP:

REGISTERED PROFESSIONAL ENGINEER — Mo. C59894 — Exp. 12/31/23 — CIVIL — STATE OF CALIFORNIA

APPROVED:

DATE

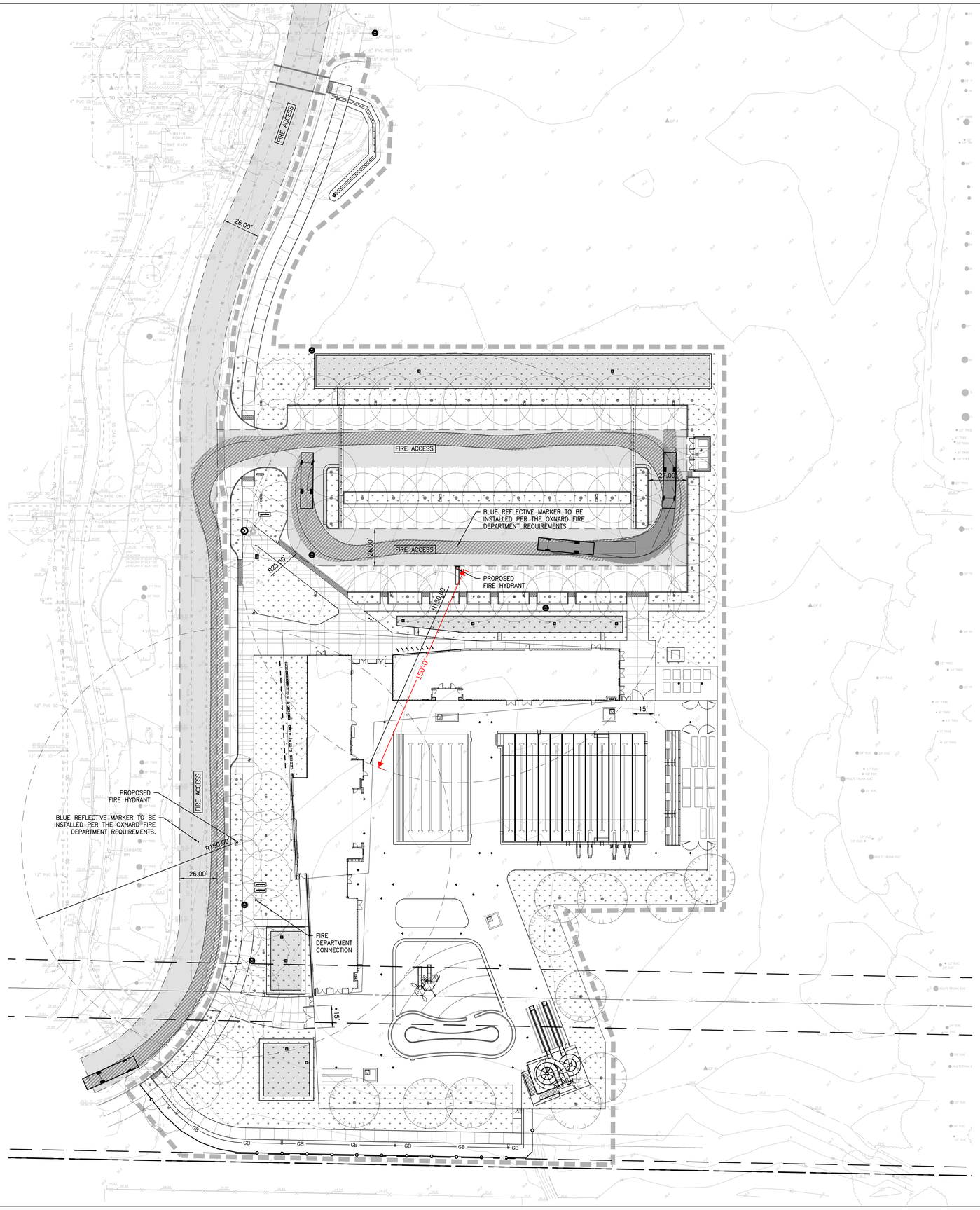
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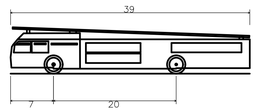
STORM WATER TREATMENT PLAN

SHEET NUMBER:

C1.41

P:\2021\210101O South Oxnard Aquatic Ctr Improvement\5 CAD\Sheets\210101O-C-1.41SW.dwg, Dec 08, 2023 - 12:18pm





Fire Truck	
Overall Length	39.000ft
Overall Width	8.500ft
Overall Body Height	7.558ft
Min Body Ground Clearance	0.808ft
Track Width	8.500ft
Lock-to-lock time	6.00s
Max Wheel Angle	44.00°

N

0 15' 30'

SCALE: 1"=30'

P:\2021\2101010 South Oxnard Aquatic Ctr Improvement\5 CAD\Sheets\2101010-C-1.50FA.dwg, Dec 08, 2023 - 11:56am

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urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

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CITY OF OXNARD
PUBLIC WORKS
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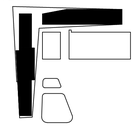
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THE PREVIEW GROUP
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MATTHEW R. GAVALDON
No. C59894
Exp. 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED:

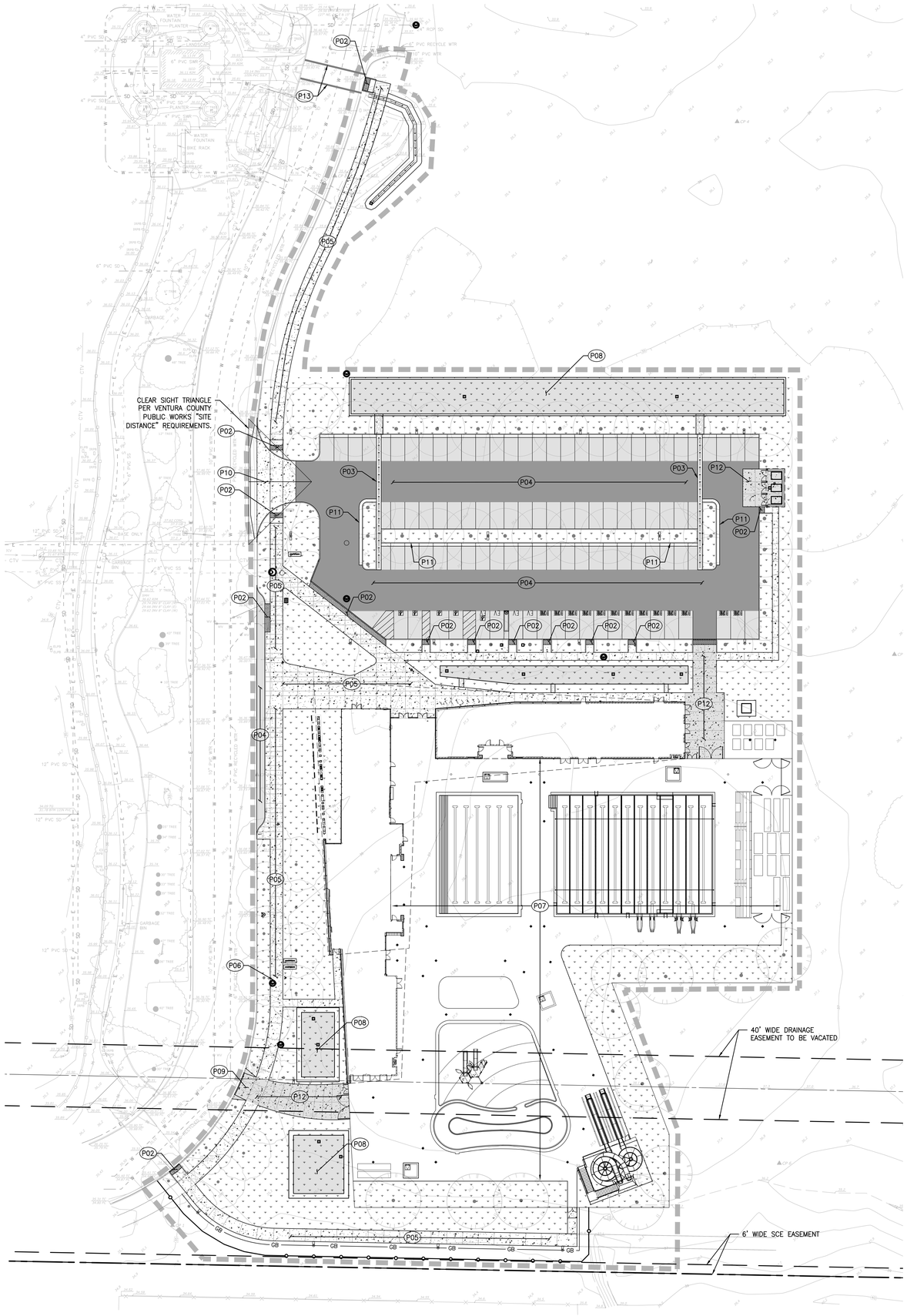
DATE

SHEET TITLE:

FIRE ACCESS PLAN

SHEET NUMBER:

C1.50



PAVING CONSTRUCTION NOTES

- (P01) CONCRETE CURB. PER DETAIL 1 ON SHEET C5.01.
- (P02) TRUNCATED DOMES. PER DETAIL 6 ON SHEET C5.01.
- (P03) CONCRETE VALLEY GUTTER. PER DETAIL 4 ON SHEET C5.01.
- (P04) ASPHALT CONCRETE PAVEMENT. PER DETAIL 2 ON SHEET C5.01.
- (P05) CONCRETE PAVEMENT. PER DETAIL 3, SHEET C5.01.
- (P06) ISOLATION JOINT. PER DETAIL 5, SHEET C5.01.
- (P07) POOL DECK PER POOL DESIGN DRAWINGS.
- (P08) BIORETENTION PLANTER. PER DETAIL 4, SHEET C5.00.
- (P09) DRIVEWAY. PER CITY STANDARD DETAIL PLATE 115.
- (P10) DRIVEWAY. PER CITY STANDARD DETAIL PLATE 116.
- (P11) CONCRETE CURB AND GUTTER. PER DETAIL 7 ON SHEET C5.01.
- (P12) HEAVY CONCRETE PAVEMENT. PER DETAIL 8, SHEET C5.01.
- (P13) INSTALL 12" WIDE WHITE CROSSWALK PER CALTRANS STANDARD PLAN A24E. LINES TO BE SPACED AT 11' ON CENTER.

LEGEND

- LIMIT OF WORK
- PROPERTY LINE
- CONCRETE PAVING (REFER TO SHEET C5.01 FOR DETAILS)
- HEAVY CONCRETE PAVING (REFER TO SHEET C5.01 FOR DETAILS)
- LIGHT DUTY ASPHALT (REFER TO SHEET C5.01 FOR DETAILS)
- HEAVY DUTY ASPHALT (REFER TO SHEET C5.01 FOR DETAILS)
- GRAVEL (REFER TO ARCHITECTURAL PLANS FOR DETAILS)
- PLANTER AREA/LANDSCAPE (REFER TO LANDSCAPING PLANS FOR DETAILS)

NOTE TO CONTRACTOR/CONSTRUCTION SURVEYOR:

CONSTRUCTION STAKING FOR IMPROVEMENTS SHOWN ON THESE PLANS SHALL BE PERFORMED BY A LICENSED LAND SURVEYOR. CONSTRUCTION STAKING SURVEYOR SHALL BE RESPONSIBLE FOR COORDINATION OF THESE PLANS WITH SOURCE DRAWINGS PREPARED BY ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER, MEP CONSULTANT AND ANY OTHER DISCIPLINE PRIOR TO START OF STAKING AND CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED.

N

0 15' 30'

SCALE: 1"=30'

els architecture+ urban design

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JEFFREY B. GAVIL
No. C59894
Exp. 12/31/23
CIVIL
STATE OF CALIFORNIA

APPROVED:

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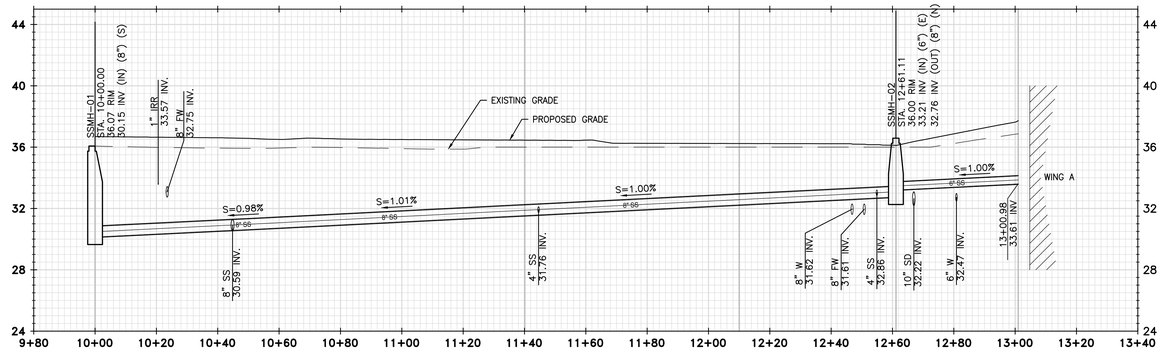
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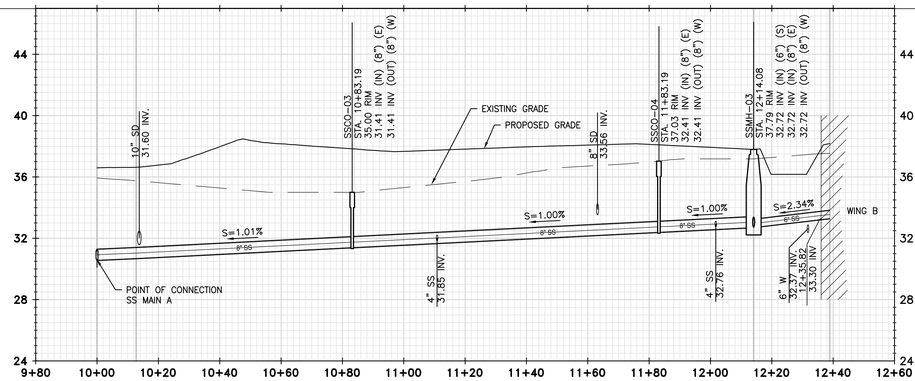
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C1.60

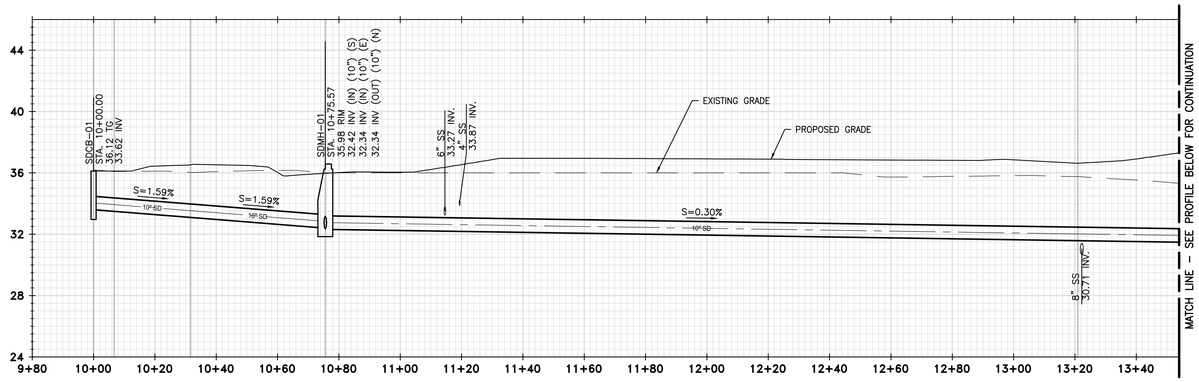
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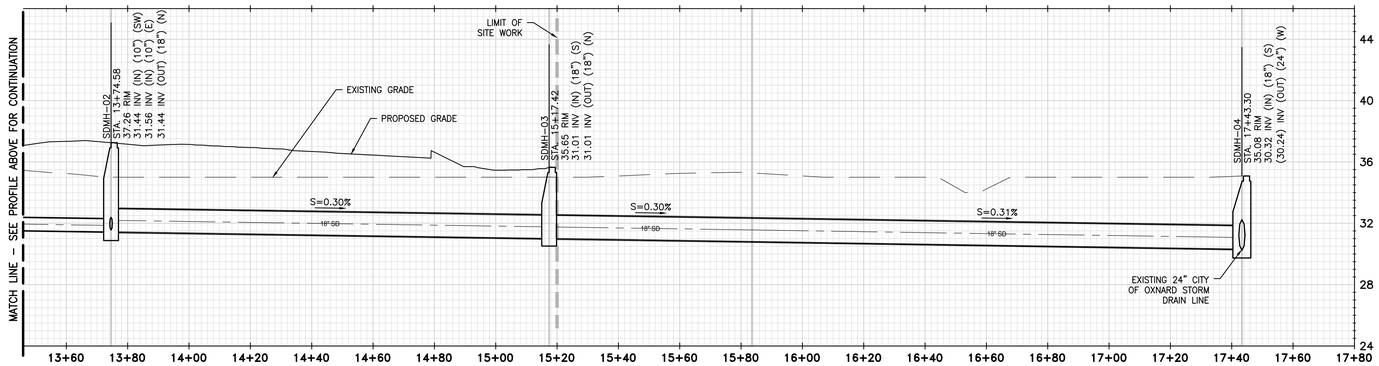
SS MAIN A
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



SS MAIN B
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



SD MAIN A
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



SD MAIN A
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'

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PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD
PUBLIC WORKS
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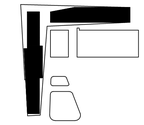
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SPECIFICATIONS
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268 Bush Street, #3000
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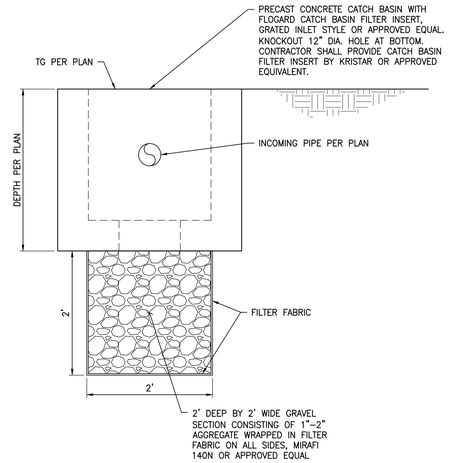


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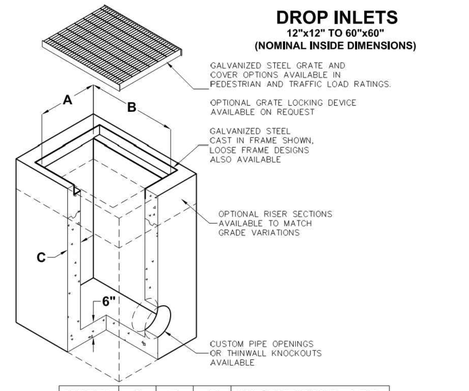
DATE

SHEET TITLE:
UTILITY PROFILES

SHEET NUMBER:
C3.00



7 | PRECAST CONCRETE BUBBLER CATCH BASIN WITH OPEN BOTTOM N.T.S.



DROP INLETS
12"x12" TO 60"x60"
(NOMINAL INSIDE DIMENSIONS)

GALVANIZED STEEL GRATE AND COVER OPTIONS AVAILABLE IN PEDESTRIAN AND TRAFFIC LOAD RATINGS.

OPTIONAL GRATE LOCKING DEVICE AVAILABLE ON REQUEST

GALVANIZED STEEL CAST IN FRAME SHOWN, LOOSE FRAME DESIGNS ALSO AVAILABLE

OPTIONAL RISER SECTIONS AVAILABLE TO MATCH GRADE VARIATIONS

CUSTOM PIPE OPENINGS OR THINWALL KNOCKOUTS AVAILABLE

MODEL	A	B	C	WEIGHT CALC - LBS.
1212	12	12	4	208 (BASE) + 266 VF
1616	16	16	5	408 (BASE) + 480 VF
1818	18	18	5	602 (BASE) + 604 VF
2424	24	24	6	675 (BASE) + 750 VF
2436	24	36	6	900 (BASE) + 900 VF
2448	24	48	6	1500 (BASE) + 1050 VF
3030	30	30	6	920 (BASE) + 900 VF
3636	36	36	6	1200 (BASE) + 1050 VF
3648	36	48	6	1500 (BASE) + 1200 VF
4848	48	48	6	1875 (BASE) + 1350 VF
6060	60	60	6	2700 (BASE) + 1650 VF

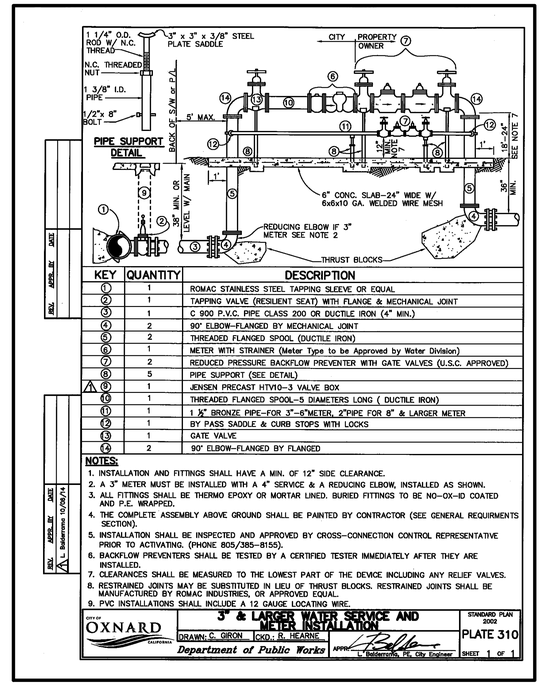
FOR COMPLETE DESIGN AND PRODUCT INFORMATION CONTACT JENSEN PRECAST.

Jensen Precast reserves the right to make changes to product design and/or dimensions without notice. Please contact Jensen Precast whenever necessary for confirmation or advice on product design.

JENSEN PRECAST

12/20/2010
DI_CONSOL_B.DWG
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5 | PRECAST CONCRETE CATCH BASIN N.T.S.



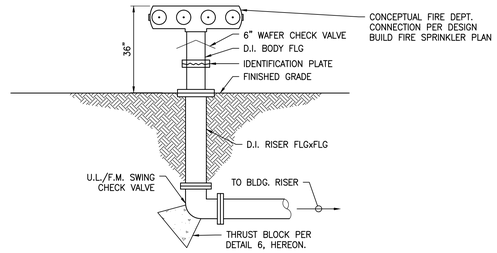
KEY	QUANTITY	DESCRIPTION
1	1	ROMAC STAINLESS STEEL TAPPING SLEEVE OR EQUAL
2	1	TAPPING VALVE (RESILIENT SEAT) WITH FLANGE & MECHANICAL JOINT
3	1	C 900 P.V.C. PIPE CLASS 200 OR DUCTILE IRON (4" MIN.)
4	2	90° ELBOW–FLANGED BY MECHANICAL JOINT
5	2	THREADED FLANGED SPOOL (DUCTILE IRON)
6	1	METER WITH STRAINER (Meter Type to be Approved by Water Division)
7	2	REDUCED PRESSURE BACKFLOW PREVENTER WITH GATE VALVES (U.S.C. APPROVED)
8	5	PIPE SUPPORT (SEE DETAIL)
9	1	JENSEN PRECAST HTV10–3 VALVE BOX
10	1	THREADED FLANGED SPOOL–5 DIAMETERS LONG (DUCTILE IRON)
11	1	1 ½" BRONZE PIPE–FOR 3"–6"METER, 2"PIPE FOR 8" & LARGER METER
12	1	BY PASS SADDLE & CURB STOPS WITH LOCKS
13	1	GATE VALVE
14	2	90° ELBOW–FLANGED BY FLANGED

NOTES:
1. INSTALLATION AND FITTINGS SHALL HAVE A MIN. OF 12" SIDE CLEARANCE.
2. A 3" METER MUST BE INSTALLED WITH A 4" SERVICE & A REDUCING ELBOW, INSTALLED AS SHOWN.
3. ALL FITTINGS SHALL BE THERMO EPOXY OR MORTAR LINED. BURIED FITTINGS TO BE NO–OX–ID COATED AND P.E. WRAPPED.
4. THE COMPLETE ASSEMBLY ABOVE GROUND SHALL BE PAINTED BY CONTRACTOR (SEE GENERAL REQUIRMENTS SECTION).
5. INSTALLATION SHALL BE INSPECTED AND APPROVED BY CROSS–CONNECTION CONTROL REPRESENTATIVE PRIOR TO ACTIVATING. (PHONE 805/385–8155).
6. BACKFLOW PREVENTERS SHALL BE TESTED BY A CERTIFIED TESTER IMMEDIATELY AFTER THEY ARE INSTALLED.
7. CLEARANCES SHALL BE MEASURED TO THE LOWEST PART OF THE DEVICE INCLUDING ANY RELIEF VALVES.
8. RESTRAINED JOINTS MAY BE SUBSTITUTED IN LIEU OF THRUST BLOCKS. RESTRAINED JOINTS SHALL BE MANUFACTURED BY ROMAC INDUSTRIES, OR APPROVED EQUAL.
9. PVC INSTALLATIONS SHALL INCLUDE A 12 GAUGE LOCATING WIRE.

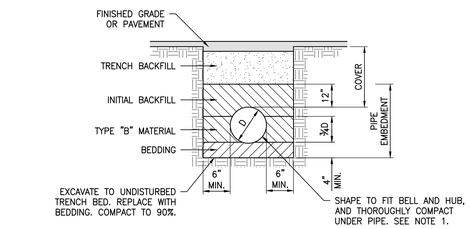
CITY OF OXNARD CALIFORNIA — **3" & LARGER WATER SERVICE AND METER INSTALLATION** — STANDARD PLAN 2002 — PLATE 310
DRAWN: C. GIRON | CKD.: R. HEARNS | APPR.: L. Bellanmino, PE, City Engineer
Department of Public Works | SHEET 1 OF 1

REV. APPR. DATE: 4/09/08 JDC; 10/30/14 JDC

3 | BACKFLOW PREVENTER ASSEMBLY N.T.S.



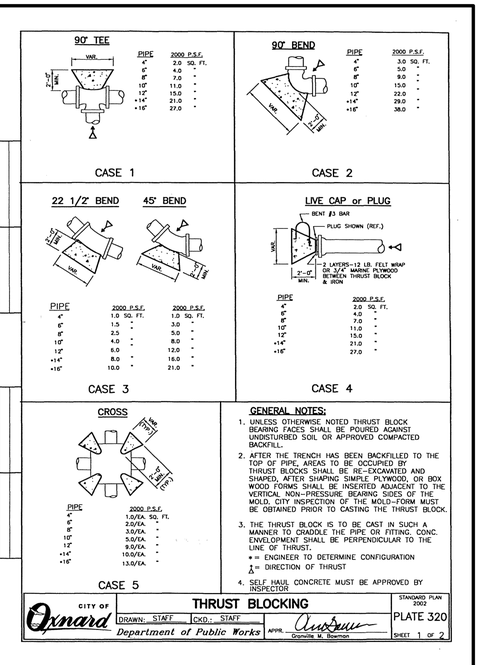
2 | FIRE DEPARTMENT CONNECTION ASSEMBLY N.T.S.



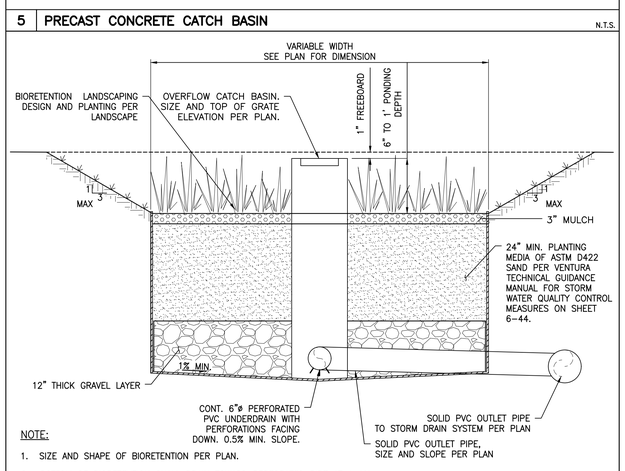
BEDDING	CLEAN COARSE SAND.
CLEAN COARSE SAND	SHALL CONFORM TO THE REQUIREMENTS OF SAND FOR PORTLAND CEMENT CONCRETE AS SPECIFIED IN SECTION 200–1.5.5 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2021 EDITION.
INITIAL BACKFILL	NATIVE MATERIAL – MAXIMUM SIZE NOT TO EXCEED 1 1/2".
TRENCH BACKFILL	NATIVE MATERIAL – 90% COMPACTION MIN. (95% COMPACTION IN UPPER 3.0' OF PAVED AREAS). UP TO CLASS IV SOILS, TYPE ML,CL. FINE GRAINED, LL<50, MEDIUM TO NO PLASTICITY. NOTE, IF CLASS IV SOIL, TYPE MH OR ALL CLASS V SOILS THEN USE CLEAN COURSE SAND.
"TYPE" B MATERIAL	SHALL BE ONE OF THE FOLLOWING: 1. NATIVE FREE DRAINING MATERIAL OR CRUSHED ROCK CONFORMING TO SUBSECTION 200–1.2 AND TABLE 200–1.2.1(A) OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". FOR PIPES UP TO AND INCLUDING 15", MAXIMUM ROCK GRADATION SHALL BE ¾". FOR PIPES OVER 15", MAXIMUM ROCK GRADATION SHALL BE 3". 2. CLEAN COARSE SAND.

NOTES:
1. EXCAVATE FOR BELLS OR HUBS SO FULL LOAD IS CARRIED BY PIPE BARRELS.
2. TYPE "B" MATERIAL SHALL BE PLACED IN A MANNER SUCH AS SLICING SHOVEL–SPADING, OR SHOVEL RODDING TO INSURE COMPLETE FILLING OF THE "HAUNCH AREAS" BELOW THE PIPE. (JETTING OF TYPE "B" MATERIAL IS NOT AUTHORIZED UNLESS PREVIOUSLY APPROVED).
3. TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 217–2 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2021 EDITION. WATER DENSIFIED BACKFILL SHALL NOT BE USED.

1 | FLEXIBLE PIPE BEDDING DETAIL N.T.S.



6 | THRUST BLOCK N.T.S.



NOTE:
1. SIZE AND SHAPE OF BIORETENTION PER PLAN.
2. BOTTOM OF BIORETENTION SHALL DRAIN TOWARD PERFORATED PIPE AT A 1% MINIMUM.

4 | BIORETENTION PLANTER N.T.S.

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PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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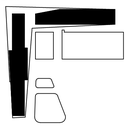
CODES / ACCESSIBILITY
THE PREVIEW GROUP
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P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

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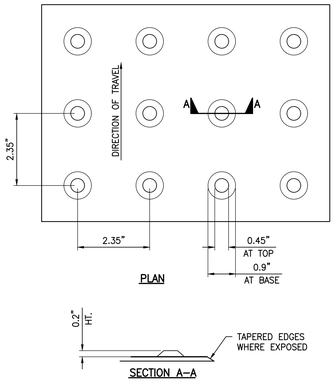


APPROVED:

DATE

SHEET TITLE:
DETAILS

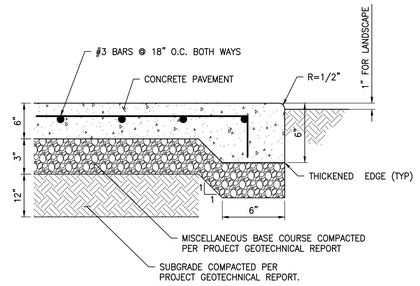
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NOTE:

1. DETECTABLE WARNING SURFACES SHALL COMPLY WITH CBC CH 11B–705.1.1.3.1. THE MATERIAL USED TO COMPLY WITH THIS SECTION SHALL BE AN INTEGRAL PART OF THE DETECTABLE WARNING SURFACE.
2. DETECTABLE WARNINGS SURFACES SHALL
   A. BE YELLOW AND APPROXIMATE 33538 OF SAE AMS–STD–595A IN ACCORDANCE WITH CBC CH11B–705.1.1.3.1.
   B. PROVIDE A 70 PERCENT MINIMUM VISUAL CONTRAST WITH ADJACENT WALKING SURFACES IN ACCORDANCE WITH CBC CH11B–705.1.1.3.2.

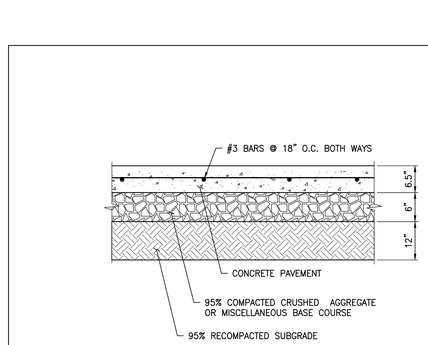
6 TRUNCATED DOMES N.T.S.



NOTES:

1. ALL TREAD SURFACES SHALL BE SLIP–RESISTANT.
2. REFER TO ARCHITECTURAL DRAWINGS FOR COLOR, PATTERN, TEXTURE, AND FINISH.
3. SEE PLAN FOR LOCATION OF CONTROL JOINTS.

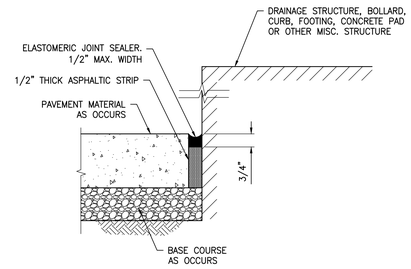
3 REINFORCED CONCRETE WALK SECTION N.T.S.



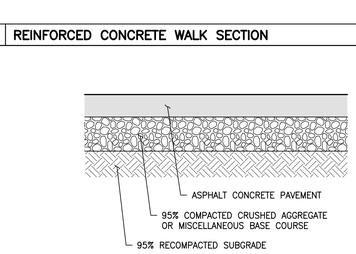
NOTES:

1. PAVEMENT SECTIONS ARE BASED ON RECOMMENDATIONS FROM THE PROJECT GEOTECHNICAL REPORT.
2. REFER TO ARCHITECTURAL PLANS FOR CONCRETE COLOR, PATTERN, TEXTURE, AND FINISH.
3. SEE PLAN FOR LOCATION OF CONTROL JOINTS.

8 HEAVY TRUCK CONCRETE PAVEMENT N.T.S.



5 ISOLATION JOINT AT STRUCTURE N.T.S.

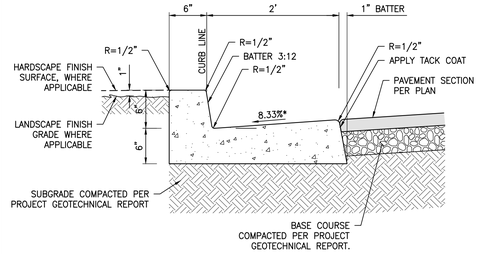


A.C. PAVEMENT TYPE	ASPHALT CONCRETE (INCHES)	BASE COURSE (INCHES)	RECOMPACTED SUBGRADE (INCHES)
LIGHT DUTY (AUTO/TRUCK PARKING AND DRIVEWAYS)	3"	6"	12"
HEAVY DUTY (DRIVEWAYS FOR HEAVY TRUCK TRAFFIC)	4.5"	6"	12"

NOTE:

1. PAVEMENT SECTIONS ARE BASED ON RECOMMENDATIONS FROM THE PROJECT GEOTECHNICAL REPORT.

2 ASPHALT PAVEMENT SECTION N.T.S.

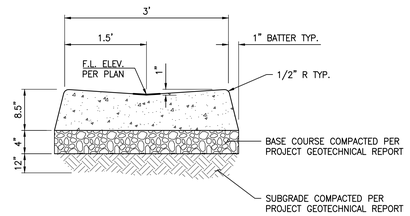


NOTES:

1. ISOLATION JOINTS SHALL BE PLACED ONLY AS SPECIFIED.
2. CONTROL JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 10' INTERVALS O.C.
3. WHERE A WALK IS ADJACENT TO THE CURB THE JOINTS SHALL ALIGN WITH JOINTS IN THE WALK.

* WHERE ADJACENT TO CURB RAMP, GUTTER SLOPE TO BE 5.0% MAX IN THE DIRECTION OF TRAVEL

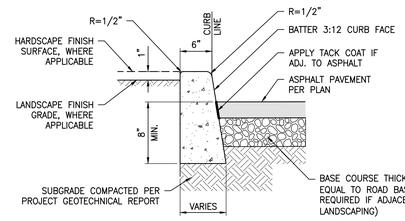
7 CONCRETE CURB AND GUTTER N.T.S.



NOTES:

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2. CONTROL JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 10' INTERVALS O.C.

4 CONCRETE VALLEY GUTTER N.T.S.



NOTES:

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3. WHERE A WALK IS ADJACENT TO THE CURB, THE JOINTS SHALL ALIGN WITH JOINTS IN THE WALK.

1 CONCRETE CURB N.T.S.

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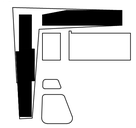
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SPECIFICATIONS
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REGISTERED PROFESSIONAL ENGINEER BRIAN GAVIN JARVIS No. C59894 Exp. 12/31/23 CIVIL STATE OF CALIFORNIA

APPROVED:

DATE

SHEET TITLE:

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SHEET NUMBER:

C5.01

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COLLEGE PARK

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COLLEGE PARK

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DATE

SHEET TITLE:
ILLUSTRATIVE PLAN

SHEET NUMBER:

L001

GENERAL NOTE:

ALL WALKWAYS OUTSIDE POOL DECK:
INTEGRAL COLOR CONCRETE WITH SAWCUT JOINTS AND ETCH FINISH

FUTURE WALKWAY

STORMWATER TREATMENT AREA
LIMIT OF WORK

1 L102

NEW DRIVEWAY AND PARKING LOT, ASPHALT, SEE CIVIL DRAWINGS

NEW DIRECTIONAL SIGN

NEW CURB CUT AT DRIVEWAY ENTRY

POLE LIGHT BASE 05 L500

DETECTABLE WARNING PAVERS 01 L500

1 L101

35' HEIGHT ALUMINUM FLAG POLE 01 L501

ENTRY PLAZA, CONCRETE, INTEGRAL COLOR WITH SAWCUT JOINS AND ETCH FINISH 02 L500

INGROUND UPLIGHT (2) 06 L500

DROP-OFF,CONCRETE, DEMO EXISTING CURB

BIKE RACKS (8) 04 L500

1-2" BLACK LA PAZ PEBBLES AT LYNGSO OR EQUAL, WITH METAL HEADER & UPLIGHTS 07 L500

NEW CONCRETE WALKWAY 02 L500

SERVICE DRIVE, SEE CIVIL DRAWINGS

STORMWATER TREATMENT AREA

EXISTING CONCROSSWALK

DETECTABLE WARNING PAVERS 01 L500

POLE LIGHT BASE 05 L500

6' WIDE EASEMENT

PROPERTY LINE

SEE ARCHITECTURE DRAWINGS

01 L500 DETECTABLE WARNING PAVERS

02 L500 NEW CONCRETE WALKWAY

EV CHARGER
2 SINGLE-HEADED AND
1 DOUBLE-HEADED

TRANSFORMER
SERVICE AREA, SEE CIVIL DRAWINGS

02 L501 FENCE-POOL ENCLOSURE SURROUNDING POOL DECKS, 7' TALL CHAIN LINK FENCE, SEE ARCHITECTURAL DRAWINGS FOR GATES

SEE POOL DECK DRAWINGS FOR POOL DECK PAVING

FUTURE WALKWAY

0 30 60 90

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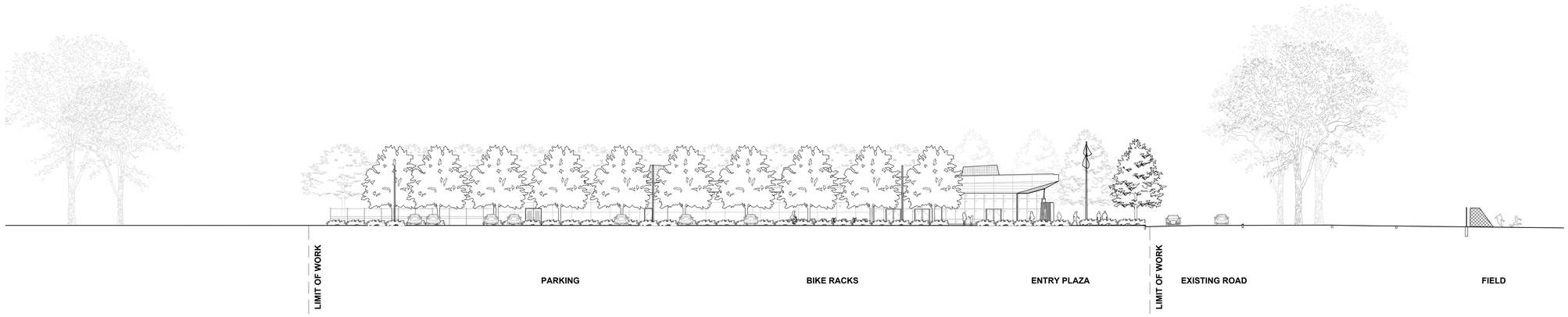
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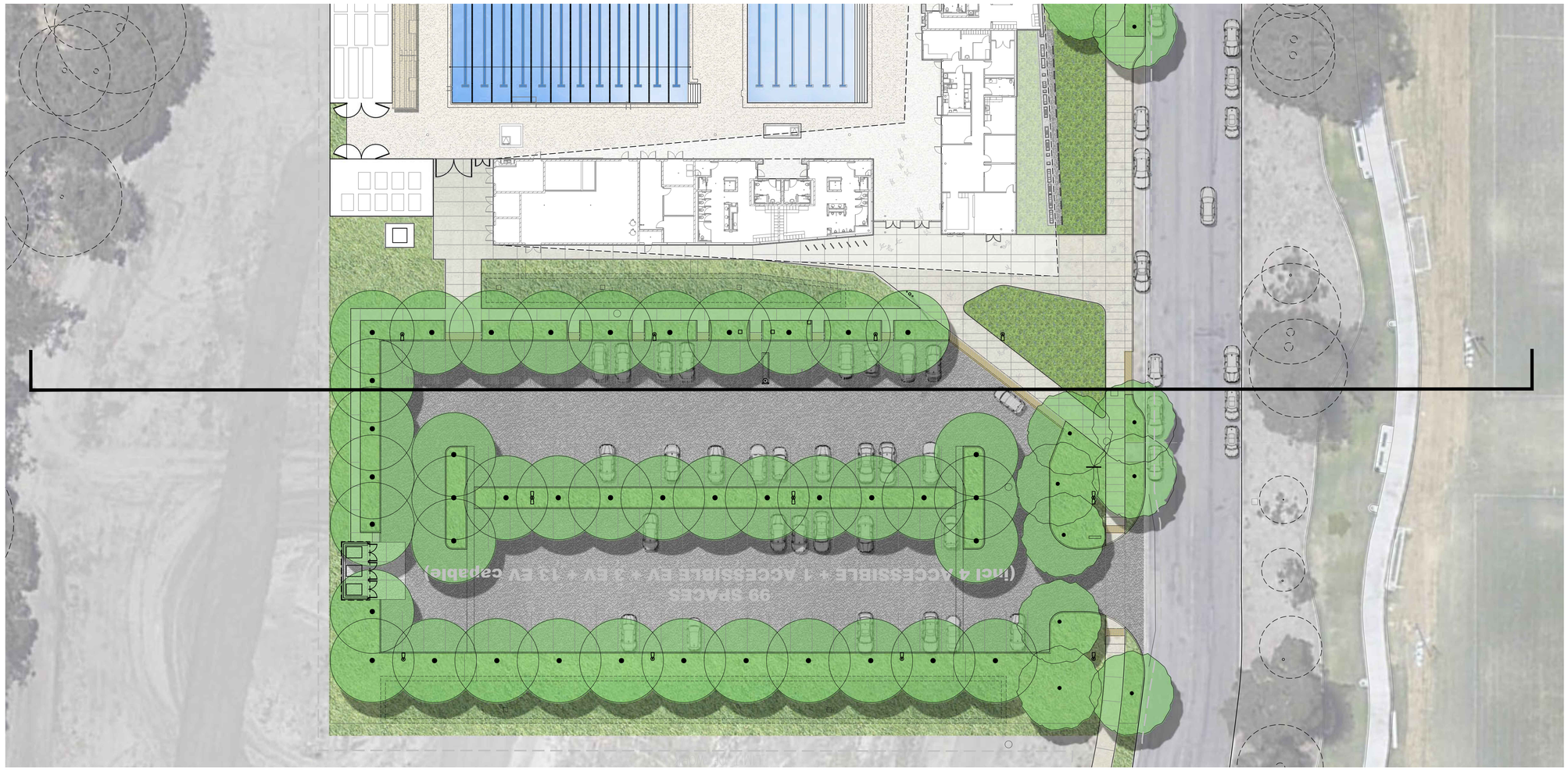
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SHEET TITLE:
LAYOUT PLAN

SHEET NUMBER:
L100





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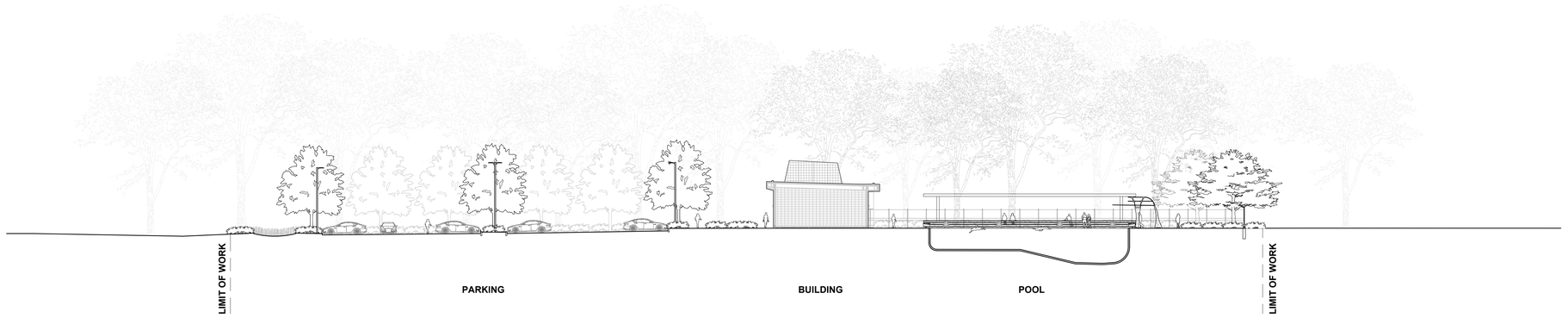
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APPROVED:

DATE

SHEET TITLE:
SITE SECTION ENTRY PLAZA

SHEET NUMBER:
L101





els
architecture+
urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD
PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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STRUCTURAL ENGINEER:
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SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:

ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

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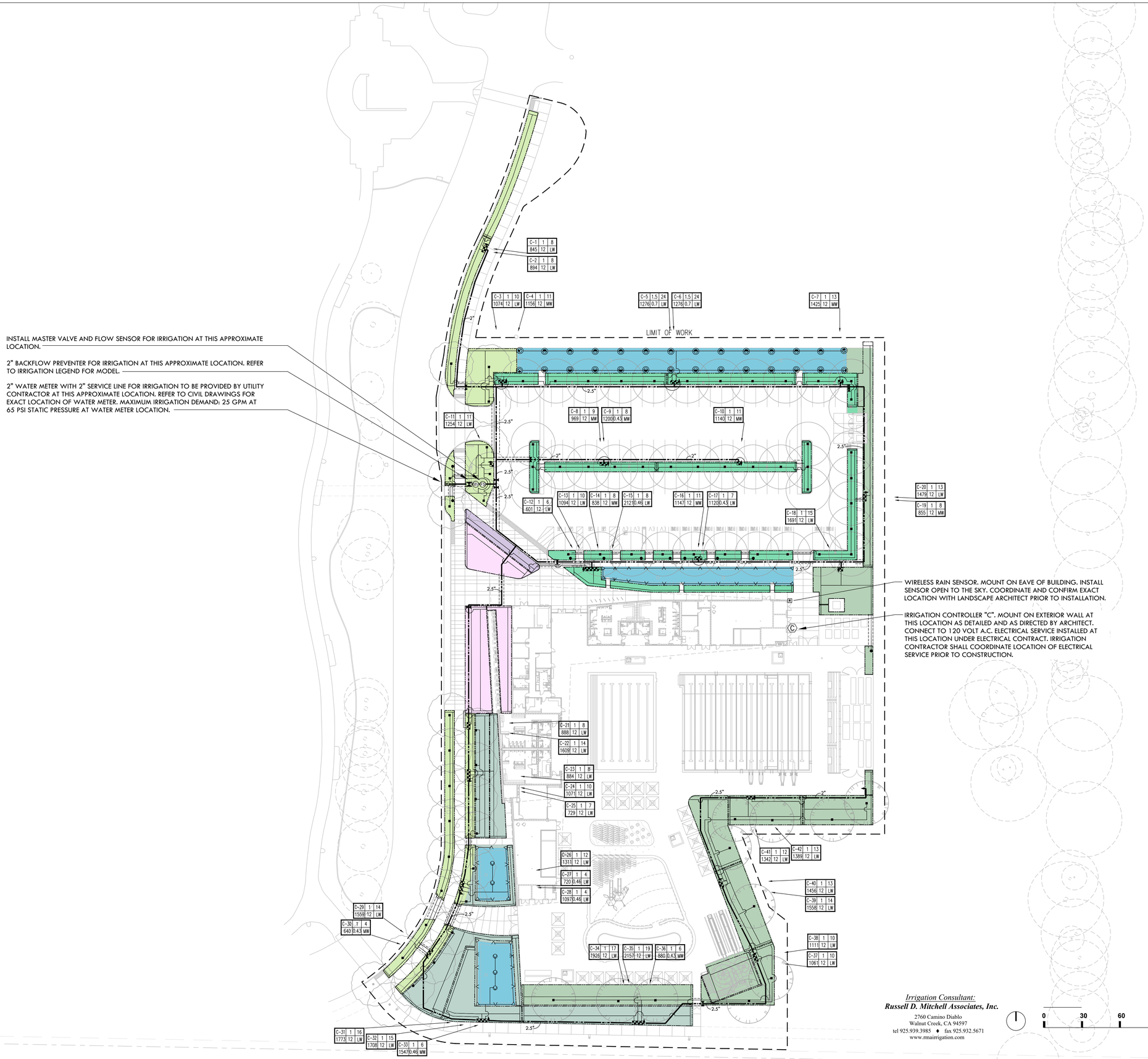
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SITE SECTION - NORTH-SOUTH

SHEET NUMBER:
L102



INSTALL MASTER VALVE AND FLOW SENSOR FOR IRRIGATION AT THIS APPROXIMATE LOCATION.

2" BACKFLOW PREVENTER FOR IRRIGATION AT THIS APPROXIMATE LOCATION. REFER TO IRRIGATION LEGEND FOR MODEL.

2" WATER METER WITH 2" SERVICE LINE FOR IRRIGATION TO BE PROVIDED BY UTILITY CONTRACTOR AT THIS APPROXIMATE LOCATION. REFER TO CIVIL DRAWINGS FOR EXACT LOCATION OF WATER METER. MAXIMUM IRRIGATION DEMAND: 25 GPM AT 65 PSI STATIC PRESSURE AT WATER METER LOCATION.

WIRELESS RAIN SENSOR. MOUNT ON EAVE OF BUILDING. INSTALL SENSOR OPEN TO THE SKY. COORDINATE AND CONFIRM EXACT LOCATION WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

IRRIGATION CONTROLLER "C". MOUNT ON EXTERIOR WALL AT THIS LOCATION AS DETAILED AND AS DIRECTED BY ARCHITECT. CONNECT TO 120 VOLT A.C. ELECTRICAL SERVICE INSTALLED AT THIS LOCATION UNDER ELECTRICAL CONTRACT. IRRIGATION CONTRACTOR SHALL COORDINATE LOCATION OF ELECTRICAL SERVICE PRIOR TO CONSTRUCTION.

Irrigation Consultant:
Russell D. Mitchell Associates, Inc.
2760 Camino Diablo
Walnut Creek, CA 94597
tel 925.939.3985 ♦ fax 925.932.5671
www.rmairrigation.com

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IRRIGATION PLAN

SHEET NUMBER:
L300

IRRIGATION NOTES

1. THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISHED CONDITION AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.

2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS. ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRIC CODE; THE UNIFORM PLUMBING CODE, PUBLISHED BY THE WESTERN PLUMBING OFFICIALS ASSOCIATION; AND OTHER STATE OR LOCAL LAWS OR REGULATIONS. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR REGULATIONS. THE CONTRACTOR SHALL FURNISH WITHOUT ANY EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED BY THE COMPLIANCE WITH THESE CODES AND REGULATIONS.

3. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LAYOUT AND INSTALLATION OF THE PLANT MATERIALS TO INSURE THAT THERE WILL BE COMPLETE AND UNIFORM IRRIGATION COVERAGE OF PLANTING IN ACCORDANCE WITH THESE DRAWINGS, AND CONTRACT DOCUMENTS. THE IRRIGATION LAYOUT SHALL BE CHECKED BY THE CONTRACTOR AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO CONSTRUCTION TO DETERMINE IF ANY CHANGES, DELETIONS, OR ADDITIONS ARE REQUIRED. IRRIGATION SYSTEM SHALL BE INSTALLED AND TESTED PRIOR TO INSTALLATION OF PLANT MATERIAL.

4. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.

5. IT IS THE RESPONSIBILITY OF THE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLER(S) TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS, SLOPES, SUN, SHADE AND WIND EXPOSURE.

6. IT IS THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR TO PROVIDE 120 VOLT A.C. (2.5 AMP DEMAND PER CONTROLLER) ELECTRICAL SERVICE TO THE CONTROLLER LOCATION(S). IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE THE ELECTRICAL SERVICE STUB-OUT TO THE CONTROLLER(S). PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH LOCAL CODES.

7. INSTALL NEW BATTERIES IN THE IRRIGATION CONTROLLER(S) TO RETAIN PROGRAM IN MEMORY DURING TEMPORARY POWER FAILURES. USE QUANTITY, TYPE AND SIZE REQUIRED AS PER CONTROLLER MANUFACTURER'S INSTRUCTIONS.

8. SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.

9. INSTALL 3" DETECTABLE TAPE ABOVE ALL PRESSURIZED MAIN LINES AS DETAILED. USE CHRISTY MODEL #TA-DT-3-BIRR FOR POTABLE IRRIGATION SYSTEMS.

10. INSTALL 2-WIRE CABLE ALONG THE MAIN LINE. CONTACT CONTROLLER REPRESENTATIVE FOR A PRE-CONSTRUCTION MEETING.

11. INSTALL 2-WIRE CABLE WITHIN 1.25" CONDUIT WITH LONG SWEEPS IN AND OUT OF EACH VALVE BOX. SEAL ALL CONDUIT OPENINGS WITH WATERPROOF FOAM.

12. INSTALL A 14"X19" GREY ELECTRICAL PULL BOX EVERY 200' AND AT EVERY CHANGE IN DIRECTION. ONLY SPLICE TWO WIRE CABLE AT THREE WAY WIRE CONNECTIONS.

13. IRRIGATION CONTROL WIRES: SOLID COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND. SIZE #14AWG WIRE WITH A JACKETED 2-CONDUCTOR. PREFERRED WIRE MAKE AND MODEL IS P7354D. ALL SPLICING SHALL BE MADE WITH 3M SCOTCHCAST 3570G WATERPROOF SPLICE KIT.

14. DECODER GROUNDING SHALL BE PROVIDED EVERY 300 FEET AT THE DECODER ONLY, AT THE CONTROLLER AND AT THE LAST DECODER OR AT THE END OF THE 2 WIRE PATH. GROUND WITH A 5/8" X 8' COPPER CLAD GROUNDING ROD. #6 COPPER WIRE TO SURGE DEVICE/DECODER. INCLUDE A SURGE ARRESTOR AT EACH GROUNDING LOCATION. A SPLIT BOLT CONNECTION TO BE USED TO CONNECT THE SURGE DEVICE TO THE GROUND WIRE WITH A 3M SCOTCHCAST 3570G WATERPROOF CONNECTOR.

15. SPLICING OF JACKETED 2-WIRE IS PERMITTED IN VALVE BOXES ONLY. LEAVE A 24" LONG COIL OF WIRE AT EACH SPLICE AND A 24" LONG EXPANSION LOOP IN ALL PULL BOXES.

16. INSTALL BLACK PLASTIC VALVE BOXES WITH BOLT DOWN, NON HINGED COVER MARKED "IRRIGATION CONTROL VALVE". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURER'S INCLUDE NDS, CARSON OR APPROVED EQUAL.

17. INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, INSTALL EACH BOX AN EQUAL DISTANCE FROM THE WALK, CURB, BUILDING OR LANDSCAPE FEATURE AND PROVIDE 12" BETWEEN BOX TOPS. ALIGN THE SHORT SIDE OF RECTANGULAR VALVE BOXES PARALLEL TO WALK, CURB, BUILDING OR LANDSCAPE FEATURE.

18. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS (AVOID LAWN AREAS WHERE POSSIBLE).

19. THE CONTRACTOR SHALL LABEL CONTROL LINE WIRE AT EACH REMOTE CONTROL VALVE WITH A 2 1/4" X 2 3/4" POLYURETHANE I.D. TAG, INDICATING IDENTIFICATION NUMBER OF VALVE (CONTROLLER AND STATION NUMBER). ATTACH LABEL TO CONTROL WIRE. THE CONTRACTOR SHALL PERMANENTLY STAMP ALL VALVE BOX LIDS WITH APPROPRIATE IDENTIFICATION AS NOTED IN CONSTRUCTION DETAILS.

20. FLUSH AND ADJUST IRRIGATION OUTLETS AND NOZZLES FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. SELECT THE BEST DEGREE OF THE ARC AND RADIUS TO FIT THE EXISTING SITE CONDITIONS AND THROTTLE THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH CONTROL ZONE.

21. SET SPRINKLER HEADS PERPENDICULAR TO FINISH GRADE.

22. LOCATE BUBBLERS ON UPHILL SIDE OF PLANT OR TREE.

23. INSTALL A HUNTER HCV SERIES, KBI CV SERIES, OR APPROVED EQUAL SPRING LOADED CHECK VALVE IN SPRINKLER RISER ASSEMBLIES WHERE LOW OUTLET DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.

24. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE CAUTION TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATE BY HAND IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR. BACK FILL TRENCHES ADJACENT TO TREE WITHIN TWENTY-FOUR (24) HOURS. WHERE THIS IS NOT POSSIBLE, SHADE THE SIDE OF THE TRENCH ADJACENT TO THE TREE WITH WET BURLAP OR CANVAS.

25. NOTIFY LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.

26. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.

27. IRRIGATION DEMAND: REFER TO PLANS.

28. THE EXISTING MAIN LINE SHOWN ON THE DRAWINGS IS DIAGRAMMATIC. VERIFY AND LOCATE EXISTING MAIN LINE IN FIELD. REPORT TO ARCHITECT IN WRITING ANY DEVIATION OF EXISTING MAIN LINE LOCATION FROM THAT SHOWN ON THE DRAWINGS.

29. PIPE SIZING SHOWN ON THE DRAWINGS IS TYPICAL. AS CHANGES IN LAYOUT OCCUR DURING STAKING AND CONSTRUCTION THE SIZE MAY NEED TO BE ADJUSTED ACCORDINGLY.

30. PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL #5.

31. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MINOR CHANGES IN THE IRRIGATION LAYOUT DUE TO OBSTRUCTIONS NOT SHOWN ON THE IRRIGATION DRAWINGS SUCH AS LIGHTS, FIRE HYDRANTS, SIGNS, ELECTRICAL ENCLOSURES, ETC.

32. WHEN WORK OF THIS SECTION HAS BEEN COMPLETED AND SUCH OTHER TIMES AS MAY BE DIRECTED, REMOVE ALL TRASH, DEBRIS, SURPLUS MATERIALS AND EQUIPMENT FROM SITE.

33. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLEMENTAL HAND WATERING OF ALL PLANT MATERIAL WITHIN DRIPLINE AREAS UNTIL THE PLANTS ARE SUFFICIENTLY ESTABLISHED.

34. VERIFY LOCATIONS OF ALL IRRIGATION COMPONENTS INSTALLED WITHIN A VALVE BOX WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL UNTIL LANDSCAPE ARCHITECT PROVIDES ACCEPTABLE LOCATIONS.

IRRIGATION WATER USE CALCULATIONS

WATER USE ESTIMATION

WATER TYPE	POTABLE
SITE ETo=	42.5

REGULAR LANDSCAPE AREAS

HYDROZONE #	HYDROZONE NAME	PLANT WATER USE TYPE	PLANT FACTOR (PF)	IRRIGATION METHOD	IRRIGATION EFFICIENCY	ETAF (PF/IE)	AREA (SQ. FT) (HA)	ETAF X AREA (HA)	ETWU (GAL/YR)	ACRE FEET/ YEAR	HCF/ YEAR	PERCENTAGE OF LANDSCAPE
1	SHRUBS/GC	LOW	0.3	DRIP	0.81	0.370	31,353	11,612	305,982	0.94	409.07	57%
2	SHRUBS/GC	MOD	0.5	DRIP	0.81	0.617	7,529	4,648	122,462	0.38	163.72	14%
3	TREES	MOD	0.5	BUBBLER	0.81	0.617	6,160	3,802	100,195	0.31	133.95	11%
4	BIORETENTION	LOW	0.3	SPRAY	0.75	0.400	9,991	3,996	105,305	0.32	140.78	18%
						TOTALS	55,033	24,059	633,945	1.95	847.52	100%

SPECIAL LANDSCAPE AREAS

HYDROZONE #	HYDROZONE NAME											
						1						0%
						TOTALS	0					0%

MAWA	GALLONS/YR	652,554
	ACRE FEET/YR	2.00
	HCF/YR	872.40
ETWU	GALLONS/YR	633,945
	ACRE FEET/YR	1.95
	HCF/YR	847.52

SITE IRRIGATION EFFICIENCY	SITE PLANT FACTOR	MAWA COMPLIANT
79.9%	0.35	YES

ETAF Calculations

REGULAR LANDSCAPE AREAS	
TOTAL ETAF x AREA	24,059
TOTAL AREA	55,033
AVG. ETAF	43.72%

MAWA FORMULA

MAXIMUM APPLIED WATER ALLOWANCE (MAWA) GALLONS PER YEAR

MAWA = (ETo)(0.62)[(LA x 0.45) + (0.55 x SLA)]

ETo = REFERENCE EVAPOTRANSPIRATION
0.55= ET ADJUSTMENT FACTOR
LA=LANDSCAPED AREA (SQUARE FEET)
0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

ETWU FORMULA

ESTIMATED TOTAL WATER USE (ETWU) GALLONS PER YEAR

ETWU= ((ETO)(.62)(ETAF x LA))

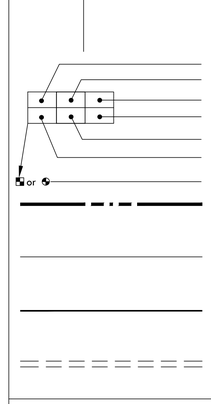
ETo = REFERENCE EVAPOTRANSPIRATION
PF = PLANT FACTOR FOR HYDROZONES
HA = HYDROZONE AREA (SQ.FT)
0.62 = CONVERSION FACTOR (GALLONS/SQ.FT/YR)

IE = IRRIGATION EFFICIENCY (0.81)-BUBBLER/DRIP

IE = IRRIGATION EFFICIENCY (0.75)-ROTORS/SPRAY

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION	NOZZLE GPM	OPERATING PSI	OPERATING RADIUS (FEET)
	I-20-12/MPR-25	HUNTER POP-UP GEAR DRIVEN ROTOR (SHRUB/GC)	2.0	45	20-25
	I-20-12/MPR-25	HUNTER POP-UP GEAR DRIVEN ROTOR (SHRUB/GC)	1.0	45	20-25
	PROS-12-PRS40-CV/ MP1000-360	HUNTER POP-UP SPRAY SPRINKLER WITH MP ROTATOR NOZZLE (SHRUB/GC)	0.75	40	12-14
	PROS-12-PRS40-CV/ MP1000-90	HUNTER POP-UP SPRAY SPRINKLER WITH MP ROTATOR NOZZLE (SHRUB/GC)	0.37,0.19	40	12-14
	PROS-12-PRS30-CV/ MP1000-90	HUNTER POP-UP SPRAY SPRINKLER WITH MP ROTATOR NOZZLE (SHRUB/GC)	0.32,0.16	30	10-12
■	PCB-25	HUNTER BUBBLER (TREE) MIN. 2 PER TREE. REFER TO BUBBLER DETAIL FOR QUANTITY OF BUBBLERS PER TREE SIZE.	0.25	30	TRICKLE
	WLT-0500-T	NDS SCH 40 BALL VALVE OR APPROVED EQUAL			
	OPERIND	RAIN BIRD DRIP ZONE INDICATOR			
	PESB-R SERIES	RAIN BIRD REMOTE CONTROL VALVE WITH SCRUBBER MECHANISM			
	XCZ-100-PRB-COM	RAIN BIRD REMOTE CONTROL VALVE DRIP ZONE KIT WITH SCRUBBER VALVE. (3-20GPM)			
	44-LRC	RAIN BIRD 1" TWO-PIECE QUICK COUPLING VALVE (YELLOW LOCKING RUBBER COVER)			
	T113-K SERIES	NIBCO BRASS GATE VALVE (LINE SIZE)			
	975XL2SEU-2"/ VIT SBBC-30AL/PBB-30	WILKINS REDUCED PRESSURE BACKFLOW ASSEMBLY WITH VIT STRONGBOX ALUMINUN ENCLOSURE AND FREEZE BLANKET.			
MV	3300200	SUPERIOR MASTER VALVE-2" (NORMALLY OPEN)			
FS	————	REFER TO CONTROLLER MODEL AND PART			
C	CS3-2W/MPS CS3-GR-KIT/CS-2W-POC/ FM 2B/COMM-5YR-2	CALSENSE CS3000 2-WIRE CONTROLLER IN A STAINLESS STEEL METER PEDESTAL ENCLOSURE; INCLUDES STUBBY ANTENNA AND 4G LTE COMMUNICATION, 2-WIRE POC DECODER, A 2" BRASS FLOW METER AND 5 YEAR CELLULAR MODEM COMMUNICATION.			
—	CS-2W-2ST	CALSENSE 2-WIRE STATION DECODER WITH 2 STATION OUTPUTS INSTALLATION CONTRACTOR SHALL CONTACT CALSENSE JENNIFER GREGORIS (925) 325-9368 JENNIFERG@CALSENSE.COM TO REQUEST A CALSENSE SITE REVIEW TO WHAT WAS SPECIFIED IS INSTALLED PER MANUFACTURER'S SPECIFICATION.			
—	NOT SHOWN ON PLANS	ROUTE TWO WIRE CABLE TO ALL REMOTE CONTROL VALVES. SIZE #14AWG WIRE WITH A JACKETED 2-CONDUCTOR. PREFERRED WIRE MAKE AND MODEL IS PAIGE P7354D. ALL SPLICING SHALL BE MADE WITH 3M SCOTCHCAST 3570G WATERPROOF SPLICE KIT. INSTALL 2 WIRE CABLE WITHIN 1.25" SCH 40 ELECTRICAL CONDUIT. PULL BOXES SHALL BE LOCATED EVERY 300' NO SPLICES ARE ALLOWED BETWEEN VALVES. REFER TO DETAIL FOR INSTALLATION INSTRUCTIONS.			

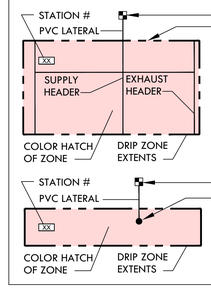


MAIN LINE: 2 1/2" AND SMALLER: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 18" COVER.

LATERAL LINE: 3/4" AND LARGER: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.

DRIPLINE LATERAL LINE: 3/4" AND LARGER: 1120-SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.

SLEEVING: SCHEDULE 40 PVC PLASTIC PIPE. COVER TO BE AS INDICATED IN SPECIFICATIONS OR AS INDICATED ABOVE FOR PIPE DEPTH OF COVER.



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SPECIFICATIONS
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REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:

ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

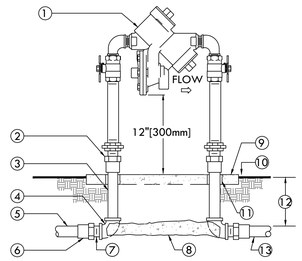
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APPROVED:

DATE

SHEET TITLE:
IRRIGATION NOTES AND LEGEND

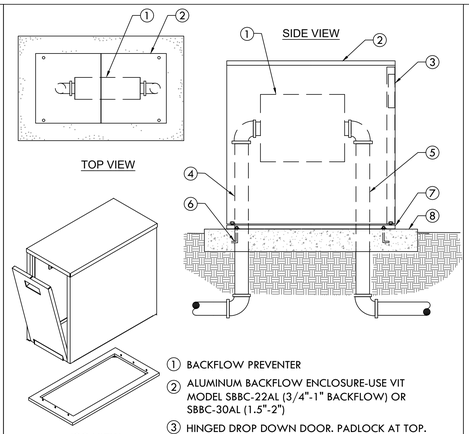
SHEET NUMBER:
L301



1. REDUCED PRESSURE BACKFLOW ASSEMBLY.
2. WROUGHT COPPER MALE ADAPTER-2 TOTAL (SOLDER x THREAD CONNECTION).
3. COPPER TYPE "K" PIPE (LENGTH AS REQUIRED).
4. WROUGHT COPPER 90° ELBOW-2 TOTAL (SOLDER x THREAD CONNECTION).
5. PVC MAIN LINE TO POINT OF CONNECTION.
6. BUSH AS NECESSARY FOR SIZE TRANSITION.
7. SCHEDULE 40 PVC MALE ADAPTER-2 TOTAL.
8. CONCRETE SUPPORT BLOCK.
9. CONCRETE PAD-SEE ENCLOSURE DETAIL.
10. FINISH GRADE.
11. PVC SLEEVE BOTH SIDES.
12. REFER TO IRRIGATION LEGEND.
13. PVC MAIN LINE TO IRRIGATION SYSTEM.

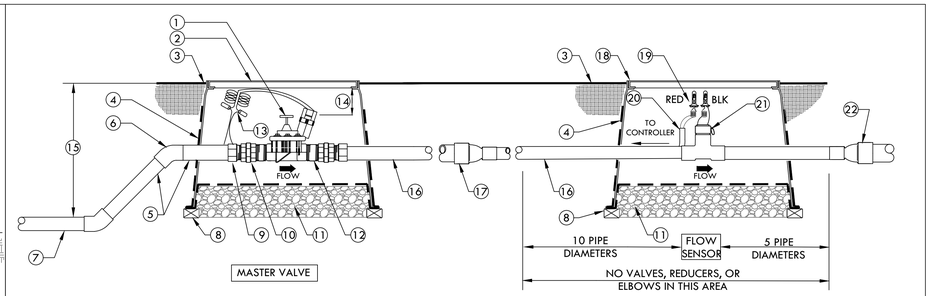
NOTES:
1. INSTALL A FREEZE PREVENTATIVE BLANKET AROUND BACKFLOW ASSEMBLY. BLANKET SHALL BE GREEN.
2. DO NOT SOLDER CONNECT FITTINGS WHILE THREADED INTO BACKFLOW ASSEMBLY. THIS MAY CAUSE DAMAGE TO DEVICE.
3. NIPPLES AND FITTINGS TO BE SAME IPT SIZE AS BACKFLOW ASSEMBLY.
4. PROVIDE A STAINLESS STEEL ENCLOSURE TO COMPLETELY ENCLOSE DEVICE. INSTALL ENCLOSURE TO CONCRETE BASE AS DIRECTED BY MANUFACTURER.

1 REDUCED PRESSURE BACKFLOW ASSEMBLY
SCALE: NONE



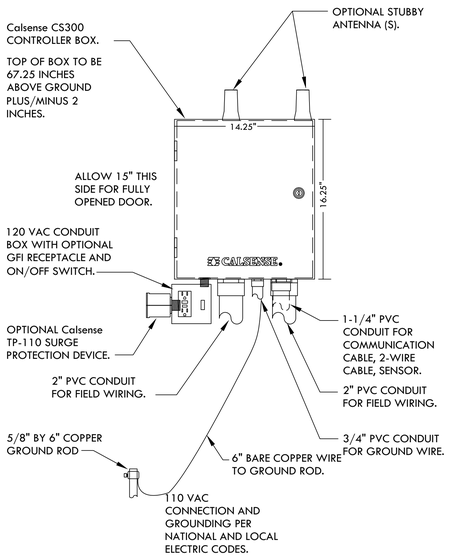
1. BACKFLOW PREVENTER
2. ALUMINUM BACKFLOW ENCLOSURE-USE VIT MODEL SBBC-22AL (3/4"-1" BACKFLOW) OR SBBC-30AL (1.5"-2")
3. HINGED DROP DOWN DOOR. PADLOCK AT TOP.
4. WATER SERVICE INLET PIPING
5. WATER SERVICE OUTLET PIPING
6. 3/8" "L" STYLE ANCHOR BOLTS SET IN CONCRETE BASE
7. SECURED ANCHOR PLATE MOUNTING BASE IN CONCRETE WITH 3#8" J BOLTS (4 PLACES).
8. POURED CONCRETE BASE - 6" MIN. THICKNESS - EXTEND 4" BEYOND OUTSIDE DIMENSIONS OF ENCLOSURE

2 ALUMINUM BACKFLOW ENCLOSURE-LOW PROFILE
SCALE: NONE

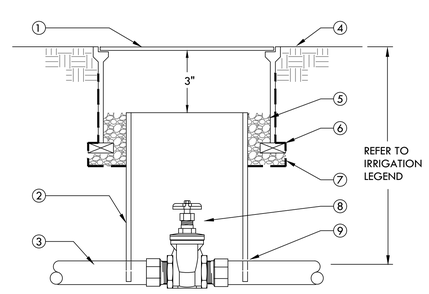


1. MASTER CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED (PRESSURE REGULATOR WHERE SHOWN ON PLANS). CENTER WITHIN BOX.
2. 14" X 19" RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
3. FINISH GRADE.
4. 1/2" MESH, 19 GAUGE HOT DIPPED GALVANIZED STEEL WIRE TO COVER VALVE BOX BOTTOM AND CUTOUTS.
5. SCH 80 PVC PIPE. LENGTH AS REQUIRED.
6. SCHEDULE 80 PVC 45° ELBOW (SxS)
7. PVC MAIN LINE FROM BACKFLOW OR PUMP.
8. BRICK-ONE ON EACH CORNER OR THREE FOR ROUND BOXES.
9. SCH 80 PVC MALE ADAPTER- 2 TOTAL.
10. SCHEDULE 80 PVC THREADED UNION-2 TOTAL.
11. PEA GRAVEL OR 3/4" DRAIN ROCK- 4" [100mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX).
12. 3" LONG SCHEDULE 80 PVC NIPPLE-2 TOTAL. MATCH VALVE SIZE.
13. VALVE CONTROL WIRE- PROVIDE 3M-DBY SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS UF WIRE IN A 1" DIAMETER COIL. FOR TWO-WIRE PROJECTS ROUTE CONDUIT AND TWO CABLE INTO VALVE BOX AND USE DECODER THAT IS COMPATIBLE WITH CONTROLLER AND VALVE.
14. 3" MIN 6" MAX.
15. REFER TO IRRIGATION LEGEND.
16. SCH 80 PVC MAIN LINE TO FLOW SENSOR.
17. IF NECESSARY INSTALL A SCH. 80 REDUCING COUPLING, TYP.
18. 10" ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
19. 18 GAUGE AWG DIRECT BURIAL WIRE. FLOW SENSOR WIRE MUST BE RUN IN 1" PVC CONDUIT FROM FLOW SENSOR TO CONTROLLER ENCLOSURE. PROVIDE 3M-DBY SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS WIRE IN A 1" DIAMETER COIL. FOR TWO-WIRE PROJECTS ROUTE CONDUIT AND TWO CABLE INTO SENSOR BOX AND USE SENSOR DECODER THAT IS COMPATIBLE WITH CONTROLLER AND SENSOR.
20. SCH 40 PVC CONDUIT FOR SENSOR WIRE OR TWO WIRE CABLE FROM CONTROLLER.
21. FLOW SENSOR MUST BE INSTALLED WITH INSERT (TOP) POSITIONED VERTICALLY AND BODY (TEE) POSITIONED HORIZONTALLY.
22. SCH. 80 REDUCING COUPLING UPSIZING TO MAIN LINE SERVICING IRRIGATION SYSTEM IF REQUIRED.

3 MASTER VALVE & FLOW SENSOR INSTALLATION
SCALE: NONE

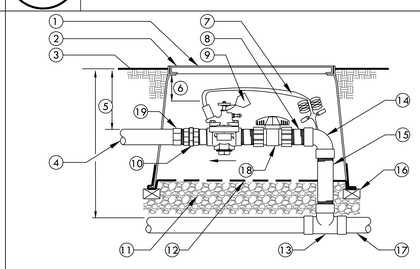


4 CALSENSE WALL MOUNTED CONTROLLER INSTALLATION
SCALE: NONE



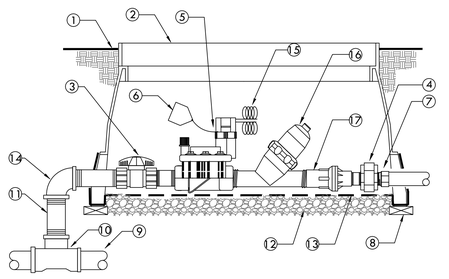
1. 10" ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID.
2. 8" CLASS 160 OR SCHEDULE 40 PVC PIPE (NOTCH TO FIT OVER MAIN LINE PIPE).
3. PVC MAIN LINE.
4. FINISH GRADE.
5. PEA GRAVEL OR 3/4" DRAIN ROCK - 4" DEEP (NO SOIL IN VALVE BOX).
6. BRICK-2 TOTAL.
7. 19 GAUGE 1/2" SQUARE WIRE MESH. WRAP UP SIDES OF BOX.
8. GATE VALVE WITH X-TOP HANDLE.
9. MALE ADAPTER. REFER TO LEGEND FOR FITTING TYPE.

5 GATE VALVE
SCALE: NONE



1. REMOTE CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED (PRESSURE REGULATOR WHERE SHOWN ON PLANS).
2. USE A NDS PRO SERIES 14" X 19" RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID FOR 1" VALVES. FOR 1.5" AND LARGER VALVES INSTALL BALL VALVE WITHIN A SEPARATE 10" ROUND BOX OR ONE BALL VALVE PER MANIFOLD OF VALVES. GATE VALVE SIZE SHALL BE SAME AS LARGEST VALVE WITHIN MANIFOLD. ONE VALVE PER BOX- NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
3. FINISH GRADE.
4. PVC LATERAL LINE.
5. REFER TO IRRIGATION SPECS.
6. 3" [75mm] MIN, 6" [150mm] MAX.
7. VALVE CONTROL WIRE- PROVIDE SEAL PACKS AT ALL SPLICES AND 3' [1m] OF EXCESS UF WIRE IN A 1" [25mm] DIAMETER COIL.
8. SCHEDULE 80 PVC NIPPLE (3 TOTAL).
9. VALVE I.D. TAG (CONTROLLER AND STATION NUMBER).
10. SCHEDULE 80 PVC THREADED UNION.
11. PEA GRAVEL OR 3/4" DRAIN ROCK- 4" [100mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX).
12. 19 GAUGE 1/2" [12mm] SQUARE WIRE MESH.
13. SCHEDULE 40 OR 80 PVC TEE. REFER TO LEGEND FOR TYPE.
14. SCHEDULE 80 PVC 90° ELBOW (TxT).
15. SCHEDULE 80 PVC NIPPLE- LENGTH AS REQUIRED.
16. BRICK-1 EACH CORNER.
17. PVC MAIN LINE.
18. SCHEDULE 80 PVC UNION BALL VALVE (ONE PER VALVE).
19. SCHEDULE 40 MALE ADAPTER

6 REMOTE CONTROL VALVE
SCALE: NONE



1. FINISH GRADE
2. RECTANGULAR JUMBO PLASTIC VALVE BOX WITH BOLT DOWN LID. ONE VALVE PER BOX- NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
3. SCHEDULE 80 PVC UNION BALL VALVE (ONE PER VALVE)
4. SCHEDULE 80 PVC THREADED UNION
5. REMOTE CONTROL VALVE
6. VALVE I.D. TAG (CONTROLLER AND STATION NUMBER).
7. SCHEDULE 40 MALE ADAPTER
8. BRICK-1 EACH CORNER.
9. PVC MAIN LINE.
10. SCHEDULE 40 OR 80 PVC TEE. REFER TO LEGEND FOR TYPE.
11. SCHEDULE 80 PVC NIPPLE-(4-TOTAL) LENGTH AS REQUIRED.
12. PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK - 4" [102mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX).
13. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH.
14. SCHEDULE 80 PVC 90° ELBOW (TxT).
15. VALVE CONTROL WIRE- PROVIDE 3M-DBY SEAL PACKS AT ALL SPLICES AND 3' [1m] OF EXCESS UF WIRE IN A 1" [25mm] DIAMETER COIL.
16. DISC FILTER
17. PRESSURE REGULATOR (40 PSI)

7 REMOTE CONTROL VALVE (DRIPZONE)
SCALE: NONE

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els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

PROJECT NUMBER:
202210

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REVISION:

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KEY PLAN:

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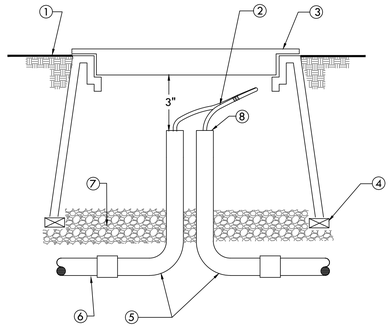
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
IRRIGATION DETAILS

SHEET NUMBER:
L302

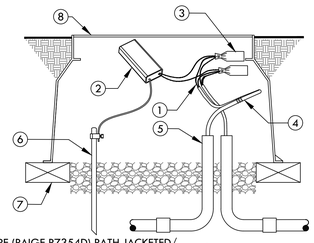


1. FINISH GRADE
2. 24" LOOP OF TWO WIRE CABLE.
3. GREY RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. HEAT BRAND "PB" INTO LID.
4. BRICK-ONE ON EACH CORNER
5. SCHEDULE 40 PVC SWEEP ELLS
6. SCHEDULE 40 U.L. LISTED PVC CONDUIT
7. PEA GRAVEL OR 3/4" [20mm] DRAIN ROCK - 4" [102mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX).
8. SEAL ALL CONDUIT OPENINGS WITH WATERPROOF FOAM.

1 IRRIGATION TWO WIRE PULL BOX

SCALE: NONE

NOTE:
TWO WIRE DECODER SYSTEMS MUST BE PROPERLY GROUNDED IN ORDER TO PROTECT AGAINST LIGHTNING SURGES. THE COMMUNICATION CABLE MUST BE GROUNDED EVERY 300' AND THE END OF THE TWO WIRE PATH. THE SURGE DEVICE MUST BE A PAIGE LIGHTNING ARRESTOR. CALSENSE RECOMMENDS A SCREW CLAMP OR CADWELD TYPE CONNECTOR TO BE USED TO CONNECT THE GROUND WIRE TO THE SURGE ARRESTOR.



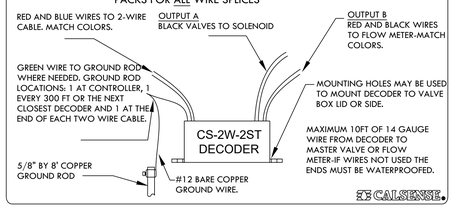
1. WIRE (PAIGE P7354D) PATH JACKETED/ TWISTED FROM CONTROLLER. ALLOW 24" SLACK PER DECODER
2. PAIGE LIGHTNING ARRESTOR. 1 EVERY 300' FROM STARTING FROM CONTROLLER.
3. 3M SCOTCHCAST 3570G SPLICE KITS ARE REQUIRED ON ALL WIRES. ALL UNUSED DECODERS WIRES NEED TO BE WATERPROOFED.
4. 2-WIRE PATH JACKETED/ TWISTED TO NEXT DECODER
5. 1.25" CONDUIT FOR 2 WIRE CABLE WITH LONG SWEEPS IN AND OUT OF EACH VALVE BOX. SEAL ALL CONDUIT OPENINGS WITH WATERPROOF FOAM.
6. INSTALL 5/8" DIAMETER COPPER GROUND ROD OF 8' LENGTH.
7. BRICK-ONE ON EACH CORNER
8. GREY RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. HEAT BRAND "GR" INTO LID.

2 CALSENSE LIGHTNING ARRESTOR

SCALE: NONE

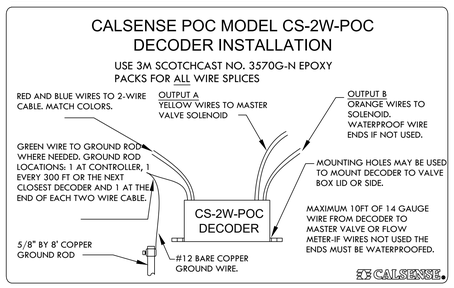
CALSENSE 2-STATION MODEL CS-2W-2ST DECODER INSTALLATION

USE 3M SCOTCHCAST NO. 3570G-N EPOXY PACKS FOR ALL WIRE SPLICES



CALSENSE POC MODEL CS-2W-POC DECODER INSTALLATION

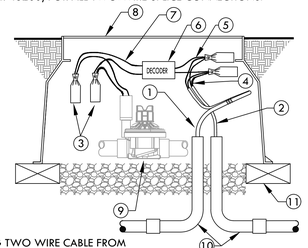
USE 3M SCOTCHCAST NO. 3570G-N EPOXY PACKS FOR ALL WIRE SPLICES



3 CALSENSE DECODER WIRING INSTALLATION

SCALE: NONE

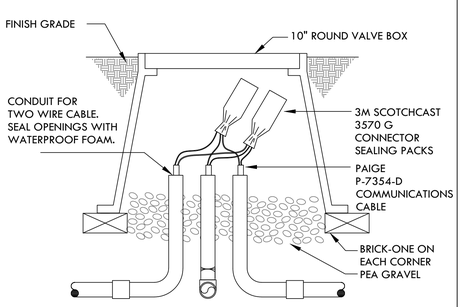
NOTE:
1. ALL DECODERS SHALL HAVE A VALVE NUMBER ADDRESSED AT CONTROLLER PRIOR TO INSTALLATION.
2. USE U.F. SAFETY CABLE STRIPPER BY KING INNOVATION (MODEL NUMBER 46200) FOR ALL TWO-WIRE SPLICE CONNECTIONS.



1. #14AWG TWO WIRE CABLE FROM CONTROLLER. REFER TO IRRIGATION NOTES FOR MODEL NUMBER OF WIRE. ALLOW A 24 INCH SLACK PER DECODER. USE ELECTRICAL TAPE TO HOLD SLACK CABLES TOGETHER.
2. TWO WIRE CABLE TO NEXT DECODER
3. 3M SCOTCHCAST 3570G WATERPROOF SPLICE KIT
4. A MAXIMUM OF 4" OF WIRE SHALL BE STRIPPED FROM TWO WIRE CABLE WHEN SPLICING AT DECODERS.
5. CONNECT CORRECT DECODER WIRES TO TWO WIRE CABLES.
6. MODEL CS-2W-ST FOR REMOTE CONTROL VALVES OR CS-2W-POC DECODER FOR MASTER VALVE AND FLOW SENSOR. REFER TO DECODER INSTALLATION DETAILS FOR WIRING CONFIGURATION.
7. CONNECT CORRECT DECODER WIRES TO VALVE SOLENOID WIRES
8. VALVE BOX. REFER TO REMOTE CONTROL VALVE DETAIL FOR INSTALLATION INSTRUCTIONS.
9. REMOTE CONTROL VALVE. REFER TO REMOTE CONTROL VALVE DETAIL FOR INSTALLATION INSTRUCTIONS.
10. 1.25" CONDUIT FOR 2 WIRE CABLE WITH LONG SWEEPS IN AND OUT OF EACH VALVE BOX. SEAL ALL CONDUIT OPENINGS WITH WATERPROOF FOAM.
11. BRICK-ONE ON EACH CORNER

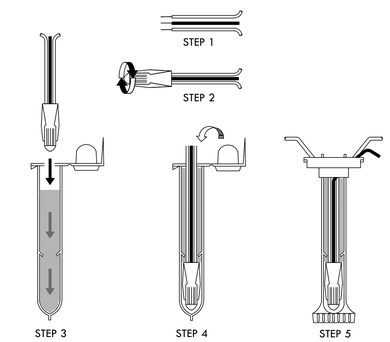
4 CALSENSE-2 STATION DECODER WIRING IN CONDUIT

SCALE: NONE



5 CALSENSE 2-WIRE SPLICE BOX AT MAIN LINE TEE OR 3 WAY WIRE BRANCH

SCALE: NONE

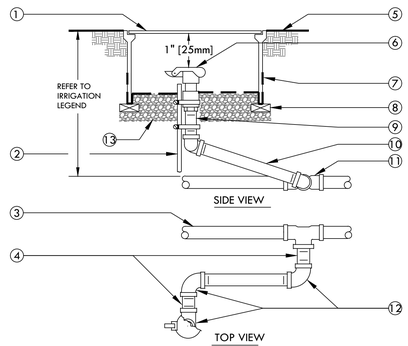


NOTE:
MAXIMUM # OF WIRES PER CONNECTOR:
- 3-#14 GAUGE
- 2-#12 GAUGE

INSTRUCTIONS:
1. STRIP WIRES APPROXIMATELY 1/2" FROM ENDS TO EXPOSE WIRE.
2. TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
3. INSERT WIRE ASSEMBLY TO BOTTOM OF GEL-FILLED TUBE. CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT THE BOTTOM OF THE TUBE.
4. PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
5. INSPECT FINAL SPLICE ASSEMBLY THAT IT IS SECURED.

6 WEATHERPROOF WIRE SPLICE ASSEMBLY

SCALE: NONE

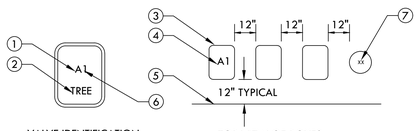


1. 10" ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID.
2. 1 1/4" x 1 1/4" x 3/16" [30mm x 30mm x 5mm] ANGLE IRON 30" [760mm] LONG W/2 STAINLESS STEEL STRAPS (ONE AROUND QCV).
3. PVC MAIN LINE.
4. 3" [75mm] LONG SCHEDULE 80 PVC THREADED NIPPLE.
5. FINISH GRADE.
6. QUICK COUPLING VALVE.
7. 19 GAUGE 1/2" [13mm] SQUARE WIRE MESH.
8. BRICK - 2 TOTAL.
9. SCHEDULE 80 PVC THREADED NIPPLE.
10. 10" [250mm] LONG SCHEDULE 80 PVC THREADED NIPPLE.
11. UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW.
12. SCHEDULE 80 PVC THREADED 90° ELL.
13. PEA GRAVEL OR 3/4" DRAIN ROCK- 4" [100mm] DEEP BELOW VALVE (NO SOIL IN VALVE BOX).

NOTE:
NIPPLES AND FITTINGS TO BE SAME SIZE AS VALVE IPT INLET THREAD SIZE.

7 QUICK COUPLING VALVE

SCALE: NONE



VALVE IDENTIFICATION

1. CONTROLLER ID.
2. ALL TREE VALVES TO HAVE TREE BRANDED INTO LID.
3. RECTANGULAR VALVE BOX.
4. HEAT BRAND VALVE TYPE PER TABLE OR CONTROLLER ID AND STATION NUMBER INTO LID.
5. EDGE OF LAWN, WALK, FENCE, CURB, ETC.
6. STATION NUMBER.
7. ROUND VALVE BOX FOR QCV AND GATE VALVE. HEAT BRAND VALVE TYPE INTO INTO LID PER TABLE.

TOP VIEW OF BOXES

ITEMS TO BRAND:	BRAND CODE
GATE VALVE	GV
PRESSURE REDUCER	PRV
MASTER VALVE	MV
FLOW SENSOR	FS
HYDROMETER	HM
MAIN LINE AIR RELIEF	ARV
REMOTE CONTROL VALVE	A___
QUICK COUPLER	QC
SPLICE BOX	SB
PULL BOX	PB
LIGHTNING ARRESTOR	LA
GROUND ROD	GR

INSTRUCTIONS:
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

8 VALVE BOX INSTALLATION

SCALE: NONE

Irrigation Consultant:
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els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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TOPFLIGHT SPECS
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REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:

ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

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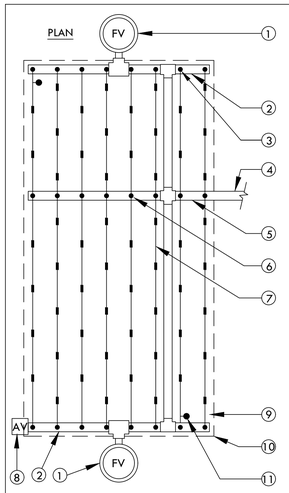
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APPROVED:

DATE

SHEET TITLE:
IRRIGATION DETAILS

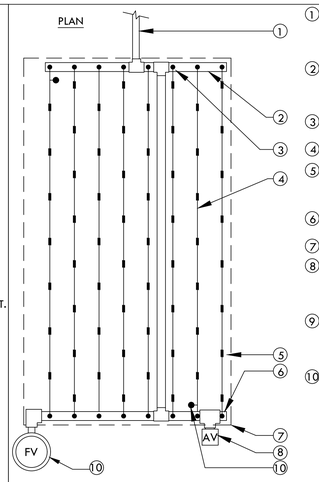
SHEET NUMBER:
L303



1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. 1" FLEXIBLE PVC IPS HOSE FLUSH MANIFOLD.
3. MANIFOLD-TO-ELBOW CONNECTION (TYP).
4. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
5. PVC SUPPLY MANIFOLD. EXTEND TO END OF ZONE/EXHAUST HEADER.
6. MANIFOLD-TO-TEE CONNECTION.
7. DRIPLINE LATERAL.
8. AIR/VACUUM RELIEF PLUMBED TO PVC EXHAUST. INSTALL AT HIGH POINT.
9. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
10. AREA PERIMETER.
11. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2-4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

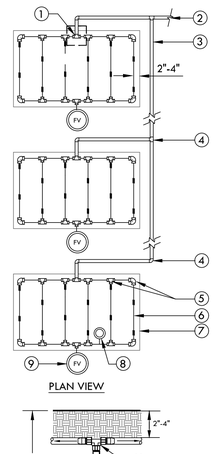
1 RAIN BIRD XFCV CENTER FEED LAYOUT
SCALE: NONE



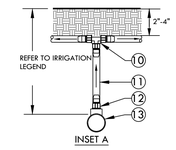
1. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. MANIFOLD-TO-ELBOW CONNECTION (TYP).
4. DRIPLINE LATERAL.
5. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
6. 1" FLEXIBLE PVC IPS HOSE FLUSH MANIFOLD.
7. AREA PERIMETER.
8. AIR/VACUUM RELIEF PLUMBED TO PVC EXHAUST. INSTALL AT HIGH POINT.
9. DRIP OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONES.
10. AUTOMATIC FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2-4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

2 RAIN BIRD XFCV END FEED LAYOUT
SCALE: NONE



PLAN VIEW

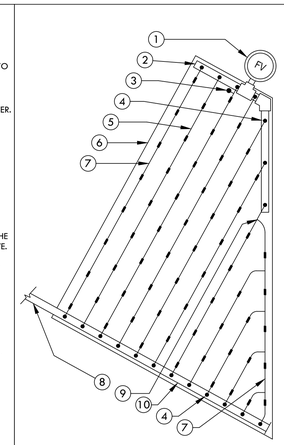


INSET A

1. PVC TO DRIPLINE TEE CONNECTION. REFER TO INSET A.
2. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1". SIZE AS FOLLOWS:
   1" = 0-12 GPM
   1.25 = 13-20 GPM
3. 1" PVC SUPPLY. EXTEND TO EACH ISLAND PLANTER.
4. SCH. 40 PVC TEE OR ELBOW (SxSxS OR SxS).
4. 1" PVC SUPPLY. EXTEND TO ENDS OF ZONE/EXHAUST HEADER.
5. TWIST LOCK FITTING. TLF-ELBW-0600 OR TLF-TEE-0600.
6. RAIN BIRD XFCV DRIPLINE
7. AREA PERIMETER.
8. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE. MIN. 2 PER VALVE.
9. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
10. TWIST LOCK FITTING. TLF-ELBW-0600 OR TLF-TEE0600.
11. 1/2" POLYETHYLENE TUBING; RAIN BIRD XFD SERIES BLANK TUBING.
12. TWIST LOCK FITTING. TLF-MPT6-0600.
13. SCH 40 PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2"-4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

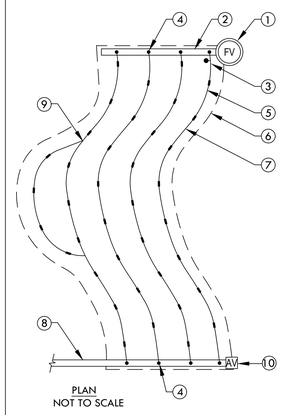
3 RAIN BIRD XFCV ISLAND LAYOUT
SCALE: NONE



1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
4. MANIFOLD-TO-ELBOW CONNECTION.
5. DRIPLINE LATERAL.
6. AREA PERIMETER.
7. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
8. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
9. RAINBIRD TWIST-LOC TEE (TLF-TEE-0600)
10. PVC SUPPLY MANIFOLD.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2-4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

4 RAIN BIRD XFCV TRIANGULAR LAYOUT
SCALE: NONE

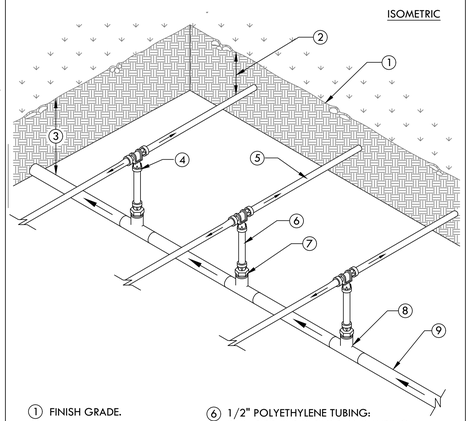


PLAN
NOT TO SCALE

1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
4. MANIFOLD-TO-ELBOW CONNECTION (TYP).
5. DRIPLINE LATERAL.
6. AREA PERIMETER.
7. PERIMETER LATERALS 2" [50mm] TO 4" [100mm] FROM EDGE.
8. PVC SUPPLY LINE/HEADER FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
9. RAIN BIRD TLF TEE-0600
10. RAIN BIRD AIR/VACUUM RELIEF VALVE (ARV050) PLUMBED TO SUPPLY MANIFOLD AT HIGH POINT.

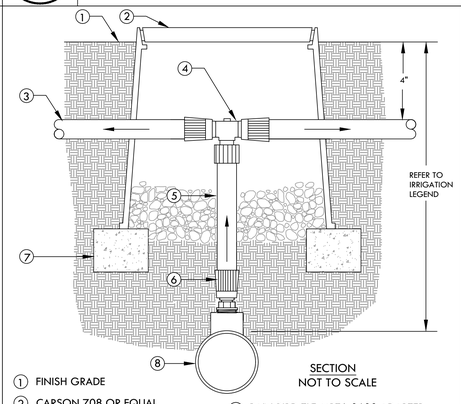
NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2-4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

5 RAIN BIRD XFCV ODD CURVE LAYOUT
SCALE: NONE



1. FINISH GRADE.
2. DEPTH OF TUBING PER IRRIGATION LEGEND.
3. DEPTH OF PVC LATERAL LINE PER IRRIGATION LEGEND.
4. TWIST LOCK TEE FITTING. TLF-TEE-0600.
5. RAIN BIRD XFCV DRIPLINE
6. 1/2" POLYETHYLENE TUBING: RAIN BIRD XFD SERIES BLANK TUBING.
7. TWIST LOCK FITTING: TLF-MPT6-0600.
8. SCH 40 PVC TEE WITH 1/2" FPT OUTLET.
9. PVC LATERAL LINE FROM REMOTE CONTROL VALVE.

6 RAIN BIRD XFCV CENTER FEED MANIFOLD
SCALE: NONE

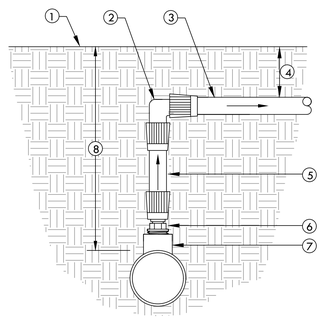


SECTION
NOT TO SCALE

1. FINISH GRADE
2. CARSON 708 OR EQUAL. COLOR: BLACK. USE PURPLE FOR RECYCLED WATER SYSTEMS.
3. DRIPLINE TUBING
4. RIAN BIRD TLF TEE-0600
5. BLANK 5/8" [16mm] POLY TUBING, LENGTH AS NECESSARY.
6. RAIN BIRD TLF-MPT6-0600 ADAPTER
7. BRICK (1 OF 2)
8. SCH 40 PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
8. PVC LATERAL LINE SUPPLY. MINIMUM SIZE TO BE 1" UNLESS SIZED DIFFERENTLY ON DRAWINGS. USE SCH 40 PVC 1"x1"x1/2" TEE OR 90° ELBOW.

NOTE:
USE ONLY WHEN THE TOTAL LENGTH OF DRIP LINE SERVICED FROM THIS PVC CONNECTION IS LESS THAN 300 FT.

7 DRIPLINE TO PVC CONNECTION-SINGLE SOURCE DRIP AREAS ONLY
SCALE: NONE



SECTION/ELEVATION
NOT TO
SCALE

1. FINISH GRADE
2. RAIN BIRD TWIST LOCK ELBOW (TLF-ELBW-0600)
3. DRIPLINE TUBING
4. DEPTH OF TUBING PER IRRIGATION LEGEND.
5. BLANK 5/8" [16mm] POLY TUBING, LENGTH AS NECESSARY.
6. RAIN BIRD TLF-MPT6-0600 ADAPTER
7. SCH 40 PVC TEE (SxSxT) WITH 1/2" FPT OUTLET.
8. DEPTH OF PVC LATERAL LINE PER IRRIGATION LEGEND

8 DRIPLINE MANIFOLD TO ELBOW CONNECTION
SCALE: NONE

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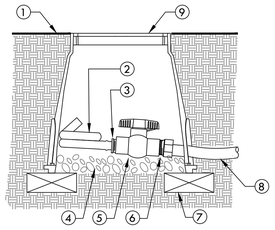
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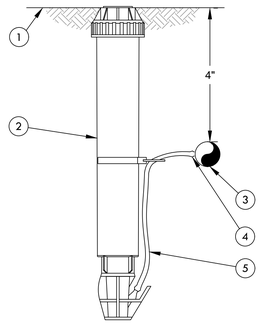
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NOTE:
ALLOW A MINIMUM 18" OF DRIPLINE HOSE IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

1. FINISH GRADE
2. 1/2" POLYETHYLENE TUBING: RAIN BIRD XFD SERIES BLANK TUBING. MIN. 18" IN LENGTH.
3. TWIST LOCK MALE ADAPTER. TLF-MPT6-0600.
4. PEA GRAVEL SUMP (4" DEEP).
5. 1/2" SCH. 40 THREADED BALL VALVE.
6. 1/2" SCH. 40 MALE ADAPTER.
7. BRICK. 2 TOTAL.
8. 1/2" IPS PVC HOSE FROM DRIPLINE OR EXHAUST HEADER.
9. 6" ROUND PLASTIC VALVE BOX.

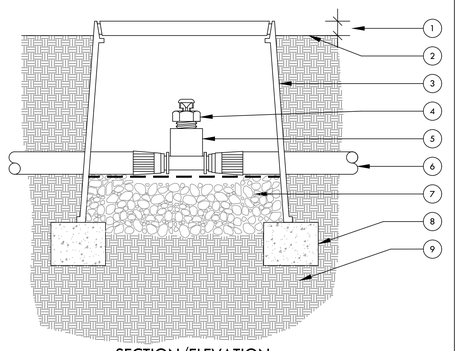
1 DRIPLINE-FLUSH POINT
SCALE: NONE



NOTE:
USE XERIMAN TOOL XM-TOOL TO INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING.

1. FINISH GRADE
2. MICRO-SPRAY POP-UP: RAIN BIRD XERI-POP XP-600X WITH 4-VAN NOZZLE
3. SUB-SURFACE DRIPLINE
4. 1/4" BARB TRANSFER FITTING: RAIN BIRD XBFCONN
5. 1/4" DISTRIBUTION TUBING: RAIN BIRD XQ TUBING (LENGTH AS REQUIRED)

2 DRIPLINE INDICATOR
SCALE: NONE
DET: --------

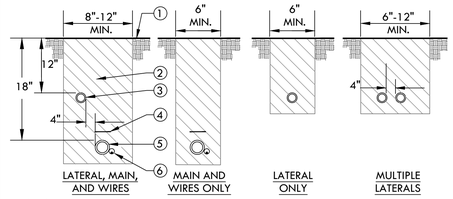


SECTION/ELEVATION

NOTE:
USE ONE AIR/RELIEF VALVE FOR EVERY 7 GPM PER ZONE. LOCATE AT HIGH POINTS.

1. 1" ABOVE FINISH GRADE.
2. FINISH GRADE.
3. 6" ROUND PLASTIC VALVE BOX. HEAT BRAND "AR" ON LID IN 1" HIGH CHARACTERS.
4. RAIN BIRD ARV050 AIR/VACUUM RELIEF VALVE.
5. RAIN BIRD TWIST LOCK TEE X 1/2" FPT ADAPTER (TLF-TEE-0600)
6. RAIN BIRD XFS TUBING.
7. PEA GRAVEL (4" DEEP).
8. BRICK SUPPORTS (2 COMMON BRICKS REQUIRED).
9. NATIVE SOIL PER SPECIFICATIONS.

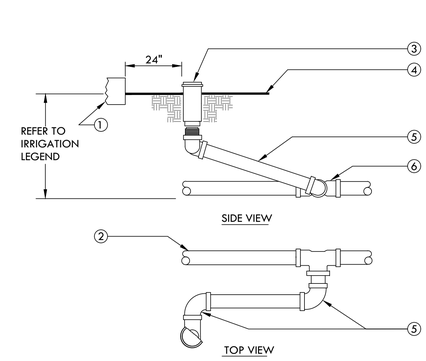
3 AIR VACUUM RELIEF VALVE IN DRIPLINE
SCALE: NONE



NOTES:
1. ALL MAIN SUPPLY LINES AND LATERAL LINES SHALL BE PLACED IN SLEEVES UNDER PAVED SURFACES. INSTALL LOW VOLTAGE WIRES WITHIN A SEPARATE CONDUIT UNDER PAVED SURFACES. DO NOT TAPE WIRES WITHIN CONDUIT.
2. REUSE SALVAGED EXCAVATED FILL AND COMPACT TO ORIGINAL DENSITY IN LANDSCAPE AREAS. ALL OTHER AREAS SHALL BE AT 95% COMPACTION. BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCHES, FREE FROM ROCKS (ANYTHING LARGER THAN 2"), CONCRETE CHUNKS, AND OTHER FOREIGN OR COARSE MATERIALS.
3. WHEN 12" POP-UP SPRINKLER HEADS ARE USED, INCREASE THE DEPTH OF LATERAL TO 18" AT THE SPRINKLER LOCATION ONLY.

1. FINISH GRADE.
2. CLEAN BACKFILL MATERIAL.
3. LATERAL LINE.
4. 3" DETECTABLE WARNING TAPE OVER MAIN LINE. INSTALL 3" ABOVE MAIN LINE. USE CHRISTY MODEL #TA-DT-3-BRR FOR POTABLE IRRIGATION SYSTEMS OR #TA-DT-3-PRW FOR RECYCLED IRRIGATION WATER SYSTEMS
5. MAIN LINE.
6. TWO WIRE CABLE IN CONDUIT

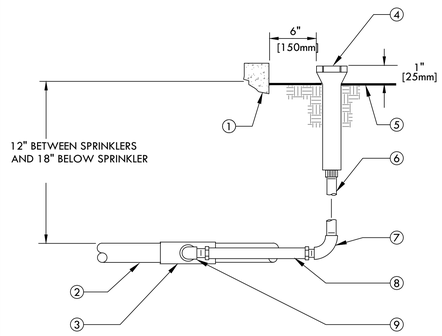
4 TRENCHING
SCALE: NONE



NOTES:
1. SET SPRINKLER 2" ABOVE FINISH GRADE.

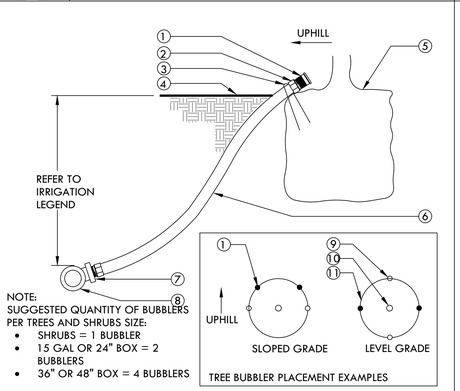
1. WALL, WALK, CURB OR HEADER.
2. PVC LATERAL LINE.
3. POP-UP ROTARY SPRINKLER.
4. FINISH GRADE.
5. UNITIZED SWING JOINT: 3/4"-LASCO MODEL T732-212 1"-LASCO MODEL T932-212.
6. SCHEDULE 40 PVC TEE OR ELBOW WITH THREADED OUTLET.

5 POP-UP ROTARY SPRINKLER - SHRUB
SCALE: NONE



1. WALL, WALK, CURB OR BUILDING.
2. PVC LATERAL LINE.
3. UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW.
4. POP-UP SHRUB SPRAY SPRINKLER OR BUBBLER.
5. FINISH GRADE.
6. 1/2" [13mm] SCHEDULE 80 PVC THREADED NIPPLE (LENGTH AS REQUIRED).
7. 1/2" [13mm] SCHEDULE 40 PVC THREADED 90° ELL.
8. 1/2" [13mm] FLEXIBLE IPS HOSE 6" [150mm] LONG WITH MALE ADAPTERS OR 1/2" [13mm] FLEXIBLE SWING JOINT (1/2" x 6") [13mm x 150mm] WITH A MINIMUM PRESSURE RATING OF 100 PSI [690kPa].
9. 1/2" [13mm] SCHEDULE 40 PVC STREET ELL.

6 POP-UP SPRAY SPRINKLER - SHRUB
SCALE: NONE



NOTE:
SUGGESTED QUANTITY OF BUBBLERS PER TREES AND SHRUBS SIZE:
- SHRUBS = 1 BUBBLER
- 15 GAL OR 24" BOX = 2 BUBBLERS
- 36" OR 48" BOX = 4 BUBBLERS

TREE BUBBLER PLACEMENT EXAMPLES

1. BUBBLER (TO BE INSTALLED ON TOP OF ROOTBALL).
2. 1/2" SCH. 40 MALE ADAPTER (2 TOTAL).
3. 6" STAPLE.
4. FINISH GRADE.
5. TREE OR SHRUB ROOTBALL.
6. 1/2" IPS FLEXIBLE PVC. USE WELD-ON 795 SOLVENT CEMENT OR EQUAL WHEN BONDING PVC HOSE TO FITTINGS.
7. PVC TEE (SST), ELBOW (ST) OR FEMALE ADAPTER.
8. PVC LATERAL LINE.
9. TREE STAKES.
10. TREE OR SHRUB.
11. EDGE OF ROOTBALL (TYPICAL).

7 TREE AND SHRUB BUBBLER
SCALE: NONE

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305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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LANDSCAPE ARCHITECT:
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Sausalito, CA 94965-1750
P: 415-332-5100

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AQUATIC DESIGN GROUP
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FOOD SERVICE
MULLER DESIGN
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P: 775-782-1110

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Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
288 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

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KEY PLAN:

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DATE:
11 DECEMBER 2023

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SHEET TITLE:
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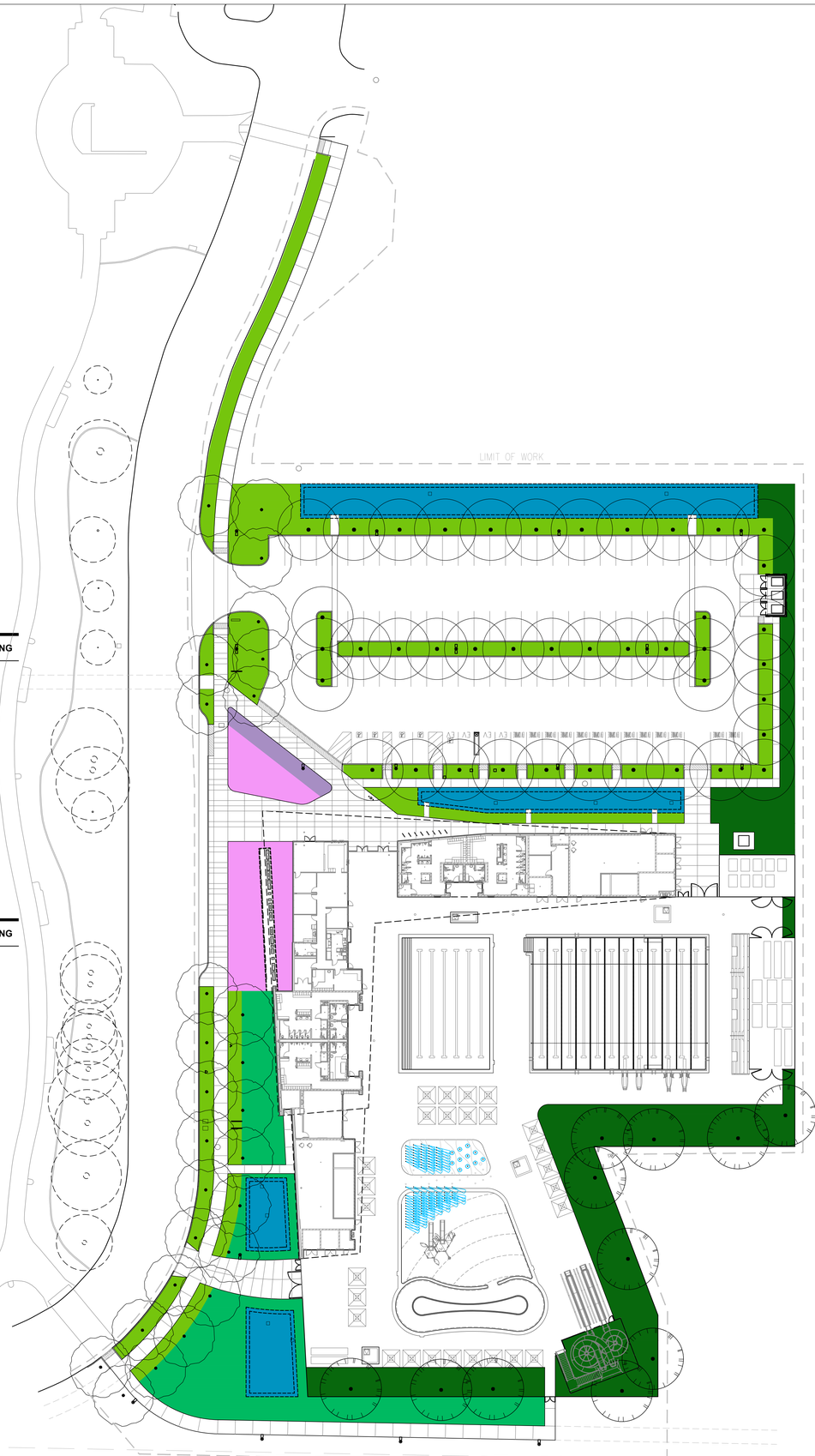
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L305

PLANT LIST - UNDERSTORY

SYMBOL	TYPE	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	WUCOL RATING
	FLOWERING SHRUB	LAVANDULA STOECHAS 'JAVELIN PURPLE'	SPANISH LAVENDER	5 GAL	30" O.C. TRIANG. SPACING	LOW
		SALVIA CLEVELANDII 'WINNIFRED GILMAN'	FRAGRANT SAGE	5 GAL	30" O.C. TRIANG. SPACING	VERY LOW
	STREET AND PARKING LOT SHRUB PLANTING	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	HOWARD MCMINN MANZANITA	5 GAL	30" O.C. TRIANG. SPACING	LOW
		CARISSA MACROCARPA	NATAL PLUM	5 GAL	30" O.C. TRIANG. SPACING	LOW
	PERIMETER SHRUB PLANTING	FRANGULA CALIFORNICA 'MOUND SAN BRUNO'	COFFEEBERRY	5 GAL	36" O.C. TRIANG. SPACING	VERY LOW
	STORMWATER TREATMENT GRASSES	LEYMUS CONDENSATUS	CANYON PRINCE WILD RYE	1 GAL	24" O.C. SQUARE SPACING	LOW

PLANT LIST - TREE

SYMBOL	TYPE	SCIENTIFIC NAME	COMMON NAME	SIZE	QUANTITY	WUCOL RATING
	EXISTING TREE					
	STREET TREE	POPULUS FREMONTII	FREMONT COTTONWOOD	24" BOX	27	MODERATE
	PARKING LOT SHADE TREE	PLATANUS X ACERIFOLIA 'BLOODGOOD'	LONDON PLANE TREE	24" BOX	11	MODERATE
	POOL PERIMETER TREE	QUERCUS LOBATA	VALLEY OAK	24" BOX	41	MODERATE
	METAL HEADER					



0 30 60 90

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PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD
PUBLIC WORKS

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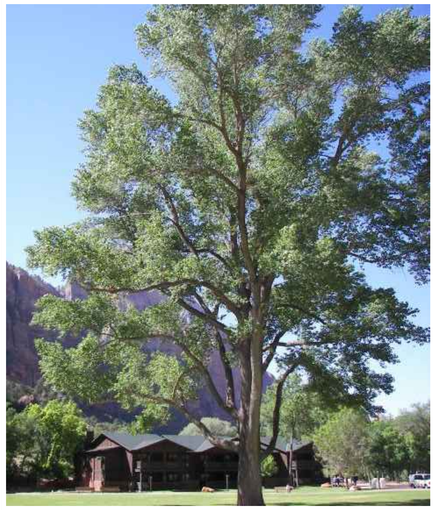
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PLANTING PLAN

SHEET NUMBER:

L400

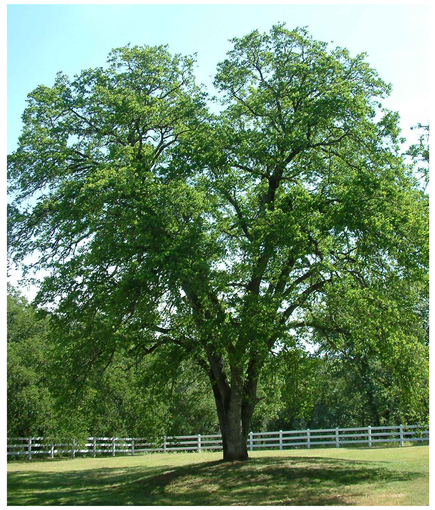
TREES



POPULUS FREMONTII -- FREMONT COTTONWOOD
STREET TREE



PLATANUS ACERIFOLIA 'BLOODGOOD' -- LONDON PLANE TREE
PARKING LOT SHADE TREE



QUERCUS LOBATA -- VALLEY OAK
POOL PERIMETER TREE

STREET AND PARKING LOT SHRUB PLANTING (3FT)



ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN' -- HOWARD MCMINN MANZANITA



CARISSA MACROCARPA -- NATAL PLUM

PERIMETER SHRUB PLANTING (3FT)



FRANGULA CALIFORNICA 'MOUND SAN BRUNO' -- COFFEEBERRY

FLOWERING SHRUB PLANTING (2-3FT)



LAVANDULA STOECHAS 'JAVELIN PURPLE' -- SPANISH LAVENDER



SALVIA CLEVELANDII 'WINNIFRED GILMAN' -- FRAGRANT SAGE

STORMWATER TREATMENT GRASSES



LEYMUS CONDENSATUS -- CANYON PRINCE WILD RYE

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COLLEGE PARK

OXNARD, CA

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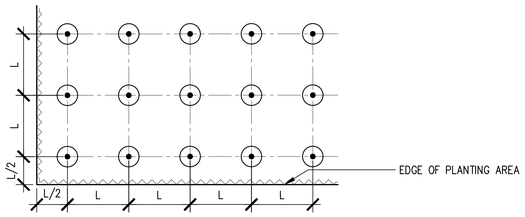
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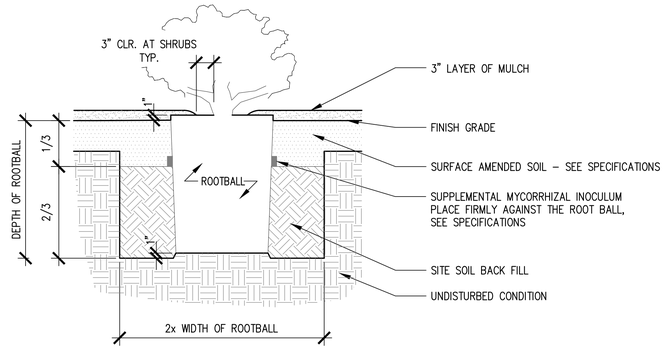
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SHEET NUMBER:

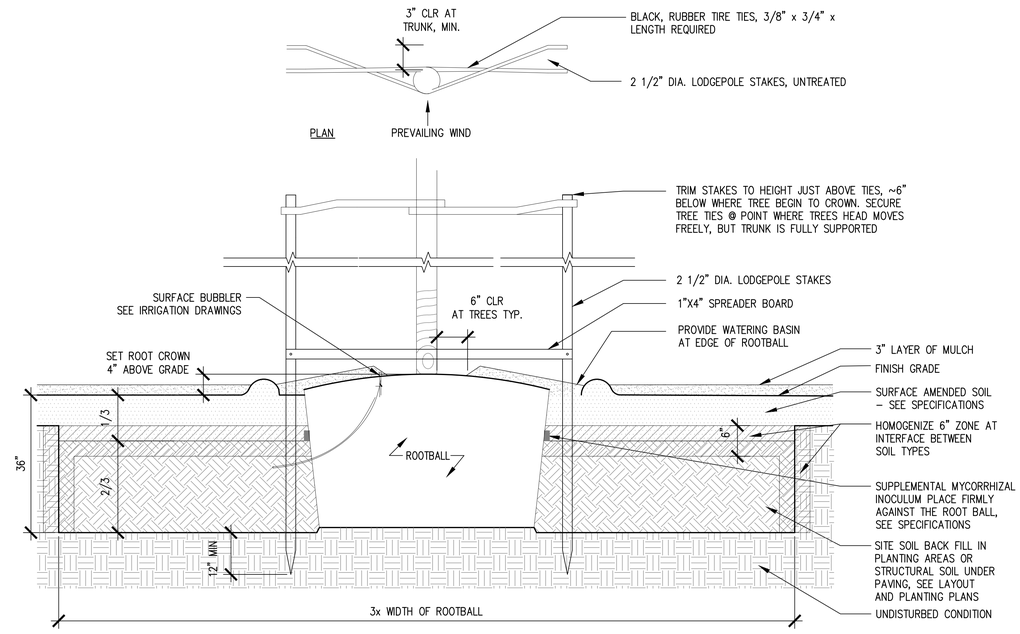
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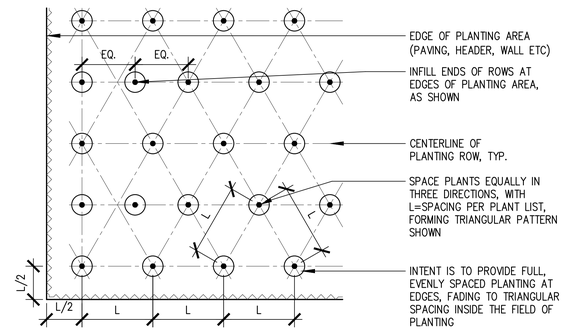
04 PLANTING LAYOUT (SQUARE SPACING)
1/2" = 1'-0"



01 SHRUB & GROUNDCOVER PLANTING PIT
1" = 1'-0"



02 TREE PLANTING PIT
1" = 1'-0"



03 PLANTING LAYOUT (TRIANGULAR SPACING)
1/2" = 1'-0"

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PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

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PUBLIC WORKS
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SPECIFICATIONS
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268 Bush Street, #3000
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SHEET TITLE:
PLANTING DETAILS

SHEET NUMBER:
L402

PARKING LOT

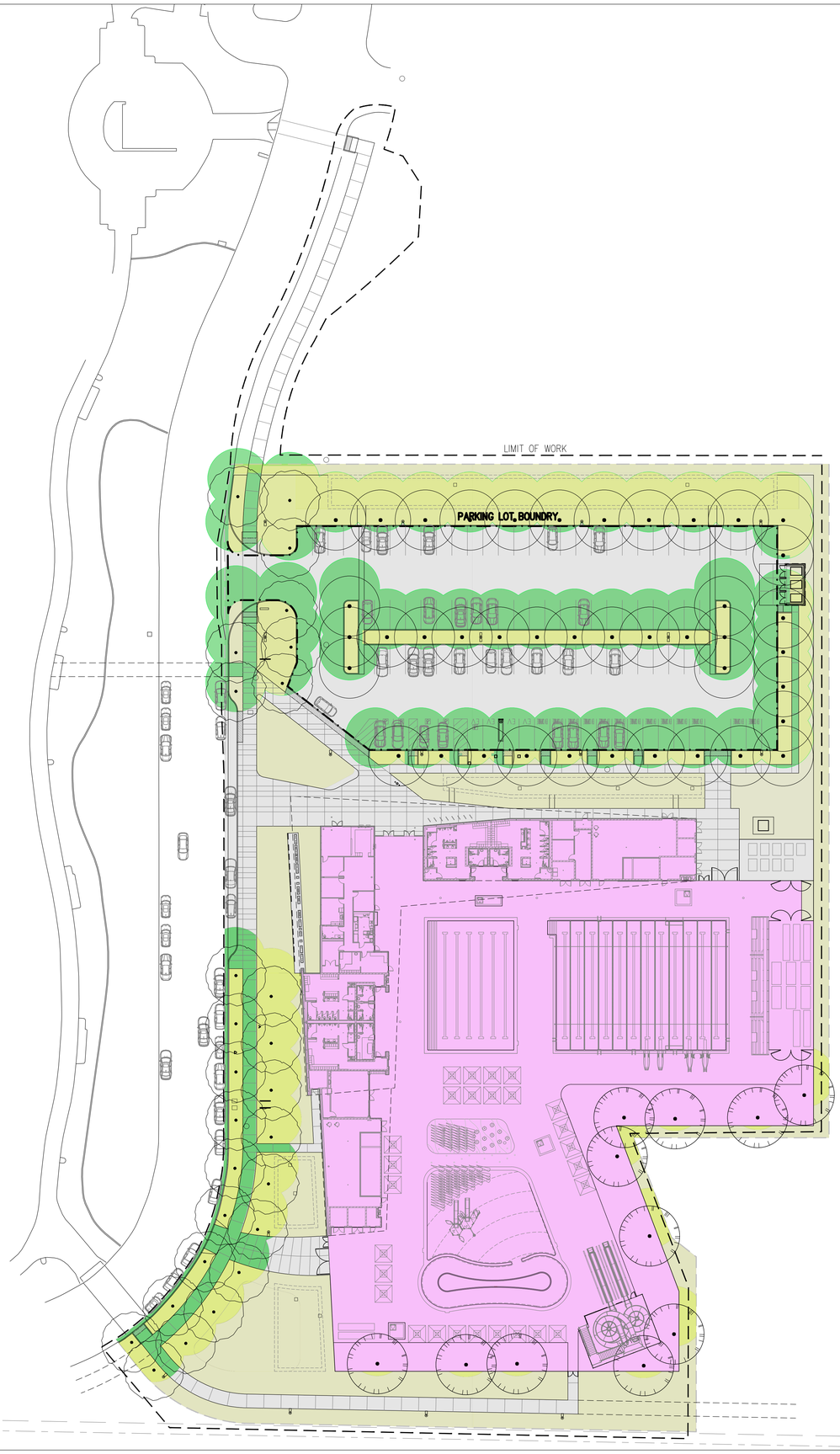
PARKING LOT AREA: 36744 sq. ft.
HARDSCAPE AREA: 34453 ft.
TREE SHADED AREA ON HARDSCAPE: 17200 sq.ft.
TREE SHADED PERCENTAGE OF HARDSCAPE: 50%

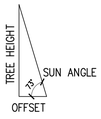
OVERALL SITE

TOTAL SITE AREA: 186000 sq.ft.
BUILDING & POOL ENCLOSURE: 75622 sq.ft.
TREE SHADED AREA: 54849 sq.ft.

HARDSCAPE AREA: 55472 sq.ft.
TREE SHADED AREA ON HARDSCAPE: 25470 sq.ft.
TREE SHADED PERCENTAGE OF HARDSCAPE: 46%

LANDSCAPE AREA: 54564 sq.ft.
TREE SHADED AREA ON LANDSCAPE: 25358 sq.ft.
TREE SHADED PERCENTAGE OF LANDSCAPE: 46%





	TREE SPECIE	HEIGHT (IN 15 YEARS)	SPREAD (IN 15 YEARS)	SHADE OFFSET
	STREET WINDBLOCKING TREES	35'TALL	35'WIDE	10.5' OFFSET
	PARKING LOT SHADE TREES	35'TALL	35'WIDE	10.5' OFFSET
	POOL PERIMETER TREES	35'TALL	35'WIDE	10.5' OFFSET

0 30 60 90

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PROJECT:
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COLLEGE PARK
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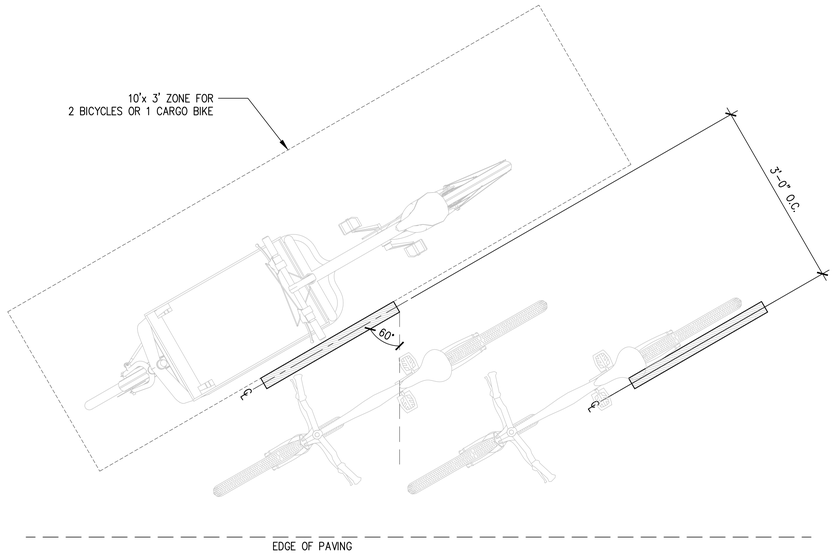
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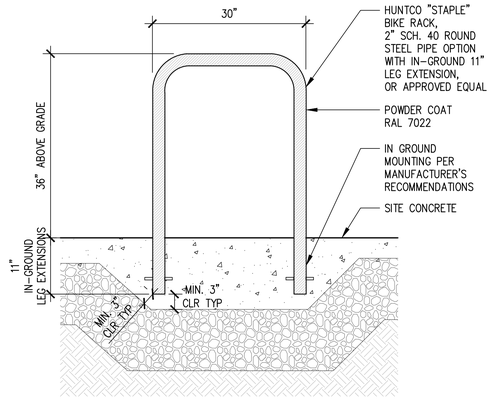
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SHEET TITLE:
TREE SHADING CALCS

SHEET NUMBER:
L403

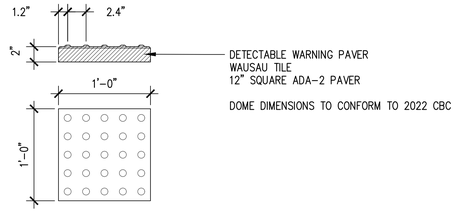


PLAN

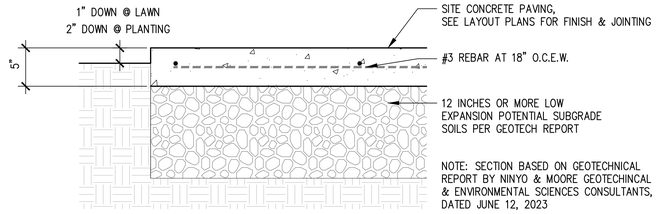


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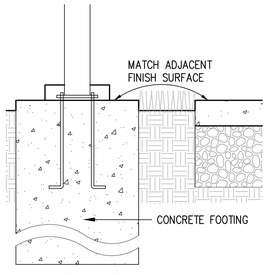
04 BIKE RACK
1" = 1'-0"



01 DETECTABLE WARNING PAVER
1 1/2" = 1'-0"

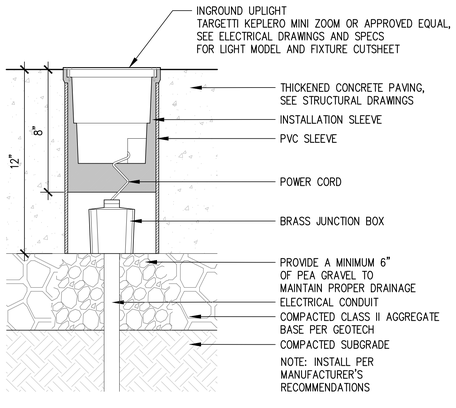


02 CONCRETE PAVING (PEDESTRIAN)
1 1/2" = 1'-0"

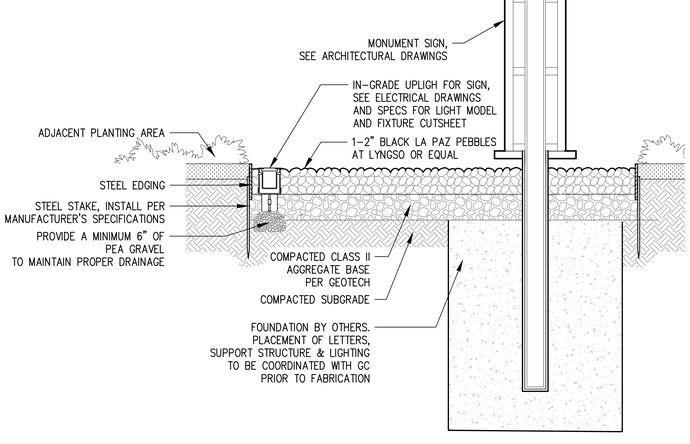


POLE LIGHT @ PLANTING

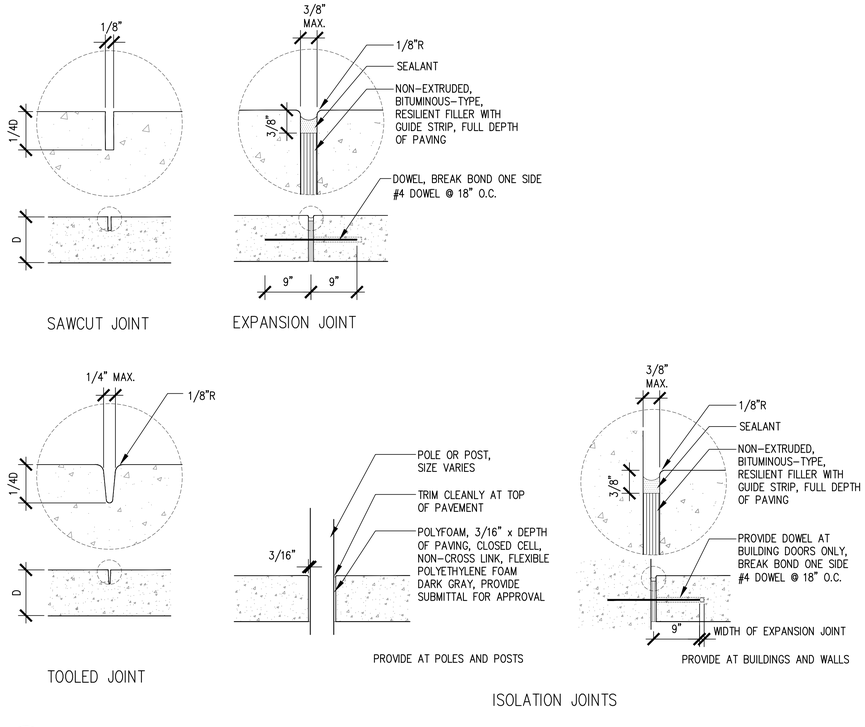
05 POLE LIGHT BASE
1" = 1'-0"



06 INGROUND UPLIGHT FOR FLAGPOLE
3" = 1'-0"



07 METAL HEADER WITH RIVER ROCK & UPLIGHT
1" = 1'-0"



ISOLATION JOINTS

03 CONCRETE PAVING CONTROL JOINTS
1' = 1'-0"

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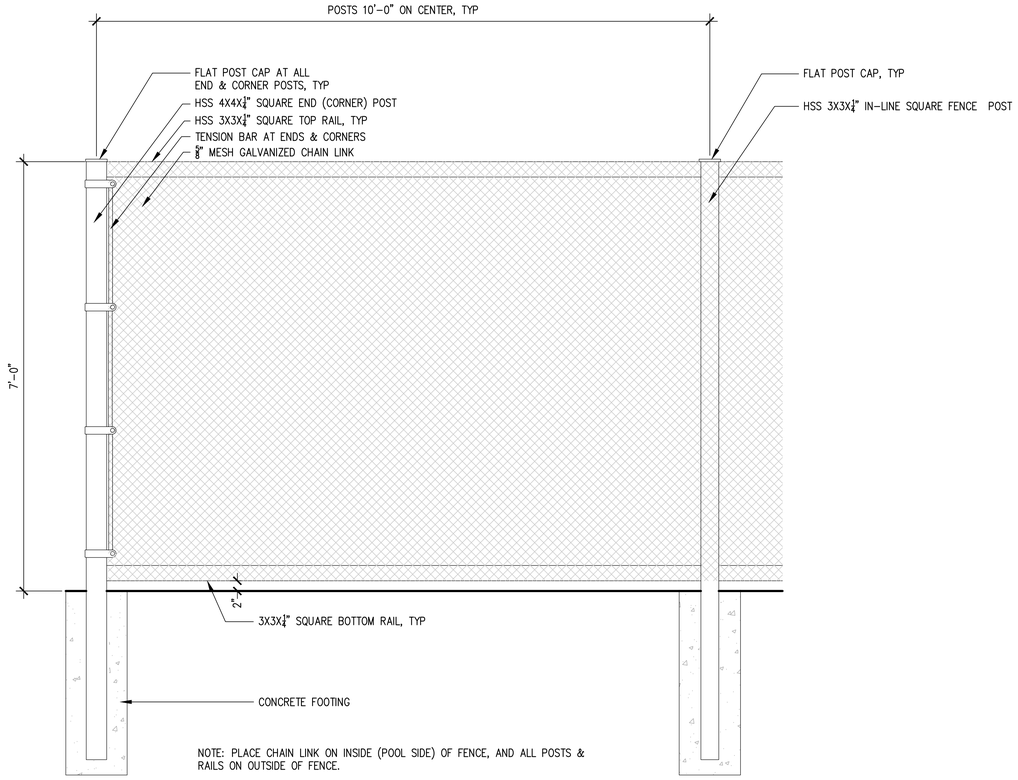
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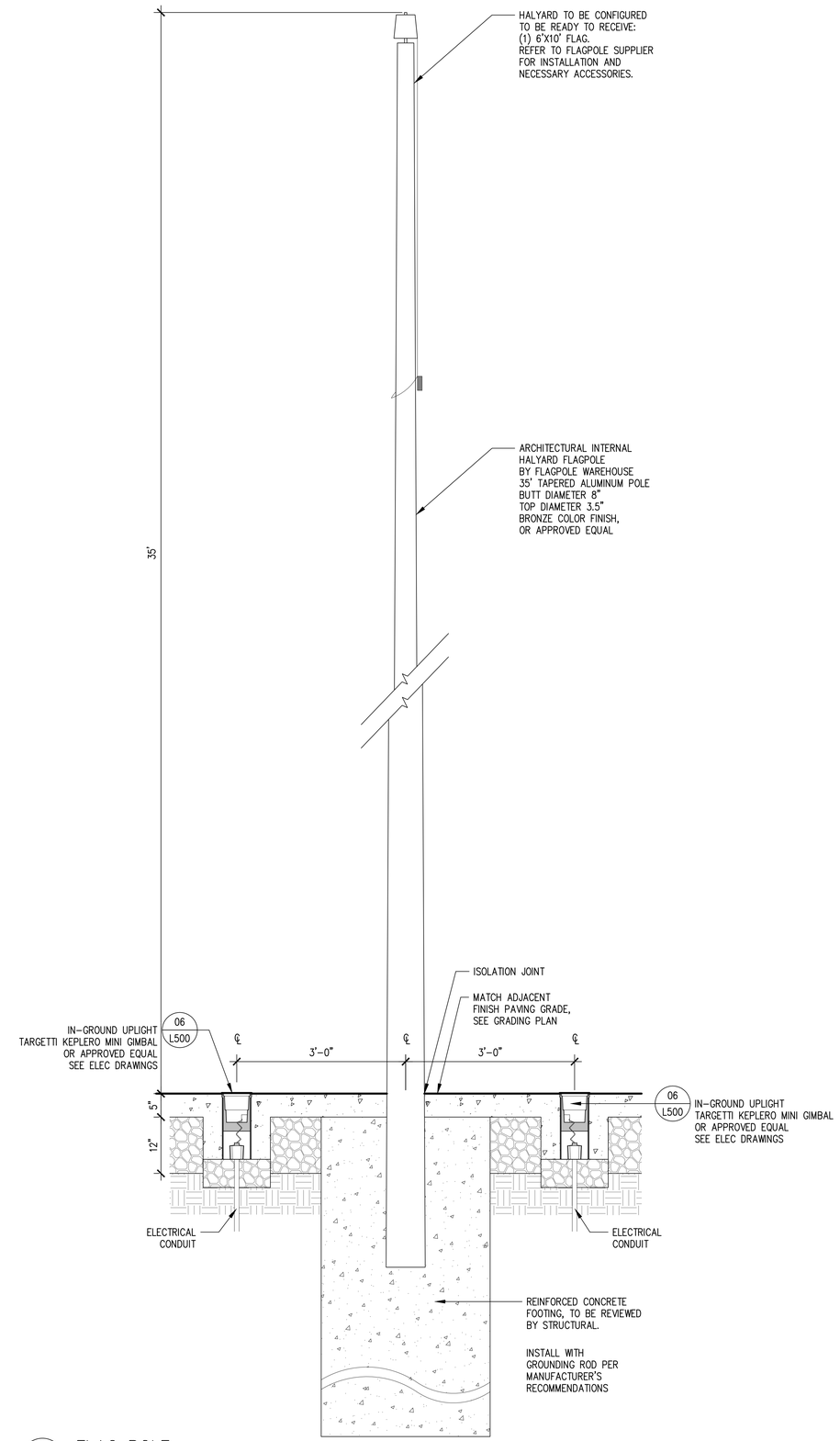
DATE

SHEET TITLE:
PAVING & SITE FURNISHING DETAILS

SHEET NUMBER:
L500



02 7' HEIGHT CHAIN LINK FENCE
1" = 1'-0"



01 FLAG POLE
1" = 1'-0"

els
architecture+
urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD
PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
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P: 510.549.2929

CIVIL ENGINEER:
KPFF
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Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
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950 South Grand Ave., 4th Floor
Los Angeles, CA 90015
P: 213-483-6490

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San Francisco, CA 94111
P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
GUTTMANN & BLAEVOET
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AQUATICS
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:

ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

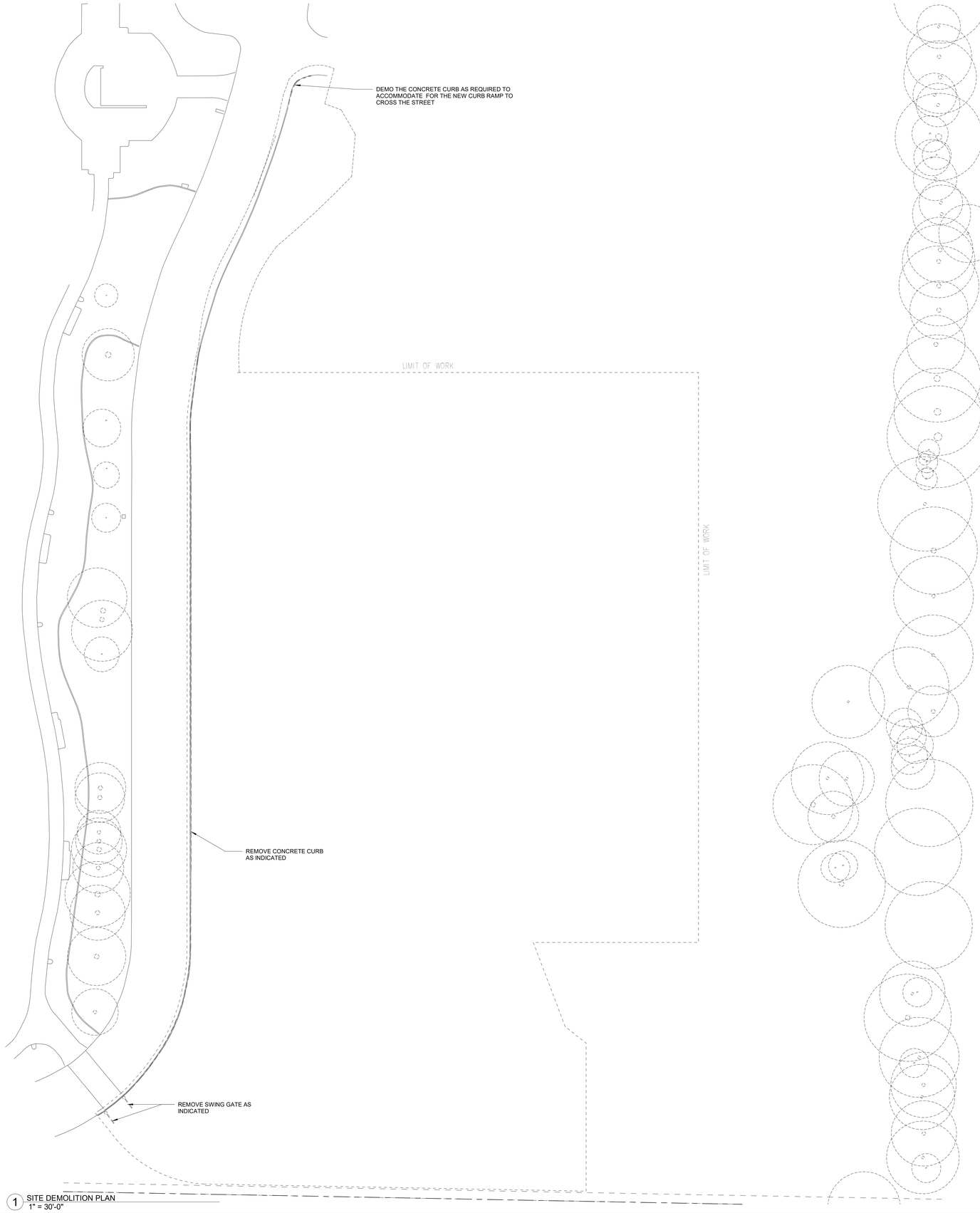
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
PAVING & SITE FURNISHING DETAILS

SHEET NUMBER:
L501



1 SITE DEMOLITION PLAN
1" = 30'-0"

LEGEND

EXISTING TO REMAIN

EXISTING TO BE REMOVED

SHEET NOTES

1. DEMO, DEMOLISH OR REMOVE: DETACH ITEMS FROM EXISITING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE.
2. SEE CIVIL DRAWINGS FOR ADDITIONAL DEMOLITION INFORMATION.

els architecture+ urban design

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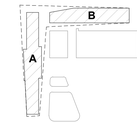
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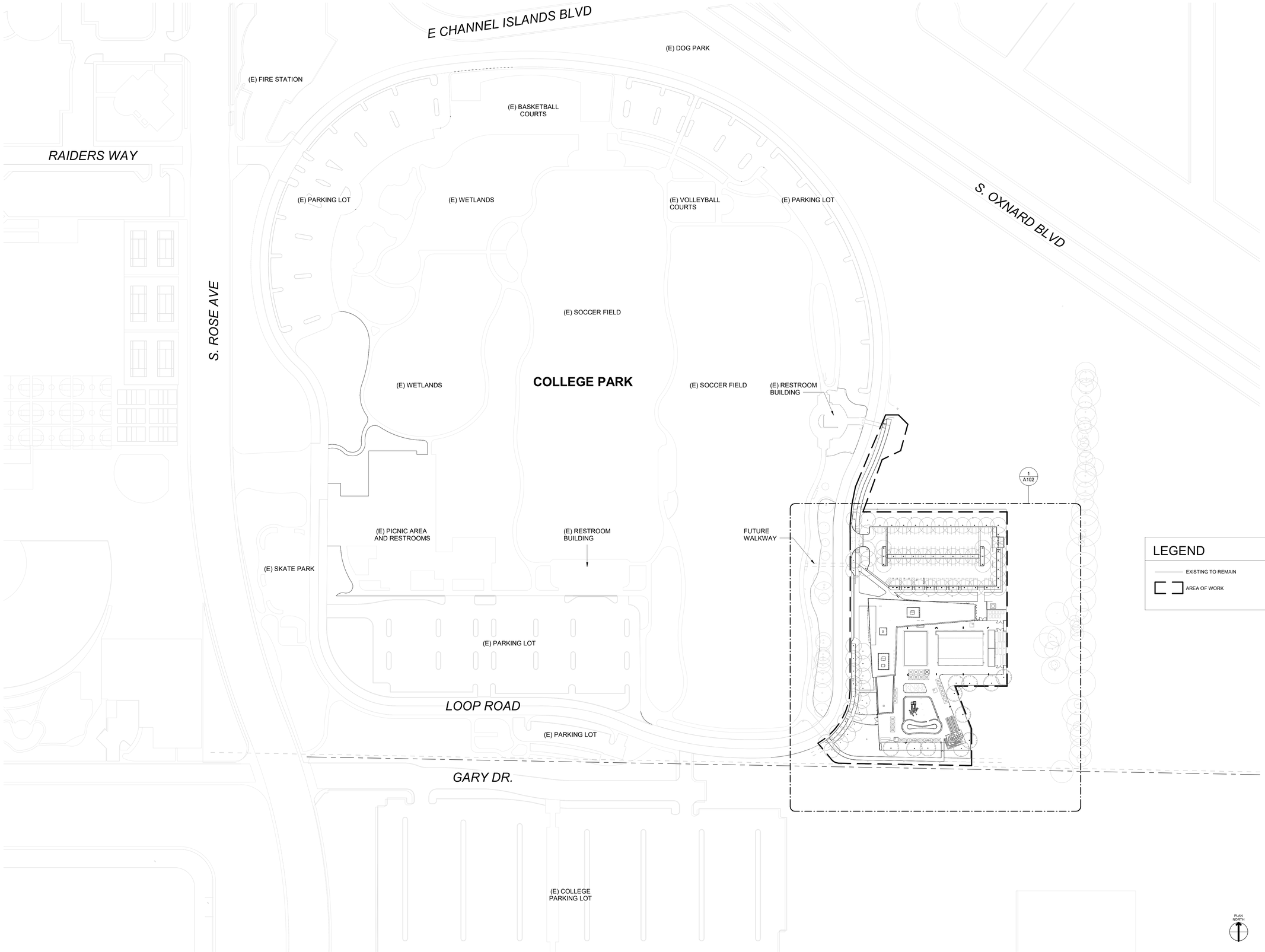
DATE

SHEET TITLE:

DEMOLITION SITE PLAN

SHEET NUMBER:

A100



1 PLANS_VICINITY PLAN
1" = 80'-0"

LEGEND

EXISTING TO REMAIN

AREA OF WORK

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

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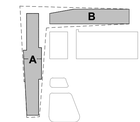
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TOPFLIGHT SPECS
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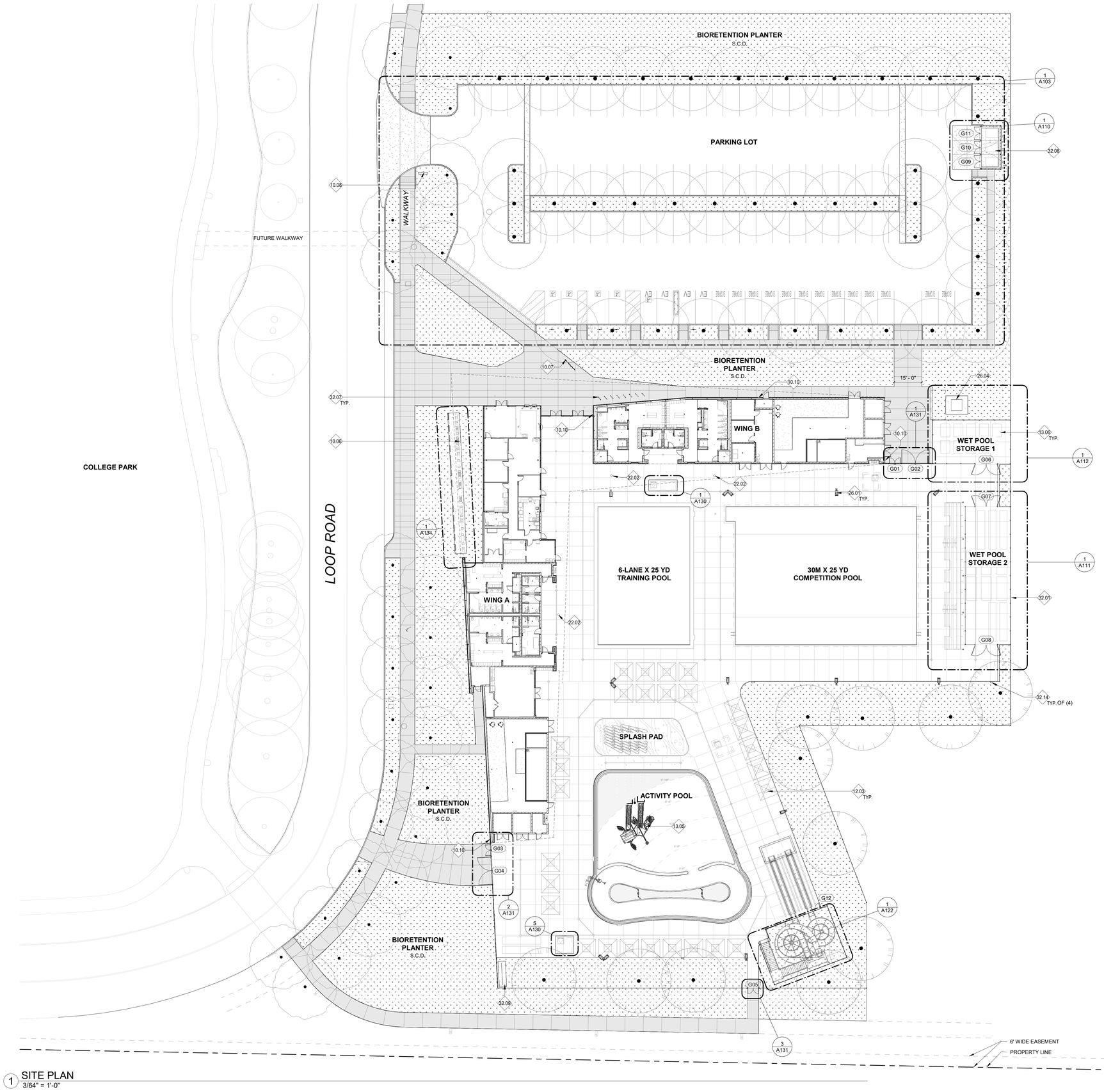
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APPROVED:

DATE

SHEET TITLE:
VICINITY PLAN

SHEET NUMBER:
A101



1 SITE PLAN
3/64" = 1'-0"

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
4. AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT BUILDING. SPRINKLERS SHALL BE DESIGNED TO COORDINATE WITH DUCTS, PIPING, CONDUIT, LIGHTING, ACCESS PANEL LOCATIONS AND OTHER CEILING ELEMENTS FOR A CLEAN, ARCHITECTURAL APPEARANCE.
5. SLAB DIMENSIONS ARE MEASURED TO GRIDLINES.
6. LOCATIONS OF DRAINS ARE MEASURED TO GRIDLINES. ALL FLOOR DRAINS ARE TO BE CENTERED IN THEIR RESPECTIVE SPACES, U.O.N.
7. REFER TO SPECIFICATIONS FOR LIST OF MATERIAL FINISHES, COLORS, AND PAINT COLORS.
8. ALL LOOSE FURNITURE AND APPLIANCES TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED, U.O.N.

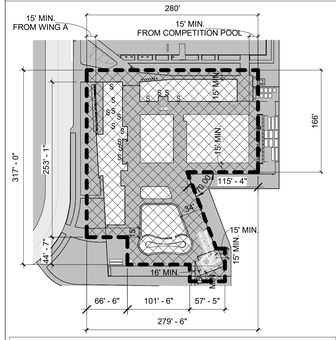
SHEET NOTES

1. SEE AQUATIC DRAWINGS FOR POOL EDGE, DECK, JOINTS AND DRAIN LOCATION
2. SEE STRUCTURAL DRAIWNGS FOR TRASH ENCLOSURE STRUCTURE

KEYNOTES

#	DESCRIPTION
10.06	MONUMENT SIGNAGE - BUILT-UP METAL CHANNEL LETTERS, PAINTED
10.07	FLAG POLE, S.L.D.
10.08	DIRECTIONAL SIGN
10.10	KNOX BOX
12.03	OUTDOOR UMBRELLA (10'W x 10' W). UMBROSA INFINA WX GARDEN PAROSOL IS BEING USED AS A BASIS OF DESIGN. ANCHOR UMBRELLA POLE INTO THE POOL DECK, S.L.D.
13.05	SWIMMING POOL PLAY STRUCTURE, SEE AQUATICS DRAWING
13.06	POOL STORAGE EQUIPMENT, SEE AQUATICS DRAWING
22.02	OUTDOOR RINSE SHOWER WITH 4 SHOWER HEADS, S.P.D.
26.01	LIGHT FIXTURE, S.E.D.
26.04	TRANSFORMER, S.E.D.
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.07	BICYCLE RACK, S.L.D.
32.08	TRASH ENCLOSURE
32.09	EXTERIOR CONCRETE PAD, S.E.D./S.P.D
32.14	HOSE BIB IN CONC. WALL ON POOL DECK, S.C.D., SEE AQUATICS DWG

GROUND IMPROVEMENT AREA DIAGRAM



NOTES:
1. REFER TO ENTIRE GEOTECHNICAL REPORT, INCLUDING CHAPTER 10 RECOMMENDATIONS

2. GC TO FOLLOW THE RECOMMENDATIONS IN THE PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT INCLUDING PREPARATION AND IMPLEMENTATION OF A SOIL MANAGEMENT PLAN (SMP) DURING CONSTRUCTION AND GRADING ACTIVITIES ASSOCIATED WIT THE PROPOSED PROJECT.

LEGEND

- STRUCTURAL SOIL IMPROVEMENT AREA (S.S.D., SEE GEOTECH REPORT)
- PLANTING, S.L.D.
- CONCRETE PAVING, S.L.D.
- POOL DECK, SEE AQUATICS DRAWING
- NEW TREE, S.L.D.

els architecture+ urban design

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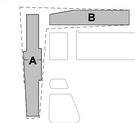
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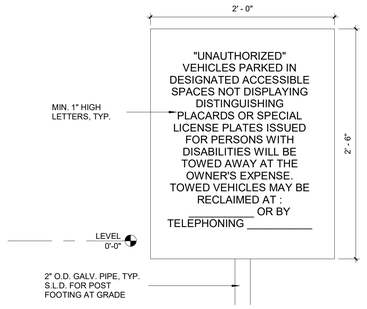
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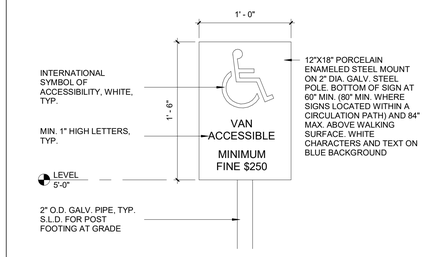
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SHEET TITLE:
SITE PLAN

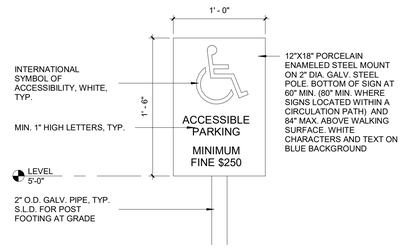
SHEET NUMBER:
A102



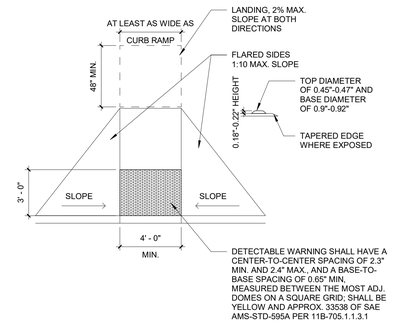
2 FINE NOTIFICATION SIGN
1 1/2" = 1'-0"



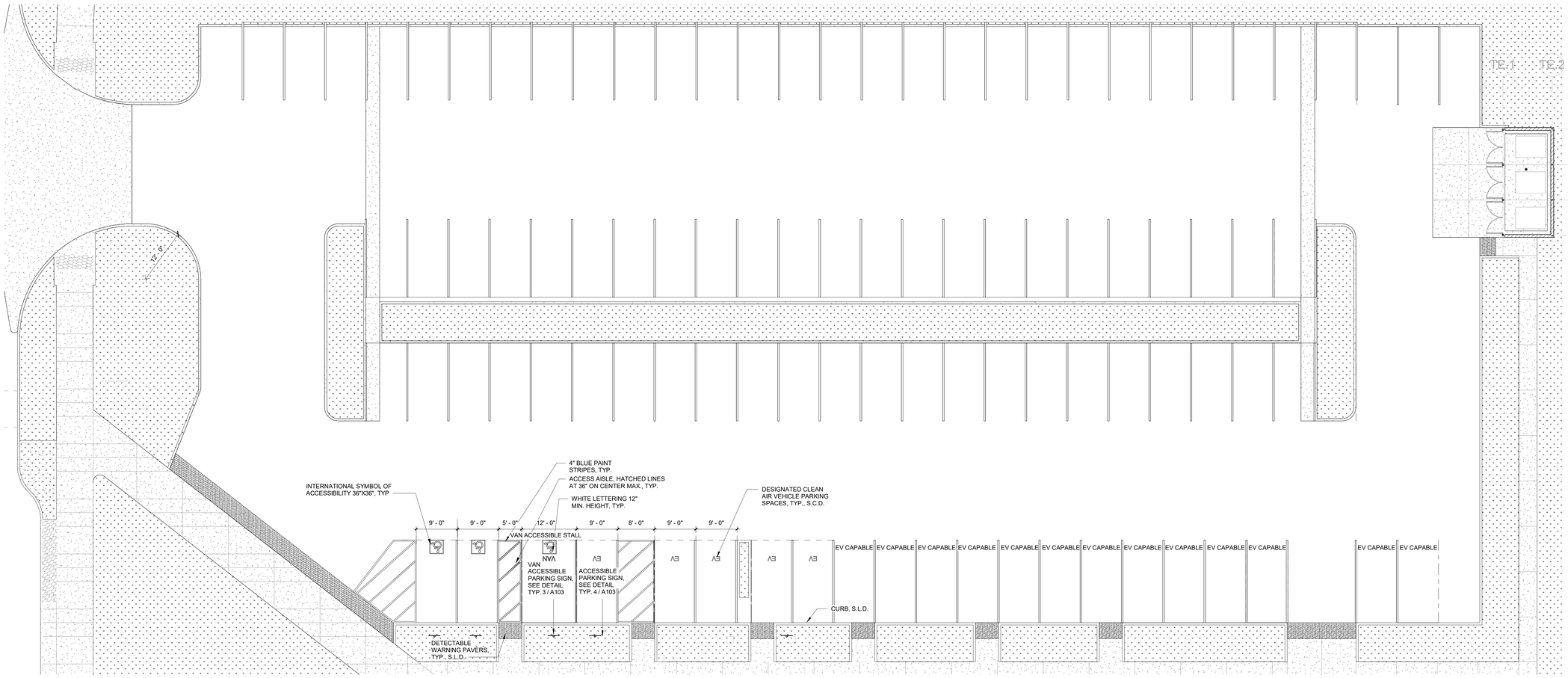
3 VAN ACCESSIBLE PARKING IDENTIFICATION SIGN
1 1/2" = 1'-0"



4 ACCESSIBLE PARKING IDENTIFICATION SIGN
1 1/2" = 1'-0"



5 CURB RAMP / DETECTABLE WARNING
1/4" = 1'-0"



1 ENLARGED PLAN - ACCESSIBLE PARKING
1" = 10'-0"

PLAN NORTH

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urban design

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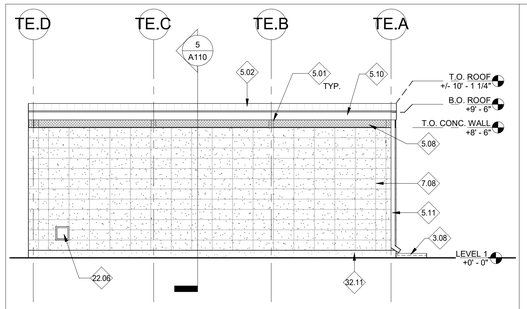
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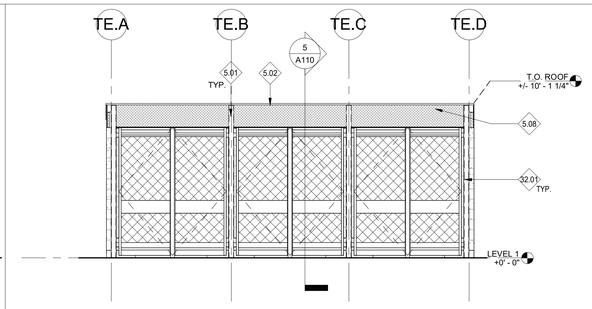
ENLARGED PLAN - PARKING

SHEET NUMBER:

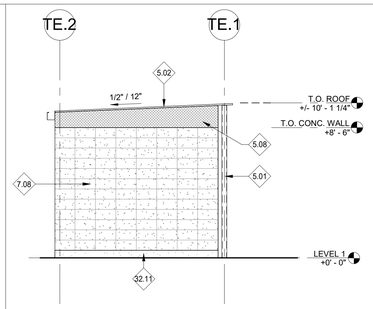
A103



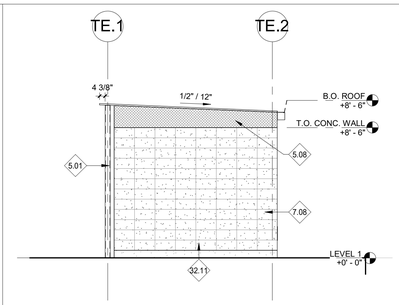
11 TRASH ENCLOSURE - EAST
1/4" = 1'-0"



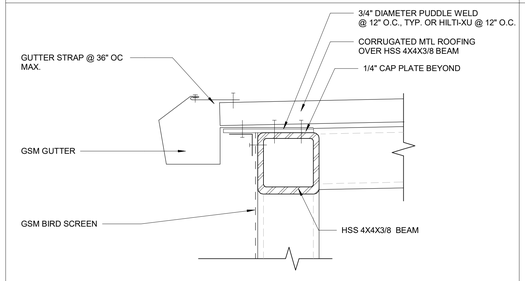
7 TRASH ENCLOSURE - WEST
1/4" = 1'-0"



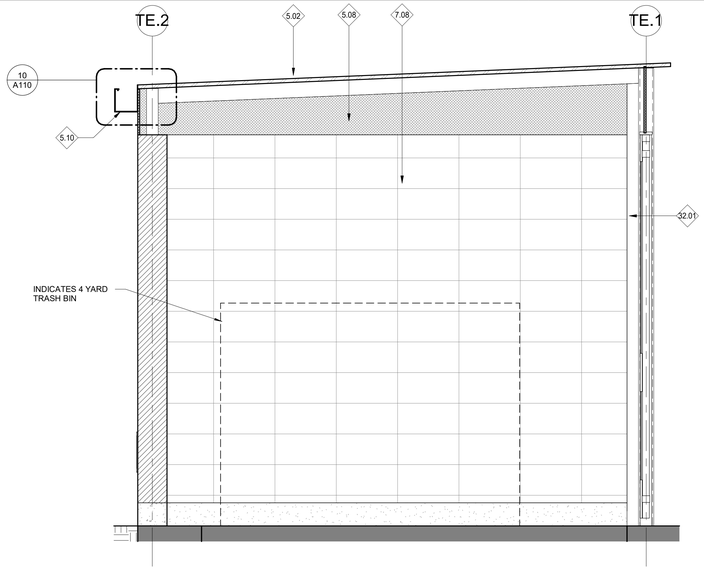
6 TRASH ENCLOSURE - NORTH
1/4" = 1'-0"



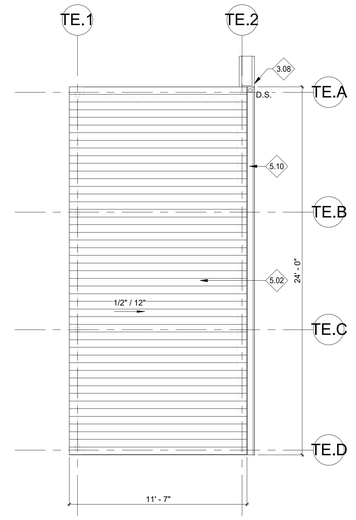
3 TRASH ENCLOSURE - SOUTH
1/4" = 1'-0"



10 GUTTER DETAIL
3" = 1'-0"

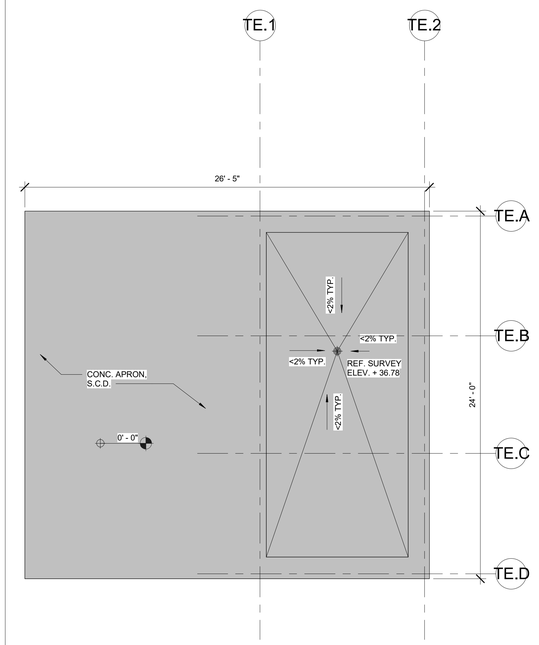


5 TRASH ENCLOSURE SECTION SOUTH
3/4" = 1'-0"



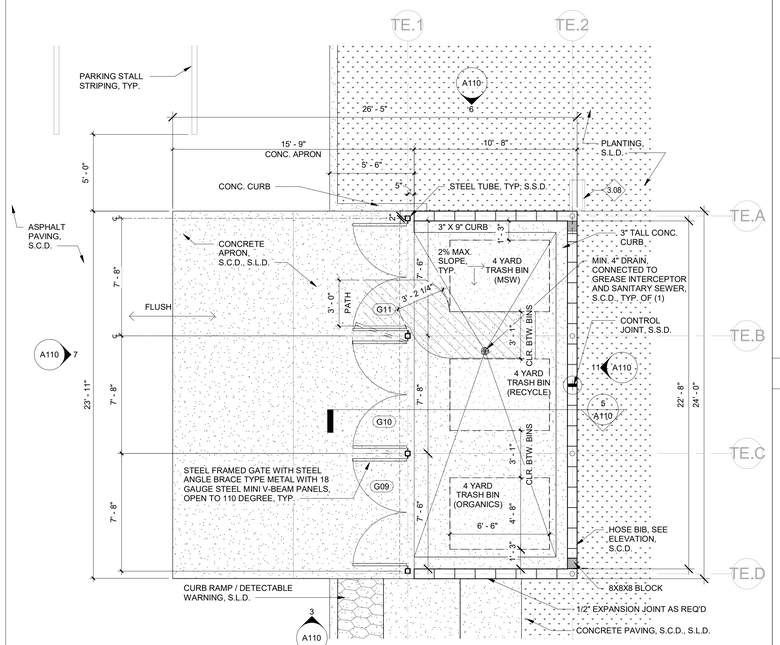
2 TRASH ENCLOSURE ROOF PLAN
1/4" = 1'-0"

PLAN NORTH



4 ENLARGED SLAB PLAN - TRASH ENCLOSURE
1/4" = 1'-0"

PLAN NORTH



1 ENLARGED PLAN - TRASH ENCLOSURE
1/4" = 1'-0"

PLAN NORTH

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
4. AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT BUILDING. SPRINKLERS SHALL BE DESIGNED TO COORDINATE WITH DUCTS, PIPING, CONDUIT, LIGHTING, ACCESS PANEL LOCATIONS AND OTHER CEILING ELEMENTS FOR A CLEAN, ARCHITECTURAL APPEARANCE.
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7. REFER TO SPECIFICATIONS FOR LIST OF MATERIAL FINISHES, COLORS, AND PAINT COLORS.
8. ALL LOOSE FURNITURE AND APPLIANCES TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED, U.O.N.

SHEET NOTES

1. SEE AQUATIC DRAWINGS FOR POOL EDGE, DECK, JOINTS AND DRAIN LOCATION
2. SEE STRUCTURAL DRAIWNGS FOR TRASH ENCLOSURE STRUCTURE

KEYNOTES

#	DESCRIPTION
3.08	CONCRETE SPLASH BLOCK
5.01	STRUCTURE, S.S.D., PAINTED
5.02	METAL DECK, S.S.D., PAINTED
5.08	GALVANIZED MESH INSECT SCREEN
5.10	GALVANIZED SHEET METAL GUTTER
5.11	3" DIA. X 22 GA GALVANIZED SHEET METAL DOWNSPOUT
7.08	GROUND FACE CMU
22.06	HOSE BIB, S.F.D.
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.11	CONCRETE CURB, S.S.D.

LEGEND

- PLANTING, S.L.D.
- CONCRETE PAVING, S.L.D., S.C.D.
- POOL DECK, SEE AQUATICS DRAWING
- STRUCTURAL CONCRETE SLAB, S.S.D., S.L.D.
- CMU WALL OVER CURB, FOR REFERENCE
- CMU WALL, S.S.D.
- CMU CONTROL JOINT, S.S.D.

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD
PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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P: 510.549.2929

CIVIL ENGINEER:
KPFF
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Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
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Sausalito, CA 94965-1750
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STRUCTURAL ENGINEER:
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P: 510-500-1823
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Los Angeles, CA 90015
P: 213-483-6490

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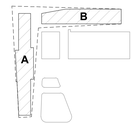
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

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KEY PLAN:



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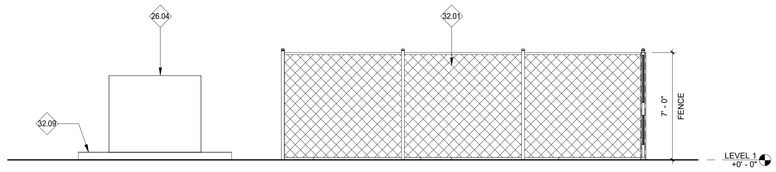
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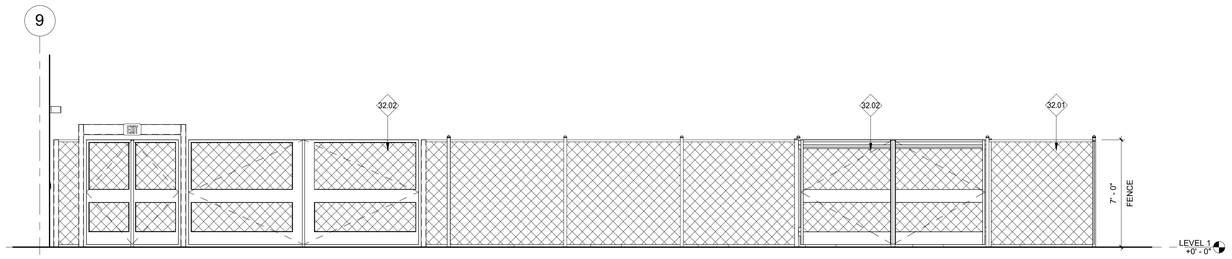
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SHEET TITLE:
SITE - TRASH ENCLOSURE

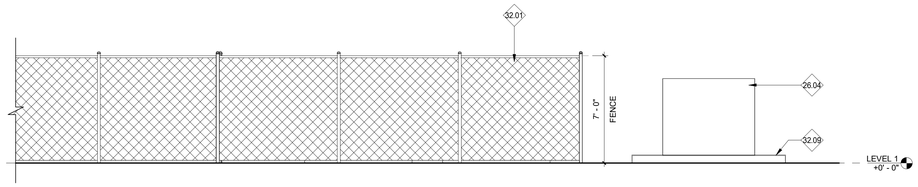
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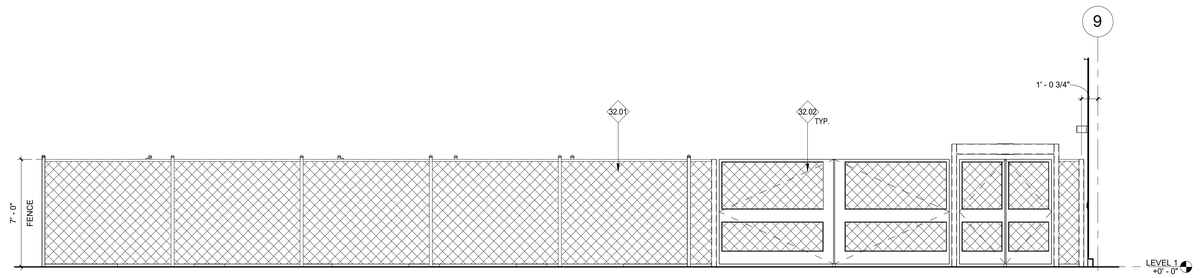
8 POOL STORAGE 1 - WEST
1/4" = 1'-0"



7 POOL STORAGE 1 - SOUTH
1/4" = 1'-0"



6 POOL STORAGE 1 - EAST
1/4" = 1'-0"



5 POOL STORAGE 1 - NORTH
1/4" = 1'-0"

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
4. AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT BUILDING. SPRINKLERS SHALL BE DESIGNED TO COORDINATE WITH DUCTS, PIPING, CONDUIT, LIGHTING, ACCESS PANEL LOCATIONS AND OTHER CEILING ELEMENTS FOR A CLEAN, ARCHITECTURAL APPEARANCE.
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SHEET NOTES

1. SEE AQUATIC DRAWINGS FOR POOL EDGE, DECK, JOINTS AND DRAIN LOCATION
2. SEE STRUCTURAL DRAIWNGS FOR TRASH ENCLOSURE STRUCTURE

KEYNOTES

#	DESCRIPTION
26.04	TRANSFORMER, S.E.D.
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.02	GALVANIZED CHAINLINK GATE WITH 5/8" MESH
32.09	EXTERIOR CONCRETE PAD, S.E.D./S.P.D

els architecture+ urban design

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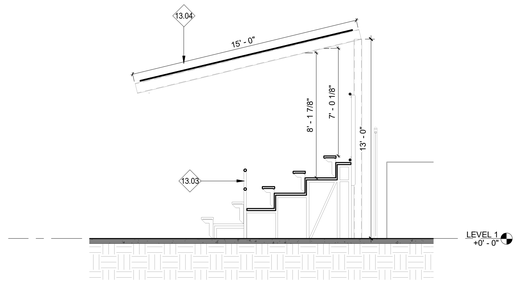
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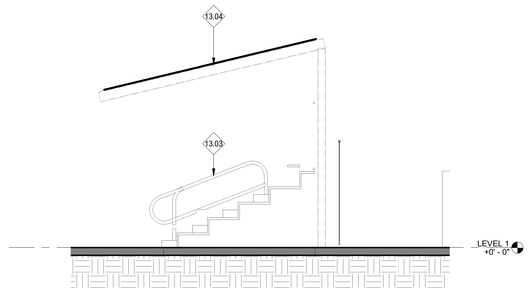
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SHEET TITLE:
SITE - ENLARGED ELEVATIONS

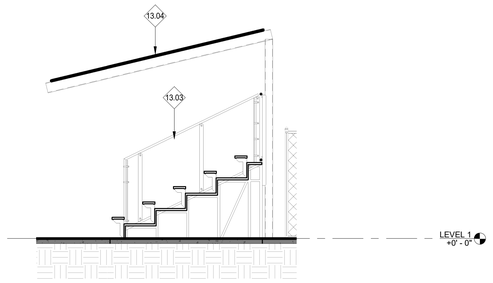
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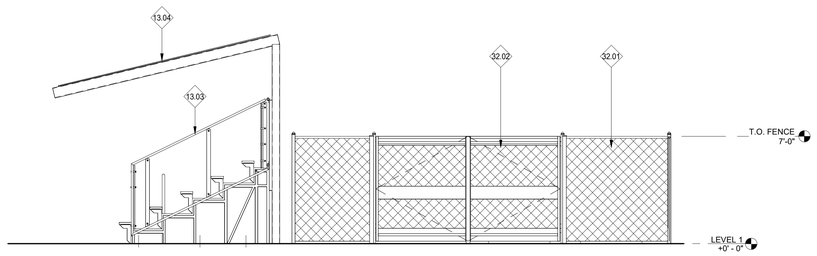
7 BLEACHER SECTION THROUGH ACCESSIBLE SPACE
1/4" = 1'-0"



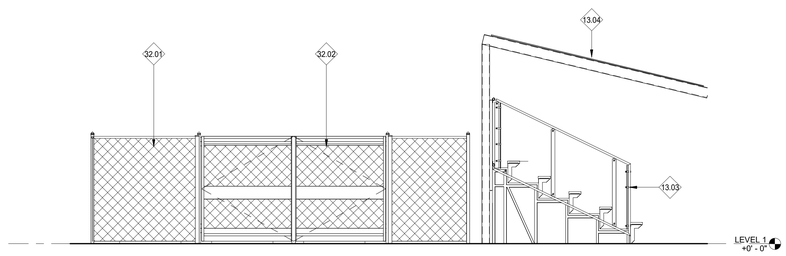
6 BLEACHER SECTION THROUGH STEPS
1/4" = 1'-0"



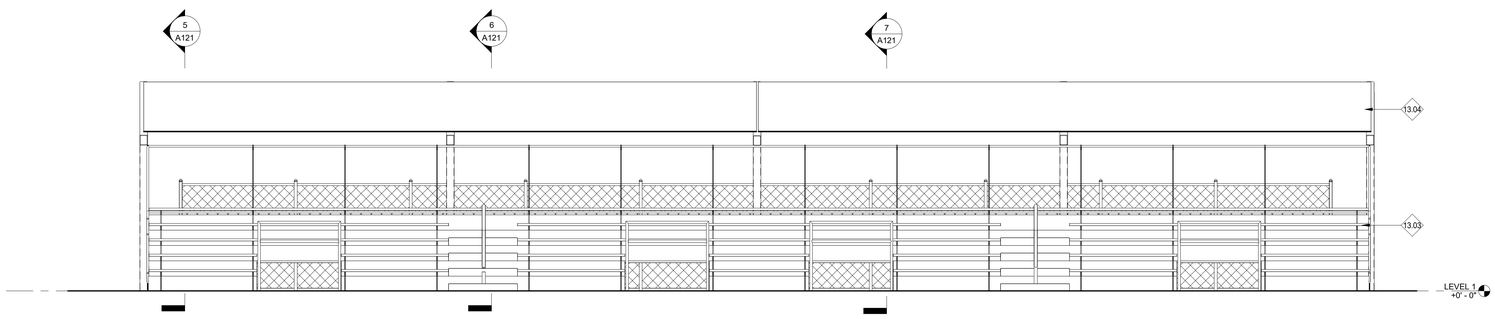
5 BLEACHER SECTION THROUGH SEATS
1/4" = 1'-0"



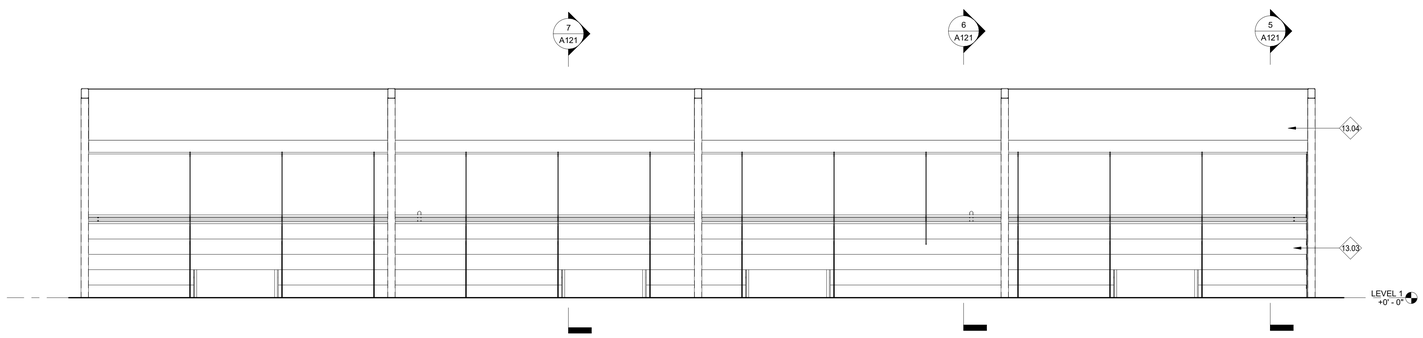
4 BLEACHER & POOL STORAGE 2 - SOUTH
1/4" = 1'-0"



3 BLEACHER & POOL STORAGE 2 - NORTH
1/4" = 1'-0"



2 BLEACHER FRONT ELEVATION - WEST
1/4" = 1'-0"



1 BLEACHER BACK ELEVATION - EAST
1/4" = 1'-0"

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SHEET NOTES

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2. SEE STRUCTURAL DRAIWNGS FOR TRASH ENCLOSURE STRUCTURE

KEYNOTES

#	DESCRIPTION
13.03	BLEACHER
13.04	BLEACHER SHADE STRUCTURE AND TENSIONED FABRIC. SHADE COMFORTS IS BEING USED AS A BASIS OF DESIGN,
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.02	GALVANIZED CHAINLINK GATE WITH 5/8" MESH

els architecture+ urban design

PROJECT:

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COLLEGE PARK

OXNARD, CA

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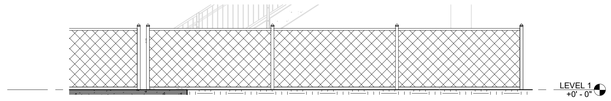
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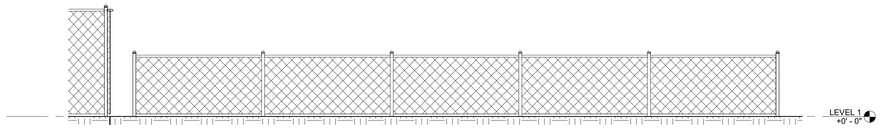
DATE

SHEET TITLE:
SITE - ENLARGED ELEVATIONS

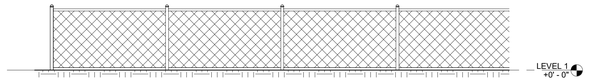
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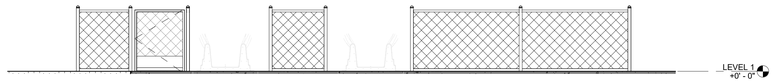
5 FENCE AT WATERSLIDE - WEST ELEVATION
1/4" = 1'-0"



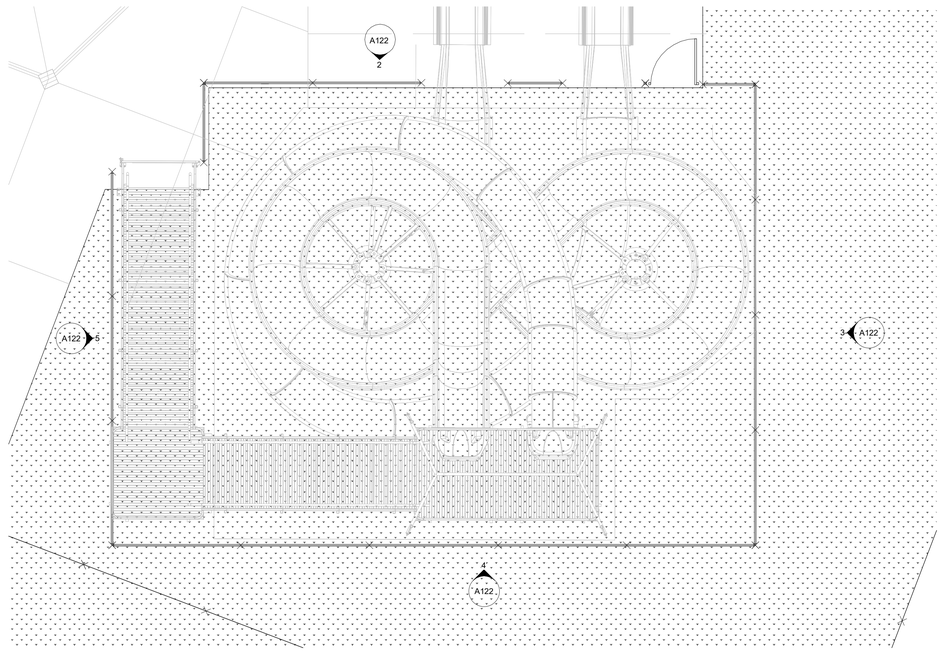
4 FENCE AT WATERSLIDE - SOUTH ELEVATION
1/4" = 1'-0"



3 FENCE AT WATERSLIDE - EAST ELEVATION
1/4" = 1'-0"



2 FENCE AT WATERSLIDE - NORTH ELEVATION
1/4" = 1'-0"



1 ENLARGED PLAN - FENCE @ WATERSLIDE
1/4" = 1'-0"

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urban design

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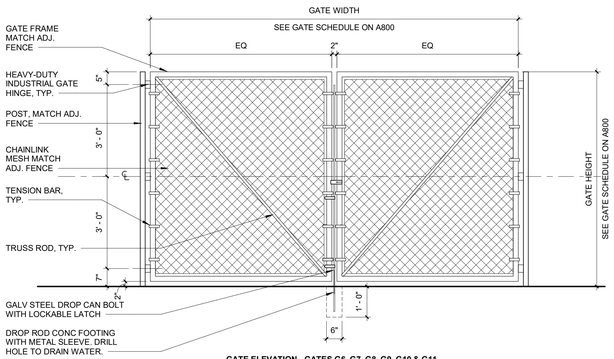
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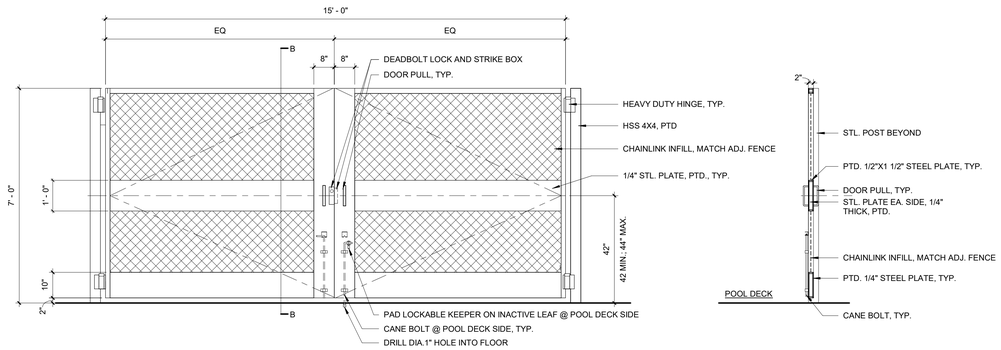
SITE - ENLARGED ELEVATIONS

SHEET NUMBER:

A122

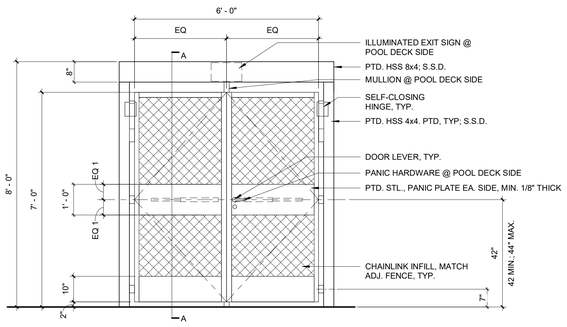


GATE ELEVATION - GATES G6, G7, G8, G9, G10 & G11

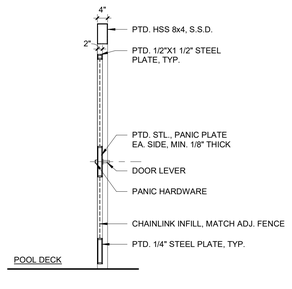


GATE ELEVATION - GATES G2, G4

GATE SECTION B

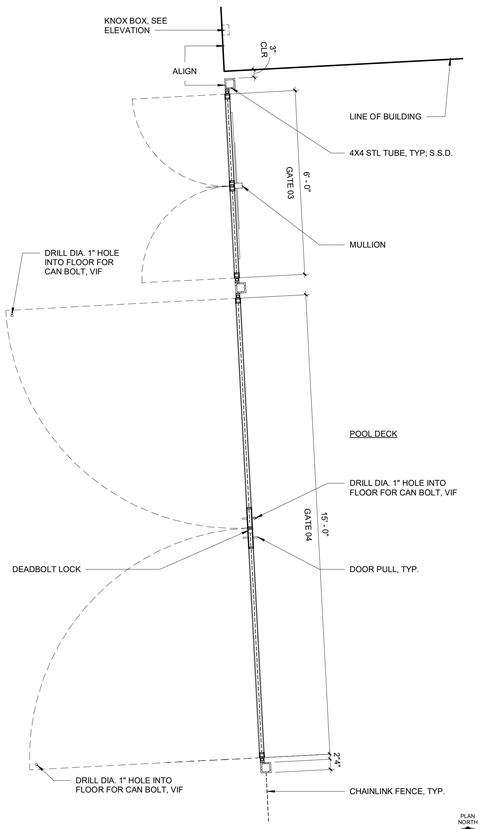


GATE ELEVATION - GATES G1, G3, G5

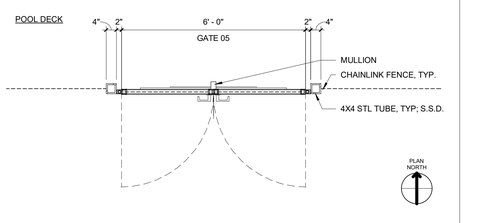


GATE SECTION A

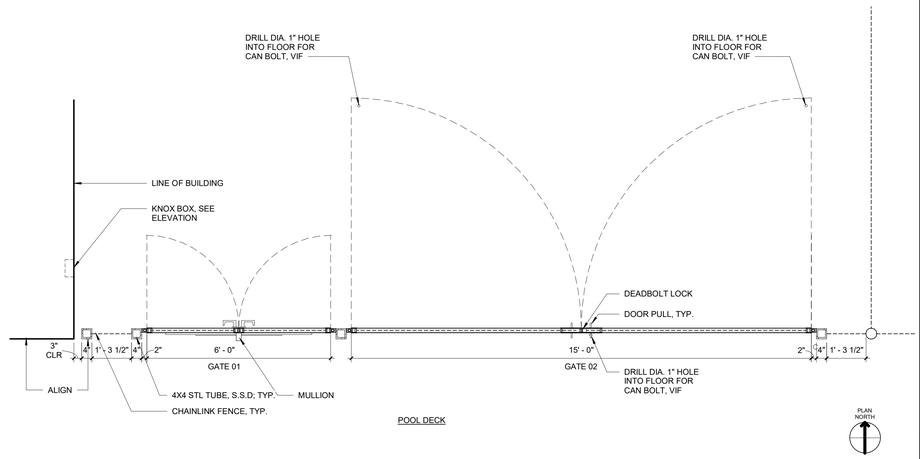
4 GATE DETAILS
1/2" = 1'-0"



2 GATE PLAN VIEW - GATE G03 AND G04
1/2" = 1'-0"



3 GATE PLAN VIEW - GATE 05
1/2" = 1'-0"



1 GATE PLAN VIEW - GATE 01 AND G02
1/2" = 1'-0"

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COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
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P: 510.549.2929

CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
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STRUCTURAL ENGINEER:
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P: 510-500-1823
950 South Grand Ave., 4th Floor
Los Angeles, CA 90015
P: 213-483-6490

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
GUTTMANN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
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AQUATICS
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

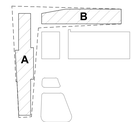
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

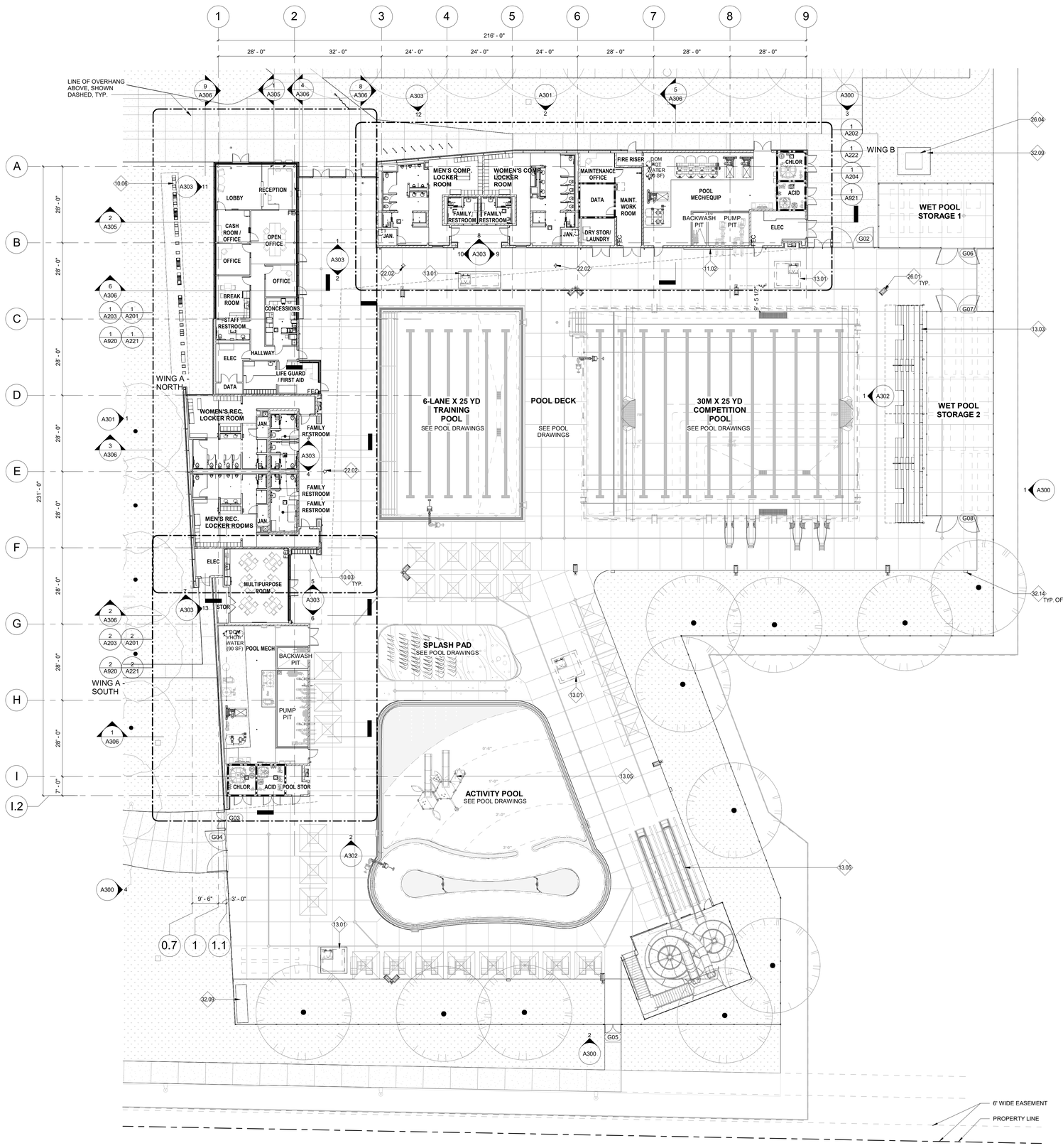
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
SITE DETAILS - GATES

SHEET NUMBER:
A131



1 OVERALL FLOOR PLAN
1/16" = 1'-0"

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
4. AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT BUILDING. SPRINKLERS SHALL BE DESIGNED TO COORDINATE WITH DUCTS, PIPING, CONDUIT, LIGHTING, ACCESS PANEL LOCATIONS AND OTHER CEILING ELEMENTS FOR A CLEAN, ARCHITECTURAL APPEARANCE.
5. SLAB DIMENSIONS ARE MEASURED TO GRIDLINES.
6. LOCATIONS OF DRAINS ARE MEASURED TO GRIDLINES. ALL FLOOR DRAINS ARE TO BE CENTERED IN THEIR RESPECTIVE SPACES, U.O.N.
7. REFER TO SPECIFICATIONS FOR LIST OF MATERIAL FINISHES, COLORS, AND PAINT COLORS.
8. ALL LOOSE FURNITURE AND APPLIANCES TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED, U.O.N.

SHEET NOTES

KEYNOTES

#	DESCRIPTION
10.03	PHENOLIC LOCKER
10.06	MONUMENT SIGNAGE - BUILT-UP METAL CHANNEL LETTERS, PAINTED
11.02	EXTERIOR SCOREBOARD
13.01	SURGE TANK, SEE AQUATICS DRAWING
13.03	BLEACHER
13.05	SWIMMING POOL PLAY STRUCTURE, SEE AQUATICS DRAWING
22.02	OUTDOOR RINSE SHOWER WITH 4 SHOWER HEADS, S.P.D.
26.01	LIGHT FIXTURE, S.E.D.
26.04	TRANSFORMER, S.E.D.
32.09	EXTERIOR CONCRETE PAD, S.E.D./S.P.D
32.14	HOSE BIB IN CONC. WALL ON POOL DECK, S.C.D., SEE AQUATICS DWG

LEGEND

- METAL STUD FRAMING
- 1 HR RATED PARTITION
- 2 HR RATED PARTITION
- CMU WALL
- PLANTING, S.L.D.
- CONCRETE PAVING, S.L.D.
- POOL DECK, SEE AQUATICS DRAWING

els architecture+ urban design

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SOUTH OXNARD AQUATICS CENTER

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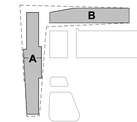
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THE PREVIEW GROUP
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TOPFLIGHT SPECS
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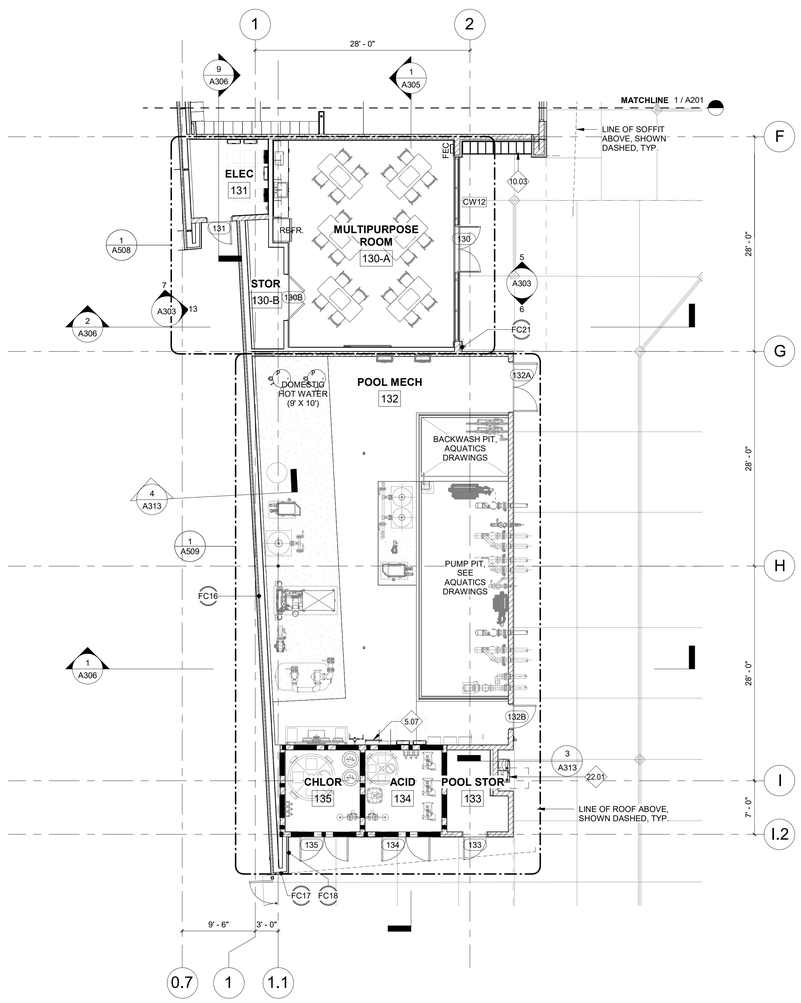
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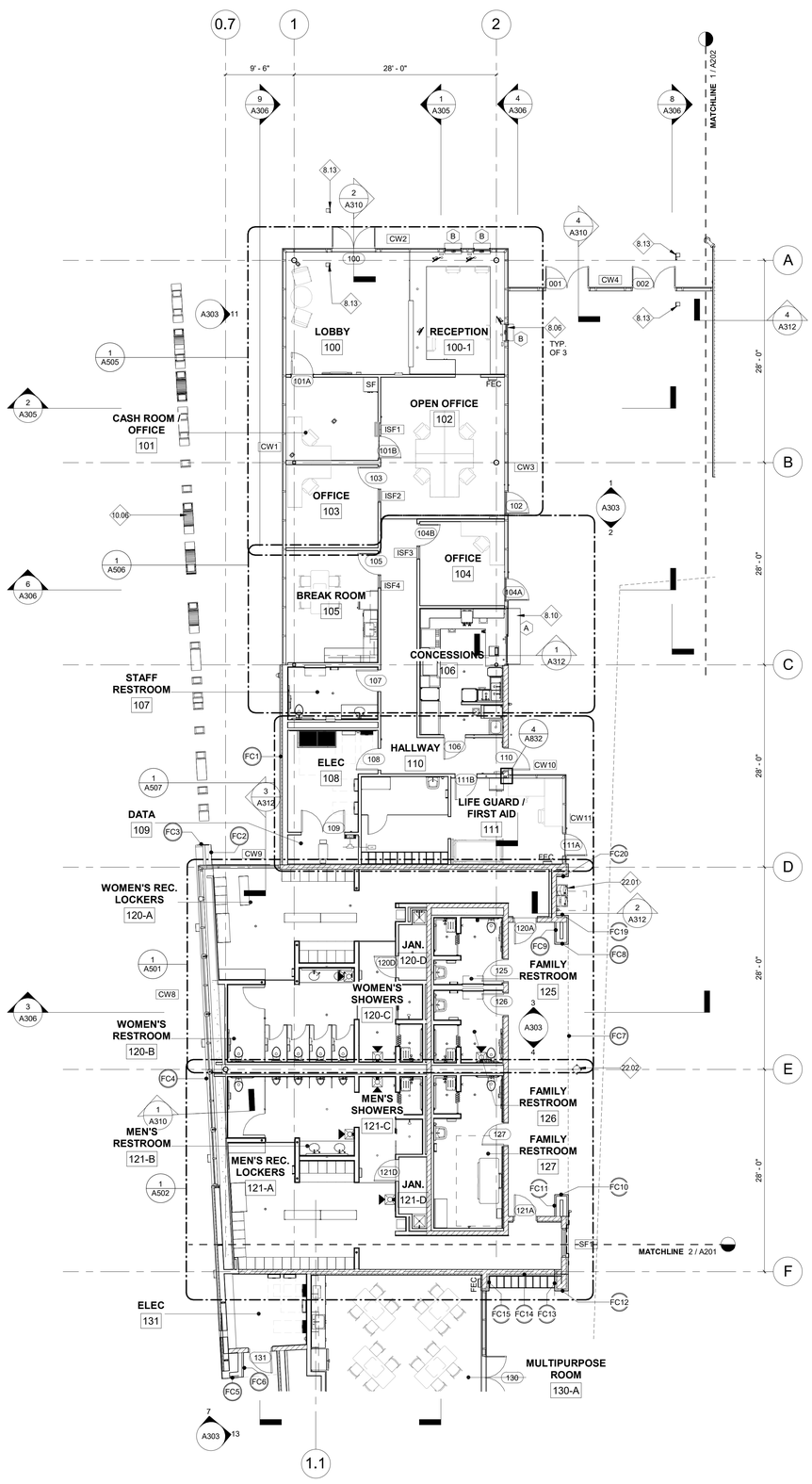
SHEET TITLE:
OVERALL FLOOR PLAN

SHEET NUMBER:
A200



2 FLOOR PLAN- WING A - SOUTH
1/8" = 1'-0"

PLAN NORTH



1 FLOOR PLAN - WING A - NORTH
1/8" = 1'-0"

PLAN NORTH

GENERAL NOTES

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SHEET NOTES

KEYNOTES

#	DESCRIPTION
5.07	PREMANUFACTURED METAL LADDER, PAINTED
8.06	CURTAINWALL SYSTEM - PREFINISHED ALUMINUM 6" DEEP SYSTEM W/ 1" INSULATED, LOW-E GLAZING
8.10	CONCESSIONS TRANSACTION WINDOW
8.13	DOOR ACTUATOR, BOLLARD MOUNT
10.03	PHENOLIC LOCKER
10.06	MONUMENT SIGNAGE - BUILT-UP METAL CHANNEL LETTERS, PAINTED
22.01	DUAL HEIGHT DRINKING FOUNTAIN WITH BOTTLE FILLER, S.P.D.
22.02	OUTDOOR RINSE SHOWER WITH 4 SHOWER HEADS, S.P.D.

LEGEND

- METAL STUD FRAMING
- 1 HR RATED PARTITION
- 2 HR RATED PARTITION
- CMU WALL
- 101 — DOOR / GATE NUMBER - SEE SHEET A800 FOR SCHEDULE
- SF# — STOREFRONT KEY - SEE SHEET A805 FOR SCHEDULE
- # — PARTITION KEY - SEE SHEET A900 FOR SCHEDULE

els architecture+ urban design

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COLLEGE PARK

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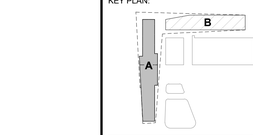
CODES / ACCESSIBILITY
THE PREVIEW GROUP
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SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
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REVISION:

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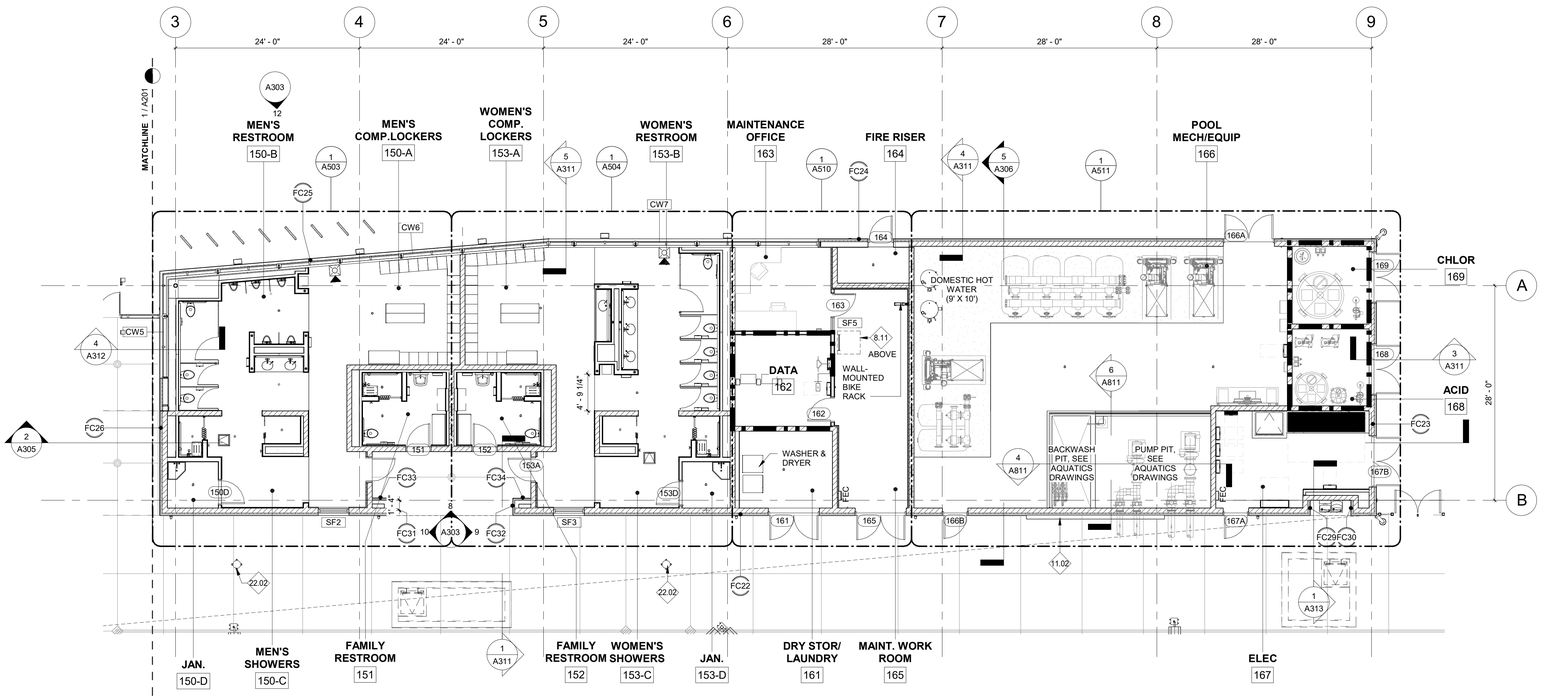
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
FLOOR PLAN - WING A

SHEET NUMBER:
A201



1 FLOOR PLAN - WING B
1/8" = 1'-0"

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
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SHEET NOTES

KEYNOTES

#	DESCRIPTION
8.11	PREMANUFACTURED ROOF ACCESS HATCH
11.02	EXTERIOR SCOREBOARD
22.02	OUTDOOR RINSE SHOWER WITH 4 SHOWER HEADS, S.P.D.

LEGEND

- METAL STUD FRAMING
- 1 HR RATED PARTITION
- 2 HR RATED PARTITION
- CMU WALL
- (101) DOOR / GATE NUMBER - SEE SHEET A800 FOR SCHEDULE
- SF# STOREFRONT KEY - SEE SHEET A805 FOR SCHEDULE
- # PARTITION KEY - SEE SHEET A900 FOR SCHEDULE

PLAN NORTH

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
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LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
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950 South Grand Ave., 4th Floor
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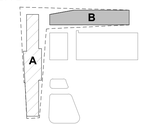
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:

DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

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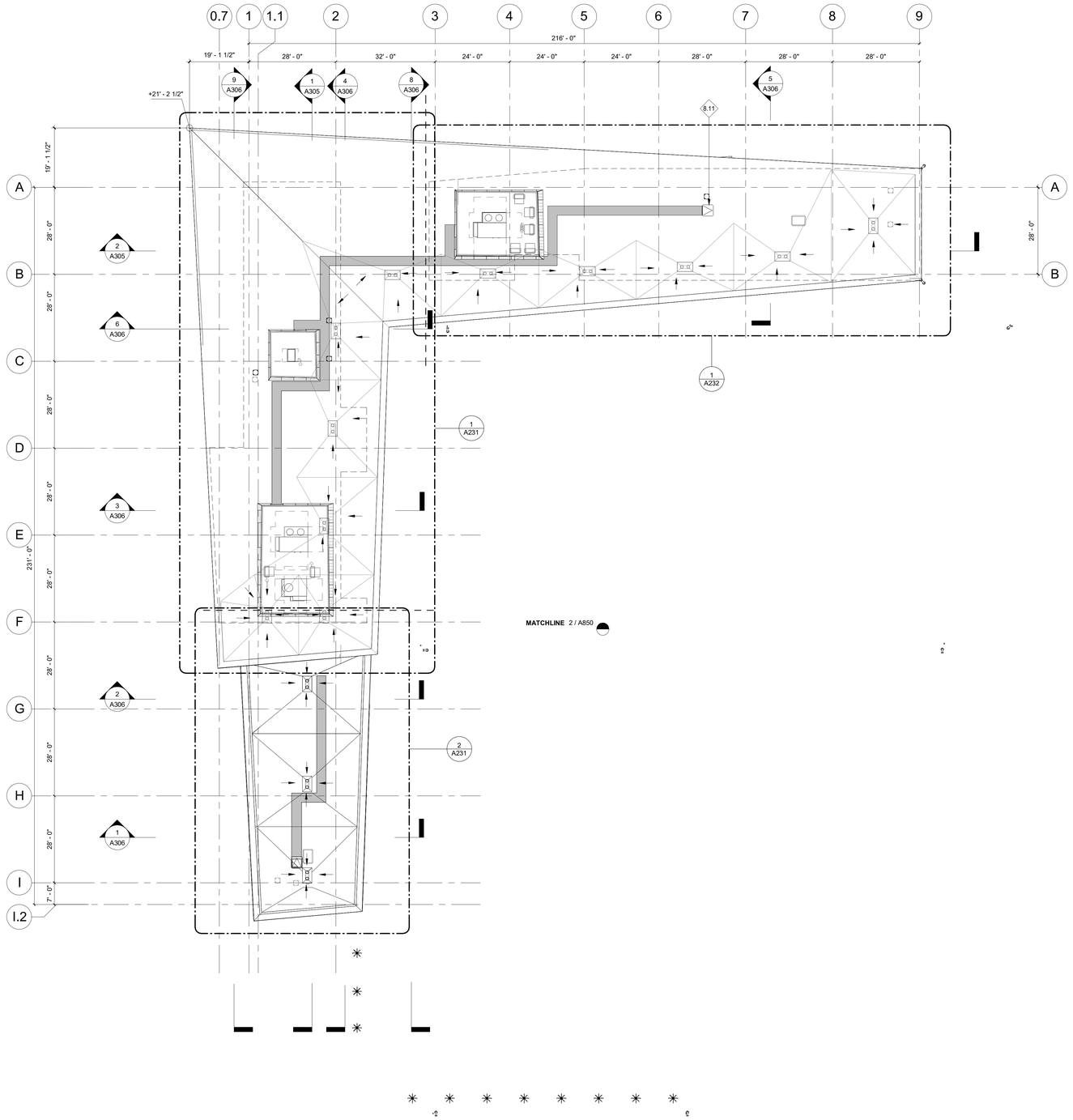
DATE

SHEET TITLE:

FLOOR PLAN - WING B

SHEET NUMBER:

A202



1 ROOF PLAN
1/16" = 1'-0"

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
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SHEET NOTES

KEYNOTES

#	DESCRIPTION
8.11	PREMANUFACTURED ROOF ACCESS HATCH

LEGEND

ROOF HATCH

DRAIN SUMP

INDICATES 3' - 0" WIDE ROOF PAD WALKWAY, TYP. WHERE CONSTRAINED, ROOF PAD MEASURES 2' - 0" OR 1' - 0" WIDE

PLAN NORTH

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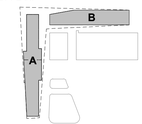
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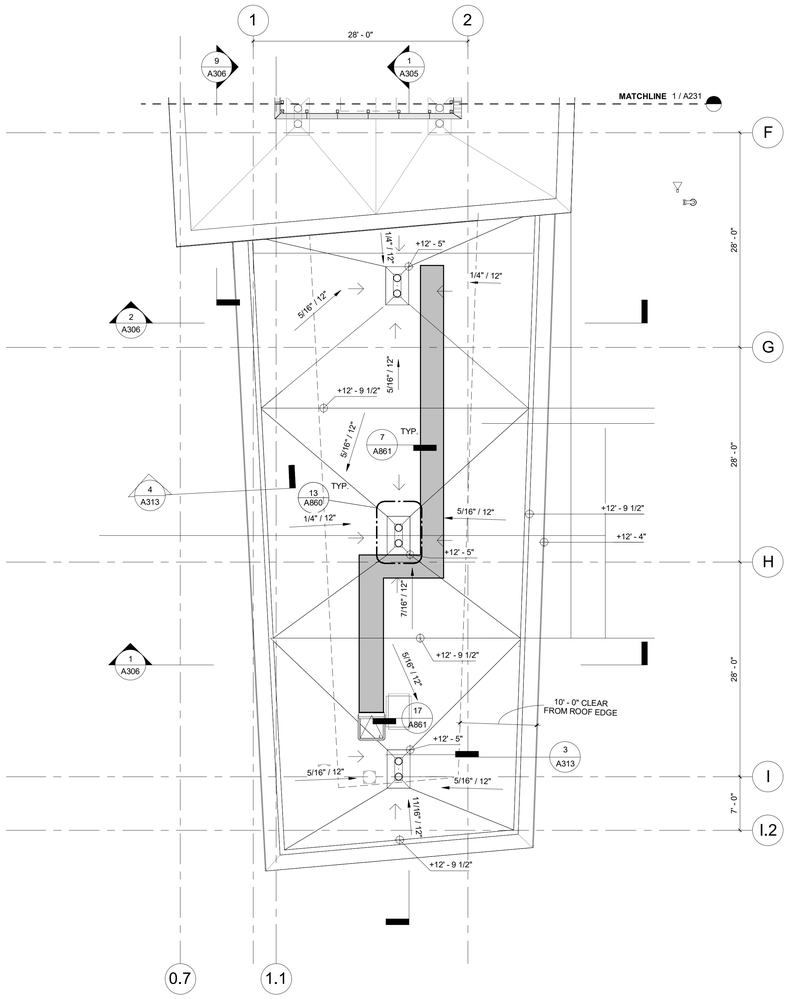
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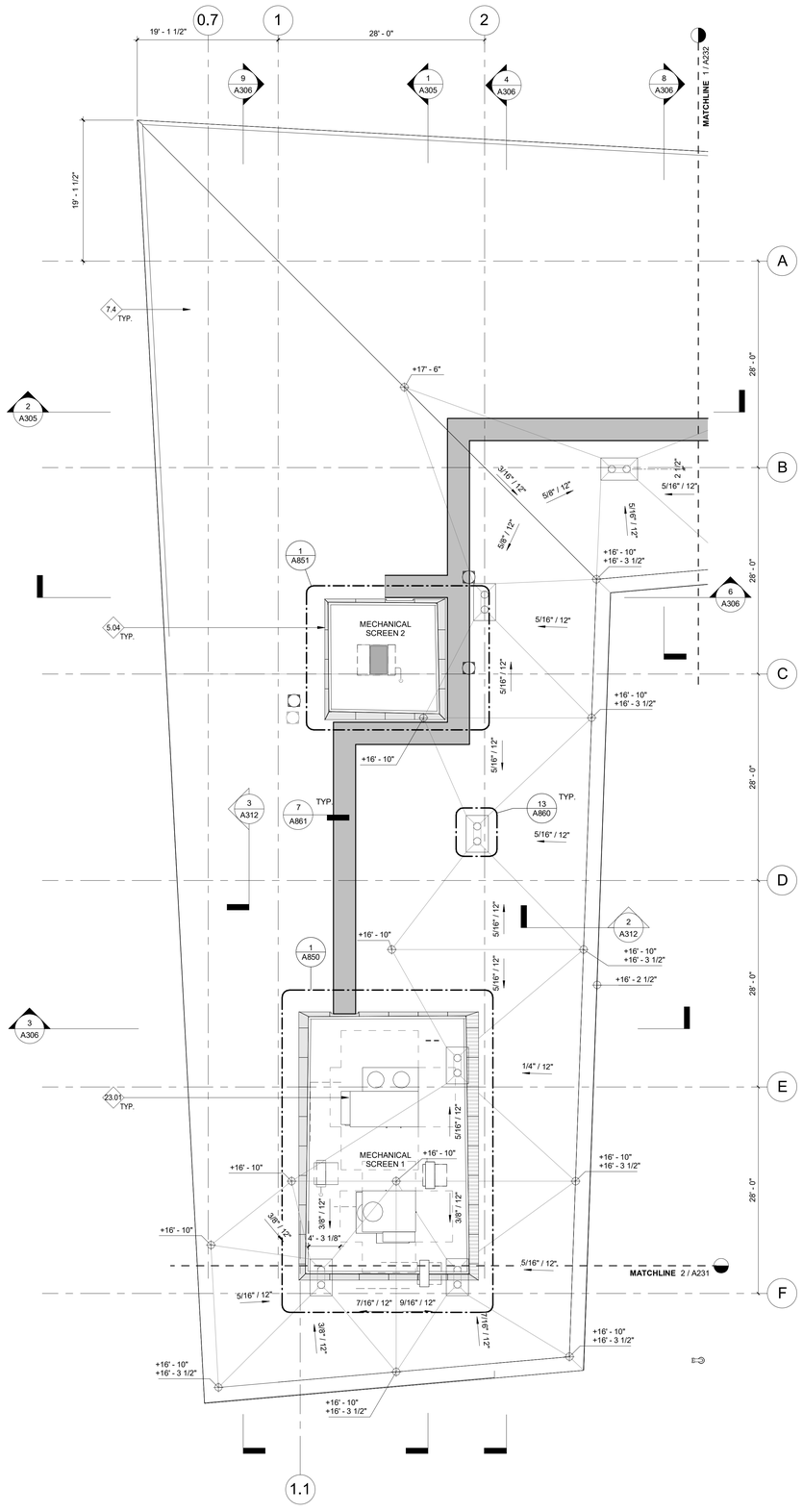
OVERALL ROOF PLAN

SHEET NUMBER:

A230



2 ROOF PLAN - WING A - SOUTH
1/8" = 1'-0"



1 ROOF PLAN - WING A - NORTH
1/8" = 1'-0"

GENERAL NOTES

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SHEET NOTES

KEYNOTES

#	DESCRIPTION
5.04	MECHANICAL SCREEN - PREFINISHED CORRUGATED PERFORATED METAL PANEL WITH TUBE STEEL STRUCTURAL FRAMING, PAINTED
7.4	
23.01	MECHANICAL EQUIPMENT, S.M.D.

LEGEND

- ROOF HATCH
- DRAIN SUMP
- INDICATES 3' - 0" WIDE ROOF PAD WALKWAY, TYP. WHERE CONSTRAINED, ROOF PAD MEASURES 2' - 0" OR 1' - 0" WIDE

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AQUATIC DESIGN GROUP
2225 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

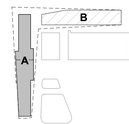
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION :

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

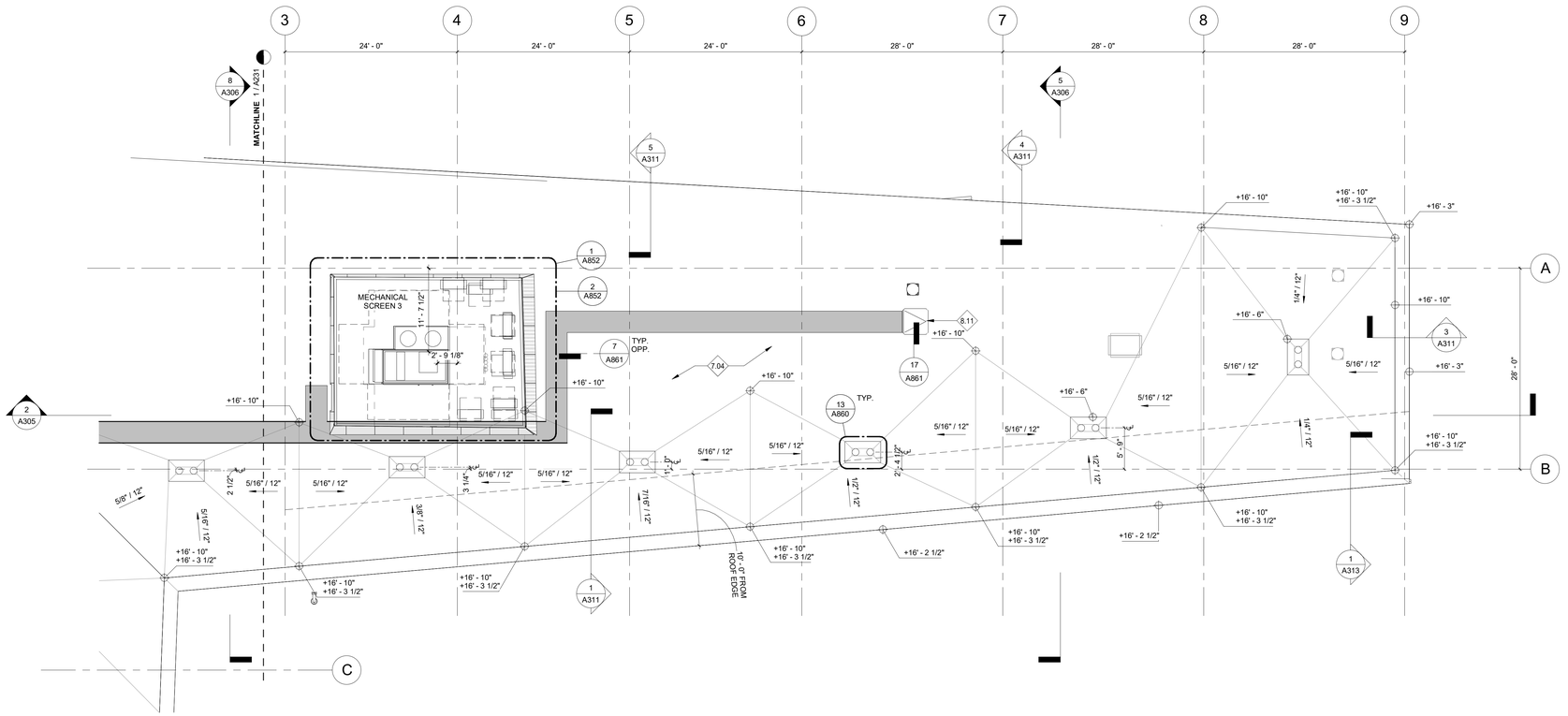
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
ROOF PLAN - WING A

SHEET NUMBER:
A231



1 ROOF PLAN - WING B
1/8" = 1'-0"

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
4. AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT BUILDING. SPRINKLERS SHALL BE DESIGNED TO COORDINATE WITH DUCTS, PIPING, CONDUIT, LIGHTING, ACCESS PANEL LOCATIONS AND OTHER CEILING ELEMENTS FOR A CLEAN, ARCHITECTURAL APPEARANCE.
5. SLAB DIMENSIONS ARE MEASURED TO GRIDLINES.
6. LOCATIONS OF DRAINS ARE MEASURED TO GRIDLINES. ALL FLOOR DRAINS ARE TO BE CENTERED IN THEIR RESPECTIVE SPACES, U.O.N.
7. REFER TO SPECIFICATIONS FOR LIST OF MATERIAL FINISHES, COLORS, AND PAINT COLORS.
8. ALL LOOSE FURNITURE AND APPLIANCES TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED, U.O.N.

SHEET NOTES

#	DESCRIPTION
7.04	PVC ROOFING O/ 1/2" ROOF GYPSUM BOARD O/ 5" UNIFORM THICKNESS POLYISOCYANURATE INSULATION BOARD O/ METAL DECK
8.11	PREMANUFACTURED ROOF ACCESS HATCH

LEGEND

ROOF HATCH

DRAIN SUMP

INDICATES 3' - 0" WIDE ROOF PAD WALKWAY, TYP. WHERE CONSTRAINED, ROOF PAD MEASURES 2' - 0" OR 1' - 0" WIDE

PLAN NORTH

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

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PROJECT TEAM:

ARCHITECT:
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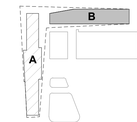
CODES / ACCESSIBILITY
THE PREVIEW GROUP
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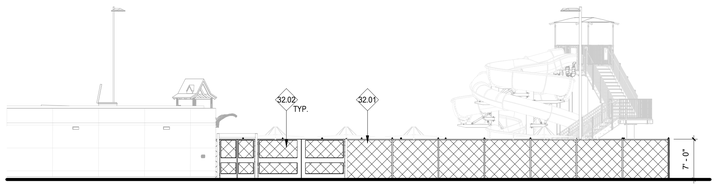
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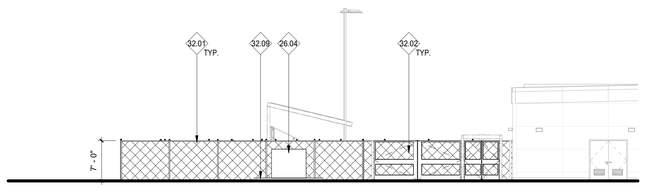
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SHEET TITLE:
ROOF PLAN - WING B

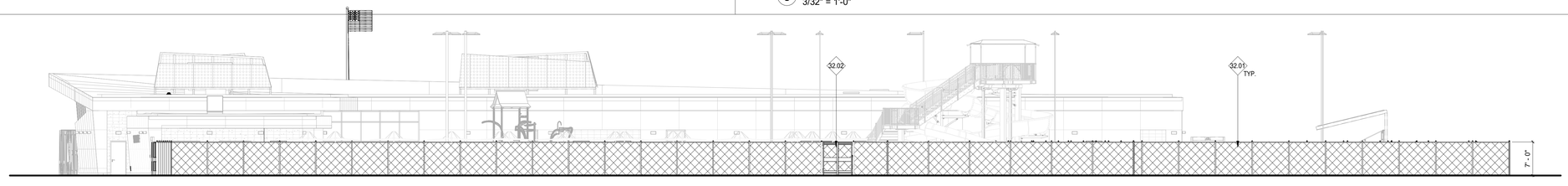
SHEET NUMBER:
A232



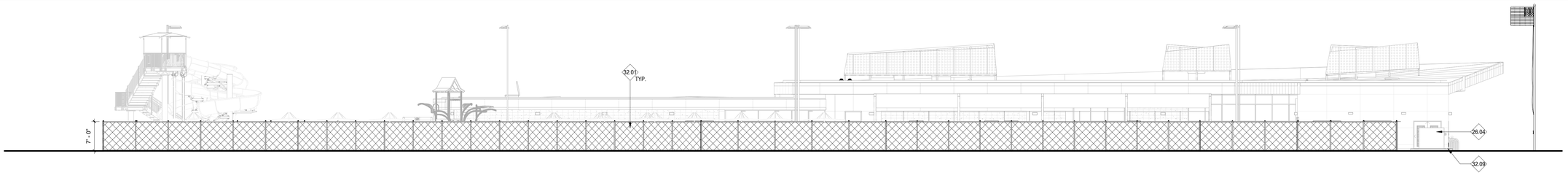
4 POOL ENCLOSURE - WEST ELEVATION
3/32" = 1'-0"



3 POOL ENCLOSURE - NORTH ELEVATION
3/32" = 1'-0"



2 POOL ENCLOSURE - SOUTH ELEVATION
3/32" = 1'-0"



1 POOL ENCLOSURE - EAST ELEVATION
3/32" = 1'-0"

LEGEND

KEYNOTES

#	DESCRIPTION
26.04	TRANSFORMER, S.E.D.
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.02	GALVANIZED CHAINLINK GATE WITH 5/8" MESH
32.09	EXTERIOR CONCRETE PAD, S.E.D./S.P.D

SHEET NOTES

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
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architecture+
urban design

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COLLEGE PARK

OXNARD, CA

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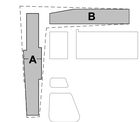
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Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
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San Francisco, CA 94104
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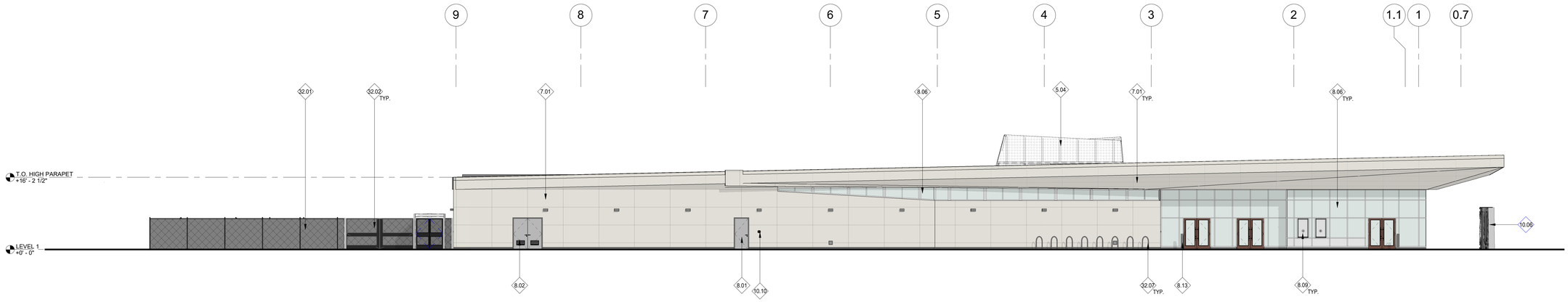
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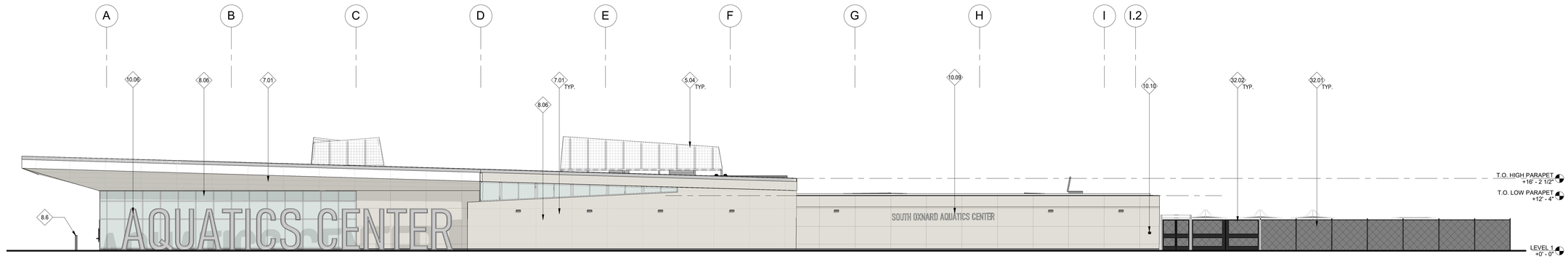
POOL ENCLOSURE ELEVATIONS

SHEET NUMBER:

A300



2 NORTH ELEVATION - PRESENTATION
1" = 10'-0"



1 WEST ELEVATION - PRESENTATION
1" = 10'-0"

LEGEND

KEYNOTES

#	DESCRIPTION
5.04	MECHANICAL SCREEN - PREFINISHED CORRUGATED PERFORATED METAL PANEL WITH TUBE STEEL STRUCTURAL FRAMING, PAINTED
7.01	FIBER CEMENT PANEL
8.01	HOLLOW METAL DOORS, PAINTED
8.02	FIBER GLASS DOORS WITH FIRE RESISTANT LOUVERS AND SCREEN PER MFR., PAINTED
8.6	
8.06	CURTAINWALL SYSTEM - PREFINISHED ALUMINUM 6" DEEP SYSTEM W/ 1" INSULATED, LOW-E GLAZING
8.09	TRANSACTION WINDOW W/ DEAL TRAY
8.13	DOOR ACTUATOR, BOLLARD MOUNT
10.06	MONUMENT SIGNAGE - BUILT-UP METAL CHANNEL LETTERS, PAINTED
10.09	ALUMINUM SIGNAGE
10.10	KNOX BOX
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.02	GALVANIZED CHAINLINK GATE WITH 5/8" MESH
32.07	BICYCLE RACK, S.L.D.

SHEET NOTES

1. PAINT ALL EXPOSED STRUCTURE, UNDERSIDE OF METAL DECK, DUCTS, UTILITIES, HANGERS, AND ALL MISCELLANEOUS SUSPENSION HARDWARE. SEE PAINT SCHEDULE.
2. GC TO COORDINATE EXACT LOCATION OF ACCESS PANEL WITH ARCHITECT DURING CONSTRUCTION

GENERAL NOTES

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els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
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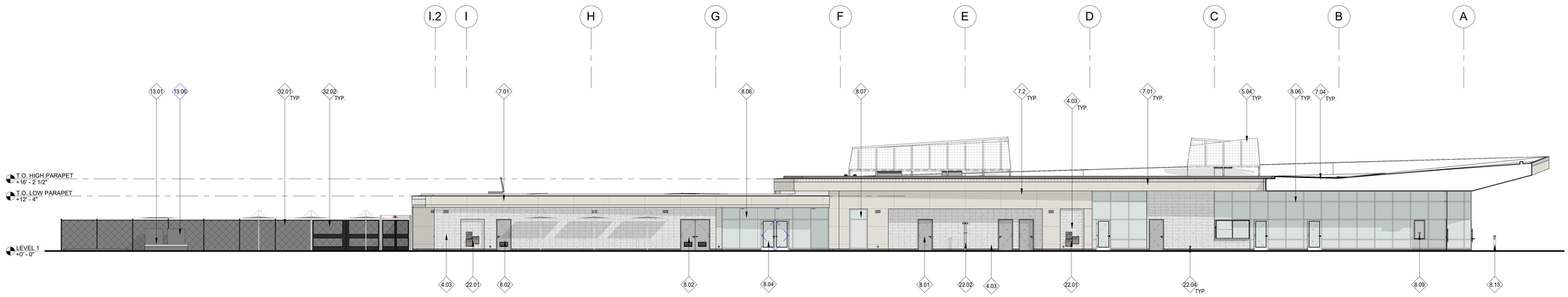
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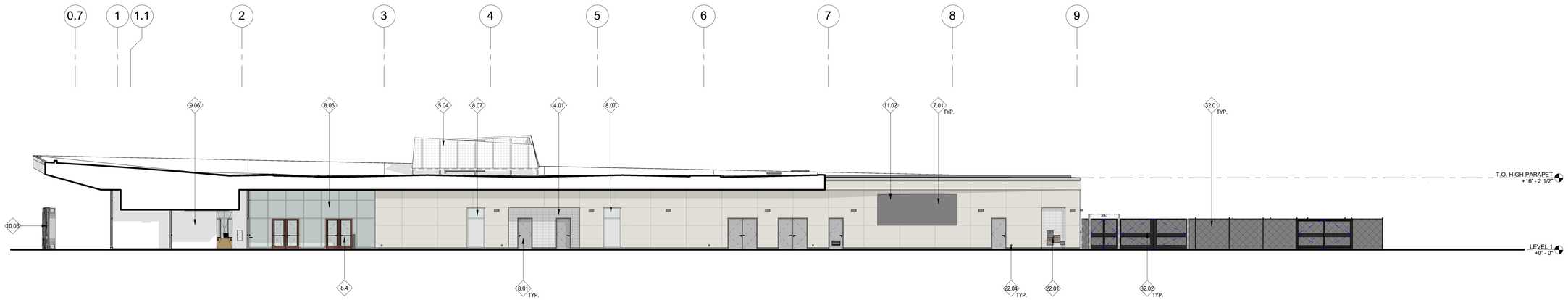
EXTERIOR ELEVATIONS - RECREATION BLDG

SHEET NUMBER:

A301*



2 EAST ELEVATION - PRESENTATION
1" = 10'-0"



1 SOUTH ELEVATION - PRESENTATION
1" = 10'-0"

LEGEND

KEYNOTES

#	DESCRIPTION
4.01	CMU BLOCK WITH GROUND FACE FINISH
4.03	CMU BLOCK WITH GROUND FACE FINISH AND GRAFFITI RESISTANT COATING @ EXTERIOR
5.04	MECHANICAL SCREEN - PREFINISHED CORRUGATED PERFORATED METAL PANEL WITH TUBE STEEL STRUCTURAL FRAMING, PAINTED
7.01	FIBER CEMENT PANEL
7.2	
7.04	PVC ROOFING O/ 1/2" ROOF GYPSUM BOARD O/ 5" UNIFORM THICKNESS POLYISOCYANURATE INSULATION BOARD O/ METAL DECK
8.01	HOLLOW METAL DOORS, PAINTED
8.02	FIBER GLASS DOORS WITH FIRE RESISTANT LOUVERS AND SCREEN PER MFR., PAINTED
8.4	
8.04	GLAZED ALUMINUM ENTRANCE DOORS
8.06	CURTAINWALL SYSTEM - PREFINISHED ALUMINUM 6" DEEP SYSTEM W/ 1" INSULATED, LOW-E GLAZING
8.07	STOREFRONT SYSTEM - PREFINISHED ALUMINUM 6" DEEP SYSTEM W/ 1" INSULATED, LOW-E GLAZING
8.09	TRANSACTION WINDOW W/ DEAL TRAY
8.13	DOOR ACTUATOR, BOLLARD MOUNT
9.06	GYP. WALL BD., PAINTED
10.06	MONUMENT SIGNAGE - BUILT-UP METAL CHANNEL LETTERS, PAINTED
11.02	EXTERIOR SCOREBOARD
13.01	SURGE TANK, SEE AQUATICS DRAWING
13.06	POOL STORAGE EQUIPMENT, SEE AQUATICS DRAWING
22.01	DUAL HEIGHT DRINKING FOUNTAIN WITH BOTTLE FILLER, S.P.D.
22.02	OUTDOOR RINSE SHOWER WITH 4 SHOWER HEADS, S.P.D.
22.04	DOWNSPOUT NOZZLE, S.P.D.
32.01	GALVANIZED CHAINLINK FENCE WITH 5/8" MESH
32.02	GALVANIZED CHAINLINK GATE WITH 5/8" MESH

SHEET NOTES

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GENERAL NOTES

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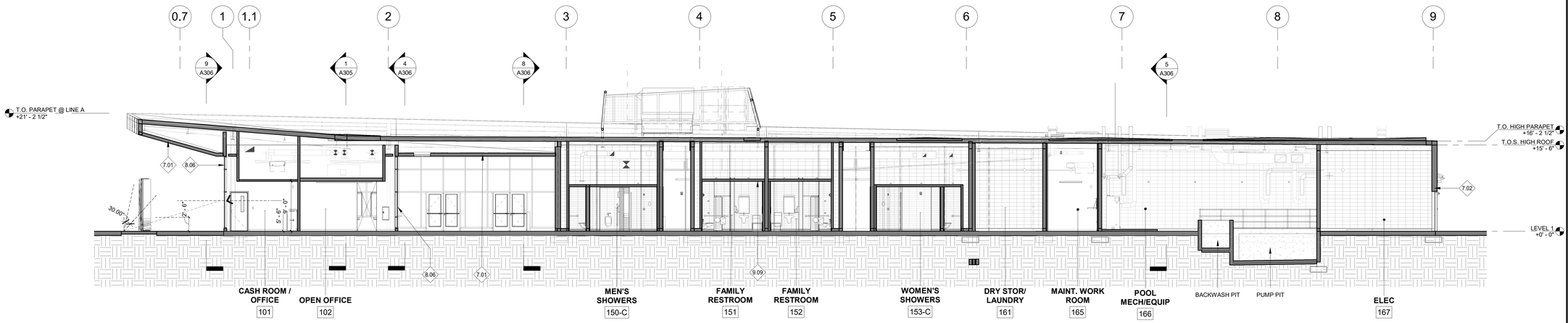
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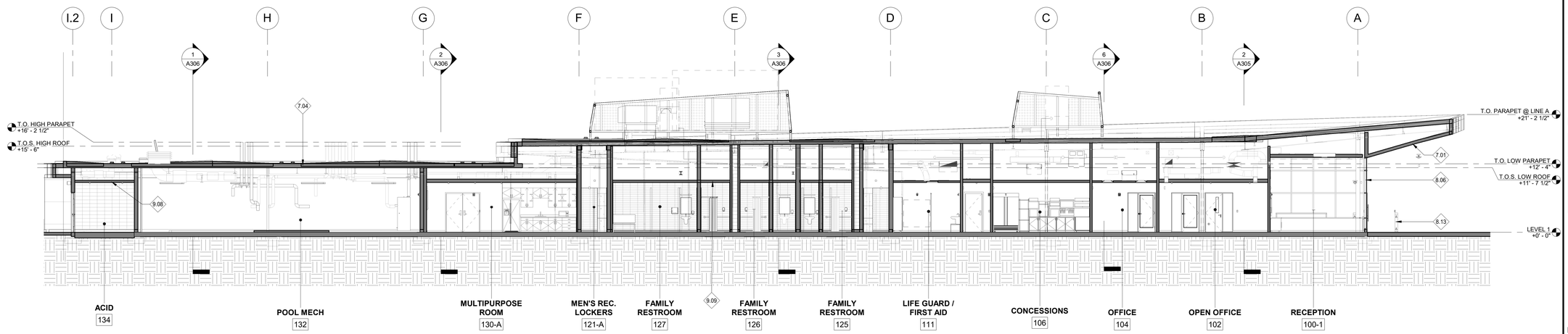
EXTERIOR ELEVATIONS - COMPETITION BLDG

SHEET NUMBER:

A302*



2 LONGITUDINAL BUILDING SECTION - WING B
1/8" = 1'-0"



1 LONGITUDINAL BUILDING SECTION - WING A
1/8" = 1'-0"

LEGEND

KEYNOTES

#	DESCRIPTION
7.01	FIBER CEMENT PANEL
7.02	FIBER CEMENT PANEL, 12 MM THICK ASSEMBLY O/ 1-1/2" AIR GAP O/ 1-1/2" RIGID INSULATION O/ WATERPROOFING MEMBRANE O/ GYP. BOARD O/ BATT-FILLED METAL STUD
7.04	PVC ROOFING O/ 1/2" ROOF GYPSUM BOARD O/ 5" UNIFORM THICKNESS POLYISOCYANURATE INSULATION BOARD O/ METAL DECK
8.06	CURTAINWALL SYSTEM - PREFINISHED ALUMINUM 6" DEEP SYSTEM W/ 1" INSULATED, LOW-E GLAZING
8.13	DOOR ACTUATOR, BOLLARD MOUNT
9.08	GYP. BD. CEILING, PAINTED, WATER RESISTANT AT WET AREA
9.09	CEMENT BOARD CEILING SYSTEM WITH ACRYLIC FINISH AT WET LOCATIONS

SHEET NOTES

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
2. ALL EXPOSED C.I.P. CONC. & CMU BLOCK TO RECEIVE WATERPROOF & ANTI-GRAFFITI COATING.
3. ALL OPENINGS ARE FULL OR 1/2 BLOCK CMU MODULES U.O.N.
4. AUTOMATIC FIRE SPRINKLER SYSTEM THROUGHOUT BUILDING. SPRINKLERS SHALL BE DESIGNED TO COORDINATE WITH DUCTS, PIPING, CONDUIT, LIGHTING, ACCESS PANEL LOCATIONS AND OTHER CEILING ELEMENTS FOR A CLEAN, ARCHITECTURAL APPEARANCE.
5. SLAB DIMENSIONS ARE MEASURED TO GRIDLINES.
6. LOCATIONS OF DRAINS ARE MEASURED TO GRIDLINES. ALL FLOOR DRAINS ARE TO BE CENTERED IN THEIR RESPECTIVE SPACES, U.O.N.
7. REFER TO SPECIFICATIONS FOR LIST OF MATERIAL FINISHES, COLORS, AND PAINT COLORS.
8. ALL LOOSE FURNITURE AND APPLIANCES TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED, U.O.N.

els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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SPECIFICATIONS
TOPFLIGHT SPECS
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San Francisco, CA 94104
P: 415 335-3940

REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

STAMP:

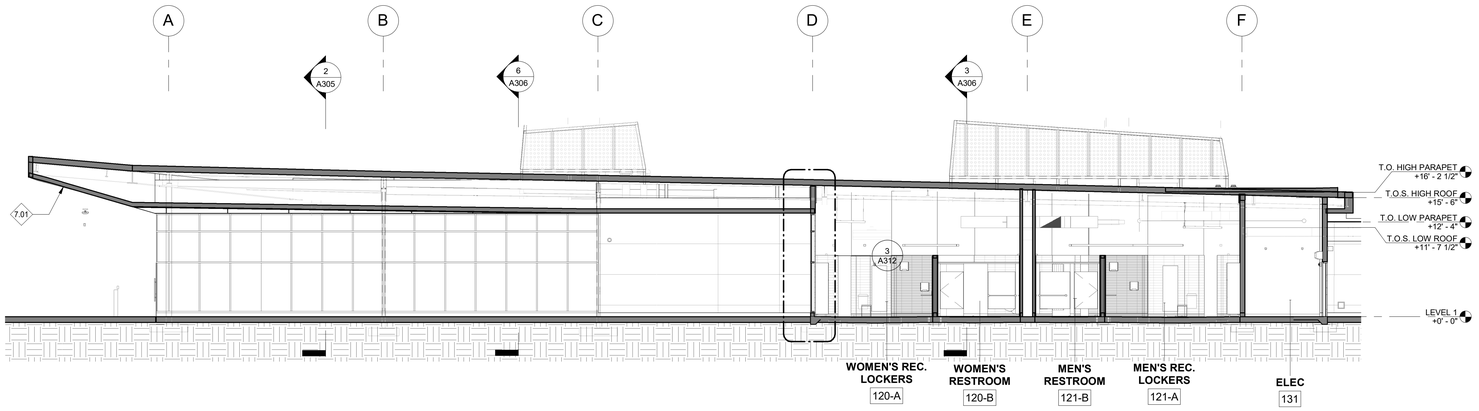
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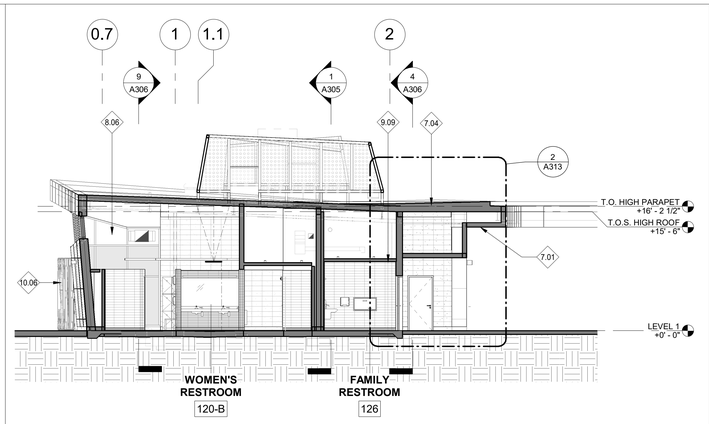
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SHEET TITLE:
BUILDING SECTIONS

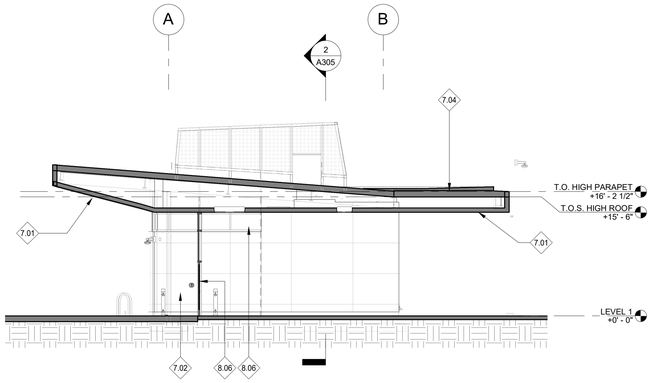
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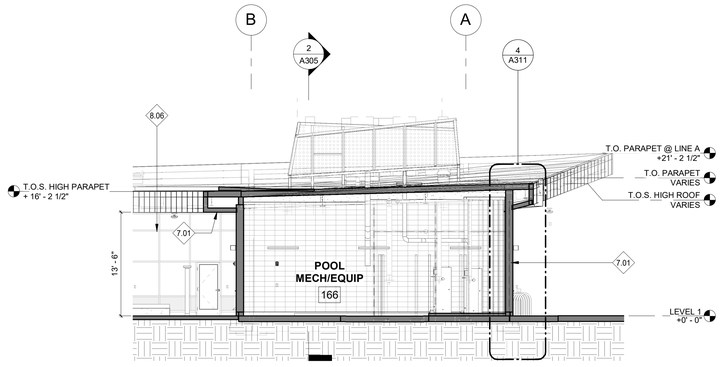
9 LONGITUDINAL BUILDING SECTION - THROUGH WING A LOCKER ROOMS
1/8" = 1'-0"



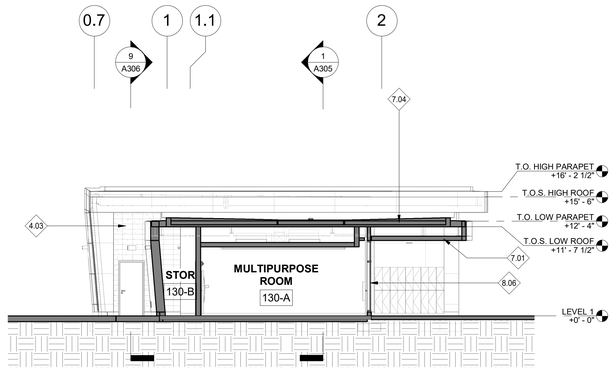
3 TRANSVERSE BUILDING SECTION - THROUGH WING A WOMEN'S RESTROOM
1/8" = 1'-0"



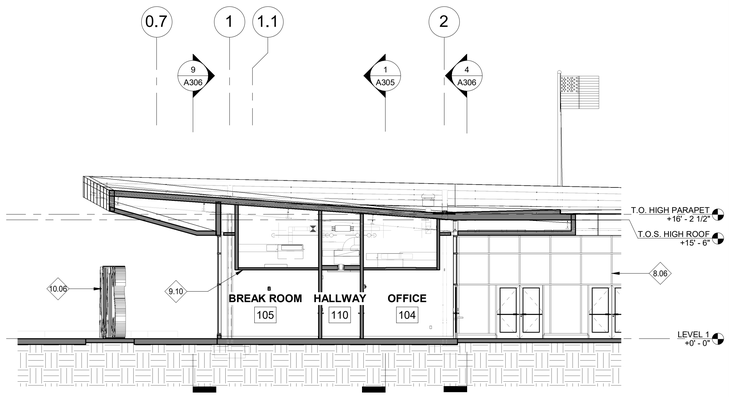
8 BUILDING SECTION - THROUGH ENTRY PORTAL
1/8" = 1'-0"



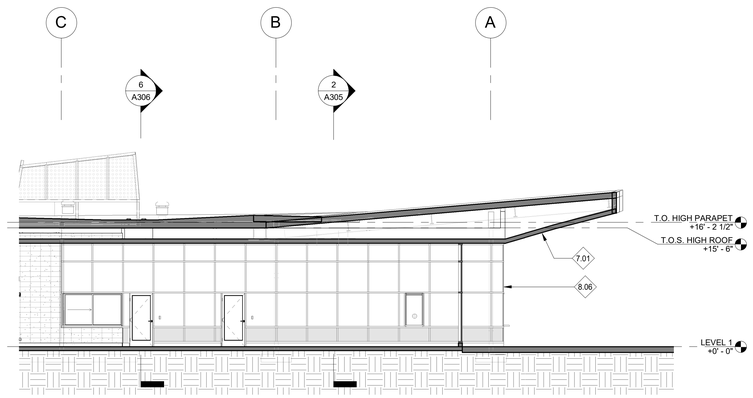
5 TRANSVERSE BUILDING SECTION - THROUGH WING B POOL MECH/EQUIP
1/8" = 1'-0"



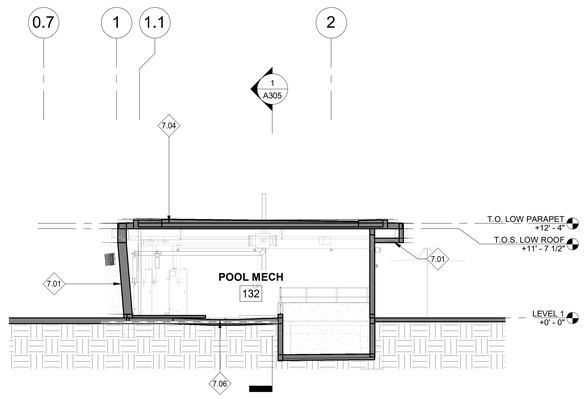
2 TRANSVERSE BUILDING SECTION - THROUGH WING A MULTIPURPOSE ROOM
1/8" = 1'-0"



6 BUILDING SECTIONS THROUGH OFFICE SPACES
1/8" = 1'-0"



4 BUILDING SECTION THROUGH ENTRY PORTAL
1/8" = 1'-0"



1 TRANSVERSE BUILDING SECTION - THROUGH WING A POOL MECH
1/8" = 1'-0"

LEGEND

KEYNOTES

#	DESCRIPTION
4.03	CMU BLOCK WITH GROUND FACE FINISH AND GRAFFITI RESISTANT COATING @ EXTERIOR
7.01	FIBER CEMENT PANEL
7.02	FIBER CEMENT PANEL, 12 MM THICK ASSEMBLY O/ 1-1/2" AIR GAP O/ 1-1/2" RIGID INSULATION O/ WATERPROOFING MEMBRANE O/ GYP. BOARD O/ BATT-FILLED METAL STUD
7.04	PVC ROOFING O/ 1/2" ROOF GYPSUM BOARD O/ 5" UNIFORM THICKNESS POLYISOCYANURATE INSULATION BOARD O/ METAL DECK
7.06	SLAB-ON-GRADE - 5" C.I.P. CONC O/ VAPOR BARRIER O/ 4" CRUSHED ROCK OR SAND
8.06	CURTAINWALL SYSTEM - PREFINISHED ALUMINUM 6" DEEP SYSTEM W/ 1" INSULATED, LOW-E GLAZING
9.09	CEMENT BOARD CEILING SYSTEM WITH ACRYLIC FINISH AT WET LOCATIONS
9.10	ACOUSTIC CEILING TILE
10.06	MONUMENT SIGNAGE - BUILT-UP METAL CHANNEL LETTERS, PAINTED

SHEET NOTES

GENERAL NOTES

1. FFE: +0' - 0" = SEE CIVIL DRAWINGS.
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OXNARD, CA

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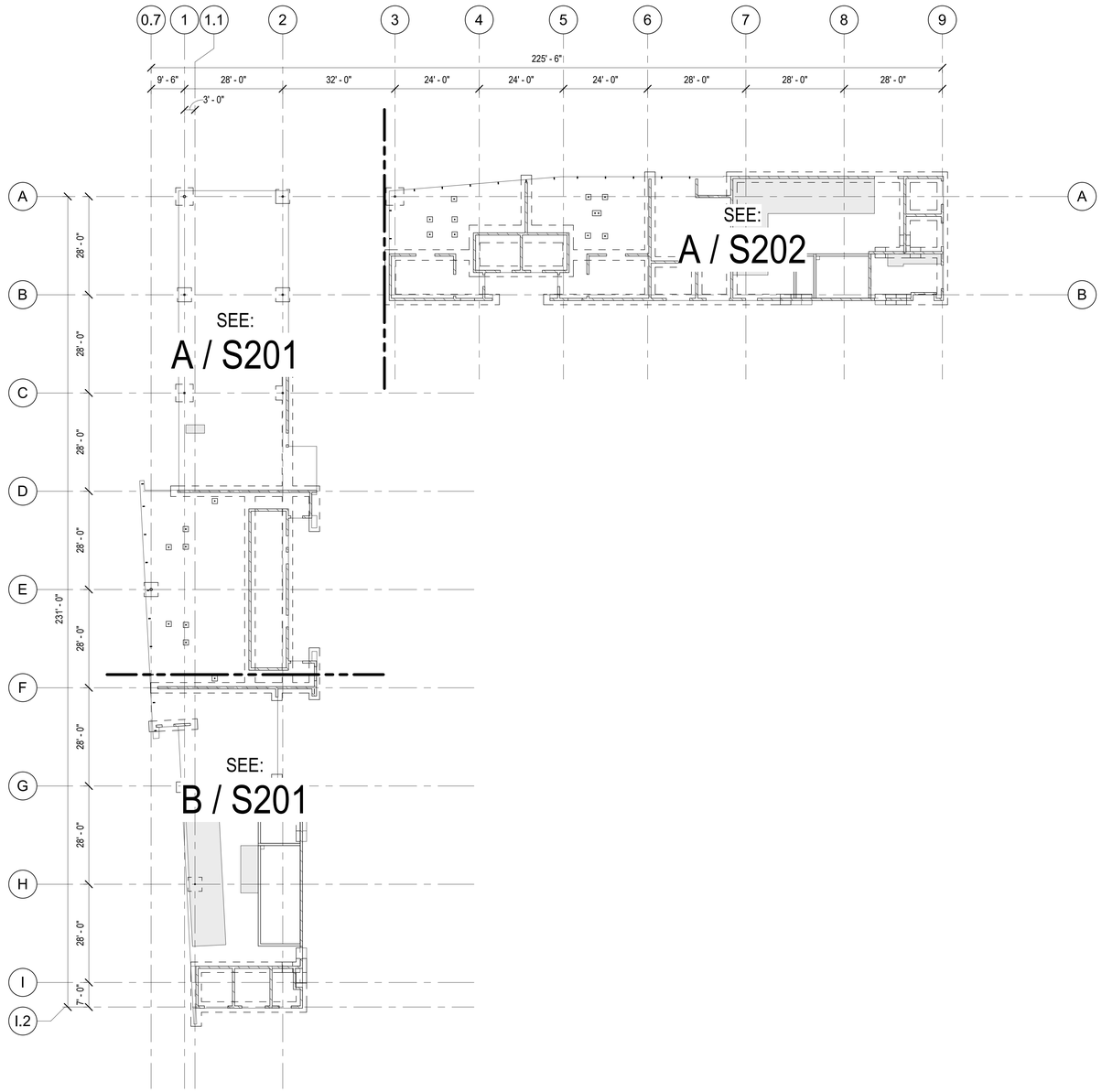
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APPROVED:

DATE

SHEET TITLE:
BUILDING SECTIONS

SHEET NUMBER:
A306



OVERALL FOUNDATION PLAN
1/16" = 1'-0"

A

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PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

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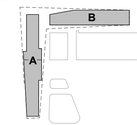
AQUATICS:
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
49 Geary St., Suite 230
San Francisco, CA 94108
P: 415 546-6033

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



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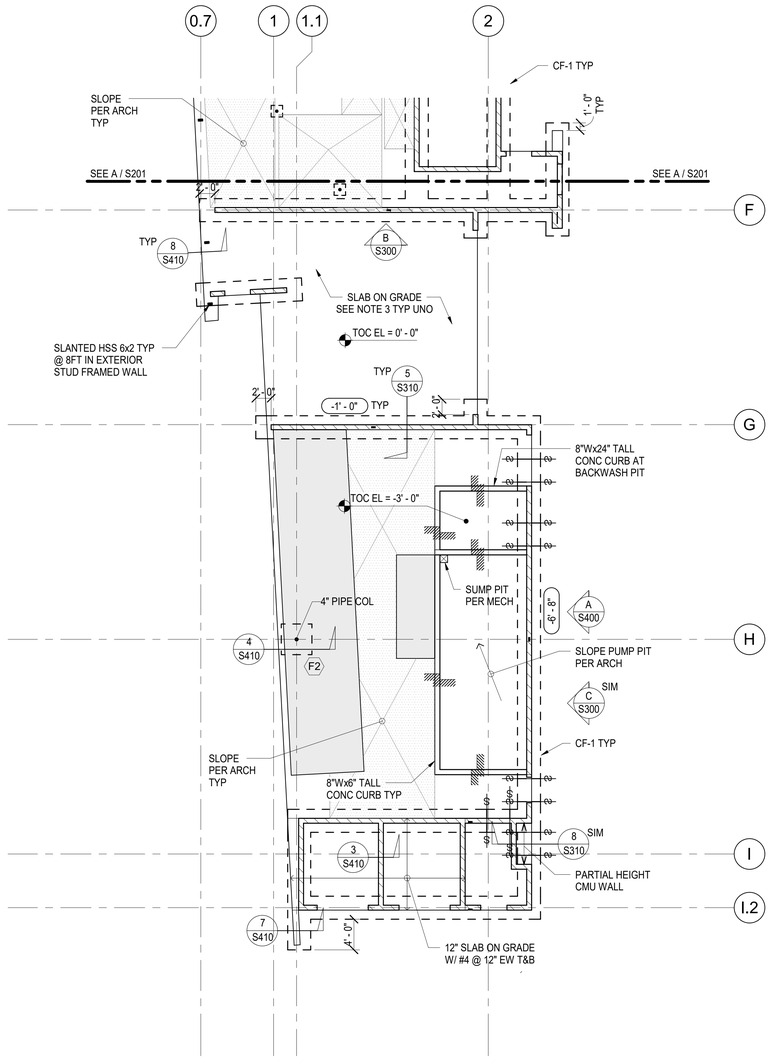
NOT FOR CONSTRUCTION

APPROVED:

CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:
OVERALL FOUNDATION PLAN

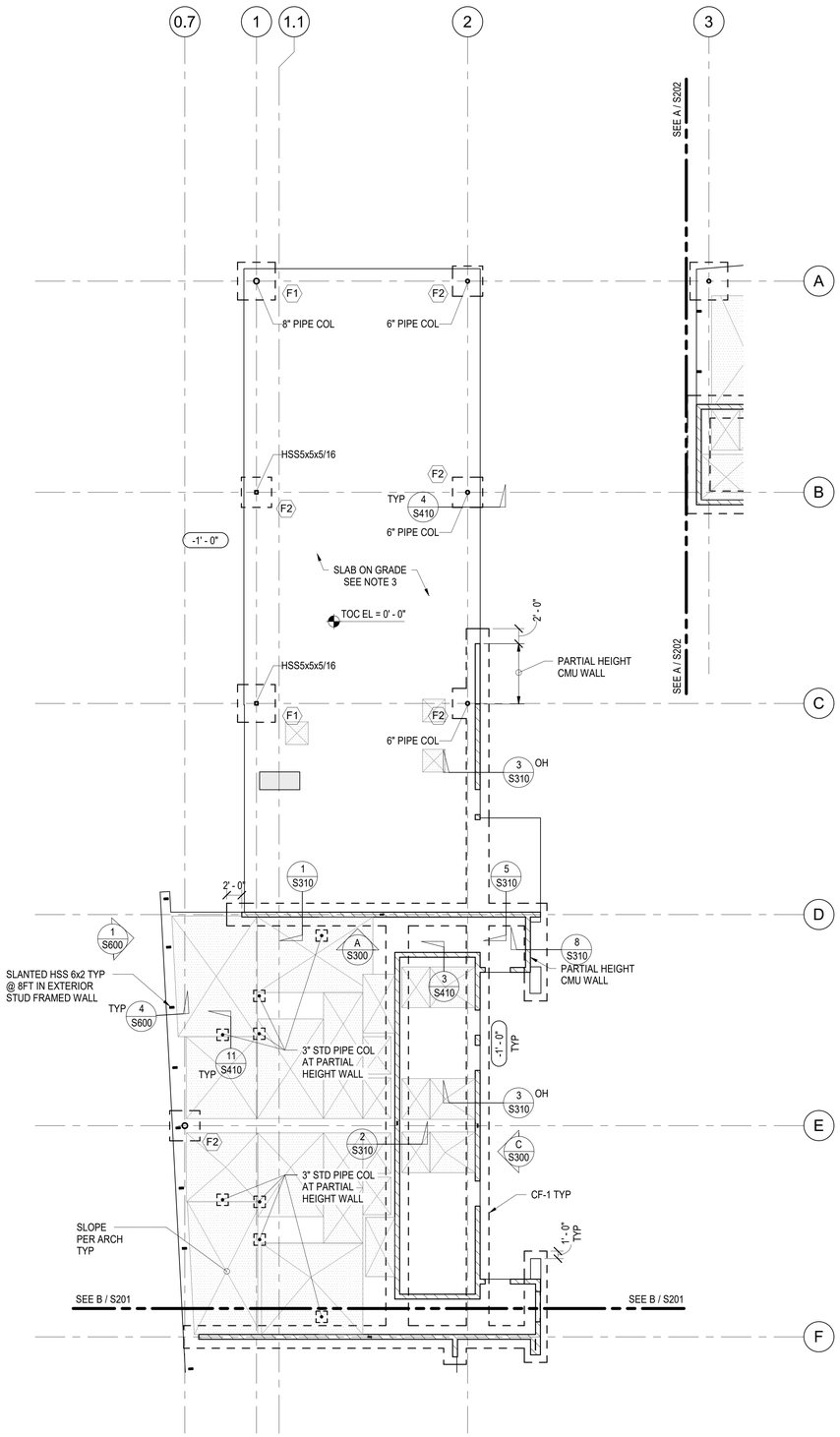
SHEET NUMBER:
S200



FOUNDATION PLAN - WING A

1/8" = 1'-0"

B



FOUNDATION PLAN - WING A

1/8" = 1'-0"

A

PLAN NOTES:

1. DATUMN: +0' - 0" = +38' - 4". VERIFY W/ ARCH
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S001 THRU S105
4. SLAB ON GRADE: 5" THICK WITH #5 @ 18" EACH WAY OVER TOP OF SUB-GRADE PER SOILS ENGINEER.
5. SEE GEOTECHNICAL REPORT FOR GROUND IMPROVMENT PLAN AND PERFORMANCE OBJECTIVES TO BE DESIGNED BY THE GENERAL CONTRACTOR'S SPECIALTY CONTRACTOR.
6. SEE ARCHITECTURAL DRAWINGS FOR LAYOUT OF CONCRETE CURBS. SEE DETAIL 4 / S102.

PLAN LEGEND:

- TOC EL = +0' - 0" — INDICATES BASIC TOP OF CONCRETE SLAB ELEVATION. SEE ARCHITECTURAL DRAWING FOR EXACT ELEVATION / DRAINAGE (DATUMN: +0' - 0" = +38' - 4")
- F1 — SPREAD FOOTING MARK. SEE SCHEDULE & 4 / S410 FOR INFORMATION
- -1' - 0" — INDICATES TOP OF FOOTING OR GRADE BEAM ELEVATIONS (TYP EL: -1' - 0" FROM FINISHED FLOOR OR LOWEST ADJACENT GRADE, UNO)
- CF-1 — CONTINUOUS FOOTING MARK SEE SCHEDULE FOR INFORMATION
- 8" THK STRUCTURAL MASONRY WALL FOR TYPICAL SECTIONS AND REINFORCMENT SEE S301 THRU S310
- INDICATES CMU JOINT PER 4 / S103
- STEP IN FOUNDATION PER 11 / S101
- STEP IN SLAB PER 17 / S102
- 4" CONC EQUIPMENT PAD. SEE DETAIL 4 / S102 VERIFY LOCATION WITH ARCH DRAWINGS
- INDICATES SLOPED SLAB DEPRESSION PER ARCH. SEE 17C / S102

SPREAD FOOTING SCHEDULE

MARK	SIZE			REINFORCEMENT
	LENGTH	WIDTH	THICKNESS	
F1	5' - 0"	5' - 0"	12"	(5) #5 BOT EA WAY
F2	4' - 0"	4' - 0"	12"	(4) #5 BOT EA WAY
F3	3' - 0"	3' - 0"	12"	(3) #5 BOT EA WAY

CONTINUOUS FOOTING SCHEDULE

MARK	SIZE		REINFORCEMENT
	WIDTH	THICKNESS	
CF-1	3' - 0"	12"	(1) #5 TOP LONGITUDINAL (3) #5 BOT LONGITUDINAL #5 @ 12" BOT TRANSVERSE
CF-2	5' - 0"	12"	(2) #5 TOP LONGITUDINAL (4) #5 BOT LONGITUDINAL #6 @ 12" BOT TRANSVERSE

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD
PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

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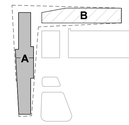
AQUATICS:
AQUATIC DESIGN GROUP
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SPECIFICATIONS:
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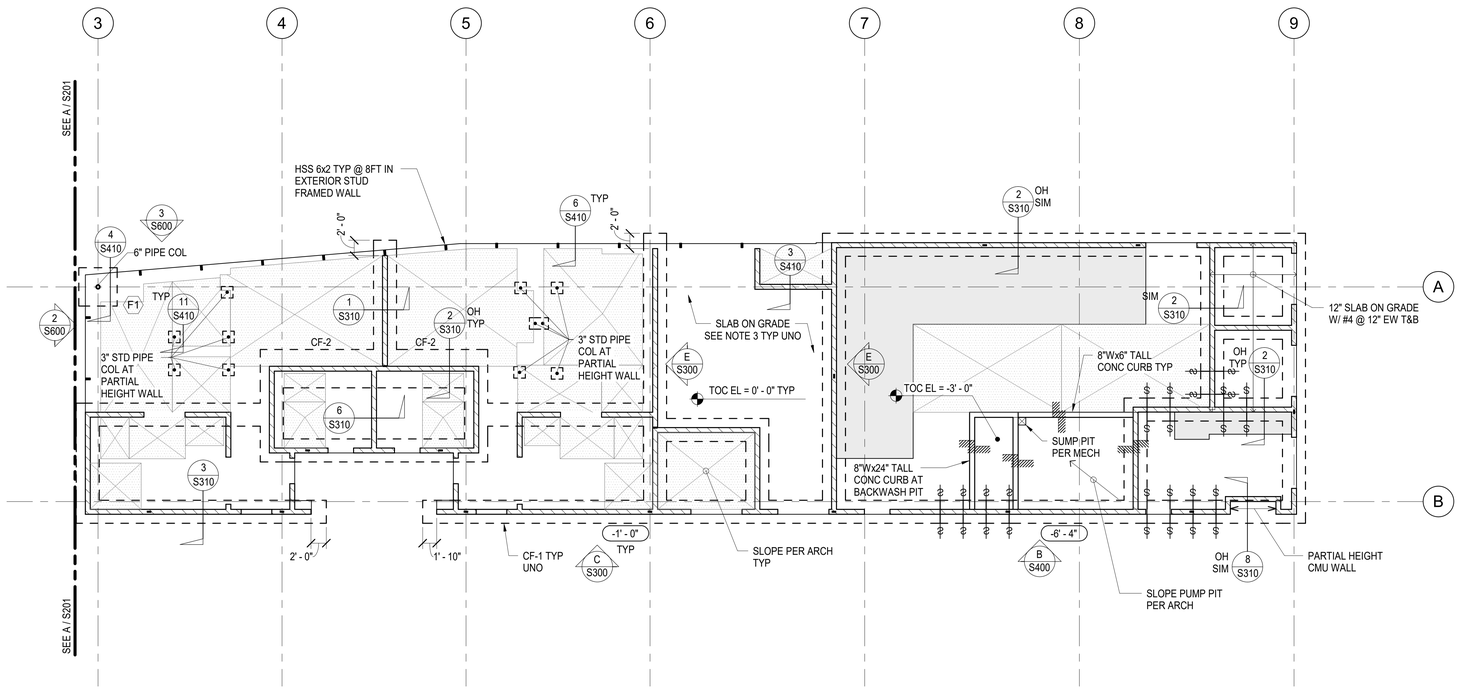
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

FOUNDATION PLAN - WING A

SHEET NUMBER:

S201



FOUNDATION PLAN - WING B

1/8" = 1'-0"

A

PLAN NOTES:

1. DATUMN: +0' - 0" = +38' - 4". VERIFY W/ ARCH
2. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
3. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S001 THRU S105
4. SLAB ON GRADE: 5" THICK WITH #5 @ 18" EACH WAY OVER TOP OF SUB-GRADE PER SOILS ENGINEER.
5. SEE GEOTECHNICAL REPORT FOR GROUND IMPROVMENT PLAN AND PERFORMANCE OBJECTIVES TO BE DESIGNED BY THE GENERAL CONTRACTOR'S SPECIALTY CONTRACTOR.
6. SEE ARCHITECTURAL DRAWINGS FOR LAYOUT OF CONCRETE CURBS. SEE DETAIL 4 / S102.

PLAN LEGEND:

TOC EL = +0' - 0" — INDICATES BASIC TOP OF CONCRETE SLAB ELEVATION. SEE ARCHITECTURAL DRAWING FOR EXACT ELEVATION / DRAINAGE (DATUMN: +0' - 0" = +38' - 4")

F1 — SPREAD FOOTING MARK. SEE SCHEDULE & 4 / S410 FOR INFORMATION

-1' - 0" — INDICATES TOP OF FOOTING OR GRADE BEAM ELEVATIONS (TYP EL: -1' - 0" FROM FINISHED FLOOR OR LOWEST ADJACENT GRADE, UNO)

CF-1 — CONTINUOUS FOOTING MARK SEE SCHEDULE FOR INFORMATION

8" THK STRUCTURAL MASONRY WALL FOR TYPICAL SECTIONS AND REINFORCMENT SEE S301 THRU S310

INDICATES CMU JOINT PER 4 / S103

STEP IN FOUNDATION PER 11 / S101

STEP IN SLAB PER 17 / S102

4" CONC EQUIPMENT PAD. SEE DETAIL 4 / S102 VERIFY LOCATION WITH ARCH DRAWINGS

INDICATES SLOPED SLAB DEPRESSION PER ARCH. SEE 17C / S102

SPREAD FOOTING SCHEDULE

MARK	SIZE			REINFORCEMENT
	LENGTH	WIDTH	THICKNESS	
F1	5' - 0"	5' - 0"	12"	(5) #5 BOT EA WAY
F2	4' - 0"	4' - 0"	12"	(4) #5 BOT EA WAY
F3	3' - 0"	3' - 0"	12"	(3) #5 BOT EA WAY

CONTINUOUS FOOTING SCHEDULE

MARK	SIZE		REINFORCEMENT
	WIDTH	THICKNESS	
CF-1	3' - 0"	12"	(1) #5 TOP LONGITUDINAL (3) #5 BOT LONGITUDINAL #5 @ 12" BOT TRANSVERSE
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P: 213-483-6490
J22001

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
GUTTMAN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

LOW VOLTAGE:
GUTTMAN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

FIRE AND LIFE SAFETY CONSULTANT:
GUTTMAN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

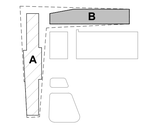
AQUATICS:
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
49 Geary St., Suite 230
San Francisco, CA 94108
P: 415 546-6033

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:

DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:

11 DECEMBER 2023

STAMP:

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APPROVED:

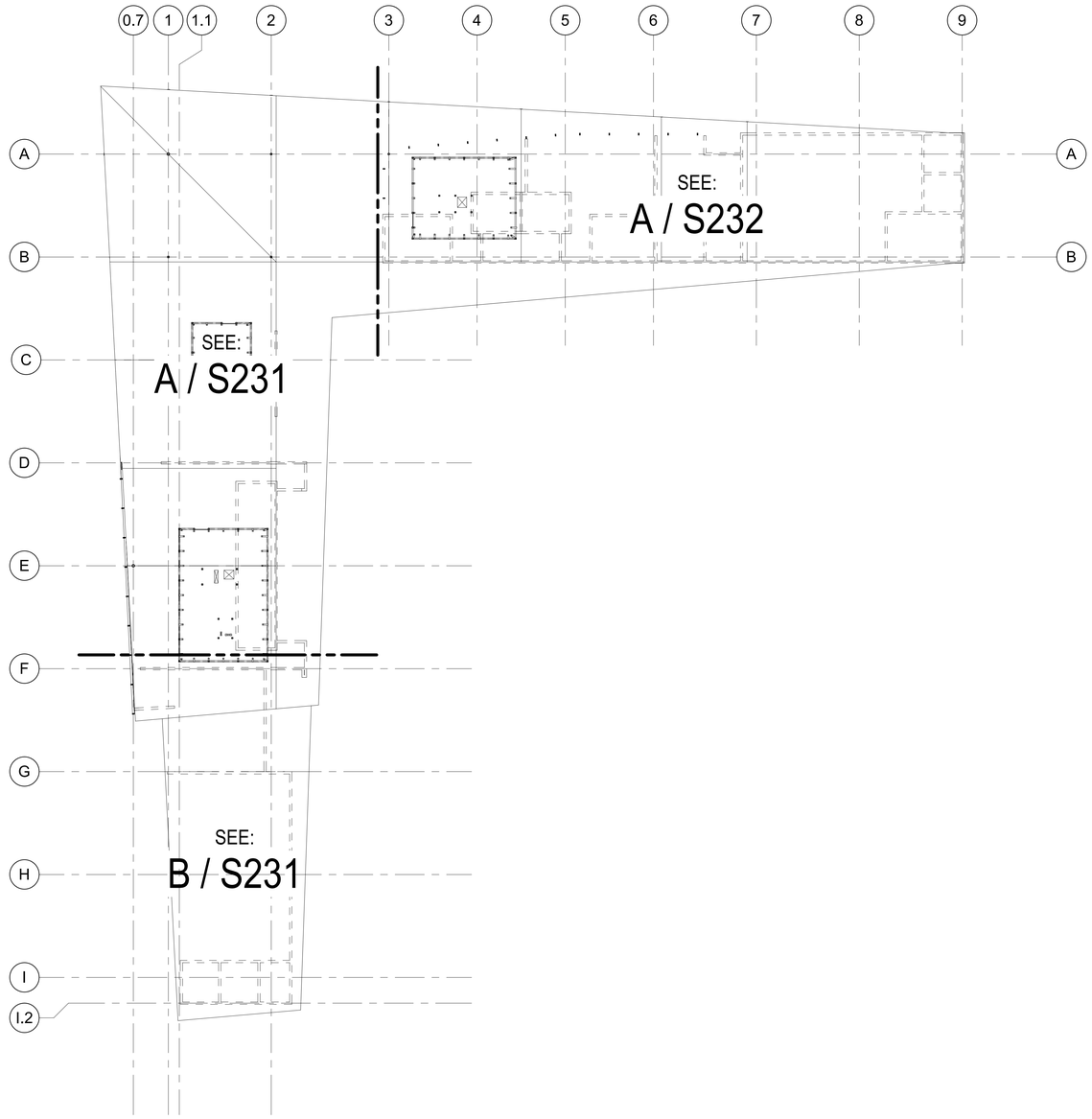
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

FOUNDATION PLAN - WING B

SHEET NUMBER:

S202



ROOF FRAMING PLAN - OVERALL
1/16" = 1'-0"

A

els
architecture+
urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD
PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
1901 Harrison St., Suite 1570
Oakland, CA 94612
P: 510-500-1823
950 South Grand Ave., 4th Floor
Los Angeles, CA 90015
P: 213-483-6490
J22051

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
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P: 415-665-4000

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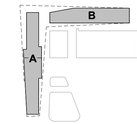
AQUATICS:
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
49 Geary St., Suite 230
San Francisco, CA 94108
P: 415 546-6033

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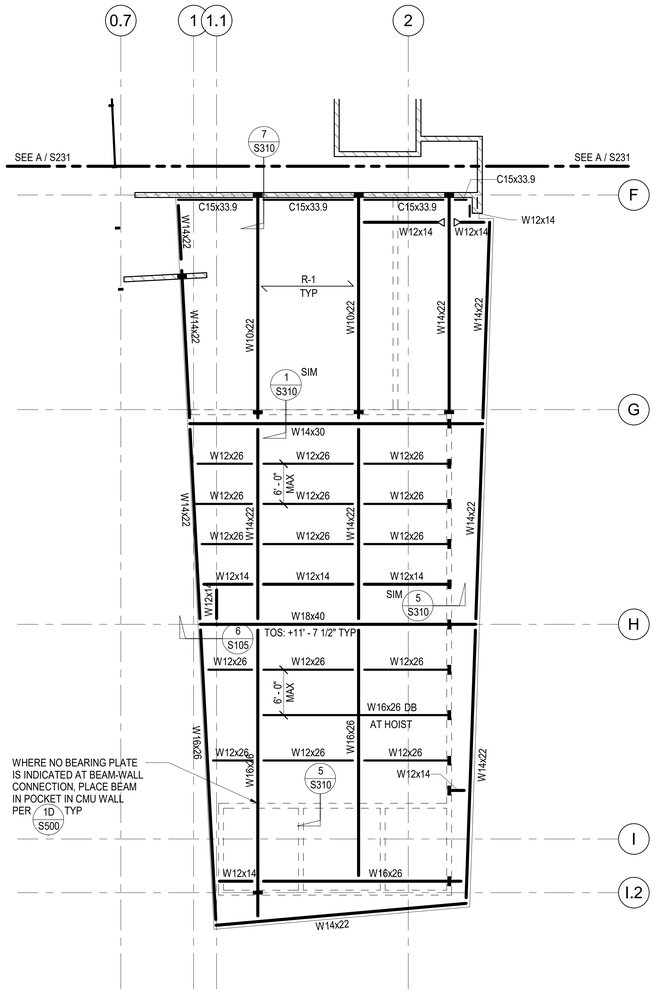
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

OVERALL ROOF FRAMING PLAN

SHEET NUMBER:

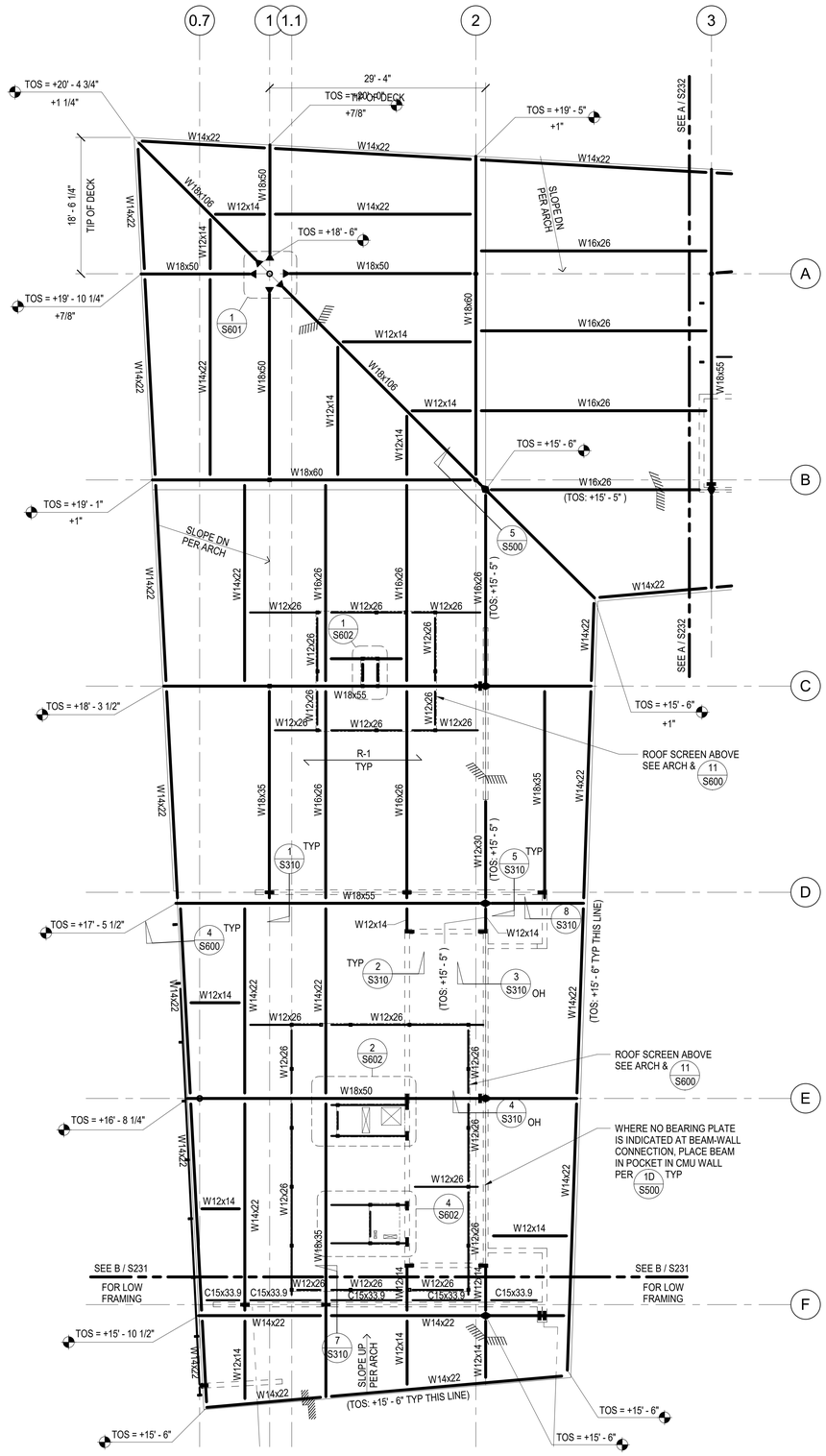
S230



ROOF FRAMING PLAN - WING A - LOW

1/8" = 1'-0"

B



ROOF FRAMING PLAN - WING A

1/8" = 1'-0"

A

PLAN NOTES:

1. REFER TO AND CHECK WITH ARCHITECTURAL DRAWING, DIMENSION FOR ROOF SLOPE. GUTTERS, VENTS, DRAINS, SADDLES, ETC,. AND DIMENSIONS NOT SHOWN. REFER TO AND CHECK WITH MECHANICAL DRAWING, FOR DUCTS OPENING, EQUIPMENT SIZE AND LOCATION ETC. LOCATE SUPPORTS MEMBER ACCORDINGLY.
2. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEET S001 THRU S105
3. BEAMS SHALL BE EQUALLY SPACED ACROSS Wx GIRDER, UNLESS SHOWN OR NOTED OTHERWISE ON PLANS.
4. LONGITUDINAL BEAMS AT SLOPED ROOF SHALL BE ROTATED TO SPLIT THE DIFFERENCE IN SLOPE OF THEIR SUPPORTING GIRDERS PER 16 / S500

PLAN LEGEND:

- R-1 — INDICATES DECK TYPE PER SCHEDULE. SEE 1 / S104
- <7"> — INDICATES CAMBER IN Wx BEAM (INCHES UPWARD) MEASURED AT MID-SPAN FOR BEAMS WITH SUPPORTS AT BOTH ENDS
- INDICATES BENT BEAM. SEE DETAIL 8 / S104
- INDICATES STEEL BEAM BEARING ON CMU WALL PER1C / S500
- TOS = +15' - 6" / +1" — INDICATES TOP OF STEEL BEAM UNO (DATUMN: +0' - 0" = +38' - 4")
- CONTRACTOR TO ERECT TIP OF CANTILEVERED GIRDER UPWARDS THE INDICATED VALUE (IN INCHES)

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD
PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
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950 South Grand Ave., 4th Floor
Los Angeles, CA 90015
P: 213-483-6490
J22051

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
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San Francisco, CA 94111
P: 415-665-4000

LOW VOLTAGE:
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FIRE AND LIFE SAFETY CONSULTANT:
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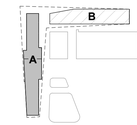
AQUATICS:
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
49 Geary St., Suite 230
San Francisco, CA 94108
P: 415 546-6033

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



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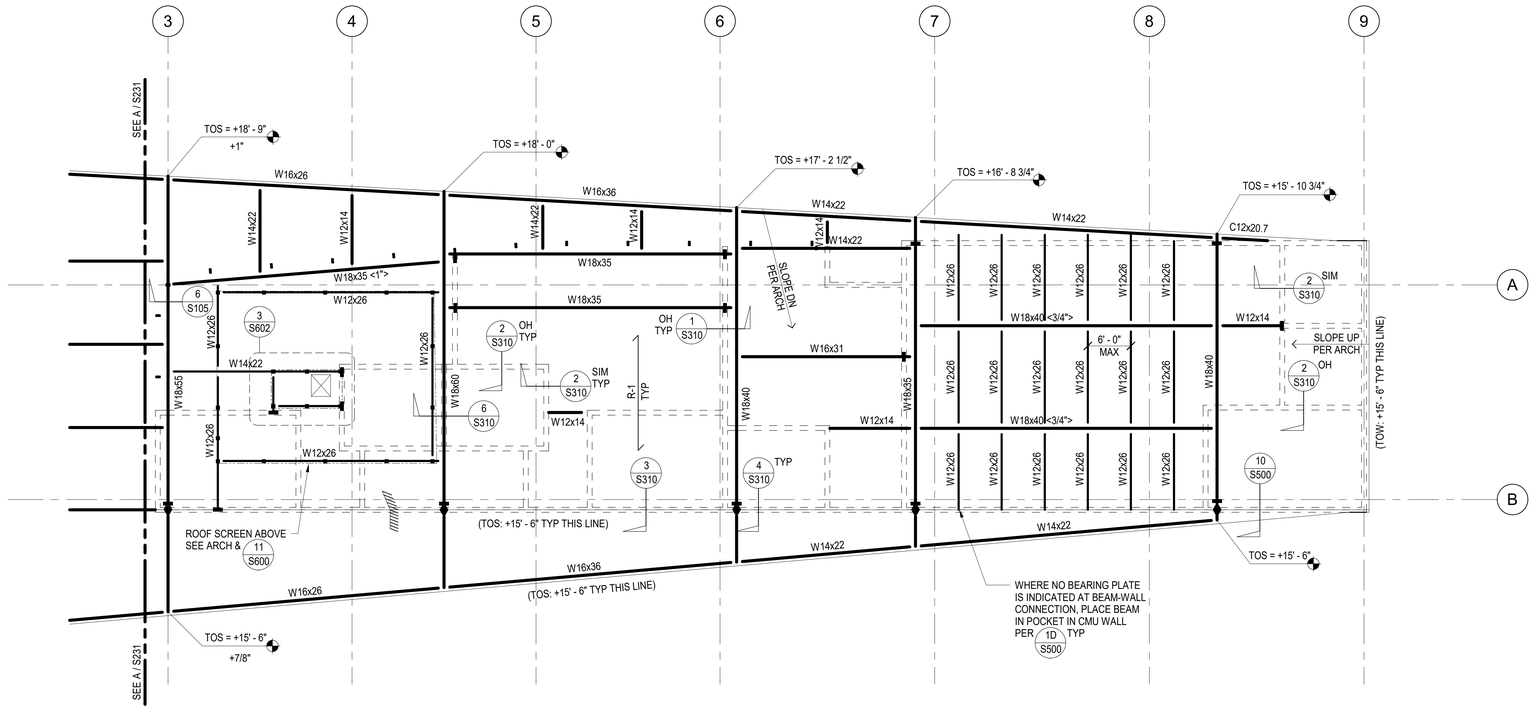
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP: 03-31-24

SHEET TITLE:

ROOF FRAMING PLAN - WING A

SHEET NUMBER:

S231



ROOF FRAMING PLAN - WING B

1/8" = 1'-0"

A

PLAN NOTES:

1. REFER TO AND CHECK WITH ARCHITECTURAL DRAWING, DIMENSION FOR ROOF SLOPE. GUTTERS, VENTS, DRAINS, SADDLES, ETC,. AND DIMENSIONS NOT SHOWN. REFER TO AND CHECK WITH MECHANICAL DRAWING, FOR DUCTS OPENING, EQUIPMENT SIZE AND LOCATION ETC. LOCATE SUPPORTS MEMBER ACCORDINGLY.
2. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEET S001 THRU S105
3. BEAMS SHALL BE EQUALLY SPACED ACROSS Wx GIRDER, UNLESS SHOWN OR NOTED OTHERWISE ON PLANS.
4. LONGITUDINAL BEAMS AT SLOPED ROOF SHALL BE ROTATED TO SPLIT THE DIFFERENCE IN SLOPE OF THEIR SUPPORTING GIRDERS PER 16 / S500

PLAN LEGEND:

R-1 — INDICATES DECK TYPE PER SCHEDULE. SEE 1 / S104

<7"> — INDICATES CAMBER IN Wx BEAM (INCHES UPWARD) MEASURED AT MID-SPAN FOR BEAMS WITH SUPPORTS AT BOTH ENDS

INDICATES BENT BEAM. SEE DETAIL 8 / S104

INDICATES STEEL BEAM BEARING ON CMU WALL PER1C / S500

TOS = +15' - 6" / +1" — INDICATES TOP OF STEEL BEAM UNO (DATUMN: +0' - 0" = +38' - 4")

CONTRACTOR TO ERECT TIP OF CANTILEVERED GIRDER UPWARDS THE INDICATED VALUE (IN INCHES)

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
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Berkeley, CA 94704
P: 510.549.2929

CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
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1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

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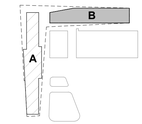
AQUATICS:
AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
49 Geary St., Suite 230
San Francisco, CA 94108
P: 415 546-6033

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
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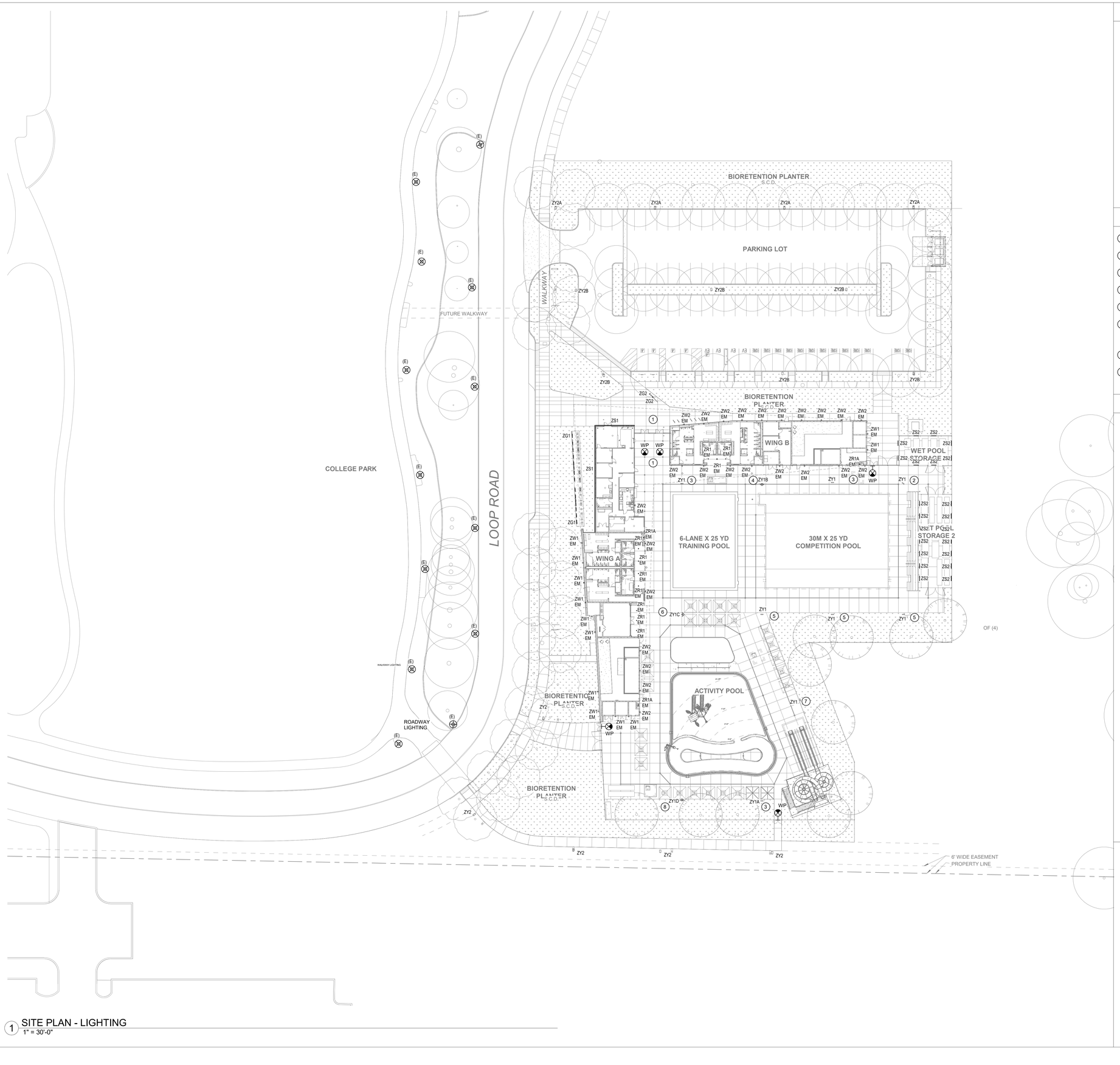
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

ROOF FRAMING PLAN - WING B

SHEET NUMBER:

S232



1 SITE PLAN - LIGHTING
1" = 30'-0"

N

GENERAL NOTES

SHEET NOTES

1. SEE SHEET E301 DETAIL #1 FOR ADDITIONAL EXTERIOR LIGHTING. AT ENTRY CANOPY
2. FIXTURE HEAD TO BE TILTED UP 15 DEGREES FROM HORIZONTAL.
3. FIXTURE HEAD TO BE TILTED UP 12 DEGREES FROM HORIZONTAL.
4. BOTH HEADS TO BE TILTED UP 12 DEGREES FROM HORIZONTAL.
5. FIXTURE HEAD TO BE TILTED UP 13 DEGREES FROM HORIZONTAL.
6. RIGHT HEAD (TOWARDS TRAINING POOL) TO BE TILTED 15 DEGREES AND LEFT HEAD (TOWARDS SPLASH PAD) TO BE TILTED 20 DEGREES FROM HORIZONTAL, RESPECTIVELY.
7. FIXTURE HEAD TO BE TILTED UP 18 DEGREES FROM HORIZONTAL.
8. RIGHT HEAD TO BE TILTED 18 DEGREES AND LEFT HEAD TO BE TILTED 15 DEGREES FROM HORIZONTAL, RESPECTIVELY.

KEYNOTES ◇#

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
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CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
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Oakland, CA 94612
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1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
GUTTMANN & BLAEVOET
1620 Montgomery St., Suite 230
San Francisco, CA 94111
P: 415-665-4000

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AQUATIC DESIGN GROUP
2226 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

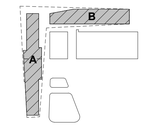
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



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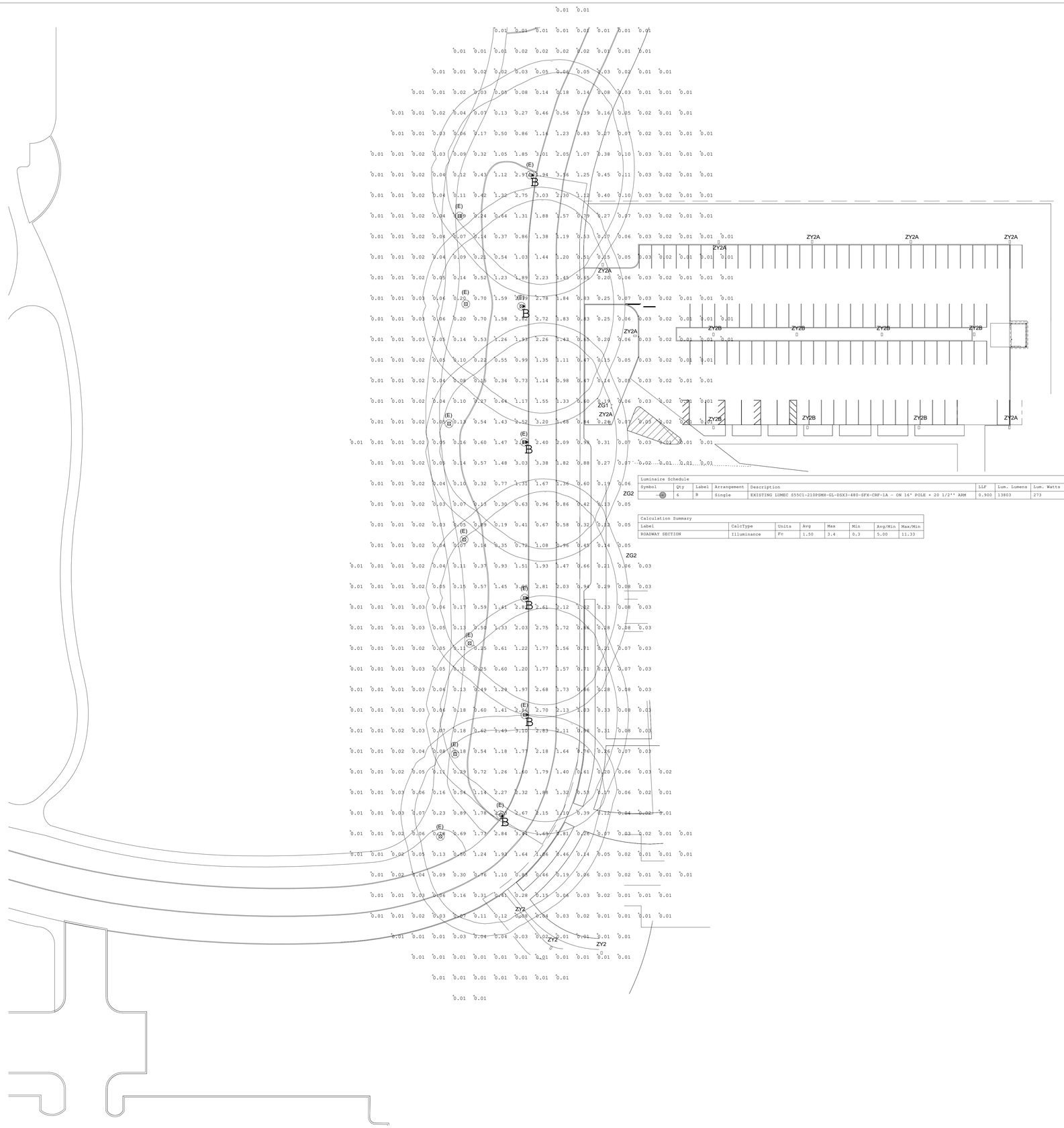
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
SITE PLAN - LIGHTING

SHEET NUMBER:
E101



Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Lum. Lumens	Lum. Watts	Tot. Watts
	6	B	Single	EXISTING LUMEC S55C1-210PSMH-GL-DSX3-480-SFX-CRF-1A - ON 16' POLE + 20 1/2'' ARM	0.900	13803	273	1638

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ROADWAY SECTION	Illuminance	Fc	1.50	3.4	0.3	5.00	11.33

PLAN NORTH

GENERAL NOTES

SHEET NOTES

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

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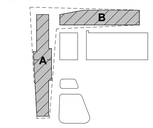
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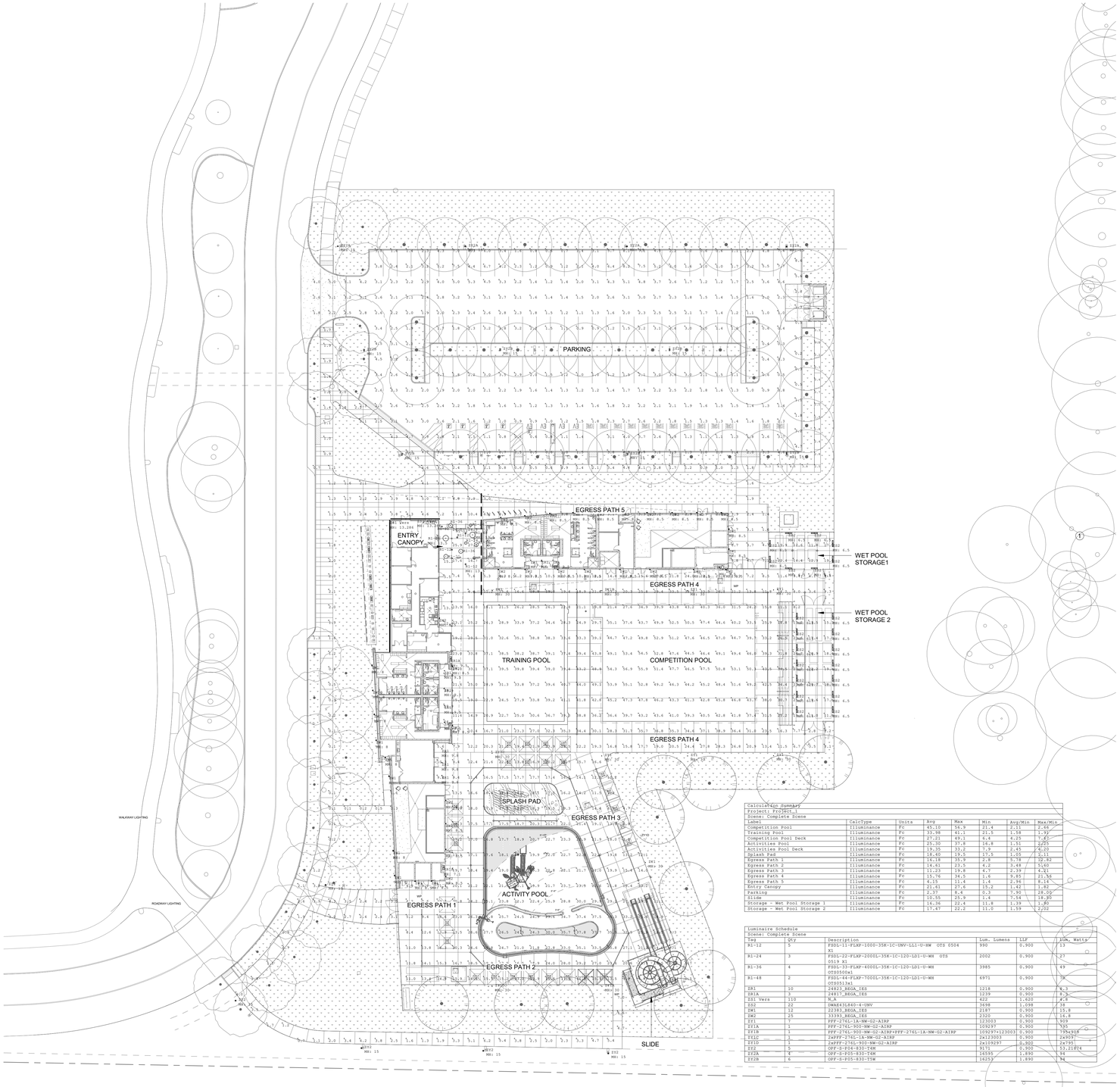
DATE

SHEET TITLE:

ROADWAY PHOTOMETRIC CALCULATION

SHEET NUMBER:

E309



Calculation Summary
Project: PROJECT_1
Scene: Complete Scene

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Competition Pool	Illuminance	Fc	45.10	56.9	21.4	2.11	2.66
Training Pool	Illuminance	Fc	33.98	41.1	21.5	1.58	1.91
Competition Pool Deck	Illuminance	Fc	27.21	49.1	6.4	4.25	7.67
Activities Pool	Illuminance	Fc	25.30	37.8	16.8	1.51	2.25
Activities Pool Deck	Illuminance	Fc	19.35	33.2	7.9	2.45	4.20
Splash Pad	Illuminance	Fc	18.40	19.5	17.5	1.05	1.11
Egress Path 1	Illuminance	Fc	16.18	35.9	2.8	5.78	12.82
Egress Path 2	Illuminance	Fc	14.41	23.5	4.2	3.48	5.60
Egress Path 3	Illuminance	Fc	11.23	19.8	4.7	2.39	4.21
Egress Path 4	Illuminance	Fc	15.76	34.5	1.4	8.85	21.36
Egress Path 5	Illuminance	Fc	6.15	11.4	1.4	2.96	8.14
Entry Canopy	Illuminance	Fc	21.61	27.4	15.2	1.42	1.82
Parking	Illuminance	Fc	2.37	8.6	0.3	7.90	28.00
Slide	Illuminance	Fc	10.55	25.9	1.4	7.54	18.50
Storage - Wet Pool Storage 1	Illuminance	Fc	16.36	22.4	11.8	1.39	1.90
Storage - Wet Pool Storage 2	Illuminance	Fc	17.47	22.2	11.0	1.59	2.02

Luminaire Schedule
Scene: Complete Scene

Tag	QTY	Description	Lum. Lumens	LLF	Lum. Watts
RL-12	5	FSDL-11-FLWP-1000-35K-IC-UNV-LL1-U-NW OTS 0504 R3	990	0.900	13
RL-24	3	FSDL-22-FLWP-2000L-35K-IC-120-LD1-U-WH OTS 0519 R3	2002	0.900	27
RL-36	4	FSDL-33-FLWP-4000L-35K-IC-120-LD1-U-WH OTS0500e1	3985	0.900	49
RL-48	2	FSDL-44-FLWP-7000L-35K-IC-120-LD1-U-WH OTS0513e1	6971	0.900	78
SR1	10	24823_REGA_IES	1218	0.900	8.3
SR1A	3	24837_REGA_IES	1239	0.900	8.3
SR1 Vers	110	N_A	422	1.620	4.8
SR2	22	SWARXLSLED-4-UNV	3498	1.098	38
SW1	12	23393_REGA_IES	2187	0.900	15.8
SW2	25	33393_REGA_IES	2320	0.900	16.8
SY1	1	PFP-276L-XA-NW-G2-AIRP	103003	0.900	1x5
SY1A	1	PFP-276L-900-NW-G2-AIRP	109297	0.900	905
SY1B	1	PFP-276L-900-NW-G2-AIRP+PFP-276L-1A-NW-G2-AIRP	109297+123003	0.900	905+905
SY1C	1	2xPFP-276L-1A-NW-G2-AIRP	2x123003	0.900	2x903
SY1D	1	2xPFP-276L-900-NW-G2-AIRP	2x109297	0.900	2x795
SY2	5	OPF-S-P04-830-T4M	9171	0.900	53.21@74
SY2A	4	OPF-S-P05-830-T4M	16535	1.890	94
SY2B	6	OPF-S-P05-830-T5W	16253	1.890	94

PLAN NORTH

GENERAL NOTES

SHEET NOTES

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

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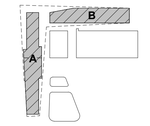
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TOPFLIGHT SPECS
268 Bush Street, #3000
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REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

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NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
SITE PLAN PHOTOMETRIC CALCULATION

SHEET NUMBER:
E310

INTERIOR LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	MANUFACTURER/ CATALOG #	LAMP	DRIVER	VOLTS	INPUT WATTS	NOTES
P1	PENDANT MOUNTED LINEAR BACK OF HOUSE	CEILING PENDANT	SIGNIFY SDS-4-2448L-8CST-UNV-DIM	LED 3,640 LUMENS 3500K, 80 CRI	0-10V	UNV	41.2 W	
P2-4	4' PENDANT MOUNTED LINEAR	CEILING PENDANT	FINELITE HP2-P-D-4-B-935-F-96LG-VOLTAGE-OPTIONS	LED 1,655 LUMENS 3500K, 90 CRI	0-10V	UNV	18.4 W	
P2A-8	8' PENDANT MOUNTED LINEAR WITH HIGHER OUTPUT	CEILING PENDANT	FINELITE HP2-P-D-8-H-935-F-96LG-VOLTAGE-OPTIONS	LED 5,000 LUMENS 3500K, 90 CRI	0-10V	UNV	56 W	
P2A-10	10' PENDANT MOUNTED LINEAR WITH HIGHER OUTPUT	CEILING PENDANT	FINELITE HP2-P-D-10-H-935-F-96LG-VOLTAGE-OPTIONS	LED 6,250 LUMENS 3500K, 90 CRI	0-10V	UNV	71 W	
P2A-12	12' PENDANT MOUNTED LINEAR WITH HIGHER OUTPUT	CEILING PENDANT	FINELITE HP2-P-D-12-H-935-F-96LG-VOLTAGE-OPTIONS	LED 7,503 LUMENS 3500K, 90 CRI	0-10V	UNV	84 W	
P3	PENDANT MOUNTED LINEAR IN LOCKER ROOMS (MOUNTED 10'-0" AFF)	CEILING PENDANT	XAL BASO1.5-PDT-COLOR-OP-35-C90-UNV-019V-0550LF-PATTERN-LENGTH PER DWG	LED 550 LM/FT 3500K, 90 CRI	0-10V	UNV	5.9 W/FT	
R1-12	12" DIA RECESSED CIRCLE	CEILING RECESSED	FOCAL POINT FSDL-11-FLXP-1000L-935K-1C-UNV-LD1-U-WH	LED 1000 LM 3500K, 90 CRI	0-10V	120-277	14 W	
R1-24	24" DIA RECESSED CIRCLE	CEILING RECESSED	FOCAL POINT FSDL-22-FLXP-2000L-935K-1C-UNV-LD1-U-WH	LED 2000 LM 3500K, 90 CRI	0-10V	120-277	27 W	
R1-36	36" DIA RECESSED CIRCLE	CEILING RECESSED	FOCAL POINT FSDL-33-FLXP-4000L-935K-1C-UNV-LD1-U-WH	LED 4000 LM 3500K, 90 CRI	0-10V	120-277	49 W	
R1-48	48" DIA RECESSED CIRCLE	CEILING RECESSED	FOCAL POINT FSDL-44-FLXP-7000L-935K-1C-UNV-LD1-U-WH	LED 7000 LM 3500K, 90 CRI	0-10V	120-277	70 W	
R2	RECESSSED 2X4	CEILING RECESSED	FOCAL POINT FAM2-24-ACR-5500L-935K-1C-UNV-LD1-G-OPTIONS-FINISH	LED 5500 LM 3500K, 90 CRI	0-10V	UNV	41.6 W	
R3	3.5" DIA RECESSED ROUND DOWNLIGHT	CEILING RECESSED	FOCAL POINT FLC3D-RO-SW-900L-UNV-LD1-IC-LC3-RO-90SW-900L-935K-90-DNT-FL1-FINISH	LED 900 LM 3500K, 90 CRI	0-10V	UNV	10 W	
R3A	3.5" DIA WET RATED RECESSED ROUND DOWNLIGHT	CEILING RECESSED	FOCAL POINT FLC3D-RO-SW-900L-VOLTAGE-LD1-IC-OD-LC3-RO-SW-900L-935K-90-DNT-FL1-WH-WP	LED 900 LM 3500K, 90 CRI	0-10V	UNV	10 W	
R4	RECESSED 2X2 REGRESSED	CEILING RECESSED	AXIS SKPA-22-3500-90-35-SO-RE-FINISH-UNV-DP-1-MOUNTING-OPTIONS	LED 3504 LM 3500K, 90 CRI	0-10V	UNV	33.06 W	
R5	3.5" DIA RECESSED ROUND DOWNLIGHT HIGHER OUTPUT	CEILING RECESSED	FOCAL POINT FLC3D-RO-SW-1500L-UNV-LD1-IC-LC3-RO-90SW-1500L-935K-90-DNS-WFL-FINISH	LED 1500 LM 3500K, 90 CRI	0-10V	UNV	17 W	
S1	36" DIA SURFACE MOUNTED CIRCLE	CEILING SURFACE	FOCAL POINT FSDL-33-CX-4000L-935-1C-UNV-L11-SM-FINISH	LED 4000 LM 3500K, 90 CRI	0-10V	UNV	48 W	
S2	SURFACE MOUNTED UNDER CABINET	UNDER CABINET SURFACE	HE WILLIAMS 15F-LENGTH-L12-8-35-DMA-OPTIONS-DIM	LED 600 LM/FT 3500K, 80 CRI	0-10V	UNV	5.9 W/FT	
S3	BACK OF HOUSE SURFACE MOUNTED LINEAR	CEILING SURFACE	AXIS ES3-48-1-45L35K-DCC-DV-PP-WW	LED 4,701 LM 3500K, 90 CRI	0-10V	UNV	49 W	
W1	WALL MOUNTED SCONCE	WALL SURFACE	VISA LIGHTING CV1700-L35K(L)-MVOLT-FINISH	LED 550 LM 3500K, 90 CRI	0-10V	UNV	7 W	
W2	WALL MOUNTED LINEAR	WALL SURFACE	XAL BASO2.5 -WAL-COLOR- OP-35K-C90-UNV-010V-0750LF-ST-144IN	LED 9,000 LM 3500K, 90 CRI	0-10V	UNV	88.2 W	

NOTES:
1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION, MOUNTING HEIGHT AND MOUNTING REQUIREMENTS OF ALL LUMINAIRES.
2. THE FINISH INDICATED ARE PRELIMINARY, COORDINATE WITH ARCHITECT FOR ALL LUMINAIRE'S FINAL COLOR FINISH SELECTED FROM MANUFACTURER'S STANDARD COLOR PALETTE PRIOR TO ORDERING OF FIXTURES.
3. ALL INTERIOR LUMINAIRES SHALL BE 3500K (KELVIN) TEMPERATURE AND 90 CRI UNLESS NOTED OTHERWISE.
4. PROVIDE COMPLETE MOUNTING ACCESSORIES, SUPPORT BRACKETS, CLIPS, ETC. AS APPLICABLE TO THE FINISH CEILING OR CEILING STRUCTURE AS REQUIRED.
5. PROVIDE ACCESSIBLE WIRING DISCONNECT TO FIXTURE AS REQUIRED.

EXTERIOR LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	MANUFACTURER/ CATALOG #	LAMP	DRIVER	VOLTS	INPUT WATTS	NOTES
ZG1	IN GRADE LINEAR ASYMMETRIC UPLIGHT FOR SIGN	IN GRADE	BEGA 77 843 K4	LED 3,258 LUMENS 4000K, 80 CRI	INTEGRAL	120-277	36.4 W	RGBW LED
ZG2	6" DIAMETER INGRADE ROUND LIGHT WITH HONEOMB LOUVER, ADJUSTABLE BEAM TO BE DETERMINED IN FIELD POST CONTSRUCTION.	GROUND	TARGETTI KPLM-41-ZM-L2-30-TRIM-INSTALLATION-INSTALLATION ACCESSORIES-1T1711	LED 610-1127 LUMENS 3000K, 80 CRI	INTEGRAL DIMMABLE DRIVER	UNV	14 W	AT THE BASE OF FLAGPOLE
ZR1	RECESSED DOWNLIGHT UNDER CANOPY WIDE BEAM	RECESSED DOWNLIGHT IN CANOPY	BEGA 24 823 K4	LED 1,181 LUMENS 4000K, 80 CRI	0-10V DIMMING DRIVER	277	8.3 W	
ZR1A	RECESSED DOWNLIGHT UNDER CANOPY NARROW BEAM	RECESSED DOWNLIGHT IN CANOPY	BEGA 24 817 K4	LED 1,194 LUMENS 4000K, 80 CRI	0-10V DIMMING DRIVER	277	8.3 W	
ZS1	LINEAR LIGHT WITH GRAZING OPTIC WITH Q-ANGLE MOUNTING BRACKET	SURFACE MOUNTED AT EAVE	QTRAN VERS-04-SW-5.0-40-WET-GZR-N/A-WIRE INPUT/OUTPUT-CONNECTOR/WIRE IN-CONNECTOR/WIRE OUT-WIRE COLOR-WIRE TYPE-MOUNTING-FINISH-LENGTH PER PLAN-Q, Q-ANGLE-X	LED 449 LM/FT 4000K, 98 CRI	0-10V DIMMING DRIVER	0-10V	5 W/FT	
ZS2	SURFACE MOUNTED LINEAR	SURFACE MOUNTED	SIGNIFY D-W-LENS-E-43L-840-4-UNV	LED 4,300 LUMENS 4000K, 80 CRI	0-10V DIMMING DRIVER	0-10V	38 W	
ZW1	WALL MOUNTED SCONCE DOWNLIGHT ONLY	WALL MOUNTED SCONCE	BEGA 22 383 K4	LED 2,187 LUMENS 4000K, 80 CRI	0-10V DIMMING DRIVER	0-10V	15.8 W	MOUNTED AT 8'-6" EXCEPT FOR WING A WEST WALL.
ZW2	WALL MOUNTED SCONCE UPLIGHT AND DOWNLIGHT WITH MODIFIED WATTAGE	WALL MOUNTED SCONCE	BEGA 33 393/FPRO (16.8W) K4	LED 2,320 LUMENS 4000K, 80 CRI	0-10V DIMMING DRIVER	0-10V	16.8 W	MOUNTED AT 8'-6" EXCEPT FOR WING A WEST WALL.
ZY1	30'-0" TALL POLE LIGHT WITH 5" DIA. STEEL POLE	POLE MOUNTED (30' HIGH POLE)	GARDCO POWERFORM PFF-276L-1A-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; POLE: SRA-STB-5-30-T2D4L-FINISH	LED 123,856 LUMENS 4000K, 70 CRI	INTEGRAL DIMMABLE	UNV	909 W	
ZY1A	30'-0" TALL POLE LIGHT WITH 5" DIA. STEEL POLE	POLE MOUNTED (30' HIGH POLE)	GARDCO POWERFORM PFF-276L-900-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; POLE: SRA-STB-5-30-T2D4L-FINISH	LED 109,217 LUMENS 4000K, 70CRI	INTEGRAL DIMMABLE	UNV	795 W	
ZY1B	DOUBLE HEAD 30'-0" TALL POLE LIGHTS WITH 5" DIA. STEEL POLE WITH TWIN SPOKES AT 90 DEG.	POLE MOUNTED (30' HIGH POLE)	GARDCO POWERFORM LEFT HEAD: PFF-276L-900-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; RIGHT HEAD: PFF-276L-1A-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; POLE: SRA-STB-5-30-T2D4L-FINISH; BULLHORN: SBRKT-RBH-L2-36-T2D4L-FINISH	LED LEFT HEAD: 109,217 LM RIGHT HEAD: 123,856 LM 4000K, 70CRI	0-10V DIMMING DRIVER	UNV	LEFT HEAD: 795 W RIGHT HEAD: 909 W	
ZY1C	DOUBLE HEAD 30'-0" TALL POLE LIGHTS WITH 5" DIA. STEEL POLE WITH TWIN SPOKES AT 90 DEG.	POLE MOUNTED (30' HIGH POLE)	GARDCO POWERFORM RIGHT HEAD: PFF-276L-1A-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; LEFT HEAD: PFF-276L-1A-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; POLE: SRA-STB-5-30-T2D4L-FINISH; BULLHORN: SBRKT-RBH-L2-36-T2D4L-FINISH	LED RIGHT HEAD: 123,856 LM LEFT HEAD: 123,856 LM 4000K, 70CRI	0-10V DIMMING DRIVER	277	RIGHT HEAD: 909 W LEFT HEAD: 909 W	
ZY1D	DOUBLE HEAD 30'-0" TALL POLE LIGHTS WITH 5" DIA. STEEL POLE WITH TWIN SPOKES AT 90 DEG.	POLE MOUNTED (30' HIGH POLE)	GARDCO POWERFORM RIGHT HEAD: PFF-276L-900-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; LEFT HEAD: PFF-276L-900-NW-G2-SF-AIRP-UNV-DD-FP1-OPTIONS-FINISH; POLE: SRA-STB-5-30-T2D4L-FINISH; BULLHORN: SBRKT-RBH-L2-36-T2D4L-FINISH	LED RIGHT HEAD: 109,217 LM LEFT HEAD: 109,217 LM 4000K, 70CRI	0-10V DIMMING DRIVER	277	RIGHT HEAD: 795 W LEFT HEAD: 795 W	
ZY2	15' POLE LIGHT TYPE 4 MEDIUM DISTRIBUTION LOW OUTPUT	POLE MOUNTED (15' HIGH POLE)	GARDCO OPTIFORM OPF-S-P04-840-T4M-AR1-UNV-OPTIONS-FINISH; SRA-BASE-4-125-15-D1-DT1-FINISH-OPTIONS	LED 9,171 LUMENS 4000K, 80CRI	0-10V DIMMING DRIVER	UNV	53 W	
ZY2A	SAME AS TYPE ZY2 EXCEPT WITH HIGHER OUTPUT	POLE MOUNTED (15' HIGH POLE)	GARDCO OPTIFORM OPF-S-P07-840-T4M-AR1-UNV-OPTIONS-FINISH; SRA-BASE-4-125-15-D1-DT1-FINISH-OPTIONS	LED 16,595 LUMENS 4000K, 80CRI	0-10V DIMMING DRIVER	UNV	94 W	
ZY2B	15' POLE LIGHT TYPE 5 WIDE DISTRIBUTION AND HIGHER OUTPUT	POLE MOUNTED (15' HIGH POLE)	GARDCO OPTIFORM OPF-S-P07-840-T5W-AR1-UNV-OPTIONS-FINISH; SRA-BASE-4-125-15-D1-DT1-FINISH-OPTIONS	LED 16,253 LUMENS 4000K, 80CRI	0-10V DIMMING DRIVER	UNV	94 W	

NOTES:
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3. ALL EXTERIOR LUMINAIRES SHALL BE 4000K (KELVIN) TEMPERATURE AND MIN. 70 CRI UNLESS NOTED OTHERWISE.
4. PROVIDE COMPLETE MOUNTING ACCESSORIES, SUPPORT BRACKETS, CLIPS, ETC. AS APPLICABLE TO THE FINISH CEILING OR CEILING STRUCTURE AS REQUIRED.
5. PROVIDE ACCESSIBLE WIRING DISCONNECT TO FIXTURE AS REQUIRED.

STANDARD SEQUENCE OF OPERATIONS

legrand / Watteredge

LIGHTING CONTROL SEQUENCE OF OPERATION

ROOM TYPE	OCC SENSOR 6				PHOTOCELL		DIMMING			TIME CLOCK			SWITCHES			SYSTEM					REMARKS
	AUTO ON	MANUAL ON/ AUTO OFF	PARTIAL OFF AT NORMAL HOURS	AUTO OFF AFTER HOURS (MAX 20MIN)	AUTO OFF @ TARGET FC	AUTOON @ TARGET FC	SET LEVEL TO 50 FC	CONTINUOUS	STEP[1]	MULTI-ZONE[2]	TIME ON[3]	TIME OFF[3]	ASTRONOMICAL TIME CLOCK	WALL SWITCH	DIMMER SWITCH	SCENE CONTROL	PLUG LOAD	NETWORK	STAND-ALONE	CURRENT MONITORING[4]	AUXILIARY RELAY	REMOTE SIGNAL CONTROL	DEMAND RESPONSE	
Commercial Bldg (> 10,000 sq ft)											6 AM	10 PM				•	•	•					•	Building SF is more than 10,000 SF. Demand Response is required. 19,664 SF
Areas w/ 1-2 lamp single luminaire (< 100 sq ft)	100%	20 min												•					•					Spaces with more than 100 sq ft will need either continuous dimming or 4 levels of step dimming, depending on lighting type.
Small Office (< 250 sq ft)	100%	20 min					•							•		•	•						•	Plug Load Required. Sensor required space. Partial On or Vacancy if space requires multilevel. Daylighting control if part of LEED credits.
Open Office Area	80%	20 min				•		•	•	•	6 AM	10 PM		•		•	•		•				•	Can be either occupancy sensor or time clock or both Plug Load Required
Electrical Room, Pool Equipment, Date and Mechanical rooms													•										•	ON/OFF switch only, no dimmers or sensors.
Janitor Closet	100%	20 min											•											
Maintenance workroom	80%	20 min				•		•	•		6 AM	10 PM		•		•	•		•				•	
Smaller Private Restrooms	100%	20 min												•										
Restrooms and Lockers (< 1000 sq ft)	100%	20 min						•	•					•			•							Restrooms are exempt from multi-level, but require bilevel 30-70%
Hallway	100%		50% 20 min	20 min				•	•					•			•							Full or Partial Off, and Off After Hour for commercial spaces. Shall be automatically activated from all design paths of egress.
Lobby and Reception	100%	20 min				•		•	•					•		•	•						•	Plug load required at reception area. Daylighting controls for dayilt zones only
Storage Room (< 100 sq ft)	100%	20 min											•						•					
Life Guard/First Aid, Concessions, Break room	100%	20 min						•						•		•	•						•	
Multi Purpose room	100%	20 min				•		•	•					•			•						•	Daylighting controls for dayilt zones only.
Pool Storage, Chlorine and Acid, Fire Riser, Dry Stor., Pool Mechanical Equipment	100%	20 min											•						•					
Exterior / Wall	100%		50% 20 min		•		•					•												Outdoor luminaires with bottoms ≤ 24' above ground need occupancy sensors. No more than 1.5/2KW lighting controlled together. Exception - with max. rated wattage of 75 watts.
Exterior / Non wall or pole mounted					•		•					•												
Exterior / Pole Lights	100%		50% 20 min		•		•					•												Outdoor pole mounted luminaires with bottoms ≤ 24' above ground need occupancy sensors. No more than 1.5/2KW lighting controlled together. Exception - with max. rated wattage of 75 watts.

FOOTNOTES:
1. Continuous dimming and step dimming are chosen based on light source type per Title 24 130.1A. If continuous dimming is not necessary per lighting source, then LMSW-103 will be provided with 50% for step dimming.
2. Multizone is shown chosen due to typical rooms. For example, if there is a primary daylight zone and a non-daylighting zone, then these zones must be separated. Therefore, an open office will need separated zones.
3. There are no Title 24 requirements for manual on and auto on. There are only requirements for partial off NH and auto off AH.
4. Daylighting is not necessary when areas do not include skylights or glazing > 24 sq ft or skylit+primary sidelit zone is less than 120W. Luminaires in or at least 50% within daylighting zones must be controlled.
5. Timeclock settings can be changed to have different time on/off settings. Typical schedules were added in chart above.
6. Scene control is not necessary per Title 24 as long as dimming provided is per lighting source standards. Scene control can be checked off by end user if needed.
7. Controlled plug load must be within 6 ft of uncontrolled receptacle where controlled plug loads are needed.

NOTES FOR EXTERIOR:
a. Exceptions: Signs, façade lighting, statutes, bridges, health or life safety lighting.
b. Luminaires that illuminate public right of way roads, sidewalks, and bikeways.
c. Exterior Wall: Outdoor luminaires with bottoms less than or equal to 24' above the ground need motion or other controls.
d. Outdoor lighting needs to be controlled by astronomical time clock and automatically shut off by photocell.

GENERAL NOTES:
I. Occupancy Sensor required spaces (Individual Offices <250sqft, Multipurpose <1000sqft, Classrooms, & Conference Rooms) that meet multilevel requirement (>100sqft and General Lighting over .5W/sqft) must be Vacancy or Partial On.
II. Hospitals and Correctional Facility Institutions are exempt from Title 24. This includes Hospitality Lobbies and Waiting rooms used for 365 24 hour operations.
III. Daylighting is not necessary when areas do not include skylights or glazing > 24 sq ft or skylit+primary sidelit zone is less than 120W. Luminaires in or at least 50% within daylighting zones must be controlled.
IV. Auto-tim and photocell are only applicable when not just on a time clock and has dimming capabilities.
V. Controlled plug load must be within 6 ft of uncontrolled receptacle where controlled plug loads are needed.
VI. Separate shut off control for each 5,000 sq ft
VII. Exit luminaire is not under general lighting and must be kept on 24 hours 365 days.
VIII. TARGET FC for daylighting is 150% design illuminance and lighting is to be reduced at least 65% power in nonresidential interior. TARGET FC for daylighting in a parking garage is 150% design illuminance and lights are to be turned off.
IX. Area control exceptions: malls, auditorium, industrial facilities, commercial centers. The person needs to be able to see the area that is being controlled. For example, a security guard should be able to see the control switch for the areas through a security camera when switching lights.

Based on S00

els architecture+ urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD PUBLIC WORKS
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REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
11 DECEMBER 2023

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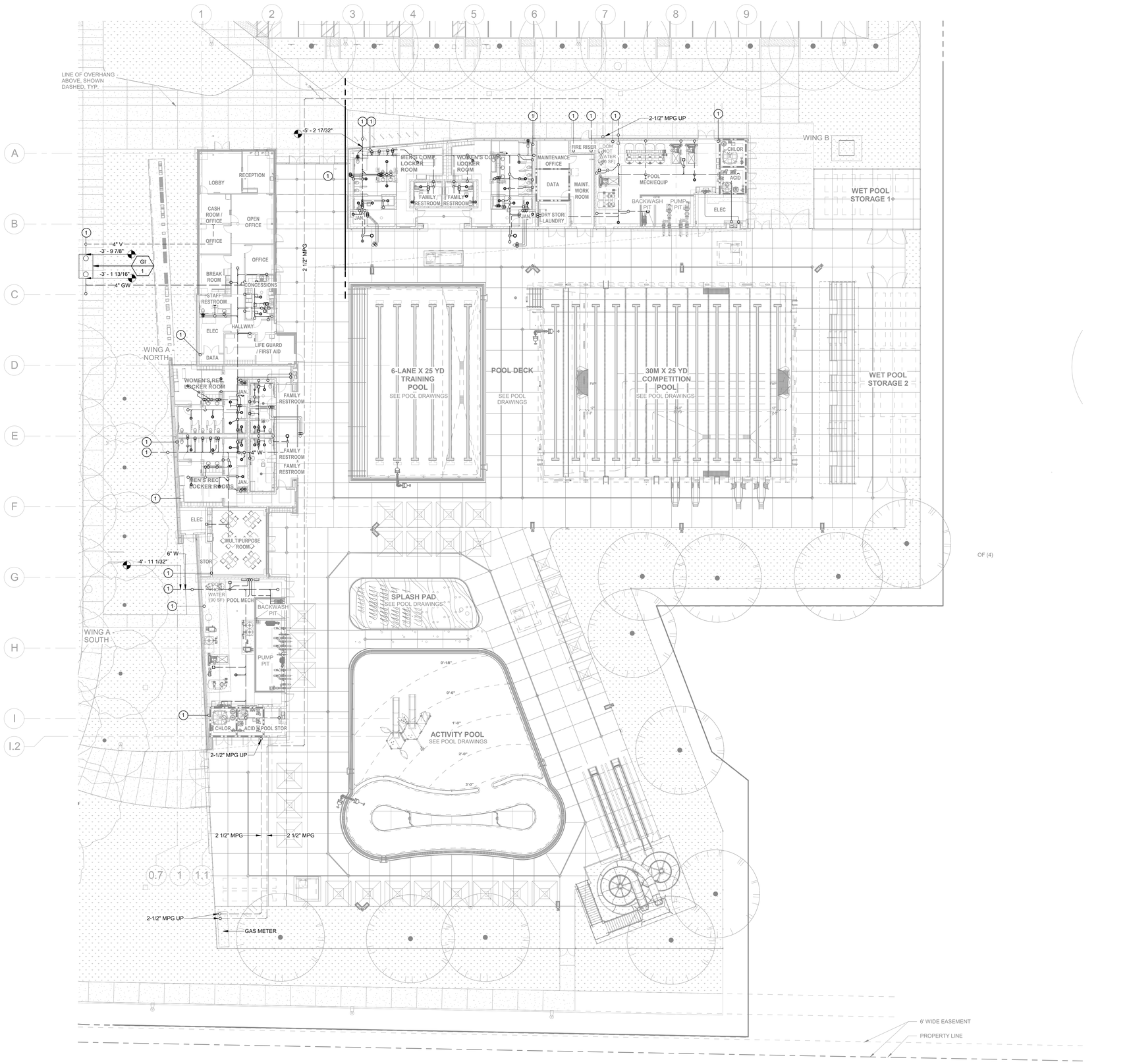
NOT FOR CONSTRUCTION

APPROVED:

DATE

SHEET TITLE:
LIGHTING FIXTURE SCHEDULE

SHEET NUMBER:
E601



1 LEVEL 1 - PLUMBING UNDERGROUND OVERALL
1/16" = 1'-0"

PLAN NORTH

OF (4)

GENERAL NOTES

SHEET NOTES

1 CONNECT TO STUB IN SITE UTILITY. FOR LOCATION OF CONNECTION SEE SITE UTILITY PACKAGE.

els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER
COLLEGE PARK
OXNARD, CA

PROJECT NUMBER:
202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
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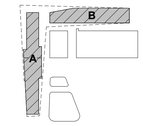
CODES / ACCESSIBILITY
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SPECIFICATIONS
TOPFLIGHT SPECS
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San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL-2

DATE:
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SHEET TITLE:
OVERALL FOUNDATION PLAN - PLUMBING

SHEET NUMBER:
P200UG

PUMP SCHEDULE ①②③

SYMBOL	SERVICE	TYPE	MODEL NUMBER	GPM	TOTAL DYN. HEAD (FT)	EFFICIENCY	MOTOR				REMARKS
							PHASE	HP	RPM	VOLTAGE	
RP-1,2,3,4	DOMESTIC WATER RECIRCULATING PUMP	IN-LINE PUMP TYPE	GRUNDFOS MAGNA3 32-100F STAINLESS STEEL	10	30	42	1	1/5	3000	115	

NOTES:

① ALL PRODUCTS ARE "OR EQUAL"
② PROVIDE VANDAL-RESISTANT PRODUCTS
③ INSTALL EQUIPTMENT PER MANUFATURER'S INSTRUCTIONS

MISCELLANEOUS EQUIPMENT SCHEDULE ①②

SYMBOL	LOCATION	DESCRIPTION	ITEM	ELECTRICAL REQUIREMENTS	REMARKS
GWH-1A GWH-2A	BUILDING A	GAS WATER HEATER	PVI 100 L 130A-GCML, 900,000 BTH INPUT, 1041@100F RECOVERY, 1 " GAS CONNECTION.	11 AMP 120 V/1 PH	SHIPPING WEIGHT: 910 LBS EMPTY WEIGHT: 750 LBS
GWH-1B GWH-2B	BUILDING B	GAS WATER HEATER	PVI 100 L 130A-GCML, 900,000 BTH INPUT, 1041@100F RECOVERY, 1 " GAS CONNECTION.	12 AMP 120 V/1 PH	SHIPPING WEIGHT: 910 LBS EMPTY WEIGHT: 750 LBS
GI-1	BUILDING A	GREASE INTERCEPTOR	JENSEN PRECAST MODEL MU-750-EE-G, 750 GALLONS, 114" L x 66" W x 58" H		
ET-1A	POOL MECH #132	EXPANSION TANK	AMTROL THRM-X-TROL #ST-30VC-DD, ASME, 16.5 GALLONS, 0.68 ACCEPTANCE FACTOR, 25" H, 15" DIAMETER.	--	③ OPERATING WEIGHT: 116 LBS
ET-1B	POOL MECH #166	EXPANSION TANK	AMTROL THRM-X-TROL #ST-30VC-DD, ASME, 16.5 GALLONS, 0.68 ACCEPTANCE FACTOR, 25" H, 15" DIAMETER.	--	③ OPERATING WEIGHT: 116 LBS
MV-1A,1B	POOL MECH #132, #166	THERMOSTATIC MASTER MIXING VALVE	WATTS POWERS INTELLISTATION JR. #LFIS150C00LP, DIGITAL MASTER MIXING VALVE PRE-PIPE, 2" INLET, 2-1/2" OUTLET, MIN. FLOW .5 GPM, 5PSI PRESSURE DROP @ 60GPM. ASSE 1017, LEAD FREE, NSF CERTIFIED.	115/230 V	①
TMV-1	TOILET ROOM AT LAV'S	TEMPERING MIXING VALVE	LEONARD MODEL 170-LF WITH INTEGRAL CHECK-STOPS, ROUGH BRONZE FINISH, MINIMUM FLOW 0.25 GPM MAXIMUM FLOW 4 GPM SET AT 110°F, LEAD FREE ASSE 1070 . PROVIDE WITH RECESS STAINLESS STEEL CABINET.		①
TMV-2	EMERGENCY SHOWER	TEMPERING MIXING VALVE	BRADLEY MODEL S19-2350(EFX120) THERMOSTATIC MIXING VALVE, WITH INTEGRAL CHECK-STOPS, ROUGH BRONZE FINISH, MINIMUM FLOW 3 GPM. MAXIMUM FLOW 50 GPM SET AT 80°F, LEAD FREE ASSE 1071, ANSI Z358.1-2014.		①
WHA		WATER HAMMER ARRESTOR	PPP, MAINTENANCE FREE, WITH BRASS PISTON.		①
TP-1		TRAP PRIMER VALVE	MIFAB MODEL #M-500, P1-500, WITH 4 PORTS DISTRIBUTION UNIT.		①
TP-2	MECH, FIRE RM	ELECTRONIC TRAP PRIMER VALVE	MIFAB MODEL #MI-300-DU, ELECTRONIC TRAP SEAL PRIMER WITH AIR GAP DISTRIBUTION UNIT AND CONTROL PANEL.		①
WM-1	POOL MECH #132, #166	WATER METER			①

NOTES:
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WING A

HOT AND COLD WATER LOAD CALCULATIONS APPENDIX A

APPLIANCES, APPURTENANCES, or FIXTURES 2022 CPC TABLE A 103.1 2011 ASHRAE CHAPTER 49 TABLE 10	FIXTURE LABEL	WATER SUPPLY FIXTURE UNITS (WSFU)	QUANTITY	MAIN SUPPLY TOTAL COLD WATER 100% (WSFU)	BRANCH COLD WATER 100% (WSFU)	BRANCH HOT WATER 100% (WSFU)
LAVATORY, PRIVATE	LV-2	1.0	5	5.0	5.0	5.0
LAVATORY, PUBLIC	LV-1	1.0	6	6.0	6.0	6.0
KITCHEN SINK, DOMESTIC, PUBLIC	SK-1	1.5	3	4.5	4.5	4.5
SERVICE OR MOP BASIN SINK, PUBLIC	MS-1	3.0	1	3.0	3.0	3.0
SHOWER PER HEAD, PRIVATE	SH-2	2.0	4	8.0	8.0	8.0
SHOWER PER HEAD, PUBLIC	SH-1,2	2.0	4	8.0	8.0	8.0
SHOWER PER HEAD, PUBLIC	SH-3	2.0	4	8.0	8.0	8.0
DRINKING FOUNTAIN OR WATERCOOLER, PUBLIC	DF-1	0.5	3	1.5	1.5	
HOSE BIBB, PUBLIC	HB-1,2,3	2.5	1	2.5	2.5	
HOSE BIBB, EACH ADDITIONAL, PUBLIC	HB-1,2,3	1.0	5	5.0	5.0	
DISHWASHER		1.5	1	1.5		1.5
URINAL, 1.0 GPF, PUBLIC	UR-1,2	4.0	5	20.0	20.0	
WATER CLOSET, 1.6 GPF FLUSHOMETER VALVE, PRIVATE	WC-2	5.0	5	25.0	25.0	
WATER CLOSET, 1.6 GPF FLUSHOMETER VALVE, PUBLIC	WC-1,2	5.0	7	35.0	35.0	

APPENDIX A

TOTAL WATER WSFU	133.00	131.50	44.00
WATER DEMAND GPM	76.25	75.88	26.00
ADDITIONAL GPM		-	-
TOTAL WATER DEMAND GPM	76.25	75.88	26.00
PIPE MATERIAL	COPPER TYPE K	COPPER TYPE L	COPPER TYPE L
VELOCITY FT/S	3.69	3.58	2.70
PRESSURE LOSS (psi/100 ft)	0.82	0.77	0.72
R/C/H WATER PIPE SIZE (in)	3	3	2

WING B

HOT AND COLD WATER LOAD CALCULATIONS APPENDIX A

APPLIANCES, APPURTENANCES, or FIXTURES 2022 CPC TABLE A 103.1 2011 ASHRAE CHAPTER 49 TABLE 10	FIXTURE LABEL	WATER SUPPLY FIXTURE UNITS (WSFU)	QUANTITY	MAIN SUPPLY TOTAL COLD WATER 100% (WSFU)	BRANCH COLD WATER 100% (WSFU)	BRANCH HOT WATER 100% (WSFU)
LAVATORY, PRIVATE	LV-2	1.0	2	2.0	2.0	2.0
LAVATORY, PUBLIC	LV-1	1.0	6	6.0	6.0	6.0
SERVICE OR MOP BASIN SINK, PUBLIC	MS-1	3.0	1	3.0	3.0	3.0
SHOWER PER HEAD, PRIVATE	SH-2	2.0	2	4.0	4.0	4.0
SHOWER PER HEAD, PUBLIC	SH-1,2	2.0	4	8.0	8.0	8.0
SHOWER PER HEAD, PUBLIC	SH-3	2.0	16	32.0	32.0	32.0
CLOTHES WASHER, PUBLIC		4.0	2	8.0	8.0	8.0
DRINKING FOUNTAIN OR WATERCOOLER, PUBLIC	DF-1	0.5	2	1.0	1.0	
HOSE BIBB, PUBLIC	HB-1,2,3	2.5	1	2.5	2.5	
HOSE BIBB, EACH ADDITIONAL, PUBLIC	HB-1,2,3	1.0	5	5.0	5.0	
URINAL, 1.0 GPF, PUBLIC	UR-1,2	4.0	5	20.0	20.0	
WATER CLOSET, 1.6 GPF FLUSHOMETER VALVE, PRIVATE	WC-2	5.0	2	10.0	10.0	
WATER CLOSET, 1.6 GPF FLUSHOMETER VALVE, PUBLIC	WC-1,2	5.0	8	40.0	40.0	

APPENDIX A

TOTAL WATER WSFU	141.50	141.50	63.00
WATER DEMAND GPM	78.38	78.38	34.00
ADDITIONAL GPM		-	-
TOTAL WATER DEMAND GPM	78.38	78.38	34.00
PIPE MATERIAL	COPPER TYPE K	COPPER TYPE L	COPPER TYPE L
VELOCITY FT/S	3.79	3.69	3.53
PRESSURE LOSS (psi/100 ft)	0.87	0.81	1.18
R/C/H WATER PIPE SIZE (in)	3	3	2

NATURAL GAS DEMAND (MBH)

WING A	PB-1A POOL ACIVITY HEATER	2,000
	PB-2A POOL SPLASH PAD HEATER	400
	PB-3A POOL SLIDE HEATER	400
	GWH-1A - DOMESTIC WATER HEATER	900
	GWH-2A - DOMESTIC WATER HEATER	900
	AC-1 - SPACE HEATING	160
	AC-3 - HEATING	64
	TOTAL WING A	**4824**
WING B	PB-1A POOL COMPETITION HEATER	2,000
	PB-1B POOL COMPETITION HEATER	2,000
	PB-3B POOL TRAINING HEATER	1,500
	CLOTHES DRYER	35
	GWH-1B - DOMESTIC WATER HEATER	900
	GWH-2B - DOMESTIC WATER HEATER	900
	AC-2 - SPACE HEATING	160
	TOTAL WING B	**7,495**
TOTAL WING A & B		**12,319**

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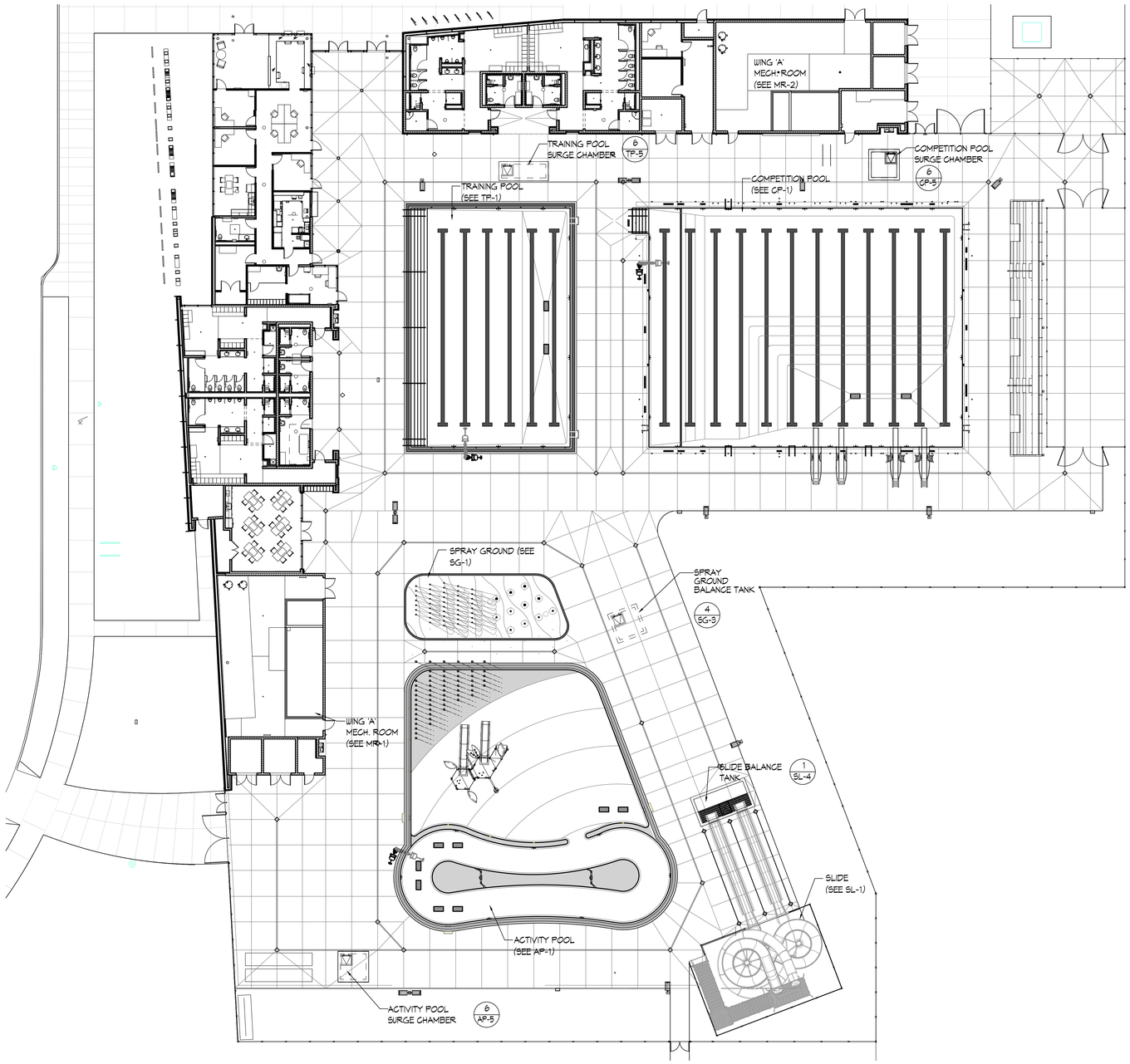
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APPROVED:

DATE

SHEET TITLE:
SCHEDULES

SHEET NUMBER:
P502



COMPETITION POOL DATA

SURFACE AREA	=	7,431 SQ. FT.
PERIMETER	=	357 FT.
DEPTH	=	3'-6" TO 12'-3"
VOLUME	=	451,389 GAL.
6 HR TURNOVER	=	1,254 GPM

TRAINING POOL DATA

SURFACE AREA	=	3,750 SQ. FT.
PERIMETER	=	250 FT.
DEPTH	=	3'-6" TO 5'-0"
VOLUME	=	112,096 GAL.
3 HR TURNOVER	=	623 GPM

ACTIVITY POOL DATA

SURFACE AREA	=	5,563 SQ. FT.
PERIMETER	=	434 FT.
DEPTH	=	0'-0" TO 3'-0"
VOLUME	=	74,665 GALLONS
4 HR TURNOVER	=	311 GPM

SPRAY GROUND DATA

SURFACE AREA	=	950 SQ. FT.
PERIMETER	=	122 FT.
VOLUME	=	4,000 GALLONS
30 MIN. TURNOVER	=	133 GPM

SLIDE DATA

SLIDE LENGTH:

SLIDE A: 118.75 FT.
(CLOSED FLUME BODY SLIDE)

SLIDE B: 174.58 FT.
(OPEN FLUME BODY SLIDE)

SLIDE HEIGHT:

SLIDE A & B: 19.83 FT.

SLIDE TOWER HEIGHT:

TO PLATFORM: 19.83 FT.

1 **OVERALL POOL AREA LAYOUT** 1/16" = 1'-0"

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COLLEGE PARK

OXNARD, CA

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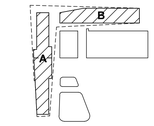
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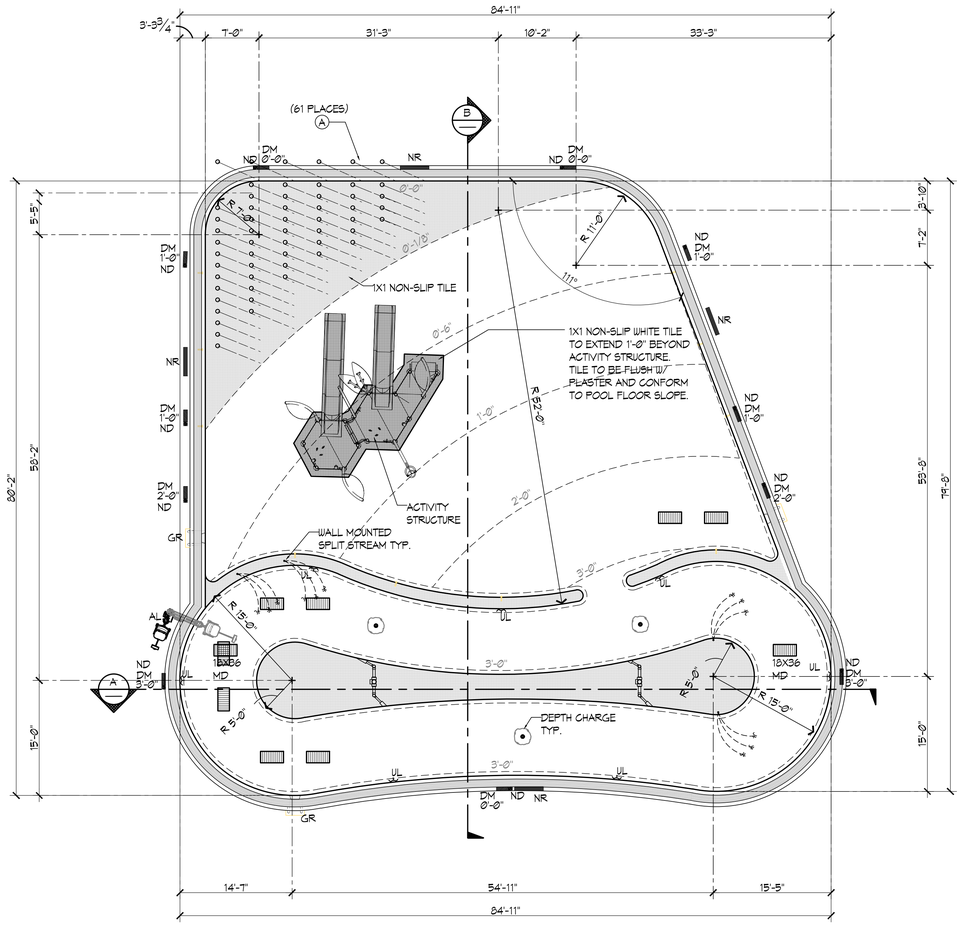
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

OVERALL POOL LAYOUT

SHEET NUMBER:

OP-1



1 **ACTIVITY POOL LAYOUT PLAN** 1/8" = 1'-0"

ACTIVITY POOL DATA

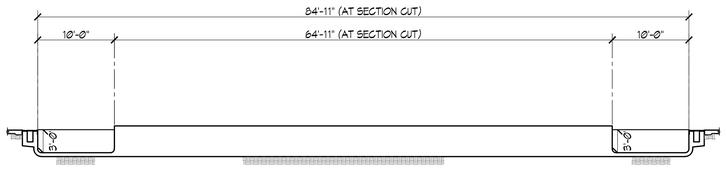
SURFACE AREA	=	5,563 SQ. FT.
PERIMETER	=	434 FT.
DEPTH	=	0'-0" TO 3'-0"
VOLUME	=	74,665 GALLONS
4 HR TURNOVER	=	311 GPM

LEGEND

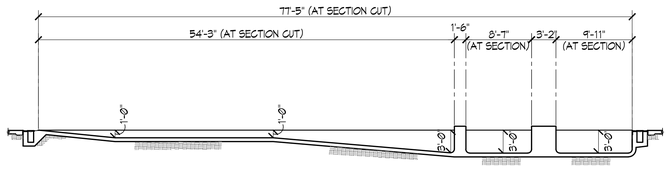
MD	=	MAIN DRAIN	3 CP-6
GR	=	GRABRAIL	1 CP-6
DM	=	DEPTH MARKER	5 CP-6
NR	=	'NO RUNNING'	6 CP-6
ND	=	'NO DIVING'	6 CP-6, 7 CP-6
UL	=	UNDERWATER LIGHT	6 CP-6
AL	=	ACCESSIBLE LIFT	1 CP-6

PRODUCT LEGEND

	PRODUCT CODE	QTY	TOTAL FLOW	FEATURE HEIGHT	DETAIL
A	DECK LEVEL 1" STREAM JET 'CRYSTAL FOUNTAINS' #UMD100	61	305 GPM	4 FT	1 SG-3
B	WATER PLAY STRUCTURE 'SPLASHTACULAR' A-4	10	384 GPM	22 FT	1 AP-4



A **ACTIVITY POOL SECTION VIEW** 1/8" = 1'-0"



B **ACTIVITY POOL SECTION VIEW** 1/8" = 1'-0"

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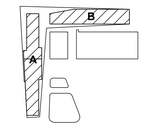
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SHEET TITLE:

ACTIVITY POOL LAYOUT PLAN

SHEET NUMBER:

AP-1

PRODUCT LEGEND

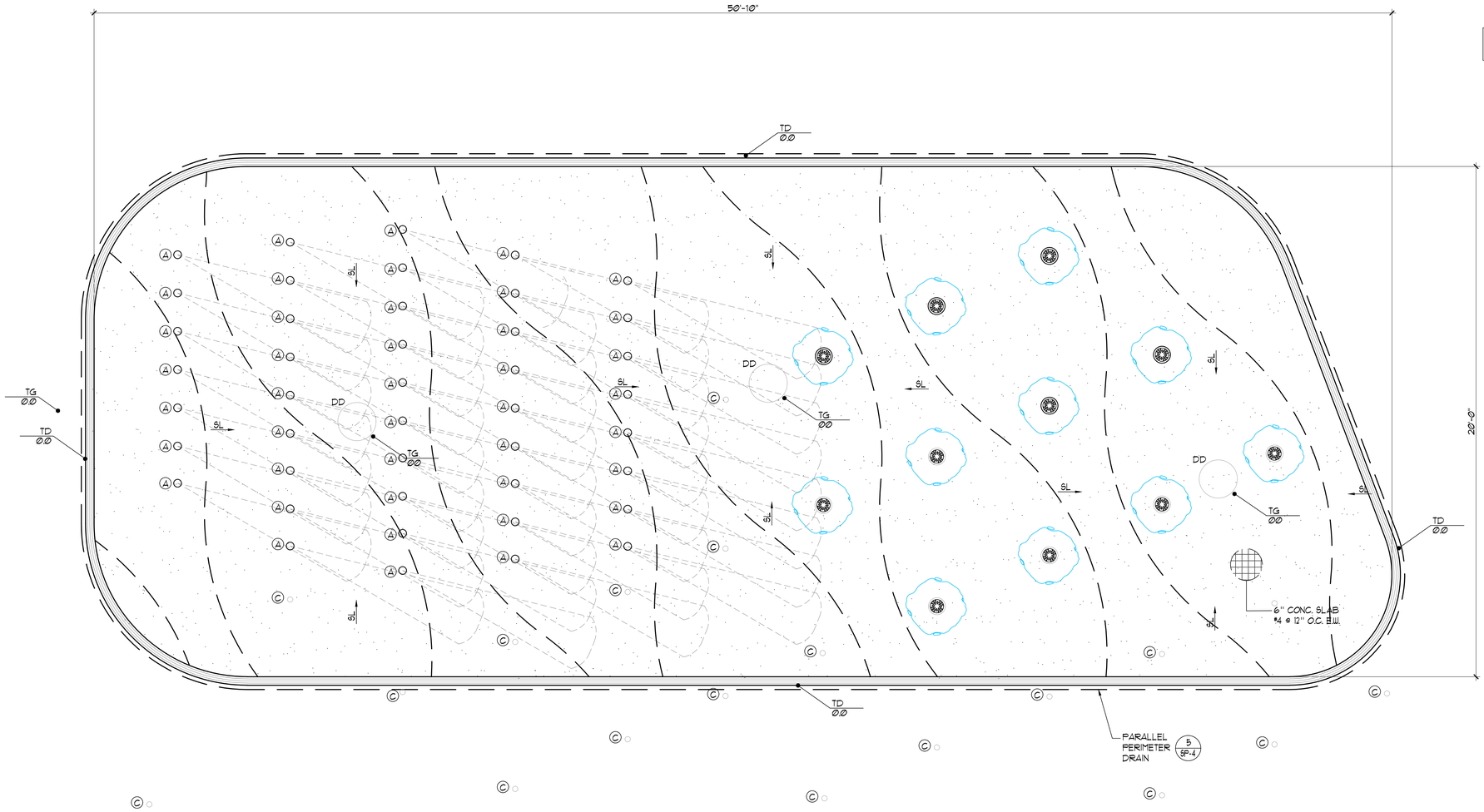
	PRODUCT CODE	QTY	TOTAL FLOW	FEATURE HEIGHT	DETAIL
Ⓐ	DECK LEVEL TRI-STREAM #UMD115 CRYSTAL FOUNTAINS	41	205 GPM	4 FT	1 / SG-3
Ⓑ	COLUMN JET #NLC-075 CRYSTAL FOUNTAINS	11	154 GPM	4 FT	1 / SG-3
Ⓒ	BLANK PLATE NO ORIFICE CRYSTAL FOUNTAINS	19	-	-	

SPRAY GROUND DATA

SURFACE AREA	=	950 SQ. FT.
VOLUME	=	4,000 GAL.
30 MIN. TURNOVER	=	133 GPM

LEGEND

- — — EJ — — = EXPANSION JOINT — 5A4C / SG-4
- ——— CJ ——— = CONTROL JOINT — 3B / SG-4
- SL = SLOPE DIRECTION 2% MAX
- TG = TOP OF GRATE
- TD = TOP OF DECK
- SGDD = SPRAY GROUND DECK DRAIN — 5 / SG-4
- REF = REFERENCE ELEVATION (COORDINATE WITH SITE GRADES)
- = CONCRETE DECK W/ MEDIUM BROOM NON-SLIP FINISH



NORTH

B

SPRAY GROUND LAYOUT ½" = 1'-Ø"

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PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER: **202210**

CLIENT:

CITY OF OXNARD PUBLIC WORKS

305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
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2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
1901 Harrison St., Suite 1570
Oakland, CA 94612
P: 510-500-1823
950 South Grand Ave., 4th Floor
Los Angeles, CA 90015
P: 213-483-6490

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
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1620 Montgomery St., Suite 230
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P: 415-665-4000

FIRE ALARM, SECURITY, TELECOM, A/V
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2226 Faraday Avenue
Carlsbad, CA 92008

FOOD SERVICE
MULLER DESIGN
1564 Deseret Drive
Minden, NV 89423
P: 775-782-1110

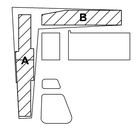
CODES / ACCESSIBILITY
THE PREVIEW GROUP
2765 Prince Street
Berkeley, CA 94705
P: 510-547-7748

SPECIFICATIONS
TOPFLIGHT SPECS
268 Bush Street, #3000
San Francisco, CA 94104
P: 415 335-3940

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL 2

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11 DECEMBER 2023

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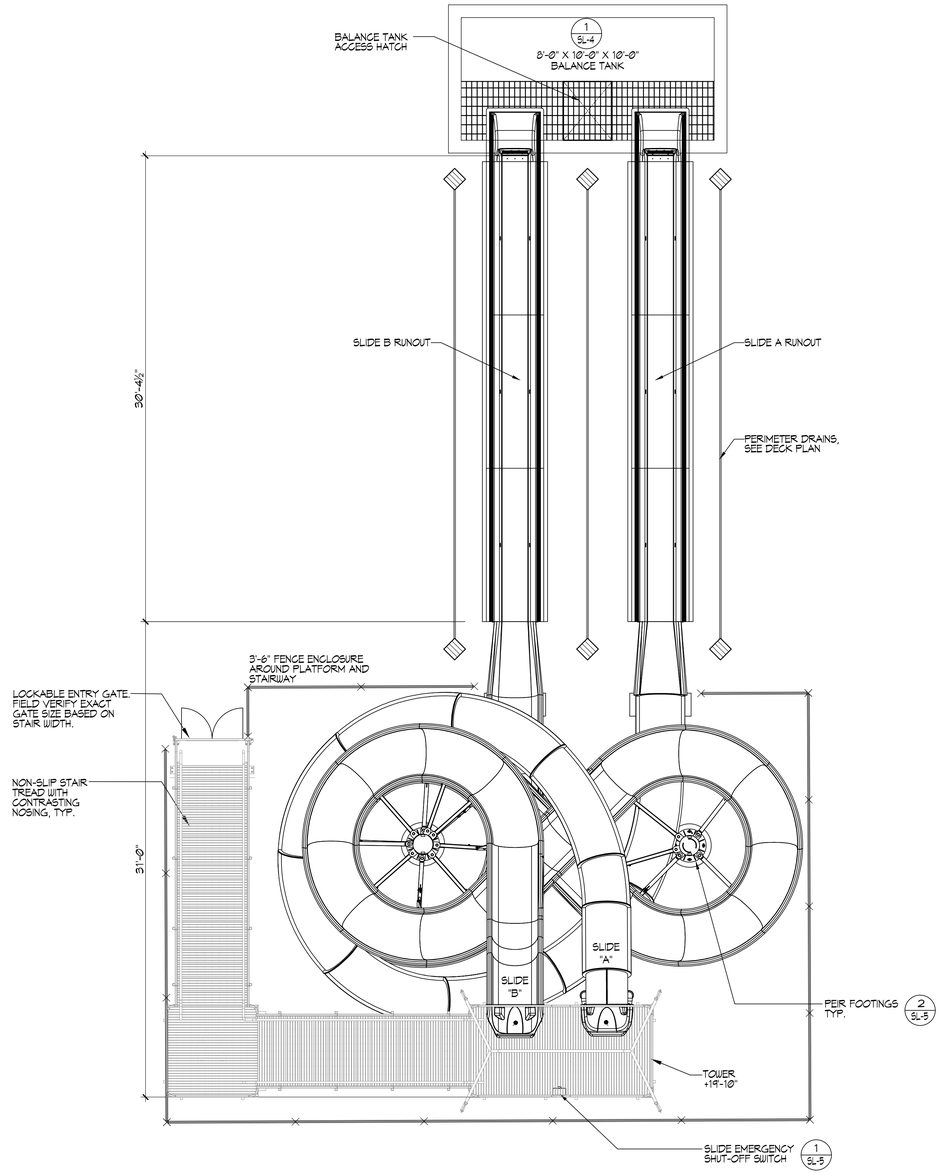
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

SPRAY GROUND LAYOUT

SHEET NUMBER:

SG-1



SLIDE DATA

SLIDE LENGTH:	SLIDE HEIGHT:
SLIDE A: 118.75 FT. (CLOSED FLUME BODY SLIDE)	SLIDE A & B: 19.83 FT.
SLIDE B: 174.59 FT. (OPEN FLUME BODY SLIDE)	SLIDE TOWER HEIGHT: TO PLATFORM: 19.83 FT.

GENERAL NOTES

1. ALL PIPES INTO SLIDE SUMPS SHALL EXTEND A MIN. 6" FROM SIDEWALL TO ALLOW FOR CAPPING OF PIPING FOR WINTERIZATION PROCEDURES. DURING WINTER THE PIPING TO BALANCE TANK SHALL BE CAPPED AND 4" DRAIN DOWN PIPING UNCAPPED. VISA VERSA DURING ON SEASON USAGE.

2. REFER TO VORTEX PLANS FOR SLIDES, SUPPORTS AND TOWER, FOOTINGS AND REINFORCEMENT TYP.

DOSH REQUIREMENTS

DESIGN OF SLIDE AND SLIDE TOWER BY SLIDE MANUFACTURER SHALL COMPLY WITH REQUIREMENTS STATED IN 'DOSH PERMANENT AMUSEMENT RIDES SAFETY ORDERS', CHAPTER 4, SUBCHAPTER 6.2, ARTICLES 1-4. FOR THE PURPOSES OF ARTICLES 1-4, THE FOLLOWING ASTM STANDARDS ON AMUSEMENT RIDES AND DEVISES SHALL BE MET:

ASTM F 698-94, SECTIONS 1-3
ASTM F 1110-93, SECTIONS 1-4
ASTM F 846-92, SECTIONS 1-8
ASTM F 853-98, SECTIONS 1-6
ASTM F 893-97, SECTIONS 1-5
ASTM F 1159-03, SECTIONS 1-14
ASTM F 1193-97, SECTIONS 1-7

SIGN REQUIREMENTS

A SIGN SHALL BE POSTED AT THE TOP OF THE TOWER WITH THE FOLLOWING RULES:

- CAUTION - ONE RIDER AT A TIME. WAIT UNTIL THE LANDING AREA IS CLEAR BEFORE ENTERING THE SLIDE
- SLIDE FEET FIRST IN THE SITTING POSITION OR LYING ON YOUR BACK!
- DO NOT ATTEMPT TO STOP IN THE SLIDE
- LEAVE THE PLUNGE AREA IMMEDIATLY
- ALWAYS EXIT THE SLIDE FEET FIRST! DO NOT SOMERSAULT, TWIST OR DIVE FROM THE END OF THE SLIDE
- WATER AND ALCOHOL DO NOT MIX, NO PERSON UNDER THE INFLUENCE OF ALCOHOL MAY USE THE SLIDE

NORTH

B

SLIDE LAYOUT

¼" = 1'-0"

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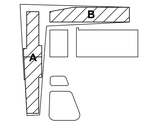
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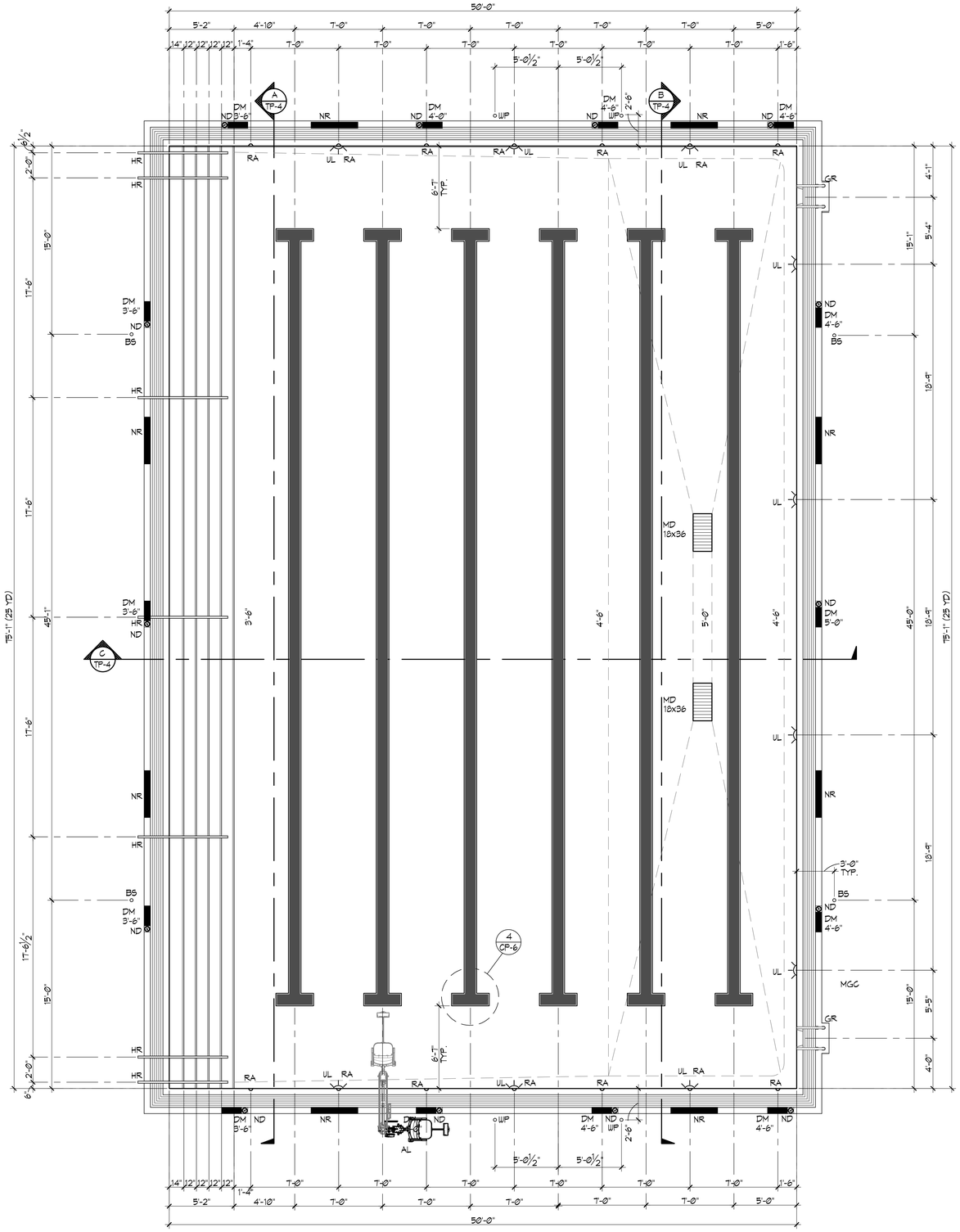
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

SLIDE LAYOUT

SHEET NUMBER:

SL-1



1 **TRAINING POOL LAYOUT PLAN** ¼"=1'-0"

TRAINING POOL DATA

SURFACE AREA	=	3,750 SQ. FT.
PERIMETER	=	250 FT.
DEPTH	=	3'-6" TO 5'-0"
VOLUME	=	112,046 GAL.
3 HR TURNOVER	=	623 GPM

LEGEND

MD	=	MAIN DRAIN	3 CP-8
GR	=	GRABRAIL	1 CP-8
DM	=	DEPTH MARKER	5 CP-6
NR	=	'NO RUNNING'	6 CP-6
ND	=	'NO DIVING'	6 CP-6, 7 CP-6
RA	=	ROPE ANCHOR	2 CP-7
MGC	=	MOVEABLE GUARD CHAIR	5 CP-7
BS	=	BACKSTROKE STANCHION	3 CP-7
UL	=	UNDERWATER LIGHT	3 CP-10
AL	=	ACCESSIBLE LIFT	1 CP-7
WP	=	WATERPOLO	7 CP-7, 3 CP-7
HR	=	HANDRAIL	5 TP-5

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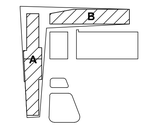
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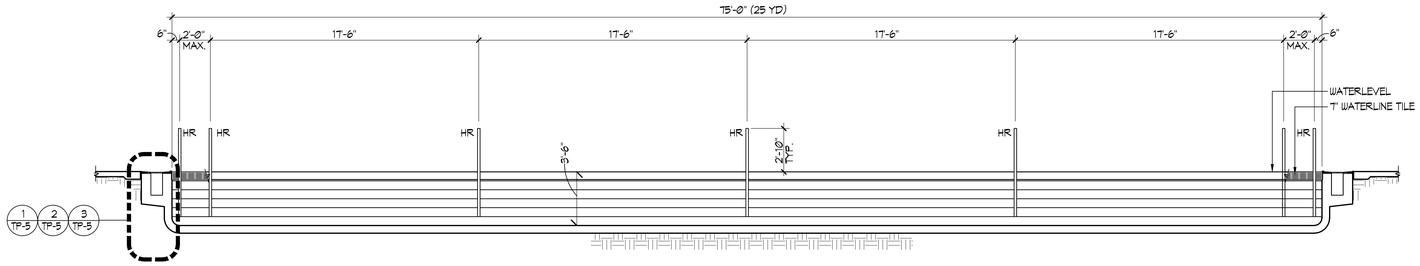
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

TRAINING POOL LAYOUT PLAN

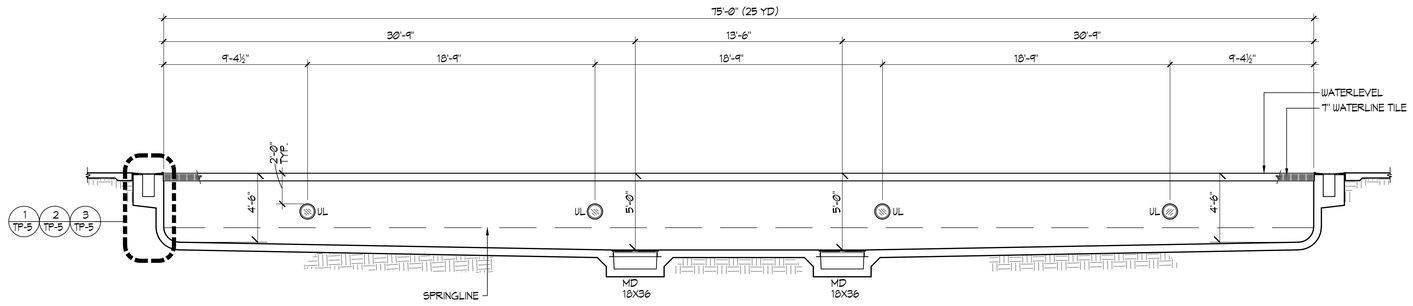
SHEET NUMBER:

TP-1



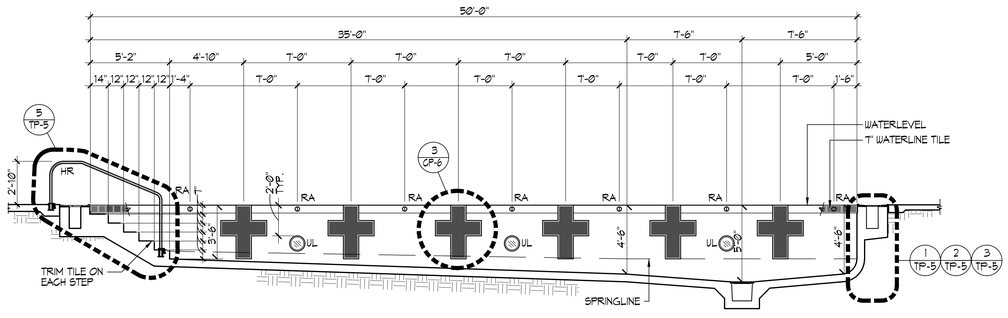
A TRAINING POOL SECTION

¼"=1'-0"



B TRAINING POOL SECTION

¼"=1'-0"



C TRAINING POOL SECTION

¼"=1'-0"

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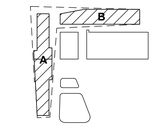
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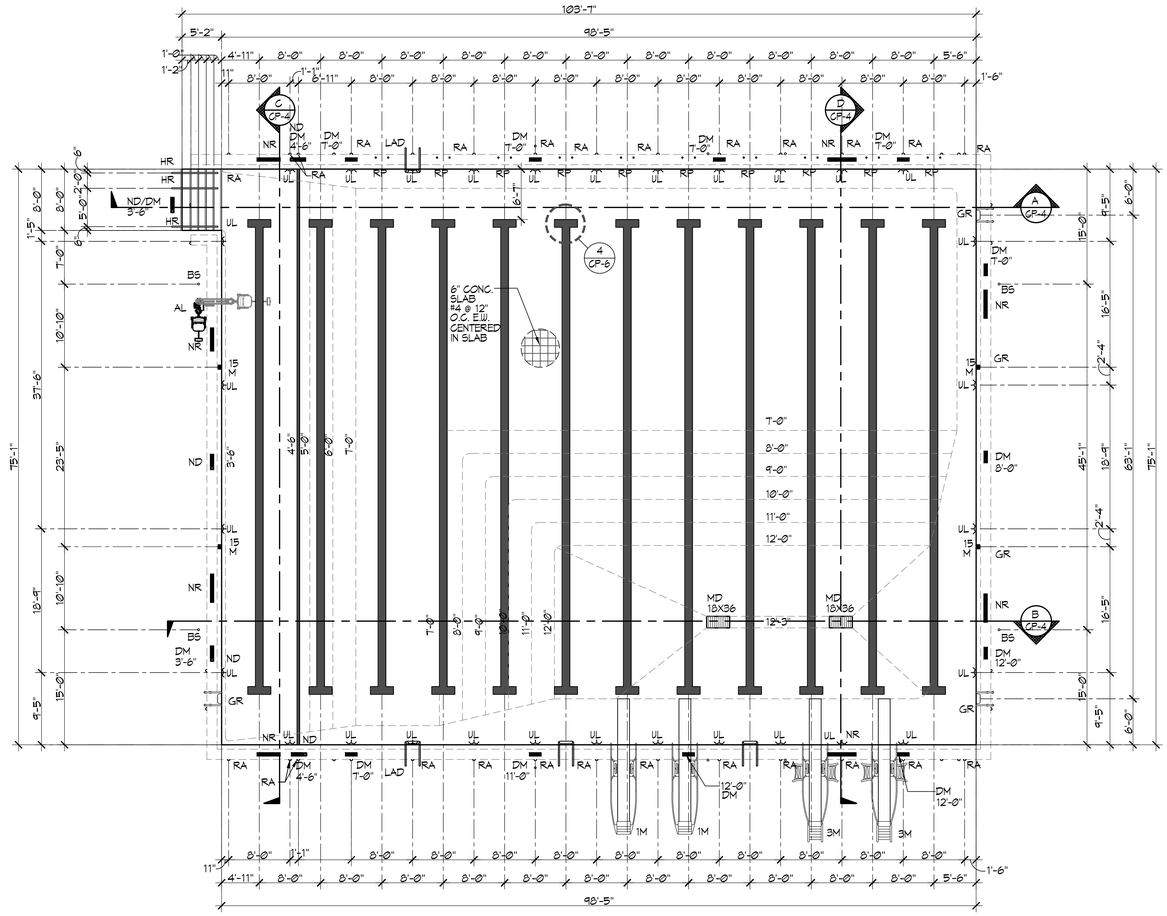
CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

TRAINING POOL SECTIONS

SHEET NUMBER:

TP-4



1 COMPETITION POOL LAYOUT PLAN ⅛" = 1'-0"

COMPETITION POOL DATA

SURFACE AREA	=	7,431 SQ. FT.
PERIMETER	=	357 FT.
DEPTH	=	3'-6" TO 12'-3"
VOLUME	=	451,389 GAL.
6 HR TURNOVER	=	1,254 GPM

LEGEND

**MD	=	MAIN DRAIN	3 CP-8
GR	=	GRABRAIL	1 CP-8
DM	=	DEPTH MARKER	5 CP-6
NR	=	'NO RUNNING'	6 CP-6
ND	=	'NO DIVING'	6 CP-6, 7 CP-6
RA	=	ROPE ANCHOR	2 CP-7
RP	=	RACING PLATFORM	6 CP-7
BS	=	BACKSTROKE STANCHION	3 CP-7
MGC	=	MOVEABLE GUARD CHAIR	5 CP-7
AL	=	ACCESSIBLE LIFT	1 CP-7
SA	=	STANCHION ANCHOR	3 CP-7
UL	=	UNDERWATER LIGHT	3 CP-10
LAD	=	LADDER	4 CP-7
HR	=	HANDRAIL	5 CP-6
15M	=	15 METER MARKER	2 CP-6
1M	=	ONE METER DIVE STAND	2 CP-8
3M	=	THREE METER DIVE STAND	6 CP-9

GENERAL NOTES

1. SWIMMING POOL VINYL FINISH IS WHITE IN COLOR
2. 6" WATERLINE AND HANDHOLD TILE IS CONTRASTING COLOR TO THE POOL FINISH, AROUND THE ENTIRE POOL PERIMETER.
3. ALL MARKERS LOCATED ON THE DECK SHALL BE SLIP RESISTANT. SLIP RESISTANT IS CONSIDERED A WET COEFFICIENT OF FRICTION OF 0.6 OR GREATER AND SHALL BE FLUSH WITH THE POOL DECK FINISH.
4. SEE CP-12 FOR WATER POLO LAYOUT AND ANCHOR PLACEMENT.
5. PROVIDE EQUIPOTENTIAL BONDING ON ALL METALLIC POOL WALL PANELS TO CONCRETE FLOOR AND DECK REINFORCEMENT PER 1/CP-14
6. FIELD CONFIRM ALL BACKSTROKE ANCHOR SETBACKS WITH BULKHEAD PRIOR TO INSTALLATION.

CERTIFICATION REQUIREMENTS

* THE CONTRACTOR SHALL RETAIN AN INDEPENDENT LICENSED SURVEYOR TO PROVIDE PROOF OF COMPLIANCE FOR REQUIRED POOL LENGTHS AS FOLLOWS: (RECOMMEND PATRELL ENG. GROUP (626) 335-4362)

  SHORT COURSE-25YDS: (ALLOWS FOR TOUCH PADS AT ONE END) 75'-0 5/16" MIN.; 75'-1 3/16" MAX.

  TOLERANCE AGAINST LENGTH SHALL EXTEND IN A VERTICAL PLANE @ 3M (12') ABOVE AND @.8M, (2'-7½") BELOW THE SURFACE OF THE WATER AT ALL POINTS OF BOTH END WALLS TYP. OF ALL COURSES.

  THE INDEPENDENT LICENSED SURVEYOR SHALL FILL OUT, NOTARIZE AND FILE OFFICIAL CERTIFICATION FORM(S) WITH USA SWIMMING.

** CONTRACTOR SHALL RETAIN A LICENSED ENGINEER TO CERTIFY THE FIELD BUILT MAIN DRAIN SYSTEMS AS V.G.B. COMPLIANT.

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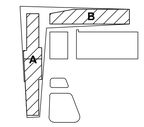
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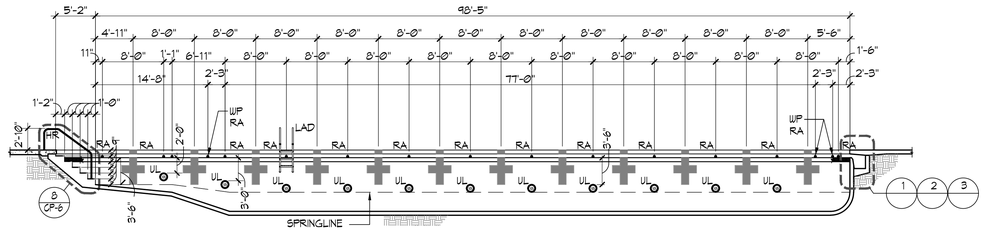
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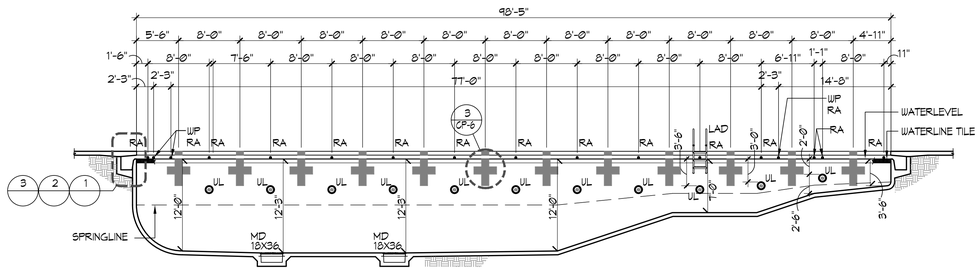
SHEET TITLE:
COMPETITION POOL LAYOUT PLAN

SHEET NUMBER:
CP-1



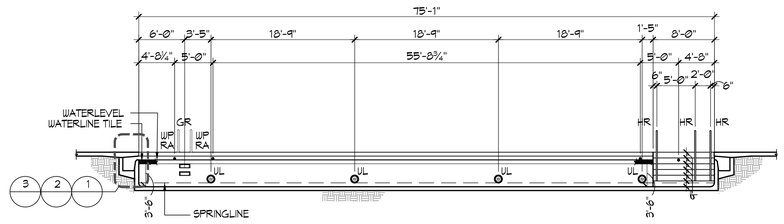
A SWIMMING POOL SECTION

⅛" = 1'-0"



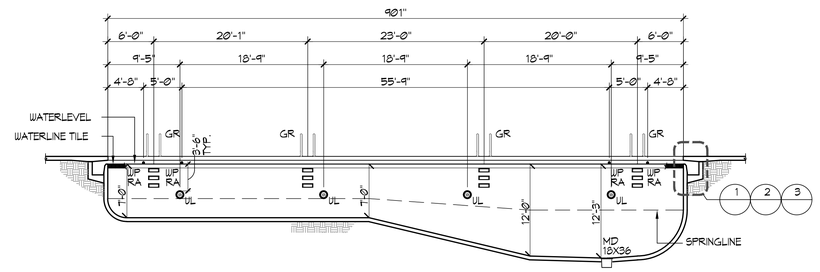
B SWIMMING POOL SECTION

⅛" = 1'-0"



C SWIMMING POOL SECTION

⅛" = 1'-0"



D SWIMMING POOL SECTION

⅛" = 1'-0"

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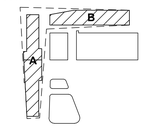
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REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:



ISSUE:
DEVELOPMENT DESIGN REVIEW RE-SUBMITTAL 2

DATE:
11 DECEMBER 2023

STAMP:

NOT FOR CONSTRUCTION

APPROVED:

CITY ENGINEER, DATE
TATIANA B. ARNAOUT
R.C.E. 88195 EXP. 03-31-24

SHEET TITLE:

COMPETITION POOL SECTIONS

SHEET NUMBER:

CP-4

ATTACHMENT C

IS-MND 23-04

[HTTPS://WWW.OXNARD.GOV/COMMUNITY-DEVELOPMENT/PLANNING-ENVIRONMENTAL-SERVICES/ENVIRONMENTAL-POSTINGS]



South Oxnard Aquatics Center

Final Initial Study – Mitigated Negative Declaration

prepared by

City Oxnard
305 West Third Street
Oxnard, California 93030
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December 2025

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Executive Summary

This document is an Initial Study-Mitigated Negative Declaration (IS-MND) analyzing the environmental effects of the proposed South Oxnard Aquatics Center project ("proposed project"). This section summarizes the project description and provides a summary of the proposed project's impacts and mitigation measures.

Project Description

The proposed project would include construction of a 57,233 square-foot outdoor pool area with four pool areas totaling 23,571 square feet, one slide area totaling 822 square feet, a one-story "L" shaped building totaling 18,342 square feet, a 103-stall parking lot, and ancillary facilities. Pool areas would consist of a 50-meter competition pool, 25-yard instructional pool, splash pad, recreation pool, and slide area. The one-story building would frame the western and northern sides of the pool deck and would be used to house locker rooms, administrative space, utility rooms, a concession stand, and other ancillary facilities.

Summary of Impacts that Require Mitigation

Impacts within this IS-MND are categorized as follows:

- **Less than Significant with Mitigation Incorporated:** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures.
- **Less than Significant:** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures.
- **No Impact:** The proposed project would have no adverse effect on environmental conditions.

The project would have no adverse impacts to any of the following environmental resource topics:

- Agricultural and Forestry Resources
- Energy
- Land Use
- Mineral Resources
- Tribal Cultural Resources
- Wildfire

The project would have less-than-significant impact to the following environmental resource topics:

- Aesthetics
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Population/Housing
- Public Services
- Recreation
- Transportation
- Utilities/Service Systems

Potentially significant impacts that require mitigation were identified for Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Noise. Table 1 summarizes the environmental impacts of the proposed project that require mitigation and the associated mitigation measure(s). The impacts listed in Table 1 are determined to be less than significant with mitigation incorporated.

Table 1 Summary of Environmental Impacts Requiring Mitigation

Impact	Mitigation Measure (s)
Air Quality	
Construction of the proposed project would generate nitrous oxides (NO_x) in exceedance of Ventura County Air Pollution Control District thresholds and have a potentially significant impact on air quality. With implementation of Mitigation Measure AQ-1, impacts would be less than significant.	**AQ-1: NO_x Construction Reduction Measures.** During construction, the construction contractor shall implement the following measures pursuant to the requirements of the VCAPCD Guidelines. ▪ Ensure all on-site vehicles and equipment with 50 horsepower or more shall meet, at a minimum, United States Environmental Protection Agency (USEPA) Tier 4 final engine certification requirements. If Tier 4 final equipment is not available, the contractor may apply other technologies available for construction equipment which would achieve a reduction in NO_X (as well as PM) emissions comparable to Tier 4 final construction equipment. Where alternatives to USEPA Tier 4 equipment are utilized, the contractor shall be required to provide evidence these alternative technologies would achieve comparable emissions reductions. Certifications or alternative reduction strategies shall be required prior to receiving a construction permit. ▪ Minimize equipment idling time. ▪ Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. ▪ Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time. ▪ Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible. Prior to initiation of construction activities, the City of Oxnard Public Works Department shall ensure that the measures listed above are included in the construction specifications for the proposed project
Construction of the proposed project could expose sensitive receptors to toxic air contaminants.	Implement Mitigation Measure AQ-1.
Biological Resources	
Project construction could disturb overwintering monarch butterfly roosts. With implementation of Mitigation Measure BIO-1, impacts would be less than significant.	**BIO-1: Monarch Butterfly Avoidance and Minimization.** Project construction activities, including equipment staging, grading, and construction shall be avoided during the monarch butterfly overwintering season between October 15 through March 15, if practicable. In the event project activities cannot be avoided during the overwintering season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct surveys for roosting monarch butterflies every two weeks during the overwintering season to confirm their absence. If construction activities occur during the overwintering season and monarch butterflies are present, the qualified biologist shall establish a protective buffer, ranging from 100 to 300 feet from the roosting site in which monarch butterflies are aggregating. The buffer will be delineated on site by the biologist with flagging or staking visible by construction personnel. The construction contractor shall ensure no construction occurs within the protective buffer, including staging of equipment or stopping or idling in the buffer, during the overwintering season. In the event construction activities, or other use of equipment, is needed to work within the buffer, the qualified biologist shall be present on site to monitor construction activities and determine if the work is disturbing the aggregated butterflies. If the biologist determines the work is disturbing the butterflies, the biologist shall stop work within the protective buffer at any time. In addition, due to the regular movement of the butterflies and locations of the aggregations, the biologist shall have the discretion to adjust the protective buffers, as necessary.

Impact	Mitigation Measure (s)
Project construction could disturb nesting birds. With implementation of Mitigation Measure BIO-2, impacts would be less than significant.	**BIO-2: Pre-Construction Nesting Bird Survey.** Project construction activities, including (but not limited to) equipment staging, grading, and construction shall be avoided during the nesting bird season (February 1 through August 31), if practicable. In the event project construction activities cannot be avoided during the nesting bird season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a nesting bird survey within three days prior to initiation of such activities to determine the presence/absence, location, and status of any active nests on site or within 100 feet of the site for songbirds and passerine species and up to 500 feet for raptors. The findings of the survey shall be summarized in a report and submitted to the City of Oxnard Public Works Department for review and approval prior to undertaking construction activities at the site. If nesting birds/active nest(s) are observed on site, the qualified biologist shall establish a construction buffer with fencing or flagging. The buffer shall be 500 feet from the active nest for nesting raptors or threatened or endangered species and 100 feet from all other nesting birds. The nest buffer may be adjusted at the direction of the qualified biologist based on the species, location of the nest, and the type of construction activities occurring during the nesting period. The construction contractor shall communicate to all construction personnel that no person or construction related activity shall occur within the buffer without prior approval from the qualified biologist. Nests shall be monitored at a minimum of once per week by the qualified biologist until it has been determined the nest is no longer being used by either the young or adults. The construction contractor shall ensure no ground disturbance occurs within this buffer until the qualified biologist confirms the breeding/nesting is completed, including confirmation all the young have fledged (if the nest was successful). If construction activities must occur within the buffer, the activity shall be conducted at the discretion of the qualified biologist. The construction contractor shall obtain approval from the qualified biologist prior to conducting any construction activities within the buffer. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses, if construction is planned to restart during nesting bird season (February 1 through August 31), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.
Cultural Resources	
Project construction could encounter an unanticipated archaeological resources during ground-disturbing activities. With implementation of Mitigation Measure CUL-1, impacts would be less than significant.	**CUL-1: Unanticipated Discovery of Cultural Resources.** In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determine it to be appropriate, archaeological testing for California Register of Historic Resources eligibility shall be completed. If the resource proves to be eligible for the California Register of Historic Resources and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of California Code of Regulations Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The City shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per California Code of Regulations Guidelines Section 15126.4(b)(3)(C).

Impact	Mitigation Measure (s)
Geology and Soils	
The project site is located in an area mapped as a liquefaction zone, and there is the potential for liquefaction-induced settlement to structurally compromise the proposed project. With implementation of Mitigation Measure GEO-1, impacts would be less than significant.	**GEO-1: Liquefaction Risk Minimization.** The City Department of Public Works shall ensure project design and construction complies with all recommendations presented within the Geotechnical Evaluation, titled *Geotechnical Evaluation South Oxnard Aquatic Center Project Oxnard College Park Oxnard, California* (Ninyo and Moore 2022) or the most recent subsequent version. Prior to the issuance of grading permits, the City Public Works Department shall review the design and construction plans for the proposed project and ensure all recommendations from the Geotechnical Evaluation are incorporated into the plans. Prior to the start of construction, the City Public Works Department shall retain a qualified environmental professional (Professional Geologist [PG] or Professional Engineer [PE]) to ensure all recommendations from the Geotechnical Evaluation are implemented by the construction contractor. During construction, the qualified environmental professional shall perform field observation and testing during grading activities to confirm construction is occurring in accordance with the recommendations of the Geotechnical Evaluation. The qualified environmental professional shall summarize the results of the field observation and testing performed during grading activities into a Final Geotechnical Evaluation report and shall submit the report to the City Public Works Department. Prior to issuance of a Certificate of Occupancy, the City Public Works Department shall review the Final Geotechnical Evaluation report to confirm the recommendations of the Geotechnical Evaluation have been implemented
Hazards	
Construction of the proposed project could result in the creation of a hazard due to the disturbance of soils contaminated with total petroleum hydrocarbons. With implementation of Mitigation Measure HAZ-1, impacts would be less than significant.	**HAZ-1: Soil Management Plan.** The City shall retain a qualified environmental consultant (Professional Geologist or Professional Engineer) to prepare a Soil Management Plan prior to construction. The Soil Management Plan shall be prepared to address handling and management of soils or other contaminated wastes on the project site, if any is encountered during subsurface investigation, to reduce hazards to construction workers and off-site receptors during construction. The City shall review, approve, and implement the Soil Management Plan prior to grading activities. The Soil Management Plan must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of impacts from the project site. These measures and practices may include, but are not limited to: ▪ Stockpile management including stormwater pollution prevention and the installation of Best Management Practices ▪ Proper disposal procedures for impacted materials ▪ Monitoring and reporting ▪ A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection. The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction ▪ Proper handling procedures for unexpected contamination, such as halt-work and avoidance protocols, and City and contractor notifications The Soil Management Plan shall also specify the procedures to be implemented in the event unexpected hazardous materials are encountered during construction. If unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground disturbing activities, the construction contractor shall halt work in the immediate area and a qualified consultant (Professional Geologist or Professional Engineer) shall be contacted immediately to evaluate the situation. The qualified consultant shall evaluate the material and recommend the appropriate testing, removal, and disposal methods. The construction contractor shall ensure hazardous materials are removed or remediated in accordance with the requirements of the qualified environmental consultant and the Soil Management Plan. Construction work may continue on other parts of the project site while soil investigation and/or remediation takes place. The construction contractor shall not resume work at the impacted area(s) until approved by the qualified consultant and the City

Impact	Mitigation Measure (s)
Noise	
Construction of the proposed project could generate noise in exceedance of City requirements. With implementation of Mitigation Measure NOI-1, impacts would be less than significant.	**NOI-1: Construction Noise Reduction Plan.** The construction contractor shall prepare and implement a Construction Noise Control Plan. The construction contractor shall submit the Construction Noise Control Plan to the City of Oxnard Public Works Department for review and approval prior to initiation of construction. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set. The Construction Noise Control Plan shall include the following measures: ▪ At least 21 days prior to the start of construction activities, all off-site businesses and residents within 500 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. ▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, the representative shall investigate, take appropriate corrective action, and report the action to the City. ▪ During the entire active construction period, equipment, tools, and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. During the entire active construction period, stationary noise sources shall be located as far from sensitive receivers as practicable, muffled, and enclosed within temporary sheds or insulation barriers, or other measures for equivalent noise reduction will be incorporated to the extent feasible. ▪ The contractor shall be required to use impact tools that are hydraulically or electrically powered wherever practicable. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools. ▪ Stockpiling of materials shall be located as far as feasible from nearby noise-sensitive receptors. ▪ Signs shall be posted at the job site entrance(s) to reinforce the prohibition of unnecessary engine idling. All equipment shall be turned off if not in use for more than 5 minutes. ▪ Use of stereos and other amplified noise not necessary for the completion of construction work shall be prohibited. ▪ During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. The construction manager shall ensure the use of use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with safety requirements and laws.

Impact	Mitigation Measure (s)
Construction of the proposed project may temporarily expose monarch butterflies and nesting birds to excessive noise. With implementation of Mitigation Measures BIO-1 and BIO-2, impacts would be less than significant.	Implement Mitigation Measures BIO-1 and BIO-2.
Mandatory Findings of Significance	
The proposed project could contribute to cumulative biological resources and cultural resources impacts. With implementation of Mitigation Measures BIO-1, BIO-2, and CUL-1, impacts would not be cumulative considerable (less than significant).	Implement Mitigation Measures BIO-1, BIO-2, and CUL-1.
The proposed project could result in effects to air quality, noise, and hazardous materials which could potentially cause substantial adverse effects on human beings. With implementation of Mitigation Measures AQ-1, HAZ-1, and NOI-1, impacts would be less than significant.	Implement Mitigation Measures AQ-1, HAZ-1, and NOI-1

Initial Study

1. Project Title

South Oxnard Aquatics Center

2. Lead Agency Name and Address

City of Oxnard
305 West Third Street
Oxnard, California 93030

3. Contact Person and Phone Number

Reza Bagherzadeh, P.E., Senior Project Manager
City of Oxnard, Public Works Department
(805) 271-2280

4. Project Location

The 7.93-acre project site is located at 3250 South Rose Avenue (Assessor's Parcel Number [APN] 224-0-012-285) in Oxnard, California. The project site is located in the southeast corner of College Park, approximately 340 feet south of Oxnard Boulevard. The project site is primarily vacant, with existing trees encroaching into the project site's eastern border. Figure 1 shows the regional location of the project site, while Figure 2 shows the project site boundary.

5. Surrounding Land Uses and Setting

The project site is within an urbanized area of Oxnard. The project site is within College Park and bounded to the west by College Park's one-lane ring road, recreation fields, and parking lots. Oxnard College is immediately south of the project site. To the east, the project site is bounded by a row of trees extending in a north-south direction, which separates the project site from adjacent vacant land. Existing residential development is also located approximately 850 feet east of the project site Oxnard Boulevard is approximately 300 feet northeast of the project site. Vacant land exists immediately north of the project site. Oxnard Boulevard separates the adjacent vacant land from residential neighborhoods located approximately 500 feet north of the project site.

Figure 1 Regional Project Location



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Project Location

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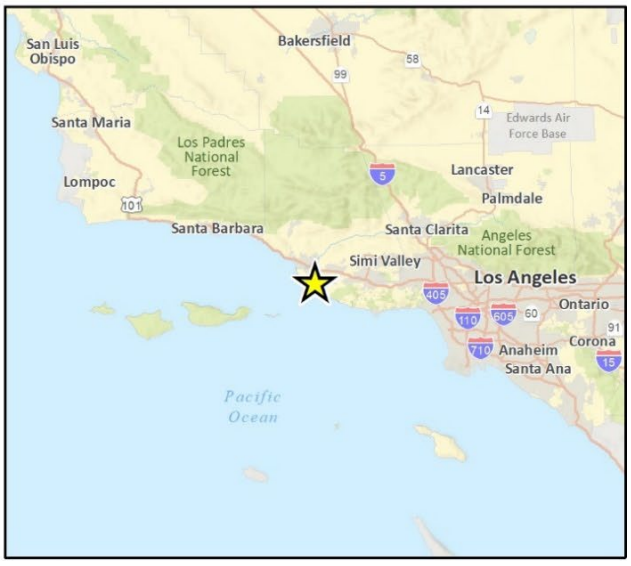


Figure 2 Project Site Boundary



6. General Plan Designation

Park

7. Zoning

Community Reserve (CR)

8. Description of Project

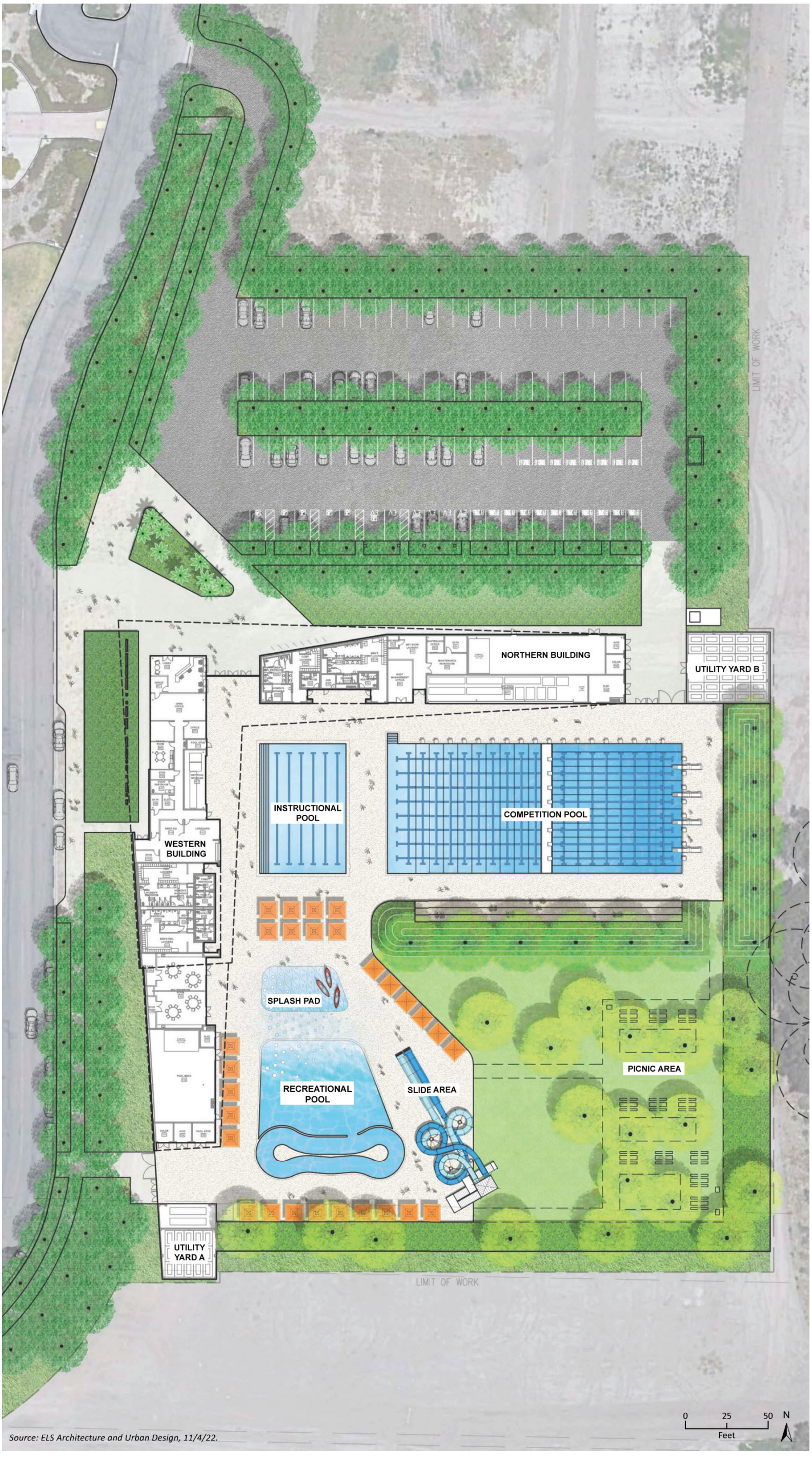
The South Oxnard Aquatics Center project ("proposed project") would include construction of a 57,233 square foot outdoor pool area with four pool areas totaling 23,571 square feet, one slide area totaling 822 square feet, a one-story "L" shaped building totaling 18,342 square feet, a 103-stall parking lot, and ancillary facilities. Pool areas would consist of a 50-meter competition pool, 25-yard instructional pool, splash pad, recreation pool, and slide area. The one-story building would frame the western and northern sides of the pool deck and would be used to house locker rooms, administrative space, utility rooms, a concession stand, and other ancillary facilities. Table 2 provides an overview of the proposed project. Figure 3 shows the project layout. Figure 4 shows renderings of the project site during operation.

Table 2 Proposed Project Summary

Pool Areas	square feet
Competition Pool	13,014
Instructional Pool	3,750
Recreation Pool	5,624
Splash Pad	1,183
Slide Area	822
Pool Deck (North)	11,410
Pool Deck (South)	12,466
Spectator Seating	1,859
Picnic Area	7,105
Total	**57,233**
Building	**square feet**
Building	18,342
Total	**18,342**
Parking Stalls	**Number of Stalls**
Standard	73
Accessible	5
Accessible + Electric Vehicle	2
Electric Vehicle	4
Electric Vehicle Capable	19
Total	**103**
Bicycle Parking	**Number of Spaces**
Bicycle Spaces	16
Total	**16**
Landscaping	**square feet**
Landscape area	81,179
Total	**81,179**

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Figure 3 Conceptual Project Layout



Source: ELS Architecture and Urban Design, 11/4/22.

Figure 4 Project Site Renderings



EXTERIOR - AERIAL VIEW



EXTERIOR - BUILDING ENTRY VIEW



EXTERIOR - COMPETITION POOL VIEW



INTERIOR - PARTY ROOM VIEW

Source: ELS Architecture and Urban Design, 11/4/22.

Pool Areas

Five pool areas would be constructed on the project site. Information for each pool area is provided below.

Competition Pool

The 50-meter competition pool would be 165 feet in length and 75 feet in width and would range from three-feet six-inches deep to 13 feet deep with a capacity of 709,658 gallons. Approximately 534,960 gallons would be required annually to account for water loss from filter backwash, water splashed out of the pool, and evaporation. Water in the competition pool would have a turnover rate of approximately six hours, filtering and reintroducing approximately 1,971 gallons per minute (gpm) of water. The competition pool would include drains, grabrails, rope anchors, racing platforms, backstroke stanchion/recall fixtures, water polo goal fixtures, underwater lights, an accessible lift, moveable guard chair, a one-meter dive stand, and ladders.

Instructional Pool

The 25-yard instructional pool would be constructed west of the competition pool. The instructional pool would be 75 feet in length and 50 feet in width and would range from three-feet six-inches deep to five feet deep with a capacity of 112,349 gallons. Approximately 202,278 gallons would be required annually to account for water loss from filter backwash, water splashed out of the pool, and evaporation. Water in the instructional pool would have a turnover rate of approximately three hours, filtering and reintroducing approximately 624 gpm of water. The instructional pool would include drains, grabrails, rope anchors, moveable guard chair, backstroke stanchions, underwater lights, an accessible lift, handrails, and stanchion anchors.

Splash Pad

The splash pad would be constructed south of the instructional pool and east of the multipurpose rooms located in the western building. The splash pad would function as a play space with little to no standing water. Water fixtures located within the splash pad would spray, mist, or dump water into the splash pad. The splash pad would be level to the ground. Approximately 13,075 gallons would be required annually to account for water loss from filter backwash, water splashed out of the pool, and evaporation. Water in the splash pad would have a turnover rate of approximately four hours, filtering and reintroducing approximately 134 gpm of water.

Recreation Pool

The recreation pool would be constructed south of the splash pad and would range from zero feet deep to three-feet six-inches deep with a capacity of 89,366 gallons. Approximately 257,630 gallons would be required annually to account for filter backwash, water splashed out of the pool, and evaporation. Water in the recreation pool would have a turnover rate of approximately four hours, filtering and reintroducing approximately 368 gpm of water.

Slide Area

The slide area would be constructed adjacent to the eastern border of the recreation pool. Approximately 13,880 gallons would be required annually to account for filter backwash, water splashed out of the pool, and evaporation.

Picnic Area

A 7,105 square foot picnic area would be constructed at the southeast corner of the project site. The picnic area would include picnic tables on grass, shaded by trees that would be planted on the project site.

Building Uses

The 18,342 square foot "L"-shaped building would consist of two sections (referred to herein as the western building and northern building) connected by a main entry/exit area at the northwest corner of the aquatics center. Descriptions of each section of the building are provided below. The layout of the western building is detailed in Figure 5. The layout of the northern building is detailed in Figure 6.

Western Building

The western building would be located on the western border of the project site and extend north-south parallel from the main entry/exit to the recreation pool. The western building would house one lobby, five office spaces, one break room, seven storage rooms, four family restrooms, three utility rooms, one first aid room, one lifeguard room, one men's locker room, one women's locker room, two janitor closets, two multipurpose rooms, one room to house pool mechanical equipment, and two rooms containing chlorine and acid for the purposes of water filtration. In addition, the western building would include a concession area. The concession area would be used to cook and sell food and drink. Cooking appliances within the concession area would include a refrigerator, stove/oven, and sink.

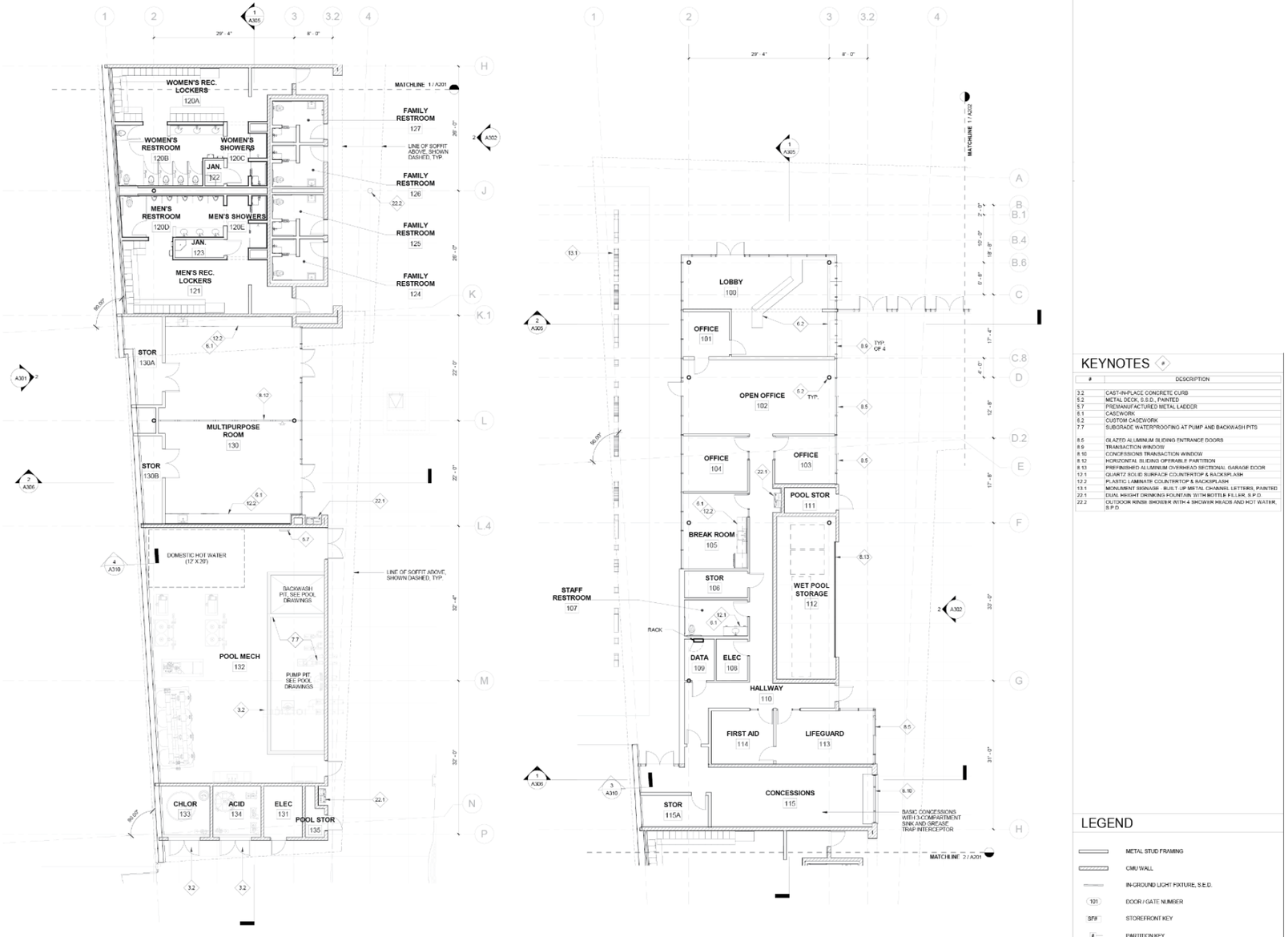
Northern Building

The northern building would be located on the northern border of the pool decks immediately south of the parking lot. The northern building would extend west to east from the main entry/exit to a secondary exit at its eastern border. The northern building would house one men's locker room, one women's locker room, one janitor closet, two family restrooms, one fire riser room, one management office, one dry storage/laundry room, one maintenance office, two utility rooms, one maintenance workroom, one wet pool storage room, one room to house pool mechanical equipment, and two rooms containing chlorine and acid for the purposes of water filtration.

Utility Yards

The proposed project would include two utility yard enclosures, Utility Yard A and Utility Yard B, south of the western building and east of the northern building, respectively. The utility yard enclosures would be constructed with eight-foot-tall concrete walls with a five-inch concrete slab and a six-inch concrete curb with a surrounding chainlink metal roof and gate. These enclosures would house utilities for power and heat.

Figure 5 Western Building Layout

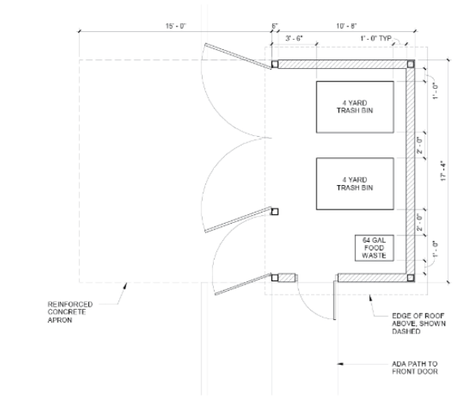


2 ENLARGED PLAN - WESTERN BUILDING (SOUTH)

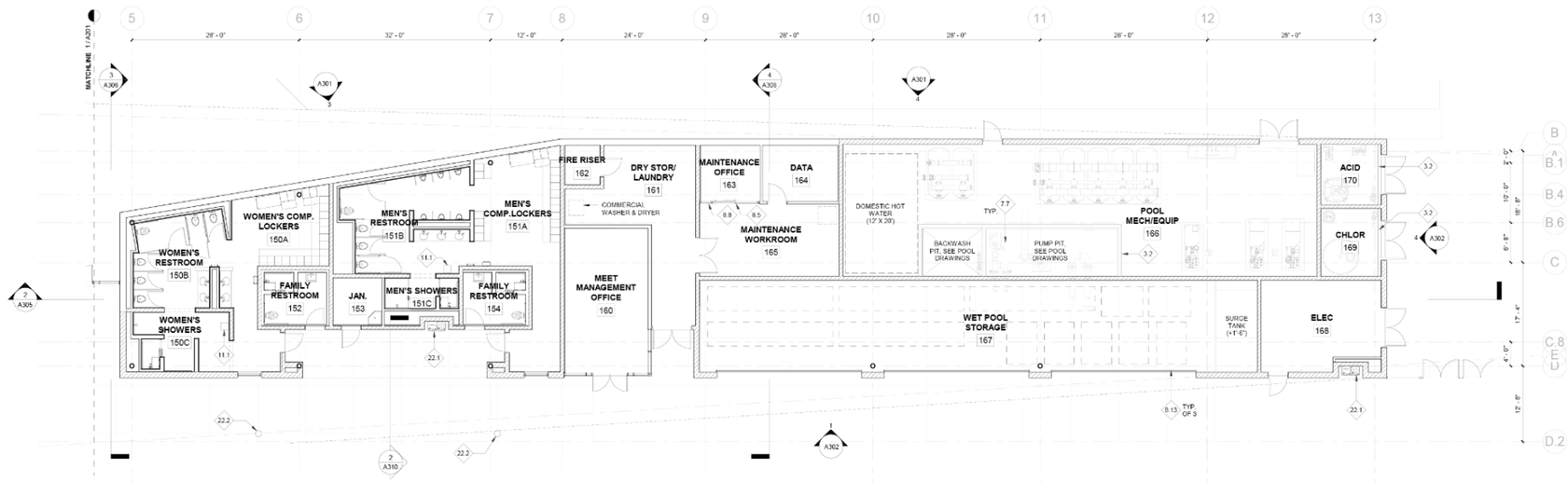
1 ENLARGED PLAN - WESTERN BUILDING (NORTH)

Source: ELS Architecture and Urban Design, 11/4/22.

Figure 6 Northern Building Layout



2 ENLARGED PLAN - TRASH ENCLOSURE
Not To Scale



1 ENLARGED PLAN - NORTHERN BUILDING

LEGEND

- METAL STUD FRAMING
- CMU WALL
- IN-GROUND LIGHT FIXTURE, S.E.D.
- 101 DOOR / GATE NUMBER
- SF# STOREFRONT KEY
- # PARTITION KEY

KEYNOTES

#	DESCRIPTION
3.2	CAST-IN-PLACE CONCRETE CURB
7.7	SUBGRADE WATERPROOFING AT PUMP AND BACKWASH PITS
8.5	GLAZED ALUMINUM SLIDING ENTRANCE DOORS
8.8	STOREFRONT SYSTEM TYPE 2 - INTERIOR PREFINISHED ALUMINUM 4 1/2" DEEP SYSTEM W/ 1/4" GLAZING
8.13	PREFINISHED ALUMINUM OVERHEAD SECTIONAL GARAGE DOOR
11.1	SWIMSUIT SPINNER
22.1	DUAL HEIGHT DRINKING FOUNTAIN WITH BOTTLE FILLER, S.P.D.
22.2	OUTDOOR RINSE SHOWER WITH 4 SHOWER HEADS AND HOT WATER, S.P.D.

0 10 20 Feet

N

Source: ELS Architecture and Urban Design, 11/4/22.

Parking

The proposed project would include one dedicated parking area with a total of 103 parking spaces north of the aquatics center. Of the 103 spaces, five would be Americans with Disabilities Act (ADA) compliant, two would be ADA compliant and allow electric vehicle (EV) parking, four would be reserved for EV parking only, and 19 would be EV capable, meaning infrastructure that would support the future installation of an EV charging station would be provided. Bicycle racks would be installed at the main entry/exit point of the aquatics center and would providing spaces for 16 bicycles. The parking lot would be supplemented by existing parking along College Park's one-lane ring road as well as existing adjacent parking lots within College Park.

Lighting

Lighting provided on site would be a mixture of one-, two-, and three-head 30-foot pole lights; 15-foot pole lights; recessed downlights, recessed linear lights; recessed step lights; wall-mounted sconces; and in-grade sign lighting. The 30-foot pole lights would be provided to illuminate the pool deck and parking lot. The 15-foot pole lights would be used to illuminate the picnic area in the southeastern corner of the project site. Other lighting would be utilized within and on the exterior of the building. In addition, seven street pole lights would be installed along College Park's one-lane ring road immediately west of the project site. A lighting control system would be installed with motion sensors and automatic daylight controls, which would automatically dim or switch off lighting when sufficient daylight is present. Lighting would be constructed compliant with California Building Code Title 24 standards.

Landscaping

The proposed project would include landscaping at the exterior of the aquatics center, within the parking lot, along College Park's one-lane ring road immediately west of the project site, and at the picnic area. Landscaped areas would include a mix of two- to four-foot flowering shrubs, one- to three-foot ornamental grasses, two- to eight-foot shrubs, hydroseed, and one- to three-foot stormwater treatment grasses, as well as wind-blocking and canopy trees. Tree and plant species would include, but not be limited to, California sycamore, Chinese elm, valley oak, fan palm, purple sage, manzanita, and California gray rush. Species used would be conducive to species which thrive in a Mediterranean climate similar to the climate within Oxnard. All planting areas would be irrigated via an automatic irrigation system operated by a controller located in the eastern border of the northern building. No existing trees would be removed.

Utility Connections

Water

Water would be provided by an extension from the City of Oxnard (City) water main located underneath College Park's one-lane ring road. The proposed project's water pipeline would traverse underneath the northern and western buildings and connect to the City's existing water main underneath College Park's one-lane ring road, west of the western building.

Wastewater

Wastewater would be carried from the western and northern buildings through pipelines which would connect to a main sanitary sewer pipeline via points of connection five feet from the building face and would connect to the City's sewer system between the western building and College Park's one-lane ring road.

Electricity

The proposed project would include construction of a pad-mounted electrical transformer located in Utility Yard B. On-site electrical lines would connect to the existing Southern California Edison (SCE) electrical facilities at College Park's one-lane ring road west of the proposed aquatics center.

Natural Gas

Up to 7.425 million British Thermal Units BTUs of natural gas would be required to heat the pools. The proposed project includes construction of an natural gas line that would connect to the southwest corner of the proposed aquatics center, run west along the southern portion of College Park's one-lane ring road, and connect to an existing SoCalGas line in South Rose Avenue. Refer to Figure 2 for the proposed location of the natural gas line extension.

Mechanical, Engineering, Plumbing

The aquatics center would be powered by a combination of natural gas and electricity, or would be all-electric. Options are summarized below.

Heating, Ventilation, and Air Conditioning (HVAC)

Heating and air conditioning would be supplied to the multipurpose rooms, administrative areas, and locker rooms via rooftop HVAC units and an exhaust system which would utilize gas for heating and electricity for cooling. Indoor offices would be served by Variable Air Volume (VAV) connections[1] which bring air into the office space.

Within the northern and western buildings, each restroom would have a dedicated exhaust fan. Each locker room would have exhaust fans with additional controls for humidity. Each janitor room would also have an exhaust fan. The rooms housing acid would have an exhaust fan and natural ventilation using door and wall shutters. The concession area would have an exhaust fan suitable for odor control. The mechanical rooms would have a phased approach for cooling. Mechanical rooms would utilize natural ventilation using door and wall shutters, and an exhaust fan linked to a thermostat/humidity sensor.

Water

Two centralized hot water systems would be installed in the pool mechanical rooms of the western and northern buildings to provide hot water to plumbing fixtures in the buildings. The system would consist of two gas-powered water heaters with an expansion tank, master mixing valve, and recirculating pump.

To heat the pool areas, four gas-powered high-efficiency condensing boilers located in the western and northern buildings would be used along with one heat exchanger per pool. The anticipated energy required to heat each pool is listed below in BTUs:

[1] Variable Air Volume connections vary the airflow at a constant or varying temperature, allowing for lower overall energy consumption.

- Competition Pool: 3,900,000 BTUs
- Recreation Pool: 1,600,000 BTUs
- Instructional Pool: 1,125,000 BTUs
- Splash Pad Pool: 400,000 BTUs
- Slides: 400,000 BTUs

Wastewater

Wastewater would be generated from the five pool areas and users of the aquatics center. The annual wastewater generation from each of the five pools would be as follows:

- Competition Pool: 151,200 gallons per year
- Recreation Pool: 73,440 gallons per year
- Instructional Pool: 55,016 gallons per year
- Splash Pad Pool: 3,600 gallons per year
- Slides: 2,880 gallons per year

In addition, the anticipated wastewater from the ancillary facilities (such as restrooms) would be approximately 22,250 gallons per day.

Public Address System

The proposed project would include installation of a public address (PA) system. The PA system would place ceiling speakers spaced 20 to 25 feet apart throughout the exterior of the building. Exterior pole mounted speakers would be provided for coverage to all exterior areas. The system would be designed and required to have a 70 decibel A scale (dbA) sound level limit throughout the aquatics center, which would result in announcements approximately three to five decibels (dB) higher than typical conversation.

Access and Security

The building would be provided with an access control, video surveillance, and intrusion monitoring system. Automated card access would be provided and consist of a card system, cabling and wiring, and power connection. Automatic doors would be installed with request-to-exit sensors. Closed-circuit television surveillance systems would be installed as well as an alarm system including audio-visual systems.

Fire Protection

The proposed project would include a six-inch dedicated fire service pipeline consisting of a connection to the street fire main, a double detector check valve assembly, a post indicator valve, and a fire department pump connection. The fire service pipeline would traverse underneath the northern and western buildings and connect to the City's existing water main underneath College Park's one-lane ring road, west of the western building. The inlet water pressure would be required to be a minimum of 35 pounds per square inch (PSI). A sprinkler system would be installed in the building, as well as a fire alarm system to provide monitoring and alarm notification for the building. In addition, smoke detectors, heat detectors, manual pull stations, sprinkler water flow switches, and suppression systems would be installed.

Stormwater and Drainage

The proposed project would include construction of on-site stormwater drainage systems to limit excess stormwater runoff. The stormwater drainage system and overflow drains would consist of roof drains and roof drain leaders which would convey stormwater through pipes in the interior of the building to discharge above ground at the exterior of the building for collection of rainwater via four biofiltration planters. Two biofiltration planters would be located adjacent to the parking lot, one biofiltration planter would be located at the southern border of the project site, and one biofiltration planter would be located adjacent to the western building. The biofiltration planters at the southern end of the project site and west of the western building would convey stormwater to storm drain inlets located underneath the biofiltration planters and storm drain inlets located to the west near College Park's one-lane ring road. The biofiltration planters adjacent to the parking lot would convey stormwater to storm drain inlets located underneath the biofiltration planters, which would be conveyed to an underground stormwater pipe routed for connection to existing City-owned storm drains at a point of connection located underneath the parking lot's entrance/exit. The sizing of the stormwater drainage system would be based on the local rainfall density of two inches per hour.

Construction

Construction of the proposed project is anticipated to begin in the first quarter of 2026 and end in the first quarter of 2028. Underground stone columns, up to 50 feet in depth, may be required to increase the load-bearing capacity of the soil. Excavation up to 15 feet in depth would be required for the pool areas and utilities. The proposed project would require cut of approximately 11,000 cubic yards (CY) and approximately 7,000 CY of fill. Approximately 6,000 CY of soil would be exported from the project site. Soil debris would be hauled to the Toland Road Landfill or the Simi Valley Landfill and Recycling Center, or other landfills with available capacity. The proposed haul route for soil export and material delivery would be as follows:

- **Toland Road Landfill:** Rose Avenue to State Route (SR) 118 to SR 126 to Toland Road
- **Simi Valley Landfill and Recycling Center:** Pleasant Valley Road to United States Route 101 (U.S. 101) to SR 23 to SR 118 to Madera Road

Construction staging would be located on the project site. Construction workers would park on the project site, on the street immediately west of the project site, or in the adjacent parking lot located approximately 460 feet west of the project site. No nighttime or weekend construction would occur.

The contractor would be required to implement appropriate erosion and stormwater pollution control best management practices (BMPs) as part of preparation of Stormwater Pollution Prevention Plan (SWPPP).

Operation

The City anticipates that the aquatics center would serve only the local community of Oxnard, and would not be used for regional events. The proposed project would be operated 50 weeks out of the year, seven days per week. Hours of operation during the summer season would span Monday through Friday from 5:00am to 8:00pm, and Saturday through Sunday from 10:00am to 8:00pm. Additional operation hours on Friday and Saturday from 8:00pm to 10:00pm are proposed to accommodate special events and programs during the summer such as movie nights. Hours of operation during the fall, winter, and spring seasons would span Monday through Friday from

5:00am to 8:00pm, and Saturday through Sunday from 10:00am to 8:00pm. During the fall, winter, and spring seasons, only the competition pool would be opened from 5:00am to 8:00am to accommodate swim team practices.

Peak use of the aquatics center is anticipated to occur during the summer season with the highest use occurring during the weekend. During the summer season it is anticipated approximately 3,005 daily users would utilize the aquatics center Monday through Friday. On Saturday and Sunday, it is expected approximately 4,425 daily users would utilize the aquatics center. During the weekdays, the aquatics center would be staffed with approximately 80 employees per day. During the weekends, the number of employees is anticipated to increase to approximately 100 employees per day. It is anticipated that the City would hire up to 200 new employees in total.

Use of the aquatics center during the fall, winter, and spring seasons is anticipated to be less than the use during the summer season. During the fall, winter, and spring seasons it is anticipated approximately 1,330 daily users would utilize the aquatics center Monday through Friday. On Saturday and Sunday, it is expected approximately 2,650 daily users would utilize the aquatics center. Employment at the aquatics center is expected to remain the same as during the summer season, ranging from approximately 80 to 100 employees per day.

Throughout the entire year, swim team practices are expected to generate approximately 30 to 150 participants and special events are expected to generate approximately 300 to 500 participants. The total maximum pool capacity for all pool areas would be 1,610 occupants. The capacity for the entire project site would be 2,334 occupants.

9. Other Public Agencies Whose Approval is Required

The City of Oxnard is the lead agency for the proposed project~~, and no approvals are required from any other agency~~. The proposed project requires the following discretionary approvals from the City:

- Building permit to construct proposed project facilities
- Grading permit for the cut and fill of soil
- Encroachment permit to connect utilities to the City's point of connection
- Design Development Review permit to approve the proposed design of the aquatics center

<u>The proposed project also requires the following approvals from other agencies:</u>

- <u>Ventura County Air Pollution Control District Permit to Operate for the operation of the gas-powered condensing boilers</u>

10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The City sent Assembly Bill (AB) 52 letters to the following Native American tribes on November 10, 2022:

- Barbareño/Ventureño Band of Mission Indians
- Chumash Council of Bakersfield
- Coastal Band of the Chumash Nation
- Gabrielino/Tongva San Gabriel Band of Mission Indians
- Gabrielino/Tongva Nation
- Gabrielino-Tongva Tribe
- Northern Chumash Tribal Council
- San Luis Obispo County Chumash Council
- Santa Ynez Band of Chumash Indians

One Native American tribe, the Santa Ynez Band of Chumash Indians, responded to the City's AB 52 letters on December 6, 2022. The Santa Ynez Band of Chumash Indians did not request further consultation.

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture and Forestry Resources	■	Air Quality
■	Biological Resources	■	Cultural Resources	☐	Energy
■	Geology and Soils	☐	Greenhouse Gas Emissions	■	Hazards and Hazardous Materials
☐	Hydrology and Water Quality	☐	Land Use and Planning	☐	Mineral Resources
■	Noise	☐	Population/Housing	☐	Public Services
☐	Recreation	☐	Transportation	☐	Tribal Cultural Resources
☐	Utilities and Service Systems	☐	Wildfire	☐	Mandatory Findings of Significance

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

M. R. B

Signature

12/02/2025

Date

Reza Bagherzadeh

Printed Name

Senior Project Manager

Title

Environmental Checklist

1 Aesthetics and Urban Design

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista such as an ocean or mountain view from an important view corridor or location as identified in the 2030 General Plan or other City Planning documents?	☐	☐	☐	■
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, or route identified as scenic by the County of Ventura or City of Oxnard?	☐	☐	☐	■
c. Substantially degrade the existing visual character or quality of the site or its surroundings such as by creating new development or other physical changes that are visually incompatible with surrounding areas or that conflict with visual resource policies contained in the 2030 General Plan or other City planning documents?	☐	☐	☐	■
d. Add to or compound an existing negative visual character associated with the project site?	☐	☐	☐	■
e. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista such as an ocean or mountain view from an important view corridor or location as identified in the 2030 General Plan or other City Planning documents?

The project site is located approximately 2.85 miles northeast of the coastline and approximately 5.63 miles northwest of the nearest mountains. Existing residential, commercial, industrial

development, and roadways separate the project site from these scenic vistas and generally block these scenic vistas from being viewed extensively from the project site. The City's 2030 General Plan Background Report identifies the project site as being located outside of key aesthetic resources including local waterways and agricultural greenbelts (City of Oxnard 2006). Accordingly, the proposed project would have no impact on scenic vistas.

NO IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, or route identified as scenic by the County of Ventura or City of Oxnard?

The project site is located approximately 340 feet south of South Oxnard Boulevard which is designated as a Scenic Roadway by the City and an Eligible State Scenic Highway by the California Department of Transportation (Caltrans) (Caltrans 2018; City of Oxnard 2017). Although the project site would be located within the vicinity of a City-designated Scenic Roadway and Eligible State Scenic Highway, the proposed project would not substantially damage scenic resources within a state or local scenic roadway. Existing trees adjacent to South Oxnard Boulevard obscure views of the project site from South Oxnard Boulevard. There are no substantial rock outcroppings visible from South Oxnard Boulevard which the proposed project would remove. The proposed project would not remove any existing trees. As discussed in Section 6, *Cultural Resources*, the project site does not include any built environment resources which could be considered historic, and the proposed project would not substantially damage any historic buildings. Therefore, the proposed project would have no impact on scenic resources within a state scenic highway or route identified as scenic by the County of Ventura or City of Oxnard.

NO IMPACT

c. Would the project, substantially degrade the existing visual character or quality of the site or its surroundings such as by creating new development or other physical changes that are visually incompatible with surrounding areas or that conflict with visual resource policies contained in the 2030 General Plan or other City planning documents?

The project site is surrounded by existing development including roads, Oxnard College, residential development, and College Park. Existing trees obscure views of the project site from South Oxnard Boulevard and from the residential development located east of the project site. The project site is visible from public viewpoints within College Park and the northern portion of Oxnard College which contains a parking lot and sports fields. The introduction of an aquatics center at the project site would not substantially degrade the existing visual character or quality of the site or its surroundings because the aquatics center would be visually compatible with existing recreational development at College Park and Oxnard College.

The City's 2030 General Plan Policy ER-6.1 requires the preservation of important public views and viewsheds by ensuring the scale, bulk, and setback of new development does not significantly impede or disrupt views. In addition, Policy ER-6.1 requires development to provide physical breaks to allow views (City of Oxnard 2011). The proposed project would include construction of a one-story building which would be consistent with the heights of surrounding development. The proposed project would not substantially alter public views because the proposed project would not impede the ability of the public to view College Park or Oxnard College. The project site is adjacent to an open area and the proposed project would not be constructed such that the views from the surrounding open areas are substantially disrupted. The proposed project would not remove trees;

therefore, the proposed project would not disrupt public views from South Oxnard Boulevard or the residences to the east. Therefore, the proposed project would be consistent with Policy ER-6.1. The City's 2030 General Plan Policy ER-6.3 requires the preservation of significant small-scale aesthetic resources, such as plant communities (City of Oxnard 2011). The proposed project would not remove the existing trees bordering the project site and would therefore preserve small-scale aesthetic resources consistent with Policy ER-6.3. Therefore, the proposed project would not substantially degrade the existing visual character or quality of the site or its surroundings such as by creating new development or other physical changes that are visually incompatible with surrounding areas or that conflict with visual resources policies contained in the 2030 General Plan or other City planning documents. No impact would occur.

NO IMPACT

d. Would the project add to or compound an existing negative visual character associated with the project site?

The proposed project would construct and operate an aquatics center on exiting vacant land. The proposed project would include landscaping which would consist of trees, flowering shrubs, ornamental grasses, and stormwater treatment grasses. As a result, the proposed project would introduce features which provide visual aesthetic to existing vacant land. As discussed under criteria 1(a), 1(b), and 1(c) the proposed project would not substantially impair views, damage scenic resources, or degrade the existing visual character of the project site. Therefore, no impact would occur related to the proposed project adding or compounding an existing negative visual character.

NO IMPACT

e. Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No nighttime construction is proposed. Daytime construction would not require the use of temporary flood lights or other light/glare generating sources. As a result, construction activities would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

During operation, lighting would be provided to illuminate the pool areas, parking lot, and the one-lane ring road of College Park outside of the aquatics center. Operation of the aquatics center would typically cease at 8:00pm nightly, with additional operating hours during the summer on Friday and Saturday until 10:00pm to accommodate special events and programs. A lighting control system would be installed with motion sensors and automatic daylight controls, which would automatically dim or switch off lighting when sufficient daylight is present. In addition, lighting would be compliant with California Building Code (CBC) Title 24 standards. The proposed lighting would be required to comply with Section 16-320 of the City's Municipal Code which prohibits lighting from illuminating surfaces not required to be lit and prohibits lighting from constituting a hazard to vehicular traffic, either on private property or on abutting streets (City of Oxnard 2022a). In addition, the proposed lighting would be required to comply with 2030 General Plan Policy ER-6.5 which requires all outdoor light fixtures including street lighting and externally illuminated signs, use low-energy shielded light fixtures which direct light downward and, where public safety would not be compromised, encourages the use of low-pressure sodium lighting for all outdoor light fixtures (City of Oxnard 2011). Furthermore, all indoor and outdoor lighting will be high efficacy light-emitting diode (LED).

The proposed pool lighting would result in an average illumination of approximately 50 foot-candles[2] at the competition pool, and 30 foot-candles at the other pools, which is consistent with the Illuminating Engineering Society's recommendations for competition lighting and general exercise and recreation lighting (Elite LED Lighting 2023; Waypoint Lighting 2023). Night-time lighting of the pool area would occur during operational hours until 8:00 pm, or 10:00 pm during occasional special events. When the aquatics center is not in use, pool lighting would be shut off. The parking areas, which would remain luminated throughout the night, would use low-energy shielded light fixtures which direct light downward. The operational lighting at the project site would only incrementally add nighttime lighting, as the project site is surrounded by urban development with similar nighttime lighting. Therefore, operation of the proposed project would have a less than significant related to light and glare.

LESS-THAN-SIGNIFICANT IMPACT

[2] A footcandle is a unit of measurement which focuses on the amount of light that reaches a surface area. One footcandle is defined as enough light to saturate one square-foot with one lumen of light.

2 Agricultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or an existing Williamson Act contract?	☐	☐	☐	■
c. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of off-site farmland to non-agricultural use?	☐	☐	☐	■

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use or an existing Williamson Act contract?

The project site is zoned Community Reserve. While agriculture is a permitted use on land zoned as Community Reserve, the project site is currently vacant and not used for agriculture. The project site is located on Other Land, as defined in the California Department of Conservation's (DOC) California Important Farmland Finder (DOC 2018). The project site is not under an existing Williamson Act contract. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use or conflict with an existing Williamson Act contract. Therefore, no impacts would occur.

NO IMPACT

c. Would the project involve other changes in the existing environment that, due to their location or nature, could result in conversion of off-site farmland to non-agricultural use?

The DOC identifies Farmland of Local Importance adjacent and to the south of the project site (DOC 2018). However, the City of Oxnard General Plan Background Report identifies the surrounding land as Urban (City of Oxnard 2006). The Farmland of Local Importance identified by the DOC is vacant land, surrounded by urban uses which would be incompatible with agricultural use. The introduction of the proposed project would not cause further land use compatibility issues beyond existing conditions. Therefore, the proposed project would have no impact related to changes in the existing environment that, due to their location or nature, could result in conversion of off-site farmland to non-agricultural use.

NO IMPACT

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3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP?	☐	☐	☐	■
b. Violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation?	☐	■	☐	☐
c. Result in a net increase of any criteria pollutant in excess of quantitative thresholds recommended by the VCAPCD?	☐	■	☐	☐
d. Expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants?	☐	■	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	■	☐

An Air Quality and Greenhouse Gas Study was completed by Rincon Consultants, Inc. (Rincon) in May 2023, which informs the entire analysis of potential impacts to air quality (Appendix A).

a. Would the project conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP?

According to the 2003 Ventura County Air Quality Pollution Control District (VCAPCD) Ventura County Air Quality Assessment Guidelines (Guidelines), a project's consistency with the Ventura County Air Quality Management Plan (AQMP) can be determined by comparing the actual population growth in Ventura County from the proposed project using growth rates in the AQMP. Therefore, a demonstration of consistency with the population forecasts used in the most recently adopted AQMP is used for assessing project consistency with the AQMP. The 2022 Ventura AQMP relies on the Southern California Association of Governments' (SCAG) 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) forecasts of regional population growth in its projections for managing Ventura County's air quality.

The proposed project would not include new residential development and therefore would not directly result in population growth. The proposed project would result in an increase of up to 200 employees total, likely to be filled by the local workforce residing in Oxnard or the surrounding area. The employment growth forecasts in the 2020 RTP/SCS estimate the total number of jobs would increase from 61,000 in 2016 to 76,100 in 2045, for a total increase of 15,000 jobs. Therefore, the proposed project's employment growth would be within the RTP/SCS forecasts. Accordingly, the proposed project would not conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP. No impact would occur.

NO IMPACT

b. Would the project violate any federal or state air quality standard or contribute substantially to an existing or projected air quality standard violation?

c. Would the project result in a net increase of any criteria pollutant in excess of quantitative thresholds recommended by the VCAPCD?

Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory) into the atmosphere. Primary criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO_2), fine particulate matter (PM_{10} and $PM_{2.5}$), and sulfur dioxide (SO_2). Ozone (O_3) is considered a secondary criteria pollutant because it is created by atmospheric chemical and photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_X). These pollutants can have adverse impacts on human health at certain levels of exposure.

Significance Thresholds

This analysis uses VCAPCD thresholds to determine if the project would violate air quality standards or exceed thresholds for criteria pollutants. For projects within the city, the VCAPCD Guidelines provide ROG and NO_X thresholds that "the VCAPCD has determined will individually and cumulatively jeopardize attainment of the federal one-hour ozone standard, and thus have a significant adverse impact on air quality in Ventura County". These thresholds are as follows:

- ROG:25 pounds/day
- NO_X: 25 pounds/day

According to the VCAPCD Guidelines, construction-related emissions (including portable engines and portable engine-driven equipment subject to the California Air Resource Board [CARB] Statewide Portable Equipment Registration Program and used for construction operations or repair and maintenance activities) of ROG and NO_X are not counted towards the two significance thresholds, since these emissions are temporary. However, the VCAPCD Guidelines recommend that if a project's estimated construction-related emissions of ROG and NO_X would exceed 25 pounds/day, the following measures to mitigate ozone precursor emissions from construction motor vehicles be implemented:

- Minimize equipment idling time
- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications
- Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time

- Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible

The VCAPCD guidelines do not include thresholds for CO, SO_2, PM_{10}, or $PM_{2.5}$.

Construction Emissions

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10}] and Particulate Matter-2.5 [$PM_{2.5}$]), exhaust emissions from heavy construction equipment and construction vehicles, and ROG emissions released during the drying of architectural coating and paving phases. As part of the Air Quality and Greenhouse Gas Study, air pollutant emissions generated by project construction were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions. Table 3 summarizes the estimated maximum daily emissions of pollutants during construction of the proposed project. As shown therein, construction-related emissions would exceed the VCAPCD threshold for NO_x. Therefore, construction-related emissions would have a potentially significant impact to air quality and Mitigation Measure AQ-1 is required.

Table 3 Project Construction Emissions

	Maximum Daily Emissions (pounds/day)[1]					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Aquatics Center						
2023[2]	4	47	38	<1	11	6
2024	2	18	19	<1	4	2
2025	5	12	15	<1	1	<1
Pipeline[3]						
Pipeline	4	34	33	<1	3	2
Maximum Daily Emissions	**9**	**81**	**71**	**<1**	**14**	**8**
VCAPCD Thresholds	25	25	–	–	–	–
Threshold Exceeded?	**No**	**Yes**				

VCAPCD = Ventura County Air Pollution Control District; ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

[1] This table provides a conservative analysis and presents the maximum daily emissions when the construction phases overlap.

[2] Construction would begin in the first quarter of 2026 and end in the first quarter of 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

[3] It is assumed the gas pipeline would overlap the construction of the aquatics center for approximately 18 days; therefore, no year is associated with the construction of the natural gas pipeline.

Notes: Some totals may not add up due to rounding. Emissions data is sourced from "mitigated" results, which incorporate emissions reductions from measures to be implemented during project construction, such as watering of soils during construction required under VCAPCD Rule 55.

Source: Air Quality and Greenhouse Gas Study (Appendix A)

Operational Emissions

Operation of the proposed project would generate criteria air pollutant emissions associated with area sources (e.g., architectural coatings, consumer products, and landscaping equipment), energy

sources (i.e., use of natural gas for space and water heating), and mobile sources (i.e., vehicle trips to and from the project site). As part of the Air Quality and Greenhouse Gas Study, air pollutant emissions generated by project operation were estimated using CalEEMod, version 2022.1. Table 4 summarizes the proposed project's maximum daily operational emissions by emission source. As shown therein, operational emissions would not exceed VCAPCD regional thresholds for criteria pollutants. Therefore, project operation would not result in a considerable net increase of any criteria pollutant in excess of thresholds, and impacts would be less than significant.

Table 4 Project Operational Emissions

	Maximum Daily Emissions (pounds/day)					
Emission Source	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	1	<1	2	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	17	11	89	<1	6	1
Project Emissions	**17**	**11**	**91**	**<1**	**6**	**1**
SCAQMD Regional Thresholds	25	25	–	–	–	–
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

ROG = reactive organic gases; NO_x = nitrogen oxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns; SO_x = sulfur oxide

Notes: Some numbers may not add up precisely due to rounding considerations.

Source: Air Quality and Greenhouse Gas Study (Appendix A)

Mitigation Measures

AQ-1 NO_x Construction Reduction Measures

During construction, the construction contractor shall implement the following measures pursuant to the requirements of the VCAPCD Guidelines.

- Ensure all on-site vehicles and equipment with 50 horsepower or more shall meet, at a minimum, United States Environmental Protection Agency (USEPA) Tier 4 final engine certification requirements. If Tier 4 final equipment is not available, the contractor may apply other technologies available for construction equipment which would achieve a reduction in NO_X (as well as PM) emissions comparable to Tier 4 final construction equipment. Where alternatives to USEPA Tier 4 equipment are utilized, the contractor shall be required to provide evidence these alternative technologies would achieve comparable emissions reductions. Certifications or alternative reduction strategies shall be required prior to receiving a construction permit.
- Minimize equipment idling time.
- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
- Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time.
- Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible.

Prior to initiation of construction activities, the City of Oxnard Public Works Department shall ensure that the measures listed above are included in the construction specifications for the proposed project.

Significance After Mitigation

Implementation of Mitigation Measure AQ-1 would reduce construction emissions of NO_x in accordance with VCAPCD guidance. Construction emissions with implementation of Mitigation Measure AQ-1 are shown in Table 5. As shown therein, emissions of NO_x would be reduced below 25 pounds per day from the use of Tier 4 final equipment as compared to no specified tier. Therefore, impacts would be less than significant after mitigation.

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Table 5 Construction Air Pollutant Emissions – Mitigated

	Maximum Daily Emissions (pounds/day)[1]					
Project Component	**ROC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Aquatics Center						
2023[2]	1	10	31	<1	9	5
2024	<1	3	19	<1	3	1
2025	4	4	17	<1	<1	<1
Pipeline[3]						
Pipeline	1	6	40	<1	2	<1
Maximum Daily Emissions	**5**	**17**	**71**	**<1**	**11**	**5**
VCAPCD Thresholds	25	25	–	–	–	–
Threshold Exceeded?	**No**	**No**	**–**	**–**	**–**	**–**

VCAPCD = Ventura County Air Pollution Control District; ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

[1] This table provides a conservative analysis and presents the maximum daily emissions when the construction phases overlap.

[2] Construction would begin in the first quarter of 2026 and end in the first quarter of 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

[3] It is assumed the gas pipeline would overlap the construction of the aquatics center for approximately 18 days; therefore, no year is associated with the construction of the natural gas pipeline.

Source: Air Quality and Greenhouse Gas Study (Appendix A)

d. Would the project expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants?

The closest sensitive receptors to the project site are students at Channel Islands High School approximately 200 feet northwest of the proposed gas line alignment and single-family residents approximately 415 feet east of the project site. Toxic Air Contaminant (TAC) and San Joaquin Valley Fever impacts to sensitive receptors are discussed in the following subsections.

Toxic Air Contaminants

A TAC is an air pollutant that may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-

term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM); however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

Construction Impacts

Construction-related activities would result in temporary project-generated emissions of DPM from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. The prevailing winds in Oxnard are westerly, which is directed to residential neighborhoods approximately 800 feet east of the project site, rather than the nearest sensitive receptors. The proposed project would be consistent with applicable VCAPCD requirements and control strategies intended to reduce emissions from construction equipment and activities. With incorporation of Mitigation Measure AQ-1, the construction contractor would be required to use off-road diesel-powered construction equipment that meets or exceeds the most stringent and environmentally protective CARB and USEPA Tier 4 off-road emissions standards, or alternatively fueled equipment which would substantially reduce DPM emissions. Thus, with implementation of Mitigation Measure AQ-1, construction activities would reduce the TAC exposure to sensitive receptors and impacts would be less than significant with mitigation incorporated.

Operational Impacts

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). CARB guidelines recommend siting distances both for the development of sensitive land uses in proximity to TAC sources and for the addition of new TAC sources in proximity to existing sensitive land uses. Recreational land uses are not considered land uses that generate substantial TAC emissions based on review of the air toxic sources listed in CARB's guidelines. It is expected that quantities of hazardous TACs generated on site (e.g., cleaning solvents, paints, landscape pesticides) for the types of proposed land uses would be below thresholds warranting further study under the California Accidental Release Program. Because the proposed project would not include substantial TAC sources and is consistent with CARB guidelines, the proposed project would not have a significant impact on the release of carcinogenic or toxic air contaminants.

San Joaquin Valley Fever

San Joaquin Valley Fever is an airborne fungal infection caused by the fungus *Coccidioides immitis*. The fungal spores responsible for the disease generally grow in undisturbed soil and have affected residents of Ventura County. Ground disturbance during project construction has a potential to release fungal spores, if they are present on the project site. However, standard construction measures in accordance with VCAPCD rules would reduce fugitive dust generation which would minimize the potential risk of infection. Therefore, construction of the proposed project would not substantially increase the risk to public health above existing conditions. In addition, given the temporary nature of construction emissions, as well as incorporation of fugitive dust reduction measures through compliance with existing VCAPCD regulations, the potential impact associated with San Joaquin Valley Fever would be less than significant.

Mitigation Measure

Implementation of Mitigation Measure AQ-1 is required.

Significance After Mitigation

Implementation of Mitigation Measure AQ-1 would require the construction contractor to use off-road diesel-powered construction equipment that meets or exceeds the most stringent and environmentally protective CARB and USEPA Tier 4 off-road emissions standards, or alternatively fueled equipment which would substantially reduce DPM emissions. With implementation of Mitigation Measure AQ-1, TAC exposure to sensitive receptors during construction would be less than significant.

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e. Would the project create objectionable odors affecting a substantial number of people?

Construction could generate odors associated with heavy-duty equipment and ground-disturbing activities. Such odors would be temporary in nature and limited due to the duration of construction in the vicinity of a given receptor. Project construction would not generate other emissions, such as those leading to odors.

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of odors (e.g., sewage treatment plants, landfills, recycling facilities, biomass operations, autobody shops, fiberglass manufacturing, and livestock operations). An aquatics center operation is not identified on this list as a potential odor source. Therefore, the proposed project would have a less-than-significant impact on the creation of objectionable odors.

LESS-THAN-SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c. Have a substantial adverse effect on federally protected waters of the U.S. as defined by Section 404 of the federal Clean Water Act or protected waters of the state as defined by Section 1600 et seq. of the California Fish and Game Code (including, but not limited to, marshes vernal pools, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
e. Conflict with any local policies or ordinances protecting biological resources?	☐	☐	☐	■
f. Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The project site encompasses 7.93 acres within a disturbed dirt lot. The site is in a developed urban area within a public park (College Park). Existing recreational facilities associated with College Park are located to the west and south and consist of a soccer field, tennis courts, parking areas, recreational structures, and a small pond. The eastern and northern boundary of the project site is lined with large eucalyptus "gum" trees (*Eucalyptus* spp.). The areas surrounding College Park consist primarily of residential urban development. In addition, agricultural fields are located approximately 0.5 to the east. The nearest open space is over 0.5 mile east of the project site, along Calleguas Creek.

Due to the disturbed condition of the site, there are few biological resources present and the overall biological value of the site is low. The nearest United States Fish and Wildlife Service (USFWS) designated Critical Habitat, located approximately 2.3 miles to the southwest along Ormond Beach, is habitat for the tidewater goby (*Eucyclogobius newberryi*) and western snowy plover (*Charadrius nivosus nivosus*) (USFWS 2022b). Due to their distance from the project site, project implementation would not affect or modify these delineated protected habitat areas or other wildlife habitats suitable for these protected species.

A search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), the Cornell Lab of Ornithology's eBird, and the USFWS Information for Planning and Consulting, was conducted on December 20, 2022, to identify documented occurrences of special status species in the vicinity of the project site. The CNDDB documents two special status species occurrences overlapping the project site: monarch butterfly (*Danaus plexippus*) and American peregrine falcon (*Falco peregrinus anatum*) (CDFW 2022). Further information on these species and potential to occur within the project site is provided below. Additional special status species were documented greater than 3.5 miles away from the project site, but suitable habitat does not occur in the project site. These include: southwestern pond turtle (*Emys marmorata*), Blainville's horned lizard (*Phrynosoma blainvillii*), Southern California legless lizard (*Anniella stebbinsi*), Crotch's bumble bee (*Bombus crotchii*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), least Bell's vireo (*Vireo bellii pusillus*), California horned lark (*Eremophilia alpestris actia*), and burrowing owl (*Athene cunicularia*). Within a query of the Cornell Lab of Ornithology's eBird (2022), two special status species have been previously documented in College Park, but were not identified by the CNDDB. These species include yellow warbler (Setophaga petechia) and willow flycatcher (*Empidonax triallii*), also discussed below.

Suitable habitat for special status plant species documented in the CNDDB query within the vicinity of the project site is absent. Due to the disturbed nature of the site and absence of suitable habitat, special status plant species are not expected to occur within the project site.

Other species known to occur in the vicinity of the project site, such as western burrowing owl (*Athene cunicularia*), southwestern pond turtle (*Actinemys pallida*), two-striped garter snake (*Thamnophis hammondii*), and least Bell's vireo (*Vireo bellii pusillus*), are not expected to occur in the project site due to lack of suitable habitat. The ground is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment. The ground disturbances and other human disturbances of the project site reduce the potential occurrences for burrowing owl or breeding pond turtle that utilize upland habitats for laying eggs. No suitable riparian or aquatic habitat occurs within the project site that may support nesting least Bell's vireo or two-

striped garter snake. In addition, no vegetation is proposed for removal that may support nesting birds or other local wildlife.

Monarch Butterfly

The California overwintering population of monarch butterfly is ~~a candidate species proposed for federal listing~~ proposed for listing as a threatened species under the federal Endangered Species Act. Monarch butterflies overwinter in roost sites that extend along the Pacific coast from northern Mendocino County to Baja California, Mexico. Overwintering period for monarch in California occurs between October 15 and March 15. Roosts are located in wind-protected tree groves, including groves of eucalyptus, with nectar and water sources nearby (Xerces Society 2022). Overwintering habitat may be present within the eucalyptus trees bordering the project site to the east and north, as documented by the CNDDB and Xerces Society (CDFW 2022). This species may also occur temporarily during spring migration as the species moves through the region.

American Peregrine Falcon

The American peregrine falcon is a CDFW Fully Protected species that occurs near urban areas and open habitats, including wetlands, lakes, rivers, and mountain sides. Nests consist of a scrape or a depression or ledge in an open site. The species typically nests on cliffs, banks, dunes, mounds and occasionally on human-made structures such as bridges or tall buildings or occasionally abandoned raptor nests. American peregrine falcon prey on small to medium sized birds, small reptiles, mammals and bats. They prefer wide open spaces and can reach speeds of up to 200 miles per hour when pursuing their aerial prey. There is one CNDDB occurrence associated with a nest documented on a power facility in 2017 along the coastline, approximately 2.5 miles to the southwest of the project site. Due to the lack of suitable foraging habitat on the project site, the species is not expected to perch in the eucalyptus trees. The species may fly over the project site periodically, but is not expected to nest or forage in the project site due to absence of suitable nesting and foraging habitat.

Yellow Warbler

The yellow warbler is a CDFW Species of Special Concern (SSC) and a migratory bird species, typically occurring in riparian plant associations in close proximity to water. They are frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plant communities including cottonwoods, sycamores, ash, and alders. The bird is a common occurrence throughout California during its breeding period in the summer months. There is no CNDDB documentation of the species in the vicinity of the project site; however, eBird (2022) documented the species in College Park in 2021. The yellow warbler is a common migratory species occurring throughout Ventura County and may occur temporarily in the eucalyptus trees adjacent to the project site during its migration period; however, the project site and the adjacent eucalyptus does not provide suitable habitat for nesting.

Willow Flycatcher

There are three subspecies of willow flycatcher, which are extremely difficult to differentiate; however, in southern/coastal California, the most likely to occur is the southwestern willow flycatcher (*E.t. extimus*). The southwestern willow flycatcher is a federal and state endangered species provided protection by the USFWS and CDFW. The bird typically occurs within riparian habitats, nesting in willow shrubs and thickets. Willow flycatcher was documented in eBird (2022) in

College Park in 2017; however, it is likely the bird was occurring only temporarily during its migratory period in the summer months, due to lack of suitable nesting habitat. Eucalyptus trees are not known to provide habitat for willow flycatcher; therefore, this species is not expected to occur at the project site due to lack of suitable habitat.

Migratory Nesting Birds

Under the provisions of the Migratory Bird Treaty Act of 1918 (MBTA), it is unlawful "by any means or manner to pursue, hunt, take, capture (or) kill" any migratory birds except as permitted by regulations issued by the USFWS. The term "take" is defined by the USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest, or egg of any migratory bird covered by the conventions, or to attempt those activities. In addition, the California Fish and Game Code extends protection to non-migratory birds identified as resident game birds and any birds in the orders Falconiformes or Strigiformes (birds-of-prey) (California Fish and Game Code Sections 3500 et seq.). The eucalyptus trees occurring in the project site have the potential to support numerous nesting bird species.

Under existing conditions, the project site is a disturbed dirt lot and there is no suitable habitat present for supporting special status species or sensitive habitats. However, the mature eucalyptus trees do provide suitable habitat for overwintering monarch butterfly. Suitable habitat for monarch will not be directly impacted by project activities, as the project does not propose to remove any trees. However, project activities may potentially indirectly disturb roosting overwintering monarch butterflies through construction noise, dust, and other human disturbances. Indirect impacts to monarch butterflies are potentially significant and therefore Mitigation Measure BIO-1 is required to reduce impacts.

No direct impacts to nesting birds are expected, as the project does not propose to remove any trees, however, construction of the project may potentially indirectly impact nesting birds through construction noise, dust, and other human disturbances that may cause a nest to fail. Indirect impacts to nesting birds are potentially significant during construction; therefore, Mitigation Measure BIO-2 is required to reduce impacts.

Following project completion, the eucalyptus trees will remain in place, continuing to provide roosting habitat for monarch butterflies and nesting habitat for birds. However, completion of the project would generate operational noise that has a potential to disturb roosting monarch butterflies during the fall/winter months and nesting birds in the spring/summer months. Operational noise sources after completion of the project would include heating, ventilation, and air condition equipment, pool utility equipment, voices from people recreating, and noise from swim competitions, such as use of a public address (PA) system and spectators. Operational noise also includes traffic noise generated by visitors traveling to and from the project site in automobiles. Noise from operations of the facility would primarily occur during daylight hours, and, as determined in the Noise and Vibration Study completed for the project (Rincon, 2023), operational noise generated by the project will not result in a substantial permanent increase in ambient noise. Therefore, the impacts to roosting monarch butterflies and nesting birds as a result from operational noise would be less than significant.

In addition, night-time lighting would occur during operational hours until 8:00 pm, or 10:00 pm during occasional special events, and throughout the night within the parking areas. The parking areas, which would remain luminated throughout the night, would use low-energy shielded light fixtures which direct light downward. Lighting from the pool would be shut off when the facility is not in use. This operational lighting at the project site would only be until 8:00 pm or during the

occasional events and would only incrementally contribute to nighttime lighting in the area, as the project site is surrounded by urban development with similar nighttime lighting. Therefore, the potential long-term impacts to roosting monarchs and birds resulting from operational lighting would be less than significant.

Impacts to foraging migratory birds, such as yellow warbler, are not expected to be significant due to the temporary foraging behavior of birds and ability to fly to nearby areas for additional foraging habitat.

Mitigation Measures

The following mitigation measures are required to reduce impacts to overwintering monarch butterfly roosts and nesting birds throughout the duration of project construction.

BIO-1 Monarch Butterfly Avoidance and Minimization

Project construction activities, including equipment staging, grading, and construction shall be avoided during the monarch butterfly overwintering season between October 15 through March 15, if practicable. In the event project construction activities cannot be avoided during the overwintering season, the City of Oxnard Public Department shall retain a qualified biologist to conduct a survey for roosting monarch butterflies within seven days prior to initiation of construction activities to determine their presence/absence. If construction activities occur during the overwintering season and monarch butterflies are present, the qualified biologist shall establish a protective buffer, ranging from 100 to 300 feet from the roosting site in which monarch butterflies are aggregating. The buffer will be delineated on site by the biologist with flagging or staking visible by construction personnel. The construction contractor shall ensure no construction occurs within the protective buffer, including staging of equipment or stopping or idling in the buffer, during the overwintering season. In the event construction activities, or other use of equipment, is needed to work within the buffer, the qualified biologist shall be present on site to monitor construction activities and determine if the work is disturbing the aggregated butterflies. If the biologist determines the work is disturbing the butterflies, the biologist shall stop work within the protective buffer at any time. In addition, due to the regular movement of the butterflies and locations of the aggregations, the biologist shall have the discretion to adjust the protective buffers, as necessary.

If no monarch butterflies are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses for a period of 7 days or more, if construction is planned to restart during the monarch butterfly overwintering season (October 15 through March 15), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.

BIO-2 Pre-Construction Nesting Bird Survey

Project construction activities, including (but not limited to) equipment staging, grading, and construction shall be avoided during the nesting bird season (February 1 through August 31), if practicable. In the event project construction activities cannot be avoided during the nesting bird season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a nesting bird survey within seven days prior to initiation of such activities to determine the presence/absence, location, and status of any active nests on site or within 100 feet of the site for songbirds and passerine species and up to 500 feet for raptors. The findings of the survey shall be summarized in a report and submitted to the City of Oxnard Public Works Department for review and approval prior to undertaking construction activities at the site.

If nesting birds/active nest(s) are observed on site, the qualified biologist shall establish a construction buffer with fencing or flagging. The buffer shall be 500 feet from the active nest for nesting raptors or threatened or endangered species and 100 feet from all other nesting birds. The nest buffer may be adjusted at the direction of the qualified biologist based on the species, location of the nest, and the type of construction activities occurring during the nesting period. The construction contractor shall communicate to all construction personnel that no person or construction related activity shall occur within the buffer without prior approval from the qualified biologist. Nests shall be monitored at a minimum of once per week by the qualified biologist until it has been determined the nest is no longer being used by either the young or adults. The construction contractor shall ensure no ground disturbance occurs within this buffer until the qualified biologist confirms the breeding/nesting is completed, including confirmation all the young have fledged (if the nest was successful). If construction activities must occur within the buffer, the activity shall be conducted at the discretion of the qualified biologist. The construction contractor shall obtain approval from the qualified biologist prior to conducting any construction activities within the buffer.

If no nesting birds are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses for a period of 7 days or more, if construction is planned to restart during the nesting bird season (February 1 through August 31), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.

Significance After Mitigation

Implementation of Mitigation Measure BIO-1 would ensure compliance with the federal Endangered Species Act by requiring construction activities occur outside of the overwintering period when monarch butterflies could be present or, if construction occurs during the overwintering period, requiring preconstruction surveys for monarch butterflies prior to construction activities to verify presence, and if present, requiring establishment of suitable avoidance buffers to avoid potential indirect impacts to monarch butterfly. With implementation of Mitigation Measure BIO-1, impacts to monarch butterfly would be reduced to a less-than-significant level.

Implementation of Mitigation Measure BIO-2 would ensure compliance with the California Fish and Game Code Section 3503 and the federal Migratory Bird Treaty Act with respect to nesting birds by requiring pre-construction nesting bird surveys and avoidance of active nests to reduce potential impact to nesting birds. With implementation of Mitigation Measure BIO-2, impacts to nesting birds would be reduced to a less-than-significant level.

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b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No riparian habitats, wetlands, or other sensitive natural communities occur within the project site and therefore the proposed project would have no impacts to these resources.

NO IMPACT

c. Would the project have a substantial adverse effect on federally protected waters of the U.S. as defined by Section 404 of the federal Clean Water Act or protected waters of the state as defined by Section 1600 et seq. of the California Fish and Game Code (including, but not limited to, marshes vernal pools, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means?

No waters of the U.S. or State occur within the project site and therefore the proposed project would have no impacts to these resources.

NO IMPACT

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. Regional and local wildlife movements are expected to be concentrated near topographic features that allow convenient passage, including roads, drainages, and ridgelines.

As mentioned above, the project site is in an urban area surrounded by residential housing and agriculture. The nearest open space is over 0.5 mile east of the project site, along Calleguas Creek, which may provide a suitable corridor for wildlife movement. However, the project site does not connect areas of natural habitat and is not located near wildlife nurseries; therefore, the project would have no impact on wildlife movement.

NO IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources?

The City of Oxnard Municipal Code, Chapter 20: Trees; Shrubs, identifies protection of trees, plants, and shrubs on public property. No vegetation occurs within the project site and the eucalyptus trees located adjacent to the project site are not subject to protection by any local or regional protection ordinances. Therefore, no impacts associated with local biological resource protection policies or ordinances would occur.

NO IMPACT

f. Would the project conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is in an urban area and is zoned as Community Reserve by the City of Oxnard. The project site is not within an area covered by a Habitat Conservation Plan or Natural Community Conservation Plan (CDFW 2019). Additionally, as explained above, the project would not substantially impact any native or sensitive habitat. Therefore, the proposed project would not conflict with an adopted local, regional, or state habitat conservation plan, and there would be no impact.

NO IMPACT

5 Climate Change and Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with state goals for reducing GHG emissions in California?	☐	☐	■	☐
c. Contribute or be subject to potential secondary effects of climate change (e.g., sea level rise, increase fire hazard)?	☐	☐	■	☐

An Air Quality and Greenhouse Gas Study was completed by Rincon in May 2023, which informs the entire analysis of potential impacts to greenhouse gas emissions (GHGs) (see Appendix A).

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with state goals for reducing GHG emissions in California?

Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. GHGs are emitted by natural processes and human activities. Of these gases, carbon dioxide (CO_2) and methane (CH_4) are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Different types of GHGs have varying global warming potentials. The global warming potential of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e),

which is the amount of GHG emitted multiplied by its global warming potential. Carbon dioxide has a 100-year global warming potentials of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis.

Thresholds of Significance

According to the *CEQA Guidelines*, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of a project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. The City of Oxnard has not adopted a numerical significance threshold for assessing impacts related to GHG emissions but has an adopted Climate Adaptation and Action Plan (CAAP) for reduction of GHG emissions. Neither the VCAPCD, California Office of Planning and Research, CARB, California Air Pollution Control Officers Associated, nor any other state or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the proposed project.

In the absence of any adopted numeric threshold, the significance of the proposed project's GHG emissions is evaluated consistent with *CEQA Guidelines* Section 15064.4(b) by considering whether the proposed project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Therefore, the significance of the proposed project's potential impacts regarding GHG emissions and climate change is evaluated based on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are the 2022 Scoping Plan, the 2020-2045 RTP/SCS, the City of Oxnard General Plan and the City of Oxnard CAAP. GHG emissions from the construction and operation of the proposed project are provided for informational purposes.

Greenhouse Gas Generation

Construction of the proposed project would generate temporary GHG emissions primarily from the operation of construction equipment as well as from vehicles transporting construction workers to and from the project site and heavy trucks to transport building materials. Consistent with guidance from the Association of Environmental Professionals and the South Coast Air Quality Management District, GHG emissions from construction have been amortized over a 30-year period. Table 6 shows the estimated GHG emissions from construction. Amortized over a 30-year period, proposed project construction would generate an estimated 21 metric tons (MT) CO_2e per year.

Table 6 Estimated Greenhouse Gas Emissions from Construction

Construction	Project Emissions MT CO_2e
Aquatics Center	
2023	120
2024	320
2025	144
Pipeline[2]	
Pipeline	42
Total	**626**
Amortized over 30 Years	21

MT CO_2e = metric tons of carbon dioxide equivalent

[1]Construction would begin in the first quarter of 2026 and end in the first quarter of 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance with statewide plans to reduce air pollutant and GHG emissions.

[2] It is assumed the gas pipeline would overlap the construction of the aquatics center for approximately 18 days; therefore, no year is associated with the construction of the natural gas pipeline.

Source: Air Quality and Greenhouse Gas Study (Appendix A)

Operation of the proposed project would generate GHG emission associated with area sources, energy and water usage, vehicle trips, and wastewater and solid waste generation. Table 7 combines the estimated construction and operational GHG emissions associated with development of the proposed project. As shown therein, annual emissions from the proposed project would be approximately 3,023 MT CO_2e per year.

Table 7 Combined Annual Greenhouse Gas Emissions

Emission Source	Annual Emissions (MT CO_2e)
Construction[1]	**21**
Operational	**3,002**
Area	1
Energy	84
Mobile	2,850
Solid Waste	50
Water, Wastewater	17
Total	**3,023**

MT CO_2e = metric tons of carbon dioxide equivalent

[1]Amortized construction related GHG emissions over 30 years.

Source: Air Quality and Greenhouse Gas Study (Appendix A)

Consistency with Applicable Plans and Policies

2022 Scoping Plan

The principal legislation regulating GHG emissions is Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, which was followed by Senate Bill (SB) 32. The quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. According to CARB, California achieved its 2020 GHG emission reduction target in 2016. The goal of SB 32 is to reduce GHG emissions to 40

percent below 1990 levels by 2030. Pursuant to SB 32, CARB's Scoping Plan was created to outline goals and measures for the state to achieve the reductions, the latest iteration of which is the 2022 Scoping Plan. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities. The proposed project would be consistent with these goals through proposed project design, which includes complying with the latest Title 24 Green Building Code and Building Efficiency Energy Standards. The proposed project would allocate six passenger vehicle spaces for electric vehicle (EV) charging. In addition, the proposed project would install water efficient fixtures to conform to State water conservation requirements. The proposed project would be served by SCE, which is required to increase its renewable energy procurement in accordance with SB 100, which requires renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045. The project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the project site which provides visitors alternative transportation to and from the project site. With these design features in place, the proposed project would be consistent with the goals of the 2022 Scoping Plan.

2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). The 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars in the SCAG region by eight percent below 2005 levels by 2020 and 19 percent by 2035 in accordance with the CARB targets adopted in March 2018. The 2020-2040 RTP/SCS includes ten goals with corresponding implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The proposed project is an infill development that would add an amenity to several neighboring residential communities within approximately half a mile radius from the project site. The project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the project site. In addition, the project site's proximity to residential communities and education facilities could potentially reduce commute times to new job opportunities. The proposed project would allocate six parking spaces to EV charging, and an additional 19 would be EV capable, meaning infrastructure that would support the future installation of an EV charging stations would be provided. Therefore, the proposed project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS.

City of Oxnard 2030 General Plan

In October 2011, the City of Oxnard adopted the City of Oxnard 2030 General Plan to provide the city with a consistent framework for land use decisions. The 2030 General Plan includes the State-required elements, and a chapter on sustainable community development addressing the emerging topics at the time of climate change, alternative energy, and the implementation of SB 375 which requires Metropolitan Planning Organizations, such as SCAG, to adopt and implement a RTP/SCS. Policies in the 2030 General Plan relevant to GHG emissions include the following:

- **Policy CD-1.4: Transportation Choices.** Promote the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices (pedestrian, bicycle, transit, and automobile).

- **Policy ICS-11.7: Water Wise Landscapes.** Promote water conservation in landscaping for public facilities and streetscapes, residential, commercial, and industrial facilities and require new developments to incorporate water conserving fixtures (low water usage) and water-efficient plants into new and replacement landscaping.

The proposed project would be consistent with the General Plan's polices by complying with the water efficiency and conservation requirements in the latest iteration of Title 24 of the California Building Code. The proposed project would include bike racks and the project site is within a quarter of a mile from transit along Rose Avenue to promote alternative modes of transportation. The proposed project would be served by SCE, which is required to increase its renewable energy procurement to 100 percent by 2045 in accordance with SB 100. Therefore, the proposed project would be consistent with the policies in the 2030 General Plan to increase energy and water efficiency, and potentially reduce the amount of motor vehicle trips through availability of transit and connectivity to surrounding neighborhoods.

City of Oxnard Climate Adaption and Action Plan

The City of Oxnard CAAP outlines goals, strategies, and actions for reducing emissions and increasing community resilience to climate change. The CAAP ensures Oxnard does its part to contribute to the goals of AB 32 and its successor legislation, SB 32, while remaining consistent with the City's General Plan vision for future growth. The proposed project would be consistent with several transportation strategies, such as T1: Expand Zero Emissions Charging and Fueling Infrastructure, T3: Expand Infrastructure for Pedestrians, Bikes, and Micro-mobility Solutions, and T4: Improve Transit Effectiveness and Accessibility. The proposed project would include six EV charging stations and 19 EV-capable parking spaces. In addition, 16 bicycle racks would be installed at the main entrance of the aquatics center to promote alternative modes of transportation. The project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the site. Therefore, the proposed project could potentially reduce the reliance on motor vehicle trips and thus vehicle miles traveled (VMT). The proposed project would be consistent with the goals outlined in the CAAP.

Conclusion

The proposed project would generate GHG emissions during construction and operation. However, the proposed project would implement design features, such as the installation of bicycle parking, and adherence to the Title 24 standards, and be located near transit stops which would reduce the amount of GHG emissions the proposed project would generate, consistent with the guidance and requirements of applicable GHG-reduction plans and policies. Therefore, the proposed project would have a less-than-significant impact related to the generation of GHG emissions and would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project contribute or be subject to potential secondary effects of climate change (e.g., sea level rise, increase fire hazard)?

Climate change may result in a number of secondary effects, including an unpredictability in the quality and supply of water from the Sierra snowpack, increased risk of large wildfires, reductions in the quality and quantity of certain agricultural products, exacerbation of air quality problems,

increase in temperature and extreme weather events, and a decrease in the health and productivity of California's forests.

An individual project could potentially be vulnerable to secondary effects of climate change with its site location or it could increase secondary effects to the surrounding area with its presences. To determine if the proposed project would contribute or be subject to potential secondary effects of climate change, Table 8 evaluates the consequences of climate change in California compared to the proposed project. As described in Table 8, the proposed project would have a less-than-significant impact on potential secondary effects of climate change.

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Table 8 Secondary Effects of Climate Change

Consequences of Climate Change in California	Project Evaluation
Unpredictability in the quality and supply of water from the Sierra snowpack. If heat-trapping emissions continue unabated, more precipitation would fall as rain instead of snow, and the snow that does fall would melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.	**The proposed project would not contribute or be subject to this potential secondary effect of climate change**. According to the City of Oxnard Urban Water Management Plan (UWMP), the City anticipates it will be able to manage its water supply portfolio to provide adequate water to meet demand in normal, single-dry, and multiple dry years through the year 2045 (City of Oxnard 2021). The proposed project's annual demand of 28.1 AF would account for approximately 0.09 percent of the projected 28,819 AF demand in 2025 and approximately 0.08 percent of the projected 33,349 AF demand in 2045 (City of Oxnard 2021). The proposed project would account for minimal demand anticipated by the City and would not substantially contribute to the reduction of the snowpack.
Increased risk of large wildfires. If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain would stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.	**The proposed project would not contribute or be subject to this potential secondary effect of climate change.** The project site is approximately 7.93-acres. While the project site is undeveloped it is surrounded by urban development and is not in or near a forested area. As a result, it would not cause surrounding development to be subject to wildfire. The proposed project would not contribute to or be subject to an increased risk of large wildfires; related impacts would be less than significant.
Reductions in the quality and quantity of certain agricultural products. The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.	**The proposed project would not contribute or be subject to this potential secondary effect of climate change.** The proposed project is recreational in nature and would not engage in the production of agricultural products.
Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.	**The proposed project would not contribute or be subject to this potential secondary effect of climate change.** Health effects from air quality problems that would be exacerbated by an increase in temperature would more commonly occur at a local level. As discussed under Section 3, *Air Quality*, the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

Consequences of Climate Change in California	Project Evaluation
A rise in sea levels resulting in the displacement of coastal businesses and residences. During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats	**The proposed project would not contribute or be subject to this potential secondary effect of climate change.** The project site is approximately 45 feet to 48 feet in elevation relative to local mean sea level. The project site is approximately 2.7 miles inland from the Pacific Ocean. The proposed project would not result in the displacement of coastal businesses and residences or be displaced due to a rise in sea levels.
Increased temperature and extreme weather events. Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.	**The proposed project would not contribute or be subject to this potential secondary effect of climate change.** Development of the proposed project would not directly contribute to an increase in temperature or extreme weather events. In addition, the aquatics center could potentially provide relief to the community during extreme heat events.
A decrease in the health and productivity of California's forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.	**The proposed project would not contribute or be subject to this potential secondary effect of climate change.** The project site is not forested, and development of the site would not contribute to a change in the health and productivity of forested land. Development and operations of the proposed project would not result in an increase in wildfire, nor would it enhance insect populations or establish non-native species, resulting in a decrease in the health or productivity of California's forests.

Source: Air Quality and Greenhouse Gas Study (Appendix A)

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6 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of an historical resource as defined in State CEQA Guidelines Section 15064.5?	☐	☐	☐	■
b. Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to State CEQA Guidelines Section 15064.5?	☐	■	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	■	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

A Cultural Resources Technical Report was completed in December 2022, which informs analysis of potential impacts to cultural and tribal cultural resources. The Cultural Resources Technical Report consists of information gathered from a California Historical Resources Information System search, a Sacred Lands File (SLF) search, a pedestrian survey, and desktop analysis (Appendix B).

a. Would the project cause a substantial adverse change in the significance of an historical resource as defined in State CEQA Guidelines Section 15064.5?

Four historical built-environment resources are located outside of the project site within a 0.5-mile radius search area. However, all four historical resources were previously deemed ineligible for listing in the National Register of Historic Places and the California Register of Historic Resources. In addition, the field survey did not identify any built environment resources on the project site which could be considered historical resources pursuant to *CEQA Guidelines* Section 15064.5 (Appendix B). Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* Section 15064.5. No impact would occur.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of a unique archaeological resource pursuant to State CEQA Guidelines Section 15064.5?

There are no known archaeological resources or archaeological deposits at the project site, and the absence of substantial prehistoric or historic-period archaeological remains and existing level of disturbance at the project site suggest there is a low potential for encountering intact subsurface

archaeological deposits (Appendix B). However, a lack of surface evidence of archaeological materials does not entirely preclude their subsurface existence, and there is potential unknown buried archaeological resource could be encountered during ground-disturbing activities. Therefore, the proposed project could potentially cause a substantial adverse change in the significance of a unique archaeological resource pursuant to *CEQA Guidelines* Section 15064.5 and Mitigation Measure CUL-1 is required to reduce impacts.

Mitigation Measure

CUL-1 Unanticipated Discovery of Cultural Resources

In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determine it to be appropriate, archaeological testing for California Register of Historic Resources eligibility shall be completed. If the resource proves to be eligible for the California Register of Historic Resources and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of California Code of Regulations Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The City shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per California Code of Regulations Guidelines Section 15126.4(b)(3)(C).

Significance After Mitigation

Implementation of Mitigation Measure CUL-1 would provide a standard procedure following the unanticipated discovery of an archaeological resource, including evaluation, consultation with Native American representatives, avoidance, and data recovery, if applicable. With implementation of Mitigation Measure CUL-1, the proposed project would not cause a substantial adverse change in the significance of a unique archaeological resource pursuant to *CEQA Guidelines* Section 15064.5, and impacts would be less than significant.

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c. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underly the soil layer. Typically, fossils are greater than 5,000 years old (i.e., older than middle Holocene in age) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. It is possible to evaluate the potential for geologic units to contain scientifically important paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction of a development project.

The project site is located in the Transverse Ranges geomorphic province, one of the eleven geomorphic provinces of California (California Geological Survey 2002a). The Transverse Ranges extend approximately 275 miles west-east from Point Arguello in Santa Barbara County, east to the San Bernardino Mountains, and south to the Anacapa-Santa Monica-Hollywood-Raymond-Cucamonga fault zone (Yerkes and Campbell 2005). The Transverse Ranges are composed of Proterozoic to Mesozoic intrusive crystalline igneous and metamorphic rocks overlain by Cenozoic marine and terrestrial sedimentary deposits and volcanic rock (Norris and Webb 1990). More specifically, the project site is located in the Oxnard Plain, a large coastal alluvial plain located south of the Santa Susana Mountains and west of the Santa Monica Mountains.

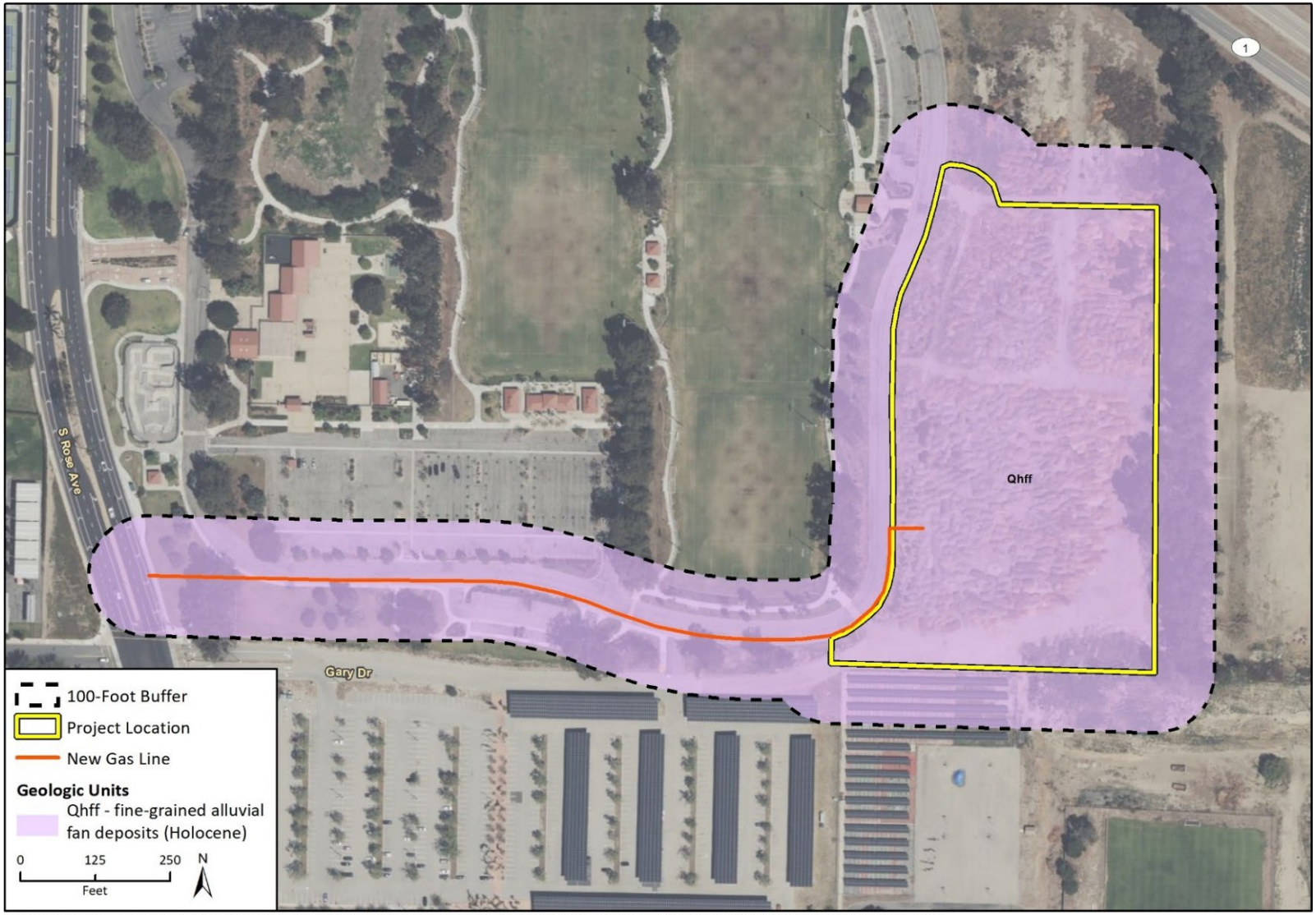
The geology of the region surrounding the project site was mapped by Clahan (2003), who identified one geologic unit, fine-grained alluvial fan deposits, underlying the project site (Figure 7). Fine-grained alluvial fan deposits consist of primarily clay with occasional sand and gravel lenses that are Holocene in age (Clahan 2003). Given their young age, these sediments are likely too young (i.e., less than 5,000 years old) to preserve paleontological resources (SVP 2010) and, therefore, have low paleontological sensitivity.

The Geotechnical Evaluation for the proposed project conducted test borings within the project site (Appendix C), which represent a more local and accurate assessment of the sediments underlying the project site. All the borings contained sediments ranging from silty sand to clay with small amounts of gravel, which largely resembles the description of fine-grained alluvial fan deposits from Clahan (2003). In 10 of the 15 borings, a 4- to 6.5-foot-thick layer of artificial fill (i.e., human-deposited sediments with no paleontological sensitivity) overlay these alluvial fan sediments (Appendix C).

Excavations for the pool areas are anticipated to reach up to 15 feet below the surface. Additionally, stone columns may be placed up to 50 feet in depth to increase the load-bearing capacity of the soil. Holocene alluvial sediments on the Oxnard Plain are 200 to 250 feet thick on average (California Geological Survey 2002b). Therefore, ground-disturbing construction activities are only anticipated to impact fine-grained alluvial fan deposits with low paleontological sensitivity. As a result, potential impacts to paleontological resources from construction of the proposed project would be less than significant.

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Figure 7 Geologic Map of the Project Site



Imagery provided by Microsoft Bing and its licensors © 2022. Additional information provided by "Geologic Map of the Oxnard 7.5' Quadrangle Ventura County, California," Clahan, 2003.

d. Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains are known to be present within the project site. However, it is possible to discover human remains during ground disturbing activities. Pursuant to California Health and Safety Code Section 7050.5, if human remains are found the County Coroner shall be contacted immediately and no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If human remains are determined to be of Native American origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) which would identify and notify a Most Likely Descendant (MLD). The MLD has 48 hours from being granted access to the project site to make recommendations for the disposition of the remains. If the MLD does not make a recommendation within the 48 hours, the landowner shall reinter the remains in an area of the property secure from subsequent disturbance. With adherence to procedures required through California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98, impacts to human remains, including those interred outside of formal cemeteries, would be less than significant.

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7 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	■
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Energy use during construction activities would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, and other machinery. Energy use during construction would be temporary in nature. The construction contractor would be required to demonstrate compliance with California Code of Regulations Title 13 Sections 2449 and 2485 which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes. In addition, heavy equipment would be subject to the USEPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption (USEPA 2004). Furthermore, in the interest of both environmental awareness and cost efficiency, construction contractors would reasonably be expected to utilize fuel in a manner that is not wasteful, inefficient, or unnecessary. Therefore, no construction impacts would occur related to wasteful, inefficient, or unnecessary consumption of energy or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Operation of the proposed project would result in increased use of natural gas and electricity. Table 9 summarizes the operational energy consumption for the proposed project compared to the total energy consumption in Ventura County. As shown in Table 9, the proposed project would use approximately 0.36 gigawatts of electricity per year and approximately 494.4 million BTUs of natural gas per year. This energy use represents less than 0.01 percent of electricity and natural gas usage in Ventura County annually for electricity and natural gas, respectively.

Table 9 Energy Consumption for the Proposed Project and Ventura County

Fuel Type	Proposed Project	Ventura County	Percentage of Ventura County Consumption[1]
Electricity (GWh/yr)	0.36	5,242.3	0.0069
Natural Gas (MMBtu/yr)	494.4	16,334,221	0.003

[1]Ventura County energy consumption is based on 2021 values for energy consumption, the most recent data available.

GWh/yr = Gigawatt hours per year; MMBtu/yr = million British Thermal Units per year

Source: Appendix A; California Energy Commission 2021a; California Energy Commission 2021b

The proposed project would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings) and the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for all new and renovated buildings constructed in California. The California Energy Code applies to the building envelope, space-conditioning systems, and water heating and lighting systems of buildings and appliances and provides guidance on construction techniques to maximize energy conservation (California Energy Commission [CEC] 2022). Minimum efficiency standards are given for a variety of building elements including appliances, water and space heating and cooling equipment, and insulation for doors, pipes, walls, and ceilings. The CEC emphasizes saving energy at peak periods and seasons and improving the quality of installation of energy efficiency measures. The proposed project would adhere to these energy-saving regulations. In addition, in the interest of both environmental awareness and cost efficiency, the City would reasonably be expected to not utilize fuel in a manner that is wasteful, inefficient, or unnecessary. As a result, the proposed project would promote the use of energy conservation on the project site, consistent with the City's Energy Action Plan (City of Oxnard 2013). In addition, as discussed in Section 5 Climate Change and Greenhouse Gas Emissions, the proposed project would be consistent with the goals outlined in the CAAP. Therefore, no operational impacts would occur related to the wasteful, inefficient, or unnecessary consumption of energy or conflicts with or obstruct a state or local plan for renewable energy or energy efficiency.

NO IMPACT

8 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	■
2. Strong seismic groundshaking that cannot be addressed through compliance with standard Code requirements?	☐	☐	■	☐
b. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse that cannot be addressed through compliance with standard Code requirements?	☐	■	☐	☐
c. Be located on expansive soil, creating substantial risks to life or property that cannot be addressed through compliance with standard Code requirements?	☐	☐	☐	■
d. Expose people or structures to inundation by seiche or tsunami?	☐	☐	☐	■
e. Rely in dredging or other maintenance activity by another agency that is not guaranteed to continue?	☐	☐	☐	■

A Geotechnical Evaluation was completed in August 2022, which informs the analysis of potential impacts related to geology and soils (Appendix C).

a.1. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The project site does not partially or fully intersect any known active or potentially active faults, including those delineated as an Alquist-Priolo Earthquake Fault Zone (Appendix C). Therefore, the proposed project would not expose people or structures to the risk of loss, injury, or death involving rupture of a known earthquake fault. No impact would occur.

NO IMPACT

a.2. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic groundshaking that cannot be addressed through compliance with standard Code requirements?

The project site is located approximately 9.4 miles northwest of the Oakridge fault which could produce strong seismic ground shaking in the event of an earthquake (Appendix C). However, this is a common risk throughout the seismically-active southern California region, and the proposed project would not exacerbate seismic groundshaking conditions beyond what is already present. Project design would adhere to the standards of the CBC which provides earthquake design requirements, including earthquake loading specifications for design and construction to resist effects of earthquake motions in accordance with the American Society of Civil Engineers Standard 7-05. In addition, standards regulate procedures for soil preparation, including, but not limited to: excavation, grading and earthwork, fills and embankments, expansive soils, foundation investigations, liquefaction potential, and soil strength loss. Compliance with the CBC would minimize the potential to expose people or structures to the risk of loss, injury, or death involving strong seismic groundshaking. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse that cannot be addressed through compliance with standard Code requirements?

The project site is flat and does not have steep topography conducive to landslides. The project site is located in an area mapped as a liquefaction zone (Appendix C). The Geotechnical Evaluation concluded liquefaction-induced settlement potential exists at the project site, which could result in structural deficiencies (Appendix C). Based on the results of the Geotechnical Evaluation, there is the potential for liquefaction-induced settlement to structurally compromise the proposed project. Therefore, this impact would be potentially significant and Mitigation Measure GEO-1 is required to reduce impacts to a less-than-significant level.

Mitigation Measure

GEO-1 Liquefaction Risk Minimization

The City Community Development Department shall ensure project design and construction complies with all recommendations presented within the Geotechnical Evaluation, titled *Geotechnical Evaluation South Oxnard Aquatic Center Project Oxnard College Park Oxnard,*

California (Ninyo and Moore 2022) or the most recent subsequent version. Prior to the issuance of grading permits, the City Community Development Department shall review the design and construction plans for the proposed project and ensure all recommendations from the Geotechnical Evaluation are incorporated into the plans. Prior to the start of construction, the City Community Development Department shall retain a qualified environmental professional (Professional Geologist [PG] or Professional Engineer [PE]) to ensure all recommendations from the Geotechnical Evaluation are implemented by the construction contractor. During construction, the qualified environmental professional shall perform field observation and testing during grading activities to confirm construction is occurring in accordance with the recommendations of the Geotechnical Evaluation. The qualified environmental professional shall summarize the results of the field observation and testing performed during grading activities into a Final Geotechnical Evaluation report and shall submit the report to the City Community Development Department. Prior to issuance of a Certificate of Occupancy, the City Community Development Department shall review the Final Geotechnical Evaluation report to confirm the recommendations of the Geotechnical Evaluation have been implemented.

Significance After Mitigation

Implementation of Mitigation Measure GEO-1 would require implementation of the recommendations in the Geotechnical Evaluation to minimize potential impacts related to liquefaction. With implementation of Mitigation Measure GEO-1, impacts would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project be located on expansive soil, creating substantial risks to life or property that cannot be addressed through compliance with standard Code requirements?

The project site is underlain by fill soils and alluvium generally consisting of loose to medium dense silty sand with gravel, clayey sand, poorly graded sand, and firm to very stiff silt and lean clay which are not conducive to expansive soils (Appendix C). Therefore, the proposed project would not create a risk to life or property related to expansive soil. No impact would occur.

NO IMPACT

d. Would the project expose people or structures to inundation by seiche or tsunami?

There are no large bodies of water near the project site which would provide conditions for potential inundation by seiche or tsunami. The project site is approximately 3.9 miles east of the City's Channel Islands Harbor which is the nearest area to the project site that could be affected by seiche (City of Oxnard 2006). The project site is approximately 1.9 miles northeast of the nearest tsunami hazard area (DOC 2022). Because the project site is located outside of the nearest seiche and tsunami hazard areas, the proposed project would not expose people or structures to inundation by seiche or tsunami.

NO IMPACT

e. Would the project rely on dredging or other maintenance activity by another agency that is not guaranteed to continue?

The project site is not in a location requiring ongoing dredging to maintain. The City would be responsible for maintenance of the aquatics center. Therefore, the project would not rely on dredging or other maintenance activity by another agency. No impact would occur.

NO IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials that cannot be addressed through compliance with standard regulatory requirements?	☐	■	☐	☐
b. Create a substantial hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment?	☐	■	☐	☐
c. Emit hazardous emissions or involve handling hazardous or acutely hazardous substances or waste within one-quarter mile of an existing or proposed school, in quantities or a manner that would create a substantial hazard?	☐	■	☐	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a substantial hazard to the public or the environment?	☐	☐	☐	■
e. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐

A Hazardous Materials Evaluation was completed in December 2022 (Appendix D) and a Phase II Environmental Site Assessment was completed in March 2023 (Appendix E). These documents inform the analysis of potential impacts related to hazards and hazardous materials.

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials that cannot be addressed through compliance with standard regulatory requirements?

b. Would the project create a substantial hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment?

The project site was previously used for agricultural and parking activities (Appendix D). Based on the results of soil testing conducted on the project site, the presence of total petroleum hydrocarbons (TPH) associated with diesel use is a concern (Appendix E). Consequently, ground-disturbing activities during construction could result in the release of contaminated soil into the environment which may create a substantial hazard to the public or environment and require remediation. In addition, off-site disposal of contaminated soils may require special handling or disposal. Therefore, construction impacts would be potentially significant and Mitigation Measure HAZ-1 is required to reduce impacts.

Construction of the proposed project would require the use of limited quantities of construction-related hazardous materials and petroleum products (e.g., diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals). Operation of the proposed project would involve the routine use of pool maintenance chemicals, cleaning products, pesticides/herbicides, and other materials used for pool and landscaping maintenance (Appendix D). The transport, use, and storage of hazardous materials would be conducted pursuant to applicable local, State, and federal regulations regarding the handling of potentially hazardous materials, including Title 49 of the Code of Federal Regulations and Title 13 of the California Code of Regulations. Title 49 of the Code of Federal Regulations requires training of every employee who handles hazardous materials to ensure proper handling, transport, and disposal of the hazardous materials. Title 13 of the California Code of Regulations regulates transport of hazardous materials to ensure the safe transport of hazardous materials.

Hazardous materials would be stored on site within four rooms, two in the northern building and two in the western building. 1,000-gallon tanks of sodium hypochlorite would be stored in three rooms and a 500-gallon tank of muriatic acid and 600 pounds of carbon dioxide would be stored in one room. However, these chemical and gas storage tanks would be designed, protected, and contained for such storage, in accordance with applicable regulations. Regardless, due to the large quantity of hazardous materials stored at the site, operation of the proposed project could potentially result in reasonably foreseeable accident conditions involving the release of hazardous materials. Chapter 6.95 of the California Health and Safety Code requires businesses[3] to prepare an Hazardous Materials Business Plans (HMBP) if the business uses, handles, or stores a hazardous material and/or waste or an extremely hazardous materials in quantities greater than or equal to 55 gallons for a liquid, 500 pounds for a solid, 200 cubic feet of any compressed gas, or the threshold planning quantities of an extremely hazardous substance. HMBPs include facility information, a Hazardous Materials Inventory Statement, an Emergency Response Plan, and an Emergency Response Training Plan. An HMBP is required to be certified annually in accordance with the Emergency Planning and Community Right-to-Know Act of 1986. The Oxnard Fire Department is the administrative agency that coordinates and enforces the HMBP program. Because the proposed project would store hazardous materials at quantities greater than the threshold provided in

[3] California Health and Safety Code Division 20, Chapter 6.95, Article 1, Section 25501(c)(5) defines "business" as including "An agency, department, office, board, commissions, or bureau of a city, county, or district". Therefore, the requirements of Chapter 6.95 apply to the proposed project.

Chapter 6.95 of the California Health and Safety Code, the proposed project would include implementation of an HBMP to minimize the potential for operation of the proposed project to result in upset or accidental conditions involving the release of hazardous materials into the environment. Compliance with these regulatory requirements, including implementation of the HBMP, would reduce impacts to a less-than-significant level.

Mitigation Measure

HAZ-1 Soil Management Plan

The City shall retain a qualified environmental consultant (Professional Geologist or Professional Engineer) to prepare a Soil Management Plan prior to construction. The Soil Management Plan shall be prepared to address handling and management of soils or other contaminated wastes on the project site, if any is encountered during subsurface investigation, to reduce hazards to construction workers and off-site receptors during construction. The City shall review, approve, and implement the Soil Management Plan prior to grading activities. The Soil Management Plan must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of impacts from the project site. These measures and practices may include, but are not limited to:

- Stockpile management including stormwater pollution prevention and the installation of Best Management Practices
- Proper disposal procedures for impacted materials
- Monitoring and reporting
- A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection. The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction
- Proper handling procedures for unexpected contamination, such as halt-work and avoidance protocols, and City and contractor notifications

The Soil Management Plan shall also specify the procedures to be implemented in the event unexpected hazardous materials are encountered during construction. If unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground disturbing activities, the construction contractor shall halt work in the immediate area and a qualified consultant (Professional Geologist or Professional Engineer) shall be contacted immediately to evaluate the situation. The qualified consultant shall evaluate the material and recommend the appropriate testing, removal, and disposal methods. The construction contractor shall ensure hazardous materials are removed or remediated in accordance with the requirements of the qualified environmental consultant and the Soil Management Plan. Construction work may continue on other parts of the project site while soil investigation and/or remediation takes place. The construction contractor shall not resume work at the impacted area(s) until approved by the qualified consultant and the City.

Significance After Mitigation

Implementation of Mitigation Measure HAZ-1 would require implementation of remedial measures and soil management practices to ensure adequate safety to workers and visitors. With implementation of Mitigation Measure HAZ-1, impacts related to hazardous materials would be reduced to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project emit hazardous emissions or involve handling hazardous or acutely hazardous substances or waste within one-quarter mile of an existing or proposed school, in quantities or a manner that would create a substantial hazard?

Channel Islands High School is located approximately 0.27 mile west of the location of the proposed aquatics center, and approximately 200 feet northwest of the proposed gas line. Oxnard College is adjacent to the southern border of the project site.

During construction, construction equipment would require the use of diesel fuel, gasoline, motor oil, and similar materials. The amount of fuel and oil to power construction equipment would be typical of similar construction projects. Such materials would be handled and disposed of in accordance with applicable regulations including the Occupational Safety and Health Administration Standard 1917.156 which designates fueling locations, regulates liquid fuel, and specifies standards for fueling operation and storage. Construction personnel would be required to have the necessary training and/or certifications to operate construction equipment, minimizing the risk of accidental release of hazardous materials due to equipment failure. The minimal use of fuels during construction, in accordance with applicable regulations, would ensure construction would not create a significant hazard involving the handling of hazardous materials within 0.25 mile of a school. During construction, the proposed project would be required to implement Mitigation Measure HAZ-1 to safely dispose of any contaminated soil and remediate the project site, as needed. As a result, construction of the proposed project would minimize the risk of hazards within 0.25 mile of a school.

Channel Islands High School is not located within 0.25 mile of the proposed location of the aquatics center where sodium hypochlorite, muriatic acid, and carbon dioxide would be stored during operation. However, these materials would be stored and used within 0.25 mile of Oxnard College. As discussed in criteria 9(a) and 9(b), operational use of hazardous materials would be carried out in accordance with all applicable regulations including Title 49 of the Code of Federal Regulations and Title 13 of the California Code of Regulations. As required by Chapter 6.95 of the California Health and Safety Code, hazardous materials storage and use during operation of the proposed project would be carried out in accordance with the HMBP which would establish emergency response procedures for the release or threatened release of a hazardous material. The HBMP and subsequent prevention and emergency response plans would be certified by the Oxnard Fire Department prior to operation. Implementation of the HMBP would reduce the risk of release of hazardous materials within 0.25 mile of a school.

Mitigation Measures

Implementation of Mitigation Measure HAZ-1 is required.

Significance After Mitigation

Implementation of Mitigation Measure HAZ-1 would reduce impacts to a less-than-significant level.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a substantial hazard to the public or the environment?

The following databases were reviewed on November 15, 2022, as part of the Hazardous Materials Evaluation, to determine if a hazardous material site listed pursuant to Government Code Section 65962.5 was present on the project site:

- California Department of Toxic Substances Control (DTSC) EnviroStor (DTSC 2022)
- State Water Resources Control Board (SWRCB) GeoTracker (SWRCB 2022a)
- SWRCB Cease and Desist Orders and Cleanup Abatement Orders (SWRCB 2022b)
- USEPA Superfund Site Search (USEPA 2022)

The database search did not identify any hazardous material sites listed pursuant to Government Code 65962.5 on the project site (DTSC 2022; SWRCB 2022a and 2022b; USEPA 2022). Therefore, the project would not create a substantial hazard to the public or environment as a result of being listed on hazardous materials sites compiled pursuant to Government Code Section 65962.5. No impact would occur.

NO IMPACT

e. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The proposed project would result in approximately 3,848 additional vehicle trips which would utilize Channel Islands Boulevard and Rose Avenue to access the project site. However, the proposed project would be subject to 2030 General Plan policies which ensure adequate emergency response, including evacuation. The City's 2030 General Plan ICS-20.10 requires new development provide adequate access for emergency vehicles and evacuation routes. Policy SH-4.6 requires the City to identify access and evacuation corridors in the event of minor and major emergencies (City of Oxnard 2011). College Park is identified as a reunification area to evacuate to in the event of a possible tsunami or other emergency. In the event of an emergency, all lanes of traffic on Channel Islands Boulevard and Rose Avenue would be directed north or east toward College Park (City of Oxnard 2019). The proposed project would not result in the closure of these roads or otherwise preclude the ability for College Park to be used as a reunification area during an emergency. The proposed project would not interfere with implementation of the Ventura County Multi-Hazard Mitigation Plan because the proposed project would not preclude the County from fulfilling overarching goals in the plan (County of Ventura 2015). As part of standard development procedures, the proposed project's development plans would be submitted to the City for review and approval to ensure all new development has adequate emergency access in compliance with the Oxnard Fire Department's standards. Furthermore, implementation of the proposed project would not introduce new features that would preclude implementation of or alter the City's emergency access standards. Therefore, the proposed project would have a less-than-significant impact related to impairing implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.

LESS-THAN-SIGNIFICANT IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a violation of any adopted water quality standards or waste discharge or treatment requirements?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in on- or off-site flooding or exceed the capacity of existing or planned stormwater drainage systems?	☐	☐	■	☐
d. Place new structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■
e. Impede or redirect flood flows such that it would increase on- or off-site flood potential?	☐	☐	☐	■
f. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	■	☐
g. Be exposed to a substantial risk related to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

A Preliminary Drainage Report was completed in December 2022 which informs the analysis of potential impacts related to hydrology and water quality (Appendix F).

a. Would the project cause a violation of any adopted water quality standards or waste discharge or treatment requirements?

The proposed project would involve construction activities which could adversely impact water quality due to increased erosion and sedimentation resulting from exposed soils and the generation of water pollutants, including trash, construction materials, and equipment fluids. The federal Clean Water Act requires compliance with the SWRCB's *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit; Order No. 2009-0009-DWQ) for projects disturbing more than one acre of soil during construction, which is applicable to the proposed project. The City would be required to obtain coverage under the Construction General Permit prior to construction. Compliance with the NPDES Construction General Permit requires preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which includes project-specific erosion and sediment control BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Typical BMPs include, but are not limited to, covering stockpiled soils, installation of silt fences and erosion control blankets, and proper handling and disposal of wastes. In addition, the Construction General Permit requires implementation of good housekeeping BMPs such as vehicle maintenance and proper storage of construction materials to reduce the potential for leaks and spills. The City's Stormwater Quality Management Ordinance, codified in Municipal Code Chapter 22, Article XII, also implements the provisions of the federal Clean Water Act. The proposed project would be required to adhere to Municipal Code requirements, including prohibiting leaving trash or other discarded objects on site; maintaining structures within or adjacent to a storm drain system to prevent hazards to the storm drain system; and prohibiting the alteration or modification of a storm drain system without a permit (City of Oxnard 2022a).

As discussed in the Geotechnical Evaluation (Appendix C), it is likely high groundwater levels would be encountered during project construction. If groundwater is encountered during excavation, dewatering would be required to perform subsurface construction activities in a dry condition. Disposal of dewatered groundwater to the storm drain system can introduce total dissolved solids and other constituents to surface waters. Any groundwater dewatering during excavation would be conducted in accordance with the *Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties* (Order No. R4-2018-0125) which would require testing and treatment, as necessary, of groundwater encountered during dewatering prior to release to the City's storm drain system (Los Angeles Regional Water Quality Control Board [RWQCB] 2018). Compliance with NPDES regulations, SWPPP, and City regulations would ensure BMPs are implemented during construction to minimize potential impacts to water quality standards or waste discharge or treatment requirements.

Municipal Code Section 22-223 requires a Post Construction Storm Water Management Plan be implemented to describe the design, placement, and implementation of stormwater retention and stormwater treatment BMPs for post-construction urban runoff in accordance with the requirements of the *Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for Municipal Separate Storm Sewer (MS4) Discharges within the Coastal Watershed of Los Angeles and Ventura Counties* (MS4 Permit; Order No. R4-2021-0105) and the *Ventura County Technical Guidance Manual for Stormwater Quality Control Measures* (Ventura

County Technical Guidance Manual) (County of Ventura 2018). To control pollutants during operation, the proposed project would be required to implement BMPs to prevent and/or reduce pollutants in stormwater runoff (County of Ventura 2018). The proposed project would comply with stormwater requirements through implementation of four biofiltration planters which would be designed and installed to reduce stormwater flows and discharge of pollutants during storm events. BMPs would also include, but are not limited to, using plant materials tolerant of drought and saturated soil conditions, and periodically inspecting flow entrances, ponding areas, and surface overflow areas (County of Ventura 2018). Implementation of post-construction stormwater BMPs would ensure impacts to water quality are minimized. Adherence to regulatory requirements would ensure project operation would result in less-than-significant impacts related to violation of water quality standards or waste discharge or treatment requirements.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

As discussed in criterion 10(a), it is likely dewatering activities would be required during construction. However, groundwater dewatering would be minimal and temporary, and would not substantially change the groundwater level on the project site or interfere with groundwater recharge. The City extracts groundwater from the Oxnard Basin, which is under the management of the Fox Canyon Groundwater Management Agency (FCGMA) (City of Oxnard 2021). To achieve sustainability and prevent seawater intrusion after 2040 the FCGMA has imposed allocation cutbacks for the City, and as a result the City is required to reduce groundwater extractions by 45 percent by 2040 (City of Oxnard 2021). As discussed in Section 18, *Utilities and Service Systems*, operation of the proposed project would require approximately 28.1 acre-feet per year (AFY) of water. The City's UWMP anticipates the City will be able to manage its water supply portfolio to provide adequate water to meet demand through the year 2045, taking into account FCGMA management requirements (City of Oxnard 2021). The City would provide water to the proposed project in accordance with the management requirements of the FCGMA. Therefore, water supplied to the proposed project would not substantially decrease groundwater supplies. The proposed project would not require on-site pumping of groundwater; therefore, the project would not impact production rates or groundwater levels of pre-existing nearby wells. Although the proposed project would result in the introduction of impervious surfaces on the project site, the proposed project would implement four biofiltration planters which would allow stormwater to infiltrate into pervious areas rather than entirely leading to the City's storm drain system. Therefore, the proposed project would result in a less-than-significant impact to groundwater supplies and groundwater recharge.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in on- or off-site flooding or exceed the capacity of existing or planned stormwater drainage systems?

The proposed project would increase the amount impervious surfaces on the project site which would increase stormwater runoff from the project site. However, the project design includes stormwater BMPs, including four biofiltration planters, and storm drains which would accommodate peak stormwater flows in accordance with the requirements of the MS4 Permit and Ventura County Technical Guidance Manual (County of Ventura 2018). According to a Preliminary Drainage Report prepared for the proposed project, the total peak flow rate at the project site under existing conditions is 6.2 cubic feet per second. With the proposed project the peak flow rate would increase to 7.7 cubic feet per second. The existing storm drain point of connection has an available capacity of 8.3 cubic feet per second to accommodate increased stormwater flows from the project site to prevent flooding (Appendix F). The proposed project would be consistent with the MS4 Permit and Ventura County Technical Guidance Manual requirements and impacts related to alternation of the existing drainage pattern of the site in a manner that would result in on- or off-site flooding or exceed the capacity of existing or planned stormwater drainage systems would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project place new structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

e. Would the project impede or redirect flood flows such that it would increase on- or off-site flood potential?

The project site is not located within a 100-year flood hazard zone as delineated by the Federal Emergency Management Agency (FEMA) (FEMA 2021). In addition, the City does not identify the project site as an area of flood risk (City of Oxnard 2011). The proposed project would not place new structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. Therefore, the proposed project would not impede or redirect flood flows. No impact related to flooding would occur.

NO IMPACT

f. Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The project site is not located within a 100-year flood hazard zone and therefore the project site is not at risk from inundation from flooding during a storm event. However, several dams, including the Santa Felicia Dam, the Castaic Lake Dam, and the Pyramid Lake Dam, are located at least 35 miles east and northeast of Oxnard (City of Oxnard 2006). The entire city of Oxnard, including the project site, is located in a Dam Inundation Zone (City of Oxnard 2006). However, according to the Oxnard General Plan Background Report, the potential for dam failure is low as all dams have been constructed to the specifications set forth by State and federal agencies (City of Oxnard 2006). In addition, the California Department of Water Resources (DWR) inspects dams on an annual basis to identify any issues and ensure the continued safety of a dam's operation (DWR 2022). The proposed project does not include any features which would preclude the routine inspection of dams or

otherwise increase the risk for dam failure and inundation. Although people would be present on the project site during construction and operation, the proposed project would serve the local community which is entirely within a dam inundation zone. As a result, the proposed project would not expose additional people to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. While the aquatics center would be placed within a dam inundation zone, the risk of inundation from dam failure is low as the dams are properly constructed and maintained. Therefore, impacts related to exposure of people or structures to risk of loss, injury, or death from flooding would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

g. Would the project be exposed to a substantial risk related to inundation by seiche, tsunami, or mudflow?

As detailed in Section 8, *Geology and Soils*, there are no large bodies of water near the project site which would provide conditions for potential inundation by seiche. The project site is approximately 3.9 miles east of the City's Channel Islands Harbor which is the nearest area to the project site which could be affected by seiche (City of Oxnard 2006). The project site is approximately 1.9 miles northeast of the nearest tsunami hazard area and thus would not be at a substantial risk related tsunami (DOC 2022). The project site is flat and does not have steep topography conducive to conditions for a mudflow to occur. Therefore, the proposed project would not be exposed to a substantial risk related to inundation by seiche, tsunami, or mudflow. No impact would occur.

NO IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable land use plan, policy, or regulation of the City or other agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect?	☐	☐	☐	■
b. Involve land uses that are not allowed under an applicable airport land use compatibility plan?	☐	☐	☐	■
c. Conflict with an applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■
d. Physically divide an established community?	☐	☐	☐	■

a. Would the project conflict with an applicable land use plan, policy, or regulation of the City or other agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating a significant environmental effect?

The project site is located within a parcel zoned Community Reserve (CR) which, according to the City's Municipal Code, permits the use of recreation facilities such as aquatics facilities. The proposed one-story building would not exceed the permitted two-story height in a Community Reserve zone (City of Oxnard 2022a). The proposed project would be constructed in accordance with 2030 General Plan policies and Municipal Code requirements. The environmental impacts of the proposed project are evaluated throughout this IS-MND, and all impacts would be reduced to a less-than-significant level with adherence to applicable regulations and/or incorporation of mitigation measures. Therefore, the proposed project would have no impact related to conflicts with an applicable land use plan, policy, or regulation of the City adopted for the purpose of avoiding or mitigating a significant environmental effect.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project involve land uses that are not allowed under an applicable airport land use compatibility plan?

The Oxnard Airport is approximately 3.1 miles northwest of the project site. The project site is outside of the airport's sphere of influence, defined in the Municipal Code as bounded to the south by Wooley Road, approximately 2 miles northwest of the project site (City of Oxnard 2022a). Accordingly, the proposed project is not subject to development of an aircraft hazard and land use

risk assessment or review by the Oxnard Airport Authority (City of Oxnard 2022a). The project site is located approximately 3.5 miles northwest of the airport landing strip on the Naval Base Ventura County (NBVC) Point Mugu. The project site is within the 500-foot airfield imaginary surface[4] but is not within the flight path for the NBVC Point Mugu (Appendix G). The proposed building height would not exceed 25 feet which is well below the 500-foot airfield imaginary surface. In addition, the proposed 30-foot and 15-foot pole lights would not interfere with the operations of NBVC Point Mugu as the project site is not within the flight path for the NBVC Point Mugu and, as described in Section 1, *Aesthetics and Urban Design*, lighting would be shielded and directed downward. Thus, the proposed project would not interfere with NBVC Point Mugu-established air safety standards. Therefore, the proposed project would not be subject to land use restrictions under an applicable airport land use compatibility plan. No impact would occur.

NO IMPACT

c. Would the project conflict with an applicable habitat conservation plan or natural community conservation plan?

The project site is not within an area subject to an applicable habitat conservation plan or natural community conservation plan (CDFW 2019). Therefore, no impact would occur.

NO IMPACT

d. Would the project physically divide an established community?

The proposed project is an aquatics center which would be constructed on vacant land adjacent to existing recreation fields and Oxnard College. The proposed project would not include any features which would physically divide an established community. Therefore, no impact would occur.

NO IMPACT

[4] The Federal Aviation Administration has identified certain imaginary surfaces around runways to determine how structures and facilities are evaluated for creating vertical obstructions around an active airfield. The imaginary surfaces of an active runway are used to define the required airspace that must remain free of vertical obstructions in the vicinity of aviation operations to ensure safe flight operations.

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource of value to the region or state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated in the 2030 General Plan or other adopted land use plan?	☐	☐	☐	■

a. Would the project result in the loss of availability of a known mineral resource of value to the region or state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated in the 2030 General Plan or other adopted land use plan?

According to the DOC, the project site is within Mineral Resources Zone-1 (MRZ) which indicates an area containing little or no mineral deposits (DOC 1981). The City does not designate the project site as an area containing mineral resources (City of Oxnard 2006). The proposed project would not result in the loss of availability of a known mineral resource of value to the region or state, or a locally important mineral resource recovery site delineated in the 2030 General Plan. Therefore, no impact would occur.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Generate or expose persons to noise levels exceeding standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies?	☐	■	☐	☐
b. Generate or expose persons to excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. Generate a substantial temporary or periodic increase in ambient noise in the project vicinity above levels existing without the project?	☐	■	☐	☐
d. Generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project?	☐	■	☐	☐
e. For a project located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	■
f. Expose non-human species to excessive noise?	☐	■	☐	☐

A Noise and Vibration Study was completed by Rincon in May 2023, which informs the entire analysis of potential impacts to noise (Appendix H).

a. Would the project generate or expose persons to noise levels exceeding standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies?

c. Would the project generate a substantial temporary or periodic increase in ambient noise in the project vicinity above levels existing without the project?

d. Would the project generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project?

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment. Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dBA; dividing the energy in half would result in a 3 dBA decrease. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud.

The impact of noise is not a function of loudness alone. The time of day when noise occurs, and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. Leq is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time.

The City of Oxnard CEQA Guidelines (City of Oxnard 2017) define noise sensitive uses as residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. Noise sensitive receptors near the site include College Park adjacent to the project site along the western project boundary, single-family residences approximately 425 feet northeast of the project site boundary on Sutter Place, Oxnard College adjacent to the southern project boundary, single-family residences approximately 850 feet east of the project site boundary on Olds Road, and Channel Islands High School located across Rose Avenue northwest from the western terminus of the proposed pipeline associated with the project.

Thresholds of Significance

Construction Noise

As stated in the Oxnard CEQA Guidelines (2017), activities associated with construction are exempt from specific quantitative noise limitations in the City Noise Ordinance, but are restricted to the hours between 7:00 a.m. and 6:00 p.m. on weekdays and Saturdays pursuant to the City's Municipal Code Section 7-188(D). Construction-related noise impacts would normally be less than significant if construction activity occurs within the timing restrictions specified in the Noise Ordinance.

On-site Stationary Operational Noise

The City has adopted exterior noise standards in the Oxnard Municipal Code regulating operational noise sources in the city. The proposed project would result in a significant impact if noise from project stationary operational and recreational noise sources exceed the Municipal Code standards shown in Table 10.

Table 10 Exterior Noise Standards

		Allowable Exterior Sound Level (dBA)	
Sound Zone	**Type of Land Use**	**7:00 a.m. to 10:00 p.m.**	**10:00 p.m. to 7:00 a.m.**
I	Residential	55	50
II	Commercial	65	60
III	Industrial	70	70
IV	As identified in Figure IX-2 of the 2020 General Plan		

dBA = A-weighted decibel

Source: Noise and Vibration Study (Appendix H)

Traffic Noise

A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas. The following thresholds of significance, included in the Oxnard CEQA Guidelines and recommended by the Federal Transit Administration (FTA), are used to assess traffic noise impacts at sensitive receptor locations. Table 11 shows the significance thresholds for increases in traffic-related noise levels. These standards are applicable to project-related noise impacts on existing sensitive receptors.

Table 11 Significance of Changes in Operational Roadway Noise Exposure

Existing Noise Exposure (dBA L_{dn} or L_{eq})	Allowable Noise Exposure Increase (dBA L_{dn} or L_{eq})
45-49	7
50-54	5
55-59	3
60-64	2
65-74	1
75+	0

Source: Noise and Vibration Study (Appendix H)

Construction Noise

Over the course of a typical construction day, construction equipment would be located as close as 125 feet to the nearest sensitive receptor, College Park, but would typically be located at an average distance further away due to the nature of construction where equipment is mobile throughout the site during the day. As part of the Noise and Vibration Study, construction noise was estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM). Table 12 identifies the estimated noise levels at the closest sensitive receptors from the center of the specific phase based on the conservatively assumed combined use of all construction equipment during each phase of construction.

Table 12 Estimated Noise Levels by Construction Phase

Construction Phase	L_{eq} dBA					
	RCNM Reference Noise Level	College Park to the West	Single-Family Residences to the Northeast	Single-Family Residences to the East	Oxnard College to the South	Channel Islands HS to the Northwest
Distance in feet	**50**	**290**	**835**	**1,040**	**845**	**1,700**
Site Preparation	84	69	59	58	59	53
Grading	87	72	63	61	62	56
Stone Column Construction	78	63	54	52	53	47
Distance in feet	**50**	**125**	**780**	**1,005**	**735**	**1,5000**
Building Construction	85	77	61	59	62	55
Architectural Coating	76	68	52	50	53	46
Distance in feet	**50**	**300**	**665**	**1,045**	**1,025**	**1,725**
Paving	87	71	65	61	61	56
Distance in feet	**50**	**195**	**1,550**	**1,900**	**800**	**790**
Pipeline Construction	92	80	62	60	68	68

Notes: RCNM reference noise levels are noise levels generated during each construction phase measured from a point 50 feet from the location of the construction phase. These reference noise levels are then used to calculate noise levels from the construction phase at a distance greater than 50 feet from the construction phase.

Source: Noise and Vibration Study (Appendix H)

As shown in Table 12, construction noise could be as high as approximately 80 dBA L_{eq} during natural gas pipeline construction which would occur approximately 195 feet from the nearest sensitive receptor, College Park. Construction noise would be less than 80 dBA L_{eq} at all other sensitive receptors during construction of the proposed project. Construction would occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and Saturdays, pursuant to the City's Municipal Code Section 7-188(D). According to the City of Oxnard CEQA Guidelines, when construction would occur within 500 feet of a noise sensitive use, noise minimization measures are prudent. Therefore, if uncontrolled, project construction noise would be considered significant and Mitigation Measure NOI-1 is required.

On-Site Operational Stationary Source Noise

The noise sources on the project site during operation would be typical of an aquatics and recreation center, such as HVAC equipment, pool utility equipment, voices from people recreating, and noise from swim competitions, such as use of a public address (PA) system and spectators. As part of the Noise and Vibration Study, reference noise levels from the SoundPLAN 8.2 computer acoustical modeling program were used to estimate operational noise from large groups of people using the swimming pools and facilities. The reference noise level of 108 dB sound power level for "open air swimming pool" was selected from the SoundPLAN library. The combination of noise sources anticipated from the project are then estimated at nearby sensitive receptors using the principles of sound propagation and taking into account any major shielding such as from proposed project buildings. Operational noise level estimates at nearby sensitive receptors are shown in Table 13.

Project operational activities are proposed primarily from 7:00 a.m. to 10:00 p.m., consistent with the hours designated by City as daytime noise, as shown in Table 10. No activities are proposed after 10:00 p.m. As shown in Table 13, noise generated by the proposed project would not exceed the City's most stringent daytime exterior noise level limit of 55dBA. The proposed project would also operate from 5:00 a.m. to 7:00 a.m. when more stringent allowable noise levels are applied, as shown in Table 10. However, operation of the aquatics center at these hours is intended to accommodate swim team practices and thus it is not anticipated the aquatics center would be at peak operating capacity such that noise thresholds would be exceeded. Therefore, the proposed project would have a less-than-significant impact on operational stationary noise.

Table 13 On-Site Stationary Operational Noise Levels, dBA

Source	College Park to the West[1]	Single-Family Residences to the Northeast[2]	Single-Family Residences to the East	Oxnard College to the South
Voices from swimming pool and facilities use	43	46	51	52
PA System	36	22	21	24
Mechanical Equipment	38	24	23	26
Combined Noise Levels	**45**	**46**	**51**	**52**

[1] Includes 15 dBA of reduction due to shielding from the proposed project Western Building.

[2] Includes 5 dBA of reduction due to shielding from the South Oxnard Boulevard sound wall.

Source: Noise and Vibration Study (Appendix H)

Off-Site Traffic Noise

The proposed project would generate up to 2,048 new daily vehicle trips that would increase noise levels on nearby roadways. The proposed project would not make substantial alterations to roadway alignments or substantially change the vehicle classifications mix on local roadways. Therefore, the primary factor affecting off-site noise levels would be increased traffic volumes. Table 14 summarizes the estimated project and cumulative traffic noise increases based on peak hour traffic. As shown in Table 14, the maximum increase in traffic noise would be 4 dBA L_{eq} under cumulative conditions at the College Park entrance east of Rose Avenue. Similarly, under cumulative conditions traffic noise along Raiders Way east of Rose Avenue would increase by 3.3 dBA Leq. Both of these roadways lead to the road encircling College Park, where ambient noise levels were measured to be 52 dBA Leq during the afternoon peak commute hours. The projected traffic noise increase of 4 dBA Leq would not exceed the City's significance threshold of 5 dBA Leq for areas with existing ambient noise levels of 50 – 54 dBA Leq. Projected traffic noise increases would be less than 1 dBA Leq on all other roadway study segments. Therefore, increases in traffic noise associated with the project would be less than significant.

Table 14 Summary of Project and Cumulative Traffic Noise Increases

		Roadway Segment Peak Hour Volumes				dBA (L_{eq})		
Roadway	Segment	Existing	Existing + Project	Cumulative	Cumulative + Project	Project Noise Increase	Cumulative Increase	Project Cumulative Contribution
Rose Avenue	Rose Avenue - North of Channel Islands Boulevard	1,715	1,872	1,859	2,016	0.4	0.7	0.4
Rose Avenue	Rose Avenue - South of Channel Islands Boulevard	1,566	1,812	1,902	1,902	0.6	0.8	<0.1
Channel Islands	Channel Islands Boulevard - West of Rose Avenue	1,696	1,763	1,879	1,879	0.2	0.4	<0.1
Channel Islands	Channel Islands Boulevard - East of Rose Avenue	1,185	1,207	1,249	1,249	0.1	0.2	<0.1
Rose Avenue	Rose Avenue - North of Raiders Way	1,560	1,807	1,651	1,899	0.6	0.9	0.6
Rose Avenue	Rose Avenue - South of Raiders Way	1,481	1,616	1,569	1,706	0.4	0.6	0.4
Raiders Way	Raiders Way - West of Rose Avenue	60	60	62	63	<0.1	0.2	0.1
Raiders Way	Raiders Way - East of Rose Avenue	183	385	190	392	3.2	3.3	3.2
Rose Avenue	Rose Avenue - North of College Park Entrance	1,482	1,618	1,570	1,705	0.4	0.6	0.4
Rose Avenue	Rose Avenue - South of College Park Entrance	1,434	1,636	1,521	1,722	0.6	0.8	0.5
College Park Entrance	College Park Entrance - East of Rose Avenue	168	416	174	421	3.9	4.0	3.8
Rose Avenue	Rose Avenue - North of Gary Drive	1,425	1,627	1,511	1,713	0.6	0.8	0.5
Rose Avenue	Rose Avenue - South of Gary Drive	1,302	1,482	1,384	1,564	0.6	0.8	0.5
Gary Drive	Gary Drive - West of Rose Avenue	185	207	192	214	0.5	0.6	0.5
Gary Drive	Gary Drive - East of Rose Avenue	26	26	27	27	<0.1	0.2	<0.1

Source: Source: Noise and Vibration Study (Appendix H)

Mitigation Measures

The City shall implement the following measures during proposed project construction:

NOI-1 Construction Noise Reduction Plan

The construction contractor shall prepare and implement a Construction Noise Control Plan. The construction contractor shall submit the Construction Noise Control Plan to the City of Oxnard Public Works Department for review and approval prior to initiation of construction. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set. The Construction Noise Control Plan shall include the following measures:

- At least 21 days prior to the start of construction activities, all off-site businesses and residents within 500 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, the representative shall investigate, take appropriate corrective action, and report the action to the City.
- During the entire active construction period, equipment, tools, and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. During the entire active construction period, stationary noise sources shall be located as far from sensitive receivers as practicable, muffled, and enclosed within temporary sheds or insulation barriers, or other measures for equivalent noise reduction will be incorporated to the extent feasible.
- The contractor shall be required to use impact tools that are hydraulically or electrically powered wherever practicable. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Stockpiling of materials shall be located as far as feasible from nearby noise-sensitive receptors.
- Signs shall be posted at the job site entrance(s) to reinforce the prohibition of unnecessary engine idling. All equipment shall be turned off if not in use for more than 5 minutes.
- Use of stereos and other amplified noise not necessary for the completion of construction work shall be prohibited.
- During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. The construction manager shall ensure the use of use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with safety requirements and laws.

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would require several noise reduction measures, including the use of mufflers and shielding to minimize construction noise to the degree feasible. With implementation of Mitigation Measure NOI-1, impacts to sensitive receptors from construction noise would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project generate or expose persons to excessive groundborne vibration or groundborne noise levels?

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration sensitive receptors are similar to noise sensitive receptors, including residences and institutional uses such as schools, churches, and hospitals. However, vibration sensitive receptors also include buildings where vibrations may interfere with vibration-sensitive equipment. Vibration sensitive receptors near the site include single-family residences northeast of the project site, Oxnard College to the south, single-family residences to the east of the project site, and Channel Islands High School located to the northwest of the proposed pipeline.

Threshold of Significance

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as, vibratory compaction or excavation, are based on information contained in the 2018 FTA *Transit Noise and Vibration Impact Assessment Manual*. Groundborne vibration levels that could induce potential architectural damage to buildings are identified in Table 15. Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec peak particle velocity (PPV) at non-engineered timber and masonry buildings (which would apply to the nearby residential structures and Oxnard College) would prevent architectural damage.

Table 15 Groundborne Vibration Architectural Damage Criteria

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

in/sec = inches per second; PPV = peak particle velocity

Source: Noise and Vibration Study (Appendix H)

The FTA provides criteria for acceptable levels of groundborne vibration for buildings containing vibration-sensitive equipment, including but not limited to scanning electron microscopes, optical microscopes, and other sensitive laboratory equipment. For the purposes of this analysis, 65 VdB is used as a threshold for nearby Oxnard College buildings potentially containing vibration-sensitive equipment, such as science classrooms and laboratories.

Groundborne Vibration

Construction activities have the greatest potential to generate ground-borne vibration affecting nearby receptors, especially during grading and paving of the project site. Construction activities known to generate excessive groundborne vibration, such as pile driving and blasting, would not be needed to construct the proposed project. The greatest vibratory source during construction in the project vicinity would be a roller used during paving. Construction vibration estimates are based on vibration levels reported by the FTA. Table 16 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration.

Table 16 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 feet (in/sec)
Vibratory Roller	0.21
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

PPV = peak particle velocity; in/sec = inches per second

Source: Noise and Vibration Study (Appendix H)

Based on the recommendations of the FTA, limiting vibration levels to below 0.2 inches per second PPV at residential and institutional structures would prevent architectural damage regardless of building construction type. Additionally, based on FTA recommendations, limiting vibration levels to 65 VdB at nearby Oxnard College buildings potentially containing vibration-sensitive equipment would prevent damage to vibration-sensitive equipment. The greatest anticipated source of vibration during project construction activities would be from a vibratory roller, which would be used during paving and pipeline construction activities. Based on the project site plan, it is assumed the vibratory roller may be used within 500 feet of the nearest off-site residential structures to the northeast of the project site during paving activities. For pipeline construction, a vibratory roller may be used within 190 feet of the nearest off-site institutional structure to the pipeline, Channel Islands High School northwest of the eastern terminus of the pipeline. A vibratory roller generates up to approximately 0.01 inches per second PPV at distance of 190 feet and approximately 0.002 inches per second PPV at a distance of 500 feet, which would not exceed the significance threshold of 0.2 inches per second PPV. A vibratory roller used during pipeline construction may be used within 1,500 feet of the Oxnard College Letters and Science Building, which may contain science classrooms and laboratories with vibration-sensitive equipment such as scanning electron microscopes, optical microscopes, and other sensitive laboratory equipment. A vibratory roller generates 41 VdB at a distance of 1,500 feet, which would not exceed the significance threshold of 65 VdB. Therefore, proposed project construction activities would have a less-than-significant impact on the generation or exposure of persons to excessive groundborne vibration or groundborne noise levels.

Operation of the proposed project would not include substantial sources of vibration. Therefore, the operation of the proposed project would have no impact on exposure to excessive groundborne vibration or groundborne noise levels.

LESS-THAN-SIGNIFICANT IMPACT

e. For a project located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the area to excessive noise levels?

The Oxnard Airport is located approximately 3.1 miles northwest of the project site. The project site is not located within the airport land use plan for the Oxnard Airport and the project site is not within two miles of NBVC Point Mugu. Therefore, the proposed project would not expose people working in the project area to excessive noise levels. No impact would occur.

NO IMPACT

f. Would the project expose non-human species to excessive noise?

The project site is a disturbed dirt lot and there is no suitable habitat present for supporting non-human species. However, the mature eucalyptus trees surrounding the project site provide suitable habitat for overwintering monarch butterfly and nesting birds. Construction may indirectly disturb roosting overwintering monarchs through construction noise and other human disturbances. Construction of the proposed project may indirectly impact nesting birds through construction noise and other human disturbances that may cause a nest to fail. Therefore, non-human species could be exposed to excessive noise generated by the project, which is considered potentially significant and implementation of Mitigation Measures BIO-1 and BIO-2 are required.

Following the completion of construction, the eucalyptus trees would remain in place, continuing to provide roosting habitat for monarch butterflies and nesting habitat for birds. Noise from the operations of the facility would be minimal due to the peripheral tree planting along the eastern boundary of the facility, screening noise between the facility and the eucalyptus. Therefore, no significant long-term permanent noise impacts would occur.

Mitigation Measures

Implement Mitigation Measures BIO-1 and BIO-2, as described in Section 4, *Biological Resources*.

Significance After Mitigation

Implementation of Mitigation Measures BIO-1 and BIO-2 would require preconstruction surveys and establishment of buffer zones to minimize noise impacts during construction to the monarch butterfly and nesting birds. Impacts would be less than significant with mitigation incorporated.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

14 Population, Education, and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Involve a General Plan amendment that could result in an increase in population beyond that projected in the 2030 General Plan that may result in one or more significant physical environmental effects?	☐	☐	☐	■
b. Induce substantial growth on the project site or surrounding area, resulting in one or more significant environmental effects?	☐	☐	■	☐
c. Result in a substantial (15 single-family or 25 multi-family dwelling units – about one-half block) net loss of housing units through demolition, conversion, or other means that may necessitate the development of replacement housing?	☐	☐	☐	■
d. Result in a net loss of existing housing units affordable to very low- or low-income households (as defined by federal and/or City standards), through demolition, conversion, or other means that may necessitate the development of replacement housing?	☐	☐	☐	■
e. Cause an increase in enrollment at local public schools that would exceed capacity and necessitate the construction of new or expanded facilities?	☐	☐	☐	■
f. Directly or indirect interfere with the operation of an existing or planned school?	☐	☐	☐	■

a. Would the project involve a General Plan amendment that could result in an increase in population beyond that projected in the 2030 General Plan that may result in one or more significant physical environmental effects?

The proposed project would not involve a General Plan amendment. Therefore, no impact would occur.

NO IMPACT

b. Would the project induce substantial growth on the project site or surrounding area, resulting in one or more significant environmental effects?

The proposed project would provide recreation opportunities for existing residents. The proposed project would not construct residences and therefore would not directly induce population growth. The proposed project would require a total of up to 200 new employees which may indirectly increase the population if new employees relocate to Oxnard or the surrounding area. However, these jobs would likely come from the local workforce and the proposed project is not expected to require people to relocate to the city or surrounding area. However, even if the new employees relocated to Oxnard or the surrounding area, the number of employees would be within the forecasted population growth. In a conservative scenario wherein all projected employees and their families were to relocate to Oxnard, there would be a population growth of 732 based on the city's average persons per household of 3.66 (California Department of Finance [DOF] 2022). The city's current population is approximately 200,050 and Ventura County's current population is approximately 833,652 persons (DOF 2022). SCAG anticipates the population of Oxnard will increase to 237,300 persons by 2040 and the population of Ventura County will increase to 945,100 persons by 2040 (SCAG 2016). The addition of 732 people would result in a city population of 200,782 persons and a county population of 834,384 persons, which would account for approximately two percent of projected growth in the city and 0.6 percent of projected growth in the county. Therefore, potential population growth resulting from the proposed project would be accounted for within regional growth forecasts for the city and county. Although the proposed project would provide employment opportunities, it would not result in direct population growth or result in substantial indirect growth. Therefore, this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project result in a substantial (15 single-family or 25 multi-family dwelling units – about one-half block) net loss of housing units through demolition, conversion, or other means that may necessitate the development of replacement housing?

d. Would the project result in a net loss of existing housing units affordable to very low- or low-income households (as defined by federal and/or City standards), through demolition, conversion, or other means that may necessitate the development of replacement housing?

The proposed project does not involve the demolition, conversion, or other means of reduction of housing which may necessitate the development of replacement housing. Therefore, no impact would occur.

NO IMPACT

e. Would the project cause an increase in enrollment at local public schools that would exceed capacity and necessitate the construction of new or expanded facilities?

The proposed project would not construct residences or otherwise induce substantial population growth that could cause an increase in enrollment at local public schools. Therefore, no impact would occur.

NO IMPACT

f. Would the project directly or indirect interfere with the operation of an existing or planned school?

Channel Islands High School is located approximately 0.27-mile west of the location of the proposed aquatics center, and approximately 200 feet northwest of the proposed gas line. Oxnard College is located adjacent to the project site. However, construction and operation of the proposed project would not require a major reorganization of students or classrooms, major revisions to the school calendar, or other actions which would create temporary or permanent impacts. Therefore, no impact would occur.

NO IMPACT

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15 Public Services and Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Increase demand for fire protection service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects?	☐	☐	■	☐
b. Increase demand for law enforcement service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects?	☐	☐	■	☐
c. Increase the use of existing park facilities such that substantial physical deterioration of the facilities would occur or be accelerated or that new or expanded park facilities would be needed to maintain acceptable service levels?	☐	☐	■	☐
d. Increase the need for or use of existing library or other community facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☐	■

a. Would the project increase demand for fire protection service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects?

The Oxnard Fire Department provides emergency and non-emergency services to the community. Station 8 is the closest to the project site, located approximately 0.35-mile northwest. The Oxnard Fire Department has a service goal of four minutes for first response travel time (Oxnard Fire Department 2022).

As discussed in Section 14, *Population, Education, and Housing*, The proposed project would not induce substantial population growth and would therefore not substantially increase demand fire protection services. The proposed project is expected to increase the number of vehicles on the local roadways primarily during the weekend midday peak hour compared with existing conditions. Because this falls outside of the typical weekday community periods when traffic congestion is at its

highest within Oxnard, the proposed project is expected to have a negligible effect on firefighter response times. The Oxnard Fire Department anticipates the proposed project would require two personnel to provide fire protection services to the aquatics center (McNaughten 2023). These personnel would not require the construction of new or expanded fire protection facilities, and funding for these positions would be administered by the City. In addition, Oxnard Fire Station 8 has direct access to the College Park ring road via a driveway that connects to the intersection of Rose Avenue and Raiders Way. Due to the project site's proximity to Station 8, it is anticipated the Oxnard Fire Department would be able to meet its goal for emergency response at the project site, if needed. In addition, the proposed project would comply with the requirements of the 2022 California Fire Code, CBC, California Electric Code, and California Plumbing and Mechanical Codes, each of which have specific requirements to reduce the potential for a fire to occur. Adherence to these codes would reduce the potential for fire hazards at the project site, thereby reducing the demand for fire protection services. Furthermore, the proposed project would install a dedicated fire service pipeline, sprinkler system, and fire alarm system to provide monitoring and alarm notifications for the building. The proposed project would include smoke detectors, heat detectors, manual pull stations, sprinkler water flow switches, and suppression systems which would further reduce the demand for fire protection services. Therefore, the proposed project would not substantially increase the demand for fire protection service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project increase demand for law enforcement service such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects?

The project site is located approximately 2.6 miles southeast of the Oxnard Police Department headquarters and is within the Oxnard Police Department's District 4, Beat 41 (Oxnard Police Department 2022). The proposed project would incrementally increase the demand for law enforcement services because the proposed project would result in additional visitors at College Park; however, the demand would increase in an area already served by the Oxnard Police Department. As discussed in Section 14, *Population, Education, and Housing*, the proposed project would not induce substantial population growth which could significantly increase demand for law enforcement or reduce the officer per capita service ratio. The proposed project is expected to increase the number of vehicles on the road primarily during the weekend midday peak hour compared with existing conditions. Because this falls outside of the typical weekday community periods when traffic congestion is at its highest within Oxnard, the proposed project is expected to have a negligible effect on police response times. Furthermore, the Oxnard Police Department does not anticipate the proposed project would adversely affect existing police services (Gens 2023). Furthermore, the proposed project would incorporate various security features, such as surveillance cameras and security lighting, to minimize trespassing, vandalism, and other uses which could cause additional demand for police services. Therefore, the proposed project would not substantially increase demand for law enforcement services such that new or expanded facilities would be needed to maintain acceptable service levels, the construction of which may have significant environmental effects. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project increase the use of existing park facilities such that substantial physical deterioration of the facilities would occur or be accelerated or that new or expanded park facilities would be needed to maintain acceptable service levels?

The proposed project would construct a new aquatics center on vacant land which would provide increased recreational opportunities within College Park. The addition of an aquatics center would increase the number of visitors to College Park; however, this increase in visitors is anticipated to result in a marginal increase in the use of existing recreational facilities within College Park because the additional visitors are anticipated to primarily use the aquatics center. As a result, substantial physical deterioration of existing recreational facilities at College Park would not occur.

As discussed in Section 14, *Population, Education, and Housing*, the proposed project could result in a minimal indirect population increase due to increased employment for the aquatics center. The City maintains approximately 426 acres of parks and open space (City of Oxnard 2022b). The city's current population is approximately 200,050 which provides a ratio of parkland per 1,000 residents of approximately 2.1 acres (DOF 2022). The project would not result in substantial population growth and would therefore not substantially decrease the ratio of parkland available to the residents of Oxnard. Therefore, the proposed project would have a less-than-significant impact on park facilities.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project increase the need for or use of existing library or other community facilities such that substantial physical deterioration of the facilities would occur or be accelerated?

The project would not induce substantial population growth which could increase the need for or use of existing library or other community facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, no impact would occur.

NO IMPACT

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16 Transportation and Circulation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	■	☐
b. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	☐	☐	■	☐
d. Result in inadequate emergency access?	☐	☐	■	☐
e. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	■

A Memorandum titled *CEQA Transportation Analysis for the South Oxnard Aquatics Center Project* was completed in January 2023, which informs the entire analysis of potential impacts to transportation and circulation (Appendix G).

a. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Pursuant to Senate Bill 743, VMT has replaced automobile delay, historically measured as level of service (LOS), as the appropriate metric for evaluating environmental transportation impacts in accordance with CEQA. VMT measures the amount of travel on roadways by all types of motorized vehicles carrying passengers or cargo. Each mile traveled is counted as one vehicle mile regardless of the number of people in a vehicle. The City of Oxnard is currently developing guidance on VMT impact analysis consistent with the California Governor's Office of Planning and Research's (OPR) *Technical Advisory on Evaluating Transportation Impacts* (2018) for office, retail, industrial, and residential land uses. However, neither the City's nor OPR's guidance provide direction on how VMT should be assessed for aquatics center uses.

OPR guidance recommends screening local-serving uses from conducting a VMT analysis on the grounds that local-serving uses tend to shorten trips and reduce VMT. While the OPR guidance specifically applies this logic to retail development projects, the same logic can be applied to other local-serving land use development projects. The CEQA Guidelines Section 15064.3(b)(3) allow for

the use of a qualitative methodology and recommend considering factors such as the availability of transit and proximity to other destinations to gauge potential VMT impacts. These factors influence the ability to access the project site by walking, bicycling, and transit while also contributing to shorter trip lengths for vehicle trips. Another factor in qualitative assessment is whether the approval of the project would encourage development in a travel efficient location. Therefore, for this analysis, a project would be considered to generate a significant impact if it is estimated to result in a net increase in VMT.

The city currently has one public swimming pool, located at the Colonia Park Recreation Center in North Oxnard at 197 N Marquita Street. City residents may utilize this existing swimming pool or travel to comparable facilities in neighboring jurisdictions, including Ventura and Camarillo. Because the City anticipates the aquatics center would serve only the local community of Oxnard, and would not be used for regional events, the proposed project would allow residents of South Oxnard to travel a shorter distance to access a public pool than under existing conditions. While the proposed project would generate new employment that would generate new vehicle trips and VMT, these trips and VMT would be offset by the much larger number of visitors using the site. Given the proposed project is an additional aquatics center located near existing residential neighborhoods in South Oxnard, most trips to the project site are likely to be in place of residents traveling to other aquatics centers or recreational uses, and the trip lengths are expected to be similar, if not shorter, than existing trips to other aquatics centers or recreational uses. Therefore, the proposed project would not result in a net increase in VMT. The proposed project would not conflict with or be inconsistent with *CEQA Guidelines* Section 15064.3(b) and impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Oxnard Airport is approximately 3.1 miles northwest of the project site. The project site is outside of the airport's sphere of influence, defined in the Municipal Code as bounded to the south by Wooley Road, approximately 2 miles northwest of the project site. Because the project site is not within the airport sphere of influence, the aquatics center would not interfere with air traffic from Oxnard Airport.

The project site is located approximately 3.5 miles northwest of the airport landing strip on the NBVC Point Mugu. The project site is within the 500-foot airfield imaginary surface but is not within the flight path for the NBVC Point Mugu. The proposed building would not exceed 25 feet in height and would not interfere with air traffic from the NBVC Point Mugu. The proposed 30-foot pole lights and 15-foot pole lights would not interfere with the operations of NBVC Point Mugu as the project site is not within the flight path for the NBVC Point Mugu and, as described in Section 1, *Aesthetics and Urban Design*, lighting would be shielded and directed downward. Additionally, the proposed project does not feature a helicopter landing pad and would therefore not generate new air traffic or divert existing air traffic. Therefore, the proposed project would not result in a change in air traffic patterns. No impact would occur.

NO IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Impacts regarding the potential increase of hazards due to a geometric design feature generally relate to the design of access points to and from the project site. Impacts occur when vehicle to vehicle, vehicle to bicycle, or vehicle to pedestrian conflicts occur, as well as to operational delays caused by vehicles slowing and/or queuing to access a project site. These conflicts may be created by the driveway configuration or through the placement of driveways in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to busy or congested intersections. These impacts are typically evaluated for permanent conditions after project completion but can also be evaluated for temporary conditions during project construction.

The proposed project is adding a new driveway with an alignment perpendicular to the public right-of-way at College Park's ring road. The new driveway is adequately spaced from existing signalized and unsignalized intersections, and the proposed project does not introduce land uses incompatible with the surrounding community. The site access and circulation configuration were evaluated based on the proposed project's site plan to determine its adequacy based on traffic engineering principles and the anticipated number of vehicle trips during the mid-day peak hour. The evaluation included a vehicle turn template analysis to determine whether the proposed driveway width is adequate and a sight distance analysis to determine whether there is adequate visibility from the proposed driveway to ensure oncoming vehicles on the ring road have enough time to reach a complete stop if a vehicle exits the proposed project driveway. As shown in Figures 4 and 5 in Appendix G, the proposed driveway width is sufficient to allow incoming and exiting vehicles to pass one another, and the stopping sight distance and corner sight distance are sufficient to allow adequate visibility for vehicles exiting the proposed parking lot and for oncoming vehicles approaching the proposed driveway. Therefore, the proposed project's impacts on substantial increases in hazards due to a geometric design feature or incompatible uses would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

The proposed project is expected to increase the number of vehicles on the road primarily during the weekend midday peak hour compared with existing conditions. Because this falls outside of the typical weekday commute periods when traffic congestion is at its highest within Oxnard, the proposed project is expected to have a negligible effect on response times. Additionally, Oxnard Fire Station 8 is located adjacent to College Park, where the project site is located, and has direct access to the College Park ring road via a driveway that connects to the intersection of Rose Avenue and Raiders Way. The proximity of Oxnard Fire Station 8 to the project site would allow for rapid emergency response times. As such, there would be adequate emergency access to the project site. This impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

e. Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Appendix G includes a consistency analysis with the SCAG RTP/SCS, the City's 2030 General Plan Land Use Element and Circulation Element, and the City's Bicycle and Pedestrian Facilities Master Plan. As further detailed in Appendix G and summarized below, no conflicts were identified between the proposed project and these existing plans. The proposed project would not result in changes to the existing regional transportation network and therefore would not conflict with the RTP/SCS. The project site is consistent with the City General Plan Policy CD-1.2 of promoting efficient use of larger vacant areas by encouraging infill development. The project site is in proximity to existing residential neighborhoods which can be accessed by walking and biking consistent with the City's General Plan Policy CD-1.4 of promoting land uses that provide residents with the opportunity for a variety of transportation choices and City General Plan policies ICS-7.2, ICS-8.5, and ICS-8.14 which promote reduction in single-occupancy automotive use, enhancement of the pedestrian environment, and creation of a link for pedestrian and bicycle traffic between parks and recreation facilities. The proposed project would preserve existing bicycle lanes on Rose Avenue and would include installation of a new crosswalk to connect the project site with the interior of College Park. The proposed project would provide 16 spaces for bicycle parking to facilitate bicycle travel. These features are consistent with the City's Bicycle and Pedestrian Facilities Master Plan Goal 2.1 which intends to make bicycling and walking integral modes of transportation in Oxnard.

The proposed project would be consistent with SCAG RTP/SCS, the City's 2030 General Plan Land Use Element and Circulation Element, and the City's Bicycle and Pedestrian Facilities Master Plan. Therefore, the proposed project would have no impact related to conflicts with adopted policies, plans, or program supporting alternative transportation.

NO IMPACT

17 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	☐	☐	☐	■
b. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	■

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

On September 2, 2022, the NAHC responded to Rincon's SLF request, stating the SLF search results were negative. This means tribal cultural resources are not known to be present within the SLF search area. Of the nine Native American tribes contacted during AB 52 consultation, one Native American Tribe, the Santa Ynez Band of Chumash Indians, responded indicating they do not require further consultation. The City did not receive responses from the other Native American tribes. No tribal cultural resources were identified as a result of AB 52 consultation. Therefore, the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource. No impact would occur.

NO IMPACT

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18 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Need new or expanded water supply entitlements that are not anticipated in the current Urban Water Management Plan?	☐	☐	■	☐
b. Would additional wastewater conveyance or treatment capacity be required to serve project demand and existing commitments?	☐	☐	■	☐
c. Generate solid waste that would exceed the permitted capacity of a landfill serving the City?	☐	☐	■	☐
d. Conflict with federal, state, or local statues or regulations related to solid waste?	☐	☐	☐	■

a. Would the project need new or expanded water supply entitlements that are not anticipated in the current Urban Water Management Plan?

During the first year of operation, the proposed project would require approximately 911,373 gallons of water to fill the competition pool, instructional pool, and recreation pool and approximately 26,955 gallons of water for the splash pad and slide area. In subsequent years the proposed project would require approximately 1,021,823 gallons per year of water to account for losses due to filter backwash, water splashing out of the pool areas, and evaporation. In addition, the proposed project would require approximately 10 gallons of water per person per day, in accordance with the water daily demand value within the American Society of Plumbing Engineers' Plumbing Engineering Design Handbook, Volume Two (Lundquist 2022). An average of 2,225 people per day are anticipated to visit the aquatics center. This would equate to approximately 8,121,250 gallons of annual water usage by users of the aquatics center. In total, water usage during the first year would be approximately 9,059,578 gallons and following the first year of operation, the proposed project would use approximately 9,143,073 gallons, or 28.1 acre-feet (AF).

The City's UWMP projects the total demand for water within the City's service area through the year 2045 (City of Oxnard 2021). According to the UWMP, the City anticipates it will be able to manage its water supply portfolio to provide adequate water to meet demand in normal, single-dry, and multiple dry years through the year 2045 (City of Oxnard 2021). The proposed project's annual demand of 28.1 AF would account for approximately 0.09 percent of the projected total 2025 demand of 28,819 AF and approximately 0.08 percent of the projected total 2045 demand of 33,349 AF (City of Oxnard 2021). Water use from the proposed project would be minimal compared to the

total demand anticipated by the City. In addition, the proposed project would include water saving landscaping features in accordance with Municipal Code Chapter 22 Article XIII such as irrigation systems designed to avoid overspray and runoff, use of drought-tolerant plants, and irrigation controllers programmed to comply with City water conservation requirements (City of Oxnard 2022a). Therefore, the proposed project would not need new or expanded water supply entitlements not already anticipated in the current UWMP, and this impact would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would additional wastewater conveyance or treatment capacity be required to serve project demand and existing commitments?

The City provides wastewater treatment services at the Oxnard Wastewater Treatment Plant which has a rated capacity of 31.7 million gallons per day (MGD) and an average daily flow of 19 MGD (City of Oxnard 2022c). The proposed project would discharge wastewater to existing City wastewater pipelines. Wastewater from the proposed project would consist of filter backwash from each of the five pool areas and wastewater generated from on-site restrooms. Annual wastewater generation from pools is anticipated to total 286,136 gallons per year, or approximately 784 gallons per day. In accordance with the American Society of Plumbing Engineers' Plumbing Engineering Design Handbook, Volume Two, the wastewater daily demand for recreational facilities is 10 gallons per person per day (Lundquist 2022). The aquatics center is anticipated to serve an average of 2,225 people per day. This would equate to 22,250 gallons of daily wastewater generation. Thus, the proposed project would generate approximately 23,034 gallons of wastewater per day, or 0.02 MGD. This additional wastewater represents 0.11 percent of the average daily wastewater flow to the Oxnard Wastewater Treatment Plant. This additional wastewater flow would not substantially add to the average daily flow of 19 MGD such that the 31.7 MGD capacity of the Oxnard Wastewater Treatment Plant would be exceeded. Therefore, the proposed project would have a less-than-significant impact on wastewater treatment capacity.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project generate solid waste that would exceed the permitted capacity of a landfill serving the City?

Toland Road Landfill has a remaining capacity of approximately 16,068,864 cubic yards and a maximum permitted throughput of 2,864 tons per day of solid waste (California Department of Resources, Recycling, and Recovery [CalRecycle] 2023a). Simi Valley Landfill and Recycling Center has a remaining capacity of approximately 82,954,873 cubic yards and a maximum permitted throughput of 9,250 tons per day of solid waste (CalRecycle 2023b).

Construction waste would consist of approximately 6,000 cubic yards of soil export. Toland Road landfill and Simi Valley Landfill and Recycling Center would have sufficient capacity to accept soil export during construction. During operation, the aquatics center is anticipated to generate approximately 0.03 tons of solid waste per day (Estrada 2023). This additional solid waste would account for approximately 0.001 percent of the permitted daily throughput of Toland Road Landfill and approximately 0.0003 percent of the permitted daily throughput of the Simi Valley Landfill and Recycling Center. Therefore, the proposed project would not exceed the permitted capacity of Toland Road Landfill or Simi Valley Landfill and Recycling Center and the proposed project would have a less-than-significant impact on solid waste generation.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project conflict with federal, state, or local statues or regulations related to solid waste?

The proposed project would be required to comply with applicable regulations concerning solid waste management. In compliance with Assembly Bill 939, the proposed project would divert a minimum of 50 percent solid waste from landfills. Pursuant to the City's Solid Waste Ordinance, the proposed project would utilize the City's solid waste services, which provide recycling and organics collection containers, reviews and adjusts the number and size of solid waste containers and/or collection frequency, and provides educational information to employees and facility users about recyclable and organic materials (City of Oxnard 2022d). The proposed project would comply with these mandatory solid waste requirements. Therefore, the proposed project would not conflict with federal, state, or local statues or regulations related to solid waste. No impact would occur.

NO IMPACT

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19 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

According to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire Hazard Severity Zone Viewer, the project site is not within a State Responsibility Area or Very High Fire Hazard Severity Zone. The nearest State Responsibility Area and Very High Fire Hazard Severity Zone are located approximately 5.11 miles east of the project site (CAL FIRE 2022). Because the project site is not located within an area with high wildfire risk, no impact would occur.

NO IMPACT

20 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	■	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	■	☐	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 4, *Biological Resources,* the proposed project identified two special status species occurrences overlapping the project site: the monarch butterfly (*Danaus plexippus*) and American peregrine falcon (*Falco peregrinus anatum*). The proposed project is limited to activities that would occur at the project site; therefore, the proposed project would not impact the total mapped habitat areas of these species. The proposed project does not include large-scale activities which would pose a substantial threat to the monarch butterfly or American peregrine falcon population, or their mapped habitats. Due to the local scale of the proposed project, the proposed

project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of a rare or endangered plant or animal. This impact would be less than significant.

As discussed in Section 6, *Cultural Resources*, there are no historical resources located at the project site and the proposed project would not cause a substantial change in the significance of a historic resource. In addition, the Cultural Resources Technical Report did not identify archaeological resources or archaeological deposits at the project site. There is a low potential to encounter archaeological resources at the project site and the proposed project would implement the standard procedures for evaluation, consultation, avoidance, and data recovery of unanticipated archaeological resources, if discovered during construction. Because no important examples of the major periods of California history or prehistory are known to be present at the project site, the proposed project would not eliminate important examples of the major periods of California history or prehistory. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the discussions of Sections 1 through 19, with respect to all environmental issues, the proposed project would either have no impact, a less-than-significant impact, or impacts would be reduced to a less-than-significant level with implementation of required mitigation. Cumulatively considerable impacts could occur if the construction or operation of other projects coincides with the proposed project in the same vicinity of the project site, such that similar impacts of multiple projects combine to expose a resource to greater levels of impacts than what would occur in accordance with the proposed project. The proposed project would have no impact on Farmland, forest land, riparian or wetland habitat, historical resources, flood flows, mineral resources, loss of housing, schools, or wildfire. Thus, the proposed project would not contribute to cumulative impacts to these resource topics. In addition, certain resource areas (e.g., geology and soils, hazards and hazardous materials) are by their nature specific to a project location such that impacts at one location do not add to impacts at other locations, and therefore would not result in cumulative impacts.

The proposed project would be consistent with surrounding development at the project site and would introduce lighting in accordance with City requirements such that lighting introduced would not considerably contribute to cumulative impacts associated with substantial increases in lighting. The proposed project and other cumulative development projects in the city would comply with California Building Energy Efficiency Standards which are designed to reduce wasteful energy usage for new development throughout California and thereby minimize cumulative impacts to energy consumption. The proposed project and other cumulative development projects in the city would also comply with the NPDES Construction General Permit and implement a Post Construction Storm Water Management Plan which would minimize cumulative impacts to hydrology and water quality. While cumulative development could result in substantial population increases which could result in increased cumulative demand for public services and recreation, the proposed project would not result in substantial population growth which would exceed regional population forecasts or necessitate additional public service facilities or recreation facilities. Therefore, the proposed

project's impacts to population, public services, and recreation would not be cumulatively considerable. Cumulative development could result in a greater number of vehicle trips compared to existing conditions and an increase in VMT. The proposed project would be local-serving and would not generate a net increase in VMT; therefore, proposed project's contribution to transportation and circulation impacts would not be cumulatively considerable.

Cumulative development could result in increased wastewater generation and solid waste generation. With the proposed project, the average daily flow of the Oxnard Wastewater Treatment Plant would allow for approximately 18.98 MGD additional capacity for other cumulative development. The Toland Road Landfill and Simi Valley Landfill and Recycling Center have sufficient capacities to accommodate cumulative development. Cumulative development would result in increased water demand. However, the proposed project represents approximately 0.09 percent of total anticipated demand, and thus would be accounted for in accordance with the UWMP. Therefore, the proposed project would not contribute considerably to cumulative water demand.

The proposed project includes mitigation to reduce impacts to NO_x emissions and noise generation during construction. There are no cumulative projects anticipated within 0.5-mile of the project site that could be constructed at the same time as the proposed project (City of Oxnard 2022e). Therefore, cumulative construction impacts regarding construction emissions and noise would not occur. Furthermore, the proposed project would implement Mitigation Measures AQ-1 and NOI-1 which would reduce air quality and noise in accordance with applicable regulatory standards. Therefore, the proposed project would not have a cumulatively considerable contribution on the release of NO_x emissions or noise generation.

The proposed project includes mitigation to reduce impacts to special status species (monarch butterfly) and migratory birds. Cumulative development could also result in impacts to these species and would be subject to similar regulatory requirements as the proposed project, including the federal Endangered Species Act, California Endangered Species Act, and Migratory Bird Treaty Act. These regulations are designed to protect individual species and their habitats. Cumulative projects would be required to abide by the provisions of these regulations and subject to review from agencies including, but not limited to, CDFW and USFWS, to ensure potential impacts to species or habitat are minimized. However, existing regulatory requirements alone cannot guarantee species loss, habitat loss, or other impact to biological resources due to cumulative development. The proposed project would incorporate Mitigation Measures BIO-1 and BIO-2 to avoid the potential to impact monarch butterfly and nesting bird species. As a result, the proposed project would not have a cumulatively considerable impact on special status species.

The proposed project could impact unknown archeological resources includes mitigation to reduce potential impacts to archaeological resources. Other cumulative development projects could also result in impacts to archaeological if, during ground disturbing activities, archaeological resources were disturbed. The proposed project would implement Mitigation Measure CUL-1 which would set a procedure for the unanticipated discovery of archaeological resources, including evaluation, consultation with Native American representatives, avoidance, and data recovery. Other cumulative development projects would implement similar mitigation measures to reduce impacts to archaeological resources. Implementation of Mitigation Measure CUL-1 would ensure the proposed project would not contribute considerably to cumulative impacts to archaeological resources.

For the reasons discussed above, the proposed project would not have a cumulatively considerable contribution to cumulative impacts.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Adverse effects on human beings are typically associated with air quality, hazards and hazardous materials, and noise impacts. These impacts are addressed in Section 3, *Air Quality*, Section 9, *Hazards and Hazardous Materials*, and Section 13, *Noise*. As discussed in detail in these sections, the proposed project would implement Mitigation Measures AQ-1, HAZ-1, and NOI-1 which would require implementation of emission control measures during construction, ensure contaminated soils are identified and removed at the project site, and require implement a Construction Noise Control Plan to reduce air quality, hazards, and noise impacts to a less-than-significant level. With incorporation of these mitigation measures, the proposed project would have a less-than-significant impact on human beings.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

Federal Cross-Cutting Environmental Regulations Evaluation

The proposed project may apply for and receive federal funding. If the proposed project receives federal funds, National Environmental Policy Act (NEPA) environmental clearance would be required. To assist in compliance with the federal environmental requirements for the funding program, this chapter includes analysis pertinent to several federal cross-cutting regulations (also referred to as federal cross-cutters or CEQA-Plus).

This section describes the project's status of compliance with relevant federal laws, executive orders, and policies, and any consultation that has occurred to date or will occur in the near future.

Federal Endangered Species Act

Section 7 of the federal Endangered Species Act requires federal agencies, in consultation with the Secretary of the Interior, to ensure their actions do not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of the critical habitat of these species. Under Section 7, a project that could result in incidental take of a listed threatened or endangered species must consult with the United States Fish and Wildlife Service (USFWS) to obtain a Biological Opinion (BO). If the BO finds the project could jeopardize the existence of a listed species ("jeopardy opinion"), the agency cannot authorize the project until it is modified to obtain a "non-jeopardy" opinion.

Section 4, *Biological Resources*, of the *Environmental Checklist* chapter, indicates the project site does not contain suitable habitat for federally listed species; however, the trees occurring adjacent to the project site contain suitable habitat for the California overwintering population of monarch butterfly, which is ~~a candidate species proposed for federal listing~~ proposed for listing as a threatened species under the federal Endangered Species Act. Monarch butterfly have been documented within this linear grove of trees and the population is monitored during the overwintering period between October 15 and March 15 by the Xerces Society (California Department of Fish and Wildlife [CDFW] 2022). Due to the potential for monarch butterfly to occur during the overwintering period, Mitigation Measure BIO-1 will be implemented during construction to minimize potential adverse effects to this species. This measure includes the avoidance of construction between October 15 and March 15 and, in the event project activities cannot be avoided during this time frame, a qualified biologist will conduct surveys for roosting monarch butterflies every two weeks to confirm their absence. If monarch butterfly are documented, the biologist will establish a protective buffer, ranging from 100 to 300 feet from the roosting site in which monarch butterflies are aggregating. The construction contractor will ensure no construction occurs within the protective buffer, including staging of equipment or stopping or idling in the buffer, during the overwintering season. In the event construction activities, or other use of equipment, is needed to work within the buffer, the qualified biologist will be on-site to monitor construction activities and determine if the work is disturbing the aggregated butterflies. If the biologist determines the work is disturbing the butterflies, the biologist will have the discretion to stop work within the protective buffer. In addition, due to the regular movement of the butterflies and locations of the aggregations, the biologist will have the discretion to adjust the protective buffers, as necessary.

With implementation of Mitigation Measure BIO-1 as described in Section 4, *Biological Resources*, no potentially adverse direct and/or indirect effects to the existence of the proposed listed species or suitable habitat of the species will occur. No other projects occur or are planned within the project area which may impact the monarch habitat. The project does not include removal of trees that support the monarch population, and the project would not be expected to cumulatively contribute to habitat loss or towards overall species population decline or loss of population viability. Thus, the project would not jeopardize listed species and the lead agency would be in compliance with the federal Endangered Species Act.

National Historic Preservation Act, Section 106

The purpose of the National Historic Preservation Act (NHPA) is to protect, preserve, rehabilitate, or restore significant historical, archaeological, and cultural resources. Section 106 requires federal agencies to consider effects on historic properties. Section 106 review involves a step-by-step procedure detailed in the implementing regulations found in 36 CFR Part 800.

As discussed in Section 6, *Cultural Resources*, of the *Environmental Checklist* chapter, there are no historical resources within the project site, and all four historical built environment resources within a 0.5-mile radius were deemed ineligible for listing in the National Register of Historic Properties and the California Register of Historic Resources. Ground disturbance associated with construction may result in a substantial adverse change in the significance of unanticipated archaeological and cultural resources if construction disturbs or destroys intact portions of these resources that contribute to their significance. The City would be required to implement Mitigation Measure CUL-1, which sets standard procedures following the unanticipated discovery of an archaeological resource, including evaluation, consultation with Native American representatives, avoidance, and data recovery, if applicable. With implementation of Mitigation Measure CUL-1, potential impacts to archaeological and cultural resources would be minimized. In addition, a Section 106 Cultural Resources Report would be submitted to the State Historic Preservation Officer for review and concurrence. The lead agency would also conduct outreach to Native American Tribes pursuant to the requirements of Section 106 of the NHPA. Therefore, the Section 106 documentation would be prepared at a later date and compliance with the NHPA would be determined at that time.

Clean Air Act

The 1990 Amendment to the federal Clean Air Act (FCAA) Section 176 requires the United States Environmental Protection Agency (USEPA) to promulgate rules to ensure federal actions conform to the appropriate State Implementation Plan. This rule, known as the General Conformity Rule (40 CFR Subpart W and 40 CFR Part 93 Subpart B: General Conformity), requires any federal agency responsible for an action in a federal nonattainment or maintenance area to demonstrate conformity with the applicable State Implementation Plan, by determining the action is either exempt from the General Conformity Rule requirements or subject to a formal General Conformity Determination. Actions would be exempt, and thus conform to the State Implementation Plan, if an applicability analysis shows total direct and indirect project emissions of criteria pollutants for which the project area is designated nonattainment or maintenance would be less than specified emission thresholds set by the USEPA, known as *de minimis* rates. If not exempt, an air quality conformity analysis would be required to determine conformity.

The project site is located within the South Central Coast Air Basin (SCCAB), which includes San Luis Obispo, Santa Barbara, and Ventura counties. The Ventura County Air Pollution Control District (VCAPCD) is responsible for local control and monitoring of criteria pollutants in the Ventura County area. The SCCAB is designated attainment or unclassified for all National Ambient Air Quality Standards (NAAQS) except the federal 8-hour ozone standard, for which the SCCAB is designated serious nonattainment (USEPA 2023a).

The VCAPCD operates a network of air quality monitoring stations throughout Ventura County. The closest monitoring station to the project site is El Rio-Rio Mesa School #2, located at 545 Central Avenue, Oxnard, approximately six miles south of the project site. This station collects 8-hour ozone, hourly ozone, nitrogen dioxide, particulate matter less than 2.5 microns ($PM_{2.5}$), and particulate matter less than 10 microns (PM_{10}) measurements. Table 17 indicates the number of days each federal standard was exceeded at the El Rio-Rio Mesa School #2 monitoring station. As shown for 8-hour ozone, measurements exceeded the federal standard in 2020. PM_{10} measurements exceeded the federal standard in the years 2019, 2020 and 2021. In addition, $PM_{2.5}$ measurements exceeded the federal standard in 2020. No other federal standards were exceeded at this monitoring station.

Table 17 Ambient Air Quality at the Nearest Monitoring Station

Pollutant	2019	2020	2021
8-Hour Ozone (ppm), 8-Hour Average	**0.070**	**0.086**	**0.059**
Number of days of federal exceedances (>0.070 ppm)	0	3	0
Nitrogen Dioxide (ppm) - Worst Hour	**0.041**	**0.031**	**0.033**
Number of days of federal exceedances (>0.10 ppm)	0	0	0
Particulate Matter 10 microns, μg/m³, Worst 24 Hours	**188**	**201**	**378**
Number of days above federal standard (>150 μg/m³)	2	2	1
Particulate Matter <2.5 microns, μg/m³, Worst 24 Hours	**25.5**	**58.7**	**31.7**
Number of days above federal standard (>35 μg/m³)	0	3	0

ppm = parts per million; μg/m³ = micrograms per cubic meter.

Measurements were taken from El Rio-Rio Mesa School #2 monitoring station.

Source: Appendix A Air Quality and Greenhouse Gas Study

As part of the Air Quality and Greenhouse Gas Study (Appendix A) prepared for the project, air pollutant emissions generated by construction and operation of the proposed project were estimated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod uses project-specific information, including the project's land uses, construction parameters, and operational characteristics, to model a project's construction and operational emissions.

Construction emissions modeled include air pollutant emissions associated with fugitive dust, emissions generated by construction equipment used on site, and emissions generated by vehicle trips associated with construction, such as worker, vendor, and haul trips. Operational emissions modeled consist of criteria air pollutant emissions associated with area sources (e.g., architectural coatings, consumer products, and landscaping equipment), energy sources (i.e., use of natural gas for space and water heating), and mobile sources (i.e., vehicle trips to and from the project site).

Table 18 lists the total annual emissions that would be generated from construction and operation activities associated with the proposed project. As detailed earlier, the SCCAB is designated attainment or unclassified for all NAAQs except 8-hour ozone, thus, only the 8-hour ozone *de minimis* rates would be applicable to the proposed project.

Table 18 Total Annual Emissions of Proposed Project (tons/year)

Source	VOC[1]	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum Annual Construction Emissions[2]	0.7	8.6	7.0	<1	2.0	1.1
Maximum Annual Operational Emissions	3.1	2.0	16.6	<1	1.1	<1
2025 Annual Construction plus Operational Emissions[3]	4.0	4.2	19.3	<1	1.1	<1
De Minimis Rates	**50**	**50**	N/A	N/A	N/A	N/A
De Minimis Rates Exceeded?	No	No	N/A	N/A	N/A	N/A

VOC: volatile organic compounds; NO_X: nitrogen oxides; CO: carbon monoxide; SO_2: sulfur dioxide; PM_{10}: particulate matter 10 microns or less in size; $PM_{2.5}$: particulate matter 2.5 microns or less in size; N/A: not applicable

[1] VOC is equivalent to reactive organic gases (ROG) as calculated by CalEEMod.

[2]Construction would begin in the first quarter of 2026 and end in the first quarter of 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance with statewide plans to reduce air quality and GHG emissions.

[3]Conservatively assumes that total annual operational emissions would be generated in the same year as construction emissions in year 2025, even though the proposed project would only be operational for a portion of this year.

Notes: Some totals may not add up due to rounding. Emissions data is sourced from "mitigated" results, which incorporate emissions reductions from measures to be implemented during project construction, such as watering of soils during construction required under VCAPCD Rule 55.

Source: Quality and Greenhouse Gas Study (Appendix A)

As indicated in Table 18, the proposed project would not exceed the 8-hour ozone *de minimis* rates. As such, general conformity requirements do not apply. The proposed project would conform to the State Implementation Plan and is exempt from a General Conformity Determination under FCAA Section 176. Therefore, the lead agency would be in compliance with the FCAA.

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), passed by Congress in 1972 and managed by the National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management, is designed to balance competing land and water issues in coastal zones. It also aims to "preserve, protect, develop, and where possible, to restore or enhance the resources of the nation's coastal zone." Within California, the CZMA is administered by the Bay Conservation and Development Commission, the California Coastal Conservancy, and the California Coastal Commission.

The project site is not located within the Coastal Zone and the CZMA is not applicable to the proposed project (California Coastal Commission 2019).

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) requires a federal agency to consider the effects of its actions and programs on the nation's farmlands. The FPPA is intended to minimize the impact of federal programs with respect to the conversion of farmland to nonagricultural uses. It assures that, to the extent possible, federal programs are administered to be compatible with State, local, and private programs and policies to protect farmland.

As described in Section 2, *Agriculture and Forestry Resources*, of the *Environmental Checklist* chapter, the project site is not currently in agricultural production and does not contain Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or land under a Williamson Act contract (California Department of Conservation 2018). Therefore, the proposed project would not adversely affect farmland areas, and the lead agency would be in compliance with the FPPA.

Executive Order 11988 – Floodplain Management

Executive Order (EO) 11988 requires federal agencies to recognize the values of floodplains and to consider the public benefits from restoring and preserving floodplains.

As described in Section 10, *Hydrology and Water Quality*, of the *Environmental Checklist* chapter the project site is not located within a 100-year flood hazard zone (FEMA 2021). As such, the project would not interfere with floodplain management or place structures within a floodplain management area. The lead agency would therefore be in compliance with this EO.

Federal Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Executive Order 13168

The MBTA and the Bald and Golden Eagle Protection Act prohibit the take of migratory birds (or any part, nest, or eggs of any such bird) and the take and commerce of eagles. EO 13168 (September 22, 2000) requires any project with federal involvement address impacts of federal actions on migratory birds.

As described in Section 4, *Biological Resources*, of the *Environmental Checklist* chapter, the proposed project would not require removal of any trees or vegetation that are suitable nesting and foraging habitat for migratory birds; therefore, direct effects are not anticipated. Due to the lack of suitable riparian or aquatic habitat, disturbed condition of the site, and regular ground disturbances occurring in the project site, such as stockpiling of mulch, no direct effects to other regionally occurring special status species, such as western burrowing owl (*Athene cunicularia*), southwestern pond turtle (*Actinemys pallida*), two-striped garter snake (*Thamnophis hammondii*), and least Bell's vireo (*Vireo bellii pusillus*) are anticipated. Indirect adverse effects to species utilizing the adjacent habitats, including the row of eucalyptus "gum" trees (*Eucalyptus* spp.) along the western boundary of the project site, may result during construction activities through construction noise, dust, and other human disturbances. These indirect effects may affect migratory birds during their breeding season when nesting birds may be present. To reduce the potential indirect effects to nesting migratory birds, Mitigation Measure BIO-2 would be implemented. Mitigation Measures BIO-2 includes avoidance of construction activities during the nesting bird season (February 1 through August 31) and pre-construction nesting bird surveys, nest avoidance buffers, and nest monitoring if

construction cannot be avoided during nesting season. Thus, the lead agency would be in compliance with this EO.

Executive Order 11990 – Protection of Wetlands

Under EO 11990 (May 24, 1977), federal agencies must avoid affecting wetlands unless it is determined that no practicable alternative is available.

As described in Section 4, *Biological Resources*, of the *Environmental Checklist* chapter, the project site does not support federally protected wetlands as defined by Section 404 of the federal Clean Water Act. Thus, the lead agency would be in compliance with EO 11990.

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act was passed in 1968 to preserve and protect designated rivers for their natural, cultural, and recreational value.

There are no designated Wild and Scenic Rivers within the project site, and no designated rivers would be adversely affected by the proposed project. As a result, the Wild and Scenic Rivers Act does not apply to the proposed project (Bureau of Land Management et al. 2023).

Safe Drinking Water Act – Source Water Protection

Section 1424(e) of the Safe Drinking Water Act established the USEPA's Sole Source Aquifer Program. This program protects communities from groundwater contamination from federally-funded projects.

Within USEPA's Region 9, which includes California, there are nine sole source aquifers. None of these sole source aquifers are located within the vicinity of the project site (USEPA 2023b). Therefore, the Sole Source Aquifer Program does not apply to the proposed project, and the lead agency would be in compliance with Section 1424(e) of the Safe Drinking Water Act.

Executive Order on Trails for America in the 21st Century

The EO on Trails for America (January 18, 2001) requires federal agencies to protect, connect, promote, and assist trails of all types throughout the United States. No trails exist in the vicinity of the project site with which the proposed project could interfere (City of Oxnard 2023; County of Ventura County; Visit Oxnard 2023). As a result, the lead agency would be in compliance with this EO.

Executive Order 13007 – Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

The proposed project would not be located on or impact any federal lands and therefore would not affect any Native American sacred sites protected under this EO. In addition, the lead agency would conduct outreach to Native American Tribes pursuant to the requirements of Section 106 of the NHPA. As a result, the lead agency would be in compliance with this EO.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1976, as amended (16 United States Code Section 1801 et seq.), is the primary act governing federal management of fisheries in federal waters, from the three-nautical-mile state territorial sea limit to the outer limit of the United States Exclusive Economic Zone. It establishes exclusive United States management authority over all fishing within the Exclusive Economic Zone, all anadromous fish throughout their migratory range except when in a foreign nation's waters, and all fish on the continental shelf. The Act also requires federal agencies to consult with the National Marine Fisheries Service on actions that could damage Essential Fish Habitat, as defined in the 1996 Sustainable Fisheries Act (Public Law 104-297).

The proposed project would not be located in or impact any United States federal waters regulated under the Magnuson-Stevens Act. Essential Fish Habitat includes those habitats that support the different life stages of each managed species. A single species may use many different habitats throughout its life to support breeding, spawning, nursery, feeding, and protection functions. Essential Fish Habitat can consist of both the water column and the underlying surface (e.g., streambed) of a particular area. The project area is located on vacant land within existing developed areas. As described in Section 4, *Biological Resources,* of the *Environmental Checklist* chapter, the project would not have an adverse effect on resident or migratory fish, wildlife species, or fish habitat. As a result, the lead agency would be in compliance with this Act.

Environmental Justice

The USEPA defines environmental justice as: "The fair treatment and meaningful involvement of all people regardless of race, color, culture, national origin, income, and educational levels with respect to the development, implementation, and enforcement of protective environmental laws, regulations, and policies" (USEPA 2020). This section describes existing socioeconomic conditions in the project area and the regulatory setting pertaining to environmental justice-related issues. This section also evaluates the potential for the proposed project to disproportionately affect minority or low-income groups.

According to USEPA guidelines, a minority population is present if the minority population of an area exceeds 50 percent, or if the minority population percentage of the area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (e.g., town, city, region).

The project site is located in the city of Oxnard in Ventura County, California. Demographics for Oxnard as provided in the United States Census Bureau's (Census) American Community Survey (ACS) 5-Year Estimates indicate the city's local population is comprised of approximately 35.6 percent racial minority populations and 75.4 percent ethnic minority populations (Census 2023a). The USEPA's Environmental Justice Screening and Mapping Tool (EJSCREEN) indicates communities

located in census tracts within or directly adjacent to the project site are comprised of approximately 41 percent racial minority populations and approximately 76 percent ethnic minority populations (USEPA 2023c). Therefore, the project site and surrounding area has a minority population exceeding 50 percent.

USEPA guidelines recommend that analyses of low-income communities consider the Census' poverty level definitions, as well as applicable State and regional definitions of low-income and poverty communities. According to the Census, approximately 10.6 percent of the population of Oxnard is at or below the poverty level (Census 2023b). EJSCREEN indicates that fewer than 3 percent of households in communities within or surrounding the project site earn less than $15,000 a year, and would thus be considered under the state poverty level (USEPA 2023c). For California as a whole, the percentage of persons in poverty is 12.3 percent (Census 2023b). As a result, the city of Oxnard, including communities within or directly adjacent to the project site, has a poverty rate below the state average and is therefore not considered a low-income community.

A Disadvantaged Community (DAC) is defined as a community with a median household income (MHI) less than 80 percent of the California MHI (Public Resource Code Section 75005[g]). According to ACS data, the statewide MHI was $84,097 in 2021 (Census 2023b). A DAC would therefore be a community with an MHI of $67,278 or less. In 2021, the MHI for Oxnard was $83,180 (Census 2023b). Therefore, Oxnard is not a DAC.

For the purposes of this analysis, an impact related to environmental justice would be adverse if the proposed project would cause impacts to minority or low-income populations that are disproportionately high and adverse, either directly, indirectly, or cumulatively.

Considering Oxnard has minority populations that exceed 50 percent, it is considered a community subject to an environmental justice analysis. The proposed project involves construction of an outdoor pool area; a one-story building to hold locker rooms, utility rooms, a concession stand, and ancillary facilities; a parking lot; and recreational amenities, such as a slide area for the proposed pool. Construction would generate localized environmental impacts (e.g., dust and noise), but such activities would be intermittent and temporary and would cease upon completion of work activities. These activities would also be typical of construction projects occurring throughout the state on an ongoing basis and therefore would not result in disproportionately high impacts to communities surrounding the project site. Where potential impacts could occur, mitigation measures have been identified throughout this document to reduce such effects. For example, implementation of Mitigation Measure NOI-1 would involve several noise reduction measures, including the use of mufflers and shielding to minimize construction noise to the degree feasible (refer to Section 13, *Noise,* of the *Environmental Checklist* chapter). Mitigation Measure AQ-1 would reduce construction emissions in accordance with VCAPCD guidance (refer to Section 3, *Air Quality,* of the *Environmental Checklist* chapter). Implementation of these mitigation measures would limit the extent of localized construction-related impacts. The proposed project would therefore not result in any disproportionately high impacts on minority communities. Although the proposed project has the potential for short-term effects related to temporary construction activities, the provision of a new aquatics center would have long-term recreational benefits for all community members, including the minority populations. Thus, no adverse environmental justice impacts would occur.

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Appendix A

Air Quality and Greenhouse Gas Study



South Oxnard Aquatics Center Project

Air Quality and Greenhouse Gas Study

prepared for

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Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by the City of Oxnard (City) to conduct an air quality and greenhouse gas (GHG) study for the South Oxnard Aquatics Center Project (proposed Project), in Oxnard, Ventura County, California. The 7.93-acre vacant, graded Project site is located at the southeast corner of College Park at 3250 South Rose Avenue. The proposed Project includes the construction of three outdoor pools (including a 50 meter competition pool, 25 yard instructional pool, and a fun water shallow pool, slide, and splash pad), a building structure, and a parking lot. In order to heat the pools, the proposed Project includes construction of a natural gas line that would connect to the southwest corner of the proposed aquatics center, run west along the southern portion of College Park's one-lane ring road, and connect to an existing SoCalGas line in South Rose Avenue. The aquatics center will provide recreation, water fitness, and competitive aquatics opportunities for the residents of the City and surrounding communities.

The proposed Project is subject to the California Environmental Quality Act (CEQA). The City is the lead agency under CEQA. In addition to CEQA, several laws, regulations, and guidance documents govern air quality and greenhouse gas emissions, including the federal Clean Air Act, California Clean Air Act; State Implementation Plan; Ventura County Air Pollution Control District (VCAPCD) Air Quality Management Plan; VCAPCD rules and regulations; California Air Resource Board (CARB) Scoping Plan; various California Assembly Bills, Senate Bills, and Executive Orders; California Building Code; Southern California Association of Governments 2020-2045 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), City Climate Action and Adaptation Plan (CAAP); and City General Plan.

A project may be inconsistent with the applicable air quality plan if the project would generate population, housing, or employment growth exceeding the forecasts used in the development of the plan. The proposed Project would not include new housing or population growth within Ventura County, and employment opportunities that would be generated from the proposed Project would be within SCAG's employments forecast for the city. Therefore, ***no impact*** related to conflict with or obstruct implementation of the applicable air quality plan would occur.

Project construction would generate temporary air pollutant emissions associated with fugitive dust, exhaust emissions from heavy construction equipment and construction vehicles, and emissions from architectural coating and paving. Construction-related emissions would exceed the VCAPCD threshold for nitrogen oxides (NO_X) and would be potentially significant. Mitigation Measure AQ-1 requires use of Tier 4 engine equipment along with VCACPD best management practices during construction to reduce ozone precursor below VCAPCD regional thresholds. With adherence to Mitigation Measure AQ-1, construction-related air quality impacts, including impacts to nearby sensitive receptors, would be ***less than significant with mitigation.***

Operational air quality emissions from area sources (e.g., architectural coatings, consumer products, and landscaping equipment), energy sources (i.e., use of natural gas for space and water heating), and mobile sources (i.e., vehicle trips to and from the Project site) would not exceed VCAPCD thresholds. Therefore, operation-related air quality impacts, including impacts to nearby sensitive receptors, would be ***less than significant***.

San Joaquin Valley Fever is a pollutant of concern for sensitive receptors in Ventura County. The temporary nature of Project construction and implementation of standard construction measures to

reduce fugitive dust generation would minimize the potential risk of infection from San Joaquin Valley Fever. This impact would be ***less than significant***.

The Project would temporarily generate odor during construction activity, which would cease upon completion of construction. Aquatics centers are not identified as an odor-producing facility, nor are there developments near the project site that would produce significant odors. Impacts related to odors would be ***less than significant***.

GHG impacts are assessed in a cumulative context since no single project can cause a discernible change to the climate. In the absence of an adopted numeric GHG threshold for the City of Oxnard, the significance of the proposed Project's potential impacts regarding GHG emissions and climate change is evaluated based on consistency with plans and policies adopted to reduce GHG emissions and mitigate the effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are the CARB 2022 Scoping Plan, SCAG 2020-2045 RTP/SCS, City General Plan, and City CAAP. The proposed Project would be consistent with the latest iteration of the Title 24 Building Energy Efficiency Standards (Part 6) and Green Building Standards (Part 11) that increase energy and water conservation. The proposed Project is an infill development that would add an amenity to several neighboring residential communities within approximately half a mile radius from the Project site. The Project site would include bike racks and six electric charging parking stations, which would promote alternative modes of transportation for nearby residential uses. In addition, the Gold Coast Transit bus stops 8 and 17 along Rose Avenue are within a quarter of a mile of the Project site. As such, the proposed Project could reduce the amount of motor vehicle trips through availability of transit and connectivity to surrounding neighborhoods. For these reasons, the proposed Project is consistent with goals and policies to increase energy and water efficiency and reduce vehicle trips. Therefore. proposed Project would be consistent with the statewide, regional, and local plans and policies governing GHG emissions and would not contribute to potential secondary effects of climate change. Impacts related to GHG emissions would be ***less than significant***.

1 Project Description

1.1 Introduction

This study analyzes the potential air quality and GHG impacts of the proposed South Oxnard Aquatics Center Project located in Oxnard, California. Rincon prepared this study for the City of Oxnard for use in support of environmental documentation pursuant to the CEQA. The purpose of this study is to analyze the Project's air quality and GHG impacts related to both temporary construction activity and long-term operation of the Project with respect to the VCAPCD air quality guidelines (VCAPCD 2003). The conclusions of this study are summarized in Table 1.

Table 1 Summary of Impacts

Impact Statement	Proposed Project's Level of Significance	Applicable Recommendations
Air Quality		
Would the project conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP?	No impact	None
Would the project violate any federal or state air quality standard or contribute substantially to an existing or project air quality standard violation?	Less than significant impact with mitigation incorporated	Mitigation Measure AQ-1 NO_X Construction Reduction Measures
Would the project result in a net increase of any criteria pollutant in excess of quantitative thresholds recommended by the VCAPCD?	Less than significant impact with mitigation incorporated	Mitigation Measure AQ-1 NO_X Construction Reduction Measures
Would the project expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants?	Less than significant impact	None
Would the project create objectionable odors affecting a substantial number of people?	Less than significant impact	None
Greenhouse Gas Emissions		
Would the project generate greenhouse emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than significant impact	None
Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with state goals for reducing GHG emissions in California?	Less than significant impact	None
Would the project contribute or be subject to potential secondary effects of climate change (e.g., sea level rise, increase fire hazard)?	Less than significant impact	None

1.2 Project Summary

Project Location

The Project site is located at the southeastern corner of College Park at 3250 South Rose Avenue in Oxnard, California. The 7.93-acre Project site is identified as a portion of the Assessor's Parcel Number 2240-012-28. The Project site is regionally accessible by California State Route 1 (SR-1) and locally by South Oxnard Boulevard and the intersection of South Rose Avenue and Gary Drive. The Project site is zoned for Community Reserve and surrounded by residential and commercial zoned areas. Figure 1 shows the location of the Project site in the region, and Figure 2 shows the location of the Project site in its neighborhood context.

Project Description

The proposed Project would include the construction of a 57,233 square foot outdoor pool area with four pool areas totaling 23,571 square feet, one slide area totaling 822 square feet, a one-story "L" shaped building totaling 18,342 square feet, a 103-stall parking lot, and ancillary facilities. Pool areas would consist of a 50-meter competition pool, 25-yard instructional pool, splash pad, recreation pool, and slide area. The one-story building would frame the western and northern sides of the pool area. It would be used to house locker rooms, administrative space, utility rooms, a concession stand, and other ancillary facilities. The proposed Project includes the construction of a natural gas line that would connect to the southwest corner of the proposed aquatics center, run west along the southern portion of College Park's one-lane ring road, and connect to an existing SoCalGas line in South Rose Avenue.

The proposed Project includes the construction of a dedicated parking lot with 103 parking stalls north of the aquatics center. Of the 103 spaces, five would be Americans with Disabilities Act (ADA) compliant, two would be ADA compliant and allow electric vehicle (EV) parking, four would be reserved for EV parking only, and 19 would be EV capable, meaning infrastructure that would support the future installation of an EV charging station would be provided. The parking lot will be supplemented by existing parking along College Park's ring road and adjacent parking lots within the park. Figure 3 shows the proposed site plan.

Figure 1 Regional Location



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Project Location

N

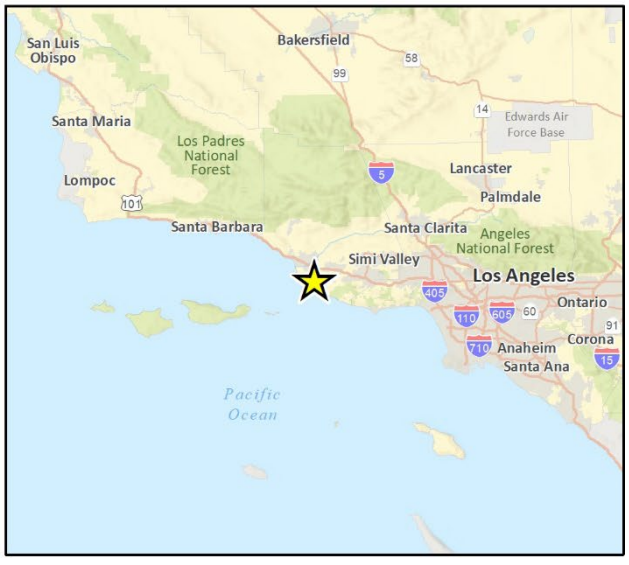
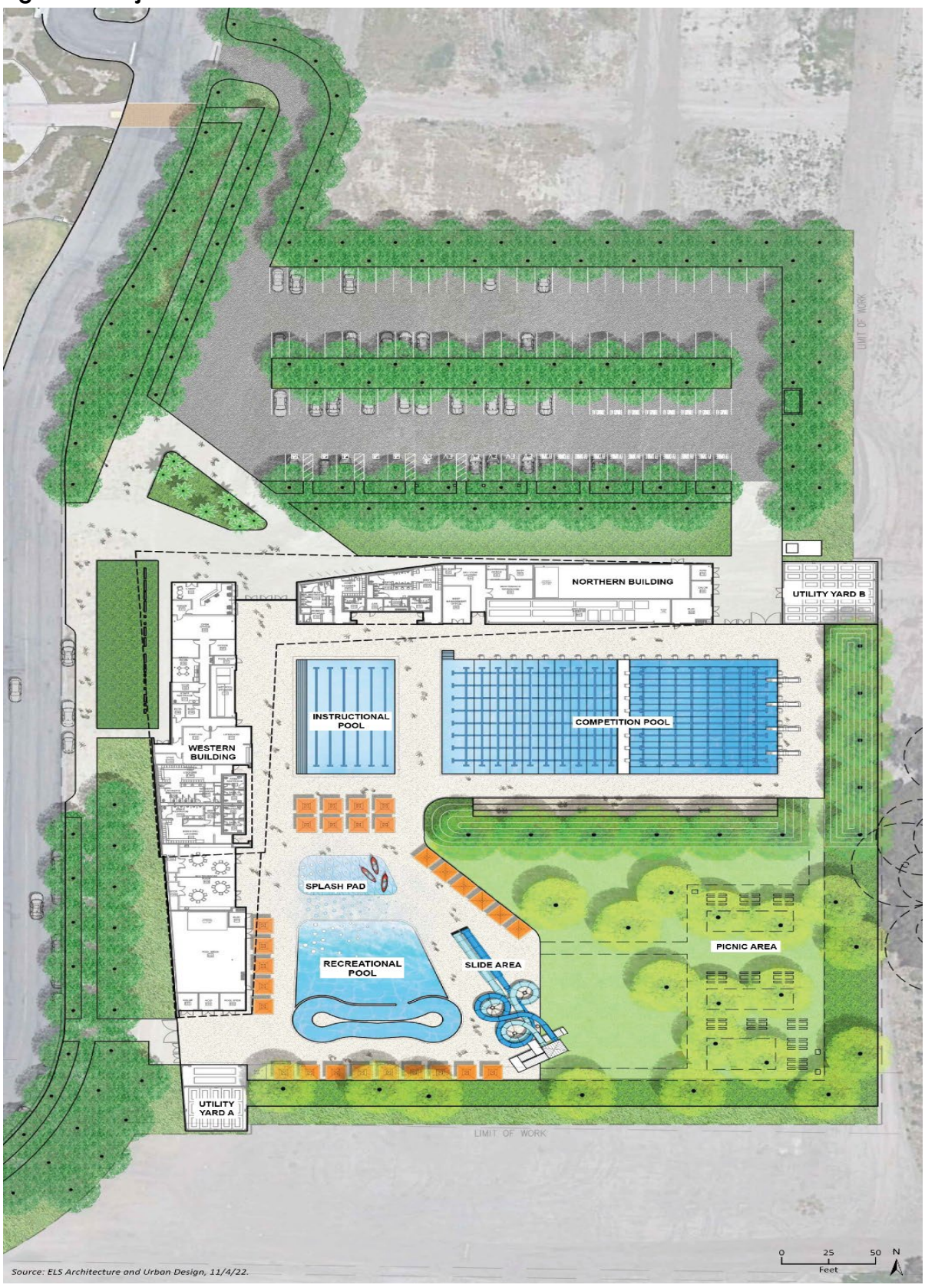


Figure 2 Project Site



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Figure 3 Project Site Plans



Construction

Construction of the proposed Project is anticipated to begin in the 1st quarter of 2026 and end in the 1st quarter of 2028[1]. Underground stone columns, up to 50 feet in depth, may be required to increase the load-bearing capacity of the soil. Excavation up to 15 feet in depth would be required for the pool areas and utilities. The proposed Project would require cut of approximately 11,000 cubic yards (CY) and approximately 7,000 CY of fill. Approximately 6,000 CY of soil would be exported from the Project site. Soil debris would be hauled to the Toland Road Landfill or the Simi Valley Landfill, or other landfills with available capacity. The proposed haul route for soil export and material delivery would be as follows:

- **Toland Road Landfill:** Rose Avenue to State Route (SR) 118 to SR 126 to Toland Road
- **Simi Valley Landfill:** Pleasant Valley Road to United States Route 101 (U.S. 101) to SR 23 to SR 118 to Madera Road

The analysis conservatively estimated hauling emissions from the furthest landfill to the Project site, the Simi Valley Landfill, which is approximately 33 miles from the Project site. Construction staging would be located on the Project site. Construction workers would park on the Project site, on the street immediately west of the Project site, or in the adjacent parking lot located approximately 460 feet west of the Project site. No nighttime or weekend construction would occur.

The contractor would be required to implement appropriate erosion and stormwater pollution control best management practices (BMPs) as part of preparation of Stormwater Pollution Prevention Plan (SWPPP).

Operation

The City anticipates that the aquatics center would serve only the local community of Oxnard, and would not be used for regional events. The proposed Project would be operated 50 weeks out of the year, seven days per week. During the summer season it is anticipated approximately 3,005 daily users would utilize the aquatics center Monday through Friday. On Saturday and Sunday, it is expected approximately 4,425 daily users would utilize the aquatics center. During the weekdays, the aquatics center would be staffed with approximately 80 employees per day. During the weekends, the number of employees is anticipated to increase to approximately 100 employees per day.

Use of the aquatics center during the fall, winter, and spring seasons is anticipated to be less than the use during the summer season. During the fall, winter, and spring seasons it is anticipated approximately 1,330 daily users would utilize the aquatics center Monday through Friday. On Saturday and Sunday, it is expected approximately 2,650 daily users would utilize the aquatics center. Employment at the aquatics center is expected to remain the same as during the summer season, ranging from approximately 80 to 100 employees per day.

Two centralized hot water systems would be installed in the pool mechanical rooms of the western and northern buildings to provide hot water to plumbing fixtures in the buildings. The system would consist of two gas-powered water heaters with an expansion tank, master mixing valve, and recirculating pump. Up to 7.425 million BTUs of natural gas would be required to heat the pools.

[1] The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

Wastewater would be generated from the five pool areas and users of the aquatics center. The annual wastewater generation from each of the five pools would be as follows:

- Competition Pool: 151,200 gallons per year
- Recreation Pool: 73,440 gallons per year
- Instructional Pool: 55,016 gallons per year
- Splash Pad Pool: 3,600 gallons per year
- Slides: 2,880 gallons per year

In addition, the anticipated wastewater from the ancillary facilities (such as restrooms) would be approximately 22,250 gallons per day.

2 Background

2.1 Local Climate and Meteorology

The Project site is located in the South Central Coast Air Basin (SCCAB), which includes San Luis Obispo, Santa Barbara, and Ventura counties. The climate of the Ventura County area and the rest of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high-pressure cell in the northeastern Pacific Ocean. The Mediterranean climate of the region produces moderate average temperatures, although slightly more extreme temperatures can be reached in the winter and summer. The warmest month in Oxnard from 2013 to 2022 was October, with a highest average temperature of 79.5 degrees Fahrenheit, while the coldest month of the year was December, with a highest average temperature of 68.5 degrees Fahrenheit. Typically, the city's annual highest average temperature is 82 degrees Fahrenheit, and the annual lowest average temperature is 46.5 degrees Fahrenheit (National Oceanic and Atmospheric Administration [NOAA] 2023a). The climate is semi-arid, with rainfall concentrated in the winter months. Table 2 summarizes local climatic conditions.

Table 2 Climatic Conditions in Oxnard

Weather Condition	Value
Average annual rainfall	11.14 inches
Highest Average temperature (annual)	82°F
Lowest Average temperature (annual)	46.5°F
Warmest month	October
Coolest month	December

°F = degrees Fahrenheit
Source: NOAA 2023a

California's weather is heavily influenced by a semi-permanent high-pressure system west off the Pacific coast. The region's Mediterranean climate and the coastal influence produce moderate temperatures year-round, with rainfall concentrated in the winter months. The sea breeze, which is the predominant wind, is a primary factor in creating this climate and typically flows from the west-southwest in a day-night cycle with speeds generally ranging from 5 to 15 miles per hour.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet. It can occur throughout the year but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed. The more stable the air (low wind speeds, uniform temperatures), the less pollutant dispersion in the air.

2.2 Air Pollutants of Primary Concern

Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere. Primary criteria pollutants include carbon monoxide (CO), nitrogen dioxide (NO_2), fine particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Ozone (O_3) is considered a secondary criteria pollutant because it is created by atmospheric chemical and photochemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_X). The proposed Project would generate CO, PM_{10}, $PM_{2.5}$, SO_2, and Pb as well as O_3 precursors ROG and NO_X (including NO_2) during construction and operation. These pollutants can have adverse impacts on human health at certain levels of exposure. The following subsections describe the characteristics, sources, and health and atmospheric effects of air pollutants.

Ozone

Ozone (O_3) is a highly oxidative unstable gas produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG)/volatile organic compounds (VOC).[2] ROG is composed of non-methane hydrocarbons (with specific exclusions), and NO_X is composed of different chemical combinations of nitrogen and oxygen, mainly nitric oxide and NO_2. NO_X is formed during the combustion of fuels, while ROG is formed during the combustion and evaporation of organic solvents. As a highly reactive molecule, O_3 readily combines with many different atmosphere components. Consequently, high O_3 levels tend to exist only while high ROG and NO_X levels are present to sustain the O_3 formation process. Once the precursors have been depleted, O_3 levels rapidly decline. Because these reactions occur on a regional rather than local scale, O_3 is considered a regional pollutant. In addition, because O_3 requires sunlight to form, it mainly occurs in concentrations considered serious between April and October. Groups most sensitive to O_3 include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors (United States Environmental Protection Agency [United States EPA] 2022a). Depending on the level of exposure, O_3 can cause coughing and a sore or scratch throat; make it more difficult to breathe deeply and vigorously and cause pain when taking a deep breath; inflame and damage the airways; make the lungs more susceptible to infection; and aggravate lung diseases such as asthma, emphysema, and chronic bronchitis.

Carbon Monoxide

Carbon monoxide (CO) is a localized pollutant found in high concentrations only near its source. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic's incomplete combustion of petroleum fuels. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Other sources of CO include the incomplete combustion of petroleum fuels at power plants and fuel combustion from wood stoves and fireplaces throughout the year. When CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability to get oxygenated blood to their hearts in situations where they need more oxygen than usual. As a result, they are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-

[2] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this report.

term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain, also known as angina (United States EPA 2022a).

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion. The primary sources are motor vehicles and industrial boilers, and furnaces. The principal form of NO_x produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2, commonly called NO_x. NO_2 is a reactive, oxidizing gas and an acute irritant capable of damaging cell linings in the respiratory tract. Breathing air with a high concentration of NO_2 can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases leading to respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, such as children and the elderly are generally at greater risk for the health effects of NO_2 (United States EPA 2022a). NO_2 absorbs blue light and causes a reddish-brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of O_3/smog and acid rain.

Sulfur Dioxide

Sulfur dioxide (SO_2) is included in a group of highly reactive gases known as “oxides of sulfur.” The largest sources of SO_2 emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore and burning fuels with a high sulfur content by locomotives, large ships, and off-road equipment. Short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO_2 (United States EPA 2022a).

Particulate Matter

Suspended atmospheric PM_{10} and $PM_{2.5}$ are comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Both PM_{10} and $PM_{2.5}$ are emitted into the atmosphere as by-products of fuel combustion and wind erosion of soil and unpaved roads. The atmosphere, through chemical reactions, can form particulate matter. The characteristics, sources, and potential health effects of PM_{10} and $PM_{2.5}$ can be very different. PM_{10} is generally associated with dust mobilized by wind and vehicles. In contrast, $PM_{2.5}$ is generally associated with combustion processes and formation in the atmosphere as a secondary pollutant through chemical reactions. PM_{10} can cause increased respiratory disease, lung damage, cancer, premature death, reduced visibility, surface soiling. For $PM_{2.5}$, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases (California Air Resource Board [CARB] 2022a).

Lead

Lead (Pb) is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial. However, due to the United States EPA ’s regulatory efforts to remove lead from gasoline, atmospheric Pb

concentrations have declined substantially over the past several decades. The most dramatic reductions in Pb emissions occurred before 1990 due to the removal of Pb from gasoline sold for most highway vehicles. Pb emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least partly due to national emissions standards for hazardous air pollutants (United States EPA 2013). As a result of phasing out leaded gasoline, metal processing is currently the primary source of Pb emissions. The highest Pb level in the air is generally found near Pb smelters. Other stationary sources include waste incinerators, utilities, and Pb-acid battery manufacturers. Pb can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and cardiovascular system depending on exposure. Pb exposure also affects the oxygen-carrying capacity of the blood. The Pb effects most likely encountered in current populations are neurological in children. Infants and young children are susceptible to Pb exposures, contributing to behavioral problems, learning deficits, and lowered IQ (United States EPA 2022a).

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TAC) are airborne substances diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (about $1/70^{th}$ the diameter of a human hair) and thus is a subset of $PM_{2.5}$. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs (CARB 2022a). TACs are different than criteria pollutants because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health. People exposed to TACs at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility), developmental, respiratory, and other health problems (United States EPA 2020).

Valley Fever

San Joaquin Valley Fever (formally known as Coccidioidomycosis) is an infectious disease caused by the fungus Coccidioides immitis. Infection is caused by inhalation of Coccidioides immitis spores that have become airborne when dry, dusty soil or dirt is disturbed by wind, construction, farming, or other activities. According to the VCAPCD, the following factors may indicate a Project's potential to create significant Valley Fever impacts:

- Disturbance of the topsoil of undeveloped land (to a depth of about 12 inches).
- Dry, alkaline, sandy soils.
- Virgin, undisturbed, non-urban areas.
- Windy areas.
- Archaeological resources probable or known to exist in the area (Native American midden sites).

- Special events (fairs, concerts) and motorized activities (motocross track, All Terrain Vehicle activities) on unvegetated soil (non-grass).
- Non-native population (i.e., out-of-area construction workers).

Health effects from Coccidioides can include fatigue, fever, headache, rashes and cough. In extremely rare cases, the fungal spores can enter the skin through a cut, wound, or splinter and cause a skin infection (Centers for Disease Control and Prevention 2020).

2.3 Air Quality Regulation

The federal and state governments have authority under the federal and state Clean Air Acts to regulate emissions of airborne pollutants and have established ambient air quality standards (AAQS) for the protection of public health. An air quality standard is defined as "the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harming public health" (CARB 2022b). The United States EPA is the federal agency designated to administer air quality regulation, while CARB is the state equivalent in California. Federal and state AAQS have been established for six criteria pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb. AAQS are designed to protect those segments of the public most susceptible to respiratory distress, such as children under the age of 14, the elderly (over the age of 65), persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases (United States EPA 2016). In addition, the state of California has established health-based ambient air quality standards for these and other pollutants, some of which are more stringent than the federal standards (CARB 2022c). The federal and state Clean Air Acts are described in more detail below.

Federal Air Quality Regulations

The Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, to achieve the purposes of Section 109 of the CAA [42 USC 7409], the United States EPA developed primary and secondary National Ambient Air Quality Standards (NAAQS).

The primary NAAQS "in the judgment of the Administrator[3], based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health," and the secondary standards are to "protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The United States EPA classifies specific geographic areas as either "attainment" or "nonattainment" areas for each pollutant based on the comparison of measured data with the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS. State plans also must control emissions that drift across state lines and harm air quality in downwind states. Table 3 lists the current federal standards for regulated pollutants.

[3] The term "Administrator" means the Administrator of the United States EPA .

Table 3 Federal and State Ambient Air Quality Standards

Pollutant	NAAQS	CAAQS
Ozone	0.070 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.070 ppm (8-hr avg)
Carbon Monoxide	35.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)	20.0 ppm (1-hr avg) 9.0 ppm (8-hr avg)
Nitrogen Dioxide	0.100 ppm (1-hr avg) 0.053 ppm (annual avg)	0.18 ppm (1-hr avg) 0.030 ppm (annual avg)
Sulfur Dioxide	0.075 ppm (1-hr avg) 0.5 ppm (3-hr avg) 0.14 ppm (24-hr avg) 0.030 ppm (annual avg)	0.25 ppm (1-hr avg) 0.04 ppm (24-hr avg)
Lead	0.15 μg/m^3 (rolling 3-month avg) 1.5 μg/m^3 (calendar quarter)	1.5 μg/m^3 (30-day avg)
Particulate Matter (PM_{10})	150 μg/m^3 (24-hr avg)	50 μg/m^3 (24-hr avg) 20 μg/m^3 (annual avg)
Particulate Matter ($PM_{2.5}$)	35 μg/m^3 (24-hr avg) 12 μg/m^3 (annual avg)	12 μg/m^3 (annual avg)
Visibility-Reducing Particles	No Federal Standards	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 - 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape. (8-hr avg)
Sulfates	No Federal Standards	25 μg/m^3 (24-hr avg)
Hydrogen Sulfide	No Federal Standards	0.03 ppm (1-hr avg)
Vinyl Chloride	No Federal Standards	0.01 ppm (24-hr avg)

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; avg = average; μg/m^3 = micrograms per cubic meter

Source: CARB 2016

To derive the NAAQS, the United States EPA reviews data from integrated science assessments and risk/exposure assessments to determine the ambient pollutant concentrations at which human health impacts occur, then reduces these concentrations to establish a margin of safety (United States EPA 2018). As a result, human health impacts caused by the air pollutants discussed above may affect people when ambient air pollutant concentrations are at or above the concentrations established by the NAAQS. The closer a region is to attainting a particular NAAQS, the lower the human health impact is from that pollutant (SJVACPD 2015). Accordingly, ambient air pollutant concentrations below the NAAQS are considered to be protective of human health (CARB 2022b and 2022c). The NAAQS and the underlying science that forms the basis of the NAAQS are reviewed every five years to determine whether updates are necessary to continue protecting public health with an adequate margin of safety (United States EPA 2015).

State Air Quality Regulations

California Clean Air Act

The California Clean Air Act (CCAA) was enacted in 1988 (California Health & Safety Code (H&SC) §39000 et seq.). Under the CCAA, the state has developed the California Ambient Air Quality Standards (CAAQS), which are generally more stringent than the NAAQS. Table 3 lists the current state standards for regulated pollutants. In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Similar to the federal CAA, the CCAA classifies specific geographic areas as either “attainment” or “nonattainment” areas for each pollutant, based on the comparison of measured data within the CAAQS.

Toxic Air Contaminants

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM); however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill (SB) 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires the CARB to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

State Implementation Plan

The SIP is a collection of documents that set forth the state's strategies for achieving the AAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the United States EPA for approval and publication in the Federal Register. The items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The 2022 Ventura County Air Quality Management Plan (AQMP) is the SIP for Ventura County. The AQMP accommodate growth by projecting the growth in emissions based on different indicators. For example, population forecasts adopted by the Southern California Associations of Governments (SCAG) are used to forecast population-related emissions. Through the planning process, emissions growth is offset by basin-wide controls on stationary, area, and transportation sources of air pollution.

In addition, the following California Code of Regulations would be applicable to the proposed Project:

- **Engine Idling.** In accordance with Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- **Emission Standards.** In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

NAAQS and CAAQS Attainment Status

California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as a nonattainment area for that pollutant. Under the federal and state Clean Air Acts, once a nonattainment area has achieved the air quality standards for a particular pollutant, it may be redesignated to an attainment area for that pollutant. To be redesignated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. Areas that have been redesignated to attainment are called maintenance areas.

The Project site is within Ventura County, which currently meets the NAAQS for all criteria air pollutants except ozone. The Ventura County is classified an attainment/maintenance area for CO, and attainment for PM_{10}. The Ventura County is currently classified as a nonattainment area under the CAAQS for ozone, and PM_{10} (Ventura County 2022).

Regional Air Quality Regulations

Ventura County Air Pollution Control District

The Federal Clean Air Act Amendments of 1990 set a schedule for the attainment of the NAAQS. States are required to prepare a SIP to develop strategies to bring about attainment of the standards. In

addition, the California Clean Air Act of 1988 requires areas that exceed the California ambient air quality standards to plan for the eventual attainment of the CAAQS. VCAPCD monitors and regulates local air quality in Ventura County and implements Air Quality Management Plans (AQMPs).

The 2022 AQMP is the most recent attainment plan adopted by VCAPCD in 2022. The 2022 AQMP presents a combined local and state clean air strategy based on concurrent ROG and NO_X emission reductions to bring Ventura County into attainment of the 2015 federal 8-hour ozone standard. The 2022 AQMP control strategy consists of a local component implemented by the VCAPCD and a combined state and federal component implemented by the CARB and EPA. The local strategy includes emission control measures carried forward from previous Ventura County clean air plans plus new and further study emission control measures. It also includes a transportation conformity budget that sets the maximum amount of on-road motor vehicle emissions produced while continuing to demonstrate progress towards attainment (VCAPCD 2022). According to the VCAPCD guidelines, in addition to the assessment of criteria pollutants, the lead agency should consider San Joaquin Valley Fever factors that are applicable to the proposed Project or the Project site. Based on these or other factors, if a lead agency determines that a Project may create a significant Valley Fever impact, the VCAPCD recommends that the lead agency consider the Valley Fever mitigation measures listed in the VCAPCD guidelines to minimize fugitive dust as well as minimizing worker exposure. The VCAPCD guidelines provides the following list of measures to be considered if the lead agency determines a Project site poses a risk of San Joaquin Valley Fever:

1. Restrict employment to persons with positive coccidioid in skin tests (since those with positive tests can be considered immune to reinfection).
2. Hire crews from local populations where possible, since it is more likely that they have been previously exposed to the fungus and are therefore immune.
3. Require crews to use respirators during Project clearing, grading, and excavation operations in accordance with California Division of Occupational Safety and Health regulations.
4. Require that the cabs of grading and construction equipment be air-conditioned.
5. Require crews to work upwind from excavation sites.
6. Pave construction roads.
7. Where acceptable to the fire department, control weed growth by mowing instead of discing, thereby leaving the ground undisturbed and with a mulch covering.

VCAPCD RULES

The VCAPCD implements rules and regulations for emissions generated by various uses and activities. The rules and regulations detail pollution-reduction measures to be implemented during construction and operation of Projects. This section discusses the rules and regulations relevant to the proposed Project.

RULE 50 (OPACITY)

This rule sets opacity standards on the discharge from sources of air contaminants. This rule would apply during construction of the proposed Project.

RULE 51 (NUISANCE)

This rule prohibits any person from discharging air contaminants or any other material from a source which would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public or which endangers the comfort, health, safety, or repose to any considerable

number of persons or the public. The rule would apply during construction and operational activities.

RULE 55 (FUGITIVE DUST)

This rule requires fugitive dust generators, including construction and demolition projects, to implement control measures limiting the amount of dust from vehicle track-out, earth moving, bulk material handling, and truck hauling activities. The rule would apply during construction and operational activities.

RULE 55.1 (PAVED ROADS AND PUBLIC UNPAVED ROADS)

This rule requires fugitive dust generators to begin the removal of visible roadway accumulation within 72 hours of any written notification from the VCAPCD. The use of blowers is expressly prohibited under any circumstances. This rule also requires controls to limit the amount of dust from any construction activity or any earthmoving activity on a public unpaved road. This rule would apply throughout all construction activities.

RULE 55.2 (STREET SWEEPING EQUIPMENT)

This rule requires the use of PM_{10} efficient street sweepers for routine street sweeping and for removing vehicle track-out pursuant to Rule 55. This rule would apply during all construction activities.

RULE 74.4 (CUTBACK ASPHALT)

This rule sets limits on the type of application and ROG content of cutback and emulsified asphalt. The proposed Project is required to comply with the type of application and ROG content standards set forth in this rule.

Local Regulations

City of Oxnard General Plan

The City of Oxnard's 2030 General Plan, adopted in 2011, lists several air quality policies as part of its Sustainable Community, Community Development, Environmental Chapters that supplement those of the VCAPCD. The following are goals and policies applicable to the proposed Project (City of Oxnard 2011):

Goal SC-4: Implementation of the California Green Building Code.

Policy SC-4.1 **Green Building Cod Implementation.** Implement the 2010 California Green Building Code as may be amended (CALGREEN) and consider recommending and/or requiring certain developments to incorporate Tier I and Tier II voluntary standards under certain conditions to be developed by the Development Services Director.

Goal CD-1: A balanced community consisting of residential, commercial, and employment uses consistent with the character, capacity, and vison of the City.

Policy CD-1.4 **Transportation Choices.** Promote the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices (pedestrian, bicycle, transit, and automobile).

Goal CD-7: Development of vibrant mixed-use urban villages characterized by a mix of land uses, transit accessibility, pedestrian, and neighborhood identity.

Policy CD-7.5 **Pedestrian and Transit Scale.** Design urban village areas to be pedestrian-oriented and transit accessible, incorporating block patterns, walking routes and edges, social orientation of buildings, and streetscapes to provide ease of walking and safety.

Policy CD -7.6 **Connectivity.** Provide connectivity to other activity nodes in the form of roadways, transit connections, and bicycle and pedestrian linkages that encourages nonvehicular travel modes. Urban villages should be considered major transit transfer points and have amenities oriented towards transit users.

Goal ER-14: Improve air quality and minimize adverse effects of air pollution on human health and economy.

Policy ER-14.1 **Incorporate Ventura County AQMP Mitigations.** Incorporate construction and operation mitigation measures recommended or required by the current Ventura County Air Quality Management Plan (AQMP) when preparing CEQA reviews, as appropriate.

Policy ER-14.4 **Emissions Control Devices.** Require all construction equipment to be maintained and tuned to meet appropriate EPA, CARB, and VCAPCD emissions requirements and when new emission control devices or operational modifications are found to be effective, such devices or operational modifications are required on construction equipment.

Policy ER-14.12 **Use VCAPCD Air Quality Assessment Guidelines.** Use the VCAPCD Air Quality Assessment Guidelines and recommended analytical tools for determining and mitigation project air quality impacts and related thresholds of significance for use in environmental documents. The City shall continue to cooperate with the VCAPCD in the review of development proposals.

2.4 Current Air Quality

The VCAPCD operates a network of air quality monitoring stations throughout Ventura County. The monitoring stations aim to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The closest monitoring station to the Project site is the El Rio-Rio Mesa School #2, located at 545 Central Avenue, Oxnard, approximately six miles south of the Project site. This station collects 8-hour O_3, hourly O_3, NO_2, $PM_{2.5}$, and PM_{10} measurements. Table 4 indicates the number of days each federal and state standard were exceeded at El Rio-Rio Mesa School #2. As shown for the 8-hour O_3 and hourly O_3, measurements exceeded the federal and state standard in 2020. PM_{10} measurements exceeded the federal and

state standards in the years 2019 through 2021. In addition, $PM_{2.5}$ measurements exceeded the federal $PM_{2.5}$ standard exceedances in 2020. No other state or federal standards were exceeded at these monitoring stations. Since CO and SO_2 are in attainment with the Ventura County region, they are not monitored at the nearest air monitoring stations and therefore ambient air quality is not reported for these pollutants.

Table 4 Ambient Air Quality at the Nearest Monitoring Station

Pollutant	2019	2020	2021
8-Hour Ozone (ppm), 8-Hour Average	0.070	0.086	0.059
Number of Days of State exceedances (>0.070 ppm)	0	3	0
Number of days of federal exceedances (>0.070 ppm)	0	3	0
Ozone (ppm), Worst Hour	0.078	0.104	0.073
Number of days of State exceedances (>0.09 ppm)	0	2	0
Nitrogen Dioxide (ppm) - Worst Hour	0.041	0.031	0.033
Number of days of State exceedances (>0.18 ppm)	0	0	0
Number of days of federal exceedances (>0.10 ppm)	0	0	0
Particulate Matter 10 microns, μg/m³, Worst 24 Hours	188	201	378
Number of days of State exceedances (>50 μg/m³)	14	21	12
Number of days above federal standard (>150 μg/m³)	2	2	1
Particulate Matter <2.5 microns, μg/m³, Worst 24 Hours	25.5	58.7	31.7
Number of days above federal standard (>35 μg/m³)	0	3	0

ppm = parts per million; μg/m³ = micrograms per cubic meter.

Measurements were taken from El Rio-Rio Mesa School #2 monitoring station

Source: CARB 2022d

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with a margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14, the elderly over 65, people engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases. The VCAPCD defines sensitive receptors as facilities or land uses which include members of the population particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Sensitive receptors listed in the VCAPCD guidelines include residences, schools, hospitals, and daycare centers (VCAPCD 2003). Sensitive receptors nearest to the Project site are Channel Islands High School, approximately 200 feet northwest of the Project site, and single family residents, approximately 415 feet northeast of the Project site.

3 Air Quality Impact Analysis

3.1 Methodology

Air pollutant emissions generated by Project construction and operation were estimated using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod allows for the use of standardized data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices C, D, and G (California Air Pollution Control Officers Associated [CAPCOA] 2022). The analysis reflects construction and operation of the proposed Project as described in Section 1.2, *Project Summary*.

Construction

Project construction would primarily generate temporary criteria pollutant and GHG emissions from construction equipment operation on the site, construction worker vehicle trips to and from the site, and export of materials off site. Construction of the proposed Project was analyzed based on the land use type and square footage described in Section 1, *Project Description*, which includes the outdoor pools, one-story building, parking lot, ancillary facilities, and new gas line. The proposed construction would start in begin in the 1st quarter of 2026 and end in the 1st quarter of 2028.[4] Based on the proposed land uses, the CalEEMod assumptions for construction schedule, equipment lists, and vehicle trips were used. Based on aerial Google Earth measurements, the gas pipeline would be approximately 1,424 linear feet to connect the Project site to the existing Southern California Gas line in South Rose Avenue. It is assumed the gas pipeline would overlap the construction of the aquatics center for approximately 18 days.[5] Approximately 6,000 cubic yards of soil would be exported to Toland Road Landfill and Simi Valley Landfill. The Simi Valley Landfill is the furthest landfill, approximately 33 miles from the Project site; therefore, this analysis modeled for this distance, which would be a conservative emissions estimate attributed to hauling material. The analysis assumes construction equipment would be diesel-powered and the proposed Project would comply with applicable regulatory standards. In particular, the proposed Project would comply with VCAPCD Rule 55 for dust control measures and Rule 74.2 for architectural coating VOC limits, which are discussed under Section 2.3, *Air Quality Regulation.*

Operation

In CalEEMod, operational sources of criteria pollutant emissions include area, energy, and mobile sources. The model uses CalEEMod assumptions for energy and area sources for the one-story building and parking lot. Project specific water and energy consumptions for the swimming pools

[4] The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

[5] Assume a pipeline installation rate of 80 linear feet per day. (1,424 linear feet divide by 80 linear feet per day) = 17.8 days

are described below. In addition, daily vehicle trips for the proposed Project were provided by Fehr & Peers (Fehr & Peers 2023).

Mobile Sources

Mobile source emissions are generated by the increase in vehicle trips to and from the Project site associated with the operation of on-site development. According to the traffic analysis prepared by Fehr and Peers, the proposed Project would generate 3,848 daily vehicle trips. Mobile emissions would be conservative since the traffic analysis utilized the peak daily attendance to estimate daily vehicle trips. The trip generation rates inputs in CalEEMod was adjusted to be consistent with the results in the traffic analysis. Due to rounding, CalEEMod overestimates total vehicle trips by approximately two trips per day for Saturday and four trips per day for Sunday, resulting in a conservative estimate of mobile emissions.

Energy Sources

Emissions from energy use include electricity and natural gas use. The proposed Project would generate air pollutant emissions associated with cooling and heating the building, heating the swimming pools, and lighting the parking lot. The emissions factors for natural gas combustion are based on the United States EPA's AP-42 (*Compilation of Air Pollutant Emissions Factors*) and California Climate Action Registry (CCAR) General Reporting Protocol (CCAR 2009). The proposed Project would use approximately 7.245 million British Thermal Units to heat the swimming pools. Natural gas default assumptions for the proposed one-story building were used. Electricity emissions only apply to GHG emissions (as the energy is generated off-site) and are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2021).

Area Sources

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilize standard emission rates from CARB, United States EPA, and emission factor values provided by the local air district (CAPCOA 2022).

CO Hotspots

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. The entire SCCAB is in conformance with state and federal CO standards, and most air quality monitoring stations no longer report CO levels. The County of Ventura does not monitor CO emissions at its air monitoring stations nor is representative data available. A detailed CO analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the SCAB, i.e., those which would be expected to experience the highest CO concentrations. The highest CO concentration observed occured at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near the I-405 Freeway, which has an ADT of approximately 100,000 vehicles per day. The concentration of CO at this intersection was 4.6 ppm, which is well below the state and federal standards (SCAQMD 2003). A truck traffic study was done for the City of Port Hueneme and City of Oxnard to analyze existing traffic conditions and identify traffic impacts. The study included all vehicle classification schemes in the analysis for estimating existing traffic conditions. According to the truck traffic study, the total traffic volume for Rose Avenue, adjacent

the Project site, would be approximately 22,600 average daily vehicles[6](City of Oxnard 2008). The proposed Project would generate 3,848 new daily vehicle trips; therefore, the proposed Project would be below the average daily traffic volume in the 2003 AQMP study that did not produce a CO hotspot. Thus, the proposed Project would not result in a localized hotspot and this topic is not discussed further in this document.

3.2 Significance Thresholds

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA guidelines* requires consideration of whether a project would:

- Conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP?
- Violate any federal or state air quality standard or contribute substantially to an existing or Project air quality standard violation?
- Result in a net increase of any criteria pollutant in excess of quantitative thresholds recommended by the VCAPCD?
- Expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants?
- Create objectionable odors affecting a substantial number of people?

Thresholds

AQMP Consistency

The VCAPCD guidelines state that project consistency with the AQMP can be determined by comparing the actual population growth in the county from the proposed Project with the projected growth rates used in the AQMP. Therefore, a demonstration of consistency with the population forecasts used in the most recently adopted AQMP should be used for assessing project consistency with the AQMP.

VCAPCD Significance Thresholds for Ozone Precursors ROG and NO_X

For projects within the city, the VCAPCD guidelines (2003), provides "ROG and NO_X thresholds that the VCAPCD has determined will individually and cumulatively jeopardize attainment of the federal one-hour ozone standard, and thus have a significant adverse impact on air quality in Ventura County". These thresholds are as follows:

- ROG:25 pounds/day
- NO_X: 25 pounds/day

According to the VCAPCD guidelines, construction-related emissions (including portable engines and portable engine-driven equipment subject to the CARB's Statewide Portable Equipment Registration Program and used for construction operations or repair and maintenance activities) of ROG and NO_X are not counted towards the two significance thresholds, since these emissions are temporary. However, the VCAPCD guidelines state that if a project's estimated construction-related emissions

[6] The Rose Avenue and W Channel Island Boulevard intersection peak PM hour traffic volumes were approximately 2,260 average daily vehicles. Using the standard industry assumption that peak hour is 10 percent of average daily trafic, traffic volumes on Rose Avenue were estimated to be 22,600 average daily vehicles.

of ROG and NO_X would exceed 25 pounds/day, VCAPCD recommends the following measures to mitigate ozone precursor emissions from construction motor vehicles:

- Minimize equipment idling time
- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications
- Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time
- Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible

San Joaquin Valley Fever

There is no recommended threshold for a significant San Joaquin Valley Fever impact. However, if there is the potential to expose workers or nearby residents to Coccidioidomycosis then implementation of the VCAPCD measures to reduce exposure should be included as mitigation for a project. Exposure reduction measures are listed in Section 2.3*, Air Quality Regulation*.

3.3 Impact Analysis

Threshold 1:	Would the Project conflict with population or other growth forecasts contained in the Ventura County AQMP or otherwise obstruct implementation of the Ventura County AQMP?

Impact AQ-1 THE PROPOSED PROJECT WOULD NOT CONFLICT WITH OR OBSTRUCT THE IMPLEMENTATION OF THE VCAPCD 2022 AIR QUALITY MANAGEMENT PLAN. NO IMPACTS WOULD OCCUR.

A project may be inconsistent with the applicable air quality plan if the project would generate population, housing, or employment growth exceeding the forecasts used in the development of the plan. This analysis examines the proposed Project's consistency with the VCAPCD's 2022 Ventura County AQMP. The 2022 Ventura County AQMP relies on the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) forecasts of regional population growth in its projections for managing Ventura County's air quality (SCAG 2020a).

The proposed Project would not include new housing or population growth within Ventura County. The employment growth forecasts in the 2020 RTP/SCS for Oxnard estimate that the total number of jobs would increase from 61,100 in 2016 to 76,100 in 2045, for an increase of 15,000 jobs (SCAG 2020b). The proposed Project would include a peak of approximately 100 employees per day; therefore, this analysis assumes the proposed Project would generate 200 employment opportunities, which are anticipated to be filled by the local workforce already residing in Oxnard or the surrounding area. The employment opportunities that would be generated from the proposed Project would be within the SCAG 2045 employment forecast for the City of Oxnard. Therefore, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. No impact would occur.

Threshold 2	Would the Project violate any federal or state air quality standard or contribute substantially to an existing or project air quality standard violation?
Threshold 3	Would the Project result in a net increase of any criteria pollutant in excess of quantitative thresholds recommended by the VCAPCD?

Impact AQ-2 PROJECT OPERATION WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT. HOWEVER, PROJECT CONSTRUCTION WOULD EXCEED THE VCAPCD NO_X THRESHOLD AND WOULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE FOR A CRITERIA POLLUTANT. HOWEVER, WITH INCORPORATION OF MITIGATION MEASURES REQUIRING TIER 4 ENGINE EQUIPMENT ALONG WITH VCACPD BEST MANAGEMENT PRACTICES FOR PRECURSOR OZONE EMISSIONS, THE IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction Emissions

Project construction would generate temporary air pollutant emissions associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction equipment and construction vehicles in addition to ROG emissions that would be released during the drying of architectural coating and paving phases. Table 5 summarizes the estimated maximum daily emissions of pollutants during Project construction. As shown therein, construction-related emissions would exceed the VCAPCD threshold for NO_X. Therefore, impacts to air quality would be potentially significant.

Table 5 Project Construction Emissions

	Maximum Daily Emissions (pounds/day)[1]					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Aquatics Center						
2023[2]	4	47	38	<1	11	6
2024	2	18	19	<1	4	2
2025	5	12	15	<1	1	<1
Pipeline						
Overlap	4	34	33	<1	3	2
Maximum Daily Emissions	**9**	**81**	**71**	**<1**	**14**	**8**
VCAPCD Thresholds	25	25	–	–	–	–
Threshold Exceeded?	**No**	**Yes**				

VCAPCD = Ventura County Air Pollution Control District; ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

[1] This table provides a conservative analysis and presents the maximum daily emissions when the construction phases overlap.

See Appendix A for modeling details and CalEEMod results.

[2] Construction would begin in 1st quarter 2026 and end in 1st quarter 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

Notes: Some totals may not add up due to rounding. Emissions data is sourced from "mitigated" results, which incorporate emissions reductions from measures to be implemented during Project construction, such as watering of soils during construction required under VCAPCD Rule 55.

Operational Emissions

Operation of the proposed Project would generate criteria air pollutant emissions associated with area sources (e.g., architectural coatings, consumer products, and landscaping equipment), energy sources (i.e., use of natural gas for space and water heating), and mobile sources (i.e., vehicle trips to and from the Project site). Table 6 summarizes the proposed Project's maximum daily operational emissions by emission source. As shown therein, operational emissions would not exceed VCAPCD regional thresholds for criteria pollutants. Therefore, Project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and impacts would be less than significant.

Table 6 Project Operational Emissions

	Maximum Daily Emissions (pounds/day)					
Emission Source	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	1	<1	2	<1	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	17	11	89	<1	6	1
Project Emissions	**17**	**11**	**91**	**<1**	**6**	**1**
SCAQMD Regional Thresholds	25	25	-	-	-	-
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

ROG = reactive organic gases; NO_x = nitrogen oxide; CO = carbon monoxide; PM_{10} = particulate matter with a diameter no more than 10 microns; $PM_{2.5}$ = particulate matter with a diameter no more than 2.5 microns; SO_x = sulfur oxide

Notes: Some numbers may not add up precisely due to rounding considerations.

Source: Table 2.2 "Overall Operation-Mitigated" emissions. Highest of Summer and Winter emissions results are shown for all emissions. The mitigated emissions account for project sustainability features and/or compliance with specific regulatory standards. No mitigation measures are required for this Project. See CalEEMod worksheets in Appendix A.

Mitigation Measures

The mitigation measure below is designed to control emissions caused by project construction mobile equipment necessary to perform these activities. Implementation of Mitigation Measure AQ-1 would reduce construction emissions of NO_X in accordance with VCAPCD guidance.

AQ-1 NO_X Construction Reduction Measures

During construction, the construction contractor shall implement the following measures pursuant to the requirements of the VCAPCD guidelines.

- Ensure all on-site vehicles and equipment with 50 horsepower or more shall meet, at a minimum, United States EPA Tier 4 final engine certification requirements. If Tier 4 final equipment is not available, the contractor may apply other technologies available for construction equipment which would achieve a reduction in NO_X (as well as PM) emissions comparable to Tier 4 final construction equipment. Where alternatives to United States EPA Tier 4 are utilized, the contractor shall be required to provide evidence these alternative technologies would achieve comparable emissions reductions. Certifications or alternative reduction strategies shall be required prior to receiving a construction permit.
- Minimize equipment idling time.

- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
- Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time.
- Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible.

Prior to initiation of construction activities, the City of Oxnard Public Works Department shall ensure the measures listed above are included in the construction specifications for the proposed Project.

Significance After Mitigation

Implementation of Mitigation Measure AQ-1 would reduce construction emissions of NO_X in accordance with VCAPCD guidance. Project construction emissions with implementation of Mitigation Measure AQ-1 are shown in Table 7. As shown in the table, emissions of NO_X would be reduced below 25pounds/day with the use of Tier 4 final equipment as compared to no specified tier. Therefore, impacts would be less than significant after mitigation.

Table 7 Construction Air Pollutant Emissions – Mitigated

	Maximum Daily Emissions (pounds/day)[1]					
Project Component	**ROC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Aquatic Center						
2023[2]	1	10	31	<1	9	5
2024	<1	3	19	<1	3	1
2025	4	4	17	<1	<1	<1
Pipeline						
Overlap	1	6	40	<1	2	<1
Maximum Daily Emissions	**5**	**17**	**71**	**<1**	**11**	**5**
VCAPCD Thresholds	25	25	–	–	–	–
Threshold Exceeded?	**No**	**No**				

VCAPCD = Ventura County Air Pollution Control District; ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

[1] This table provides a conservative analysis and presents the maximum daily emissions when the construction phases overlap.

See Appendix A for modeling details and CalEEMod results.

[2] Construction would begin in the 1st quarter of 2026 and end in the 1st quarter of 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.

Notes: Some totals may not add up due to rounding. Emissions data is sourced from "mitigated" results, which incorporate emissions reductions from measures to be implemented during Project construction, such as watering of soils during construction required under VCAPCD Rule 55.

Threshold 4	Would the Project expose sensitive receptors to pollutant concentrations exceeding state or federal standards or in excess of applicable health risk criteria for toxic air contaminants?

Impact AQ-3 THE PROPOSED PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL CONSTRUCTION TAC EMISSIONS, WITH THE IMPLEMENTATION OF MITIGATION MEASURE AQ-1. IN ADDITION, THE PROPOSED PROJECT IS NOT IDENTIFIED BY CARB AS A TYPICAL LAND USE THAT GENERATES SUBSTANTIAL TAC EMISSIONS. THE PROJECT WOULD IMPLEMENT VALLEY FEVER MEASURES CONSISTENT WITH THE VCAPCD GUIDELINES DURING PROJECT CONSTRUCTION. THEREFORE, IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

As discussed under Section 2.4, *Current Air Quality*, the closest sensitive receptors to the Project site are students at Channel Island High School, 200 feet northwest of the Project site, and single family residents approximately 415 feet northeast of the Project site. TAC impacts to sensitive receptors are discussed in the following subsections.

Toxic Air Contaminants

Construction Impacts

Construction-related activities would result in temporary project-generated emissions of DPM exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. The prevailing winds for Oxnard are westerly, which is directed to residential neighborhoods 800 feet east of the Project site, rather than the nearest sensitive receptors approximately 200 feet northwest of the Project site and 415 feet northeast of the Project site. The proposed Project would be consistent with the applicable 2022 AQMP requirements and control strategies intended to reduce emissions from construction equipment and activities. With the incorporation of Mitigation Measure MM AQ-1, the proposed Project would be required to use off-road diesel-powered construction equipment that meets or exceeds the most stringent and environmentally protective CARB and United States EPA Tier 4 off-road emissions standards, or alternatively fueled equipment which would substantially reduce DPM emissions. Thus, with implementation of Mitigation Measure MM AQ-1, construction activities would reduce the TAC exposure to sensitive receptors and impacts would be less than significant.

Operational Impacts

CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). CARB guidelines recommend siting distances both for the development of sensitive land uses in proximity to TAC sources and for the addition of new TAC sources in proximity to existing sensitive land uses. Recreational land uses are not considered land uses that generate substantial TAC emissions based on review of the air toxic sources listed in CARB's guidelines. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides, etc.) for the types of proposed land uses would be below thresholds warranting further study under the California Accidental Release Program. Because the Project would not include substantial TAC sources and is consistent with CARB guidelines, it would not result in the exposure of off-site sensitive receptors to significant amounts of carcinogenic or toxic air contaminants. Impacts would be less than significant.

San Joaquin Valley Fever

The residents of Ventura County have been and will continue to be exposed to Valley Fever from agricultural and construction activities occurring throughout the region. The fungal spores responsible for Valley Fever generally grow in virgin, undisturbed soil. The standard construction measures listed in Section *2.3, Air Quality Regulation*, would reduce fugitive dust generation, which would further minimize the potential risk of infection. Therefore, construction of the proposed Project would not substantially increase the risk to public health above existing background levels. In addition, given the temporary nature of construction emissions, as well as incorporation of fugitive dust reduction measures through compliance with existing VCAPCD regulations, the potential impact associated with Valley Fever would be less than significant.

Threshold 5	Would the Project create objectionable odors affecting a substantial number of people?

Impact AQ-4 THE PROJECT WOULD NOT GENERATE ODORS ADVERSELY AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE DURING CONSTRUCTION OR OPERATION. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Project construction could generate odors associated with heavy-duty equipment operation and earth-moving activities. Such odors would be temporary in nature and limited to the duration of construction in the vicinity of a given receptor. Overall, Project construction would not generate other emissions, such as those leading to odors, affecting a substantial number of people. Construction-related impacts would be less than significant.

With respect to operation, CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) provides recommendations regarding the siting of new sensitive land uses near potential sources of odors (e.g., sewage treatment plants, landfills, recycling facilities, biomass operations, autobody shops, fiberglass manufacturing, and livestock operations). An aquatics center is not identified on this list. Therefore, the proposed Project would not generate objectionable odors affecting a substantial number of people, and impacts would be less than significant.

4 Greenhouse Gas Emissions

4.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed that the rise and continued growth of atmospheric carbon dioxide (CO_2) concentrations is unequivocally due to human activities in the IPCC's Sixth Assessment Report (2021). Human influence has warmed the atmosphere, ocean, and land, which has led the climate to warm at an unprecedented rate in the last 2,000 years. It is estimated that between the period of 1850 through 2019, that a total of 2,390 gigatonnes of anthropogenic CO_2 was emitted. It is likely that anthropogenic activities have increased the global surface temperature by approximately 1.07 degrees Celsius between the years 2010 through 2019 (IPCC 2021). Furthermore, since the late 1700s, estimated concentrations of CO_2, methane (CH_4), and nitrous oxide (N_2O) in the atmosphere have increased by over 43 percent, 156 percent, and 17 percent, respectively, primarily due to human activity (United States EPA 2021b). Emissions resulting from human activities are thereby contributing to an average increase in Earth's temperature.

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include CO_2, CH_4, N_2O, fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (United States EPA 2021b).

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emitted multiplied by its GWP. Carbon

dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 30, meaning its global warming effect is 30 times greater than CO_2 on a molecule per molecule basis (IPCC 2021).[7]

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2020). However, since 1750, estimated concentrations of CO_2, CH_4, and N_2O in the atmosphere have increased by 47 percent, 156 percent, and 23 percent, respectively, primarily due to human activity (IPCC 2021). GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

4.2 Greenhouse Gas Emissions Inventory

Global Emissions Inventory

In 2015, worldwide anthropogenic total 47,000 billion MT of CO_2e, which is a 43 percent increase from 1990 GHG levels (United States EPA 2021c). Specifically, 34,522 million metric tons (MMT) of CO_2e of CO_2, 8,241 MMT of CO_2e of CH_4, 2,997 MMT of CO_2e of N_2O, and 1,001 MMT of CO_2e of fluorinated gases were emitted in 2015. The largest source of GHG emissions were energy production and use (includes fuels used by vehicles and buildings), which accounted for 75 percent of the global GHG emissions. Agriculture uses and industrial processes contributed 12 percent and six percent, respectively. Waste sources contributed for three percent and two percent was due to international transportation sources. These sources account for approximately 98 percent because there was a net sink of two percent from land-use change and forestry. (United States EPA 2021c).

United States Emissions Inventory

United States. GHG emissions were 5,981.4 MMT of CO_2e in 2020. Emissions decreased by nine percent from 2019 to 2020; since 1990, total United States. emissions have decreased by 7.3 percent from 1990 to 2020, down from a high of 15.7 percent above 1990 levels in 2007. The sharp decline in emissions from 2019 to 2020 is largely due to the impacts of the coronavirus (COVID-19) pandemic on travel and economic activity; however, the decline also reflects the combined impacts of long-term trends in many factors, including population, economic growth, energy markets, technological changes including energy efficiency, and the carbon intensity of energy fuel choices. In 2020, transportation activities accounted for the largest portion (27.2 percent) of total United States greenhouse gas emissions. Emissions from electric power accounted for the second largest portion (24.8 percent), while emissions from industry accounted for the third largest portion (23.8 percent) of total United States greenhouse gas emissions in 2020 (United States EPA 2022b).

California Emissions Inventory

Based on the CARB California Greenhouse Gas Inventory for 2000-2020, California produced 369.2 MMT of CO_2e in 2020, which is 35.3 MMT of CO_2e lower than 2019 levels. The 2019 to 2020 decrease in emissions is likely due in large part to the impacts of the COVID-19 pandemic. The major source of GHG emissions in California is the transportation sector, which comprises 37 percent of

[7] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by the California Air Resources Board uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

the state's total GHG emissions. The industrial sector is the second largest source, comprising 20 percent of the state's GHG emissions while electric power accounts for approximately 16 percent (CARB 2022). The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the state of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO_2e (CARB 2021d). The annual 2030 statewide target emissions level is 260 MMT of CO_2e (CARB 2017).

City of Oxnard Emissions Inventory

The City of Oxnard's Climate Action and Adaption Plan presents an inventory of GHG emissions originating from the city and sets forth strategies and actions to reduce emissions and help the community adapt to a changing climate. In 2020, the city completed an inventory of emissions for the year 2010, representing the earliest year for which the necessary data was available, and for the year 2018, representing the most recent year for which data was available. For the year 2018, GHG emissions totaled 876,140 MT of CO_2e, which is 123,648 MT of CO_2e lower than 2010 levels. The major source of GHG emissions in City of Oxnard is the transportation sector, which comprises 44 percent of the City's total GHG emissions. The electricity sector is the second largest source, comprising 24 percent of the City's GHG emissions while natural gas accounts for approximately 19 percent (City of Oxnard 2022).

4.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. The year 2022 was the sixth warmest year since global records began in 1880 at 0.86°C (1.55°F) above the 20th century average of 13.9°C (57.0°F). This value is 0.13°C (0.23°F) less than the record set in 2016 and it is only 0.02°C (0.04°F) higher than the last year's (2021) value, which now ranks as the seventh highest (NOAA 2023b). Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations jointly indicate that LSAT and sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014, 2018).

Potential impacts of climate change in California may include reduced water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (California Natural Resource Agency 2019). *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state and regionally specific climate change case studies. However, while there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy (California Natural Resource Agency 2019). A summary follows of some of the potential effects that climate change could generate in California.

Air Quality and Wildfires

Scientists project that the annual average maximum daily temperatures in California could rise by 2.4 to 3.2°C in the next 50 years and by 3.1 to 4.9°C in the next century (California Natural Resource Agency 2019). Higher temperatures are conducive to air pollution formation and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. In addition, as temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains (California Natural Resource Agency 2019). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state. With increasing temperatures, shifting weather patterns, longer dry seasons, and more dry fuel loads, the frequency of large wildfires and area burned is expected to increase (California Natural Resources Agency 2021).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common (California Department of Water Resources 2018). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts (California Natural Resource Agency 2019). The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the fraction of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack (California Natural Resource Agency 2019). Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (California Natural Resource Agency 2019).

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding (California Natural Resource Agency 2019). Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding. The rate of increase of global mean sea levels between 1993 to 2022, observed by satellites, is approximately 3.4 millimeters per year, double the twentieth century trend of 1.6 millimeters per year (World Meteorological Organization 2013; National Aeronautics and Space Administration 2023). Global mean sea levels in 2013 were about 0.23 meter higher than those of 1880 (N 2022). Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with

robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise ranging between 0.25 to 1.01 meters by 2100 with the sea level ranges dependent on a low, intermediate, or high GHG emissions scenario (IPCC 2021). A rise in sea levels could erode 31 to 67 percent of southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure (California Natural Resource Agency 2019). Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has an over $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent, which would increase water demand as hotter conditions lead to the loss of soil moisture. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks (California Natural Resource Agency 2019). Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

Ecosystems

Climate change and the potential resultant changes in weather patterns could have ecological effects on the global and local scales. Soil moisture is likely to decline in many regions due to higher temperatures, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage (Parmesan 2006; California Natural Resource Agency 2019).

4.4 Regulatory and Legal Setting

Federal Regulations

Federal Clean Air Act

The U.S. Supreme Court determined in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) that the United States EPA has the authority to regulate motor vehicle GHG emissions under the federal CAA. The United States EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the United States EPA issued a Final Rule that established the GHG permitting thresholds that determine when CAA permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In *Utility Air Regulatory Group v. Environmental Protection Agency* (134 Supreme Court 2427 [2014]), the United States Supreme Court held United States EPA may not treat GHGs as an air

pollutant for purposes of determining whether a source can be considered a major source required to obtain a Prevention of Significant Deterioration or Title V permit. The Court also held that Prevention of Significant Deterioration permits otherwise required based on emissions of other pollutants may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

State Regulations

CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. There are numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below. For more information on the Senate and Assembly Bills, executive orders, building codes, and reports discussed below, and to view reports and research referenced below, please refer to the following websites: https://www.energy.ca.gov/data-reports/reports/californias-fourth-climate-change-assessment, www.arb.ca.gov/cc/cc.htm, and https://www.dgs.ca.gov/BSC/Codes.

California Advanced Clean Cars Program

AB 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the United States EPA granted the waiver of CAA preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the United States EPA. Pavley I regulates model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, the rules will be fully implemented, and new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)

The "California Global Warming Solutions Act of 2006," (AB 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT CO_2e, which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

The CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB's climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the state's longer

term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed SB 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

2022 Update to the Climate Change Scoping Plan

In response to the passage of AB 1279 and the identification of the 2045 GHG reduction target, CARB published the Final 2022 Climate Change Scoping Plan in November 2022 (CARB 2022a). The 2022 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Update includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action no natural and working lands (NWL) to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Update assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan, addresses recent legislation and direction from Governor Newsom, extends and expands upon these earlier plans, and implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, as well as taking an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Update, "The plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state's NWL and using a variety of mechanical approaches" (CARB 2022a). Specifically, the 2022 Update:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045 and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.

- Incorporates the contribution of NWL to the state's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Update includes emissions and carbon sequestration in NWL and explores how NWL contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet our GHG reduction goals and achieve carbon neutrality no later than 2045. The 2022 Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") can receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The SCAG was assigned targets of an 8 percent reduction in per capita GHG emissions from passenger vehicles by 2020[8] and a 19 percent reduction in per capita GHG emissions from passenger vehicles by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

Senate Bill 1383

Adopted in September 2016, SB 1383 (Lara, Chapter 395, Statutes of 2016) requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

[8] SCAG met 2020 GHG reduction but confirmation from CARB is still pending.

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the former Governor Brown issued Executive Order (EO) B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Building Standards Codes

The California Code of Regulations (CCR) Title 24 is referred to as the California Building Standards Code. It consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility for persons with physical and sensory disabilities. The current iteration is the 2022 Title 24 standards. The California Building Standards Code's energy-efficiency and green building standards are outlined below.

PART 6 – BUILDING ENERGY EFFICIENCY STANDARDS/ENERGY CODE

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC). The 2022 Title 24 standards are the applicable building energy efficiency standards for the proposed Project because they became effective on January 1, 2023.

PART 11 – CALIFORNIA GREEN BUILDING STANDARDS

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The 2022 CALGreen includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures. It also includes voluntary tiers with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

California Integrated Waste Management Act (Assembly Bill 341)

The California Integrated Waste Management Act of 1989, as modified by AB 341 in 2011, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995 through source reduction, recycling, and composting activities and (2) diversion of 50 percent of all solid waste on and after January 1, 2000.

Executive Order N-79-20

On September 23, 2020, Governor Newsom issued EO N-79-20, which established the following new statewide goals:

- All new passenger cars and trucks sold in-state to be zero-emission by 2035;
- All medium- and heavy-duty vehicles in the state to be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and
- All off-road vehicles and equipment to be zero-emission by 2035 where feasible.

EO N-79-20 directs CARB, the Governor's Office of Business and Economic Development, the CEC, the California Department of Transportation, and other state agencies to take steps toward drafting regulations and strategies and leveraging agency resources toward achieving these goals.

The California Climate Crisis Act (Assembly Bill 1279)

AB 1279 was passed on September 16, 2022 and declares the state would achieve net zero greenhouse gas emissions as soon as possible, but no later than 2045. In addition, achieve and maintain net negative greenhouse gas emissions and ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85% below the 1990 levels. The bill would require updates to the scoping plan (once every five years) to implement various policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies.

Clean Energy, Jobs, and Affordability Act of 2022 (Senate Bill 1020)

Adopted on September 16, 2022, SB 1020 creates clean electricity targets for eligible renewable energy resources and zero-carbon resources to supply 90 percent of retail sale electricity by 2035, 95 percent by 2040, 100 percent by 2045, and 100 percent of electricity procured to serve all state agencies by 2035. This bill shall not increase carbon emissions elsewhere in the western grid and shall not allow resource shuffling.

Regional Regulations

2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology

innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation (SCAG 2020).

City of Oxnard 2030 General Plan

The City of Oxnard's 2030 General Plan, adopted in 2011, contains a Sustainable Community chapter that address topics, such as climate change, alternative energy, and implementation of SB 375. The general plan lists several policies as part of its Sustainable Community and Infrastructure & Community Services chapter that support GHG emission reductions. See Section 2.3, *Air Quality Regulation*, for additional general plan policies that would support GHG emission reductions. The following would be applicable to the proposed Project (City of Oxnard 2010):

Goal ICS-11: Water supply, quality, distribution, and storage adequate for existing and future development.

Policy ICS-11.7 **Water Wise Landscapes.** Promote water conservation in landscaping for public facilities and streetscapes, residential, commercial, and industrial facilities and require new developments to incorporate water conserving fixtures (low water usage) and water-efficient plants into new and replacement landscaping.

City of Oxnard 2030 Climate Adaptation and Action Plan

The City of Oxnard's Climate Action and Adaptation Plan (CAAP) builds on the City's successes of implementing the City's 2030 General Plan and recommits to furthering the City's sustainability goals and policies. The CAAP establishes a target to reduce GHG emissions 40 percent below 1990 levels by 2030, consistent with state law. Strategies and actions to reduce GHG emissions locally include the following: Clean Energy, Green Buildings, Transportation; Land Use Water Conservation and Reuse, Waste Reduction and Recycling, and Nature-Based Solutions. The following would be applicable to the proposed Project (City of Oxnard 2022):

TRANSPORTATION

- **T1 Expand Zero Emission Vehicle (ZEV) Charging and Fueling Infrastructure:** Increase the number of EV charging stations throughout the city to 1,500.
- **T4- Improve Transit Effectiveness and Accessibility:** Increase local access to transit services mode shift and VMT reduction goals.

5 Greenhouse Gas Impact Analysis

5.1 Methodology

Calculations of CO_2, CH_4, and N_2O emissions are provided to identify the magnitude of potential project effects. The analysis focuses on CO_2, CH_4, and N_2O because these comprise 98 percent of all GHG emissions by volume and are the GHG emissions the proposed Project would emit in the largest quantities (IPCC 2014). Emissions of all GHGs are converted into their equivalent GWP in terms of CO_2 (i.e., CO_2e). Minimal amounts of other GHGs (such as chlorofluorocarbons [CFCs]) would be emitted; however, these other GHG emissions would not substantially add to the total. GHG emissions associated with Project construction and operational activity were calculated using the CalEEMod version 2022.1 (see Appendix A for calculations). The analysis uses CalEEMod assumptions for energy, and area sources for the one-story building and parking lot. Project specific inputs for water, energy, and solid waste for the recreational swimming pools and one-story building were included in the analysis. The Association of Environmental Professionals (2016) has recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed Project's operational emissions. This guidance is used in this analysis. See Section 3.1 *Methodology*, for the area, natural gas, and mobile source assumptions that inform the air quality and GHG emissions estimates.

Energy Sources

Emissions from energy use include electricity and natural gas use. The proposed Project would generate air pollutant emissions using electricity associated with cooling the one-story building and lighting the parking lot. Emissions from electricity use only applies to GHG emissions (as the energy is generated off-site and therefore may not be relevant for local and regional air quality conditions) and are calculated by multiplying the energy use by the carbon intensity of the utility district per kilowatt hour (CAPCOA 2022). The proposed Project would be served by Southern California Edison (SCE). Specific energy intensity factors (i.e., the amount of CO_2e per megawatt-hour) from SCE are used in the calculation of GHG emissions.

The default electricity consumption values in CalEEMod include the CEC-sponsored California Commercial End Use Survey and Residential Appliance Saturation Survey studies. The 2022.1 CalEEMod currently incorporates California's 2019 Title 24 building energy efficiency standards. CalEEMod assumption values for parking lot fixtures and cooling the building were used in the analysis.

Waste Sources

GHG emissions from waste generation were also calculated in CalEEMod and are based on CARB's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CARB 2010). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Water and Wastewater Sources

GHG emissions from water and wastewater usage calculated in CalEEMod were based on project-specific consumption of the pool areas and ancillary facilities. In addition, default electricity intensity from the CEC's 2006 *Refining Estimates of Water-Related Energy Use in California* using the average values for northern and southern California for landscaping water usage. The pool areas would use approximately 1,021,823 gallons of water annually to account for water loss from filter backwash, water splashed out of the pool, and evaporation. Anticipated wastewater from the ancillary facilities would be approximately 22,250 gallons per day. This analysis conservatively assumes water use of the ancillary facility would be 1:1 with wastewater generation. Therefore, anticipated water consumption for ancillary facilities inside the one-story building, based on a 50 week business operation, would be approximately 7,787,500 gallons per year.

5.2 Significance Thresholds

Based on Appendix G of the CEQA guidelines, impacts related to GHG emissions from the proposed Project would be significant if the proposed Project would:

- Generate greenhouse emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with state goals for reducing GHG emissions in California?
- Contribute or be subject to potential secondary effects of climate change (e.g., sea level rise, increase fire hazard)?

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (*CEQA guidelines*, Section 15064[h][1]).

According to the state CEQA guidelines, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the proposed Project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (2016) in its white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions. The City of Oxnard has not adopted a numerical significance threshold for assessing impacts related to GHG emissions, but has an adopted CAAP for reduction of GHG emissions. Neither the VCAPCD, California Office of Planning and Research, CARB, CAPCOA, nor any other state or applicable regional agency has adopted a numerical significance threshold for assessing GHG emissions that is applicable to the proposed Project.

In the absence of any adopted numeric threshold, the significance of the proposed Project's GHG emissions is evaluated consistent with *CEQA guidelines* Section 15064.4(b) by considering whether

the proposed Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Therefore, the significance of the proposed Project's potential impacts regarding GHG emissions and climate change is evaluated based on consistency with plans and polices adopted for the purposes of reducing GHG emissions and mitigating the effects of climate change. The most directly applicable adopted regulatory plans to reduce GHG emissions are the 2022 Scoping Plan, the 2020-2045 RTP/SCS, the City of Oxnard General Plan and the City of Oxnard CAAP. GHG emissions from the construction and operation of the proposed Project are provided for informational purposes.

5.3 Project-level Impact Analysis

Threshold 1:	Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Threshold 2:	Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases or otherwise conflict with state goals for reducing GHG emissions in California?

Impact GHG-1 THE PROPOSED PROJECT WOULD GENERATE TEMPORARY AND LONG-TERM INCREASES IN GHG EMISSIONS. THE PROPOSED PROJECT WOULD BE CONSISTENT WITH THE 2022 SCOPING PLAN, 2020 SCAG RTP/SCS, AND THE CITY OF OXNARD CAAP, WHICH AIM AT REDUCING GHG EMISSIONS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Consistency with Applicable Plans and Policies

2022 Scoping Plan

The principal state plan to monitor and regulate GHGs is the AB 32, the California Global Warming Solutions Act of 2006, which was followed by SB 32. The quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. According to CARB, California achieved its 2020 GHG emission reduction target in 2016. The goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. Pursuant to SB 32, the Scoping Plan was created to outline goals and measures for the state to achieve the reductions, the latest iteration of which is the 2022 Scoping Plan. The 2022 Scoping Plan focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the state's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities. The proposed Project would be consistent with these goals through Project design, which includes complying with the latest Title 24 Green Building Code and Building Efficiency Energy Standards. The proposed Project would allocate six passenger vehicle spaces for electric vehicle charging. In addition, the Project would install water efficient fixtures to conform to state water conservation requirements. The proposed Project would be served by SCE, which is required to increase its renewable energy procurement in accordance with SB 100 targets. The Project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the Project site. The proposed Project will not conflict with the 2022 Scoping Plan.

2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). The 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals by reducing GHG emissions from passenger cars in the SCAG region by 8 percent below 2005 levels by 2020 and 19 percent by 2035 in accordance with the most recent CARB targets adopted in March 2018. The 2020-2040 RTP/SCS includes ten goals with corresponding implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The proposed Project is an infill development that would add an amenity to several neighboring residential communities within approximately half a mile radius from the Project site. The Project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the Project site. In addition, the proposed Project's proximity to residential communities and education facilities could potentially reduce commute times to new job opportunities. The proposed Project would allocate six of parking spaces to electric, and 19 would be EV capable, meaning infrastructure that would support the future installation of an EV charging stations would be provided. Therefore, the proposed project would be consistent with the GHG emissions reduction strategies contained in the RTP/SCS.

City of Oxnard 2030 General Plan

In October 2011, the City of Oxnard adopted the City of Oxnard 2030 General Plan to provide the city with a consistent framework for land use decisions. The 2030 General Plan includes the state-required elements, and a chapter on sustainable community development that addresses recently emerging topics of climate change, alternative energy, and the implementation of SB 375. The General Plan lists several policies in Chapter 2, *Sustainable Community,* and Chapter 4, *Infrastructure & Community Services,* that support GHG emission reductions. The proposed Project would be consistent with the goals and policies stated under Section 2.3*, Air Quality Regulation*, and Section 4.4, *Regulatory and Legal Setting,* pertinent to GHG emission reduction. The proposed Project would be consistent with the General Plan's polices to incorporate energy efficient and water conserving fixtures consistent with the conservation requirements in the latest iteration of Title 24. The proposed Project would include bike racks and is within a quarter of a mile from transit along Rose Avenue to promote alternative modes of transportation. Therefore, the proposed Project would be consistent with the goals and policies in the 2030 General Plan to increase energy and water efficiency and potentially reduce the amount of motor vehicle trips through availability of transit and connectivity to surrounding neighborhoods.

City of Oxnard Climate Adaptation and Action Plan

The City of Oxnard CAAP outlines goals, strategies, and actions for reducing emissions and increasing community resilience to climate change. The CAAP ensures that Oxnard does its part to contribute to the goals of AB 32 and its successor legislation, SB 32, while remaining consistent with the City's General Plan vision for future growth. In developing this CAAP, the City of Oxnard considered many potential GHG-reduction strategies and actions. Several strategies and actions are primarily for the City of Oxnard to achieve throughout the community. The proposed Project would be consistent with several transportation strategies, such as T1: Expand Zero Emissions Charging and Fueling Infrastructure, T3: Expand Infrastructure for Pedestrians, Bikes, and Micro-mobility Solutions, and T4: Improve Transit Effectiveness and Accessibility. The proposed Project would include six electric charging stations and 19 EV-capable parking spaces. In addition, 16 bicycle racks

would be installed at the main entrance of the aquatics center to promote alternative modes of transportation. The Project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the site. Therefore, the proposed Project could potentially reduce the reliance on motor vehicle trips and thus VMT. The proposed Project would be consistent with the goals outlined in the CAAP.

GHG Emissions

GHG emissions are provided for informational purposes. Construction of the proposed Project would generate temporary GHG emissions primarily from the operation of construction equipment as well as from vehicles transporting construction workers to and from the Project site and heavy trucks to transport building materials. As shown in Table 8, construction of the proposed Project would generate an estimated total of 626 MT CO_2e. Amortized over a 30-year period per SCAQMD guidance, construction of the proposed Project would generate an estimated 21 MT CO_2e per year.

Table 8 Estimated Construction Emissions of Greenhouse Gases

Construction	Project Emissions MT CO_2e
Aquatic Center	
2023[1]	120
2024	320
2025	144
Pipeline	
Overlap	42
Total	**626**
Amortized over 30 Years	21

MT CO_2e = metric tons of carbon dioxide equivalent
[1] Construction would begin in 1st quarter 2026 and end in 1st quarter 2028. The analysis modeled construction from November 2023 to June 2025, which would conservatively estimate emissions since emissions factors would decrease in accordance to statewide plans to reduce air quality and GHG emissions.
Source: Appendix A CalEEMod worksheets

Operation of the proposed Project would generate GHG emissions associated with area sources, energy and water usage, vehicle trips, and wastewater and solid waste generation. Table 9 combines the estimated construction and operational GHG emissions associated with development of the proposed Project. As shown therein, annual emissions from the proposed Project would be approximately 3,023 MT of CO_2e per year.

Table 9 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT CO_2e)
Construction[1]	**21**
Operational	**3,002**
Area	1
Energy	84
Mobile	2,850
Solid Waste	50
Water, Wastewater	17
Total	**3,023**

MT CO_2e = metric tons of carbon dioxide equivalent

[1] Amortized construction related GHG emissions over 30 years

Source: Appendix A CalEEMod worksheets.

Threshold 3: Would the Project contribute or be subject to potential secondary effects of climate change (e.g., sea level rise, increase fire hazard)?

Impact GHG-2 THE PROPOSED PROJECT IS LOCATED INLAND AND ABOVE SEA LEVEL AND NOT WITHIN A FORESTED AREA PRONE TO WILDFIRES. THE PROPOSED PROJECT WOULD NOT INCREASE SECONDARY EFFECTS OF CLIMATE CHANGE TO THE SURROUNDING AREA. THEREFORE, THE PROPOSED PROJECT WOULD NOT BE SUBJECT TO OR CONTRIBUTE TO CLIMATE CHANGE EFFECTS AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Climate change may result in a number of secondary effects, including a reduction in the quality and supply of water from the Sierra snowpack, increased risk of large wildfires, reductions in the quality and quantity of certain agricultural products, exacerbation of air quality problems, increase in temperature and extreme weather events, and a decrease in the health and productivity of California's forests (California Climate Change Center 2006; Moser et al. 2009).

An individual Project could potentially be vulnerable to secondary effects of climate change with its site location or it could increase secondary effects to the surrounding area with its presences. To determine significance, an evaluation was completed to determine if the proposed Project would contribute or be subjected to the secondary effects of climate change expected to occur in California (see Table 10 below). As described in the evaluation, the proposed Project would not contribute or be subject to potential secondary effects of climate change. Project impacts related to climate change would be less than significant.

Table 10 Secondary Effects of Climate Change

Consequences of Climate Change in California	Project Evaluation
Reduction in the quality and supply of water from the Sierra snowpack. If heat-trapping emissions continue unabated, more precipitation would fall as rain instead of snow, and the snow that does fall would melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.	**The Project would not contribute or be subject to this potential secondary effect of climate change**. According to the City of Oxnard Urban Water Management Plan, the City anticipates it will be able to manage its water supply portfolio to provide adequate water to meet demand in normal, single-dry, and multiple dry years through the year 2045 (City of Oxnard 2021). The proposed Project's annual demand of 28.1 AF would account for approximately 0.09 percent of the projected 28,819 AF demand in 2025 and approximately 0.08 percent of the projected 33,349 AF demand in 2045 (City of Oxnard 2021). The proposed project would account for minimal demand anticipated by the City and would not substantially contribute to the reduction of the snowpack.
Increased risk of large wildfires. If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain would stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.	**The Project would not contribute or be subject to this potential secondary effect of climate change.** The Project site is approximately 7.93-acre site located in Oxnard, California. The Project site is an undeveloped lot and is not in a forested area. The Project would not contribute to or be subject to an increased risk of large wildfires; related impacts would be less than significant.
Reductions in the quality and quantity of certain agricultural products. The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.	**The Project would not contribute or be subject to this potential secondary effect of climate change.** The proposed Project is recreational in nature and would not engage in the production of agricultural products.
Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.	**The Project would not contribute or be subject to this potential secondary effect of climate change.** Health effects from air quality problems that would be exacerbated by an increase in temperature would more commonly occur at a local level. As discussed under Section 3.3, *Impact Analysis*, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations.
A rise in sea levels resulting in the displacement of coastal businesses and residences. During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats	**The Project would not contribute or be subject to this potential secondary effect of climate change.** The Project site is approximately 45 feet to 48 feet in elevation relative to local mean sea level. The Project site is approximately 2.7 miles inland. The proposed Project would not result in the displacement of coastal businesses and residences or be displaced due to a rise in sea levels.

Consequences of Climate Change in California	Project Evaluation
Increased temperature and extreme weather events. Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.	**The Project would not contribute or be subject to this potential secondary effect of climate change.** Development of the proposed Project would not directly contribute to an increase in temperature or extreme weather events. In addition, the aquatic center could potentially provide relief to the community during extreme heat events.
A decrease in the health and productivity of California's forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.	**The Project would not contribute or be subject to this potential secondary effect of climate change.** The Project site is not forested, and development of the site would not contribute to a change in the health and productivity of forested land. Development and operations of the proposed Project would not result in an increase in wildfire, nor would it enhance insect populations or establish non-native species, resulting in a decrease in the health or productivity of California's forests.

Source of consequences of climate change in California: CCCC 2006; and Moser et al. 2009.

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South Oxnard Aquatics Center-AQ Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	South Oxnard Aquatics Center-AQ
Lead Agency	City of Oxnard
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	16.0
Location	34.16879846631173, -119.15473399874237
County	Ventura
City	Oxnard
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3423
EDFZ	8
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Recreational Swimming Pool	25.0	1000sqft	0.57	24,393	0.00	—	—	—
Parking Lot	103	Space	0.93	0.00	0.00	—	—	—

Other Asphalt Surfaces	33.0	1000sqft	0.76	0.00	0.00	—	—	—
General Office Building	19.0	1000sqft	5.70	18,342	81,179	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.74	11.6	15.0	0.03	0.50	0.19	0.66	0.46	0.05	0.50	—	2,835	2,835	0.11	0.05	1.03	2,854
Mit.	4.74	11.6	15.0	0.03	0.50	0.19	0.66	0.46	0.05	0.50	—	2,835	2,835	0.11	0.05	1.03	2,854
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	4.12	47.4	37.7	0.08	1.87	21.2	23.1	1.73	10.5	12.3	—	10,940	10,940	0.34	0.91	0.33	11,221
Mit.	4.12	47.4	37.7	0.08	1.87	9.21	11.1	1.73	4.36	6.09	—	10,940	10,940	0.34	0.91	0.33	11,221
% Reduced	—	—	—	—	—	57%	52%	—	59%	50%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.92	8.30	9.95	0.02	0.36	1.48	1.63	0.33	0.72	0.87	—	1,921	1,921	0.08	0.04	0.30	1,933
Mit.	0.92	8.30	9.95	0.02	0.36	0.62	0.78	0.33	0.30	0.44	—	1,921	1,921	0.08	0.04	0.30	1,933
% Reduced	—	—	—	—	—	58%	52%	—	59%	50%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	1.51	1.82	< 0.005	0.07	0.27	0.30	0.06	0.13	0.16	—	318	318	0.01	0.01	0.05	320
Mit.	0.17	1.51	1.82	< 0.005	0.07	0.11	0.14	0.06	0.05	0.08	—	318	318	0.01	0.01	0.05	320
% Reduced	—	—	—	—	—	58%	52%	—	59%	50%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	Yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	No	Yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.28	11.5	13.9	0.02	0.50	0.16	0.66	0.46	0.04	0.50	—	2,682	2,682	0.11	0.05	0.98	2,700
2025	4.74	11.6	15.0	0.03	0.46	0.19	0.65	0.42	0.05	0.47	—	2,835	2,835	0.11	0.05	1.03	2,854
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.12	47.4	37.7	0.08	1.87	21.2	23.1	1.73	10.5	12.3	—	10,940	10,940	0.34	0.91	0.33	11,221
2024	1.96	18.3	19.4	0.03	0.84	7.19	8.03	0.77	3.45	4.22	—	3,071	3,071	0.13	0.05	0.03	3,083
2025	1.19	10.7	13.7	0.02	0.43	0.16	0.60	0.40	0.04	0.44	—	2,671	2,671	0.11	0.05	0.02	2,688
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.34	3.61	3.20	0.01	0.15	1.48	1.63	0.14	0.72	0.87	—	714	714	0.02	0.04	0.26	728
2024	0.92	8.30	9.95	0.02	0.36	0.17	0.53	0.33	0.06	0.39	—	1,921	1,921	0.08	0.03	0.30	1,933
2025	0.70	3.57	4.65	0.01	0.15	0.05	0.20	0.14	0.01	0.15	—	862	862	0.04	0.01	0.13	868
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	0.66	0.58	< 0.005	0.03	0.27	0.30	0.03	0.13	0.16	—	118	118	< 0.005	0.01	0.04	120
2024	0.17	1.51	1.82	< 0.005	0.07	0.03	0.10	0.06	0.01	0.07	—	318	318	0.01	0.01	0.05	320
2025	0.13	0.65	0.85	< 0.005	0.03	0.01	0.04	0.02	< 0.005	0.03	—	143	143	0.01	< 0.005	0.02	144

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.28	11.5	13.9	0.02	0.50	0.16	0.66	0.46	0.04	0.50	—	2,682	2,682	0.11	0.05	0.98	2,700

2025	4.74	11.6	15.0	0.03	0.46	0.19	0.65	0.42	0.05	0.47	—	2,835	2,835	0.11	0.05	1.03	2,854
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.12	47.4	37.7	0.08	1.87	9.21	11.1	1.73	4.36	6.09	—	10,940	10,940	0.34	0.91	0.33	11,221
2024	1.96	18.3	19.4	0.03	0.84	2.87	3.71	0.77	1.36	2.13	—	3,071	3,071	0.13	0.05	0.03	3,083
2025	1.19	10.7	13.7	0.02	0.43	0.16	0.60	0.40	0.04	0.44	—	2,671	2,671	0.11	0.05	0.02	2,688
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.34	3.61	3.20	0.01	0.15	0.62	0.78	0.14	0.30	0.44	—	714	714	0.02	0.04	0.26	728
2024	0.92	8.30	9.95	0.02	0.36	0.14	0.50	0.33	0.04	0.37	—	1,921	1,921	0.08	0.03	0.30	1,933
2025	0.70	3.57	4.65	0.01	0.15	0.05	0.20	0.14	0.01	0.15	—	862	862	0.04	0.01	0.13	868
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	0.66	0.58	< 0.005	0.03	0.11	0.14	0.03	0.05	0.08	—	118	118	< 0.005	0.01	0.04	120
2024	0.17	1.51	1.82	< 0.005	0.07	0.02	0.09	0.06	0.01	0.07	—	318	318	0.01	0.01	0.05	320
2025	0.13	0.65	0.85	< 0.005	0.03	0.01	0.04	0.02	< 0.005	0.03	—	143	143	0.01	< 0.005	0.02	144

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.3	9.92	88.0	0.18	0.15	6.26	6.41	0.14	1.11	1.25	105	18,728	18,833	10.2	0.92	72.3	19,435
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.6	11.1	89.2	0.17	0.15	6.26	6.40	0.14	1.11	1.25	105	18,118	18,223	10.3	0.99	2.03	18,778

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.0	10.4	83.5	0.17	0.14	5.99	6.13	0.14	1.06	1.19	105	17,464	17,569	10.2	0.93	30.0	18,132
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.91	1.89	15.2	0.03	0.03	1.09	1.12	0.02	0.19	0.22	17.4	2,891	2,909	1.69	0.15	4.96	3,002
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.5	9.77	86.1	0.18	0.14	6.26	6.39	0.13	1.11	1.23	—	18,156	18,156	1.05	0.88	72.1	18,516
Area	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

Total	17.3	9.92	88.0	0.18	0.15	6.26	6.41	0.14	1.11	1.25	105	18,728	18,833	10.2	0.92	72.3	19,435
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.2	10.9	89.0	0.17	0.14	6.26	6.39	0.13	1.11	1.23	—	17,553	17,553	1.18	0.95	1.87	17,867
Area	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.6	11.1	89.2	0.17	0.15	6.26	6.40	0.14	1.11	1.25	105	18,118	18,223	10.3	0.99	2.03	18,778
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.4	10.2	82.5	0.17	0.13	5.99	6.12	0.12	1.06	1.18	—	16,895	16,895	1.08	0.89	29.8	17,217
Area	0.58	0.01	0.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.77	3.77	< 0.005	< 0.005	—	3.78
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.0	10.4	83.5	0.17	0.14	5.99	6.13	0.14	1.06	1.19	105	17,464	17,569	10.2	0.93	30.0	18,132
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.81	1.87	15.1	0.03	0.02	1.09	1.12	0.02	0.19	0.22	—	2,797	2,797	0.18	0.15	4.94	2,850
Area	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Energy	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	83.1	83.1	0.01	< 0.005	—	83.5
Water	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4
Waste	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	2.91	1.89	15.2	0.03	0.03	1.09	1.12	0.02	0.19	0.22	17.4	2,891	2,909	1.69	0.15	4.96	3,002

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.5	9.77	86.1	0.18	0.14	6.26	6.39	0.13	1.11	1.23	—	18,156	18,156	1.05	0.88	72.1	18,516
Area	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	17.3	9.92	88.0	0.18	0.15	6.26	6.41	0.14	1.11	1.25	105	18,728	18,833	10.2	0.92	72.3	19,435
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.2	10.9	89.0	0.17	0.14	6.26	6.39	0.13	1.11	1.23	—	17,553	17,553	1.18	0.95	1.87	17,867
Area	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.6	11.1	89.2	0.17	0.15	6.26	6.40	0.14	1.11	1.25	105	18,118	18,223	10.3	0.99	2.03	18,778
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.4	10.2	82.5	0.17	0.13	5.99	6.12	0.12	1.06	1.18	—	16,895	16,895	1.08	0.89	29.8	17,217
Area	0.58	0.01	0.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.77	3.77	< 0.005	< 0.005	—	3.78
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105

Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.0	10.4	83.5	0.17	0.14	5.99	6.13	0.14	1.06	1.19	105	17,464	17,569	10.2	0.93	30.0	18,132
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.81	1.87	15.1	0.03	0.02	1.09	1.12	0.02	0.19	0.22	—	2,797	2,797	0.18	0.15	4.94	2,850
Area	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Energy	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	83.1	83.1	0.01	< 0.005	—	83.5
Water	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4
Waste	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	2.91	1.89	15.2	0.03	0.03	1.09	1.12	0.02	0.19	0.22	17.4	2,891	2,909	1.69	0.15	4.96	3,002

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.74	1.55	< 0.005	0.08	—	0.08	0.07	—	0.07	—	232	232	0.01	< 0.005	—	233
Dust From Material Movement	—	—	—	—	—	0.86	0.86	—	0.44	0.44	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	38.4	38.4	< 0.005	< 0.005	—	38.6
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.76	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	0.01	0.02	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	7.57	1.45	0.04	0.07	1.40	1.47	0.07	0.39	0.46	—	5,510	5,510	0.12	0.86	0.32	5,771
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.93	5.93	< 0.005	< 0.005	0.01	6.03

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.33	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	242	242	0.01	0.04	0.23	253
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.98	0.98	< 0.005	< 0.005	< 0.005	1.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.0	40.0	< 0.005	0.01	0.04	41.9

3.2. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.68	7.68	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.74	1.55	< 0.005	0.08	—	0.08	0.07	—	0.07	—	232	232	0.01	< 0.005	—	233

Dust From Material Movement	—	—	—	—	—	0.34	0.34	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	38.4	38.4	< 0.005	< 0.005	—	38.6
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.76	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	134	134	0.01	0.01	0.02	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	7.57	1.45	0.04	0.07	1.40	1.47	0.07	0.39	0.46	—	5,510	5,510	0.12	0.86	0.32	5,771
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.93	5.93	< 0.005	< 0.005	0.01	6.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.33	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	242	242	0.01	0.04	0.23	253
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.98	0.98	< 0.005	< 0.005	< 0.005	1.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.0	40.0	< 0.005	0.01	0.04	41.9

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.53	1.50	< 0.005	0.07	—	0.07	0.07	—	0.07	—	226	226	0.01	< 0.005	—	227
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.26	0.26	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.28	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.4	37.4	< 0.005	< 0.005	—	37.5

Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.65	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	115	115	0.01	< 0.005	0.01	117
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.85	8.85	< 0.005	< 0.005	0.02	8.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.47	1.47	< 0.005	< 0.005	< 0.005	1.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.53	1.50	< 0.005	0.07	—	0.07	0.07	—	0.07	—	226	226	0.01	< 0.005	—	227
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.28	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.4	37.4	< 0.005	< 0.005	—	37.5
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.65	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	115	115	0.01	< 0.005	0.01	117
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.85	8.85	< 0.005	< 0.005	0.02	8.99
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.47	1.47	< 0.005	< 0.005	< 0.005	1.49
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969

Dust From Material Movement	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.83	3.83	< 0.005	< 0.005	—	3.85
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.60	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	113	113	0.01	< 0.005	0.01	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.2	23.2	< 0.005	< 0.005	—	23.2

Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.83	3.83	< 0.005	< 0.005	—	3.85
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.60	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	113	113	0.01	< 0.005	0.01	115
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	7.95	9.29	0.02	0.35	—	0.35	0.32	—	0.32	—	1,699	1,699	0.07	0.01	—	1,704
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.45	1.70	< 0.005	0.06	—	0.06	0.06	—	0.06	—	281	281	0.01	< 0.005	—	282
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.68	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	0.01	0.01	0.54	129
Vendor	0.01	0.22	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	157	157	< 0.005	0.02	0.43	165
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.65	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	0.01	0.01	0.01	123
Vendor	0.01	0.23	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	157	157	< 0.005	0.02	0.01	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.45	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	86.5	86.5	0.01	< 0.005	0.17	87.9
Vendor	< 0.005	0.16	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	111	111	< 0.005	0.02	0.13	117
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.03	14.6
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.4	18.4	< 0.005	< 0.005	0.02	19.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	7.95	9.29	0.02	0.35	—	0.35	0.32	—	0.32	—	1,699	1,699	0.07	0.01	—	1,704
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.45	1.70	< 0.005	0.06	—	0.06	0.06	—	0.06	—	281	281	0.01	< 0.005	—	282
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.05	0.68	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	127	127	0.01	0.01	0.54	129
Vendor	0.01	0.22	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	157	157	< 0.005	0.02	0.43	165
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.65	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	121	121	0.01	0.01	0.01	123

Vendor	0.01	0.23	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	157	157	< 0.005	0.02	0.01	164
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.45	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	86.5	86.5	0.01	< 0.005	0.17	87.9
Vendor	< 0.005	0.16	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	111	111	< 0.005	0.02	0.13	117
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.3	14.3	< 0.005	< 0.005	0.03	14.6
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.4	18.4	< 0.005	< 0.005	0.02	19.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.78	3.47	0.01	0.11	—	0.11	0.11	—	0.11	—	638	638	0.03	0.01	—	640
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	124	124	0.01	0.01	0.50	127
Vendor	0.01	0.21	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	< 0.005	0.02	0.43	162
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.61	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	119	119	0.01	0.01	0.01	121
Vendor	0.01	0.22	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	< 0.005	0.02	0.01	162
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.9	31.9	< 0.005	< 0.005	0.06	32.4
Vendor	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.2	41.2	< 0.005	0.01	0.05	43.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.28	5.28	< 0.005	< 0.005	0.01	5.36

Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.82	6.82	< 0.005	< 0.005	0.01	7.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.78	3.47	0.01	0.11	—	0.11	0.11	—	0.11	—	638	638	0.03	0.01	—	640
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.64	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	124	124	0.01	0.01	0.50	127
Vendor	0.01	0.21	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	< 0.005	0.02	0.43	162
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.61	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	119	119	0.01	0.01	0.01	121
Vendor	0.01	0.22	0.07	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	< 0.005	0.02	0.01	162
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.9	31.9	< 0.005	< 0.005	0.06	32.4
Vendor	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.2	41.2	< 0.005	0.01	0.05	43.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.28	5.28	< 0.005	< 0.005	0.01	5.36
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.82	6.82	< 0.005	< 0.005	0.01	7.14
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.63	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	128	128	0.01	< 0.005	—	129
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.3
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.59	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	116	116	0.01	< 0.005	0.46	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.47	9.47	< 0.005	< 0.005	0.02	9.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.57	1.57	< 0.005	< 0.005	< 0.005	1.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.63	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	128	128	0.01	< 0.005	—	129
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.3
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.59	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	116	116	0.01	< 0.005	0.46	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.47	9.47	< 0.005	< 0.005	0.02	9.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.57	1.57	< 0.005	< 0.005	< 0.005	1.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Architectural Coatings	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.88	1.88	< 0.005	< 0.005	—	1.88
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.9	24.9	< 0.005	< 0.005	0.10	25.3

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.03	2.03	< 0.005	< 0.005	< 0.005	2.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Architectural Coatings	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.88	1.88	< 0.005	< 0.005	—	1.88
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	24.9	24.9	< 0.005	< 0.005	0.10	25.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.03	2.03	< 0.005	< 0.005	< 0.005	2.07

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.8	9.35	82.4	0.17	0.13	5.99	6.13	0.12	1.06	1.18	—	17,393	17,393	1.00	0.84	69.1	17,737
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.75	0.42	3.71	0.01	0.01	0.26	0.27	0.01	0.05	0.05	—	763	763	0.05	0.04	3.02	778
Total	16.5	9.77	86.1	0.18	0.14	6.26	6.39	0.13	1.11	1.23	—	18,156	18,156	1.05	0.88	72.1	18,516

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.5	10.5	85.2	0.17	0.13	5.99	6.13	0.12	1.06	1.18	—	16,816	16,816	1.12	0.91	1.79	17,115
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.73	0.47	3.87	0.01	0.01	0.26	0.27	0.01	0.05	0.05	—	738	738	0.05	0.04	0.08	751
Total	16.2	10.9	89.0	0.17	0.14	6.26	6.39	0.13	1.11	1.23	—	17,553	17,553	1.18	0.95	1.87	17,867
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	2.71	1.80	14.5	0.03	0.02	1.06	1.08	0.02	0.19	0.21	—	2,704	2,704	0.17	0.14	4.77	2,756
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.10	0.06	0.52	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	92.9	92.9	0.01	0.01	0.16	94.8
Total	2.81	1.87	15.1	0.03	0.02	1.09	1.12	0.02	0.19	0.22	—	2,797	2,797	0.18	0.15	4.94	2,850

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.8	9.35	82.4	0.17	0.13	5.99	6.13	0.12	1.06	1.18	—	17,393	17,393	1.00	0.84	69.1	17,737
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.75	0.42	3.71	0.01	0.01	0.26	0.27	0.01	0.05	0.05	—	763	763	0.05	0.04	3.02	778
Total	16.5	9.77	86.1	0.18	0.14	6.26	6.39	0.13	1.11	1.23	—	18,156	18,156	1.05	0.88	72.1	18,516
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.5	10.5	85.2	0.17	0.13	5.99	6.13	0.12	1.06	1.18	—	16,816	16,816	1.12	0.91	1.79	17,115
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.73	0.47	3.87	0.01	0.01	0.26	0.27	0.01	0.05	0.05	—	738	738	0.05	0.04	0.08	751
Total	16.2	10.9	89.0	0.17	0.14	6.26	6.39	0.13	1.11	1.23	—	17,553	17,553	1.18	0.95	1.87	17,867
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Recreatio Swimming Pool	2.71	1.80	14.5	0.03	0.02	1.06	1.08	0.02	0.19	0.21	—	2,704	2,704	0.17	0.14	4.77	2,756
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.10	0.06	0.52	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	92.9	92.9	0.01	0.01	0.16	94.8
Total	2.81	1.87	15.1	0.03	0.02	1.09	1.12	0.02	0.19	0.22	—	2,797	2,797	0.18	0.15	4.94	2,850

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311

Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311
Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	5.59	5.59	< 0.005	< 0.005	—	5.63
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	51.2	51.2	< 0.005	< 0.005	—	51.5
Total	—	—	—	—	—	—	—	—	—	—	—	56.8	56.8	0.01	< 0.005	—	57.2

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311
Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311
Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	5.59	5.59	< 0.005	< 0.005	—	5.63
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	51.2	51.2	< 0.005	< 0.005	—	51.5
Total	—	—	—	—	—	—	—	—	—	—	—	56.8	56.8	0.01	< 0.005	—	57.2

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157

Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157
Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.40
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Total	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157
Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157
Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.40
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Total	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.30	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67

Total	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Total	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.30	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Total	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Total	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Recreatio Swimming Pool	—	—	—	—	—	—	—	—	—	—	0.36	1.10	1.46	0.01	< 0.005	—	1.92
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	2.76	9.26	12.0	0.07	0.01	—	15.5
Total	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	0.36	1.10	1.46	0.01	< 0.005	—	1.92
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	2.76	9.26	12.0	0.07	0.01	—	15.5
Total	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	1.58	0.00	1.58	0.16	0.00	—	5.52
Total	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Office Building	—	—	—	—	—	—	—	—	—	—	1.58	0.00	1.58	0.16	0.00	—	5.52
Total	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	11/1/2023	11/22/2023	5.00	16.0	—
Grading	Grading	11/23/2023	1/4/2024	5.00	31.0	—
Building Construction	Building Construction	1/5/2024	5/16/2025	5.00	356	—
Paving	Paving	5/19/2025	6/30/2025	5.00	31.0	—
Architectural Coating	Architectural Coating	5/16/2025	6/27/2025	5.00	31.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backh oes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backh oes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40

Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	10.6	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.21	HHDT,MHDT
Site Preparation	Hauling	46.9	33.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	10.6	LDA,LDT1,LDT2
Grading	Vendor	—	7.21	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	16.1	10.6	LDA,LDT1,LDT2
Building Construction	Vendor	7.00	7.21	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	10.6	LDA,LDT1,LDT2
Paving	Vendor	—	7.21	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	3.22	10.6	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.21	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	10.6	LDA,LDT1,LDT2
Site Preparation	Vendor	—	7.21	HHDT,MHDT
Site Preparation	Hauling	46.9	33.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	10.6	LDA,LDT1,LDT2
Grading	Vendor	—	7.21	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	16.1	10.6	LDA,LDT1,LDT2
Building Construction	Vendor	7.00	7.21	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	10.6	LDA,LDT1,LDT2
Paving	Vendor	—	7.21	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	3.22	10.6	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	7.21	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	27,513	9,171	4,403

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	6,000	24.0	0.00	—
Grading	—	—	31.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.68

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Recreational Swimming Pool	0.00	0%
Parking Lot	0.93	100%
Other Asphalt Surfaces	0.76	100%
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	349	0.03	< 0.005
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Recreational Swimming Pool	3,663	3,808	3,838	1,353,498	20,706	21,526	21,695	7,652,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	185	42.0	13.3	51,131	948	215	68.1	261,906

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Recreational Swimming Pool	3,663	3,808	3,838	1,353,498	20,706	21,526	21,695	7,652,053
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	185	42.0	13.3	51,131	948	215	68.1	261,906

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	27,513	9,171	4,403

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Recreational Swimming Pool	0.00	349	0.0330	0.0040	7,425
Parking Lot	35,373	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
General Office Building	324,065	349	0.0330	0.0040	486,999

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Recreational Swimming Pool	0.00	349	0.0330	0.0040	7,425
Parking Lot	35,373	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
General Office Building	324,065	349	0.0330	0.0040	486,999

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Recreational Swimming Pool	1,021,823	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

General Office Building	7,787,500	1,049,446

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Recreational Swimming Pool	1,021,823	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Office Building	7,787,500	1,049,446

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Recreational Swimming Pool	142	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Office Building	17.7	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Recreational Swimming Pool	142	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Office Building	17.7	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.95	annual days of extreme heat
Extreme Precipitation	4.45	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	24.9
AQ-PM	33.1
AQ-DPM	56.7
Drinking Water	71.6
Lead Risk Housing	44.6
Pesticides	99.0
Toxic Releases	75.5
Traffic	42.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11

Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	52.4
Cardio-vascular	67.5
Low Birth Weights	36.7
Socioeconomic Factor Indicators	—
Education	93.1
Housing	59.3
Linguistic	86.6
Poverty	72.4
Unemployment	56.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	26.26716284
Employed	61.27293725
Median HI	36.21198511
Education	—
Bachelor's or higher	20.73655845
High school enrollment	3.490311818
Preschool enrollment	21.73745669
Transportation	—
Auto Access	58.83485179

Active commuting	19.196715
Social	—
2-parent households	42.33286283
Voting	42.858976
Neighborhood	—
Alcohol availability	66.36725266
Park access	52.04670858
Retail density	68.61285769
Supermarket access	64.7760811
Tree canopy	11.04837675
Housing	—
Homeownership	64.71192095
Housing habitability	64.32696009
Low-inc homeowner severe housing cost burden	60.82381625
Low-inc renter severe housing cost burden	87.77107661
Uncrowded housing	12.81919672
Health Outcomes	—
Insured adults	26.25433081
Arthritis	63.4
Asthma ER Admissions	69.4
High Blood Pressure	35.9
Cancer (excluding skin)	66.1
Asthma	43.1
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	35.6
Life Expectancy at Birth	96.8

Cognitively Disabled	15.9
Physically Disabled	39.7
Heart Attack ER Admissions	71.8
Mental Health Not Good	36.5
Chronic Kidney Disease	35.4
Obesity	41.1
Pedestrian Injuries	81.5
Physical Health Not Good	35.8
Stroke	45.2
Health Risk Behaviors	—
Binge Drinking	52.5
Current Smoker	43.7
No Leisure Time for Physical Activity	25.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8
Elderly	76.6
English Speaking	13.0
Foreign-born	89.7
Outdoor Workers	8.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	33.6
Traffic Density	36.1
Traffic Access	23.0
Other Indices	—
Hardship	72.8

Other Decision Support	—
2016 Voting	39.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	28.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on information provided by the applicant
Construction: Construction Phases	Adjusted construction schedule to be consistent with the start and end date provided by the applicant
Construction: Trips and VMT	Longest haul route for the proposed project. Project site to Simi Valley Landfill
Operations: Energy Use	Data provided by the applicant
Operations: Water and Waste Water	Based on information provided by the applicant

Operations: Vehicle Data	Based on traffic report provided by Fehr & Peers

South Oxnard Aquatic Center Pipeline_unmitigated Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	South Oxnard Aquatic Center Pipeline_unmitigated
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	16.0
Location	34.1692184671285, -119.15481779122507
County	Ventura
City	Oxnard
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3423
EDFZ	8
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	0.27	Mile	0.17	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.77	33.9	32.9	0.06	1.56	3.58	5.15	1.44	0.44	1.88	—	6,926	6,926	0.28	0.07	0.05	6,955
Mit.	3.77	33.9	32.9	0.06	1.56	1.64	3.21	1.44	0.23	1.67	—	6,926	6,926	0.28	0.07	0.05	6,955
% Reduced	—	—	—	—	—	54%	38%	—	48%	11%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.13	1.21	1.19	< 0.005	0.05	0.12	0.18	0.05	0.02	0.06	—	250	250	0.01	< 0.005	0.03	251
Mit.	0.13	1.21	1.19	< 0.005	0.05	0.06	0.11	0.05	0.01	0.06	—	250	250	0.01	< 0.005	0.03	251
% Reduced	—	—	—	—	—	53%	37%	—	47%	11%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.02	0.22	0.22	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6

Mit.	0.02	0.22	0.22	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6
% Reduced	—	—	—	—	—	53%	37%	—	47%	11%	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.77	33.9	32.9	0.06	1.56	3.58	5.15	1.44	0.44	1.88	—	6,926	6,926	0.28	0.07	0.05	6,955
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.13	1.21	1.19	< 0.005	0.05	0.12	0.18	0.05	0.02	0.06	—	250	250	0.01	< 0.005	0.03	251
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.02	0.22	0.22	< 0.005	0.01	0.02	0.03	0.01	< 0.005	0.01	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.77	33.9	32.9	0.06	1.56	1.64	3.21	1.44	0.23	1.67	—	6,926	6,926	0.28	0.07	0.05	6,955

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.13	1.21	1.19	< 0.005	0.05	0.06	0.11	0.05	0.01	0.06	—	250	250	0.01	< 0.005	0.03	251
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.02	0.22	0.22	< 0.005	0.01	0.01	0.02	0.01	< 0.005	0.01	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	3.95	3.56	< 0.005	0.28	—	0.28	0.25	—	0.25	—	491	491	0.02	< 0.005	—	492
Dust From Material Movement	—	—	—	—	—	0.53	0.53	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.69	2.69	< 0.005	< 0.005	—	2.70

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.45	0.45	< 0.005	< 0.005	—	0.45
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.33	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.5	66.5	< 0.005	< 0.005	0.01	67.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Linear, Grubbing & Land Clearing (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.47	3.95	3.56	< 0.005	0.28	—	0.28	0.25	—	0.25	—	491	491	0.02	< 0.005	—	492
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.69	2.69	< 0.005	< 0.005	—	2.70
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.45	0.45	< 0.005	< 0.005	—	0.45

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.33	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.5	66.5	< 0.005	< 0.005	0.01	67.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	33.7	30.9	0.06	1.56	—	1.56	1.44	—	1.44	—	6,495	6,495	0.26	0.05	—	6,518
Dust From Material Movement	—	—	—	—	—	3.18	3.18	—	0.34	0.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.65	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	125	125	0.01	< 0.005	—	125
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.6	20.6	< 0.005	< 0.005	—	20.7
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.19	1.97	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	399	399	0.02	0.01	0.05	404
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.7	31.7	< 0.005	< 0.005	< 0.005	33.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.70	7.70	< 0.005	< 0.005	0.02	7.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.64
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Linear, Grading & Excavation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.62	33.7	30.9	0.06	1.56	—	1.56	1.44	—	1.44	—	6,495	6,495	0.26	0.05	—	6,518

Dust From Material Movement	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.65	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	125	125	0.01	< 0.005	—	125
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.6	20.6	< 0.005	< 0.005	—	20.7
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.19	1.97	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	399	399	0.02	0.01	0.05	404
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.7	31.7	< 0.005	< 0.005	< 0.005	33.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.70	7.70	< 0.005	< 0.005	0.02	7.81
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.64
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Linear, Drainage, Utilities, & Sub-Grade (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.85	28.2	25.0	0.05	1.16	—	1.16	1.06	—	1.06	—	5,693	5,693	0.23	0.05	—	5,712
Dust From Material Movement	—	—	—	—	—	2.65	2.65	—	0.29	0.29	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.46	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.6	93.6	< 0.005	< 0.005	—	93.9

Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.5
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.16	1.64	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	332	332	0.02	0.01	0.04	336
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.50	5.50	< 0.005	< 0.005	0.01	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Linear, Drainage, Utilities, & Sub-Grade (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.85	28.2	25.0	0.05	1.16	—	1.16	1.06	—	1.06	—	5,693	5,693	0.23	0.05	—	5,712
Dust From Material Movement	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.46	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	93.6	93.6	< 0.005	< 0.005	—	93.9
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.5

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.16	1.64	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	332	332	0.02	0.01	0.04	336
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.50	5.50	< 0.005	< 0.005	0.01	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Paving (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	8.46	10.9	0.01	0.43	—	0.43	0.39	—	0.39	—	1,620	1,620	0.07	0.01	—	1,625
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.20	2.20	< 0.005	< 0.005	—	2.21
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.15	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.32	0.32	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Linear, Paving (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.00	8.46	10.9	0.01	0.43	—	0.43	0.39	—	0.39	—	1,620	1,620	0.07	0.01	—	1,625
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.20	2.20	< 0.005	< 0.005	—	2.21

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.15	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.32	0.32	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	11/1/2023	11/3/2023	5.00	2.00	—
Linear, Grading & Excavation	Linear, Grading & Excavation	11/4/2023	11/13/2023	5.00	7.00	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	11/14/2023	11/22/2023	5.00	6.00	—
Linear, Paving	Linear, Paving	11/23/2023	11/27/2023	5.00	3.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38

Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38

Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	5.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT

Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	30.0	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	25.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	5.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	30.0	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT

Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	25.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	0.17	0.00	—
Linear, Grading & Excavation	—	—	0.17	0.00	—

Linear, Drainage, Utilities, & Sub-Grade	—	—	0.17	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	0.17	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.95	annual days of extreme heat
Extreme Precipitation	4.45	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A

Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	24.9
AQ-PM	33.1
AQ-DPM	56.7
Drinking Water	71.6
Lead Risk Housing	44.6
Pesticides	99.0
Toxic Releases	75.5
Traffic	42.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	1.80

Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	52.4
Cardio-vascular	67.5
Low Birth Weights	36.7
Socioeconomic Factor Indicators	—
Education	93.1
Housing	59.3
Linguistic	86.6
Poverty	72.4
Unemployment	56.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	26.26716284
Employed	61.27293725
Median HI	36.21198511
Education	—
Bachelor's or higher	20.73655845
High school enrollment	3.490311818
Preschool enrollment	21.73745669
Transportation	—
Auto Access	58.83485179
Active commuting	19.196715

Social	—
2-parent households	42.33286283
Voting	42.858976
Neighborhood	—
Alcohol availability	66.36725266
Park access	52.04670858
Retail density	68.61285769
Supermarket access	64.7760811
Tree canopy	11.04837675
Housing	—
Homeownership	64.71192095
Housing habitability	64.32696009
Low-inc homeowner severe housing cost burden	60.82381625
Low-inc renter severe housing cost burden	87.77107661
Uncrowded housing	12.81919672
Health Outcomes	—
Insured adults	26.25433081
Arthritis	63.4
Asthma ER Admissions	69.4
High Blood Pressure	35.9
Cancer (excluding skin)	66.1
Asthma	43.1
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	35.6
Life Expectancy at Birth	96.8
Cognitively Disabled	15.9

Physically Disabled	39.7
Heart Attack ER Admissions	71.8
Mental Health Not Good	36.5
Chronic Kidney Disease	35.4
Obesity	41.1
Pedestrian Injuries	81.5
Physical Health Not Good	35.8
Stroke	45.2
Health Risk Behaviors	—
Binge Drinking	52.5
Current Smoker	43.7
No Leisure Time for Physical Activity	25.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8
Elderly	76.6
English Speaking	13.0
Foreign-born	89.7
Outdoor Workers	8.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	33.6
Traffic Density	36.1
Traffic Access	23.0
Other Indices	—
Hardship	72.8
Other Decision Support	—

2016 Voting	39.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	28.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Trips and VMT	adjusted caleemod defaults for vendor trips

South Oxnard Aquatics Center_Mitigated Detailed Report

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7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	South Oxnard Aquatics Center_Mitigated
Lead Agency	City of Oxnard
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	16.0
Location	34.16865970541075, -119.15472977476742
County	Ventura
City	Oxnard
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3423
EDFZ	8
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Recreational Swimming Pool	25.0	1000sqft	0.57	24,393	0.00	—	—	—
Parking Lot	103	Space	0.93	0.00	0.00	—	—	—

Other Asphalt Surfaces	33.0	1000sqft	0.76	0.00	0.00	—	—	—
General Office Building	19.0	1000sqft	5.69	18,342	81,179	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.75	11.7	15.5	0.03	0.50	0.31	0.78	0.46	0.08	0.53	—	3,006	3,006	0.12	0.06	1.65	3,029
Mit.	3.84	3.83	17.1	0.03	0.08	0.31	0.39	0.08	0.08	0.15	—	3,006	3,006	0.12	0.06	1.65	3,029
% Reduced	19%	67%	-10%	—	84%	—	49%	83%	—	71%	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.13	47.4	38.1	0.08	1.87	21.3	23.2	1.73	10.6	12.3	—	11,038	11,038	0.34	0.92	0.35	11,320
Mit.	0.68	10.3	30.9	0.08	0.17	9.31	9.47	0.17	4.39	4.56	—	11,038	11,038	0.34	0.92	0.35	11,320
% Reduced	84%	78%	19%	—	91%	56%	59%	90%	58%	63%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.92	8.37	10.2	0.02	0.36	1.49	1.64	0.33	0.73	0.87	—	2,029	2,029	0.08	0.04	0.48	2,044
Mit.	0.43	2.30	11.4	0.02	0.06	0.63	0.64	0.05	0.30	0.31	—	2,029	2,029	0.08	0.04	0.48	2,044
% Reduced	53%	73%	-12%	—	84%	57%	61%	84%	59%	64%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.17	1.53	1.86	< 0.005	0.07	0.27	0.30	0.06	0.13	0.16	—	336	336	0.01	0.01	0.08	338
Mit.	0.08	0.42	2.08	< 0.005	0.01	0.12	0.12	0.01	0.05	0.06	—	336	336	0.01	0.01	0.08	338
% Reduced	53%	73%	-12%	—	84%	57%	61%	84%	59%	64%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	Yes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.29	11.6	14.3	0.02	0.50	0.27	0.77	0.46	0.07	0.53	—	2,837	2,837	0.11	0.06	1.56	2,859
2025	4.75	11.7	15.5	0.03	0.46	0.31	0.78	0.43	0.08	0.50	—	3,006	3,006	0.12	0.06	1.65	3,029
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.13	47.4	38.1	0.08	1.87	21.3	23.2	1.73	10.6	12.3	—	11,038	11,038	0.34	0.92	0.35	11,320
2024	1.96	18.3	19.7	0.03	0.84	7.28	8.12	0.77	3.47	4.24	—	3,154	3,154	0.13	0.06	0.04	3,167
2025	1.20	10.8	14.0	0.02	0.43	0.27	0.71	0.40	0.07	0.47	—	2,820	2,820	0.11	0.06	0.04	2,840
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.34	3.61	3.25	0.01	0.15	1.49	1.64	0.14	0.73	0.87	—	725	725	0.02	0.04	0.28	739
2024	0.92	8.37	10.2	0.02	0.36	0.25	0.61	0.33	0.07	0.41	—	2,029	2,029	0.08	0.04	0.48	2,044
2025	0.71	3.59	4.77	0.01	0.15	0.09	0.24	0.14	0.02	0.16	—	910	910	0.04	0.02	0.21	917
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	0.66	0.59	< 0.005	0.03	0.27	0.30	0.03	0.13	0.16	—	120	120	< 0.005	0.01	0.05	122
2024	0.17	1.53	1.86	< 0.005	0.07	0.05	0.11	0.06	0.01	0.07	—	336	336	0.01	0.01	0.08	338
2025	0.13	0.66	0.87	< 0.005	0.03	0.02	0.04	0.02	< 0.005	0.03	—	151	151	0.01	< 0.005	0.03	152

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.41	3.19	16.0	0.02	0.08	0.27	0.35	0.08	0.07	0.14	—	2,837	2,837	0.11	0.06	1.56	2,859
2025	3.84	3.83	17.1	0.03	0.08	0.31	0.39	0.08	0.08	0.15	—	3,006	3,006	0.12	0.06	1.65	3,029
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.68	10.3	30.9	0.08	0.17	9.31	9.47	0.17	4.39	4.56	—	11,038	11,038	0.34	0.92	0.35	11,320
2024	0.41	3.22	18.7	0.03	0.08	2.96	3.01	0.08	1.38	1.44	—	3,154	3,154	0.13	0.06	0.04	3,167
2025	0.40	3.19	15.8	0.02	0.08	0.27	0.35	0.08	0.07	0.14	—	2,820	2,820	0.11	0.06	0.04	2,840
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.06	0.61	2.79	0.01	0.01	0.63	0.64	0.01	0.30	0.31	—	725	725	0.02	0.04	0.28	739
2024	0.29	2.30	11.4	0.02	0.06	0.21	0.27	0.05	0.06	0.11	—	2,029	2,029	0.08	0.04	0.48	2,044
2025	0.43	1.08	5.28	0.01	0.02	0.09	0.11	0.02	0.02	0.04	—	910	910	0.04	0.02	0.21	917
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.01	0.11	0.51	< 0.005	< 0.005	0.12	0.12	< 0.005	0.05	0.06	—	120	120	< 0.005	0.01	0.05	122
2024	0.05	0.42	2.08	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	336	336	0.01	0.01	0.08	338
2025	0.08	0.20	0.96	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	151	151	0.01	< 0.005	0.03	152

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	17.2	9.90	87.9	0.18	0.15	6.25	6.40	0.14	1.11	1.25	105	18,713	18,818	10.2	0.92	72.2	19,420

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.6	11.1	88.9	0.17	0.15	6.25	6.40	0.14	1.11	1.24	105	18,103	18,208	10.3	0.99	2.03	18,763
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.0	10.4	83.7	0.17	0.14	6.01	6.16	0.14	1.06	1.20	105	17,521	17,626	10.2	0.94	30.1	18,190
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.92	1.90	15.3	0.03	0.03	1.10	1.12	0.02	0.19	0.22	17.4	2,901	2,918	1.69	0.15	4.98	3,012
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	No	No	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.5	9.75	85.9	0.18	0.14	6.25	6.39	0.13	1.11	1.23	—	18,141	18,141	1.04	0.88	72.1	18,500
Area	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504

Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	17.2	9.90	87.9	0.18	0.15	6.25	6.40	0.14	1.11	1.25	105	18,713	18,818	10.2	0.92	72.2	19,420
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.1	10.9	88.8	0.17	0.14	6.25	6.39	0.13	1.11	1.23	—	17,539	17,539	1.17	0.94	1.87	17,852
Area	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.6	11.1	88.9	0.17	0.15	6.25	6.40	0.14	1.11	1.24	105	18,103	18,208	10.3	0.99	2.03	18,763
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.4	10.3	82.7	0.17	0.13	6.01	6.14	0.12	1.06	1.19	—	16,953	16,953	1.08	0.89	29.9	17,275
Area	0.58	0.01	0.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.77	3.77	< 0.005	< 0.005	—	3.78
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.0	10.4	83.7	0.17	0.14	6.01	6.16	0.14	1.06	1.20	105	17,521	17,626	10.2	0.94	30.1	18,190
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.81	1.87	15.1	0.03	0.02	1.10	1.12	0.02	0.19	0.22	—	2,807	2,807	0.18	0.15	4.95	2,860
Area	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Energy	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	83.1	83.1	0.01	< 0.005	—	83.5
Water	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4
Waste	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	2.92	1.90	15.3	0.03	0.03	1.10	1.12	0.02	0.19	0.22	17.4	2,901	2,918	1.69	0.15	4.98	3,012

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.5	9.75	85.9	0.18	0.14	6.25	6.39	0.13	1.11	1.23	—	18,141	18,141	1.04	0.88	72.1	18,500
Area	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	17.2	9.90	87.9	0.18	0.15	6.25	6.40	0.14	1.11	1.25	105	18,713	18,818	10.2	0.92	72.2	19,420
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	16.1	10.9	88.8	0.17	0.14	6.25	6.39	0.13	1.11	1.23	—	17,539	17,539	1.17	0.94	1.87	17,852
Area	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.6	11.1	88.9	0.17	0.15	6.25	6.40	0.14	1.11	1.24	105	18,103	18,208	10.3	0.99	2.03	18,763
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	15.4	10.3	82.7	0.17	0.13	6.01	6.14	0.12	1.06	1.19	—	16,953	16,953	1.08	0.89	29.9	17,275

Area	0.58	0.01	0.92	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.77	3.77	< 0.005	< 0.005	—	3.78
Energy	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	502	502	0.05	< 0.005	—	504
Water	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Waste	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Total	16.0	10.4	83.7	0.17	0.14	6.01	6.16	0.14	1.06	1.20	105	17,521	17,626	10.2	0.94	30.1	18,190
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.81	1.87	15.1	0.03	0.02	1.10	1.12	0.02	0.19	0.22	—	2,807	2,807	0.18	0.15	4.95	2,860
Area	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Energy	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	83.1	83.1	0.01	< 0.005	—	83.5
Water	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4
Waste	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	2.92	1.90	15.3	0.03	0.03	1.10	1.12	0.02	0.19	0.22	17.4	2,901	2,918	1.69	0.15	4.98	3,012

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314

Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.74	1.55	< 0.005	0.08	—	0.08	0.07	—	0.07	—	232	232	0.01	< 0.005	—	233
Dust From Material Movement	—	—	—	—	—	0.86	0.86	—	0.44	0.44	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.32	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01	—	38.4	38.4	< 0.005	< 0.005	—	38.6
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.15	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	7.57	1.45	0.04	0.07	1.40	1.47	0.07	0.39	0.46	—	5,510	5,510	0.12	0.86	0.32	5,771

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.33	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	242	242	0.01	0.04	0.23	253
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.0	40.0	< 0.005	0.01	0.04	41.9

3.2. Site Preparation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	2.59	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.68	7.68	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.11	1.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	232	232	0.01	< 0.005	—	233

Dust From Material Movement	—	—	—	—	—	0.34	0.34	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	38.4	38.4	< 0.005	< 0.005	—	38.6
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.15	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.10	7.57	1.45	0.04	0.07	1.40	1.47	0.07	0.39	0.46	—	5,510	5,510	0.12	0.86	0.32	5,771
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.33	0.06	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	242	242	0.01	0.04	0.23	253
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.73
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	40.0	40.0	< 0.005	0.01	0.04	41.9

3.3. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.53	1.50	< 0.005	0.07	—	0.07	0.07	—	0.07	—	226	226	0.01	< 0.005	—	227
Dust From Material Movement	—	—	—	—	—	0.54	0.54	—	0.26	0.26	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.28	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.4	37.4	< 0.005	< 0.005	—	37.5

Dust From Material Movement	—	—	—	—	—	0.10	0.10	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.98	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	0.01	0.01	0.02	202
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.03	15.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.54	2.54	< 0.005	< 0.005	0.01	2.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	1.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	226	226	0.01	< 0.005	—	227
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.10	0.10	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.25	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	37.4	37.4	< 0.005	< 0.005	—	37.5
Dust From Material Movement	—	—	—	—	—	0.04	0.04	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.98	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	199	199	0.01	0.01	0.02	202
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.03	15.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.54	2.54	< 0.005	< 0.005	0.01	2.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969

Dust From Material Movement	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.14	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.83	3.83	< 0.005	< 0.005	—	3.85
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.92	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	196	196	0.01	0.01	0.02	198
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Grading (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.04	17.8	0.03	0.06	—	0.06	0.06	—	0.06	—	2,958	2,958	0.12	0.02	—	2,969
Dust From Material Movement	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.2	23.2	< 0.005	< 0.005	—	23.2

Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.83	3.83	< 0.005	< 0.005	—	3.85
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.92	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	196	196	0.01	0.01	0.02	198
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.54	1.54	< 0.005	< 0.005	< 0.005	1.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.85	7.95	9.29	0.02	0.35	—	0.35	0.32	—	0.32	—	1,699	1,699	0.07	0.01	—	1,704
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.45	1.70	< 0.005	0.06	—	0.06	0.06	—	0.06	—	281	281	0.01	< 0.005	—	282
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.09	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	220	220	0.01	0.01	0.95	223
Vendor	0.01	0.28	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	219	219	< 0.005	0.03	0.61	230
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.98	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	210	210	0.01	0.01	0.02	213
Vendor	0.01	0.29	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	219	219	< 0.005	0.03	0.02	229
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.07	0.70	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	150	150	0.01	0.01	0.29	152
Vendor	< 0.005	0.21	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	< 0.005	0.02	0.19	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.8	24.8	< 0.005	< 0.005	0.05	25.2
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.7	25.7	< 0.005	< 0.005	0.03	26.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.33	2.83	14.8	0.02	0.08	—	0.08	0.07	—	0.07	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	2.83	14.8	0.02	0.08	—	0.08	0.07	—	0.07	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	2.00	10.5	0.02	0.05	—	0.05	0.05	—	0.05	—	1,699	1,699	0.07	0.01	—	1,704
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.37	1.92	< 0.005	0.01	—	0.01	0.01	—	0.01	—	281	281	0.01	< 0.005	—	282
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	1.09	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	220	220	0.01	0.01	0.95	223
Vendor	0.01	0.28	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	219	219	< 0.005	0.03	0.61	230
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.98	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	210	210	0.01	0.01	0.02	213

Vendor	0.01	0.29	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	219	219	< 0.005	0.03	0.02	229
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.07	0.70	0.00	0.00	0.15	0.15	0.00	0.03	0.03	—	150	150	0.01	0.01	0.29	152
Vendor	< 0.005	0.21	0.06	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	155	155	< 0.005	0.02	0.19	163
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.8	24.8	< 0.005	< 0.005	0.05	25.2
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.7	25.7	< 0.005	< 0.005	0.03	26.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	2.78	3.47	0.01	0.11	—	0.11	0.11	—	0.11	—	638	638	0.03	0.01	—	640
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.51	0.63	< 0.005	0.02	—	0.02	0.02	—	0.02	—	106	106	< 0.005	< 0.005	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.01	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	215	215	0.01	0.01	0.87	219
Vendor	0.01	0.27	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	216	216	< 0.005	0.03	0.61	226
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.92	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	206	206	0.01	0.01	0.02	209
Vendor	0.01	0.28	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	216	216	< 0.005	0.03	0.02	226
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.2	55.2	< 0.005	< 0.005	0.10	56.0
Vendor	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.5	57.5	< 0.005	0.01	0.07	60.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.14	9.14	< 0.005	< 0.005	0.02	9.27

Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.51	9.51	< 0.005	< 0.005	0.01	9.96
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Building Construction (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	2.82	14.8	0.02	0.08	—	0.08	0.07	—	0.07	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	2.82	14.8	0.02	0.08	—	0.08	0.07	—	0.07	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.75	3.95	0.01	0.02	—	0.02	0.02	—	0.02	—	638	638	0.03	0.01	—	640
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.14	0.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	106	106	< 0.005	< 0.005	—	106
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.01	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	215	215	0.01	0.01	0.87	219
Vendor	0.01	0.27	0.08	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	216	216	< 0.005	0.03	0.61	226
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.92	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	206	206	0.01	0.01	0.02	209
Vendor	0.01	0.28	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	216	216	< 0.005	0.03	0.02	226
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.24	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.2	55.2	< 0.005	< 0.005	0.10	56.0
Vendor	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.5	57.5	< 0.005	0.01	0.07	60.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.14	9.14	< 0.005	< 0.005	0.02	9.27
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.51	9.51	< 0.005	< 0.005	0.01	9.96
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.63	0.85	< 0.005	0.03	—	0.03	0.03	—	0.03	—	128	128	0.01	< 0.005	—	129
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.15	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.3
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.94	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	201	201	0.01	0.01	0.81	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.4	16.4	< 0.005	< 0.005	0.03	16.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.71	2.71	< 0.005	< 0.005	< 0.005	2.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Paving (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	1.93	10.6	0.01	0.03	—	0.03	0.03	—	0.03	—	1,511	1,511	0.06	0.01	—	1,517
Paving	0.14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.16	0.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	128	128	0.01	< 0.005	—	129
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.3
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.94	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	201	201	0.01	0.01	0.81	204
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.4	16.4	< 0.005	< 0.005	0.03	16.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.71	2.71	< 0.005	< 0.005	< 0.005	2.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Architectural Coatings	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.88	1.88	< 0.005	< 0.005	—	1.88
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.1	43.1	< 0.005	< 0.005	0.17	43.8

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	0.01	3.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.14. Architectural Coating (2025) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.65	0.96	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	3.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.3	11.3	< 0.005	< 0.005	—	11.4
Architectural Coatings	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.88	1.88	< 0.005	< 0.005	—	1.88
Architectural Coatings	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.20	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	43.1	43.1	< 0.005	< 0.005	0.17	43.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.52	3.52	< 0.005	< 0.005	0.01	3.57

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.7	9.30	81.9	0.17	0.13	5.96	6.09	0.12	1.05	1.18	—	17,302	17,302	1.00	0.84	68.7	17,645
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.76	0.45	3.97	0.01	0.01	0.29	0.30	0.01	0.05	0.06	—	839	839	0.05	0.04	3.33	855
Total	16.5	9.75	85.9	0.18	0.14	6.25	6.39	0.13	1.11	1.23	—	18,141	18,141	1.04	0.88	72.1	18,500

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.4	10.4	84.7	0.16	0.13	5.96	6.09	0.12	1.05	1.18	—	16,728	16,728	1.12	0.90	1.78	17,026
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.75	0.50	4.11	0.01	0.01	0.29	0.30	0.01	0.05	0.06	—	811	811	0.05	0.04	0.09	825
Total	16.1	10.9	88.8	0.17	0.14	6.25	6.39	0.13	1.11	1.23	—	17,539	17,539	1.17	0.94	1.87	17,852
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	2.71	1.80	14.5	0.03	0.02	1.06	1.08	0.02	0.19	0.21	—	2,705	2,705	0.17	0.14	4.77	2,756
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.10	0.07	0.55	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	102	102	0.01	0.01	0.18	104
Total	2.81	1.87	15.1	0.03	0.02	1.10	1.12	0.02	0.19	0.22	—	2,807	2,807	0.18	0.15	4.95	2,860

4.1.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.7	9.30	81.9	0.17	0.13	5.96	6.09	0.12	1.05	1.18	—	17,302	17,302	1.00	0.84	68.7	17,645
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.76	0.45	3.97	0.01	0.01	0.29	0.30	0.01	0.05	0.06	—	839	839	0.05	0.04	3.33	855
Total	16.5	9.75	85.9	0.18	0.14	6.25	6.39	0.13	1.11	1.23	—	18,141	18,141	1.04	0.88	72.1	18,500
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	15.4	10.4	84.7	0.16	0.13	5.96	6.09	0.12	1.05	1.18	—	16,728	16,728	1.12	0.90	1.78	17,026
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.75	0.50	4.11	0.01	0.01	0.29	0.30	0.01	0.05	0.06	—	811	811	0.05	0.04	0.09	825
Total	16.1	10.9	88.8	0.17	0.14	6.25	6.39	0.13	1.11	1.23	—	17,539	17,539	1.17	0.94	1.87	17,852
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Recreatio Swimming Pool	2.71	1.80	14.5	0.03	0.02	1.06	1.08	0.02	0.19	0.21	—	2,705	2,705	0.17	0.14	4.77	2,756
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	0.10	0.07	0.55	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	102	102	0.01	0.01	0.18	104
Total	2.81	1.87	15.1	0.03	0.02	1.10	1.12	0.02	0.19	0.22	—	2,807	2,807	0.18	0.15	4.95	2,860

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311

Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311
Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	5.59	5.59	< 0.005	< 0.005	—	5.63
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	51.2	51.2	< 0.005	< 0.005	—	51.5
Total	—	—	—	—	—	—	—	—	—	—	—	56.8	56.8	0.01	< 0.005	—	57.2

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311
Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	33.8	33.8	< 0.005	< 0.005	—	34.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	310	310	0.03	< 0.005	—	311
Total	—	—	—	—	—	—	—	—	—	—	—	343	343	0.03	< 0.005	—	345

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	5.59	5.59	< 0.005	< 0.005	—	5.63
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	—	51.2	51.2	< 0.005	< 0.005	—	51.5
Total	—	—	—	—	—	—	—	—	—	—	—	56.8	56.8	0.01	< 0.005	—	57.2

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157

Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157
Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.40
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Total	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157
Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.38	2.38	< 0.005	< 0.005	—	2.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	156	156	0.01	< 0.005	—	157
Total	0.01	0.13	0.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	158	158	0.01	< 0.005	—	159

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.39	0.39	< 0.005	< 0.005	—	0.40
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
General Office Building	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	25.8	25.8	< 0.005	< 0.005	—	25.9
Total	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	26.2	26.2	< 0.005	< 0.005	—	26.3

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.30	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67

Total	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Total	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63

4.3.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.30	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Total	0.73	0.02	1.86	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.64	7.64	< 0.005	< 0.005	—	7.67
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.43	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63
Total	0.11	< 0.005	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.62	0.62	< 0.005	< 0.005	—	0.63

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Recreatio Swimming Pool	—	—	—	—	—	—	—	—	—	—	0.36	1.10	1.46	0.01	< 0.005	—	1.92
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	2.76	9.26	12.0	0.07	0.01	—	15.5
Total	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4

4.4.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	2.18	6.64	8.83	0.05	< 0.005	—	11.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	16.6	56.0	72.6	0.40	0.04	—	93.7
Total	—	—	—	—	—	—	—	—	—	—	18.8	62.6	81.4	0.46	0.04	—	105
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	0.36	1.10	1.46	0.01	< 0.005	—	1.92
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	2.76	9.26	12.0	0.07	0.01	—	15.5
Total	—	—	—	—	—	—	—	—	—	—	3.12	10.4	13.5	0.08	0.01	—	17.4

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	1.58	0.00	1.58	0.16	0.00	—	5.52
Total	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0

4.5.1. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	76.8	0.00	76.8	7.68	0.00	—	269
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
General Office Building	—	—	—	—	—	—	—	—	—	—	9.52	0.00	9.52	0.95	0.00	—	33.3
Total	—	—	—	—	—	—	—	—	—	—	86.3	0.00	86.3	8.63	0.00	—	302
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	12.7	0.00	12.7	1.27	0.00	—	44.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

General Office Building	—	—	—	—	—	—	—	—	—	—	1.58	0.00	1.58	0.16	0.00	—	5.52
Total	—	—	—	—	—	—	—	—	—	—	14.3	0.00	14.3	1.43	0.00	—	50.0

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.12	0.12

General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.04	0.04
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.16	0.16
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Recreational Swimming Pool	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	11/1/2023	11/22/2023	5.00	16.0	—
Grading	Grading	11/23/2023	1/4/2024	5.00	31.0	—
Building Construction	Building Construction	1/5/2024	5/16/2025	5.00	356	—
Paving	Paving	5/19/2025	6/30/2025	5.00	31.0	—
Architectural Coating	Architectural Coating	5/16/2025	6/27/2025	5.00	31.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Building Construction	Tractors/Loaders/Backh	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Final	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Final	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 4 Final	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Tier 4 Final	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Final	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 4 Final	1.00	6.00	37.0	0.48
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	3.00	8.00	367	0.40

Grading	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	46.9	33.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	16.1	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	7.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—

Architectural Coating	Worker	3.22	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	46.9	33.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	16.1	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	7.00	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT

Architectural Coating	—	—	—	—
Architectural Coating	Worker	3.22	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	27,513	9,171	4,403

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	6,000	24.0	0.00	—
Grading	—	—	31.0	0.00	—
Paving	0.00	0.00	0.00	0.00	1.68

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Recreational Swimming Pool	0.00	0%
Parking Lot	0.93	100%
Other Asphalt Surfaces	0.76	100%
General Office Building	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	349	0.03	< 0.005
2024	0.00	349	0.03	< 0.005
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Recreational Swimming Pool	3,673	3,780	3,818	1,353,629	20,763	21,370	21,582	7,652,790
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	185	42.0	13.3	51,131	1,046	237	75.2	289,070

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Recreational Swimming Pool	3,673	3,780	3,818	1,353,629	20,763	21,370	21,582	7,652,790
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
General Office Building	185	42.0	13.3	51,131	1,046	237	75.2	289,070

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	27,513	9,171	4,403

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00

Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Recreational Swimming Pool	0.00	349	0.0330	0.0040	7,425
Parking Lot	35,373	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
General Office Building	324,065	349	0.0330	0.0040	486,999

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Recreational Swimming Pool	0.00	349	0.0330	0.0040	7,425
Parking Lot	35,373	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
General Office Building	324,065	349	0.0330	0.0040	486,999

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Recreational Swimming Pool	1,021,823	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00

General Office Building	7,787,500	1,049,446

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Recreational Swimming Pool	1,021,823	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Office Building	7,787,500	1,049,446

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Recreational Swimming Pool	142	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Office Building	17.7	0.00

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Recreational Swimming Pool	142	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
General Office Building	17.7	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Recreational Swimming Pool	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Recreational Swimming Pool	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.95	annual days of extreme heat
Extreme Precipitation	4.45	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	24.9
AQ-PM	33.1
AQ-DPM	56.7
Drinking Water	71.6
Lead Risk Housing	44.6
Pesticides	99.0
Toxic Releases	75.5
Traffic	42.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11

Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	52.4
Cardio-vascular	67.5
Low Birth Weights	36.7
Socioeconomic Factor Indicators	—
Education	93.1
Housing	59.3
Linguistic	86.6
Poverty	72.4
Unemployment	56.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	26.26716284
Employed	61.27293725
Median HI	36.21198511
Education	—
Bachelor's or higher	20.73655845
High school enrollment	3.490311818
Preschool enrollment	21.73745669
Transportation	—
Auto Access	58.83485179

Active commuting	19.196715
Social	—
2-parent households	42.33286283
Voting	42.858976
Neighborhood	—
Alcohol availability	66.36725266
Park access	52.04670858
Retail density	68.61285769
Supermarket access	64.7760811
Tree canopy	11.04837675
Housing	—
Homeownership	64.71192095
Housing habitability	64.32696009
Low-inc homeowner severe housing cost burden	60.82381625
Low-inc renter severe housing cost burden	87.77107661
Uncrowded housing	12.81919672
Health Outcomes	—
Insured adults	26.25433081
Arthritis	63.4
Asthma ER Admissions	69.4
High Blood Pressure	35.9
Cancer (excluding skin)	66.1
Asthma	43.1
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	35.6
Life Expectancy at Birth	96.8

Cognitively Disabled	15.9
Physically Disabled	39.7
Heart Attack ER Admissions	71.8
Mental Health Not Good	36.5
Chronic Kidney Disease	35.4
Obesity	41.1
Pedestrian Injuries	81.5
Physical Health Not Good	35.8
Stroke	45.2
Health Risk Behaviors	—
Binge Drinking	52.5
Current Smoker	43.7
No Leisure Time for Physical Activity	25.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8
Elderly	76.6
English Speaking	13.0
Foreign-born	89.7
Outdoor Workers	8.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	33.6
Traffic Density	36.1
Traffic Access	23.0
Other Indices	—
Hardship	72.8

Other Decision Support	—
2016 Voting	39.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	28.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Based on data provided by the applicant
Construction: Construction Phases	Adusted construction schedule based on start and end dates provided by the applicant
Operations: Energy Use	Based on applicant provided information
Operations: Water and Waste Water	Based on information provided by the applicant
Construction: Trips and VMT	Longest hauling trip from project site to Simi Valley Landfill

Construction: Off-Road Equipment	Inserted Tier 4 final engine mitigation to reduce emissions
Operations: Vehicle Data	Based on traffic report provided by Fehr & Peers

South Oxnard Aquatics Center Pipeline_mitigated Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	South Oxnard Aquatics Center Pipeline_mitigated
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.20
Precipitation (days)	16.0
Location	34.16924475477339, -119.15474213327991
County	Ventura
City	Oxnard
Air District	Ventura County APCD
Air Basin	South Central Coast
TAZ	3423
EDFZ	8
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Construction	0.27	Mile	0.17	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-2*	Limit Heavy-Duty Diesel Vehicle Idling
Construction	C-5	Use Advanced Engine Tiers
Construction	C-10-A	Water Exposed Surfaces
Construction	C-10-C	Water Unpaved Construction Roads
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

* Qualitative or supporting measure. Emission reductions not included in the mitigated emissions results.

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	0.87	6.39	39.5	0.06	0.17	1.64	1.76	0.17	0.23	0.36	—	6,926	6,926	0.28	0.07	0.05	6,955
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	0.03	0.24	1.43	< 0.005	0.01	0.06	0.06	0.01	0.01	0.01	—	250	250	0.01	< 0.005	0.03	251
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mit.	0.01	0.04	0.26	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.87	6.39	39.5	0.06	0.17	1.64	1.76	0.17	0.23	0.36	—	6,926	6,926	0.28	0.07	0.05	6,955
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.03	0.24	1.43	< 0.005	0.01	0.06	0.06	0.01	0.01	0.01	—	250	250	0.01	< 0.005	0.03	251

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.01	0.04	0.26	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.4	41.4	< 0.005	< 0.005	0.01	41.6

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.2. Linear, Grubbing & Land Clearing (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.84	3.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	491	491	0.02	< 0.005	—	492
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.69	2.69	< 0.005	< 0.005	—	2.70
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.45	0.45	< 0.005	< 0.005	—	0.45
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.33	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.5	66.5	< 0.005	< 0.005	0.01	67.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.37	0.37	< 0.005	< 0.005	< 0.005	0.37
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.4. Linear, Grading & Excavation (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	6.16	37.5	0.06	0.12	—	0.12	0.12	—	0.12	—	6,495	6,495	0.26	0.05	—	6,518
Dust From Material Movement	—	—	—	—	—	1.24	1.24	—	0.13	0.13	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.12	0.72	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	125	125	0.01	< 0.005	—	125
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.6	20.6	< 0.005	< 0.005	—	20.7
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.19	1.97	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	399	399	0.02	0.01	0.05	404
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.7	31.7	< 0.005	< 0.005	< 0.005	33.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.70	7.70	< 0.005	< 0.005	0.02	7.81

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.64
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.28	1.28	< 0.005	< 0.005	< 0.005	1.29
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.10	0.10	< 0.005	< 0.005	< 0.005	0.11
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Linear, Drainage, Utilities, & Sub-Grade (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.6. Linear, Drainage, Utilities, & Sub-Grade (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	5.15	31.6	0.05	0.17	—	0.17	0.17	—	0.17	—	5,693	5,693	0.23	0.05	—	5,712
Dust From Material Movement	—	—	—	—	—	1.03	1.03	—	0.11	0.11	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.52	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	93.6	93.6	< 0.005	< 0.005	—	93.9
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.5	15.5	< 0.005	< 0.005	—	15.5

Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.16	1.64	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	332	332	0.02	0.01	0.04	336
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.50	5.50	< 0.005	< 0.005	0.01	5.58
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Paving (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

3.8. Linear, Paving (2023) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	2.58	11.3	0.01	0.03	—	0.03	0.03	—	0.03	—	1,620	1,620	0.07	0.01	—	1,625

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.3	13.3	< 0.005	< 0.005	—	13.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.20	2.20	< 0.005	< 0.005	—	2.21
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.11	1.15	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.93	1.93	< 0.005	< 0.005	< 0.005	1.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.32	0.32	< 0.005	< 0.005	< 0.005	0.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	11/1/2023	11/3/2023	5.00	2.00	—
Linear, Grading & Excavation	Linear, Grading & Excavation	11/4/2023	11/13/2023	5.00	7.00	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	11/14/2023	11/22/2023	5.00	6.00	—
Linear, Paving	Linear, Paving	11/23/2023	11/27/2023	5.00	3.00	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74

Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Tier 4 Final	1.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Tier 4 Final	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Tier 4 Final	2.00	8.00	36.0	0.38

Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Tier 4 Final	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Tier 4 Final	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Tier 4 Final	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Tier 4 Final	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43
Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Tier 4 Final	2.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Tier 4 Final	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Tier 4 Final	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Tier 4 Final	3.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	5.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	30.0	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	25.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix

Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	5.00	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	30.0	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT
Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	25.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	0.00	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Linear, Grubbing & Land Clearing	—	—	0.17	0.00	—
Linear, Grading & Excavation	—	—	0.17	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	0.17	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Construction	0.17	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	9.95	annual days of extreme heat
Extreme Precipitation	4.45	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	24.9
AQ-PM	33.1
AQ-DPM	56.7

Drinking Water	71.6
Lead Risk Housing	44.6
Pesticides	99.0
Toxic Releases	75.5
Traffic	42.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	2.11
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	43.8
Solid Waste	0.00
Sensitive Population	—
Asthma	52.4
Cardio-vascular	67.5
Low Birth Weights	36.7
Socioeconomic Factor Indicators	—
Education	93.1
Housing	59.3
Linguistic	86.6
Poverty	72.4
Unemployment	56.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	26.26716284

Employed	61.27293725
Median HI	36.21198511
Education	—
Bachelor's or higher	20.73655845
High school enrollment	3.490311818
Preschool enrollment	21.73745669
Transportation	—
Auto Access	58.83485179
Active commuting	19.196715
Social	—
2-parent households	42.33286283
Voting	42.858976
Neighborhood	—
Alcohol availability	66.36725266
Park access	52.04670858
Retail density	68.61285769
Supermarket access	64.7760811
Tree canopy	11.04837675
Housing	—
Homeownership	64.71192095
Housing habitability	64.32696009
Low-inc homeowner severe housing cost burden	60.82381625
Low-inc renter severe housing cost burden	87.77107661
Uncrowded housing	12.81919672
Health Outcomes	—
Insured adults	26.25433081
Arthritis	63.4

Asthma ER Admissions	69.4
High Blood Pressure	35.9
Cancer (excluding skin)	66.1
Asthma	43.1
Coronary Heart Disease	51.0
Chronic Obstructive Pulmonary Disease	47.8
Diagnosed Diabetes	35.6
Life Expectancy at Birth	96.8
Cognitively Disabled	15.9
Physically Disabled	39.7
Heart Attack ER Admissions	71.8
Mental Health Not Good	36.5
Chronic Kidney Disease	35.4
Obesity	41.1
Pedestrian Injuries	81.5
Physical Health Not Good	35.8
Stroke	45.2
Health Risk Behaviors	—
Binge Drinking	52.5
Current Smoker	43.7
No Leisure Time for Physical Activity	25.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	37.8
Elderly	76.6
English Speaking	13.0

Foreign-born	89.7
Outdoor Workers	8.9
Climate Change Adaptive Capacity	—
Impervious Surface Cover	33.6
Traffic Density	36.1
Traffic Access	23.0
Other Indices	—
Hardship	72.8
Other Decision Support	—
2016 Voting	39.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	63.0
Healthy Places Index Score for Project Location (b)	28.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Trips and VMT	Adjusted default

Appendix B

Cultural Resources Technical Report

The Cultural Resources Technical Report contains sensitive and confidential information concerning archaeological sites. This report is held confidential and is not for public distribution.

Appendix C

Geotechnical Evaluation

Geotechnical Evaluation

South Oxnard Aquatic Center Project

Oxnard College Park

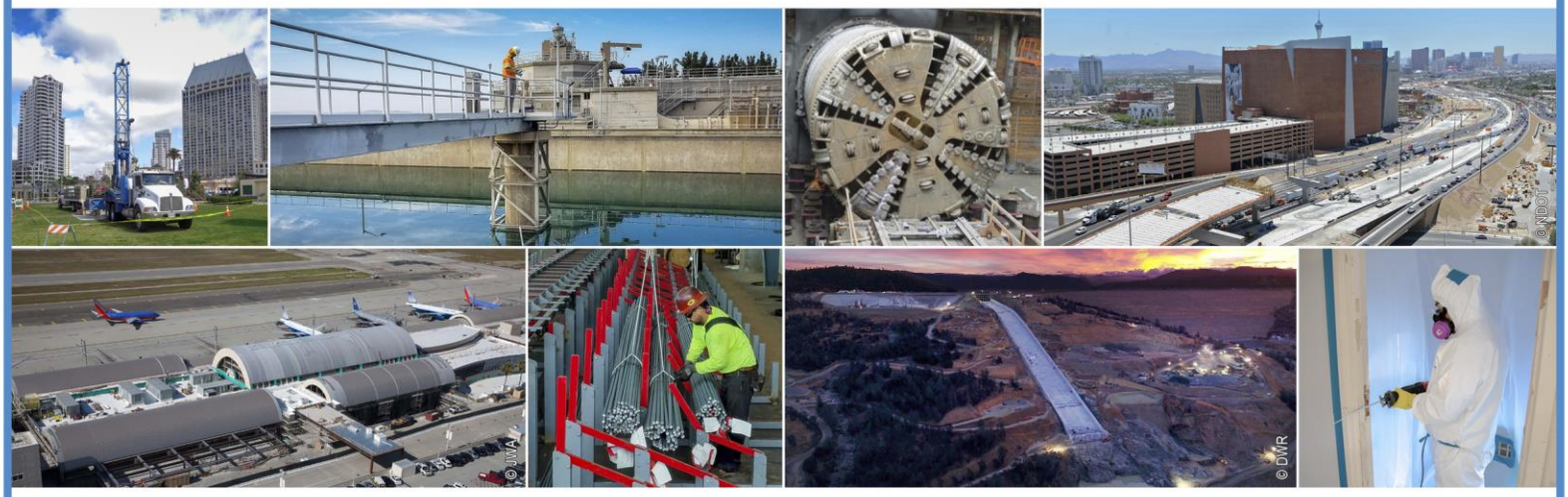
Oxnard, California

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ELS Architecture + Urban Design

2040 Addison Street | Berkeley, California 94704

August 26, 2022 | Project No. 211972001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

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Geotechnical Evaluation
South Oxnard Aquatic Center Project
Oxnard College Park
Oxnard, California

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2040 Addison Street | Berkeley, California 94704

August 26, 2022 | Project No. 211972001

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1 INTRODUCTION

In accordance with your request and authorization, we have performed a geotechnical evaluation for the South Oxnard Aquatic Center Project located at Oxnard College Park in Oxnard, California (Figure 1). The purpose of our study was to evaluate the soil and geologic conditions at the site, and to develop geotechnical recommendations regarding the design and construction of the proposed improvements. This report presents our findings, conclusions, and recommendations based on our background review, site reconnaissance, subsurface evaluation, laboratory testing, and geotechnical analyses.

A previous geotechnical subsurface evaluation was performed at, and in the vicinity of, the subject aquatic center site by Earth Systems Southern California for the design and construction of the Oxnard College Park facility (Earth Systems Southern California, 2007 and 2009). Many of the proposed improvements have already been constructed to the west of the subject site, but the South Oxnard Aquatic Center portion of the site was not developed.

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2 SCOPE OF SERVICES

Our scope of services included the following:

- Project coordination, planning, scheduling for subsurface exploration, and teleconference meetings with the project team.
- Review of readily available background materials, including published geologic maps, fault and seismic hazards maps, groundwater data, topographic maps, stereoscopic aerial photographs, and project related reports and plans.
- Site reconnaissance to locate the proposed borings for utility clearance, and coordination with Underground Services Alert for underground utility location.
- Permit acquisition with the City of Oxnard for drilling on city property and for drilling below groundwater.
- Subsurface exploration consisting of the drilling, logging, and sampling of fifteen hollow-stem auger borings ranging in depth from approximately 5 to 31½ feet below the ground surface. The borings were logged by a representative of our firm and bulk and relatively undisturbed soil samples were collected at selected intervals for laboratory testing.
- Subsurface exploration consisting of three cone penetration tests (CPT) to depths of approximately 100 feet below the ground surface. Shear wave velocity readings were collected at approximately 10-foot intervals in one of the CPTs.
- In-situ percolation testing performed at one boring location in general accordance with the referenced Ventura County Technical Guidance Manual for Stormwater Control Measures (GCLWA, 2018).

- Geotechnical laboratory testing on collected samples to evaluate in-situ moisture and dry density, the percentage of particles smaller than the number 200 sieve, Atterberg limits, consolidation, direct shear strength, soil corrosivity, and R-value.

- Data compilation and engineering analysis of the information obtained from our background review, subsurface evaluation, and laboratory testing.

- Preparation of this geotechnical report presenting our findings, conclusions, and recommendations for design and construction of the proposed project.

3 SITE DESCRIPTION AND PROPOSED CONSTRUCTION

The project site is located on the outskirts of the existing 75-acre Oxnard College Park at 3250 South Rose Avenue, Oxnard, California (Figure 1). The project site is located to the east of the existing soccer fields and is bounded by the College Park access road to the east, undeveloped land and South Oxnard Boulevard to the north, undeveloped land to the east, and Oxnard College's tennis and basketball courts to the south (Figure 2). The site is unpaved and undeveloped and has a recent history of being used to store mulch piles. The mulch piles were removed prior to our evaluation. The topography of the site is relatively flat with an elevation of approximately 35 feet above mean sea level (United States Geological Survey [USGS], 2022).

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The project involves the design and construction of a new aquatic center. At the time of our evaluation, the project was still in the conceptual stages of development; however, the new aquatic center is anticipated to include two single-story buildings that will house administrative offices, restrooms, a concessions room, a training room, locker rooms, equipment rooms, and storage rooms. The center will also have a large 50-meter pool, a 25-yard pool, a fun water pool with a water slide, and a splash pad area. Additional improvements will include bleachers, a picnic area, a parking lot with 159 parking spaces, hardscape, and landscaping.

4 SUBSURFACE EXPLORATION AND LABORATORY TESTING

Our subsurface evaluation was performed on July 12 through 14, 2022 and consisted of the drilling, logging, and sampling of fifteen hollow-stem auger borings to depths ranging from approximately 5 to 31½ feet below the ground surface and three CPT soundings to depths of approximately 100 feet below the ground surface. The borings were drilled using truck-mounted drilling equipment. A representative from Ninyo & Moore logged the borings and obtained bulk and relatively undisturbed soil samples at selected depths for laboratory testing. The CPT soundings were performed using a 30-ton CPT rig. Continuous soil profiles, including cone tip resistance and sleeve friction, were recorded during the soundings. Shear wave velocity readings were also collected at approximately 10-foot intervals in CPT-3. The borings and CPTs deeper than 6½ feet were backfilled with cement-bentonite grout and capped with on-site soils. The boring

and CPT logs are presented in Appendices A and B, respectively, and the approximate locations of the borings and CPT soundings are shown on Figure 2.

Geotechnical laboratory testing of representative soil samples included tests to evaluate in-situ moisture content and dry density, the percentage of particles finer than the number 200 sieve, Atterberg limits, consolidation, direct shear strength, R-value, and soil corrosivity. In-situ moisture content and dry density test results are presented on the boring logs in Appendix A. The remaining laboratory test results are presented in Appendix C.

In-situ percolation testing was performed in one boring (B-4) to evaluate the infiltration rates of the on-site soils at a potential stormwater infiltration location for the project. Details regarding the percolation testing are provided in the Field Percolation Testing section of this report.

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5 GEOLOGY AND SUBSURFACE CONDITIONS

5.1 Regional Geologic Setting

The project site is located within the Ventura Basin, which is situated in the Transverse Ranges Geomorphic Province (Norris and Webb, 1990). The Ventura Basin is part of a large synclinal fold approximately 120 miles in length that extends from the Santa Barbara Channel inland to the Santa Clarita region and it is underlain by marine Cretaceous to Cenozoic sedimentary rocks (Norris and Webb, 1990). The site is located on the broad, relatively flat coastal lowlands of the Oxnard Plain, which are underlain by variable thicknesses of Holocene alluvium. According to the California Division of Mines and Geology (CDMG, 2002a), the Oxnard Plain is covered by approximately 200 to 250 feet of Holocene-age sediments derived from the highland regions of northern Ventura and western Los Angeles counties and deposited by the Santa Clara River.

The proposed new aquatic center is located along a drainage channel located on a coastal alluvial plain approximately 3 miles from the Pacific Ocean. Prior to land development activities in the mid-1970s, the area in the vicinity of the site was farmland and ranch lands (Historic Aerials, 2022). Regional geologic mapping indicates that the site is underlain by Holocene-age alluvial fan and flood plain overbank deposits consisting of predominantly of clay with interbedded lenses of sand and occasional gravel (Figure 3) (Clahan, 2003). Our review of geologic literature and aerial photographs did not indicate the presence of landslides or active faulting at the site.

5.2 Site Geology

The results of our subsurface exploration indicate that the site is underlain by fill soils and alluvium. Fill soils were encountered at the ground surface in borings B-5 and B-7 through B-15

to depths ranging from approximately 4 to 6½ feet below the ground surface. The fill generally consisted of moist, loose to medium dense, silty sand with gravel. Alluvium was encountered at the ground surface in borings B-1 through B-4 and B-6, and below the fill soils in the above borings to the total depths explored of up to approximately 31½ feet. The alluvium generally consisted of moist to wet, loose to very dense silty sand, clayey sand, and poorly graded sand, and firm to very stiff silt and lean clay.

6 GROUNDWATER

Groundwater was observed in our exploratory borings at depths ranging from approximately 12 to 16 feet below the ground surface. Groundwater was also encountered in Earth Systems' borings near the project site as shallow as approximately 7½ feet below the ground surface (Earth Systems, 2007) (Appendix D). Regional maps indicate that the historic high groundwater level in the vicinity of the site is approximately 7 feet below the ground surface (CDMG, 2002a). Groundwater levels observed at the time of drilling are not considered stabilized. It should be noted that fluctuations in the level of groundwater will occur due to variations in ground surface topography, subsurface stratification, rainfall, irrigation practices, groundwater pumping, and other factors which may not have been evident at the time of our field evaluation.

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7 FIELD PERCOLATION TESTING

Percolation testing was performed in boring B-4 in general accordance with the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures (VCTGM) (GCLWA, 2018). The testing was performed to evaluate the infiltration rate of the on-site soils in the general vicinity of a possible stormwater infiltration area for use in design of Best Management Practices (BMPs) by others. The approximate location of the percolation test boring (B-4) is shown on Figure 2.

Boring B-4 was drilled to a depth of approximately 5 feet below the existing ground surface. Preparation of the drilled boring for percolation testing included the installation of a 2-inch-diameter polyvinyl chloride (PVC) pipe in the boring and backfilling the annular space between the borehole wall and pipe with clean pea gravel. After the boring was pre-soaked for 24 hours, a Falling-Head Borehole Infiltration Test (GCLWA, 2018) was performed in the boring. The falling-head test method involved placing clean water into the PVC pipe to a depth of approximately 26 inches below the ground surface. The depth of the water was measured after one hour. The PVC pipe was refilled to a depth of 26 inches below the ground surface and the test procedure was repeated for a total of four times. The last field percolation rate measurement was 14 inches per hour.

Based on our preliminary percolation testing and the VCTGM, the site may be suitable for stormwater infiltration using a relatively shallow infiltration BMP, such as permeable pavements, infiltration trenches, and vegetated swales. However, the design infiltration rate should first be calculated using the above field percolation rate divided by a Safety Factor. The Safety Factor should be calculated based on several "Suitability Assessment" and "Design" factors, as described in the VCTGM and shown in Table 1 below. Based on our knowledge of the site, we have inserted values the Suitability Assessment Factor Category; however, the Design Factor Category should be based on information provided by the project civil engineer.

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Table 1 – Infiltration Facility Safety Factor Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p)
A	Suitability Assessment	Soil Assessment Methods	0.25	3	0.75
		Predominant Soil Texture	0.25	3	0.75
		Site Soil Variability	0.25	2	0.50
		Depth to Groundwater / Impervious Layer	0.25	3	0.75
		Suitability Assessment Safety Factor, $S_A = \sum p$			2.75
B	Design	Tributary Area Size	0.25	TBD	TBD
		Level of Pre-Treatment / Expected Sediment Loads	0.25	TBD	TBD
		Redundancy	0.25	TBD	TBD
		Compaction During Construction	0.25	TBD	TBD
		Design Safety Factor, $S_B = \sum p$			TBD
Combined Safety Factor = $S_A \times S_B$					

Notes:
TBD – To be determined by the project civil engineer

As discussed in the VCTGM, some additional limitations should be considered before choosing an infiltration BMP, including the following:

- A 5-foot vertical separation is needed between the bottom of the infiltration BMP and groundwater. Due to a historic high groundwater of approximately 7 feet below the ground surface, the BMP invert should be 2 feet deep, or less.
- Infiltration BMPs must be setback from building foundations of 8 feet or more; however, we typically recommend a setback from building foundations of 15 feet or more.

8 FAULTING AND SEISMICITY

The site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed improvements. Figure 4 shows the approximate site location relative to the principal faults in the region. Based on our background review and site reconnaissance, the project site is not transected by known active or potentially active faults, nor is it located within a

State of California Earthquake Fault Zone (formerly known as an Alquist-Priolo Special Studies Zone) (CGS, 2018). However, the mapped Earthquake Fault Zone for the Oakridge fault is located approximately 9.4 miles northwest of the project area (Figure 4) (CDMG, 2002b).

Principal seismic hazards typically associated with seismic activity are surface ground rupture, ground shaking, seismically induced liquefaction, and various manifestations of liquefaction-related hazards (e.g., dynamic settlement). A brief description of these hazards and the potential for their occurrences at the project locations are discussed below.

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8.1 Surface Fault Rupture

Surface fault rupture is the offset or rupturing of the ground surface by relative displacement across a fault during an earthquake. Based on our review of referenced geologic and fault hazard data, the project site is not transected by known active or potentially active faults. Therefore, the probability of damage from surface fault rupture is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

8.2 Site-Specific Ground Motion

Considering the proximity of the site to active faults capable of producing a maximum moment magnitude of 6.0 or more, the project area has a high potential for experiencing strong ground motion. The 2019 California Building Code (CBC) specifies that the risk-targeted maximum considered earthquake (MCE_R) ground motion response accelerations be used to evaluate seismic loads for design of buildings and other structures. Per the 2019 CBC, a site-specific ground motion hazard analysis shall be performed for structures on Site Class D with a mapped MCE_R, 5 percent damped, spectral response acceleration parameter at a period of 1 second (S1) greater than or equal to 0.2g in accordance with Sections 21.2 and 21.3 of the American Society of Civil Engineers (ASCE) Publication 7-16 (2016) for the Minimum Design Loads and Associated Criteria for Building and Other Structures. We calculated that the S1 for the site is equal to 0.588g using the 2021 Applied Technology Council (ATC) seismic design tool (web-based).

The site-specific ground motion hazard analysis consisted of the review of available seismologic information for nearby faults and performance of probabilistic seismic hazard analysis (PSHA) and deterministic seismic hazard analysis (DSHA) to develop acceleration response spectrum curves corresponding to the MCE_R for 5 percent damping. Prior to the site-specific ground motion hazard analysis, we obtained the mapped seismic ground motion values and developed the general MCE_R response spectrum for 5 percent damping in accordance with Section 11.4 of ASCE 7-16 (ATC, 2021). The average shear wave velocity (V_S) for the upper 30 meters of soil (V_{S30}) was

measured to be 230 meters per second (m/s) in one of our CPT soundings and the depths to V_S = 1,000 m/s and V_S = 2,500 m/s are assumed to be 650 meters and 3,050 meters, respectively (Southern California Earthquake Center, 2005). These values were evaluated using the Open Seismic Hazard Analysis software developed by USGS (USGS, 2020).

The 2014 new generation attenuation (NGA) West-2 relationships were used to evaluate the site-specific ground motions. The NGA relationships that we used for developing the probabilistic and deterministic response spectra are by Chiou and Youngs (2014), Campbell and Bozorgnia (2014), Boore, Stewart, Seyhan, and Atkinson (2014), and Abrahamson, Silva, and Kamai (2014). The Open Seismic Hazard Analysis software developed by USGS (USGS, 2020) was used for performing the PSHA. The Calculation of Weighted Average 2014 NGA Models spreadsheet by the Pacific Earthquake Engineering Research Center (PEER) was used for performing the DSHA (Seyhan, 2014).

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PSHA was performed for earthquake hazards having a 2 percent chance of being exceeded in 50 years multiplied by the risk coefficients per ASCE 7-16. The maximum rotated components of ground motions were considered in PSHA with 5 percent damping. For the DSHA, we analyzed accelerations from characteristic earthquakes on active faults within the region using the hazard curves and deaggregation plots at the site obtained from the USGS Unified Hazard Tool application (USGS, 2021a). A magnitude 7.4 event on the Oakridge fault with a rupture distance of 9.4 kilometers from the site was evaluated to be the controlling earthquake. Hence, the DSHA was performed for the site using this event and corrections were made to the spectral accelerations for the 84th percentile of the maximum rotated component of ground motion with 5 percent damping.

The site-specific MCE_R response spectrum was taken as the lesser of the spectral response acceleration at any period from the PSHA and DSHA, and the site-specific general response spectrum was determined by taking two-thirds of the MCE_R response spectrum with some conditions in accordance with Section 21.3 of ASCE 7-16. Figure 5 presents the site-specific MCE_R response spectrum and the site-specific design response spectrum. The general mapped design response spectrum calculated in accordance with Section 11.4 of ASCE 7-16 is also presented on Figure 5 for comparison. The site-specific spectral response acceleration parameters, consistent with the 2019 CBC, are provided in Section 10.3 for the evaluation of seismic loads on buildings and other structures. The site-specific maximum considered earthquake geometric mean (MCE_G) peak ground acceleration, PGA_M, was calculated as 0.687g.

8.3 Liquefaction

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesionless soils at depths shallower than 50 feet below ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

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As shown on Figure 6, the project site is located in an area mapped as potentially liquefiable on State of California Seismic Hazards Zone map (CDMG, 2022b). Accordingly, the liquefaction potential of the subsurface soils was evaluated using the CPT soundings performed during our subsurface exploration. The liquefaction analysis was based on the National Center for Earthquake Engineering Research procedure (Youd, et al., 2001) using the computer program CLiq (GeoLogismiki, 2022). A groundwater depth of 7 feet and a PGA_M of 0.687g was used in our analysis for a design earthquake magnitude of 7.4.

8.4 Liquefaction-Induced Settlement

As a result of liquefaction, the site improvements may be subject to liquefaction-induced settlement. In order to estimate the amount of post-earthquake settlement, the method proposed by Tokimatsu and Seed (1987) was used in which the seismically induced cyclic stress ratios and corrected N-values are related to the volumetric strain of the soil. The amount of soil settlement during a strong seismic event depends on the thickness of the liquefiable layers and the density and/or consistency of the soils.

Our liquefaction analysis indicated that the liquefaction-induced total dynamic settlement ranges from approximately 4 to 5 inches. Based on the guidelines presented in CGS Special Publication 117A (2008) and in consideration of the relatively uniform subsurface stratigraphy across the site, we estimate differential settlement on the order of approximately 2.5 inches over a horizontal span of about 30 feet in the project area. The results of our analysis are presented in Appendix E.

9 CONCLUSIONS

Based on our geotechnical evaluation, it is our opinion that the proposed improvements are feasible from a geotechnical standpoint, provided that the following recommendations are incorporated into the design and construction of the project and special considerations are made to remedy the impact of relatively large liquefaction-induced settlement on the proposed improvements. In general, the following conclusions were made:

- Based on our subsurface exploration, the site is underlain by fill and alluvium. The fill generally consisted of moist, loose to medium dense, silty sand with gravel. The alluvium generally consisted of moist to wet, loose to very dense silty sand, clayey sand, and poorly graded sand, and firm to very stiff silt and lean clay.

- Undocumented fill soils are not suitable for the support of foundations and new fill. Remedial grading should be performed as recommended in this report.

- Groundwater was encountered during our subsurface exploration at depths ranging from approximately 12 to 16 feet below the ground surface. Historic high groundwater at the site is approximately 7 feet below the ground surface. Groundwater levels measured during our field exploration are not considered stabilized levels and will be subject to change.

- Excavations should be feasible with heavy-duty earthmoving equipment in good working order. The on-site soils should be considered as Type C soils in accordance with Occupational Safety and Health Administration (OSHA) regulations. Caving conditions should be anticipated in soils with low cohesion and soils that are close to or below groundwater.

- Sand and silty sand encountered during site grading should be suitable for re-use as backfill; however, the silt and clay material is not recommended for use as backfill. Soil materials that have relatively high moisture contents and will involve drying back to near optimum moisture contents prior to use as compacted fill.

- The project site is not located within a State of California Earthquake Fault Zone (formerly Alquist-Priolo Special Studies Zone). Based on our review of published geologic maps and aerial photographs, no known active or potentially active faults transect the sites. The potential for surface fault rupture at the sites is considered low.

- The project site is located in a State of California Seismic Hazard Zone for liquefaction. Based on our subsurface evaluation, the soils below the groundwater table are susceptible to liquefaction during the design seismic event. Our analysis indicates that liquefaction-induced total dynamic settlement ranges from approximately 4 to 5 inches at the site. Differential settlement due to liquefaction is estimated to be on the order of approximately 2.5 inches over a horizontal span of about 30 feet in the project area.

- The design PGA_M was calculated as 0.687g for the site.

- The field percolation rate was measured as 14 inches per hour. Based on our preliminary percolation testing and the VCTGM, the project site may be suitable for stormwater infiltration using relatively shallow infiltration BMPs, such as permeable pavements, infiltration trenches, and vegetated swales. The design infiltration rate should be evaluated using the field percolation rate and a Safety Factor calculated using site-specific factor categories as described in the VCTGM.

- Our limited laboratory corrosion testing indicates that the project site may be classified as a corrosive site based on California Department of Transportation (Caltrans, 2021) corrosion guidelines.

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10 RECOMMENDATIONS

The recommendations presented in the following section provide general geotechnical criteria regarding the design and construction of the proposed improvements. The recommendations are based on the results of our subsurface evaluation, laboratory testing, review of referenced geologic materials, experience in the general vicinity of the project area, and geotechnical analyses. We anticipate that additional recommendations including deep foundations and ground improvements may need to be included in this section during the final design phase of this project to mitigate the adverse impact of excessive liquefaction-induced settlement on the proposed improvements. The proposed work should be performed in conformance with the recommendations presented in this report, project specifications, and appropriate agency standards.

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10.1 Earthwork

Earthwork at the site is anticipated to consist of remedial grading of the near-surface soils, fill placement, foundation excavations, trenching and backfilling for new utilities, pavement construction, and finish grading for establishment of site drainage. Earthwork operations should be performed in accordance with the requirements of the applicable governing agencies and the recommendations presented in the following sections of this report.

10.1.1 Pre-Construction Conference

We recommend that a pre-construction conference be held. The owner and/or their representative, the governing agencies' representatives, the civil engineer, the geotechnical engineer, and the contractor should be in attendance to discuss the work plan and project schedule.

10.1.2 Site Preparation

Prior to performing excavations, the project areas should be cleared of rubble and debris, abandoned utilities, surface obstructions, organic materials left behind from previous mulch piles, and other deleterious materials. Existing utilities within the project limits should be re-routed or protected from damage by construction activities. Obstructions that extend below subgrade of the improvements, if any, should be removed and the resulting holes filled with compacted soils. Materials generated from clearing operations should be removed from the project sites and disposed of at a legal dumpsite.

10.1.3 Temporary Excavations and Shoring

We anticipate that excavations within fill and alluvial soils at the site may be accomplished with backhoes, excavators, or other earthmoving equipment in good working condition. Temporary excavations up to approximately 4 feet in depth are anticipated to be generally stable at a slope inclination no steeper than 1:1 (horizontal to vertical). Excavations that are unstable or deeper than 4 feet, may need to be laid back at a slope inclination of approximately 1.5:1 (horizontal to vertical) or flatter.

Where temporary slopes are not possible, shoring will be appropriate. The design of the shoring system should consider the excavation characteristics of the onsite soil, temporary excavation stability, and the impact of construction on existing structures. The temporary cantilevered and braced shoring systems used for site excavations should be designed for the anticipated soil conditions using the lateral earth pressure values presented on Figures 7 and 8, respectively. The recommended design pressures are based on the assumption that the shoring system is constructed without raising the ground surface elevation behind the shored sidewalls of the excavation, that there are no surcharge loads, such as soil stockpiles and construction materials, and that no loads act above a 1:1 (horizontal to vertical) plane ascending from the base of the shoring system. For a shoring system subjected to the above-mentioned surcharge loads, the contractor should include the effect of these loads on the lateral earth pressures acting on the shored walls.

The contractor should retain a qualified and experienced engineer to design the shoring system. The shoring parameters presented in this report are preliminary in nature, and the contractor should evaluate the adequacy of these parameters and make the requisite modifications for their design. We recommend that the contractor take appropriate measures to protect workers. OSHA requirements pertaining to worker safety should be observed. The on-site soils should be considered as soil Type C in accordance with OSHA requirements.

10.1.4 Temporary Access Ramps

Backfill materials placed within temporary access ramps extending into the pool excavations should be appropriately compacted and tested. This will mitigate excessive settlement of the backfill and subsequent damage to pool decking or other structures placed on the access ramp backfill areas.

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10.1.5 Subgrade Preparation

Undocumented fill soils are not suitable for the support of foundations, pools, and new fill. The following remedial grading recommendations are provided for the proposed improvements.

10.1.5.1 Structures with Shallow Foundations, Fun Pool, and Splash Pad

In order to provide suitable support and reduce the potential settlement of proposed new structures with shallow foundations and the relatively shallow fun pool and splash pad, we recommend that the soil beneath the planned shallow foundations be overexcavated and recompacted to a depth that provides 3 or more feet of compacted fill beneath the bottom of the foundations, or to a depth that removes existing undocumented fill, whichever is deeper. The limits of the excavation should extend laterally so that the bottom of the excavation is approximately 5 feet beyond the outside edge of the structure's footprint, or a distance corresponding to the depth of the excavation, whichever is farther. The excavation bottom should be evaluated by our representative during the excavation work. Additional excavation of loose, soft, and/or wet areas may be appropriate, depending on our observations during construction. Prior to placing new compacted fill in areas that are excavated and/or in areas where the existing subgrade will be raised with new fill, the exposed bottom should be scarified, moisture-conditioned, and recompacted to a depth of approximately 8 inches.

10.1.5.2 50-Meter and 25-Yard Pools

In order to provide suitable support and reduce the potential settlement of the proposed new deeper pools, we recommend that the soil beneath the planned pool areas be excavated a minimum of 1 foot below the design subgrade elevation and replaced with newly compacted fill. The excavations should expose relatively dense native alluvial deposits. The limits of the excavation should extend laterally so that the bottom of the excavation is approximately 5 feet beyond the outside edge of the pool footprint, or a distance corresponding to the depth of the excavation, whichever is farther. The excavation bottom should be evaluated by our representative during the excavation work. Additional excavation of loose, soft, and/or wet areas may be appropriate, depending on our observations during construction. Prior to placing newly compacted fill, the exposed bottom should be scarified, moisture-conditioned, and recompacted to a depth of approximately 8 inches.

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10.1.5.3 Exterior Hardscape and Pavements

The subgrade soils supporting exterior hardscape and pavement sections should consist of 12 inches or more of engineered fill compacted to 90 percent relative compaction, as evaluated by ASTM International (ASTM) test method D 1557. In areas to receive fill to reach design finish grades and areas of cut that are 12 inches or less, the surficial soils should be overexcavated to a depth of 12 inches and the bottom scarified to a depth of 8 inches, moisture-conditioned to slightly over the optimum moisture content, and recompacted to 90 percent relative compaction, prior to fill placement. In areas of cut that are deeper than 12 inches, the subgrade soils should be scarified to a depth of 8 inches, moisture-conditioned, and recompacted, as described above. A representative of Ninyo & Moore should observe remedial grading bottoms prior to fill placement. Additional overexcavation of loose, soft, and/or wet areas may be appropriate, depending on our observations during construction.

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10.1.6 Groundwater and Construction Dewatering

Historic high groundwater for the site is approximately 7 feet below the ground surface. Groundwater was encountered during our subsurface evaluation at depths ranging from approximately 12 to 16 feet below the ground surface. However, fluctuations in the depth to groundwater will occur and shallower groundwater depths should be anticipated. Therefore, seepage and/or groundwater should be anticipated during construction.

If groundwater is encountered during construction, dewatering will be involved in order to perform work in a dry condition. The dewatering system design should be performed by a specialty dewatering contractor. Disposal of groundwater should be performed in accordance with guidelines of the Regional Water Quality Control Board. In order to further evaluate groundwater levels at the project site prior to the start of construction, installation of groundwater monitoring wells may be considered.

10.1.7 Excavation Bottom Stability

Trench, pool, and foundation excavations that extend close to or below groundwater (before or after dewatering) are anticipated to encounter wet, loose, and/or soft ground conditions that will be unstable or unsuitable to support the proposed improvements. In general, unstable bottom conditions may be mitigated by over-excavating the excavation bottom approximately 2 feet or more, and replacing the excavated soil with crushed aggregate base or gravel wrapped by filter fabric, such as Mirafi 140N, or equivalent. If aggregate base is used, it should consist of either Caltrans Class II aggregate base or crushed miscellaneous

base. Caltrans Class II aggregate base should conform to the State of California Standard Specifications, Section 26 1.02A. Crushed miscellaneous base should conform to the Standard Specifications for Public Works Construction, Section 200 2.4. Aggregate base should be compacted to a relative compaction of 95 percent as evaluated by ASTM test method D 1557. Field tests to evaluate compaction should be performed during construction. Recommendations for stabilizing excavation bottoms should be based on evaluation in the field by the geotechnical consultant at the time of construction.

10.1.8 Fill Material

In general, the on-site granular soil should be suitable for reuse as fill provided they are free of trash, debris, or other deleterious materials. The on-site clayey soils and silt are not suitable for use as structural backfill. Excavations that extend near or below groundwater will involve wet soils. Wet soils should be allowed to dry to a moisture content near optimum prior to their placement as backfill. Fill should generally be free of rocks or lumps of material in excess of 4 inches in diameter. Rocks or hard lumps larger than approximately 4 inches in diameter should be broken into smaller pieces or should be removed from the site. Fill used as structural backfill, should be comprised of granular, non-expansive soil that conforms to the latest edition of “Greenbook” Standard Specifications for Public Works Construction (Greenbook) for structural backfill. “Non-expansive” is defined as soil having an expansion index of 20 or less in accordance with ASTM D 4829 (CBC, 2019).

Imported fill material should also consist of clean, granular material with a very low expansion potential, corresponding to an expansion index of 20 or less. The soil should also be tested for corrosive properties prior to importing. We recommend that the imported materials satisfy the Caltrans (2021) criteria for non-corrosive soils (i.e., soils having a chloride concentration of 500 ppm or less, a soluble sulfate content of approximately 0.15 percent (1,500 ppm) or less, a pH value of 5.5 or higher, or an electrical resistivity of 1,500 ohm-centimeters [ohm-cm] or more). Materials for use as fill should be evaluated by Ninyo & Moore prior to importing. The contractor should be responsible for the uniformity of import material brought to the site.

10.1.9 Fill Placement and Compaction

Fill should be placed and compacted in accordance with project specifications, the requirements of the City of Oxnard, and sound construction practices. Fill materials should be moisture-conditioned to slightly above the optimum laboratory moisture content. The lift thickness for fill soils will vary depending on the type of compaction equipment used, but should generally be placed in horizontal lifts not exceeding 8 inches in loose thickness. Fill

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materials should be compacted to a relative compaction of 90 percent as evaluated by ASTM D 1557. The upper 12 inches of pavement subgrade materials should be compacted to a relative compaction of 95 percent as evaluated by ASTM D 1557. Special care should be taken to avoid pipe damage when compacting trench backfill above pipes. Fill should be tested for specified compaction level by the geotechnical consultant.

10.2 Underground Utilities

We anticipate that new underground utility pipelines will be supported on fill or alluvial deposits. Utility trenches should not be excavated parallel to building footings. If needed, trenches can be excavated adjacent to a continuous footing, provided that the bottom of the trench is located above a 1:1 (horizontal to vertical) plane projected downward from a point 6 inches above the bottom of the adjacent footing. Utility lines that cross beneath footings should be encased in concrete below the footing.

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10.2.1 Pipe Bedding

Pipe bedding should be constructed in general accordance with the City of Oxnard Public Works and "Greenbook" Standard Specifications. We recommend that utility lines be supported by 6 inches or more of granular bedding material such as sand with a sand equivalent (SE) value of 30 or more in accordance with ASTM D 2419. Bedding material should be placed and compacted around the pipe, and 12 inches or more above the top of the pipe. We do not recommend the use of crushed rock for bedding material. It has been our experience that the voids within a crushed rock material are sufficiently large enough to allow fines to migrate into the voids, thereby creating the potential for sinkholes and depressions to develop at the ground surface. Special care should be taken not to allow voids beneath and around the pipe. Bedding material and compaction requirements should be in accordance with the recommendations of this report, the project specifications, and applicable requirements of the appropriate agencies. Compaction of the bedding material and backfill should proceed evenly up both sides of the pipe and be compacted to 90 percent or more relative compaction as evaluated by ASTM D 1557.

10.2.2 Pipe Connections

Leakage from the swimming pools or the appurtenant plumbing fixtures could create adverse saturated conditions of the surrounding subgrade soils. Localized areas of oversaturation can lead to differential settlement of the subgrade soils and subsequent shifting of pool decking. Therefore, it is important that the plumbing and pool fixtures remain leak-free during the

design life of the project. For pipes penetrating into the structures, “water-tight” penetration design should be utilized. To reduce the potential for pipe-to-wall differential settlement due to liquefaction which could cause pipe shearing, we recommend that a pipe joint be located close to the exterior of the walls. The type of joint should be such that relative movement can be accommodated without distress. The pipe connections should be sufficiently flexible to withstand differential settlement on the order of 2½ inches.

10.2.3 Modulus of Soil Reaction

The modulus of soil reaction is used to characterize the stiffness of soil backfill placed at the sides of buried pipelines for the purpose of evaluating deflection caused by the weight of the backfill above the pipe. We recommend that a modulus of soil reaction of 1,000 pounds per square inch (psi) be used for design, provided that granular bedding material is placed adjacent to the pipe, as recommended in this report.

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10.2.4 Lateral Earth Pressures for Thrust Blocks

Thrust restraint for pipes under pressure may be achieved by transferring the thrust force to the soil outside the pipe through a thrust block. Thrust blocks may be designed using the lateral passive earth pressures presented on Figure 9.

10.3 Seismic Design Considerations

Design of the proposed improvements should be performed in accordance with the requirements of governing jurisdictions and applicable building codes. Table 2 presents the site-specific spectral response acceleration parameters in accordance with the CBC (2019) guidelines.

Table 2 – 2019 California Building Code Seismic Design Criteria

Site Coefficients and Spectral Response Acceleration Parameters	Values
Site Class	D
Mapped Spectral Response Acceleration at 0.2-second Period, S_s	1.600g
Mapped Spectral Response Acceleration at 1.0-second Period, S_1	0.588g
Site-Specific Spectral Response Acceleration at 0.2-second Period, S_{MS}	1.624g
Site-Specific Spectral Response Acceleration at 1.0-second Period, S_{M1}	1.702g
Site-Specific Design Spectral Response Acceleration at 0.2-second Period, S_{DS}	1.083g
Site-Specific Design Spectral Response Acceleration at 1.0-second Period, S_{D1}	1.134g
Site-Specific Maximum Considered Earthquake Geometric Mean (MCE_G) Peak Ground Acceleration, PGA_M	0.687g

10.4 Foundations

Recommendations for spread footings and mat foundations are presented in the following section. Foundations should be designed in accordance with structural considerations and the following

recommendations. In addition, requirements of the appropriate governing jurisdictions and applicable building codes should be considered in the design of the structures.

Note that the following recommendations are based on the assumption that the proposed improvements will be able to withstand up to about 5 inches of liquefaction-induced total dynamic settlement or about 2½ inches of differential dynamic settlement over a horizontal span of about 30 feet. These settlements are expected to occur in addition to the static settlements presented below. If the project structural engineer considers the magnitude of dynamic settlements presented above to be excessive, we can develop appropriate foundation (i.e., piles) and ground modification alternatives for the design team to consider. The foundation recommendations presented below should be considered as preliminary in that case.

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10.4.1 Spread Footings

Spread footings should extend 2 feet deep or more below the lowest adjacent finished grade and be supported on compacted fill. Continuous footings should have a width of 2 feet or more. Isolated pad footings should have a width of 3 feet or more. Footings constructed near existing underground utility lines should be deepened such that the utility line is located above a 1:1 (horizontal to vertical) plane projected downward from the base of the footing. Continuous footings should be reinforced with two No. 5 steel reinforcing bars, one placed near the top and one placed near the bottom of the footings, and further detailed in accordance with the recommendations of the structural engineer.

Spread footings, as described above and bearing on compacted fill, may be designed using a net allowable bearing capacity of 2,500 pounds per square foot (psf). The net allowable bearing capacity may be increased by 400 and 200 psf per foot of increase in depth and width, respectively, up to a value of 3,500 psf. Total and differential static settlements for footings designed in accordance with the above recommendations are estimated to be on the order of 1 inch and ½ inch over a horizontal span of 40 feet, respectively.

Footings bearing on compacted fill may be designed using a coefficient of friction of 0.35, where the total frictional resistance equals the coefficient of friction times the dead load. The footings may be designed using a passive resistance value of 350 psf per foot of depth up to a value of 3,500 psf. The allowable lateral resistance can be taken as the sum of the frictional resistance and passive resistance, provided the passive resistance does not exceed one-half of the total allowable resistance. The net allowable bearing capacity and passive resistance

may be increased by one-third when considering loads of short duration such as wind or seismic forces.

Trenches should not be excavated adjacent to footings. If necessary, trenches can be excavated adjacent to a continuous footing, provided that the bottom of the trench is located above a 1:1 (horizontal to vertical) plane projected downward from the bottom of the adjacent footing. Utility lines that cross beneath footings, including the utility conduits that are planned to extend between the interior and exterior trenches, should be encased in concrete below the footing.

10.4.2 Mat Foundations

Mat foundations may be designed using a net allowable bearing capacity of 2,500 psf when supported on competent native subgrade or compacted fill. Mat foundations typically experience some deflection due to loads placed on the mat and the reaction of the soils underlying the mat. A design modulus of subgrade reaction (K_v) of 200 kips per cubic foot (kcf) may be used for the compacted subgrade soils in evaluating such deflections. This value is based on a unit square foot area and should be adjusted for the planned mat size. The coefficient of subgrade reaction, K_b, for a mat of a specific width may be evaluated using the following equation:

$$K_b = K_v \left(\frac{B+1}{2B}\right)^2 \text{; where B is the width of the mat measured in feet}$$

10.5 Building Slab-on-Grade

Buildings supported on shallow footings should have floor slabs designed by the project structural engineer based on the anticipated loading conditions. Building floor slabs should be underlain by compacted soil prepared in accordance with the recommendations presented in this report. We recommend that slabs be 5 inches thick or more and reinforced with No. 4 steel reinforcing bars placed 24 inches on-center (each way) or more placed near the mid-height of the slab. The placement of the reinforcement in the slab is vital for satisfactory performance. The floor slab and foundations should be tied together by extending the slab reinforcement into the footings. The slab should be underlain by a 4-inch-thick capillary break (consisting of either sand or crushed rock) overlain by a polyethylene vapor retarder (with a thickness of 10 mils or more). The steel reinforcements for the floor slab shall be placed on the vapor retarder using chairs, as appropriate. The vapor retarder is recommended in areas where moisture-sensitive floor coverings are anticipated. Soils underlying the slabs should be moisture-conditioned and compacted in accordance with the recommendations presented in this report prior to concrete placement. Joints

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should be constructed at intervals designed by the structural engineer to help reduce random cracking of the slab.

10.6 Lateral Earth Pressures for Pools and Other Underground Structures

Swimming pool walls bordered by concrete decking should be designed using an active earth pressure equivalent to a fluid having a unit weight of 45 pounds per cubic foot. If pool walls are bordered by landscaping, these walls should be designed using a lateral earth pressure of 62.4H pounds per square foot (where "H" equals the depth in feet below the ground surface). Pool walls should also be designed to resist lateral surcharge pressures imposed by any adjacent footings or structures in addition to the above lateral earth pressures.

Below-grade walls of the proposed improvements may be considered to be restrained from lateral displacement under static loading conditions. Lateral earth pressures for underground structures are presented on Figure 10.

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10.7 Uplift Considerations

For structures that will extend below the water table, uplift forces will need to be considered. Due shallow historic high groundwater at the site, hydrostatic uplift forces should be evaluated for groundwater conditions at 7 feet below the ground surface. The resistance to uplift may then be taken as the weight of the structure. Additional uplift resistance may be considered including: 1) installation of tie-down anchors, or 2) extending the footing a selected distance outside the exterior walls of the structure (flanges) as shown on Figure 11.

10.8 Corrosion

The corrosion potential of the site soils was evaluated using the results of selected, representative samples obtained from the exploratory borings. Laboratory testing was performed to evaluate pH, minimum electrical resistivity, soluble sulfate, and chloride content. Soluble sulfate content is addressed in the following section of this report. The soil pH and minimum resistivity tests were performed in accordance with California Test Method (CT) 643. The test for chloride content of the soils was performed using CT 422. Sulfate testing was performed in general accordance with CT 417. The laboratory test results are presented in Appendix C.

The results of our corrosivity testing indicated pH levels ranging from 7.1 to 7.7, electrical resistivities ranging from approximately 1,219 to 4,673 ohm-cm, chloride contents ranging from approximately 20 to 45 ppm, and sulfate contents ranging from approximately 10 to 170 ppm (0.001 to 0.017 percent). Based on the laboratory test results and Caltrans corrosion criteria

(2021), the project site can be classified as a corrosive site. Caltrans considers a site to be corrosive if the minimum electrical resistivity is less than or equal to 1,500 ohm-cm, chloride concentration is greater than or equal to 500 ppm, sulfate concentration is greater than or equal to 1,500 ppm, or the pH is 5.5 or less.

10.9 Concrete Placement

Concrete in contact with soil or water that contains high concentrations of water-soluble sulfates can be subject to premature chemical and/or physical deterioration. Based on the CBC criteria, the potential for sulfate attack is negligible for water-soluble sulfate contents in soil ranging from 0.00 to 0.10 percent by weight and moderate for water-soluble sulfate contents ranging from 0.10 to 0.20 percent by weight. The potential for sulfate attack is severe for water-soluble sulfate contents ranging from 0.20 to 2.00 percent by weight and very severe for water-soluble sulfate contents over 2.00 percent by weight. The soil samples tested for this evaluation, using Caltrans Test Method 417, indicates water-soluble sulfate contents ranging from approximately 0.001 to 0.017 percent by weight (i.e., 10 to 170 ppm). Accordingly, the on-site soils are considered to have a negligible potential for sulfate attack. We recommend using Type II/V cement, water to cement ratio of 0.45, and concrete compressive strength of 4,500 psi for concrete in contact with soil.

In order to reduce the potential for shrinkage cracks in the concrete during curing, we recommend that the concrete for the proposed structures be placed with a slump of 4 inches based on ASTM C 143. The slump should be checked periodically at the site prior to concrete placement. We further recommend that concrete cover over reinforcing steel for foundations be provided in accordance with CBC (2019). The structural engineer should be consulted for additional concrete specifications.

10.10 Exterior Flatwork

Exterior walkways and hardscape for pedestrian use should be supported on 12 inches or more of low expansion potential subgrade soils with an expansion index of less than 50 and compacted to a relative compaction of 90 percent in accordance with ASTM D 1557. The moisture content of the subgrade soil should be maintained at slightly above the laboratory optimum until the concrete is placed. The exterior slabs should have a thickness of 4 inches or more and should be reinforced with No. 3 steel reinforcing bars placed at approximately 18 inches on center.

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10.11 Preliminary Pavement Recommendations

Paved parking lots and fire access roads will be part of the proposed improvements for this project. Accordingly, the pavement sections were designed based on the site subgrade soil conditions and our laboratory testing. Laboratory testing was performed on representative subgrade soil samples and indicated R-values of approximately 29 and 59. Therefore, an R-value of 29 was used for the pavement design in accordance with Caltrans guidelines. We evaluated the structural pavement sections assuming traffic indices (TI) of 5.0, 6.0, and 7.0. Our AC pavement analysis was performed using the methodology outlined by the Highway Design Manual (Caltrans, 2019b). For the design of Portland Cement Concrete (PCC) pavements, we used the methodology presented in the Navy Pavement Design Manual (1979). The analysis assumes an approximate 20-year design life for the new pavements. Our preliminary pavement sections are presented below in Table 3.

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Table 3 – Preliminary Flexible and Rigid Pavement Structural Sections

Traffic Index	Full Depth AC (inches)	AC over CAB or CMB (inches)	PCC (inches)
≤5.0	3 over 6	6	6
6.0	4½ over 6	7½	6½
7.0	4½ over 9	9	8½

Notes:
AC – Asphalt Concrete
CAB – Crushed Aggregate Base
CMB – Crushed Miscellaneous Base
PCC – Portland Cement Concrete, with a 28-day compressive strength of 2,500 psi

Prior to placement of aggregate base materials, we recommend that the top 12 inches of subgrade soils be scarified and compacted to a relative compaction of 95 percent in accordance with ASTM D 1557. Aggregate base material should conform to the latest specifications in Section 200 2.2 for crushed aggregate base or Section 200 2.4 for crushed miscellaneous base of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557. AC should conform to Section 203.6 of the Greenbook and should be compacted to a relative compaction of 95 percent in accordance with ASTM D 1557.

10.12 Drainage

Positive surface drainage is imperative for satisfactory site performance. Positive drainage should be provided and maintained to transport surface water away from foundations and off of the site. Positive drainage is defined as a slope of 2 percent or more for a distance of 5 feet or more. Runoff should then be channeled by the use of swales or pipes into a collective drainage system. Surface waters should not be allowed to pond adjacent to footings or pavement. Concentrated runoff should not be allowed to flow over pavement as this can result in early deterioration of the

pavement. We recommend that the top levels of structures have roof drains and downspouts installed to collect runoff. Area drains for landscaped and paved areas are recommended.

11 CONSTRUCTION OBSERVATION

The recommendations provided in this report are based on our understanding of the proposed project and our evaluation of the data collected based on subsurface conditions disclosed by widely spaced exploratory borings. It is imperative that the geotechnical consultant checks the interpolated subsurface conditions during construction. We recommend that Ninyo & Moore review the project plans and specifications prior to construction. It should be noted that, upon review of these documents, some recommendations presented in this report may be revised or modified.

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During construction we recommend that the duties of the geotechnical consultant include, but not be limited to:

- Observing site clearing and removal of existing improvements.
- Observing excavation bottoms and the placement and compaction of fill, including trench backfill.
- Evaluating imported materials prior to their use as fill.
- Performing field tests to evaluate fill compaction.
- Observing foundation excavations for bearing materials and cleaning prior to placement of reinforcing steel or concrete.
- Performing material testing services, including concrete compressive strength and steel tensile strength tests and inspections.

The recommendations provided in this report assume that Ninyo & Moore will be retained as the geotechnical consultant during the construction phase of this project. If another geotechnical consultant is selected, we request that the selected consultant indicate to the owner and to our firm in writing that our recommendations are understood and that they are in full agreement with our recommendations.

12 LIMITATIONS

The field evaluation, laboratory testing, and geotechnical analyses presented in this geotechnical report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface

condition. Variations may exist and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

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This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

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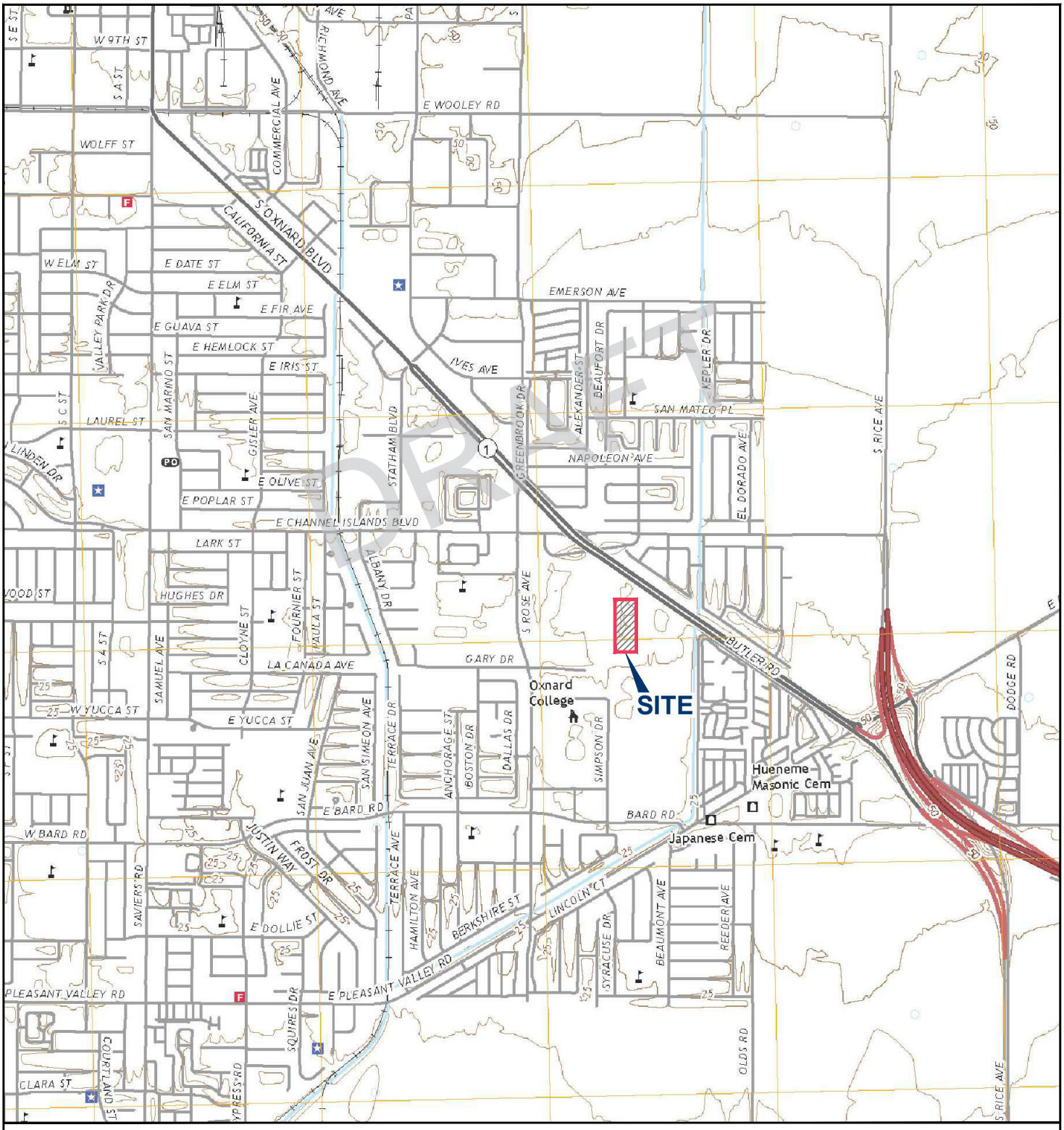
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FIGURES



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: USGS, 2022.

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FIGURE 1

SITE LOCATION

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 I 8/22

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LEGEND

B-15 TD=6.5 — BORING; TD=TOTAL DEPTH IN FEET

ESB-17 TD=16.5 — BORING (EARTH SYSTEMS, 2007); TD=TOTAL DEPTH IN FEET

CPT-3 TD=21.5 — CONE PENETRATION TEST; TD=TOTAL DEPTH IN FEET

ESCPT-5 TD=50.0 — CONE PENETRATION TEST (EARTH SYSTEMS, 2007); TD=TOTAL DEPTH IN FEET

N

FEET

0 150 300

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: GOOGLE EARTH AND ELS, 2022

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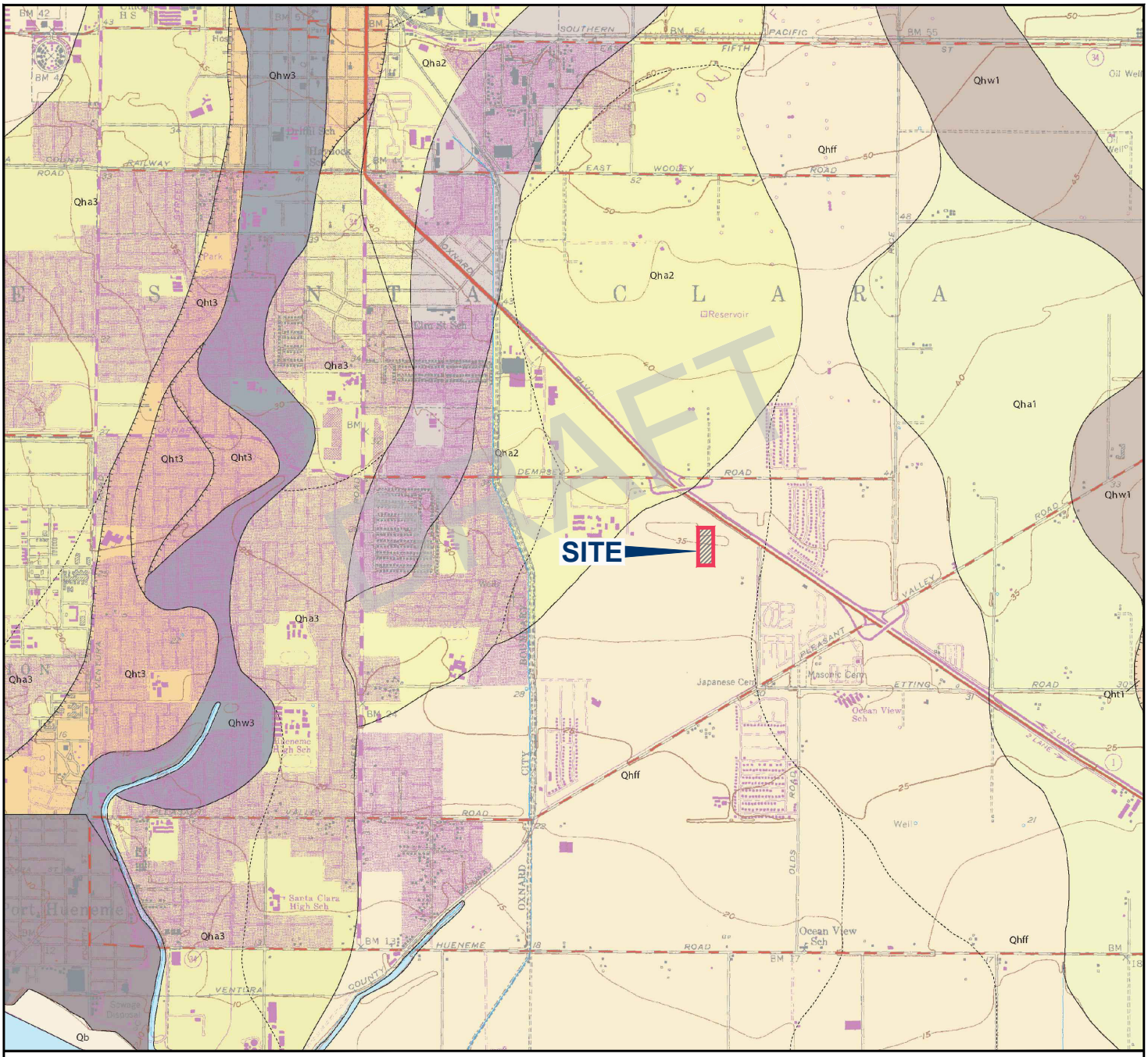
FIGURE 2

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BORING AND CPT LOCATIONS

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 I 8/22



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Qhw_2 YOUNGER HOLOCENE WASH DEPOSITS	Qha_1 OLDER HOLOCENE ALLUVIAL DEPOSITS
Qha_2 YOUNGER HOLOCENE ALLUVIAL DEPOSITS	Qhff OLDER HOLOCENE ALLUVIAL FAN DEPOSITS
Qhw_1 OLDER HOLOCENE WASH DEPOSITS	GEOLOGIC CONTACT
	FAULT

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: CLAHAN, 2003.

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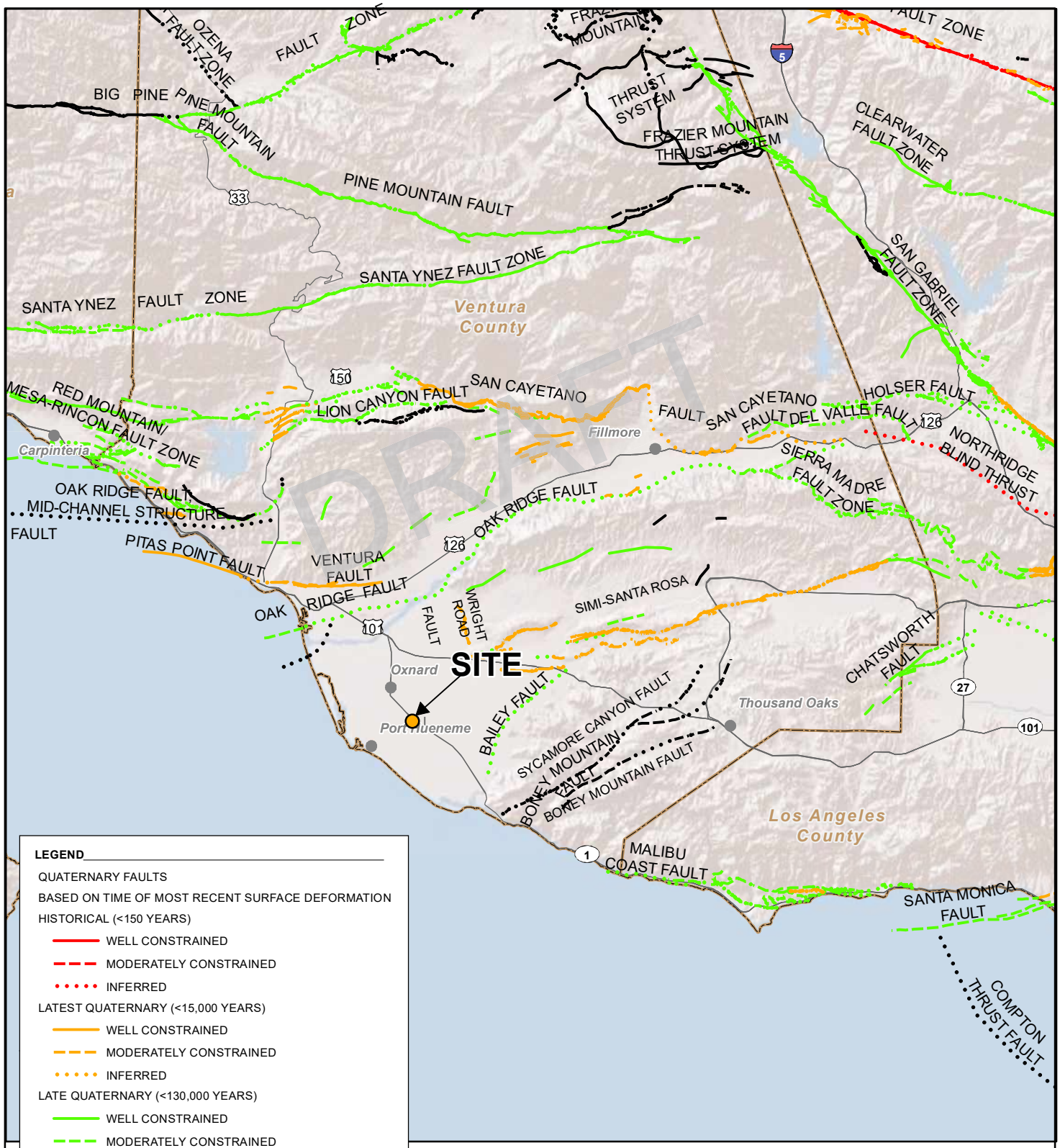
FIGURE 3

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REGIONAL GEOLOGY

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 I 8/22



NOTE: DIRECTIONS, DIMENSIONS AND LOCATIONS ARE APPROXIMATE.

SOURCES: CALIFORNIA GEOLOGICAL SURVEY, ACCESSED AUGUST 02, 2022, AT: https://www.usgs.gov/natural-hazards/earthquake-hazards/faults; ESRI, 2021.

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FIGURE 4

FAULT LOCATIONS

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 | 8/22

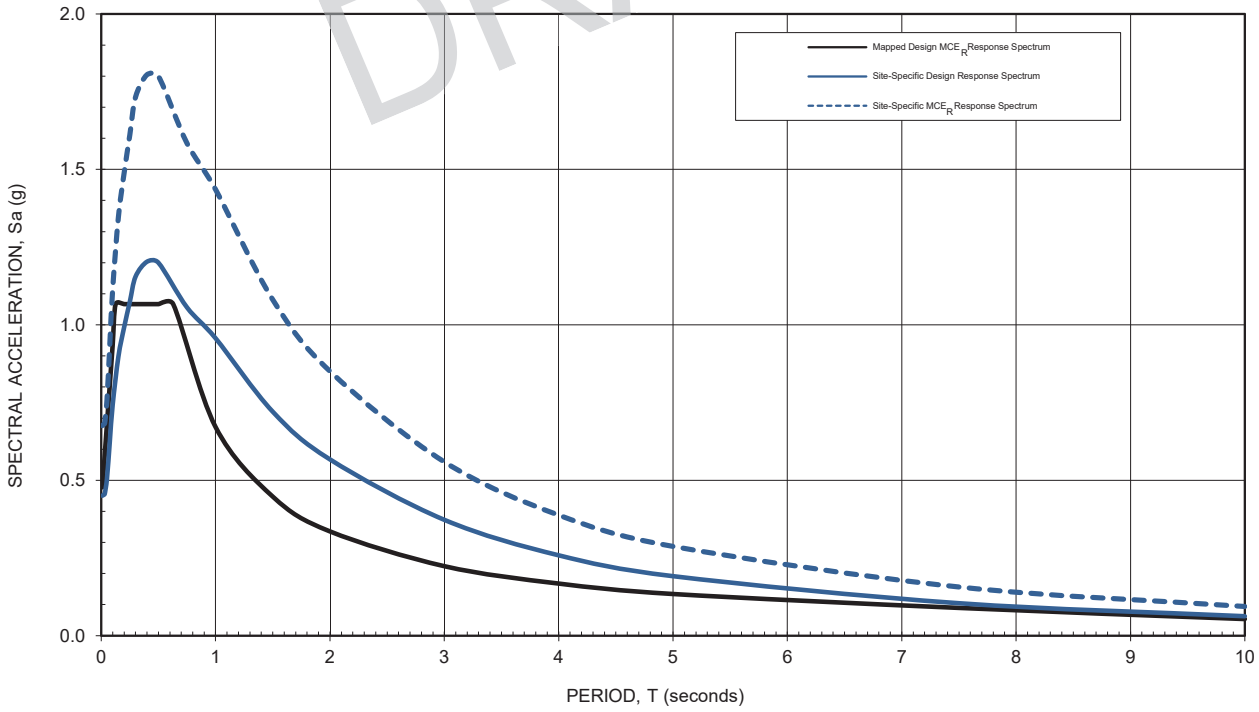
Ninyo & Moore
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PERIOD (seconds)	SITE-SPECIFIC MCE_R RESPONSE SPECTRUM Sa (g)	SITE-SPECIFIC DESIGN RESPONSE SPECTRUM Sa (g)
0.010	0.676	0.450
0.020	0.680	0.453
0.030	0.683	0.455
0.050	0.758	0.505
0.075	0.938	0.625
0.100	1.115	0.743
0.150	1.347	0.898
0.200	1.488	0.992
0.250	1.611	1.074
0.300	1.733	1.155
0.400	1.805	1.203

PERIOD (seconds)	SITE-SPECIFIC MCE_R RESPONSE SPECTRUM Sa (g)	SITE-SPECIFIC DESIGN RESPONSE SPECTRUM Sa (g)
0.500	1.800	1.200
0.750	1.584	1.056
1.000	1.435	0.957
1.500	1.081	0.721
2.000	0.851	0.567
3.000	0.559	0.373
4.000	0.388	0.259
5.000	0.287	0.192
7.500	0.157	0.105
10.000	0.094	0.063

S_{DS} =	1.083 g	S_{D1} =	1.134 g	S_{MS} =	1.624 g	S_{M1} =	1.702 g	PGA_M =	0.687 g

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NOTES:

1 The probabilistic ground motion spectral response accelerations are based on the risk-targeted Maximum Considered Earthquake (MCE_R) having a 2% probability of exceedance in 50 years in the maximum direction using the Chiou & Youngs (2014), Campbell & Bozorgnia (2014), Boore et al. (2014), and Abrahamson et al. (2014) attenuation relationships and the risk coefficients.

2 The deterministic ground motion spectral response accelerations are for the 84th percentile of the geometric mean values in the maximum direction using the Chiou & Youngs (2014), Campbell & Bozorgnia (2014), Boore et al. (2014), and Abrahamson et al. (2014) attenuation relationships for deep soil sites considering a Mw 7.4 event on the Oakridge fault zone located 9.4 kilometers from the site. It conforms with the lower bound limit per ASCE 7-16 Section 21.2.2.

3 The Site-Specific MCE_R Response Spectrum is the lesser of spectral ordinates of deterministic and probabilistic accelerations at each period per ASCE 7-16 Section 21.2.3. The Site-Specific Design Response Spectrum conforms with lower bound limit per ASCE 7-16 Section 21.3.

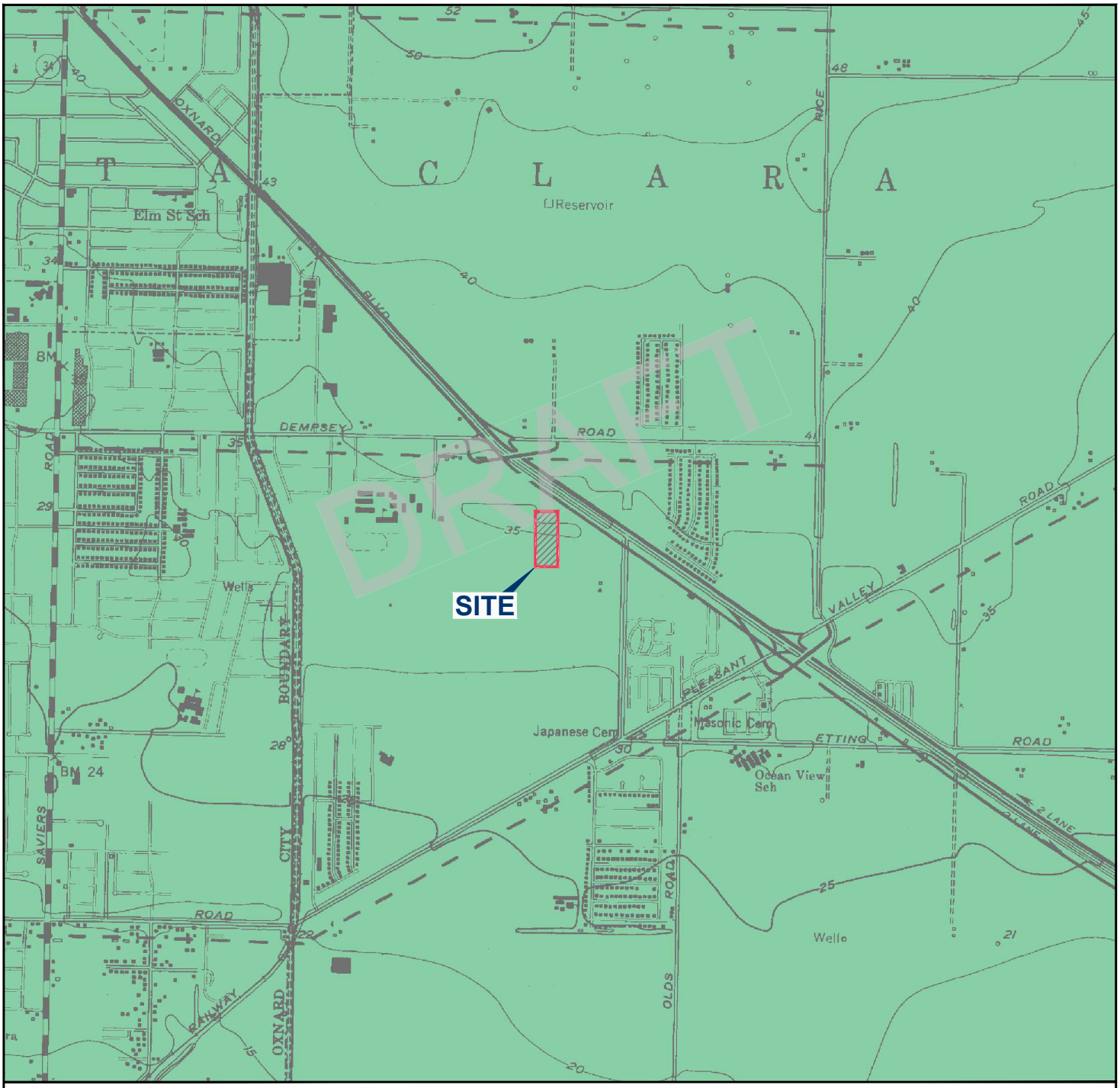
4 The Mapped Design MCE_RResponse Spectrum is computed from mapped spectral ordinates modified for Site Class D (stiff soil profile) per ASCE 7-16 Section 11.4. It is presented for the sake of comparison.

FIGURE 5

ACCELERATION RESPONSE SPECTRA

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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LIQUEFACTION
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: CGS, 2002b.

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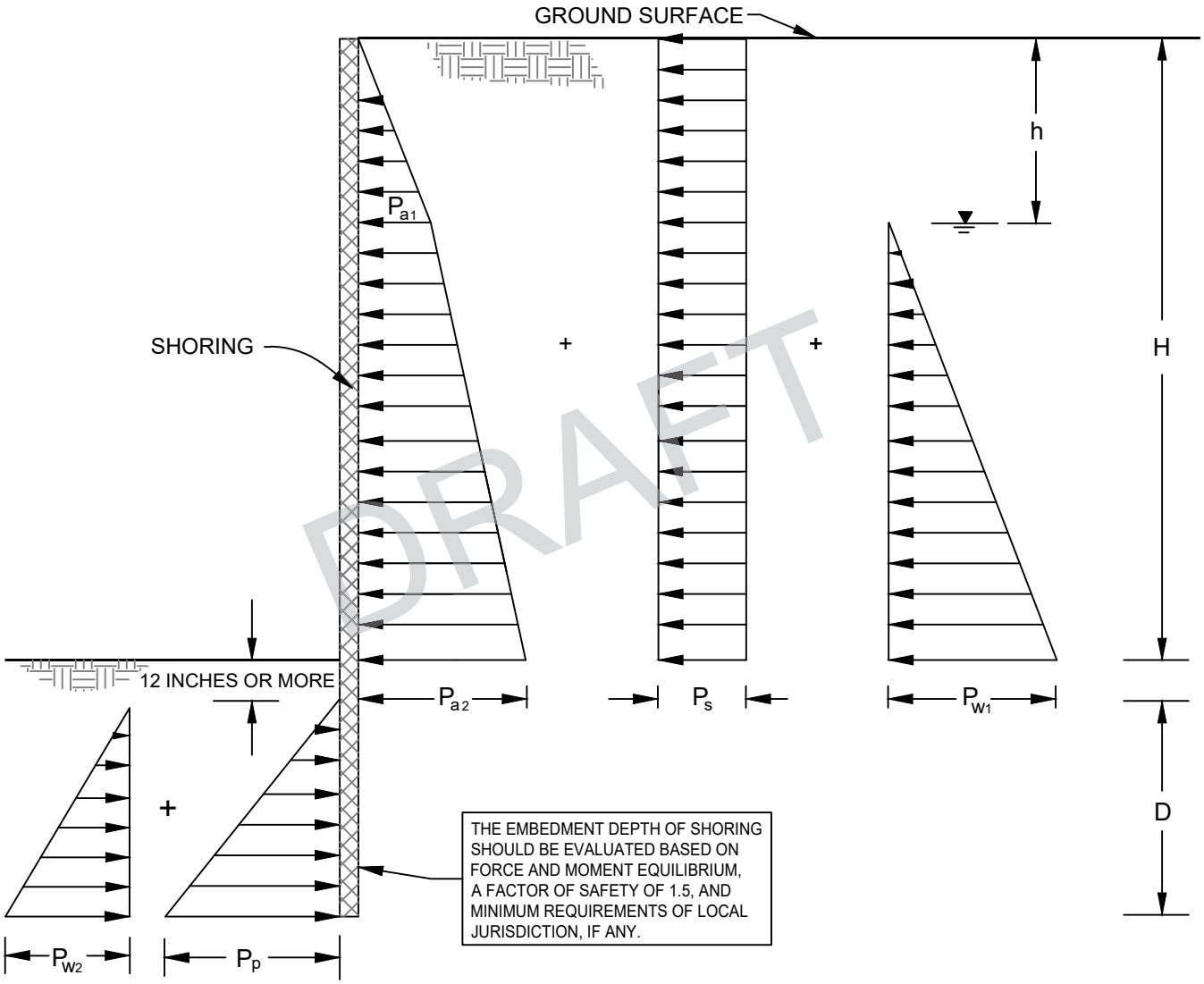
FIGURE 6

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SEISMIC HAZARD ZONES

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 I 8/22



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NOTES:

1. ACTIVE LATERAL EARTH PRESSURE, P_a
   $P_{a1} = 40h$ psf; $P_{a2} = P_{a1} + 21(H - h)$ psf
2. CONSTRUCTION TRAFFIC INDUCED SURCHARGE PRESSURE, P_s
   $P_s = 72$ psf
3. HYDROSTATIC PRESSURE, P_w
   $P_{w_1} = 62.4(H - h)$ psf
4. PASSIVE LATERAL EARTH PRESSURE, P_p
   $P_p = 180D$ psf
5. SURCHARGES FROM EXCAVATED SOIL OR CONSTRUCTION MATERIALS ARE NOT INCLUDED
6. H, h AND D ARE IN FEET
7. GROUNDWATER TABLE

NOT TO SCALE

FIGURE 7

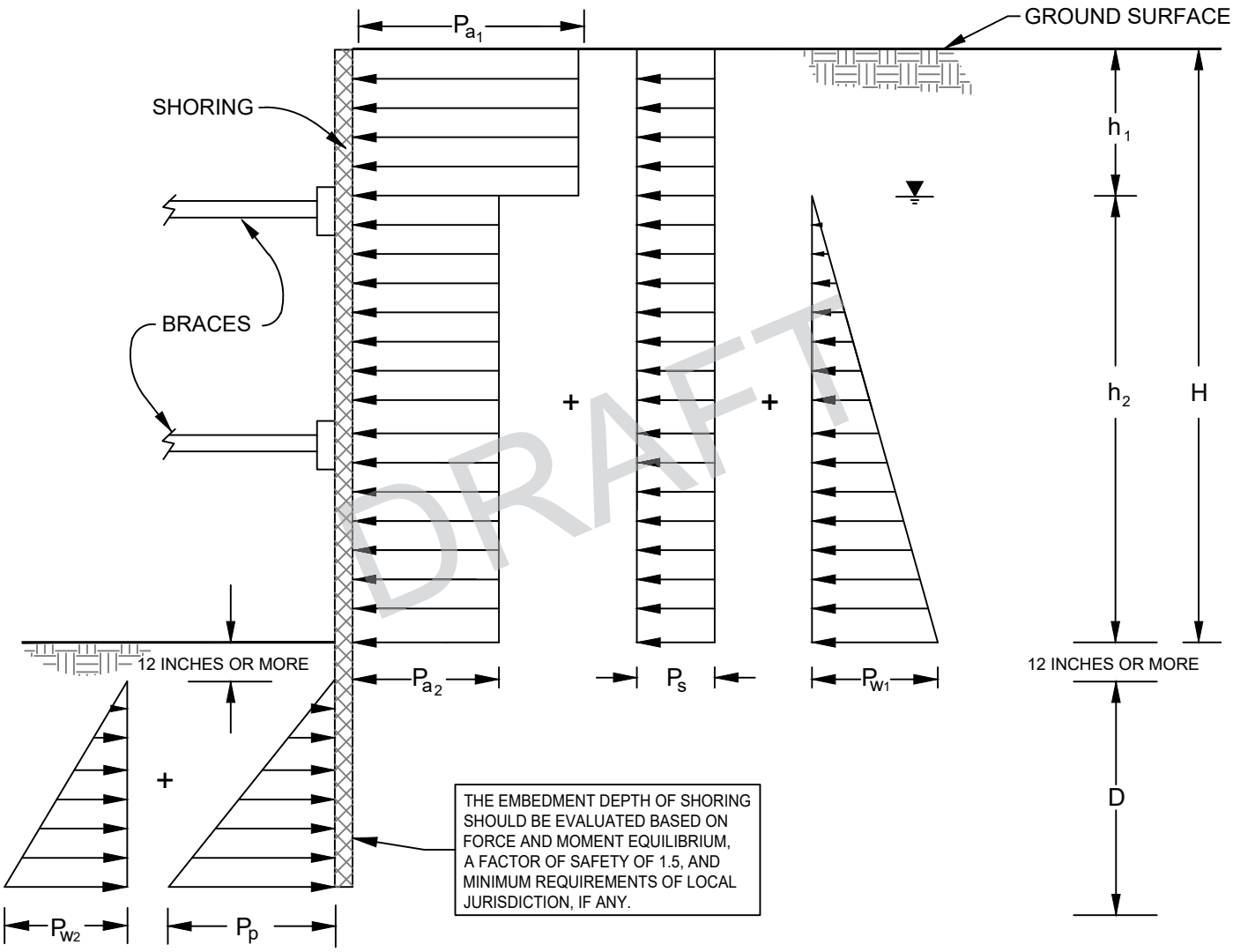
LATERAL EARTH PRESSURES FOR TEMPORARY CANTILEVERED SHORING BELOW GROUNDWATER

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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NOTES:

1. APPARENT LATERAL EARTH PRESSURES, P_{a1} AND P_{a2}
   $P_{a_1} = 26h_1$ psf
   $P_{a_2} = 14h_2$ psf
2. CONSTRUCTION TRAFFIC INDUCED SURCHARGE PRESSURE, P_s
   $P_s = 120$ psf
3. HYDROSTATIC PRESSURE, P_{w1} & P_{w2}
   $P_{w1} = 62.4(H - h)$ psf
   $P_{w2} = 62.4D$ psf
4. PASSIVE PRESSURE, P_p
   $P_p = 180D$ psf
5. SURCHARGES FROM EXCAVATED SOIL OR CONSTRUCTION MATERIALS ARE NOT INCLUDED
6. H, h_1, h_2 AND D ARE IN FEET
7. ▽ GROUNDWATER TABLE
8. P_{w2} IS APPLICABLE WHEN DEWATERING IS TO BE PERFORMED FROM INSIDE OR OUTSIDE OF THE EXCAVATION

NOT TO SCALE

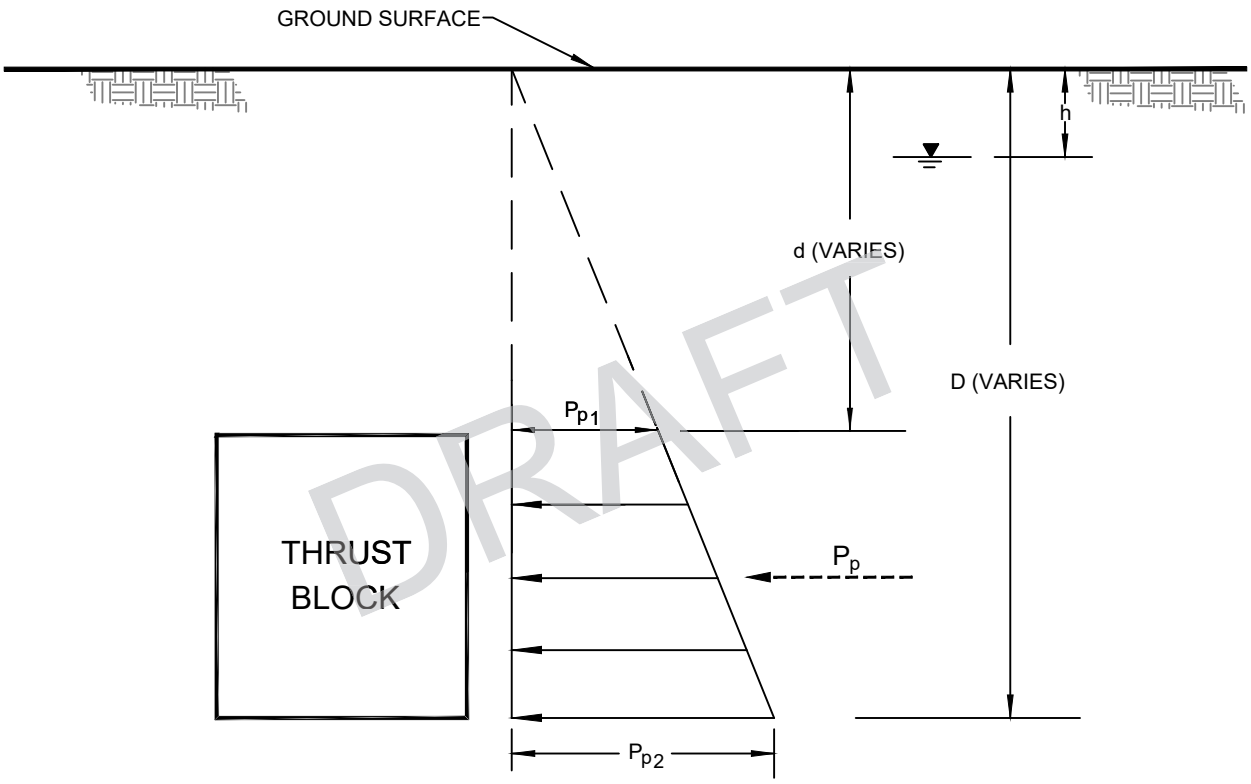
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FIGURE 8

LATERAL EARTH PRESSURES FOR BRACED EXCAVATION BELOW GROUNDWATER

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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NOTES:

1. GROUNDWATER BELOW BLOCK
   $P_p = 180(D^2-d^2)$ lb/ft
2. GROUNDWATER ABOVE BLOCK
   $P_p = 1.5(D - d)[124.8h + 62.6(D+d)]$ lb/ft
3. ASSUMES BACKFILL IS GRANULAR MATERIAL
4. ASSUMES THRUST BLOCK IS ADJACENT TO COMPETENT MATERIAL
5. D, d AND h ARE IN FEET
6. GROUNDWATER TABLE

NOT TO SCALE

FIGURE 9

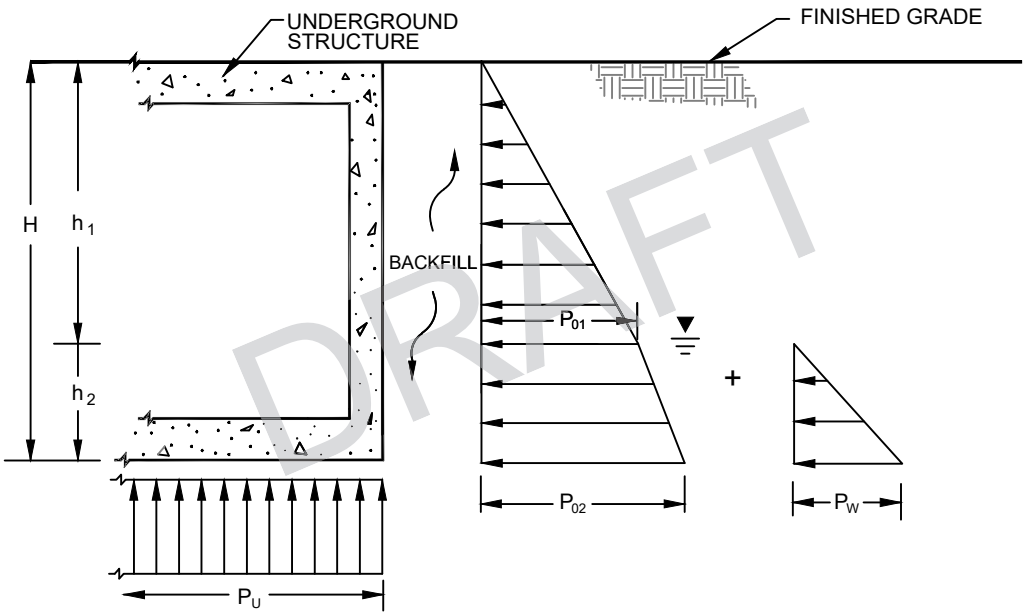
THRUST BLOCK LATERAL EARTH PRESSURE DIAGRAM

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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NOTES:

1. APPARENT LATERAL EARTH PRESSURES, P_{01} AND P_{02}
   $P_{01} = 60h_1$ psf
   $P_{02} = 60h_1 + 31h_2$ psf
2. HYDROSTATIC PRESSURE, P_w
   $P_w = 62.4h_2$ psf
3. UPLIFT PRESSURE, P_u
   $P_u = 62.4h_2$ psf
4. SURCHARGE PRESSURES CAUSED BY VEHICLES OR NEARBY STRUCTURES ARE NOT INCLUDED
5. H, h_1 AND h_2 ARE IN FEET
6. ▼ GROUNDWATER TABLE

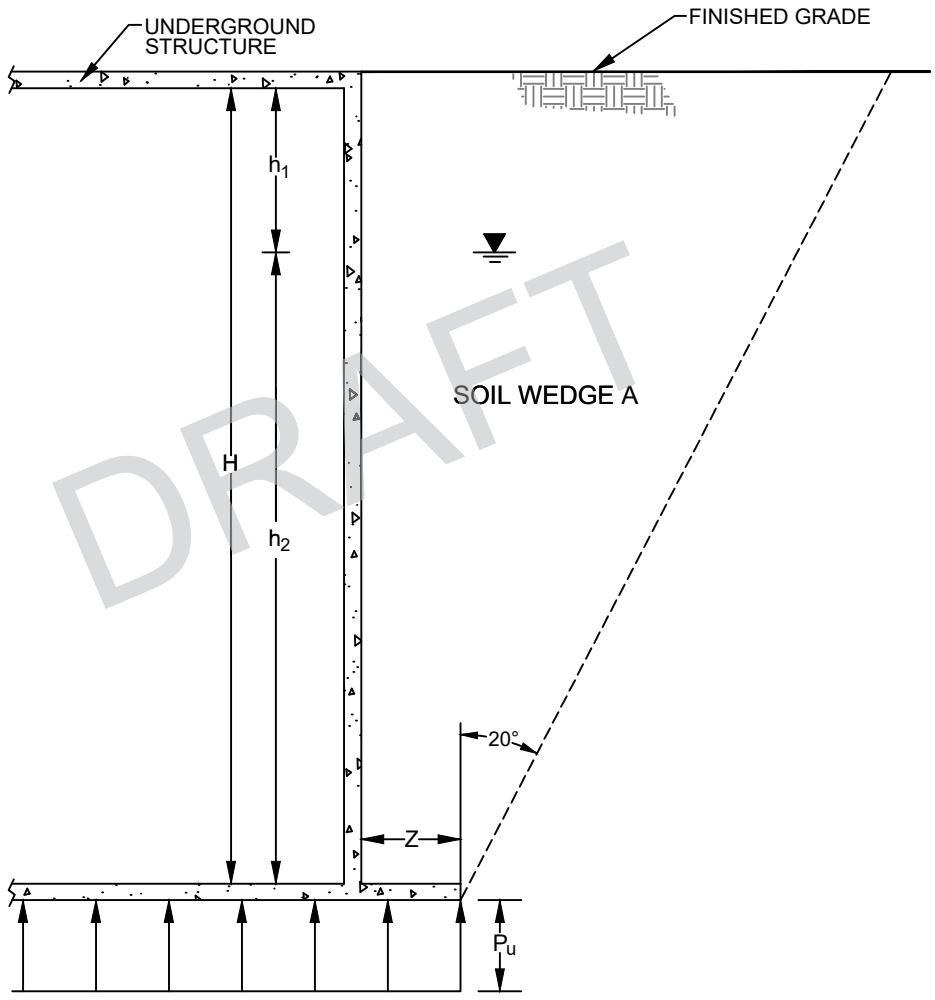
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FIGURE 10

LATERAL EARTH PRESSURES FOR UNDERGROUND STRUCTURES

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA



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RESISTANCE TO UPLIFT = WEIGHT OF STRUCTURE + WEIGHT OF SOIL WEDGE A

NOTES:

1. UNIT WEIGHT OF SOILS, γ OR γ_b
   γ = 120 pcf ABOVE GROUNDWATER TABLE
   γ_b = 63 pcf BELOW GROUNDWATER TABLE
2. UPLIFT PRESSURE, P_u
   $P_u = 62.4\ h_2$ psf
3. H, Z, h_1 AND h_2 ARE IN FEET

NOT TO SCALE

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FIGURE 11

UPLIFT RESISTANCE DIAGRAM FOR UNDERGROUND STRUCTURES

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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APPENDIX A

Boring Logs

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples
Disturbed soil samples were obtained in the field using the following methods.

Bulk Samples
Bulk samples of representative earth materials were obtained from the exploratory drilling. The samples were bagged and transported to the laboratory for testing.

The Standard Penetration Test (SPT) Sampler
Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of 1-3/8 inches. The sampler was driven into the ground 12 to 18 inches with a 140-pound hammer falling freely from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the log are those for the last 12 inches of penetration. Soil samples were observed and removed from the sampler, bagged, sealed and transported to the laboratory for testing.

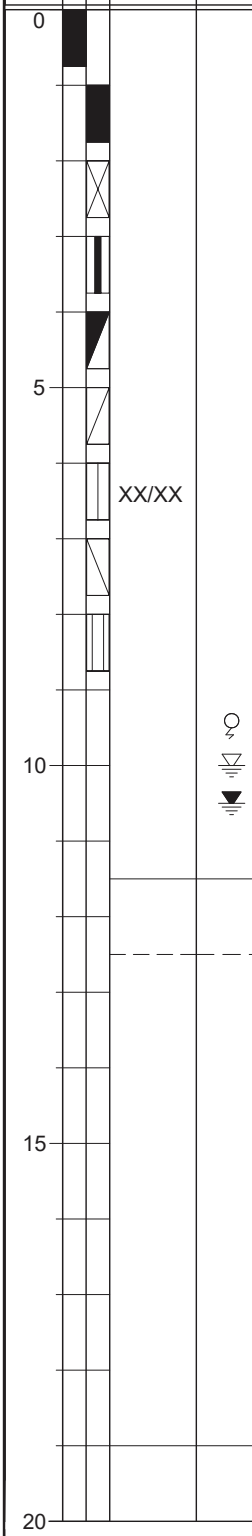
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Field Procedure for the Collection of Relatively Undisturbed Samples
Relatively undisturbed soil samples were obtained in the field using the following method.

The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3 inches, was lined with 1-inch-long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.

BORING LOG EXPLANATION SHEET



Bulk sample.

Modified split-barrel drive sampler.

No recovery with modified split-barrel drive sampler.

Sample retained by others.

Standard Penetration Test (SPT).

No recovery with a SPT.

Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.

No recovery with Shelby tube sampler.

Continuous Push Sample.

Seepage.

Groundwater encountered during drilling.

Groundwater measured after drilling.

SM

MAJOR MATERIAL TYPE (SOIL):

Solid line denotes unit change.

CL

Dashed line denotes material change.

Attitudes: Strike/Dip
b: Bedding
c: Contact
j: Joint
f: Fracture
F: Fault
cs: Clay Seam
s: Shear
bss: Basal Slide Surface
sf: Shear Fracture
sz: Shear Zone
sbs: Shear Bedding Surface

The total depth line is a solid line that is drawn at the bottom of the boring.

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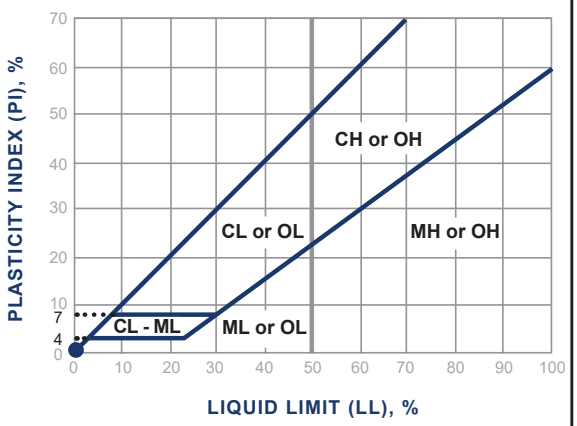
Soil Classification Chart Per ASTM D 2488

Primary Divisions			Secondary Divisions	
			Group Symbol	Group Name
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	**GRAVEL** more than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVEL less than 5% fines	GW	well-graded GRAVEL
			GP	poorly graded GRAVEL
		GRAVEL with DUAL CLASSIFICATIONS 5% to 12% fines	GW-GM	well-graded GRAVEL with silt
			GP-GM	poorly graded GRAVEL with silt
			GW-GC	well-graded GRAVEL with clay
			GP-GC	poorly graded GRAVEL with clay
		GRAVEL with FINES more than 12% fines	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve	CLEAN SAND less than 5% fines	SW	well-graded SAND
			SP	poorly graded SAND
		SAND with DUAL CLASSIFICATIONS 5% to 12% fines	SW-SM	well-graded SAND with silt
			SP-SM	poorly graded SAND with silt
			SW-SC	well-graded SAND with clay
			SP-SC	poorly graded SAND with clay
		SAND with FINES more than 12% fines	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	**SILT and CLAY** liquid limit less than 50%	INORGANIC	CL	lean CLAY
			ML	SILT
			CL-ML	silty CLAY
		ORGANIC	OL (PI > 4)	organic CLAY
			OL (PI < 4)	organic SILT
	SILT and CLAY liquid limit 50% or more	INORGANIC	CH	fat CLAY
			MH	elastic SILT
		ORGANIC	OH (plots on or above "A"-line)	organic CLAY
			OH (plots below "A"-line)	organic SILT
	Highly Organic Soils		PT	Peat

Grain Size

Description		Sieve Size	Grain Size	Approximate Size
Boulders		> 12"	> 12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to fist-sized
	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.079 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

Apparent Density	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Loose	≤ 4	≤ 8	≤ 3	≤ 5
Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

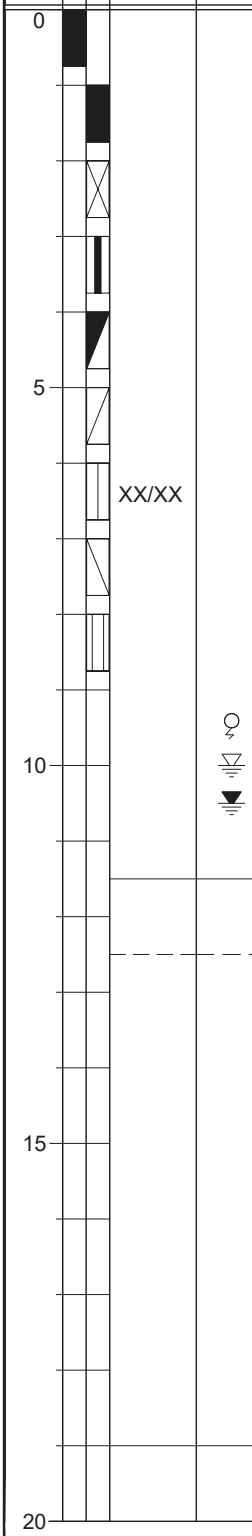
Consis-tency	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
Very Stiff	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

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USCS METHOD OF SOIL CLASSIFICATION

BORING LOG EXPLANATION SHEET



Bulk sample.

Modified split-barrel drive sampler.

No recovery with modified split-barrel drive sampler.

Sample retained by others.

Standard Penetration Test (SPT).

No recovery with a SPT.

Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.

No recovery with Shelby tube sampler.

Continuous Push Sample.

Seepage.

Groundwater encountered during drilling.

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SM

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Solid line denotes unit change.

CL

Dashed line denotes material change.

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sz: Shear Zone
sbs: Shear Bedding Surface

The total depth line is a solid line that is drawn at the bottom of the boring.

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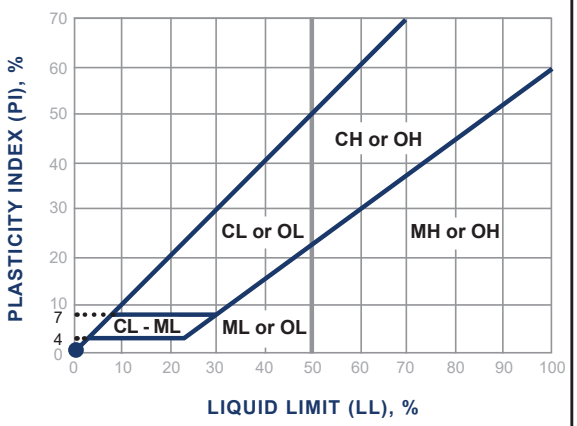
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		GRAVEL with FINES more than 12% fines	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve	CLEAN SAND less than 5% fines	SW	well-graded SAND
			SP	poorly graded SAND
		SAND with DUAL CLASSIFICATIONS 5% to 12% fines	SW-SM	well-graded SAND with silt
			SP-SM	poorly graded SAND with silt
			SW-SC	well-graded SAND with clay
			SP-SC	poorly graded SAND with clay
		SAND with FINES more than 12% fines	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
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			ML	SILT
			CL-ML	silty CLAY
		ORGANIC	OL (PI > 4)	organic CLAY
			OL (PI < 4)	organic SILT
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			MH	elastic SILT
		ORGANIC	OH (plots on or above "A"-line)	organic CLAY
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	Highly Organic Soils		PT	Peat

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Description		Sieve Size	Grain Size	Approximate Size
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Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
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	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.079 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

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	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
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Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

Consis-tency	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
Very Stiff	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

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USCS METHOD OF SOIL CLASSIFICATION

DATE DRILLED 7/12/22 BORING NO. B-1

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						ML	ALLUVIUM: Dark brown, moist, firm to stiff, sandy SILT.
		15	28.6	90.3			Very stiff.
							Total Depth = 6.5 feet. Groundwater not encountered during drilling. Backfilled with on-site soils on 7/12/22.
10							Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 1

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/12/22 BORING NO. B-2

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	ALLUVIUM: Brown, moist, loose, silty SAND; trace gravel.
		6	31.1	84.6		CL	Olive brown, moist, firm, lean CLAY; trace sand.
10							Total Depth = 6.5 feet. Groundwater not encountered during drilling. Backfilled with on-site soils on 7/12/22. Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 2

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/12/22 BORING NO. B-3

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	ALLUVIUM: Brown, moist, loose, silty SAND; trace gravel.
		6	37.3	81.6		CL	Olive brown, moist, firm, lean CLAY; trace sand.
10							Total Depth = 6.5 feet. Groundwater not encountered during drilling. Backfilled with on-site soils on 7/12/22. Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 3

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/12/22 BORING NO. B-4

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	ALLUVIUM: Brown, moist, loose to medium dense, silty SAND with gravel.
								Total Depth = 5 feet. Groundwater not encountered during drilling. In-situ percolation testing performed on 7/14/22. Backfilled with on-site soils on 7/14/22. Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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DATE DRILLED 7/12/22 BORING NO. B-5

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
		10	8.5	87.7		SM	ALLUVIUM: Brown, moist, loose, silty SAND.
		14					
10		25	5.0	101.3		SP	Brown, moist, medium dense, poorly graded SAND.
		16	▼ ▽				@ 13': Groundwater measured approximately 24 hours after drilling completed. @14': Groundwater encountered during drilling; wet.
		51	17.7	109.1			Brown to light brown; dense.
20		47					Light to brown to grayish brown; very dense.
		18				ML	Grayish brown, wet, very stiff, sandy SILT.
30		8					Grayish brown to olive brown; stiff; trace calcium carbonate.
							Total Depth = 31.5 feet. Groundwater encountered during drilling at approximately 14 feet. Groundwater measured at approximately 13 feet approximately 24 hours after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/13/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is
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DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
								DATE DRILLED 7/12/22 BORING NO. B-5 GROUND ELEVATION 35' ± (MSL) SHEET 2 OF 2 METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling) DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30" SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS
40								not sufficiently accurate for preparing construction bids and design documents.
50								
60								
70								
80								

DRAFT

DATE DRILLED 7/12/22 BORING NO. B-6

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						ML	ALLUVIUM: Brown, moist, stiff, sandy SILT.
		7	33.2	84.2			Brown to olive brown.
10		19	7.7	78.3		SM	Brown, moist, medium dense, silty SAND; trace gravel.
							@12': Groundwater encountered during drilling; wet.
						SP	Brown to light brown, wet, medium dense, poorly graded SAND. @ 13': Groundwater measured approximately 24 hours after drilling complete.
		12					Loose.
20		13					Grayish brown to light brown; trace gravel.
		13				ML	Gray to grayish brown, wet, stiff, SILT; trace sand; trace calcium carbonate.
30		10					Stiff.
							Total Depth = 31.5 feet. Groundwater encountered during drilling at approximately 12 feet. Groundwater measured at approximately 13 feet approximately 24 hours after drilling complete. Backfilled with bentonite cement grout and capped with on-site soils on 7/12/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is
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FIGURE A- 7

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/12/22 BORING NO. B-6

GROUND ELEVATION 35' ± (MSL) SHEET 2 OF 2

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
40								not sufficiently accurate for preparing construction bids and design documents.
50								
60								
70								
80								

DRAFT

DATE DRILLED 7/12/22 BORING NO. B-7

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
		14	13.2	102.0		ML	ALLUVIUM: Brown, moist, very stiff, sandy SILT.
10		18	7.4	93.7			
							@ 13.5': Groundwater measured approximately 2 hours after drilling completed.
		24					@16': Groundwater encountered during drilling; wet.
20		12					
							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 16 feet. Groundwater measured at approximately 13.5 feet approximately 2 hours after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/12/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 9

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/13/22 BORING NO. B-8

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
		13	11.7	93.1		SP	ALLUVIUM: Brown, moist, loose, poorly graded SAND.
10		12	3.4	85.4			
		20					@ 14.5': Groundwater measured after drilling completed. @15': Groundwater encountered during drilling; wet. Medium dense.
20		33					Dense.
30							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 15 feet. Groundwater measured at approximately 14.5 feet after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/13/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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DRAFT

DATE DRILLED 7/12/22 BORING NO. B-9

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
		12	13.3	99.0		SM	ALLUVIUM: Brown, moist, loose, silty SAND.
10		20	8.4	90.6			Medium dense.
						SP	@14': Groundwater encountered during drilling and measured after drilling completed; wet. Brown to light brown, wet, medium dense, poorly graded SAND.
		32					
20		53					Very dense.
							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 14 feet. Groundwater measured at approximately 14 feet after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/12/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 11

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/13/22 BORING NO. B-10

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND.
		13	8.6	96.9		SM	ALLUVIUM: Brown, moist, loose, silty SAND. Trace gravel.
10		19	7.6	98.1		SP	Brown to light brown, moist, medium dense, poorly graded SAND. @14': Groundwater encountered during drilling and approximately 2 hours after drilling completed; wet.
		17					
20		28					Dense.
30							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 14 feet. Groundwater measured at approximately 14 feet approximately 2 hours after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/13/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
40							

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DATE DRILLED 7/13/22 BORING NO. B-11

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0		24				SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
						CL	ALLUVIUM: Brown to olive brown, moist, stiff, sandy lean CLAY.
						SP-SM	Brown to light brown, moist, medium dense, poorly graded SAND with silt.
10		20	5.0	101.8			
		22	20.8	106.5		SP	@15': Groundwater encountered during drilling; wet. Brown to light brown, wet, medium dense, poorly graded SAND. @ 15.5': Groundwater measured approximately 1 hour after drilling completed.
20		23					Dense; interbedded clay layers.
							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 15 feet. Groundwater measured at approximately 15.5 feet approximately 1 hour after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/13/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 13

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

DATE DRILLED 7/13/22 BORING NO. B-12

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
		14	15.9	99.1		ML	ALLUVIUM: Brown, moist, loose, sandy SILT.
						CL	Brown to olive brown, moist, stiff, sandy lean CLAY.
10		17	20.6	94.9		SM	Brown to light brown, moist, medium dense, silty SAND.
		25					@ 14': Groundwater measured approximately 2 hours after drilling completed. @14.5': Groundwater encountered during drilling; wet. Medium dense.
20		10				SP-SM	Brown to light brown, moist, medium dense, poorly graded SAND with silt.
							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 14.5 feet. Groundwater measured at approximately 14 feet approximately 2 hours after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/13/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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DATE DRILLED 7/13/22 BORING NO. B-13

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES (Bulk / Driven)	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0						SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
		16	14.0	90.0		ML	ALLUVIUM: Brown, moist, medium dense, sandy SILT.
						SC	Brown, moist, medium dense, clayey SAND.
10		14	3.9	96.9		SP	Brown to light brown, moist, loose, poorly graded SAND.
							@ 14': Groundwater measured approximately 2 hours after drilling completed.
		31					@15': Groundwater encountered during drilling. Wet; medium dense.
20		12					Interbedded clay layers.
							Total Depth = 21.5 feet. Groundwater encountered during drilling at approximately 15 feet. Groundwater measured at approximately 14 feet approximately 2 hours after drilling completed. Backfilled with bentonite cement grout and capped with on-site soils on 7/13/22. Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 15

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OXNARD, CALIFORNIA

DATE DRILLED 7/12/22 BORING NO. B-14

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
			10	7.6	90.3		SM	ALLUVIUM: Brown, moist, loose, silty SAND.
10								Total Depth = 6.5 feet. Groundwater not encountered during drilling. Backfilled with on-site soils on 7/13/22. Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 16

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OXNARD, CALIFORNIA

DATE DRILLED 7/13/222 BORING NO. B-15

GROUND ELEVATION 35' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING 8" Hollow-Stem Auger (MR Drilling)

DRIVE WEIGHT 140 lbs (Auto. Trip Hammer) DROP 30"

SAMPLED BY CHV LOGGED BY CHV REVIEWED BY JRS

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	FILL: Brown to dark brown, moist, loose to medium dense, silty SAND with gravel.
			10	9.7	90.8		ML	ALLUVIUM: Brown, moist, loose, sandy SILT.
								Total Depth = 6.5 feet. Groundwater not encountered during drilling. Backfilled with on-site soils on 7/13/22.
10								Notes: Groundwater, though not encountered at the time of drilling, may rise to a higher level due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 17

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SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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APPENDIX B

Cone Penetration Test Logs

SUMMARY

OF

CONE PENETRATION TEST DATA

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Project:

ELS/South Oxnard Aquatic Center Geo
3250 S. Rose Avenue
Oxnard, CA
July 13, 2022

Prepared for:

Ms. Jennifer Schmidt
Ninyo & Moore
475 Goddard, Ste 200
Irvine, CA 92618-4605
Office (949) 753-7070 / Fax (949) 753-7071

Prepared by:

KEHOE TESTING & ENGINEERING
5415 Industrial Drive
Huntington Beach, CA 92649-1518
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www.kehoetesting.com

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1. **INTRODUCTION**
2. **SUMMARY OF FIELD WORK**
3. **FIELD EQUIPMENT & PROCEDURES**
4. **CONE PENETRATION TEST DATA & INTERPRETATION**

APPENDIX

- CPT Plots
- CPT Classification/Soil Behavior Chart
- Summary of Shear Wave Velocities
- CPT Data Files (sent via email)

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SUMMARY
OF
CONE PENETRATION TEST DATA

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1. INTRODUCTION

This report presents the results of a Cone Penetration Test (CPT) program carried out for the ELS/South Oxnard Aquatic Center Geo project located at 3250 S. Rose Avenue in Oxnard, California. The work was performed by Kehoe Testing & Engineering (KTE) on July 13, 2022. The scope of work was performed as directed by Ninyo & Moore personnel.

2. SUMMARY OF FIELD WORK

The fieldwork consisted of performing CPT soundings at three locations to determine the soil lithology. A summary is provided in **TABLE 2.1**.

LOCATION	DEPTH OF CPT (ft)	COMMENTS/NOTES:
CPT-1	100	
CPT-2	100	
CPT-3	100	

TABLE 2.1 - Summary of CPT Soundings

3. FIELD EQUIPMENT & PROCEDURES

The CPT soundings were carried out by **KTE** using an integrated electronic cone system manufactured by Vertek. The CPT soundings were performed in accordance with ASTM standards (D5778). The cone penetrometers were pushed using a 30-ton CPT rig. The cone used during the program was a 15 cm^2 cone with a cone net area ratio of 0.83. The following parameters were recorded at approximately 2.5 cm depth intervals:

- Cone Resistance (qc)
- Sleeve Friction (fs)
- Dynamic Pore Pressure (u)
- Inclination
- Penetration Speed

At location CPT-3, shear wave measurements were obtained at approximately various depths. The shear wave is generated using an air-actuated hammer, which is located inside the front jack of the CPT rig. The cone has a triaxial geophone, which recorded the shear wave signal generated by the air hammer.

The above parameters were recorded and viewed in real time using a laptop computer. Data is stored at the KTE office for up to 2 years for future analysis and reference. A complete set of baseline readings was taken prior to each sounding to determine temperature shifts and any zero load offsets. Monitoring base line readings ensures that the cone electronics are operating properly.

4. CONE PENETRATION TEST DATA & INTERPRETATION

The Cone Penetration Test data is presented in graphical form in the attached Appendix. These plots were generated using the CPeT-IT program. Penetration depths are referenced to ground surface. The soil behavior type on the CPT plots is derived from the attached CPT SBT plot (Robertson, "Interpretation of Cone Penetration Test…", 2009) and presents major soil lithologic changes. The stratigraphic interpretation is based on relationships between cone resistance (qc), sleeve friction (fs), and penetration pore pressure (u). The friction ratio (Rf), which is sleeve friction divided by cone resistance, is a calculated parameter that is used along with cone resistance to infer soil behavior type. Generally, cohesive soils (clays) have high friction ratios, low cone resistance and generate excess pore water pressures. Cohesionless soils (sands) have lower friction ratios, high cone bearing and generate little (or negative) excess pore water pressures.

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The CPT data files have also been provided. These files can be imported in CPeT-IT (software by GeoLogismiki) and other programs to calculate various geotechnical parameters.

It should be noted that it is not always possible to clearly identify a soil type based on qc, fs and u. In these situations, experience, judgement and an assessment of the pore pressure data should be used to infer the soil behavior type.

If you have any questions regarding this information, please do not hesitate to call our office at (714) 901-7270.

Sincerely,

KEHOE TESTING & ENGINEERING



Steven P. Kehoe
President

07/18/22-sw-4199

APPENDIX

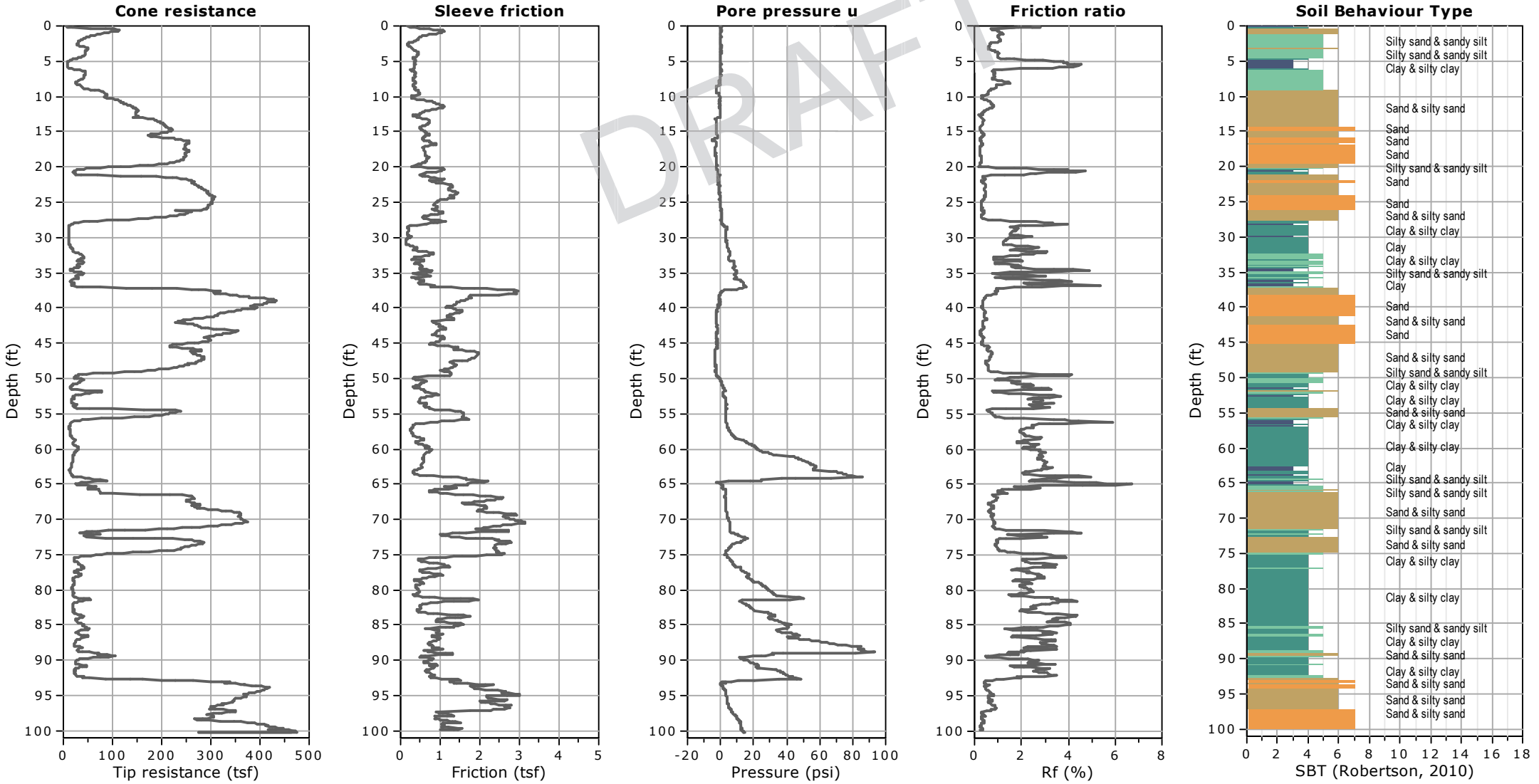
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Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **Ninyo & Moore - ELS/South Oxnard Aquatic Center**
Location: **3250 S. Rose Ave, Oxnard, CA**

CPT-1
Total depth: 100.27 ft, Date: 7/13/2022

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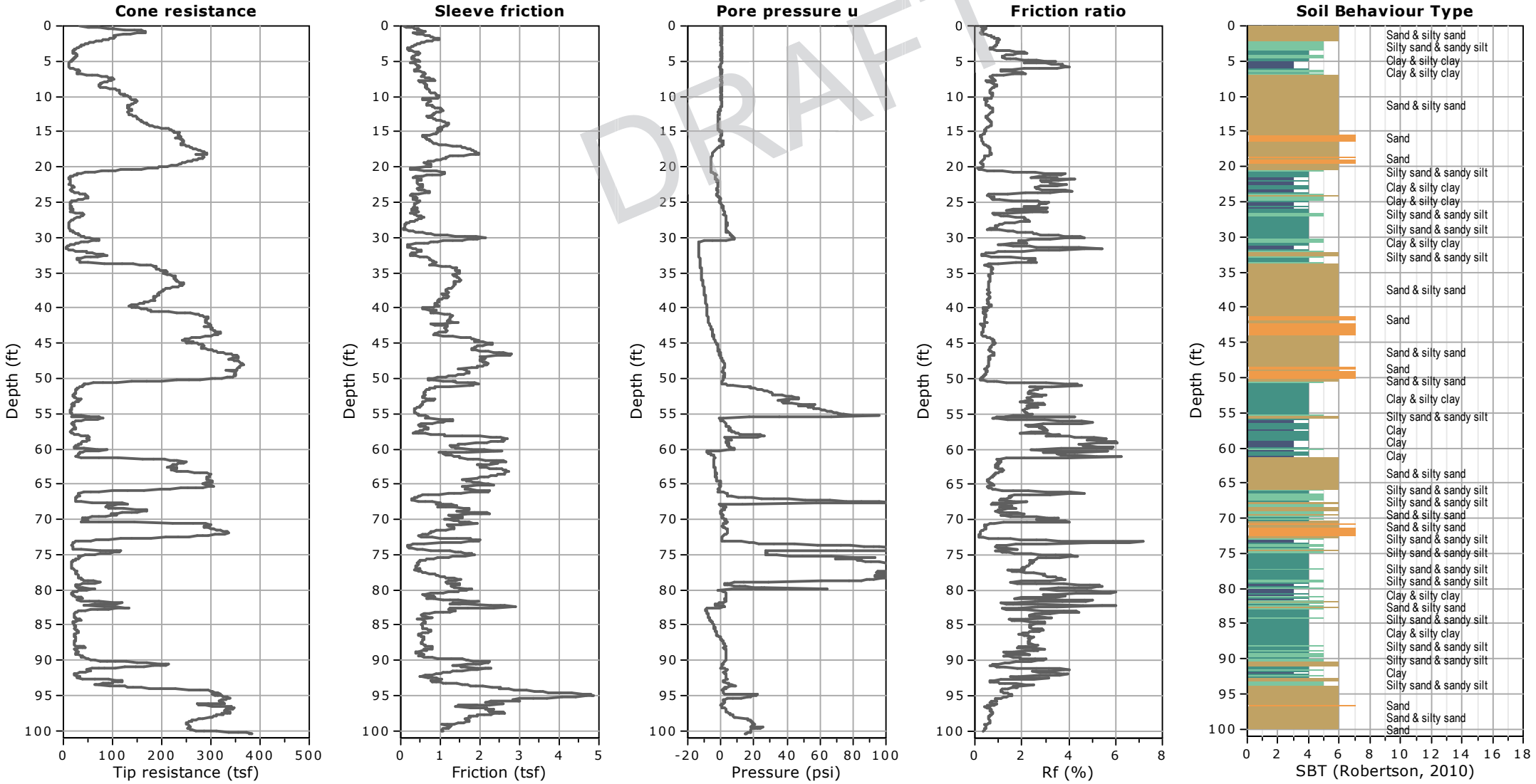


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714-901-7270
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Project: **Ninyo & Moore - ELS/South Oxnard Aquatic Center**
Location: **3250 S. Rose Ave, Oxnard, CA**

CPT-2
Total depth: 100.40 ft, Date: 7/13/2022

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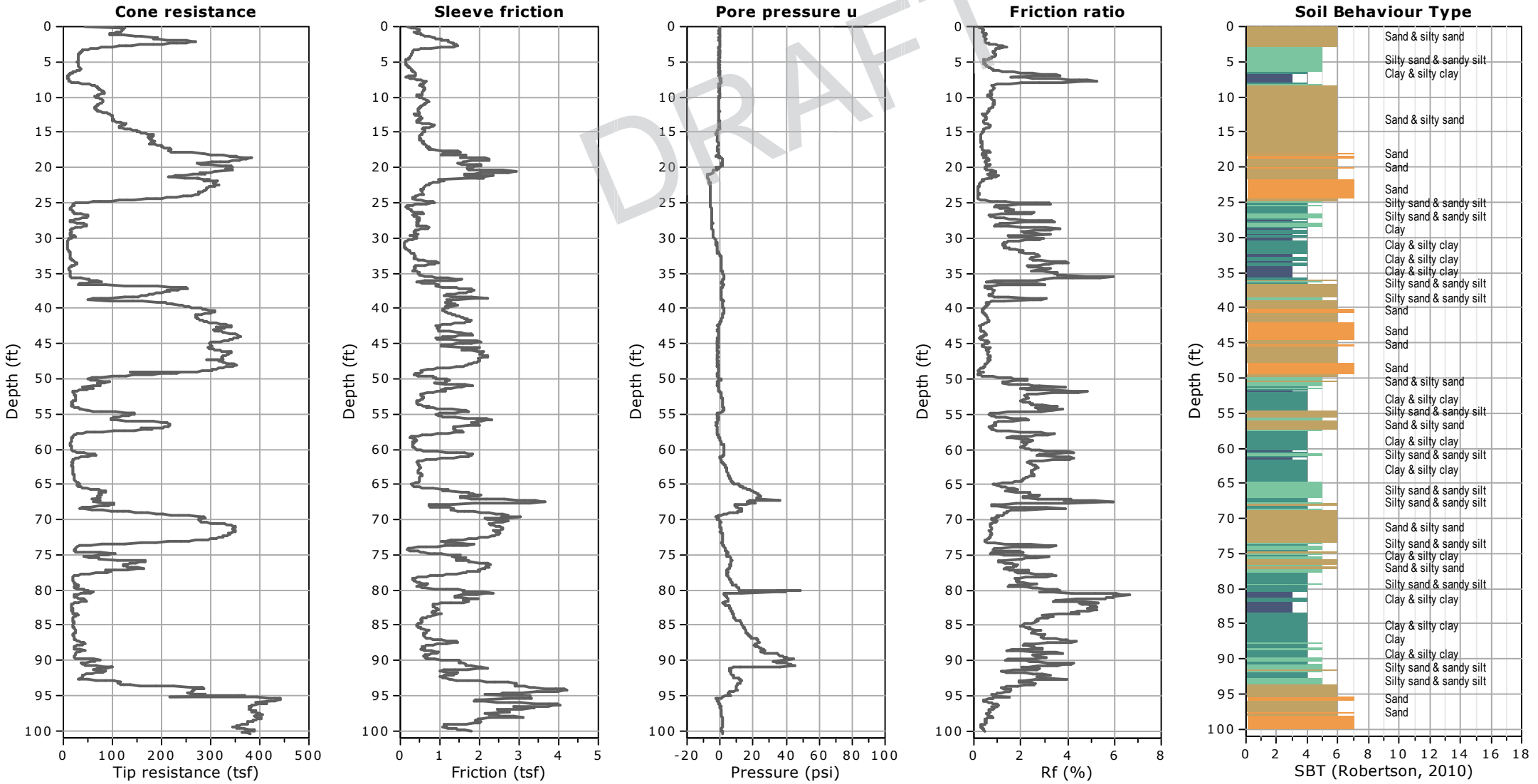


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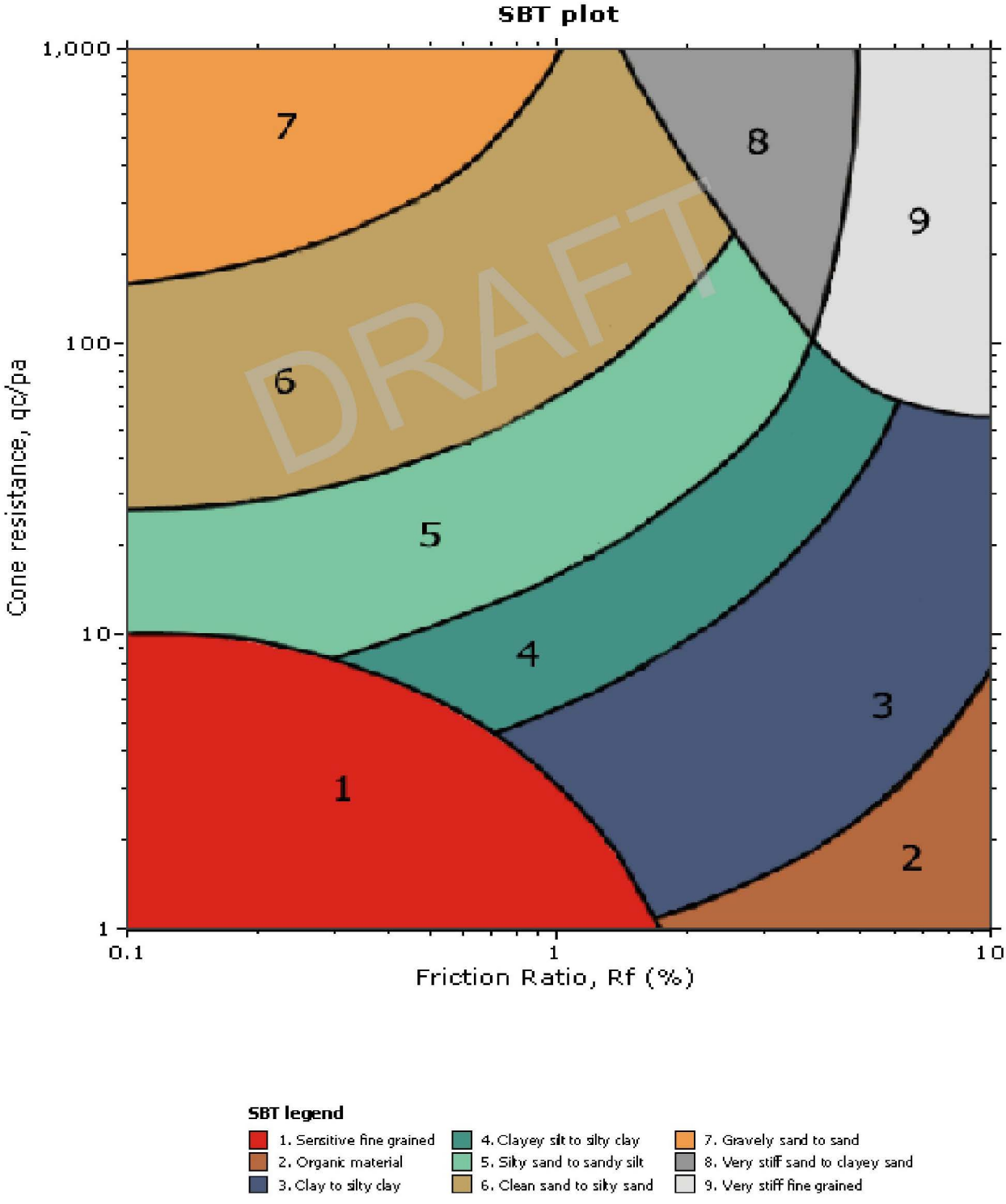
Project: **Ninyo & Moore - ELS/South Oxnard Aquatic Center**
Location: **3250 S. Rose Ave, Oxnard, CA**

CPT-3
Total depth: 100.33 ft, Date: 7/13/2022

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714-901-7270
rich@kehoetesting.com
www.kehoetesting.com



Ninyo & Moore
ELS/South Oxnard Aquatic Center
Oxnard, CA

CPT Shear Wave Measurements

Location	Tip Depth (ft)	Geophone Depth (ft)	Travel Distance (ft)	S-Wave Arrival (msec)	S-Wave Velocity from Surface (ft/sec)	Interval S-Wave Velocity (ft/sec)
CPT-3	5.02	4.02	4.49	5.44	825	
	10.01	9.01	9.23	13.60	679	581
	20.05	19.05	19.15	26.12	733	793
	30.02	29.02	29.09	45.48	640	513
	40.03	39.03	39.08	62.40	626	591
	50.07	49.07	49.11	74.28	661	844
	60.01	59.01	59.04	87.66	674	742
	70.01	69.01	69.04	97.20	710	1048
	80.02	79.02	79.05	114.36	691	583
	90.03	89.03	89.05	128.04	696	732
	100.00	99.00	99.02	136.60	725	1164

Shear Wave Source Offset - 2 ft

S-Wave Velocity from Surface = Travel Distance/S-Wave Arrival
Interval S-Wave Velocity = (Travel Dist2-Travel Dist1)/(Time2-Time1)

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APPENDIX C

Laboratory Testing

APPENDIX C

LABORATORY TESTING

Classification
Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density Tests
The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

200 Wash
An evaluation of the percentage of particles finer than the No. 200 sieve in selected soil samples was performed in general accordance with ASTM D 1140. The results of the tests are presented on Figures C-1 and C-2.

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Atterberg Limits
Tests were performed on selected representative fine-grained soil samples to evaluate the liquid limit, plastic limit, and plasticity index in general accordance with ASTM D 4318. The test results were utilized to evaluate the soil classification in accordance with the USCS. The test results and classifications are shown on Figure C-3.

Consolidation Tests
Consolidation test was performed on selected relatively undisturbed soil samples in general accordance with ASTM D 2435. The samples were inundated during testing to represent adverse field conditions. The percent of consolidation for each load cycle was recorded as a ratio of the amount of vertical compression to the original height of the sample. The results of the tests are summarized on Figures C-4 and C-5.

Direct Shear Tests
Direct shear tests were performed on relatively undisturbed samples in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of the selected materials. The samples were inundated during shearing to represent adverse field conditions. The results are shown on Figures C-6 and C-7.

Soil Corrosivity Tests
Soil pH, and minimum resistivity testing was performed on representative samples in general accordance with CT 643. The chloride content of the selected samples was evaluated in general accordance with CT 422. The sulfate content of the selected samples was evaluated in general accordance with CT 417. The test results are presented on Figure C-8.

R-Value
The resistance value, or R-value, for site soils was evaluated in general accordance with California Test (CT) 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure C-9.

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-1	0.0-5.0	SANDY SILT	94	60	ML
B-4	0.0-5.0	SILTY SAND WITH GRAVEL	84	32	SM
B-5	5.0-6.5	SILTY SAND	100	16	SM
B-5	10.0-11.5	POORLY GRADED SAND	100	4	SP
B-5	15.0-16.5	POORLY GRADED SAND	100	4	SP
B-6	0.0-5.0	SANDY SILT	98	58	ML
B-6	10.0-11.5	SILTY SAND	96	15	SM
B-7	5.0-6.5	SANDY SILT	100	55	ML
B-8	10.0-11.5	POORLY GRADED SAND	100	3	SP

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

FIGURE C-1

NO. 200 SIEVE ANALYSIS TEST RESULTS

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OXNARD, CALIFORNIA

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	DESCRIPTION	PERCENT PASSING NO. 4	PERCENT PASSING NO. 200	USCS (TOTAL SAMPLE)
B-9	10.0-11.5	SILTY SAND	100	13	SM
B-10	15.0-16.5	POORLY GRADED SAND	100	4	SP
B-11	10.0-11.5	POORLY GRADED SAND WITH SILT	100	6	SP-SM
B-12	11.0-11.5	SILTY SAND	99	48	SM
B-12	20.0-21.5	POORLY GRADED SAND WITH SILT	100	5	SP-SM
B-13	10.0-11.5	POORLY GRADED SAND	99	3	SP
B-14	5.0-6.5	SILTY SAND	100	28	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 1140

FIGURE C-2

NO. 200 SIEVE ANALYSIS TEST RESULTS

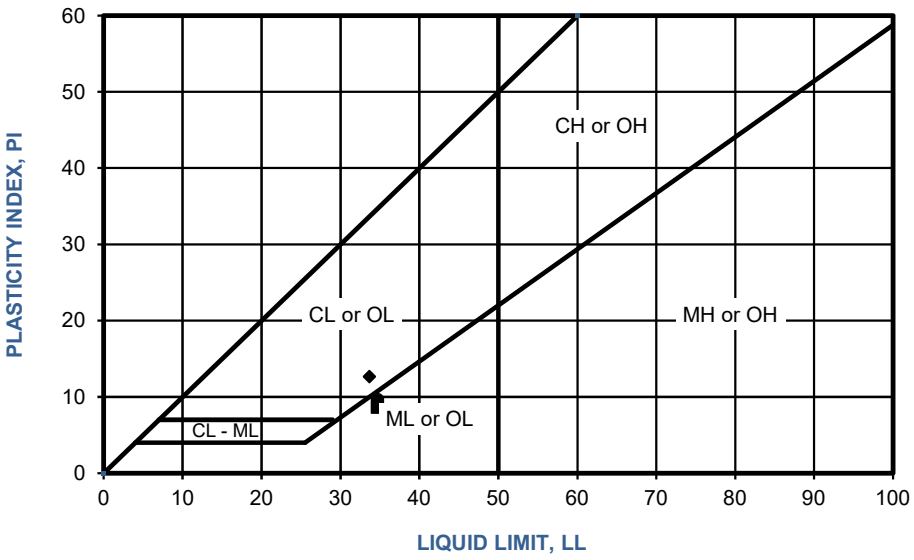
SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

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SYMBOL	LOCATION	DEPTH (ft)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	USCS CLASSIFICATION (Fraction Finer Than No. 40 Sieve)	USCS
●	B-1	5.0-6.5	35	25	10	ML	ML
■	B-6	5.0-6.5	35	26	9	ML	ML
◆	B-12	8.0-10.0	34	21	13	CL	CL

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PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318

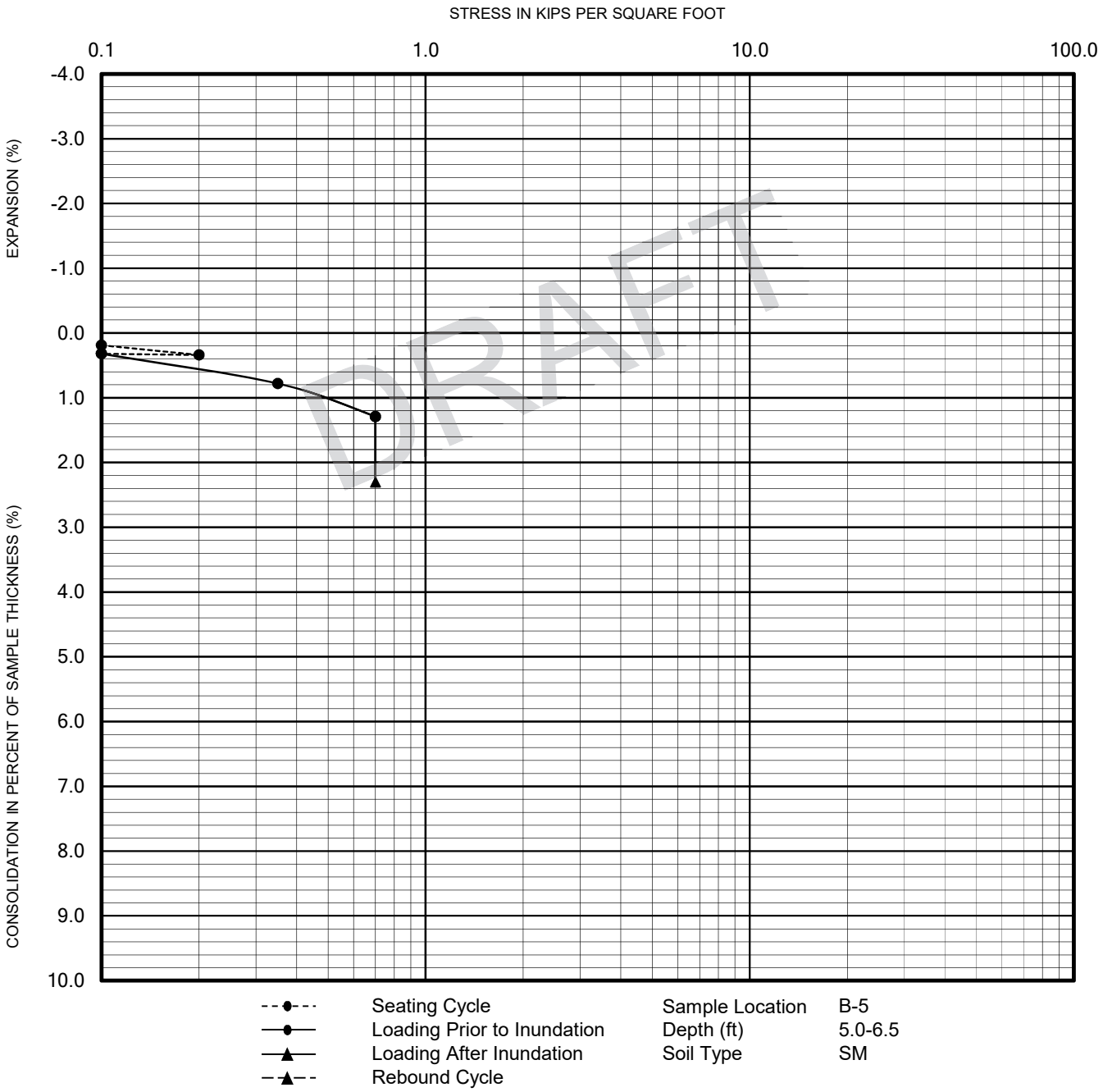
FIGURE C-3

ATTERBERG LIMITS TEST RESULTS

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PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2435

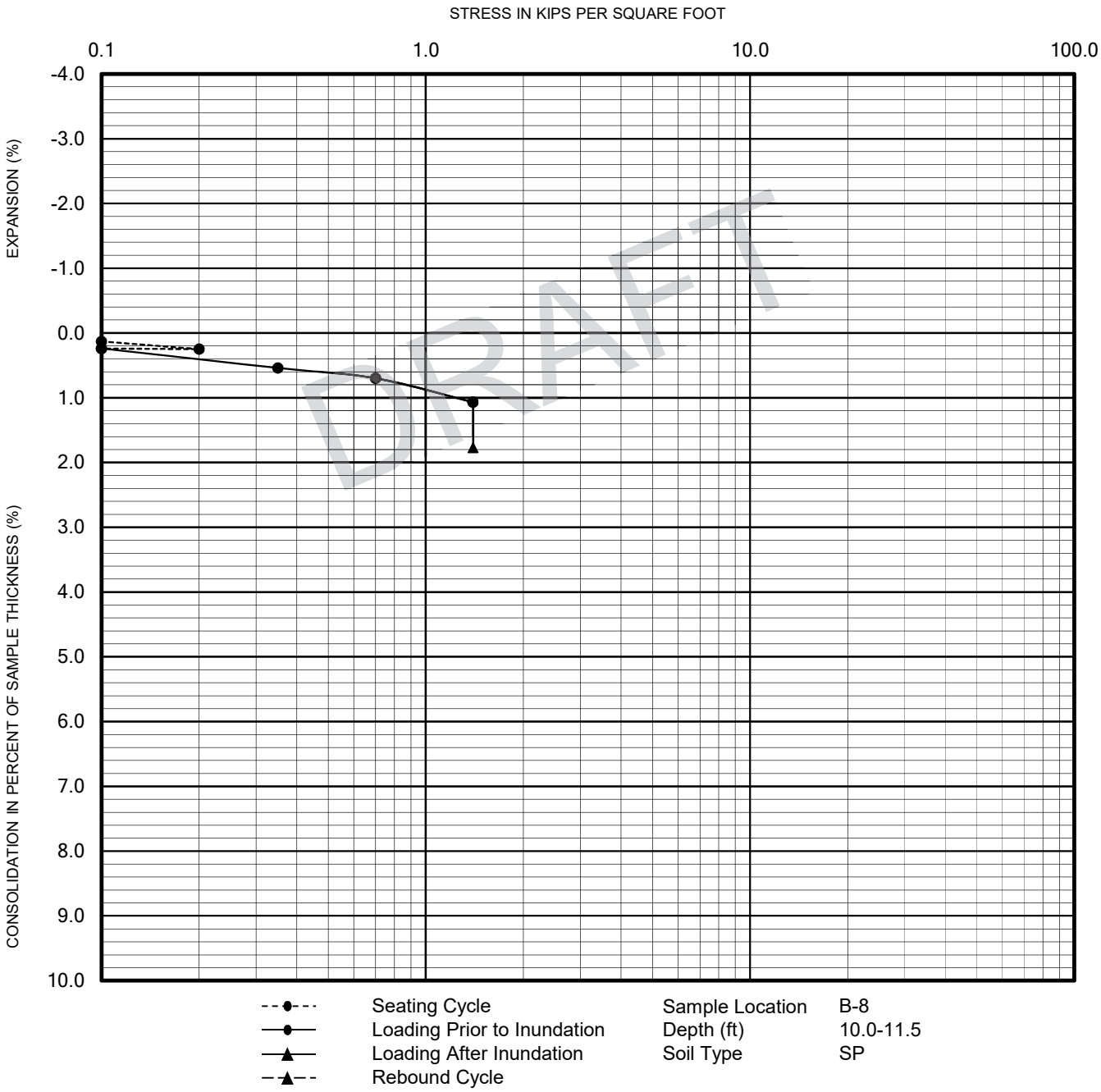
FIGURE C-4

CONSOLIDATION TEST RESULTS

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OXNARD, CALIFORNIA

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PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2435

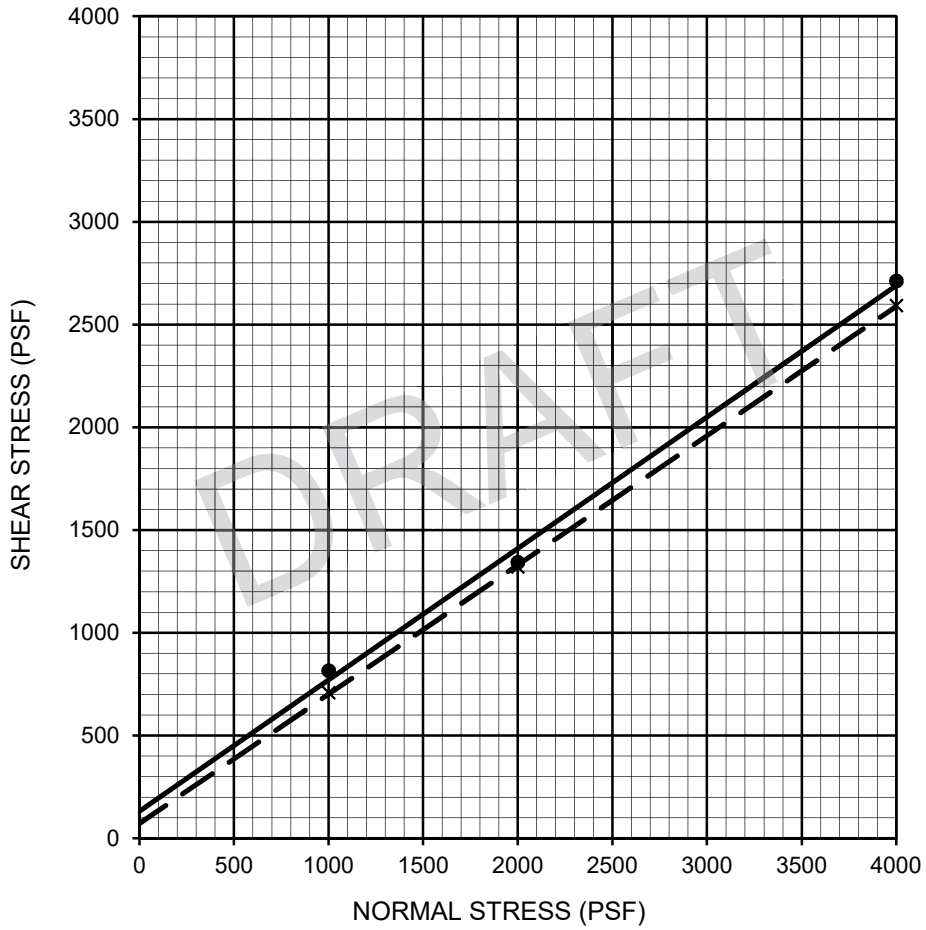
FIGURE C-5

CONSOLIDATION TEST RESULTS

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OXNARD, CALIFORNIA

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Geotechnical & Environmental Sciences Consultants



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
SANDY SILT	—●—	B-7	5.0-6.5	Peak	132	33	ML
SANDY SILT	– – X – –	B-7	5.0-6.5	Ultimate	72	32	ML

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

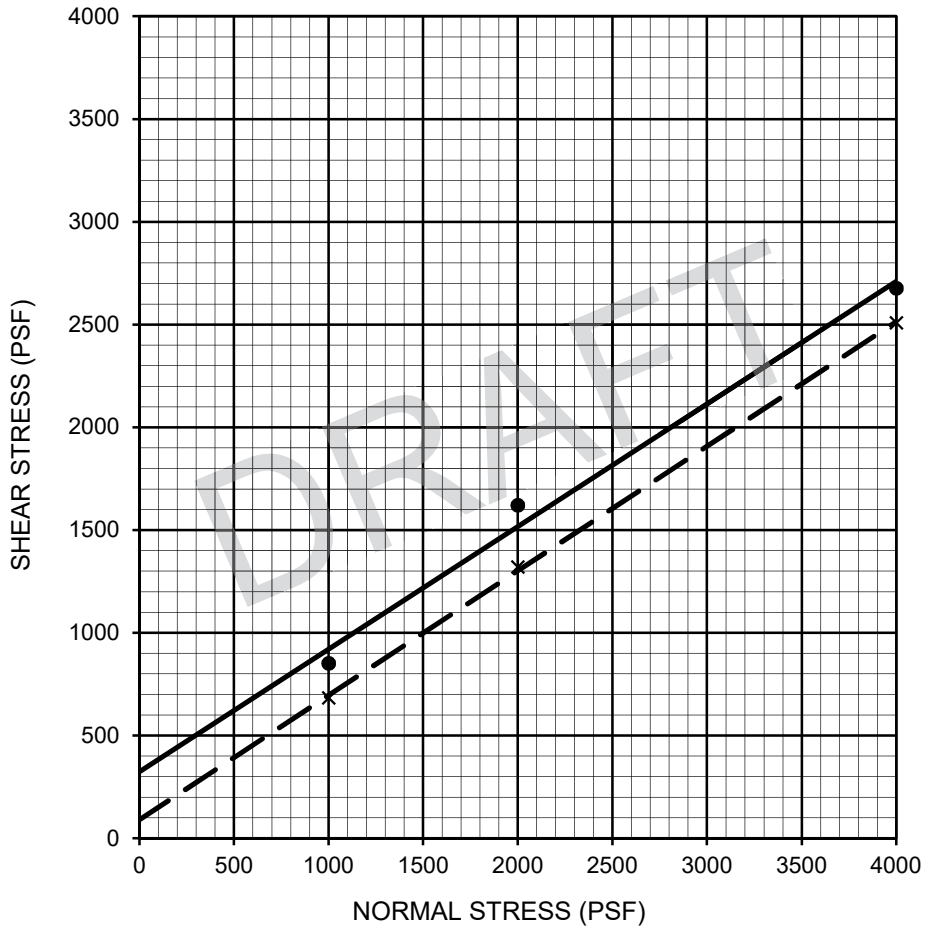
FIGURE C-6

DIRECT SHEAR TEST RESULTS

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Geotechnical & Environmental Sciences Consultants



Description	Symbol	Sample Location	Depth (ft)	Shear Strength	Cohesion (psf)	Friction Angle (degrees)	Soil Type
SILTY SAND	—●—	B-12	11.0-11.5	Peak	324	31	SM
SILTY SAND	– – X – –	B-12	11.0-11.5	Ultimate	90	31	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080

FIGURE C-7

DIRECT SHEAR TEST RESULTS

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 | 8/22

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	pH [1]	RESISTIVITY [1] (ohm-cm)	SULFATE CONTENT [2]		CHLORIDE CONTENT [3] (ppm)
				(ppm)	(%)	
B-6	0.0-5.0	7.7	2,362	10	0.001	45
B-8	0.0-4.0	7.1	1,219	160	0.016	20
B-12	5.0-6.5	7.5	4,673	170	0.017	25

[1] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643
[2] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417
[3] PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422

FIGURE C-8

CORROSIVITY TEST RESULTS

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 | 8/22

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

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SAMPLE LOCATION	SAMPLE DEPTH (ft)	SOIL TYPE	R-VALUE
B-1	0.0-5.0	ML	29
B-4	0.0-5.0	SM	59

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844/CT 301

FIGURE C-9

R-VALUE TEST RESULTS

SOUTH OXNARD AQUATIC CENTER
OXNARD, CALIFORNIA

211972001 | 8/22

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

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APPENDIX D

Previous Boring Logs, CPT Logs, and Laboratory Testing
(Earth Systems, 2007)

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 2
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 21, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0	X		■	8/9/10		SM	91.9	10.4	**ALLUVIUM:** Silty fine sand, slightly moist to dry, medium dense, pale brown.
5			⊠	6/6/8		ML SP	--	--	Same as above to slightly silty fine sand, slightly moist to dry, medium stiff to loose, pale brown.
	▼		■	13/12/11		SW	100.6	20.4	ALLUVIUM: Slightly silty fine to coarse sand, scattered fine gravel, occasional cobbles, well graded, wet, medium dense, brown to pale brown.
10		■		10/12/14		SW	--	--	Same as above.
15		■		7/10/14		SW	--	--	**ALLUVIUM:** Fine to coarse sand, some fine gravel, well graded, wet, light brown to olive brown.
20		■		3/4/6		ML	--	--	**ALLUVIUM:** Clayey silt, trace sand and calcium carbonate, slightly plastic, wet, stiff, dark olive gray.
25		■		3/3/4		ML	--	--	**ALLUVIUM:** Fine sandy clayey silt with calcium carbonate nodules up to 1/8" in diameter, some stringers, medium plasticity, wet, medium stiff, dark olive gray.
30									
35		■		13/42		SM	--	--	**ALLUVIUM:** Silty fine sand, wet, medium dense, light olive gray to olive. Heaving sands.
						SP			

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Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 2
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 21, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6"	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
40	X					SP			**ALLUVIUM:** Fine sand, some silt, poorly graded, flowing sands, wet, olive gray to olive.
45						SP SW			**ALLUVIUM:** Fine sand to fine to coarse sand, scattered gravel, wet, medium dense, olive gray.
		■		13/18/24		SP	--	--	**ALLUVIUM:** Fine sand, trace silt, poorly graded, wet, dense, olive.
50									Final Depth: 48.5 feet Groundwater was encountered at about 8.5 feet.
55									
60									
65									
70									
75									

DRAFT

Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 8
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 22, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0				5/4/6		SM	99.6	8.4	**ALLUVIUM:** Very silty fine sand, moist, loose, brown to olive brown.
5				6/8/13		ML SM	95.9	16.7	**ALLUVIUM:** Layered clayey silt to silty fine sand, trace calcium carbonate, moist, very stiff to medium dense, brown to pale brown to light reddish brown.
				7/11/13		SP SW	97.5	6.2	**ALLUVIUM:** Fine sand, some silt, poorly graded to fine to coarse sand, well graded, moist, medium dense, light reddish brown.
10				9/11/13		SM	--	--	**ALLUVIUM:** Silty fine to medium sand, wet, medium dense, brown.
15				13/19/21		SM	--	--	Same as above, except dense.
20									Final Depth: 16.5 feet Groundwater was encountered at about 9.0 feet.
25									
30									
35									

DRAFT

Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 9
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 22, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0	X		■	5/6/8		SM	88.2	15.7	**ALLUVIUM:** Clayey silty sand, slightly moist to moist, loose, olive brown to olive gray.
5	X		■	7/10/14		SM	113.0	8.9	**ALLUVIUM:** Clayey silty fine to coarse sand, some fine to medium gravel, moist, medium dense, reddish brown.
									Final Depth: 5.5 feet Groundwater was not encountered.

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Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 10
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 22, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0						PT			**SURFACE:** Layer of organics and silt.
	X		■	3/5/6		ML CL	87.2	20.2	**ALLUVIUM:** Fine sandy silt to silty clay with caliche, moist, stiff, olive gray to gray.
5	X		■	4/5/7		ML CL	86.4	35.5	Same as above, except more moisture.
									Final Depth: 5.5 feet
									Groundwater was not encountered.
10									
15									
20									
25									
30									
35									

DRAFT

Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 12
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 25, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0			■	6/7/9		SM	89.6	11.5	**ALLUVIUM:** Silty very fine sand, trace rootlets, moist to slightly moist, loose, pale reddish brown.
			■	4/5/8		SM	92.7	23.5	**ALLUVIUM:** Silty fine sand, trace clay, moist, loose, pale brown to pale reddish brown.
5	▼		■	10/11/16		SW	97.3	15.8	**ALLUVIUM:** Fine to coarse sand, trace fine gravel, well graded, very moist, medium dense, light reddish brown.
10		■		8/8/9		SM	--	--	**ALLUVIUM:** Silty fine sand, wet, medium dense, brown to olive brown.
15		■		8/11/15		SW	--	--	**ALLUVIUM:** Fine to coarse sand, trace silt and fine gravel, well graded, wet, medium dense, olive gray.
20									Final Depth: 16.5 feet Groundwater was encountered at about 9.0 feet.
25									
30									
35									

DRAFT

Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 13
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 25, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0	X		■	3/3/4		SM	88.4	22.2	**ALLUVIUM:** Silty fine sand, moist, loose, brown.
5	X		■	3/5/9		ML CL	91.5	30.7	**ALLUVIUM:** Clayey silt, trace sand, trace caliche, low plasticity, moist, stiff, olive brown to grayish brown.
	▼		■	6/8/9		SM	94.0	21.1	**ALLUVIUM:** Silty fine sand, moist, loose, olive brown to light reddish brown.
10		■		10/9/10		SM	--	--	**ALLUVIUM:** Silty fine sand, wet, medium dense, brown.
15		■		9/11/15		SW	--	--	**ALLUVIM:** Fine to coarse sand, trace silt, well graded, wet, medium dense, olive brown to grayish brown.
20		■		7/7/5		SM	--	--	**ALLUVIUM:** Silty fine to coarse sand with seams of sandy clay about 1/2" thick, wet, medium dense, olive gray to olive.
25									Final Depth: 21.5 feet Groundwater was encountered at about 9.0 feet.
30									
35									

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Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 14
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 25, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0			■	3/3/5		SM	98.5	9.8	**ALLUVIUM:** Silty fine sand, moist, loose, light reddish brown.
5			■	3/5/6		ML CL	93.8	27.4	**ALLUVIUM:** Clayey silt to silty clay, low plasticity, trace caliche, moist, stiff, reddish brown.
	▼		■	8/11/18		SW	100.3	13.4	**ALLUVIUM:** Fine to coarse sand, some fine gravel, well graded, moist, medium dense, light reddish brown.
10		■		7/5/5		SW	--	--	**ALLUVIUM:** Slightly silty fine to coarse sand, trace fine to coarse gravel, well graded, wet, loose, grayish brown.
15		■		7/9/12		SP	--	--	**ALLUVIUM:** Fine sand, trace silt, poorly graded, wet, medium dense, olive to olive gray.
20		■		3/3/4		SM	--	--	**ALLUVIUM:** Silty fine to coarse sand, some clayey silt seams, wet, loose, olive gray.
25									Final Depth: 21.5 feet Groundwater was encountered at about 9.0 feet.
30									
35									

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Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 15
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 25, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith



Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0	X		■	4/7/10		ML SM	92.9	11.0	**ALLUVIUM:** Very silty fine sand, slightly moist, loose, light reddish brown.
5	X		■	5/5/6		ML	95.2	24.2	**ALLUVIUM:** Fine sandy clayey silt, moist, stiff, light reddish brown to olive brown.
	▼		■	7/11/13		SM	91.8	24.1	**ALLUVIUM:** Silty fine to medium sand, very moist, medium dense, reddish brown.
10		■		7/8/8		SM	--	--	Same as above, except wet.
15		■		10/11/16		SW	--	--	**ALLUVIUM:** Fine to coarse sand, trace silt, well graded, wet, medium dense, olive brown.
20		■		10/20		SM SW	--	--	**ALLUVIUM:** Slightly silty fine to coarse sand, trace seams of sandy clay, wet, medium dense, olive gray.
25									Final Depth: 20.0 feet Groundwater was encountered at about 7.5 feet.
30									
35									

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Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

Earth Systems Southern California
1731-A Walter Street, Ventura, California 93003
PHONE: (805) 642-6727 FAX: (805) 642-1325

BORING NO: 17
PROJECT NAME: Oxnard College Park
PROJECT NUMBER: VT-23965-01
BORING LOCATION: Per Plan

DRILLING DATE: June 25, 2007
DRILL RIG: Mobile B-80
DRILLING METHOD: 6" Hollow Stem Auger
LOGGED BY: Wesley Smith

Vertical Depth	Sample Type: Bulk	Sample Type: SPT	Sample Type: Mod. Calif.	PENETRATION RESISTANCE (BLOWS/6")	SYMBOL	USCS CLASS	UNIT DRY WT. (pcf)	MOISTURE CONTENT (%)	DESCRIPTION OF UNITS
0						GM			**ARTIFICIAL FILL:** Scattered concrete pieces up to 6" in diameter.
			■	4/5/6		SM	103.9	4.8	**ALLUVIUM:** Silty fine sand, moist, loose, brown.
5			■	3/4/5		ML	88.2	9.4	**ALLUVIUM:** Fine sandy silt, moist, medium stiff, reddish brown to pale brown.
	▼		■	3/5/6		ML	85.0	33.4	**ALLUVIUM:** Clayey silt, low plasticity, trace sand, very moist, stiff, olive brown to slightly reddish brown.
10		■		3/3/4		SM	--	--	**ALLUVIUM:** Silty fine sand, trace seams of sandy silt about 1/2" to 1", wet, loose, olive brown to reddish brown.
15		■		9/14/18		SW	--	--	**ALLUVIUM:** Fine to coarse sand, trace silt and fine gravel, well graded, wet, dense, olive gray.
20									Final Depth: 16.5 feet Groundwater encountered at about 8.5 feet.
25									
30									
35									

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Note: The stratification lines shown represent the approximate boundaries between soil and/or rock types and the transitions may be gradual.

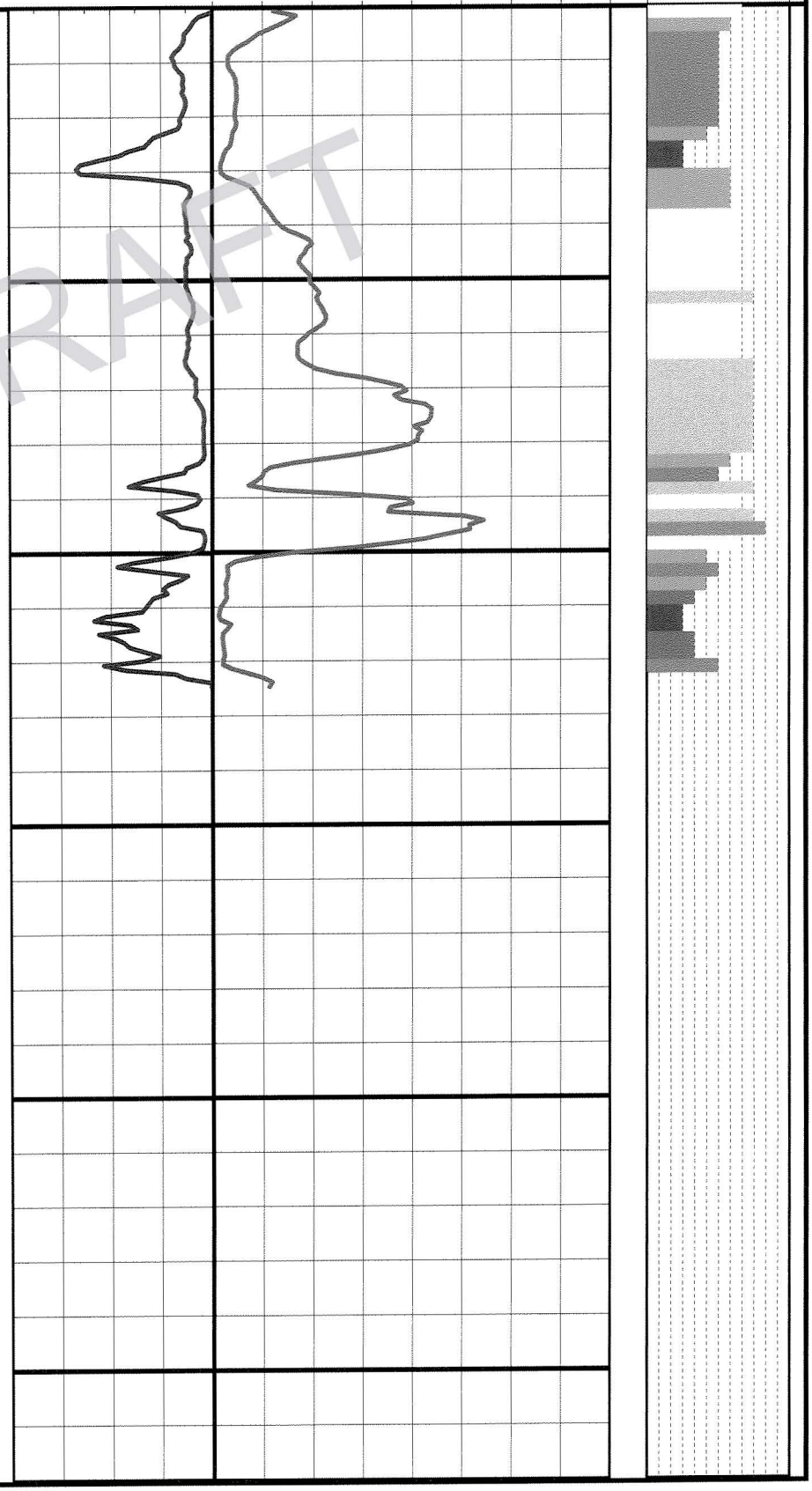
Earth Systems
Southern California

CPT No: CPT-4
Project Name: Oxnard College Park
Project No.: VT-23965-01
Location: See Site Exploration Plan

CPT Vendor: **Kehoe Testing and Engineering**
Truck Mounted Electric
Cone with 30-ton reaction
Date: 6/18/2007

DEPTH (FEET)	Interpreted Soil Stratigraphy Robertson & Campanella ('89)	Density/Consistency
	Sand to Silty Sand	medium dense
	Sandy Silt to Clayey Silt	medium dense
	Sandy Silt to Clayey Silt	medium dense
	Sandy Silt to Clayey Silt	medium dense
	Sandy Silt to Clayey Silt	medium dense
5	Clay	stiff
	Silty Sand to Sandy Silt	medium dense
	Sand to Silty Sand	medium dense
	Sand to Silty Sand	dense
	Sand to Silty Sand	dense
10	Sand to Silty Sand	dense
	Sand to Silty Sand	dense
	Sand to Silty Sand	medium dense
	Sand	dense
	Sand	very dense
15	Sand	dense
	Sand to Silty Sand	medium dense
	Sand to Silty Sand	dense
	Sand	very dense
	Sand	dense
20	Clayey Silt to Silty Clay	stiff
	Clayey Silt to Silty Clay	stiff
	Clay	stiff
	Silty Clay to Clay	stiff
25		
30		
35		
40		
45		
50		

End of Sounding @ 25.1 feet



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Earth Systems
Southern California

CONE PENETROMETER INTERPRETATION (based on Robertson & Campanella, 1989)

Project: Oxnard College Park Project No: VT-23965-01 Date: 06/18/07

CPT SOUNDING: CPT-4 Plot: 1 Density: 1 SPT N Program developed 2003 by Shelton L. Stringer, GE, Earth Systems Southwest

Est. GWT (feet): **8.0** Dr correlation: 0 Baldi Qc/N: 1 Robertson Phi Correlation: 4 SPT N

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	Soil Classification	USCS	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Total po tsf	p'o tsf	F	n	Cq	Norm. Qc1n	2.6 Ic	Clean Sand Qc1n	$N_{1(60)}$	Clean Sand $N_{1(60)}$	Est. % Fines	Rel. Dens. Dr (%)	Phi (deg.)	Nk: 17 Su (tsf)	OCR
0.15	0.5	75.63	0.66	Sand to Silty Sand	SP/SM	dense	100	4.0	19	0.013	0.013	0.66	0.53	1.70	121.5	1.73	128.9	32	26	15	85	37		
0.30	1.0	47.77	1.03	Silty Sand to Sandy Silt	SM/ML	medium dense	110	3.0	16	0.039	0.039	1.03	0.61	1.70	76.8	2.01	100.6	27	20	30	66	35		
0.46	1.5	25.93	1.28	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	10	0.066	0.066	1.28	0.69	1.70	41.7	2.28	78.2	18	16	50	41	33		
0.61	2.0	15.10	1.50	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	6	0.094	0.094	1.51	0.76	1.70	24.3	2.51	68.5	10	14	70	18	30		
0.76	2.5	19.80	1.19	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	8	0.121	0.121	1.20	0.72	1.70	31.8	2.36	68.2	13	14	55	29	31		
0.91	3.0	23.30	1.13	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	9	0.149	0.149	1.14	0.69	1.70	37.4	2.29	71.3	16	14	50	36	32		
1.07	3.5	23.30	1.03	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	9	0.176	0.176	1.04	0.69	1.70	37.4	2.26	68.8	16	14	50	36	32		
1.22	4.0	22.03	1.16	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	9	0.204	0.204	1.18	0.70	1.70	35.4	2.31	70.6	15	14	50	34	32		
1.37	4.5	22.00	1.46	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	9	0.231	0.231	1.47	0.72	1.70	35.3	2.37	77.7	15	16	55	34	32		
1.52	5.0	18.03	2.46	Clayey Silt to Silty Clay	ML/CL	medium dense	120	2.0	9	0.260	0.260	2.50	0.78	1.70	29.0	2.58	92.7	15	19	75	25	32		
1.68	5.5	10.33	4.16	Clay	CL/CH	stiff	120	1.0	10	0.290	0.290	4.28	0.88	1.70	16.6	2.91		10		100			0.59	10.4
1.83	6.0	9.63	4.45	Clay	CL/CH	stiff	120	1.0	10	0.320	0.320	4.60	0.90	1.70	15.5	2.96		10		100			0.55	8.7
1.98	6.5	34.47	1.02	Silty Sand to Sandy Silt	SM/ML	medium dense	120	3.0	11	0.350	0.350	1.03	0.65	1.70	55.4	2.12	82.8	19	17	40	52	33		
2.13	7.0	47.13	0.97	Silty Sand to Sandy Silt	SM/ML	medium dense	120	3.0	16	0.380	0.380	0.98	0.61	1.70	75.7	2.00	98.4	25	20	30	65	35		
2.29	7.5	57.33	1.04	Silty Sand to Sandy Silt	SM/ML	medium dense	120	3.0	19	0.410	0.410	1.04	0.59	1.70	92.1	1.95	114.2	30	23	30	73	36		
2.44	8.0	69.07	0.99	Sand to Silty Sand	SP/SM	medium dense	120	4.0	17	0.440	0.440	0.99	0.57	1.65	108.0	1.88	126.6	26	25	25	80	35		
2.59	8.5	93.97	0.92	Sand to Silty Sand	SP/SM	dense	120	4.0	23	0.470	0.454	0.92	0.54	1.58	140.4	1.78	152.9	35	31	20	91	37		
2.74	9.0	91.73	0.85	Sand to Silty Sand	SP/SM	dense	120	4.0	23	0.500	0.469	0.86	0.54	1.55	134.6	1.77	145.9	33	29	20	89	37		
2.90	9.5	89.70	1.00	Sand to Silty Sand	SP/SM	dense	120	4.0	22	0.530	0.483	1.00	0.56	1.55	131.1	1.82	147.2	32	29	20	88	37		
3.05	10.0	97.97	1.02	Sand to Silty Sand	SP/SM	dense	120	4.0	24	0.560	0.498	1.02	0.55	1.52	140.3	1.81	156.0	35	31	20	91	37		
3.20	10.5	104.80	0.89	Sand to Silty Sand	SP/SM	dense	120	4.0	26	0.590	0.512	0.90	0.54	1.48	146.2	1.76	157.2	37	31	20	93	38		
3.35	11.0	108.57	0.72	Sand	SP	medium dense	120	5.0	22	0.620	0.526	0.73	0.52	1.44	147.3	1.69	152.2	30	30	15	93	36		
3.51	11.5	112.40	0.81	Sand to Silty Sand	SP/SM	dense	120	4.0	28	0.650	0.541	0.82	0.52	1.42	151.1	1.72	158.6	38	32	15	94	38		
3.66	12.0	97.57	0.92	Sand to Silty Sand	SP/SM	dense	120	4.0	24	0.680	0.555	0.93	0.55	1.43	131.4	1.80	145.3	33	29	20	88	37		
3.81	12.5	85.50	0.94	Sand to Silty Sand	SP/SM	medium dense	120	4.0	21	0.710	0.570	0.95	0.56	1.42	114.6	1.85	131.3	28	26	20	82	36		
3.96	13.0	89.30	1.02	Sand to Silty Sand	SP/SM	medium dense	120	4.0	22	0.740	0.584	1.02	0.57	1.40	118.3	1.86	136.6	29	27	25	84	36		
4.11	13.5	125.27	0.77	Sand	SP	dense	120	5.0	25	0.770	0.598	0.77	0.51	1.34	158.7	1.68	163.0	32	33	15	96	37		
4.27	14.0	184.97	0.62	Sand	SP	dense	120	5.0	37	0.800	0.613	0.62	0.50	1.31	229.7	1.50	229.7	47	46	10	100	40		
4.42	14.5	194.60	0.54	Sand	SP	dense	120	5.0	39	0.830	0.627	0.54	0.50	1.30	238.9	1.45	238.9	49	48	5	100	40		
4.57	15.0	219.33	0.31	Sand	SP	very dense	120	5.0	44	0.860	0.642	0.32	0.50	1.28	266.2	1.27	266.2	55	53	0	100	41		
4.72	15.5	209.20	0.32	Sand	SP	very dense	120	5.0	42	0.890	0.656	0.32	0.50	1.27	251.1	1.29	251.1	52	50	0	100	41		
4.88	16.0	196.48	0.32	Sand	SP	dense	120	5.0	39	0.920	0.670	0.32	0.50	1.26	233.3	1.32	233.3	48	47	5	100	40		
5.03	16.5	114.07	0.38	Sand	SP	medium dense	120	5.0	23	0.950	0.685	0.38	0.50	1.24	134.0	1.57	134.0	28	27	10	89	35		
5.18	17.0	52.70	1.34	Silty Sand to Sandy Silt	SM/ML	medium dense	120	3.0	18	0.980	0.699	1.36	0.65	1.31	65.2	2.14	99.8	21	20	40	59	34		
5.33	17.5	47.13	2.52	Sandy Silt to Clayey Silt	ML	medium dense	120	2.5	19	1.010	0.714	2.57	0.72	1.33	59.1	2.35	126.1	22	25	55	55	34		
5.49	18.0	176.83	0.54	Sand	SP	dense	120	5.0	35	1.040	0.728	0.54	0.50	1.21	201.5	1.51	201.5	41	40	10	100	39		
5.64	18.5	201.80	1.67	Sand to Silty Sand	SP/SM	very dense	120	4.0	50	1.070	0.742	1.68	0.55	1.22	232.1	1.82	260.1	59	52	20	100	42		
5.79	19.0	262.90	1.01	Sand	SP	very dense	120	5.0	53	1.100	0.757	1.02	0.50	1.18	293.8	1.58	293.8	60	59	10	100	42		
5.94	19.5	208.90	0.29	Gravelly Sand to Sand	SW	dense	120	6.0	35	1.130	0.771	0.29	0.50	1.17	231.3	1.30	231.3	40	46	0	100	38		
6.10	20.0	87.83	1.00	Sand to Silty Sand	SP/SM	medium dense	120	4.0	22	1.160	0.786	1.01	0.58	1.19	98.8	1.92	119.2	25	24	25	76	35		
6.25	20.5	16.77	3.07	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	8	1.190	0.800	3.30	0.85	1.27	20.1	2.78		8		95			0.94	5.8
6.40	21.0	13.67	1.29	Sandy Silt to Clayey Silt	ML	stiff	120	2.5	5	1.220	0.814	1.42	0.81	1.24	16.0	2.65		5		80			0.76	4.6
6.55	21.5	13.10	2.00	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	7	1.250	0.829	2.21	0.85	1.23	15.2	2.77		7		95			0.72	4.3
6.71	22.0	8.30	2.60	Silty Clay to Clay	CL	firm	120	1.5	6	1.280	0.843	3.07	0.92	1.23	9.7	3.01		6		100			0.44	2.5
6.86	22.5	10.23	4.02	Clay	CL/CH	stiff	120	1.0	10	1.310	0.858	4.61	0.93	1.22	11.8	3.05		10		100			0.55	3.1
7.01	23.0	11.00	3.75	Clay	CL/CH	stiff	120	1.0	11	1.340	0.872	4.27	0.92	1.19	12.4	3.01		11		100			0.60	3.3
7.16	23.5	10.13	3.14	Silty Clay to Clay	CL	stiff	120	1.5	7	1.370	0.886	3.63	0.92	1.18	11.3	3.00		7		100			0.54	3.0
7.32	24.0	10.23	3.01	Silty Clay to Clay	CL	stiff	120	1.5	7	1.400	0.901	3.48	0.92	1.16	11.2	2.99		7		100			0.55	2.9
7.47	24.5	34.80	2.00	Sandy Silt to Clayey Silt	ML	medium dense	120	2.5	14	1.430	0.915	2.09	0.75	1.11	36.6	2.45	92.6	15	19	65	35	32		

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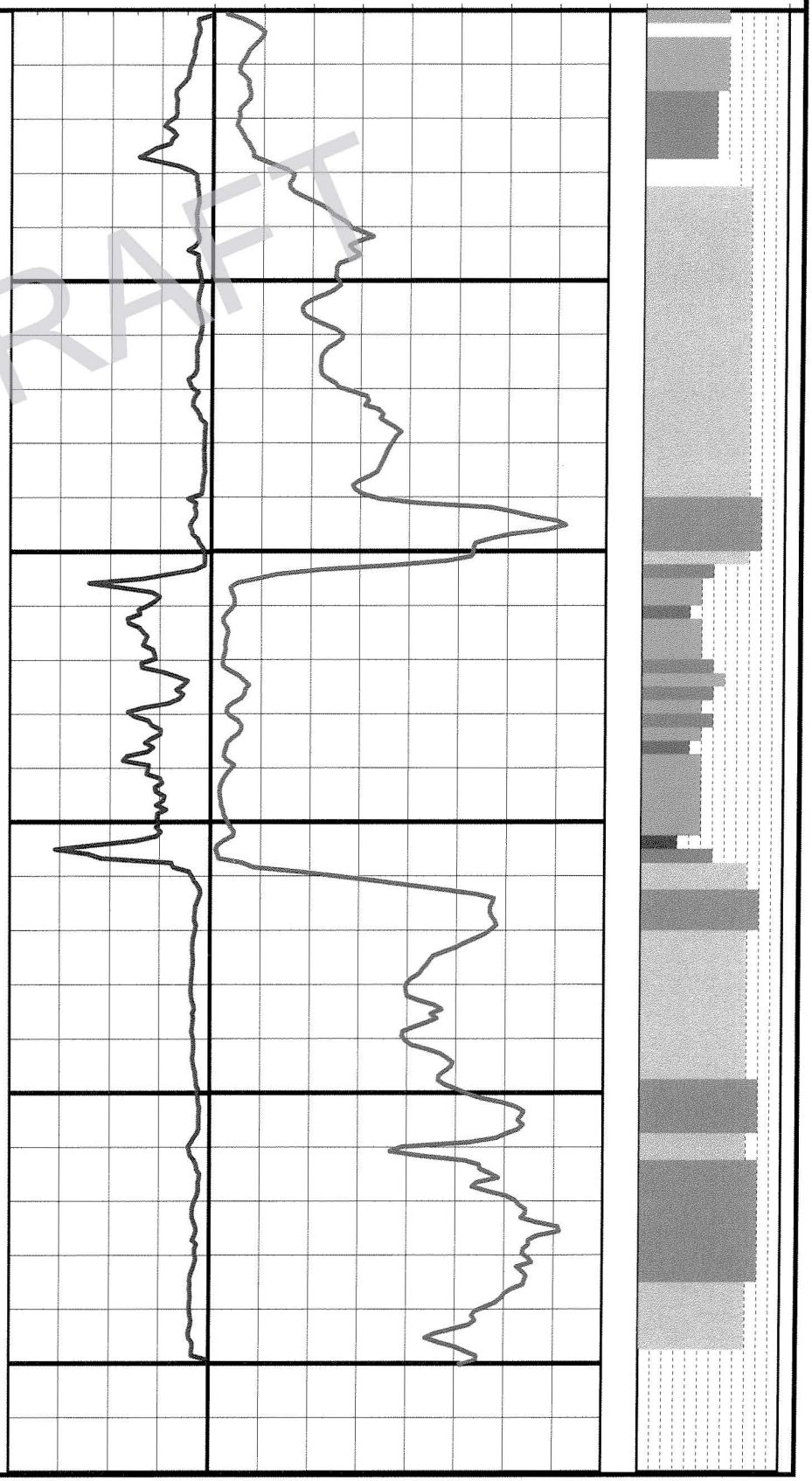
Earth Systems
Southern California

CPT No: CPT-5
Project Name: Oxnard College Park
Project No.: VT-23965-01
Location: See Site Exploration Plan

CPT Vendor: **Kehoe Testing and Engineering**
Truck Mounted Electric
Cone with 30-ton reaction
Date: 6/18/2007

DEPTH (FEET)	Interpreted Soil Stratigraphy Robertson & Campanella ('89)	Density/Consistency
	Sand to Silty Sand	medium dense
	Silty Sand to Sandy Silt	medium dense
	Silty Sand to Sandy Silt	medium dense
	Sandy Silt to Clayey Silt	medium dense
	Sandy Silt to Clayey Silt	medium dense
5	Silty Sand to Sandy Silt	dense
	Sand to Silty Sand	dense
	Sand	dense
	Sand	dense
	Sand	dense
10	Sand	medium dense
	Sand	dense
	Sand	medium dense
	Sand	dense
	Sand	dense
15	Sand	dense
	Sand	dense
	Sand	dense
	Gravelly Sand to Sand	very dense
	Gravelly Sand to Sand	very dense
20	Silty Sand to Sandy Silt	dense
	Clayey Silt to Silty Clay	very stiff
	Clayey Silt to Silty Clay	stiff
	Clayey Silt to Silty Clay	stiff
	Sandy Silt to Clayey Silt	medium dense
25	Sandy Silt to Clayey Silt	very stiff
	Sandy Silt to Clayey Silt	very stiff
	Clayey Silt to Silty Clay	stiff
	Clayey Silt to Silty Clay	firm
	Clayey Silt to Silty Clay	stiff
30	Clay	stiff
	Silty Sand to Sandy Silt	medium dense
	Gravelly Sand to Sand	dense
	Gravelly Sand to Sand	dense
	Sand	dense
35	Sand	dense
	Sand	dense
	Sand	dense
	Sand	dense
	Gravelly Sand to Sand	dense
40	Gravelly Sand to Sand	dense
	Sand	dense
	Gravelly Sand to Sand	dense
	Gravelly Sand to Sand	dense
	Gravelly Sand to Sand	dense
45	Gravelly Sand to Sand	dense
	Gravelly Sand to Sand	dense
	Sand	dense
	Sand	dense
50		

End of Sounding @ 50.2 feet



DRAFT

Earth Systems
Southern California

CONE PENETROMETER INTERPRETATION

(based on Robertson & Campanella, 1989)

Project: Oxnard College Park — Project No: VT-23965-01 — Date: 06/18/07

CPT SOUNDING: CPT-5 Plot: 1 — Density: 1 SPT N — Program developed 2003 by Shelton L. Stringer, GE, Earth Systems Southwest

Est. GWT (feet): **8.5** — Dr correlation: 0 Baldi — Qc/N: 1 Robertson — Phi Correlation: 4 SPT N

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	Soil Classification	USCS	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Total po tsf	p'o tsf	F	n	Cq	Norm. Qc1n	2.6 Ic	Clean Sand Qc1n	$N_{1(60)}$	Clean Sand $N_{1(60)}$	Est. % Fines	Rel. Dens. Dr (%)	Phi (deg.)	Nk: 17 Su (tsf)	OCR
0.15	0.5	36.77	0.57	Silty Sand to Sandy Silt	SM/ML	medium dense	110	3.0	12	0.014	0.014	0.57	0.60	1.70	59.1	1.96	73.7	21	15	30	55	33		
0.30	1.0	47.73	0.61	Sand to Silty Sand	SP/SM	medium dense	100	4.0	12	0.040	0.040	0.61	0.57	1.70	76.7	1.88	89.6	20	18	25	66	33		
0.46	1.5	35.90	0.72	Silty Sand to Sandy Silt	SM/ML	medium dense	110	3.0	12	0.066	0.066	0.72	0.61	1.70	57.7	2.02	76.5	20	15	30	54	33		
0.61	2.0	27.53	0.85	Silty Sand to Sandy Silt	SM/ML	medium dense	110	3.0	9	0.094	0.094	0.85	0.66	1.70	44.2	2.16	69.4	16	14	40	43	32		
0.76	2.5	30.30	1.00	Silty Sand to Sandy Silt	SM/ML	medium dense	110	3.0	10	0.121	0.121	1.01	0.66	1.70	48.7	2.16	76.9	17	15	40	47	32		
0.91	3.0	35.37	1.40	Silty Sand to Sandy Silt	SM/ML	medium dense	110	3.0	12	0.149	0.149	1.41	0.67	1.70	56.8	2.19	94.0	20	19	45	53	33		
1.07	3.5	31.10	1.43	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	12	0.176	0.176	1.44	0.68	1.70	50.0	2.24	89.0	21	18	45	48	34		
1.22	4.0	24.67	1.56	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	10	0.204	0.204	1.57	0.71	1.70	39.6	2.35	83.6	17	17	55	38	32		
1.37	4.5	26.13	1.64	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	10	0.231	0.231	1.65	0.71	1.70	42.0	2.34	87.6	18	18	55	41	33		
1.52	5.0	34.27	1.85	Sandy Silt to Clayey Silt	ML	medium dense	110	2.5	14	0.259	0.259	1.86	0.69	1.70	55.1	2.28	104.3	23	21	50	52	34		
1.68	5.5	47.95	2.23	Sandy Silt to Clayey Silt	ML	dense	120	2.5	19	0.288	0.288	2.24	0.68	1.70	77.0	2.23	134.4	33	27	45	66	37		
1.83	6.0	78.07	0.71	Sand to Silty Sand	SP/SM	dense	120	4.0	20	0.318	0.318	0.72	0.53	1.70	125.4	1.74	133.8	33	27	15	86	37		
1.98	6.5	77.97	0.57	Sand to Silty Sand	SP/SM	dense	120	4.0	19	0.348	0.348	0.58	0.51	1.70	125.3	1.69	128.9	33	26	15	86	37		
2.13	7.0	99.57	0.54	Sand	SP	dense	120	5.0	20	0.378	0.378	0.55	0.50	1.67	157.5	1.59	157.5	32	32	10	96	37		
2.29	7.5	122.03	0.61	Sand	SP	dense	120	5.0	24	0.408	0.408	0.61	0.50	1.61	185.9	1.57	185.9	38	37	10	100	38		
2.44	8.0	141.97	0.60	Sand	SP	dense	120	5.0	28	0.438	0.438	0.60	0.50	1.56	208.7	1.52	208.7	43	42	10	100	39		
2.59	8.5	149.00	0.57	Sand	SP	dense	120	5.0	30	0.468	0.468	0.57	0.50	1.50	211.9	1.51	211.9	44	42	10	100	39		
2.74	9.0	143.33	0.68	Sand	SP	dense	120	5.0	29	0.498	0.482	0.68	0.50	1.48	200.7	1.57	200.7	41	40	10	100	39		
2.90	9.5	125.33	0.52	Sand	SP	dense	120	5.0	25	0.528	0.496	0.52	0.50	1.46	173.0	1.55	173.0	36	35	10	100	37		
3.05	10.0	126.50	0.43	Sand	SP	dense	120	5.0	25	0.558	0.511	0.43	0.50	1.44	172.1	1.50	172.1	35	34	10	99	37		
3.20	10.5	112.70	0.50	Sand	SP	dense	120	5.0	23	0.588	0.525	0.51	0.50	1.42	151.2	1.59	151.2	31	30	10	94	36		
3.35	11.0	91.23	0.51	Sand	SP	medium dense	120	5.0	18	0.618	0.540	0.52	0.51	1.41	121.6	1.67	123.8	25	25	15	85	35		
3.51	11.5	104.00	0.41	Sand	SP	medium dense	120	5.0	21	0.648	0.554	0.41	0.50	1.38	135.9	1.58	135.9	28	27	10	90	35		
3.66	12.0	128.87	0.44	Sand	SP	dense	120	5.0	26	0.678	0.568	0.44	0.50	1.36	166.2	1.52	166.2	34	33	10	98	37		
3.81	12.5	117.90	0.57	Sand	SP	dense	120	5.0	24	0.708	0.583	0.57	0.50	1.35	150.2	1.62	150.2	31	30	10	94	36		
3.96	13.0	109.20	0.58	Sand	SP	medium dense	120	5.0	22	0.738	0.597	0.59	0.51	1.34	137.9	1.66	139.1	28	28	15	90	36		
4.11	13.5	111.60	0.72	Sand	SP	medium dense	120	5.0	22	0.768	0.612	0.73	0.52	1.33	140.5	1.71	146.6	29	29	15	91	36		
4.27	14.0	131.37	0.71	Sand	SP	dense	120	5.0	26	0.798	0.626	0.71	0.51	1.30	161.9	1.66	163.1	33	33	15	97	37		
4.42	14.5	156.17	0.70	Sand	SP	dense	120	5.0	31	0.828	0.640	0.70	0.50	1.29	189.7	1.60	189.7	39	38	10	100	38		
4.57	15.0	170.60	0.48	Sand	SP	dense	120	5.0	34	0.858	0.655	0.49	0.50	1.27	205.0	1.47	205.0	42	41	5	100	39		
4.72	15.5	184.57	0.25	Sand	SP	dense	120	5.0	37	0.888	0.669	0.25	0.50	1.26	219.4	1.28	219.4	45	44	0	100	40		
4.88	16.0	181.93	0.28	Sand	SP	dense	120	5.0	36	0.918	0.684	0.28	0.50	1.24	213.9	1.32	213.9	44	43	5	100	39		
5.03	16.5	173.63	0.28	Sand	SP	dense	120	5.0	35	0.948	0.698	0.28	0.50	1.23	202.1	1.34	202.1	42	40	5	100	39		
5.18	17.0	165.10	0.28	Sand	SP	dense	120	5.0	33	0.978	0.712	0.28	0.50	1.22	190.2	1.36	190.2	39	38	5	100	38		
5.33	17.5	145.40	0.34	Sand	SP	dense	120	5.0	29	1.008	0.727	0.35	0.50	1.21	165.8	1.46	165.8	34	33	5	98	37		
5.49	18.0	176.73	0.63	Sand	SP	dense	120	5.0	35	1.038	0.741	0.63	0.50	1.19	199.6	1.55	199.6	41	40	10	100	39		
5.64	18.5	303.53	0.61	Gravelly Sand to Sand	SW	very dense	120	6.0	51	1.068	0.756	0.62	0.50	1.18	339.5	1.38	339.5	58	68	5	100	42		
5.79	19.0	349.27	0.78	Gravelly Sand to Sand	SW	very dense	120	6.0	58	1.098	0.770	0.78	0.50	1.17	387.0	1.42	387.0	66	77	5	100	43		
5.94	19.5	284.00	0.57	Gravelly Sand to Sand	SW	very dense	120	6.0	47	1.128	0.784	0.57	0.50	1.16	311.8	1.38	311.8	53	62	5	100	41		
6.10	20.0	264.60	0.28	Gravelly Sand to Sand	SW	dense	120	6.0	44	1.158	0.799	0.28	0.50	1.15	287.8	1.21	287.8	49	58	0	100	40		
6.25	20.5	178.43	0.38	Sand	SP	dense	120	5.0	36	1.188	0.813	0.38	0.50	1.14	192.4	1.43	192.4	40	38	5	100	38		
6.40	21.0	45.90	3.09	Sandy Silt to Clayey Silt	ML	medium dense	120	2.5	18	1.218	0.828	3.17	0.75	1.20	52.1	2.46	133.4	20	27	65	50	33		
6.55	21.5	20.00	2.64	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.0	10	1.248	0.842	2.81	0.82	1.21	22.8	2.69		10		85			1.13	6.7
6.71	22.0	21.00	2.51	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.0	11	1.278	0.856	2.68	0.81	1.19	23.6	2.67		11		85			1.18	6.9
6.86	22.5	12.33	3.13	Silty Clay to Clay	CL	stiff	120	1.5	8	1.308	0.871	3.50	0.89	1.19	13.9	2.92		8		100			0.67	3.8
7.01	23.0	15.40	2.68	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	8	1.338	0.885	2.94	0.86	1.16	17.0	2.81		8		100			0.85	4.8
7.16	23.5	13.47	2.53	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	7	1.368	0.900	2.81	0.87	1.15	14.7	2.85		7		100			0.74	4.0
7.32	24.0	11.37	2.39	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	6	1.398	0.914	2.72	0.89	1.14	12.2	2.90		6		100			0.61	3.3
7.47	24.5	19.83	2.01	Sandy Silt to Clayey Silt	ML	very stiff	120	2.5	8	1.428	0.928	2.17	0.81	1.11	20.8	2.65		8		80			1.11	5.9
7.62	25.0	34.33	1.11	Silty Sand to Sandy Silt	SM/ML	medium dense	120	3.0	11	1.458	0.943	1.16	0.70	1.08	35.2	2.31	70.0	12	14	50	34	31		
7.77	25.5	27.80	1.32	Sandy Silt to Clayey Silt	ML	medium dense	120	2.5	11	1.488	0.957	1.39	0.74	1.08	28.3	2.44	69.7	11	14	60	24	30		
7.92	26.0	16.43	2.99	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	8	1.518	0.972	3.29	0.87	1.08	16.7	2.84		8		100			0.91	4.6
8.08	26.5	28.08	2.18	Sandy Silt to Clayey Silt	ML	medium dense	120	2.5	11	1.548	0.986	2.31	0.78	1.06	28.0	2.57	88.0	11	18	75	24	30		
8.23	27.0	16.77	2.41	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	8	1.578	1.000	2.66	0.85	1.05	16.6	2.79		8		95			0.93	4.6
8.38	27.5	13.63	3.10	Silty Clay to Clay	CL	stiff	120	1.5	9	1.608	1.015	3.52	0.90	1.04	13.4	2.93		9		100			0.74	3.6
8.53	28.0	18.80	2.49	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.0	9	1.638	1.029	2.73	0.84	1.02	18.2	2.76		9		95			1.05	5.0
8.69	28.5	10.07	2.03	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	5	1.668	1.044	2.44	0.91	1.01	9.6	2.96		5		100			0.53	2.4
8.84	29.0	8.43	1.94	Clayey Silt to Silty Clay	ML/CL	firm	120	2.0	4	1.698	1.058	2.43	0.93	1.00	8.0	3.03		4		100			0.43	1.9
8.99	29.5	10.90	2.00	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	5	1.728	1.072	2.37	0.90	0.99	10.2	2.93		5		100			0.58	2.6
9.14	30.0	16.73	2.09	Clayey Silt to Silty Clay	ML/CL	stiff	120	2.0	8	1.758	1.087	2.34	0.85	0.98	15.5	2.78		8		95			0.92	4.1
9.30	30.5	18.87	2.34	Clayey Silt to Silty Clay	ML/CL	very stiff	120	2.0	9	1.788	1.101	2.59	0.84	0.97	17.2	2.77		9		95			1.05	4.7
9.45	31.0	5.57	5.27	Clay	CL/CH	firm	120	1.0	6	1.818	1.116	7.82	1.00	0.95	5.0	3.49		6		100			0.26	1.0
9.60	31.5	26.47	2.45	Sandy Silt to Clayey Silt	ML	very stiff	120	2.5	11	1.848	1.130	2.64	0.81	0.95	23.7	2.66		11		80			1.49	6.5
9.75	32.0	126.10	0.72	Sand	SP	medium dense	120	5.0	25	1.878	1.144	0.73	0.54	0.96	114.2	1.78	124.8	24	25	20	82	34		
9.91	32.5	233.87	0.43	Sand	SP	dense	120	5.0	47	1.908	1.159	0.43	0.50	0.96	211.2	1.43	211.2	43	42	5	100	39		
10.06	33.0	285.93	0.51	Gravelly Sand to Sand	SW	dense	120	6.0	48	1.938	1.173	0.51	0.50	0.95	256.7	1.41	256.7	44	51	5	100	39		
10.21	33.5	285.87	0.60	Gravelly Sand to Sand	SW	dense	120	6.0	48	1.968	1.188	0.60	0.50	0.94	255.0	1.46	255.0	44	51	5	100	39		
10.36	34.0	284.80	0.57	Gravelly Sand to Sand	SW	dense	120	6.0	47	1.998	1.202	0.58	0.50	0.94	252.6	1.45	252.6	43	51	5	100	39		
10.52	34.5	259.27	0.67	Sand	SP	dense	120	5.0	52	2.028	1.216	0.68	0.50	0.93	228.6	1.53	228.6	47	46	10	100	40		
10.67	35.0	228.63	0.67	Sand	SP	dense	120	5.0	46	2.058	1.231	0.68	0.50	0.93	200.4	1.57	200.4	41	40	10	100	39		
10.82	35.5	215.27	0.69	Sand	SP	dense	120	5.0	43	2.088	1.245	0.70	0.50	0.92	187.6	1.60	187.6	39	38	10	100	38		
10.97	36.0	200.47	0.73	Sand	SP	dense	120	5.0	40	2.118	1.260	0.74	0.50	0.92	173.6	1.64	173.3	36	35	15	100	37		
11.13	36.5	209.05	0.70	Sand	SP	dense	120	5.0	42	2.148	1.274	0.71	0.50	0.91	180.1	1.62	180.1	37	36	10	100	38		
11.28	37.0	229.60	0.64	Sand	SP	dense	120	5.0	46	2.178	1.288	0.65	0.50	0.91	196.7	1.56	196.7	40	39	10	100	39		
11.43	37.5	207.33	0.69	Sand	SP	dense	120	5.0	41	2.208	1.303	0.70	0.50	0.90	176.6	1.62	176.6	36	35	10	100	38		

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Earth Systems
Southern California

CONE PENETROMETER INTERPRETATION

(based on Robertson & Campanella, 1989)

Project: Oxnard College Park

Project No: VT-23965-01

Date: 06/18/07

CPT SOUNDING: CPT-5 Plot: 1 Density: 1 SPT N Program developed 2003 by Shelton L. Stringer, GE, Earth Systems Southwest

Est. GWT (feet): **8.5** Dr correlation: 0 Baldi Qc/N: 1 Robertson Phi Correlation: 4 SPT N

Base Depth meters	Base Depth feet	Avg Tip Qc, tsf	Avg Friction Ratio, %	Soil Classification	USCS	Density or Consistency	Est. Density (pcf)	Qc to N	SPT N(60)	Total po tsf	p'o tsf	F	n	Cq	Norm. Qc1n	2.6 Ic	Clean Sand Qc1n	$N_{1(60)}$	Clean Sand $N_{1(60)}$	Est. % Fines	Rel. Dens. Dr (%)	Phi (deg.)	Nk: 17 Su (tsf)	OCR
11.58	38.0	198.97	0.64	Sand	SP	dense	120	5.0	40	2.238	1.317	0.65	0.50	0.90	168.5	1.62	168.5	35	34	10	98	37		
11.73	38.5	231.97	0.65	Sand	SP	dense	120	5.0	46	2.268	1.332	0.66	0.50	0.89	195.4	1.57	195.4	40	39	10	100	39		
11.89	39.0	243.00	0.61	Sand	SP	dense	120	5.0	49	2.298	1.346	0.62	0.50	0.89	203.6	1.54	203.6	42	41	10	100	39		
12.04	39.5	234.30	0.53	Sand	SP	dense	120	5.0	47	2.328	1.360	0.54	0.50	0.88	195.3	1.51	195.3	40	39	10	100	39		
12.19	40.0	262.83	0.45	Gravelly Sand to Sand	SW	dense	120	6.0	44	2.358	1.375	0.45	0.50	0.88	217.9	1.43	217.9	37	44	5	100	38		
12.34	40.5	309.20	0.42	Gravelly Sand to Sand	SW	dense	120	6.0	52	2.388	1.389	0.42	0.50	0.87	255.1	1.36	255.1	44	51	5	100	39		
12.50	41.0	316.10	0.42	Gravelly Sand to Sand	SW	dense	120	6.0	53	2.418	1.404	0.42	0.50	0.87	259.4	1.35	259.4	44	52	5	100	39		
12.65	41.5	302.37	0.50	Gravelly Sand to Sand	SW	dense	120	6.0	50	2.448	1.418	0.51	0.50	0.86	246.9	1.42	246.9	42	49	5	100	39		
12.80	42.0	213.83	0.77	Sand	SP	dense	120	5.0	43	2.478	1.432	0.78	0.51	0.86	173.3	1.66	175.2	36	35	15	100	37		
12.95	42.5	248.57	0.62	Sand	SP	dense	120	5.0	50	2.508	1.447	0.62	0.50	0.86	200.9	1.55	200.9	41	40	10	100	39		
13.11	43.0	284.73	0.42	Gravelly Sand to Sand	SW	dense	120	6.0	47	2.538	1.461	0.42	0.50	0.85	229.0	1.40	229.0	39	46	5	100	38		
13.26	43.5	273.80	0.42	Gravelly Sand to Sand	SW	dense	120	6.0	46	2.568	1.476	0.43	0.50	0.85	219.1	1.41	219.1	38	44	5	100	38		
13.41	44.0	308.83	0.55	Gravelly Sand to Sand	SW	dense	120	6.0	51	2.598	1.490	0.56	0.50	0.84	246.0	1.45	246.0	42	49	5	100	39		
13.56	44.5	319.73	0.67	Gravelly Sand to Sand	SW	dense	120	6.0	53	2.628	1.504	0.67	0.50	0.84	253.4	1.50	253.4	43	51	10	100	39		
13.72	45.0	347.50	0.54	Gravelly Sand to Sand	SW	dense	120	6.0	58	2.658	1.519	0.55	0.50	0.83	274.1	1.41	274.1	47	55	5	100	40		
13.87	45.5	327.33	0.57	Gravelly Sand to Sand	SW	dense	120	6.0	55	2.688	1.533	0.57	0.50	0.83	257.0	1.44	257.0	44	51	5	100	39		
14.02	46.0	320.73	0.55	Gravelly Sand to Sand	SW	dense	120	6.0	53	2.718	1.548	0.55	0.50	0.83	250.7	1.44	250.7	43	50	5	100	39		
14.17	46.5	319.70	0.61	Gravelly Sand to Sand	SW	dense	120	6.0	53	2.748	1.562	0.61	0.50	0.82	248.7	1.47	248.7	43	50	5	100	39		
14.33	47.0	317.45	0.75	Gravelly Sand to Sand	SW	dense	120	6.0	53	2.778	1.576	0.75	0.50	0.82	245.8	1.54	245.8	42	49	10	100	39		
14.48	47.5	296.67	0.74	Sand	SP	dense	120	5.0	59	2.808	1.591	0.75	0.50	0.82	228.7	1.56	228.7	47	46	10	100	40		
14.63	48.0	272.87	0.75	Sand	SP	dense	120	5.0	55	2.838	1.605	0.76	0.50	0.81	209.4	1.59	209.4	43	42	10	100	39		
14.78	48.5	261.03	0.72	Sand	SP	dense	120	5.0	52	2.868	1.620	0.73	0.50	0.81	199.4	1.59	199.4	41	40	10	100	39		
14.94	49.0	227.47	0.74	Sand	SP	dense	120	5.0	45	2.898	1.634	0.75	0.50	0.80	172.7	1.65	173.0	36	35	15	100	37		
15.09	49.5	261.27	0.66	Sand	SP	dense	120	5.0	52	2.928	1.648	0.67	0.50	0.80	197.8	1.57	197.8	41	40	10	100	39		

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Additionally, hydrometer analyses were performed to assess the distribution of the particles that passed the No. 200 screen. The hydrometer portions of the tests were run using sodium hexametaphosphate as a dispersing agent.

H. Resistance ("R") Value tests were conducted on bulk samples secured during the field study. The tests were performed in accordance with California Method 301. Three specimens at different moisture contents were tested for each sample, and the R-Value at 300 psi exudation pressure was determined from the plotted results.

I. Portions of the bulk samples were sent to another laboratory for analyses of soil pH, resistivity, chloride contents, and sulfate contents. Soluble chloride and sulfate contents were determined on a dry weight basis. Resistivity testing was performed in accordance with California Test Method 424, wherein the ratio of soil to water was 1:3.

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TABULATED LABORATORY TEST RESULTS

	REMOLDED SAMPLES		
BORING AND DEPTH	B-1 @ 0-5'	B-2 @ 0-5'	B-5 @ 0-5'
USCS	SM	SM	ML/CL
MAXIMUM DENSITY (pcf)	116.0	120.0	115.5
OPTIMUM MOISTURE (%)	12.5	9.0	13.0
COHESION (psf)	150* 0**	140* 0**	0* 0**
ANGLE OF INTERNAL FRICTION	28°* 30°**	31°* 32°**	29°* 30°**
EXPANSION INDEX	46	4	78
pH	7.1	7.5	7.3
SOLUBLE CHLORIDES (mg/Kg)	0	0	29
RESISTIVITY (OHMs/cm)	830	5,560	1,670
SOLUBLE SULFATES (mg/Kg)	2,080	69	630
GRAIN SIZE DISTRIBUTION (%)			
GRAVEL	0.4	0.4	0.3
SAND	56.1	50.2	28.1
SILT	28.4	45.2	42.6
CLAY	15.1	4.2	29.0

* = Peak Strength Values; ** = Ultimate Strength Values

BORING AND DEPTH	B-9 @ 0-5'	B-11 @ 0-3'	B-25 @ 0-5'
USCS	SM	ML	ML
RESISTANCE ("R") VALUE	10	21	18

TABULATED LABORATORY TEST RESULTS (Continued)

REMOLDED SAMPLES

BORING AND DEPTH	B-1 @ 9'	B-1 @ 15'	B-1 @21'
USCS	SP/SM	SW	ML
GRAIN SIZE DISTRIBUTION (%)			
GRAVEL	0.0	11.6	0.0
SAND	90.1	86.3	13.2
SILT	8.6	2.1	62.9
CLAY	1.3	0.0	23.9

BORING AND DEPTH	B-1 @ 25'	B-1 @ 30'	B-1 @ 35'
USCS	ML	ML	SP/SM
GRAIN SIZE DISTRIBUTION (%)			
GRAVEL	0.0	0.5	0.0
SAND	27.6	34.6	89.8
SILT	61.1	54.3	10.2
CLAY	11.3	10.6	0.0

BORING AND DEPTH	B-1 @ 40'	B-1 @ 45'	B-1 @ 50'
USCS	SP/SW	SP/SM	ML
GRAIN SIZE DISTRIBUTION (%)			
GRAVEL	0.3	0.2	0.0
SAND	95.3	90.6	43.6
SILT	4.4	8.8	49.9
CLAY	0.0	0.4	6.5

BORING AND DEPTH	B-2 @ 10'	B-2 @ 21'	B-2 @ 26'	B-2 @ 40'
USCS	SW	ML	ML	SP
GRAIN SIZE DISTRIBUTION (%)				
GRAVEL	8.4	0.0	0.0	0.1
SAND	89.8	17.7	18.1	92.4
SILT	1.8	62.7	59.2	7.5
CLAY	0.0	19.6	22.7	0.0

BORING AND DEPTH	B-5 @ 11'	B-5 @ 15'	B-5 @ 21'	B-5 @ 23'
USCS	SW	SW	SW	ML
GRAIN SIZE DISTRIBUTION (%)				
GRAVEL	0.3	11.4	12.4	0.0
SAND	95.3	86.8	80.5	41.4
SILT	4.4	1.8	6.0	45.0
CLAY	0.0	0.0	1.1	13.6

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TABULATED LABORATORY TEST RESULTS (Continued)

REMOLDED SAMPLES

BORING AND DEPTH	B-5 @ 25'	B-5 @ 30'	B-5 @ 35'	B-5 @ 40'
USCS	ML	ML	SP	SW
GRAIN SIZE DISTRIBUTION (%)				
GRAVEL	0.0	0.4	0.1	2.1
SAND	47.7	40.3	96.3	94.7
SILT	39.9	50.5	3.6	3.2
CLAY	12.4	8.8	0.0	0.0

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RELATIVELY UNDISTURBED SAMPLES

BORING AND DEPTH	B-4 @ 4'	B-4 @ 6'
USCS	SM	SP
IN-PLACE DENSITY (pcf)	95.8	94.4
IN-PLACE MOISTURE (%)	6.6	6.6
COHESION (psf)	0* 0**	0* 120**
ANGLE OF INTERNAL FRICTION	35°* 30°**	34°* 28°**

BORING AND DEPTH	B-12 @ 4'	B-13 @ 6'
USCS	ML	SM
IN-PLACE DENSITY (pcf)	92.7	94.0
IN-PLACE MOISTURE (%)	23.5	21.1
COHESION (psf)	290* 90**	120* 0**
ANGLE OF INTERNAL FRICTION	26°* 28°**	35°* 32°**

BORING AND DEPTH	B-15 @ 4'	B-16 @ 6'
USCS	ML	SM
IN-PLACE DENSITY (pcf)	95.2	110.1
IN-PLACE MOISTURE (%)	24.2	6.6
COHESION (psf)	0* 0**	360* 170**
ANGLE OF INTERNAL FRICTION	30°* 30°**	25°* 26°**

BORING AND DEPTH	B-18 @ 4'	B-23 @ 4'
USCS	SM/SW	SM
IN-PLACE DENSITY (pcf)	113.8	99.7
IN-PLACE MOISTURE (%)	12.8	22.1
COHESION (psf)	240* 90**	300* 0**
ANGLE OF INTERNAL FRICTION	34°* 29°**	30°* 31°**

* = Peak Strength Values; ** = Ultimate Strength Values

TABULATED LABORATORY TEST RESULTS (Continued)

IN-PLACE DENSITIES

BORING & DEPTH		DRY DENSITY	% MOISTURE	RELATIVE COMPACTION
B-1 @	2'	91.0	25.1	78
	5'	88.3	31.1	--
	9'	101.7	23.6	--
B-2 @	2'	91.9	10.4	77
	7'	100.6	20.4	--
B-3 @	2'	92.1	16.8	77
	4'	90.8	30.3	--
	6'	105.1	3.9	--
B-4 @	2'	97.6	8.8	81
	4'	95.8	6.6	80
	6'	94.4	6.6	--
B-5 @	2'	90.6	25.5	78
	5'	101.8	25.3	--
B-6 @	2'	101.8	8.8	85
	4'	103.6	13.4	86
	6'	99.4	9.7	--
B-7 @	2'	95.1	5.4	79
	4'	90.3	13.0	--
	6'	93.4	5.2	--
B-8 @	2'	99.6	8.4	83
	4'	95.9	16.7	80
	6'	97.5	6.2	--
B-9 @	2'	88.2	15.7	74
	4'	113.0	8.9	94
B-10 @	2'	87.2	20.2	75
	4'	86.4	35.5	75
B-11 @	2'	84.9	31.4	74
	4'	90.8	26.4	79

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TABULATED LABORATORY TEST RESULTS (Continued)

IN-PLACE DENSITIES

BORING & DEPTH	DRY DENSITY	% MOISTURE	RELATIVE COMPACTION
B-12 @ 2'	89.6	11.5	75
4'	92.7	23.5	77
6'	97.3	15.8	--
B-13 @ 2'	88.4	22.2	76
4'	91.5	30.7	--
6'	94.0	21.1	--
B-14 @ 2'	98.5	9.8	85
4'	93.8	27.4	--
6'	100.3	13.4	--
B-15 @ 2'	92.9	11.0	80
4'	95.2	24.2	--
6'	91.8	24.1	--
B-16 @ 2'	99.8	7.6	83
4'	92.1	21.2	--
6'	110.1	6.6	--
B-17 @ 2'	103.9	4.8	87
4'	88.2	9.4	--
6'	85.0	33.4	--
B-18 @ 2'	92.1	22.7	80
4'	113.8	12.8	--
6'	110.8	15.5	--
B-19 @ 2'	88.7	14.8	77
B-20 @ 2'	92.8	21.2	80
4'	90.5	32.1	78
B-21 @ 2'	96.6	23.8	84
4'	90.9	30.0	79

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TABULATED LABORATORY TEST RESULTS (Continued)

IN-PLACE DENSITIES

BORING & DEPTH	DRY DENSITY	% MOISTURE	RELATIVE COMPACTION
B-22 @ 2'	96.1	26.4	83
4'	103.0	18.0	--
B-23 @ 2'	97.8	13.5	82
4'	99.7	22.1	86
6'	96.2	10.7	80
B-24 @ 2'	104.7	9.0	91
4'	100.7	18.1	87
6'	95.4	26.1	83
10'	108.1	19.6	94
B-25 @ 2'	94.0	9.9	81
4'	84.3	36.6	73
B-26 @ 2'	100.1	14.0	87
4'	90.5	28.4	78
6'	94.8	27.9	82

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VT-23965-01

MAXIMUM DENSITY / OPTIMUM MOISTURE

ASTM D 1557-91 (Modified)

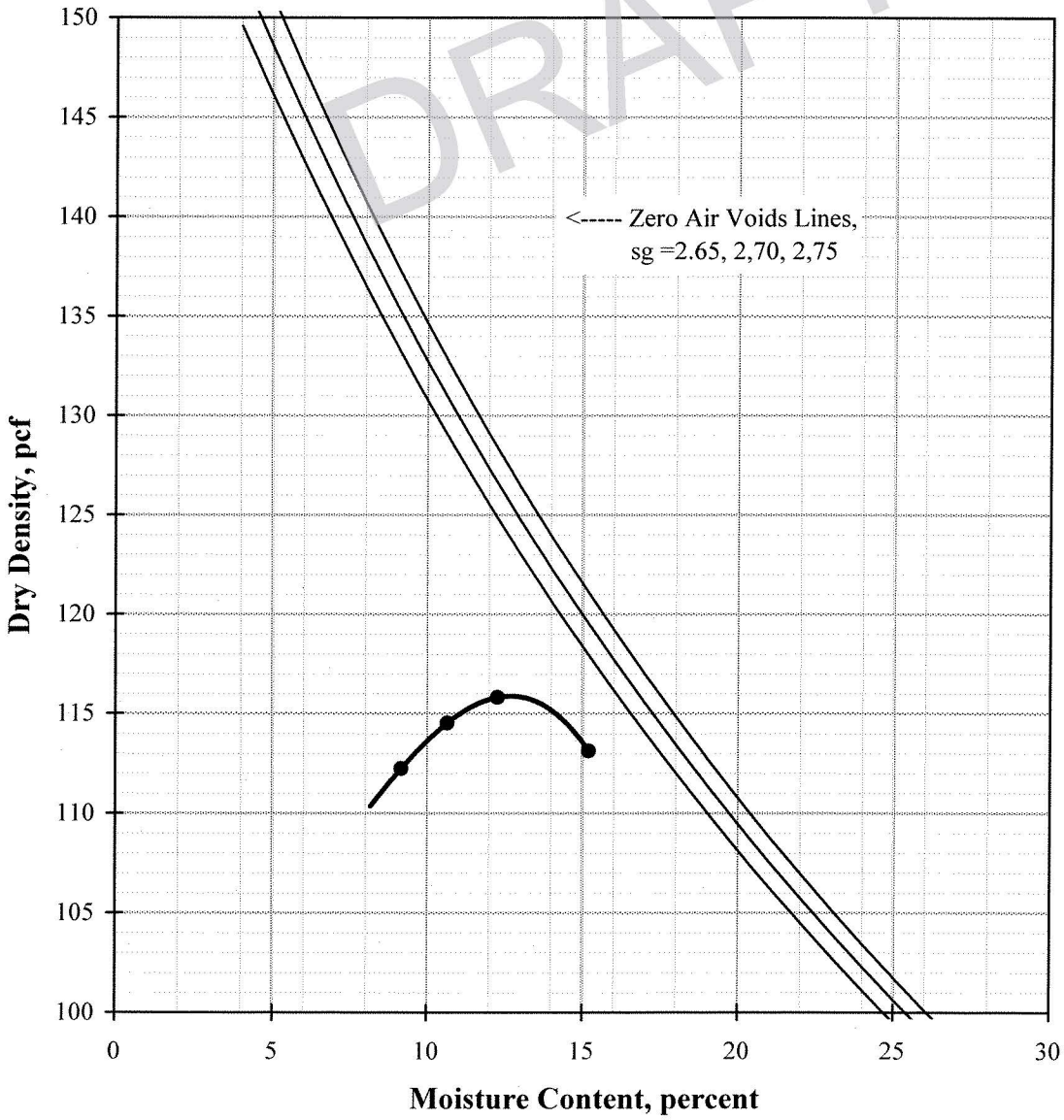
Job Name: Oxnard Collele Park
Sample ID: B 1 @ 0-5
Location: 0-5
Description: Yellowish Brown Sandy Silt

Procedure Used: A
Prep. Method: Moist
Rammer Type: Automatic

Maximum Density: **116 pcf**
Optimum Moisture: **12.5%**

Sieve Size	% Retained
3/4"	0.0
3/8"	0.0
#4	0.1

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VT-23965-01

MAXIMUM DENSITY / OPTIMUM MOISTURE

ASTM D 1557-91 (Modified)

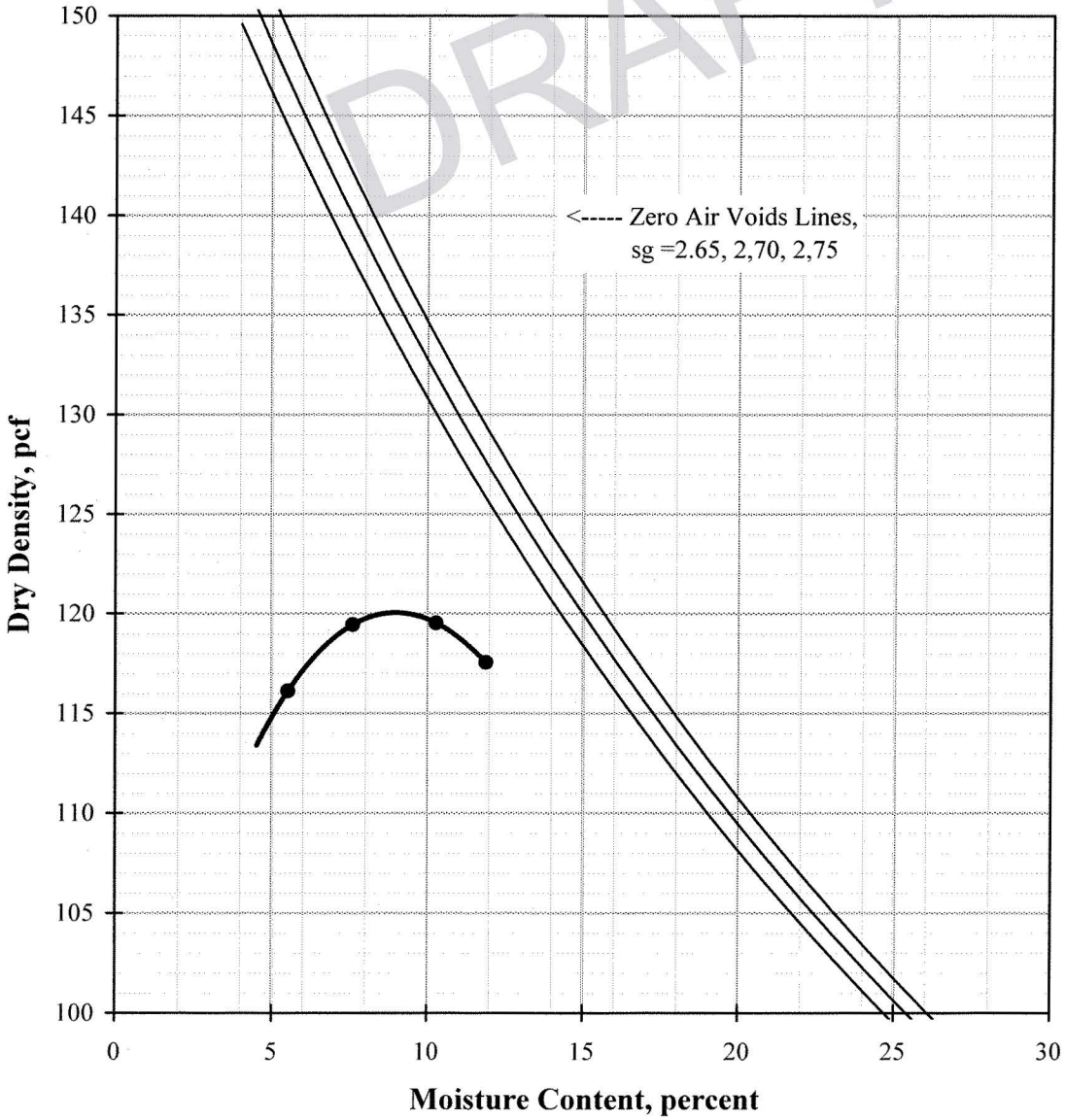
Job Name: Oxnard College Park
Sample ID: B 2 @ 0-5
Location: 0-5.
Description: Dark Yellowish Brown Silty Sand

Procedure Used: A
Prep. Method: Moist
Rammer Type: Automatic

Maximum Density: **120 pcf**
Optimum Moisture: **9%**

Sieve Size	% Retained
3/4"	0.0
3/8"	0.0
#4	0.4

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VT-23965-01

MAXIMUM DENSITY / OPTIMUM MOISTURE

ASTM D 1557-91 (Modified)

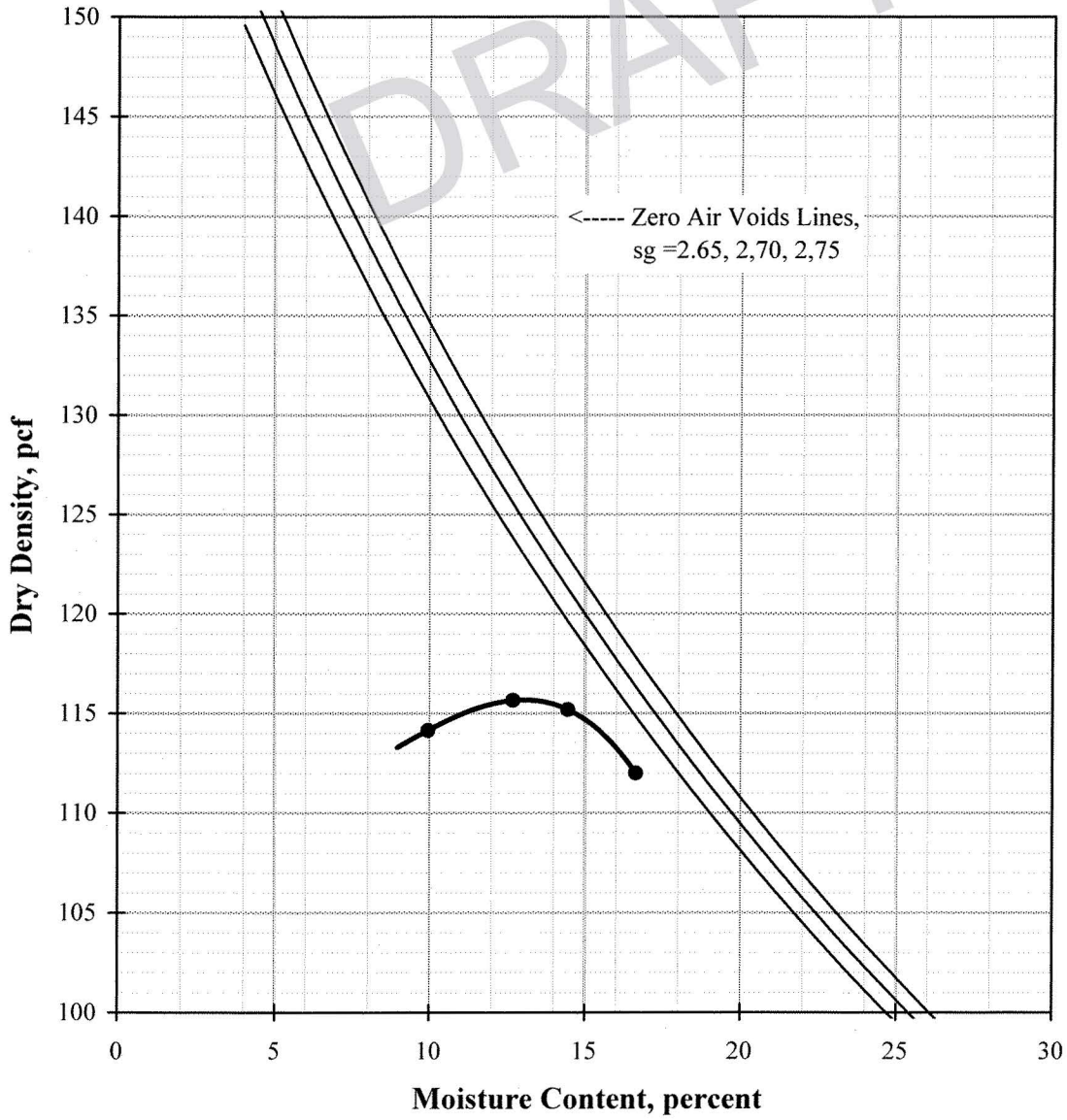
Job Name: Oxnard Collele Park
Sample ID: B 5 @ 0-5
Location: 0-5
Description: Olive Brown Clayey Sandy Silt

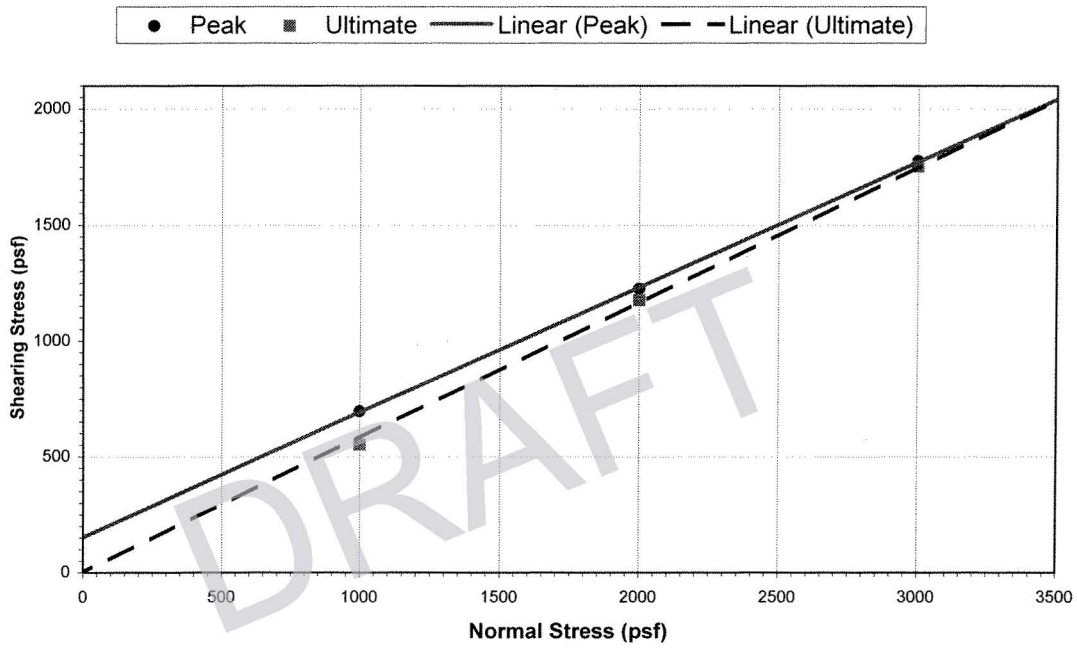
Procedure Used: A
Prep. Method: Moist
Rammer Type: Automatic

Maximum Density: **115.5 pcf**
Optimum Moisture: **13%**

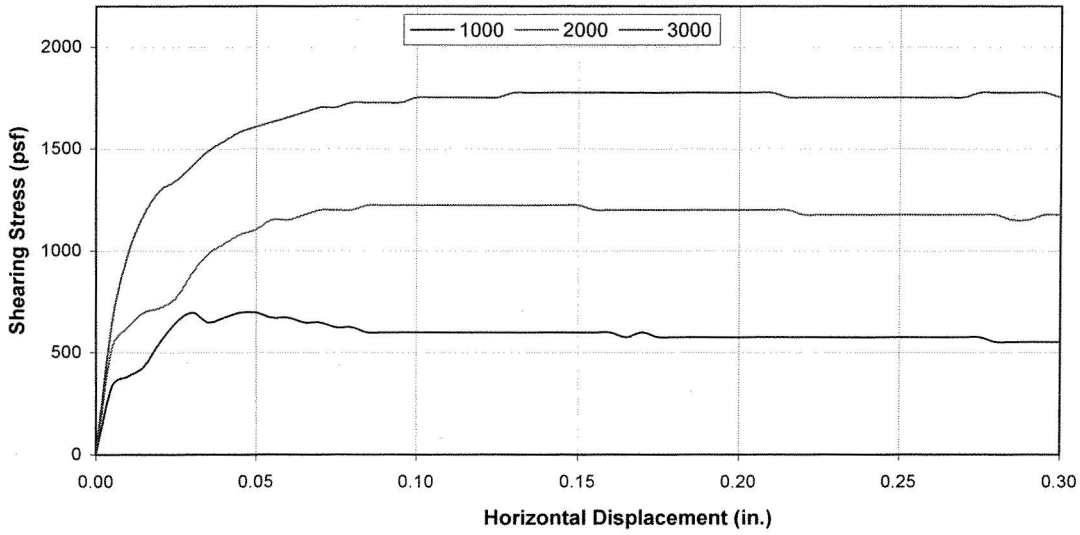
Sieve Size	% Retained
3/4"	0.0
3/8"	0.0
#4	0.3

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DIRECT SHEAR DATA*

Sample Location: B 1 @ 0-5
Sample Description: Clayey Silty Sand
Dry Density (pcf): 103.6
Intial % Moisture: 12.5
Average Degree of Saturation: 100.0
Shear Rate (in/min): 0.0277 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	696	1224	1776
Ultimate stress (psf)	552	1176	1752

	Peak	Ultimate
ϕ Angle of Friction (degrees):	28	30
c Cohesive Strength (psf):	150	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

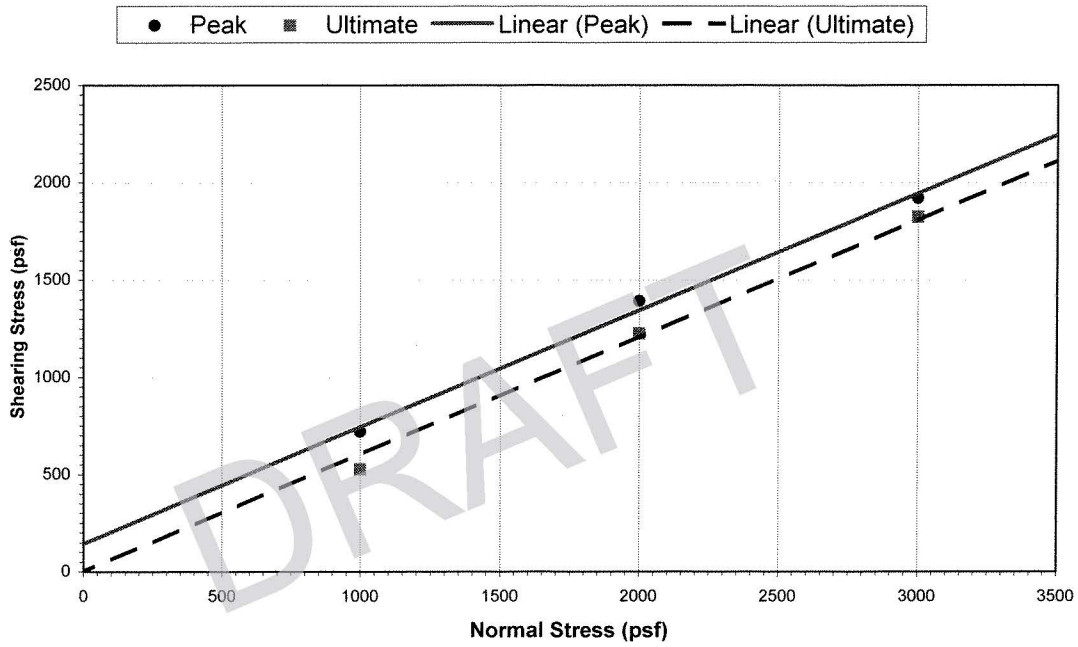
DIRECT SHEAR TEST

Oxnard College Park

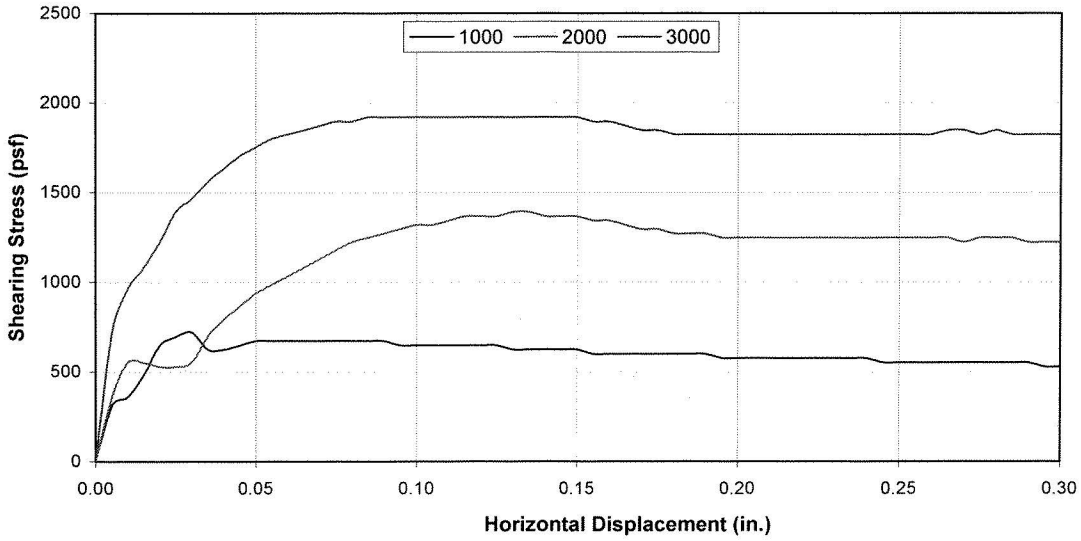
Oxnard

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Southern California

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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 2 @ 0-5
Sample Description: Silty Sand
Dry Density (pcf): 107.1
Intial % Moisture: 9
Average Degree of Saturation: 87.8
Shear Rate (in/min): 0.0211 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	720	1392	1920
Ultimate stress (psf)	528	1224	1824

	Peak	Ultimate
ϕ Angle of Friction (degrees):	31	32
c Cohesive Strength (psf):	140	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

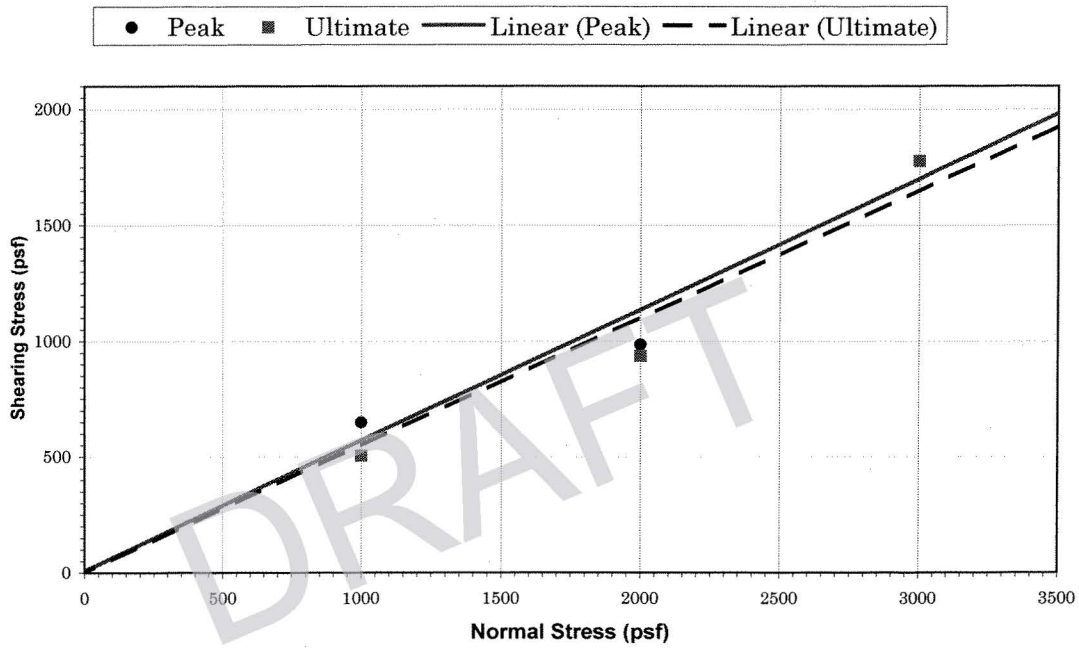
DIRECT SHEAR TEST

Oxnard College Park

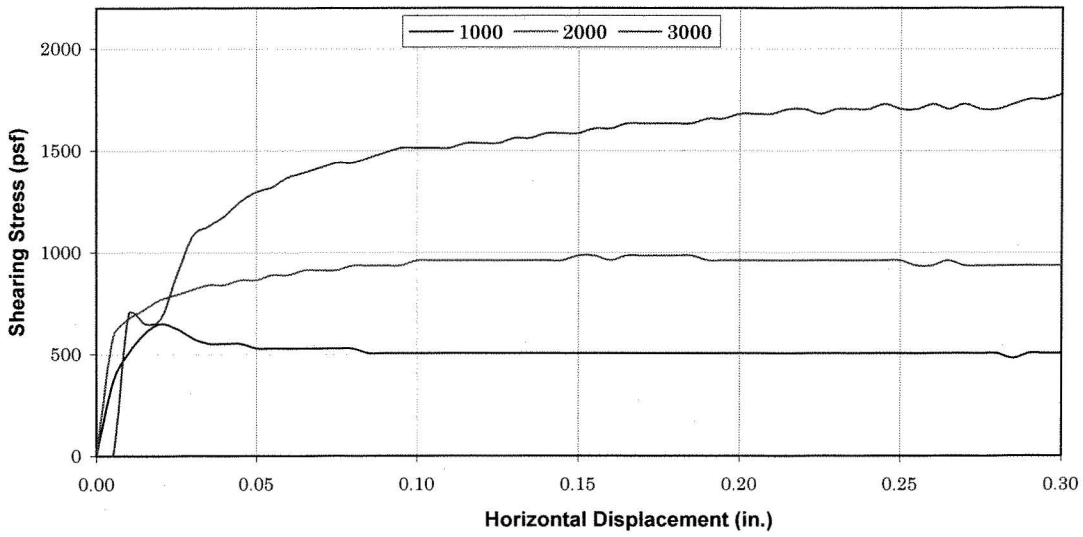
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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 5 @ 0-5
Sample Description: Sandy Clayey Silt
Dry Density (pcf): 103.7
Intial % Moisture: 13
Average Degree of Saturation: 100.0
Shear Rate (in/min): 0.02 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	648	984	1776
Ultimate stress (psf)	504	936	1776

	Peak	Ultimate
ϕ Angle of Friction (degrees):	29	30
c Cohesive Strength (psf):	0	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

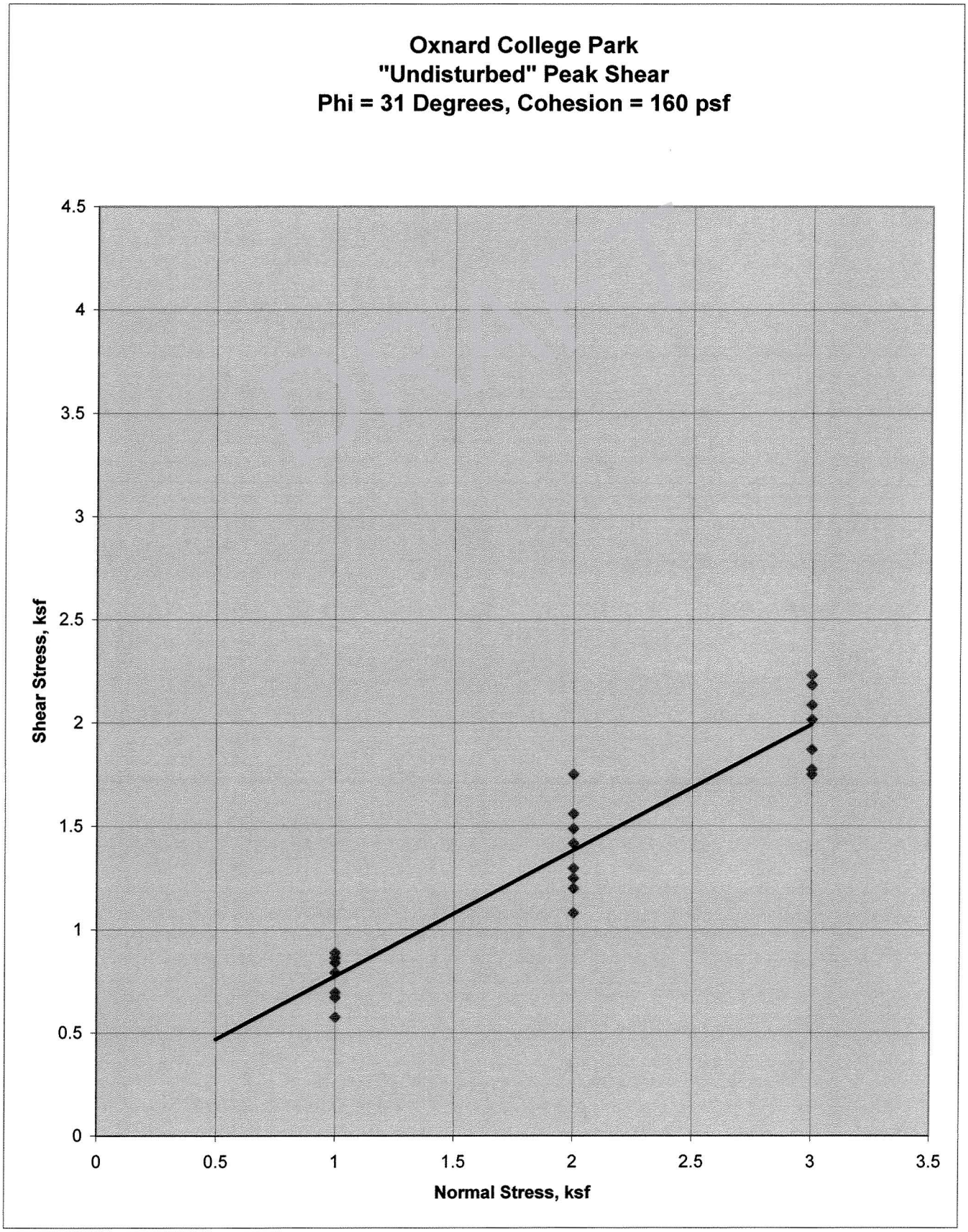
DIRECT SHEAR TEST

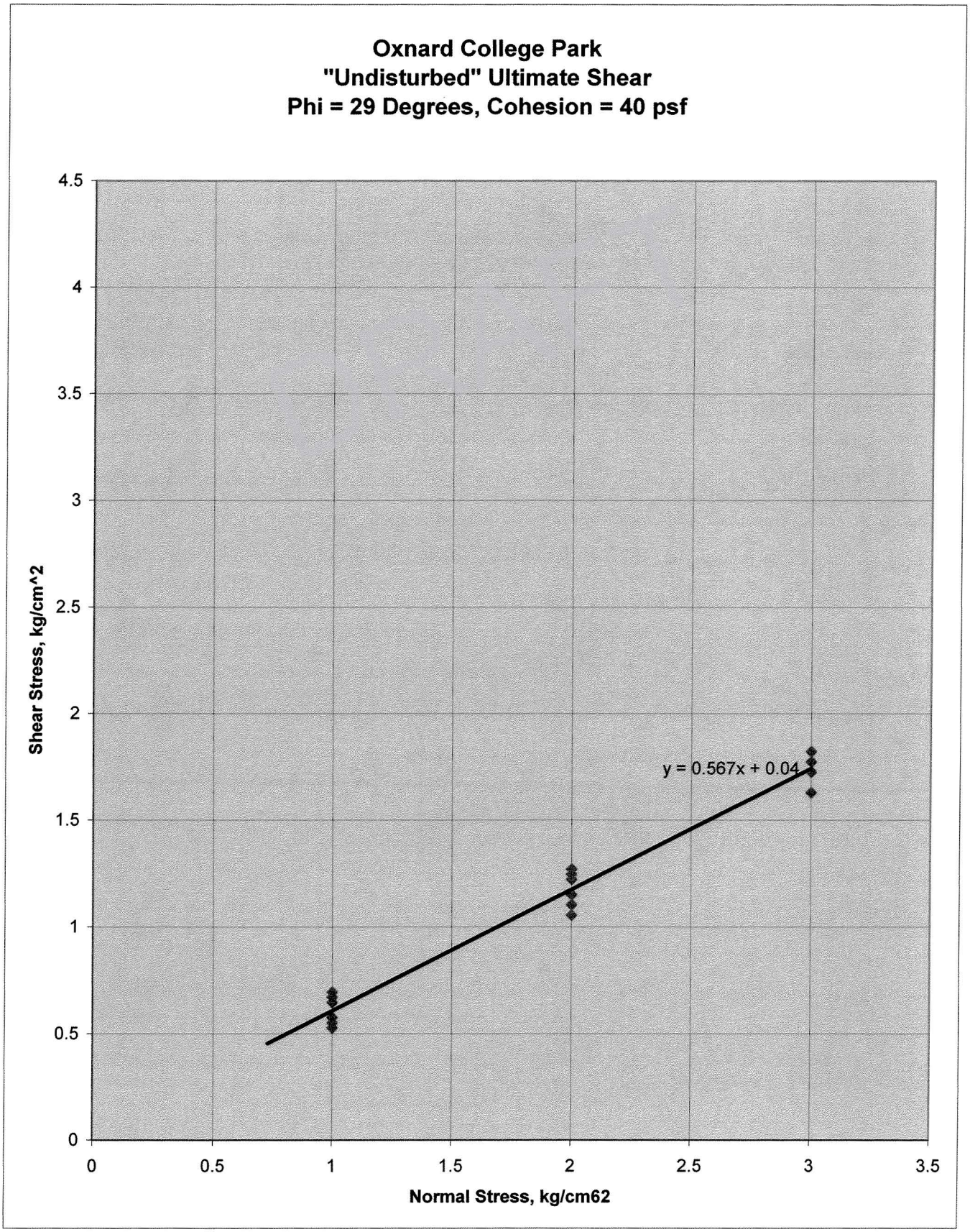
Oxnard College Park

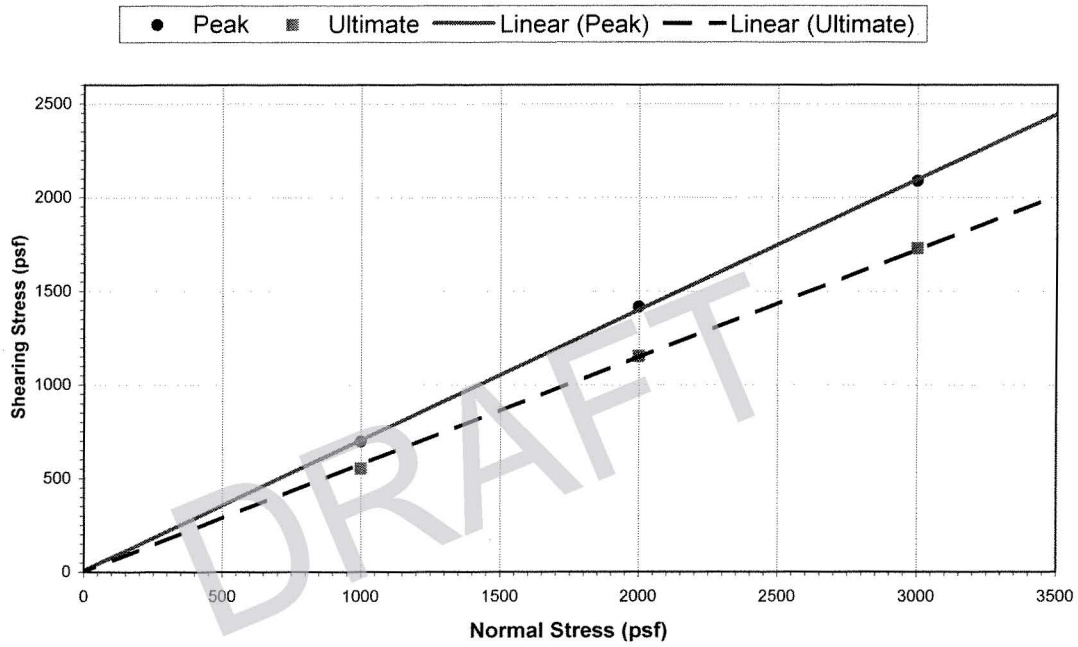
Oxnard

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Southern California

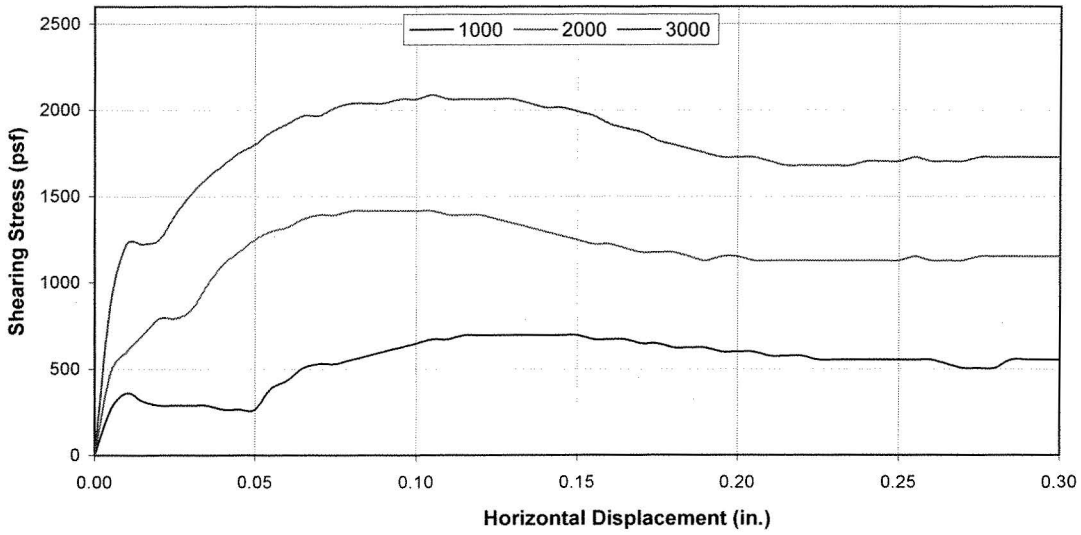
7/27/2007 | VT-23965-01


Oxnard College Park
"Undisturbed" Peak Shear
Phi = 31 Degrees, Cohesion = 160 psf
Shear Stress, ksf
Normal Stress, ksf
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5


Oxnard College Park
"Undisturbed" Ultimate Shear
Phi = 29 Degrees, Cohesion = 40 psf
Shear Stress, kg/cm^2
Normal Stress, kg/cm62
y = 0.567x + 0.04
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5



DRAFT



DIRECT SHEAR DATA*

Sample Location: B 4 @ 4
Sample Description: Med Sand
Dry Density (pcf): 95.8
Intial % Moisture: 6.6
Average Degree of Saturation: 100.0
Shear Rate (in/min): 0.0144 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	696	1416	2088
Ultimate stress (psf)	552	1152	1728

	Peak	Ultimate
ϕ Angle of Friction (degrees):	35	30
c Cohesive Strength (psf):	0	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

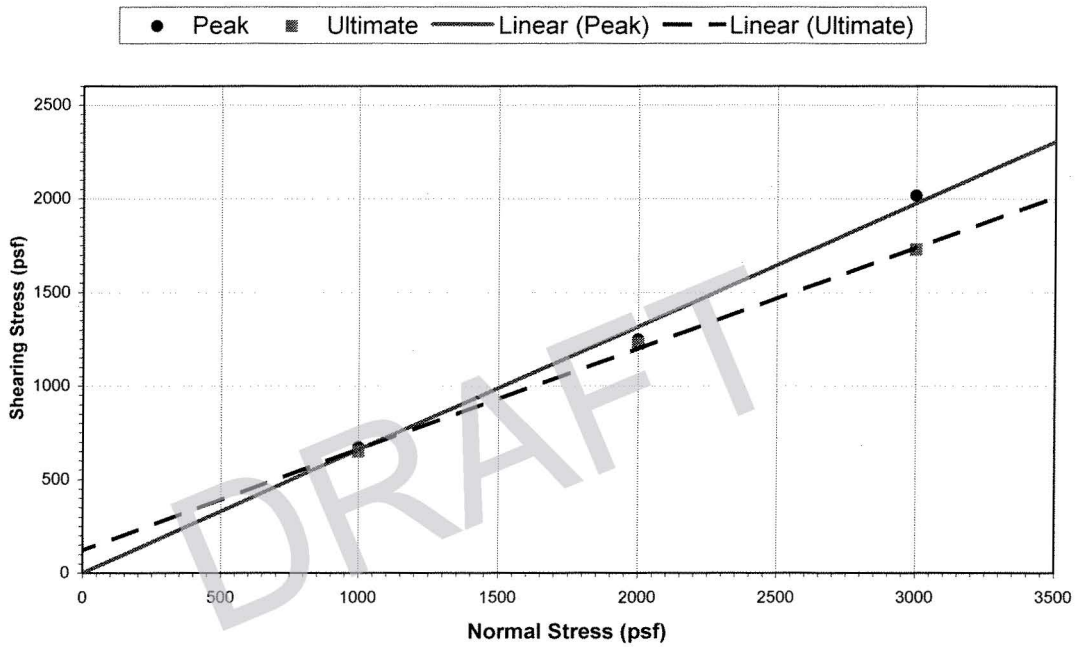
DIRECT SHEAR TEST

Oxnard College Park

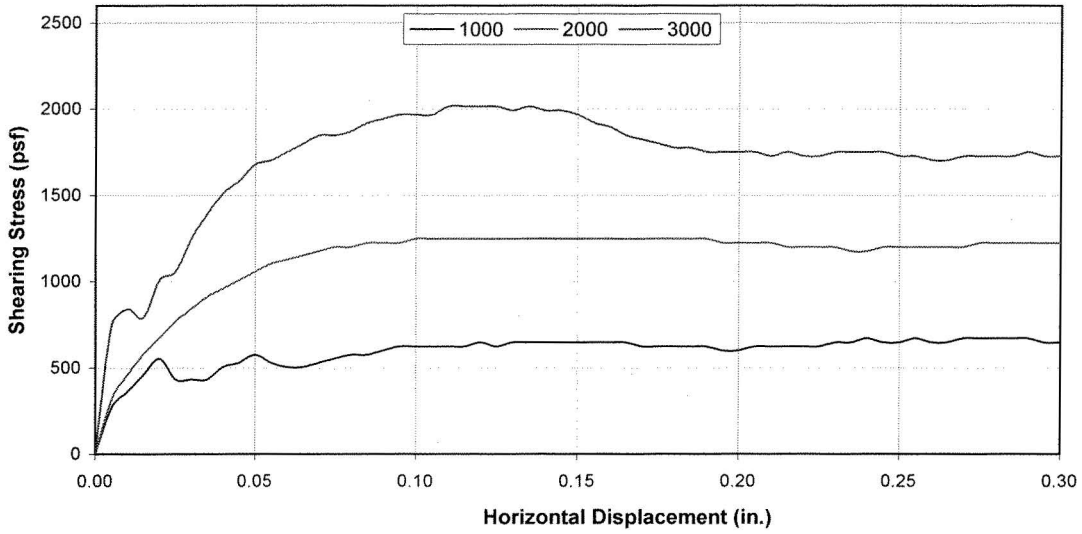
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DIRECT SHEAR DATA*

Sample Location: B 4 @ 6
Sample Description: Med to Fine Sand
Dry Density (pcf): 94.4
Intial % Moisture: 6.6
Average Degree of Saturation: 91.7
Shear Rate (in/min): 0.009 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	672	1248	2016
Ultimate stress (psf)	648	1224	1728

	Peak	Ultimate
ϕ Angle of Friction (degrees):	34	28
c Cohesive Strength (psf):	0	120

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

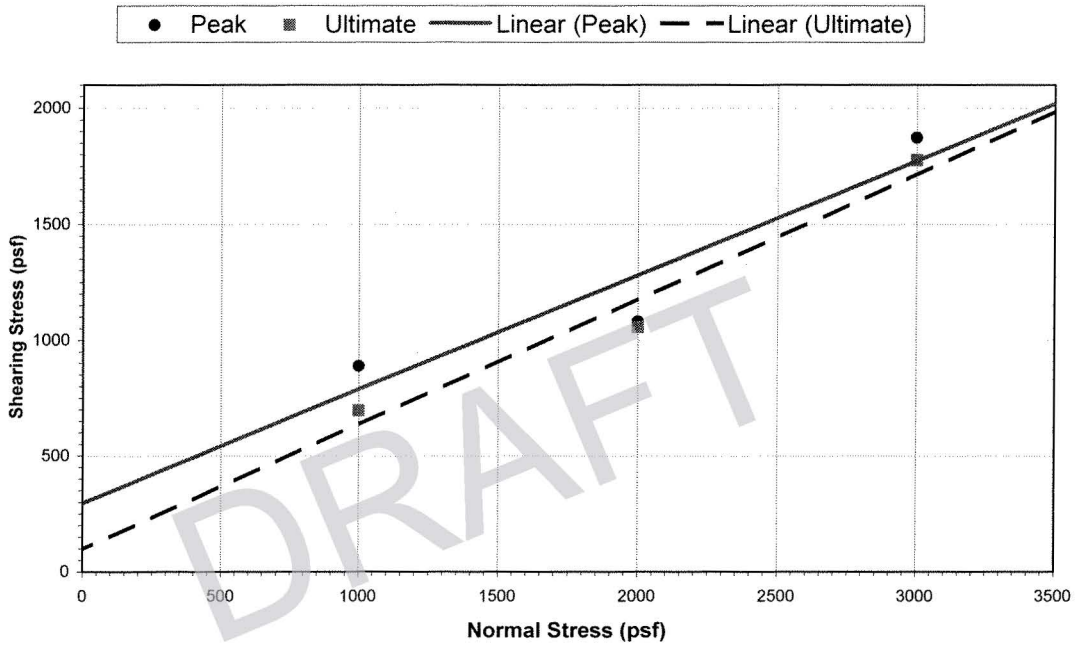
DIRECT SHEAR TEST

Oxnard College Park

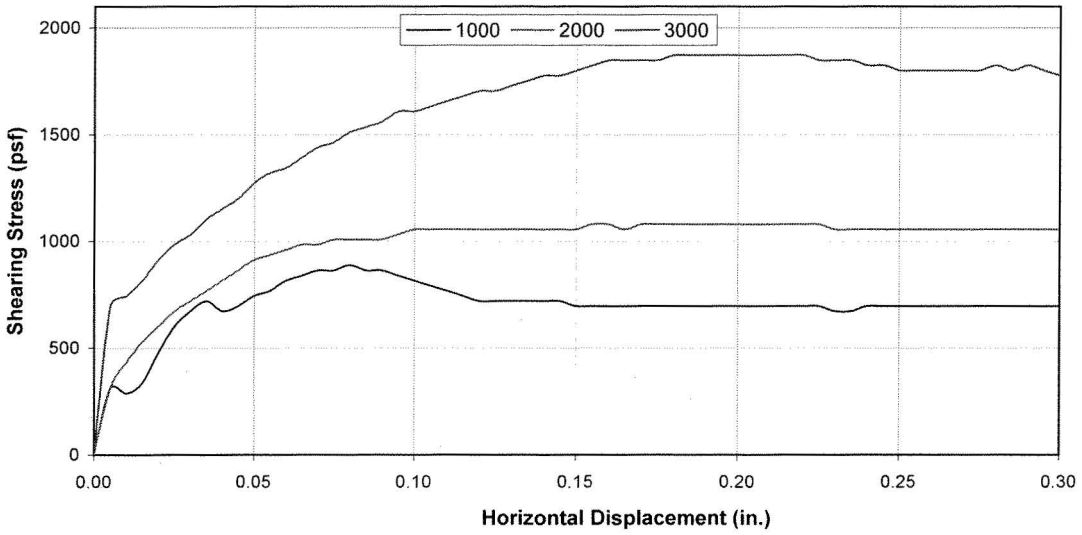
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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 12 @ 4
Sample Description: Clayey Silty Sand Sandy Silt
Dry Density (pcf): 92.7
Intial % Moisture: 23.5
Average Degree of Saturation: 100.0
Shear Rate (in/min): 0.0225 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	888	1080	1872
Ultimate stress (psf)	696	1056	1776

	Peak	Ultimate
ϕ Angle of Friction (degrees):	26	28
c Cohesive Strength (psf):	290	90

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

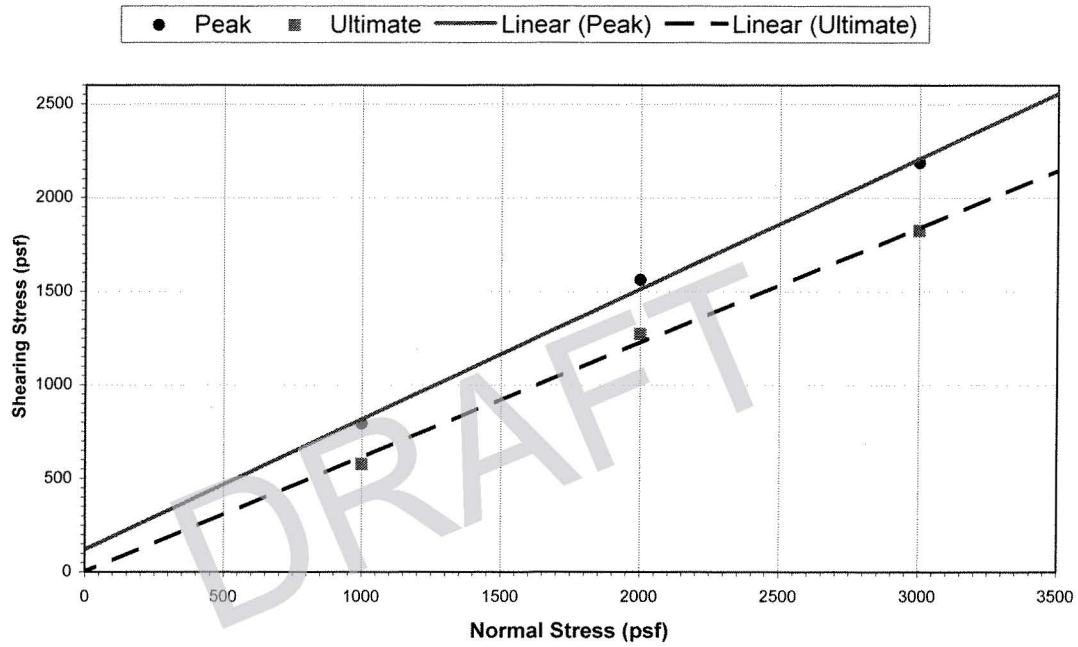
DIRECT SHEAR TEST

Oxnard College Park

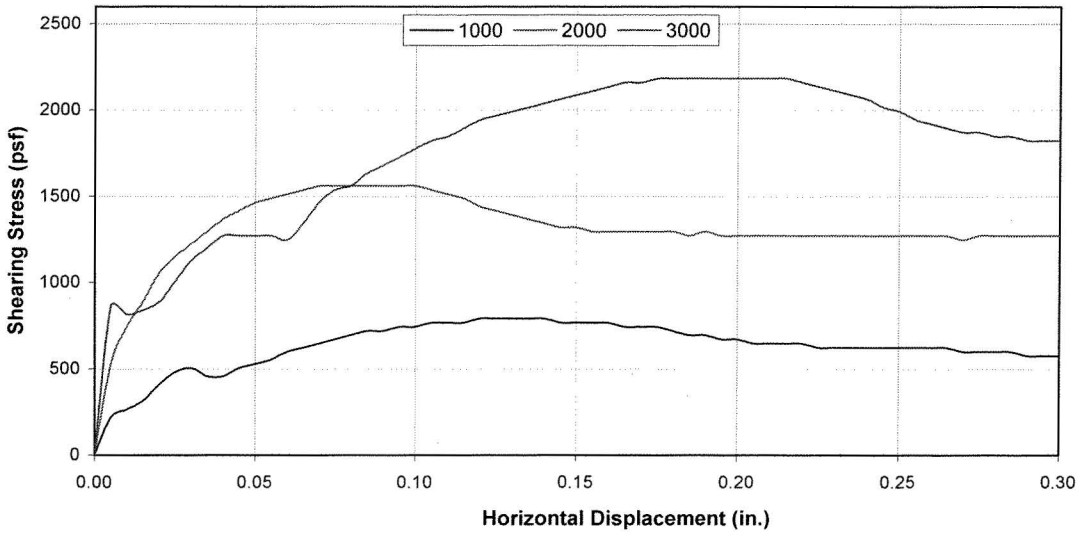
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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 13 @ 6
Sample Description: Silty Coarse to Med Sand
Dry Density (pcf): 94.0
Intial % Moisture: 21.1
Average Degree of Saturation: 98.8
Shear Rate (in/min): 0.0255 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	792	1560	2184
Ultimate stress (psf)	576	1272	1824

	Peak	Ultimate
ϕ Angle of Friction (degrees):	35	32
c Cohesive Strength (psf):	120	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

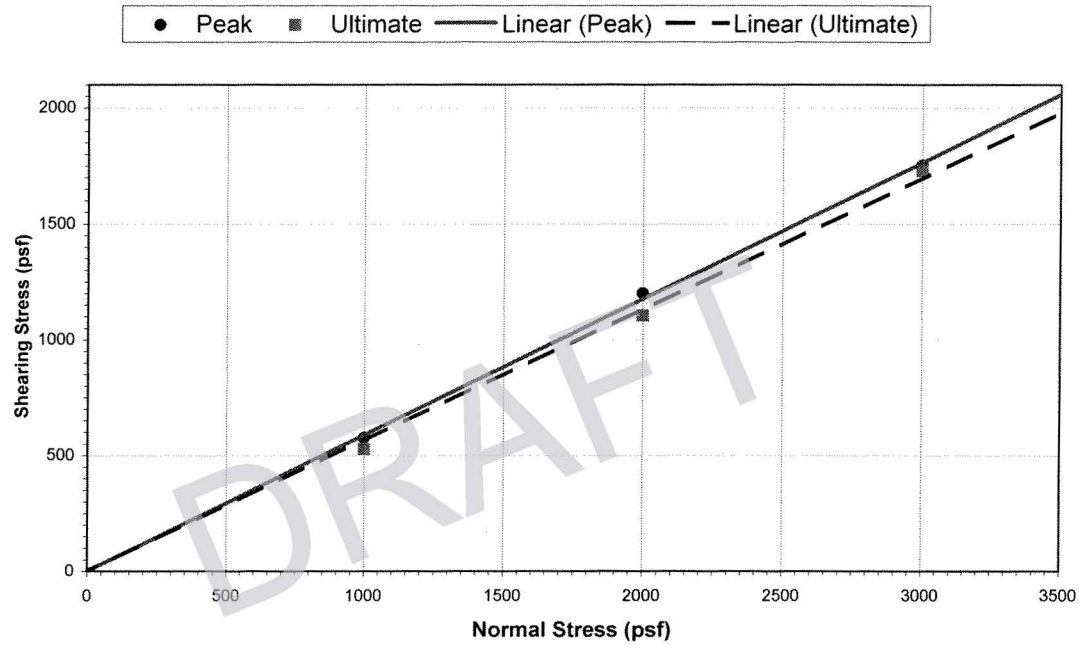
DIRECT SHEAR TEST

Oxnard College Park

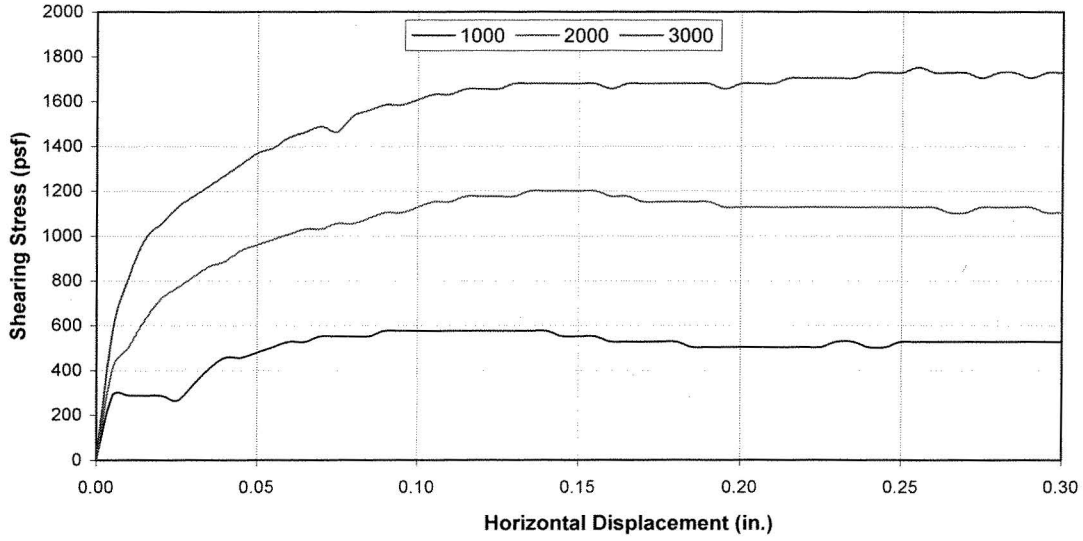
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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 15 @ 4
Sample Description: Clayey Silty Sand Sandy Silt
Dry Density (pcf): 95.2
Intial % Moisture: 24.2
Average Degree of Saturation: 100.0
Shear Rate (in/min): 0.005 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	576	1200	1752
Ultimate stress (psf)	528	1104	1728

	Peak	Ultimate
ϕ Angle of Friction (degrees):	30	30
c Cohesive Strength (psf):	0	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

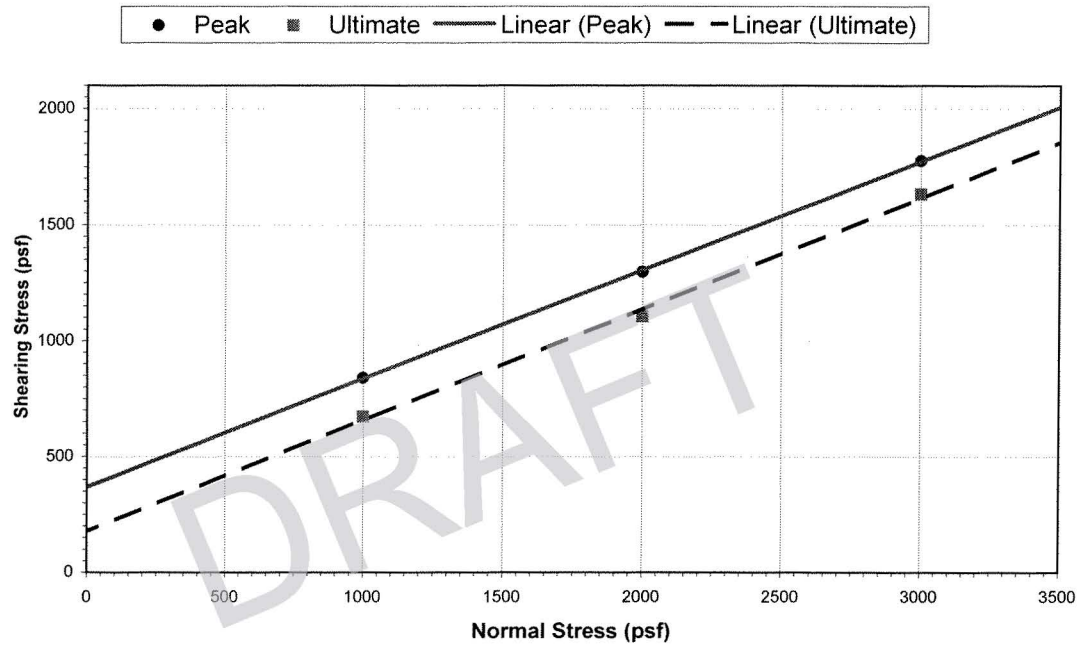
DIRECT SHEAR TEST

Oxnard College Park

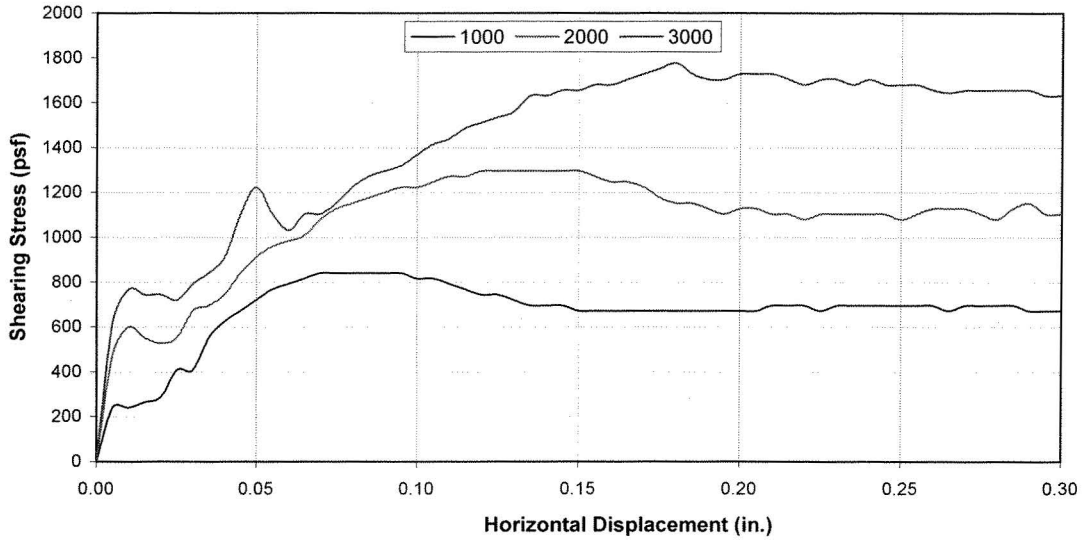
Oxnard

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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 16 @ 6
Sample Description: Clayey Silty Sand
Dry Density (pcf): 110.1
Intial % Moisture: 6.6
Average Degree of Saturation: 82.2
Shear Rate (in/min): 0.018 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	840	1296	1776
Ultimate stress (psf)	672	1104	1632

	Peak	Ultimate
ϕ Angle of Friction (degrees):	25	26
c Cohesive Strength (psf):	360	170

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

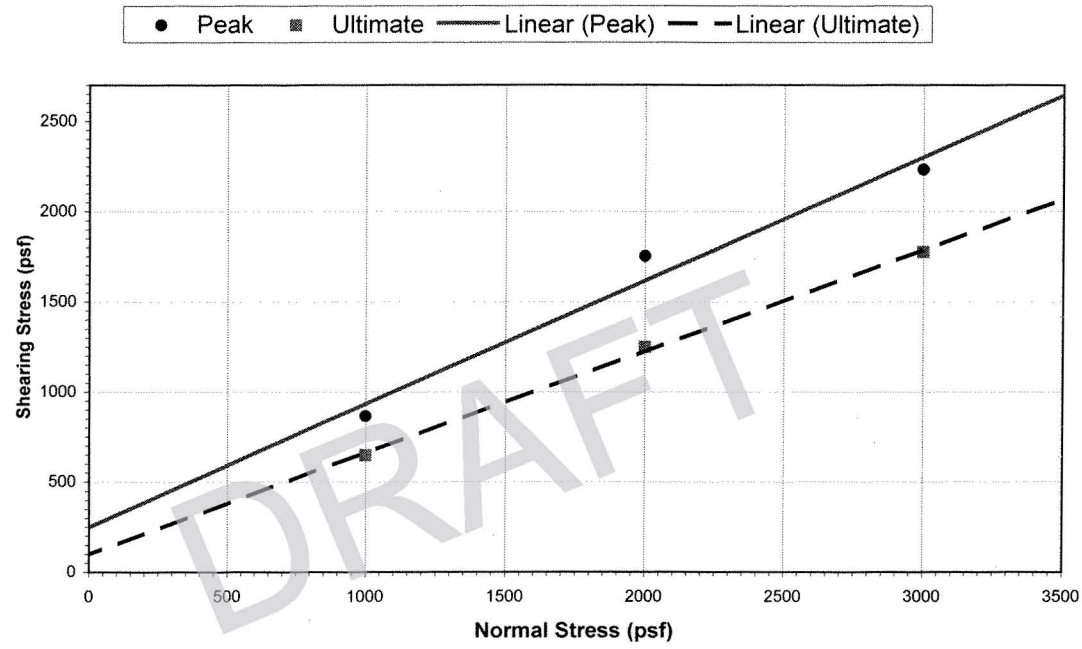
DIRECT SHEAR TEST

Oxnard College Park

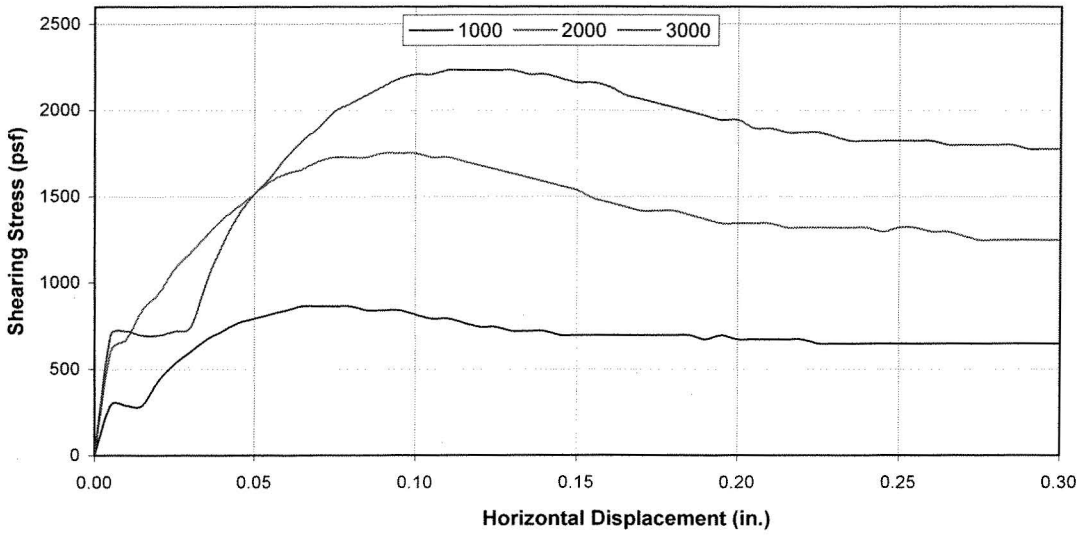
Oxnard

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Southern California

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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 18 @ 4
Sample Description: Med to Coarse Sand
Dry Density (pcf): 113.8
Intial % Moisture: 12.8
Average Degree of Saturation: 91.5
Shear Rate (in/min): 0.012 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	864	1752	2232
Ultimate stress (psf)	648	1248	1776

	Peak	Ultimate
ϕ Angle of Friction (degrees):	34	29
c Cohesive Strength (psf):	240	90

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

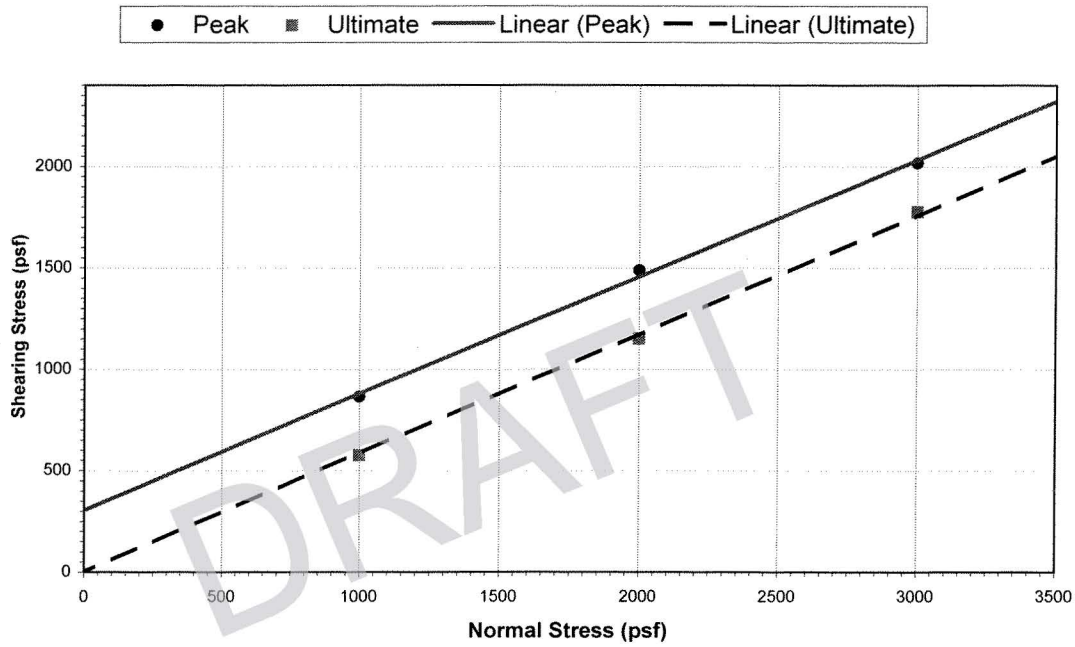
DIRECT SHEAR TEST

Oxnard College Park

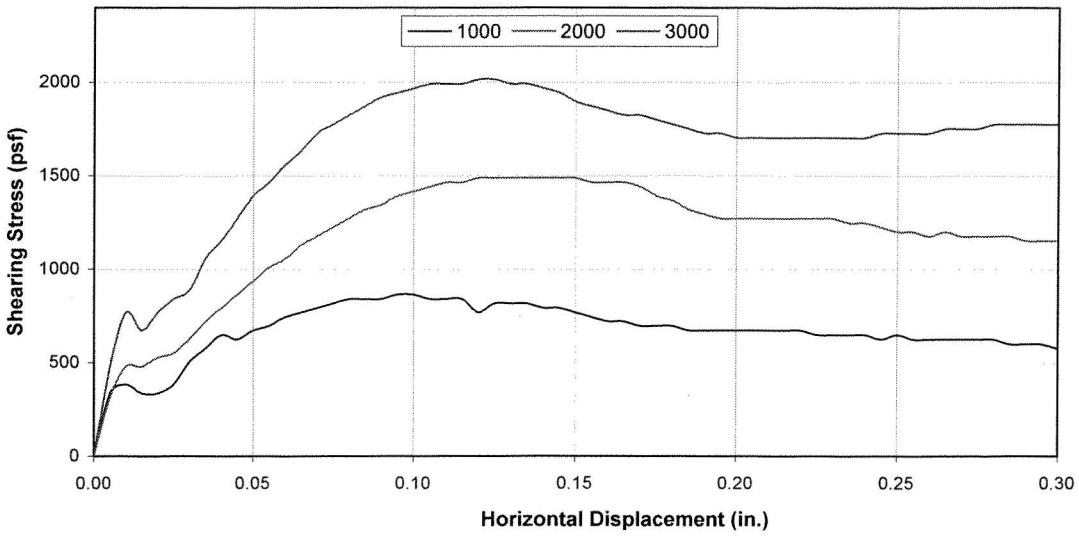
Oxnard

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DRAFT



DIRECT SHEAR DATA*

Sample Location: B 23 @ 4
Sample Description: Silty Sand
Dry Density (pcf): 99.7
Intial % Moisture: 22.1
Average Degree of Saturation: 97.9
Shear Rate (in/min): 0.012 in/min

Normal stress (psf)	1000	2000	3000
Peak stress (psf)	864	1488	2016
Ultimate stress (psf)	576	1152	1776

	Peak	Ultimate
ϕ Angle of Friction (degrees):	30	31
c Cohesive Strength (psf):	300	0

Test Type: Peak,Ultimate

* Test Method: ASTM D-3080

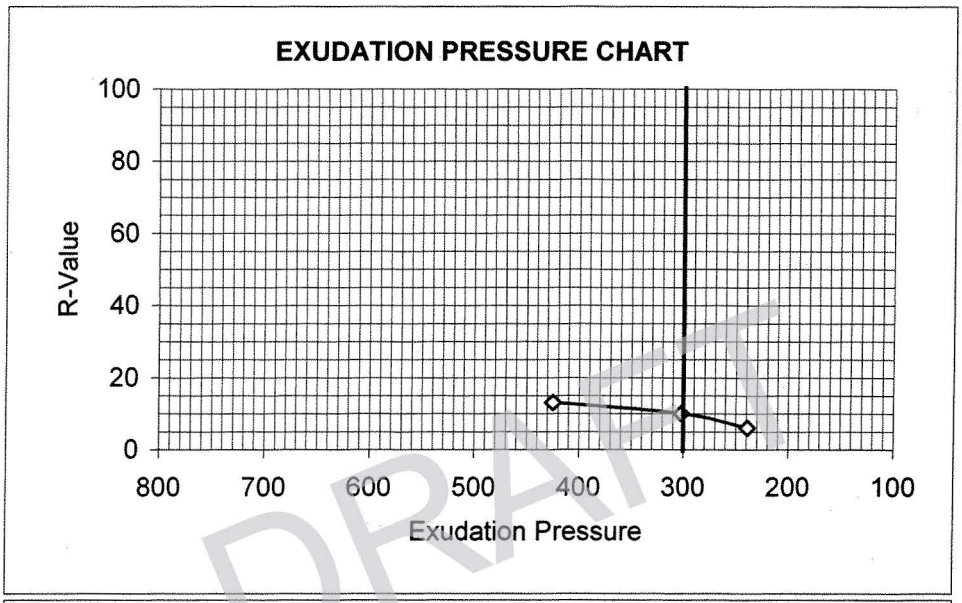
DIRECT SHEAR TEST

Oxnard College Park

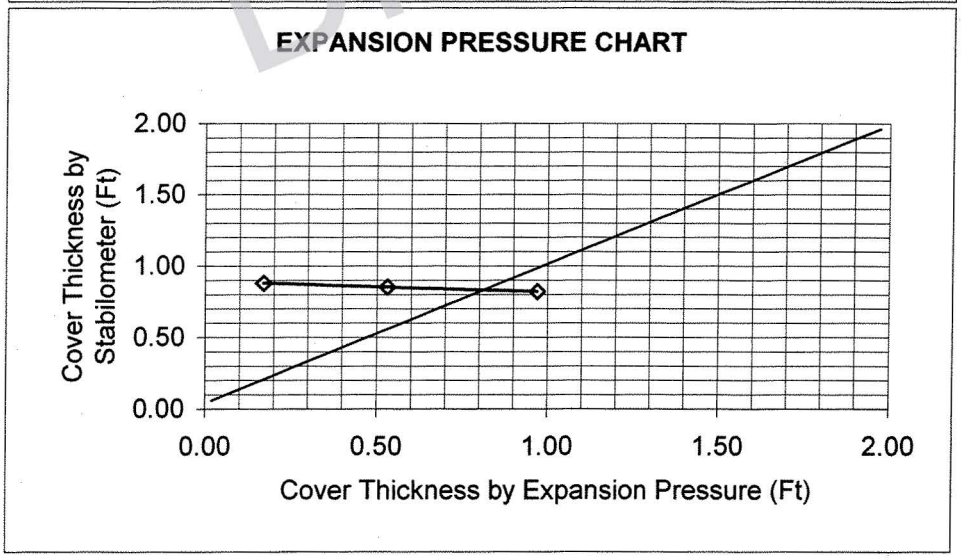
Oxnard

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Southern California

7/23/2007 | VT-23965-01



DRAFT

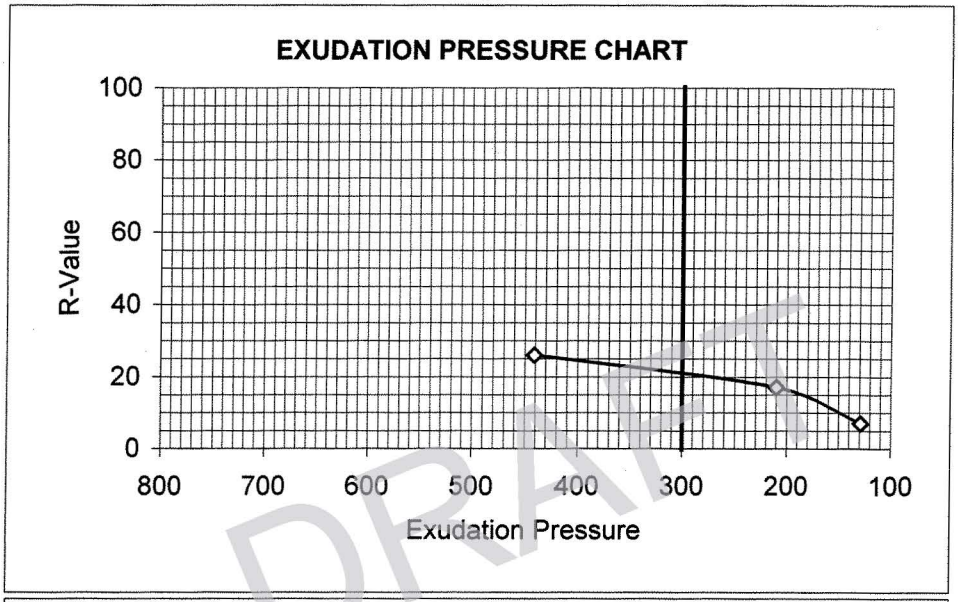


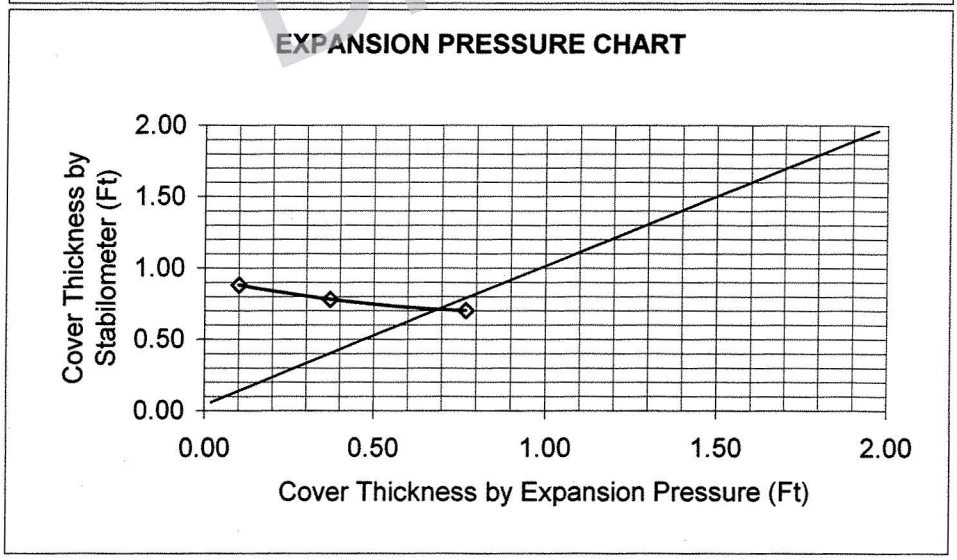
JOB NAME: Oxnard College Park
SAMPLE I. D.: Boring 9@0-5
SOIL DESCRIPTION: Fine to Coarse Sandy Clay with Silt (CL)

SPECIMEN NUMBER	A	B	C
EXUDATION PRESSURE	425	302	239
RESISTANCE VALUE	13	10	6
EXPANSION DIAL(0.0001")	29	16	5
EXPANSION PRESSURE (PSF)	125.6	69.3	21.7
% MOISTURE AT TEST	15.3	16.3	17.4
DRY DENSITY AT TEST	116.8	113.5	111.9

R-VALUE @ 300 PSI EXUDATION	**10**
R-VALUE by Expansion Pressure*	**13**

**Based on a Traffic Index of 5.0 and a Gravel Factor of 1.70*





DRAFT

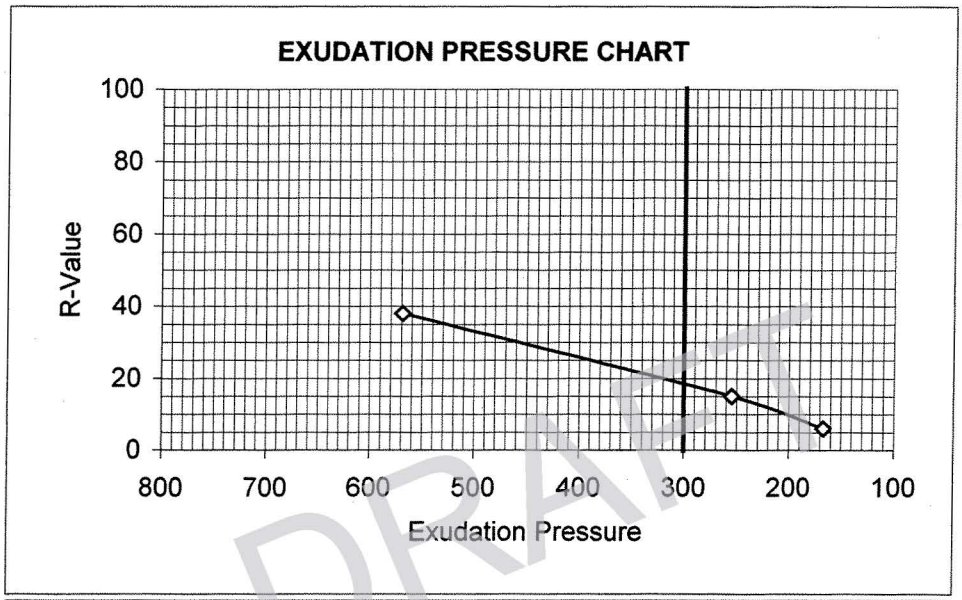
JOB NAME: Oxnard College Park
SAMPLE I. D.: Boring 11@0–3'
SOIL DESCRIPTION: Very Silty Fine to Medium Sand with Clay (SM)

SPECIMEN NUMBER	A	B	C
EXUDATION PRESSURE	441	210	129
RESISTANCE VALUE	26	17	7
EXPANSION DIAL(0.0001")	23	11	3
EXPANSION PRESSURE (PSF)	99.6	47.6	13.0
% MOISTURE AT TEST	13.4	15.8	17.0
DRY DENSITY AT TEST	114.8	110.3	108.9

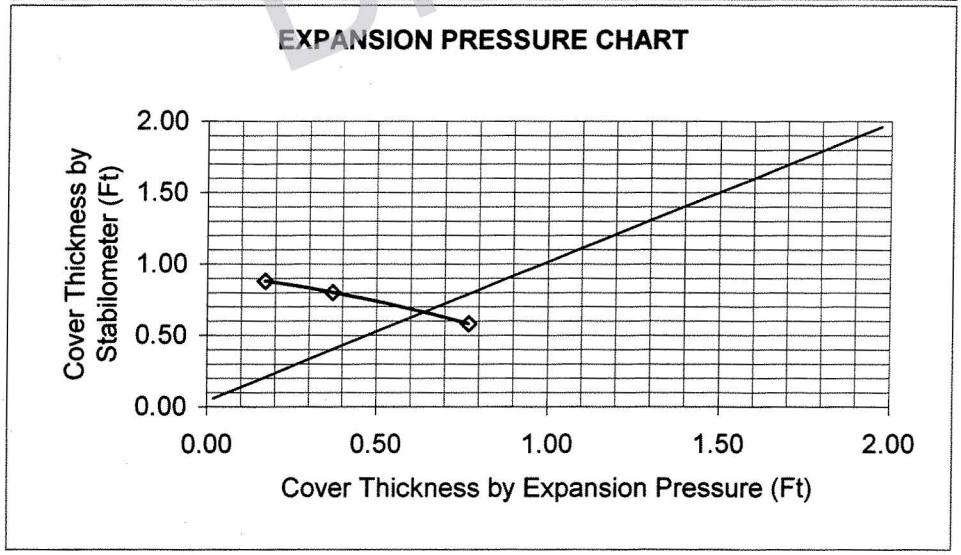
R-VALUE @ 300 PSI EXUDATION	**21**
R-VALUE by Expansion Pressure*	**26**

**Based on a Traffic Index of 5.0 and a Gravel Factor of 1.70*

July 18, 2007 **VT-23965-01**



DRAFT



JOB NAME: Oxnard College Park
SAMPLE I. D.: Boring 25@0-5
SOIL DESCRIPTION: Very Silty Fine Sand with Clay (SM/ML)

SPECIMEN NUMBER	A	B	C
EXUDATION PRESSURE	569	255	167
RESISTANCE VALUE	38	15	6
EXPANSION DIAL(0.0001")	23	11	5
EXPANSION PRESSURE (PSF)	99.6	47.6	21.7
% MOISTURE AT TEST	12.9	15.4	17.8
DRY DENSITY AT TEST	116.9	111.7	106.5

R-VALUE @ 300 PSI EXUDATION	**18**
R-VALUE by Expansion Pressure*	**33**

**Based on a Traffic Index of 5.0 and a Gravel Factor of 1.70*

VT-23965-01 Jul 23, 2007

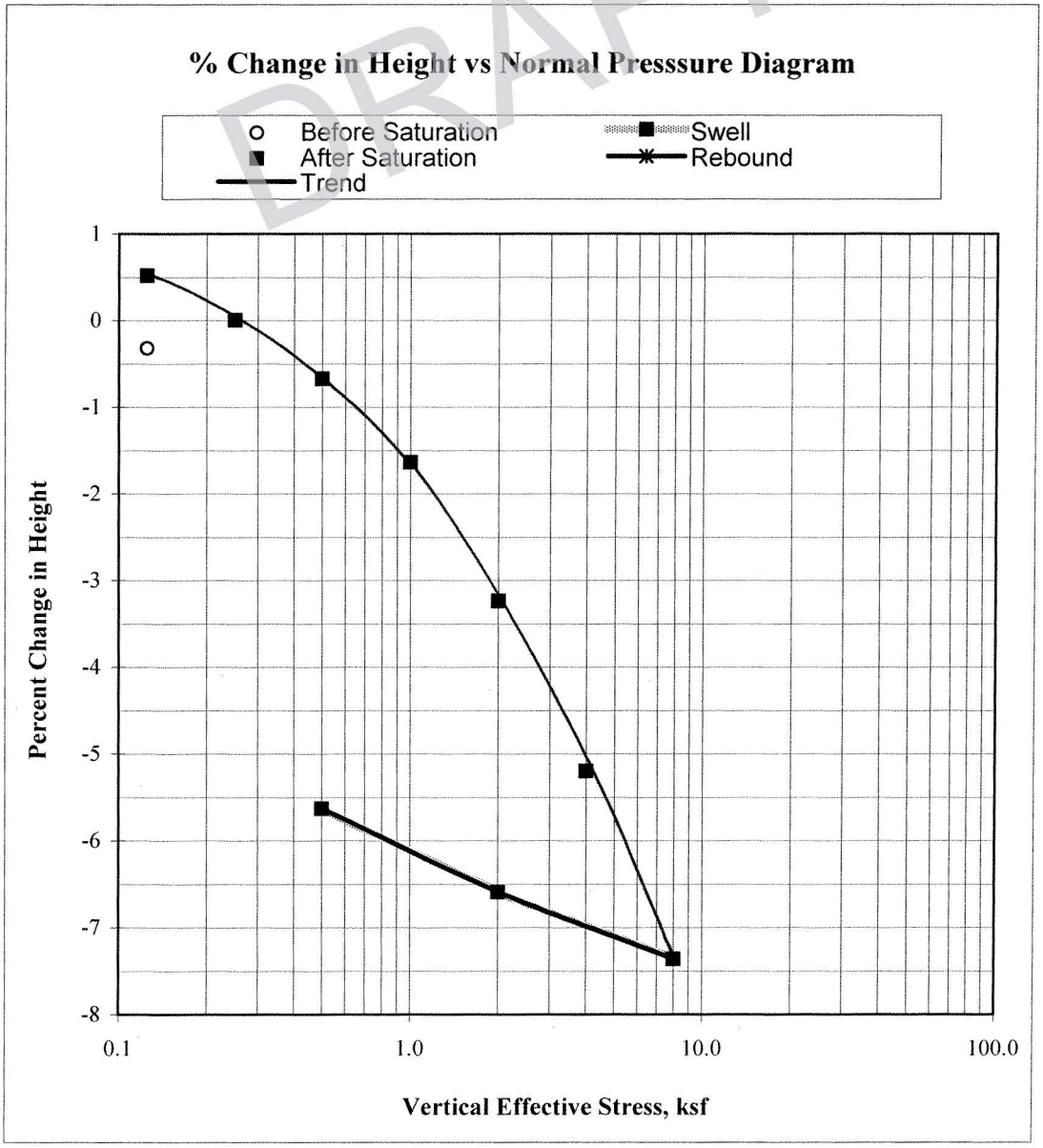
CONSOLIDATION TEST

ASTM D 2435-90

Oxnard College Park
B 1 @ 2
CL
Ring Sample

Initial Dry Density: 91.0 pcf
Initial Moisture, %: 25.1%
Specific Gravity: 2.67 (assumed
Initial Void Ratio: 0.833

DRAFT



VT-23965-01 Jul 23, 2007

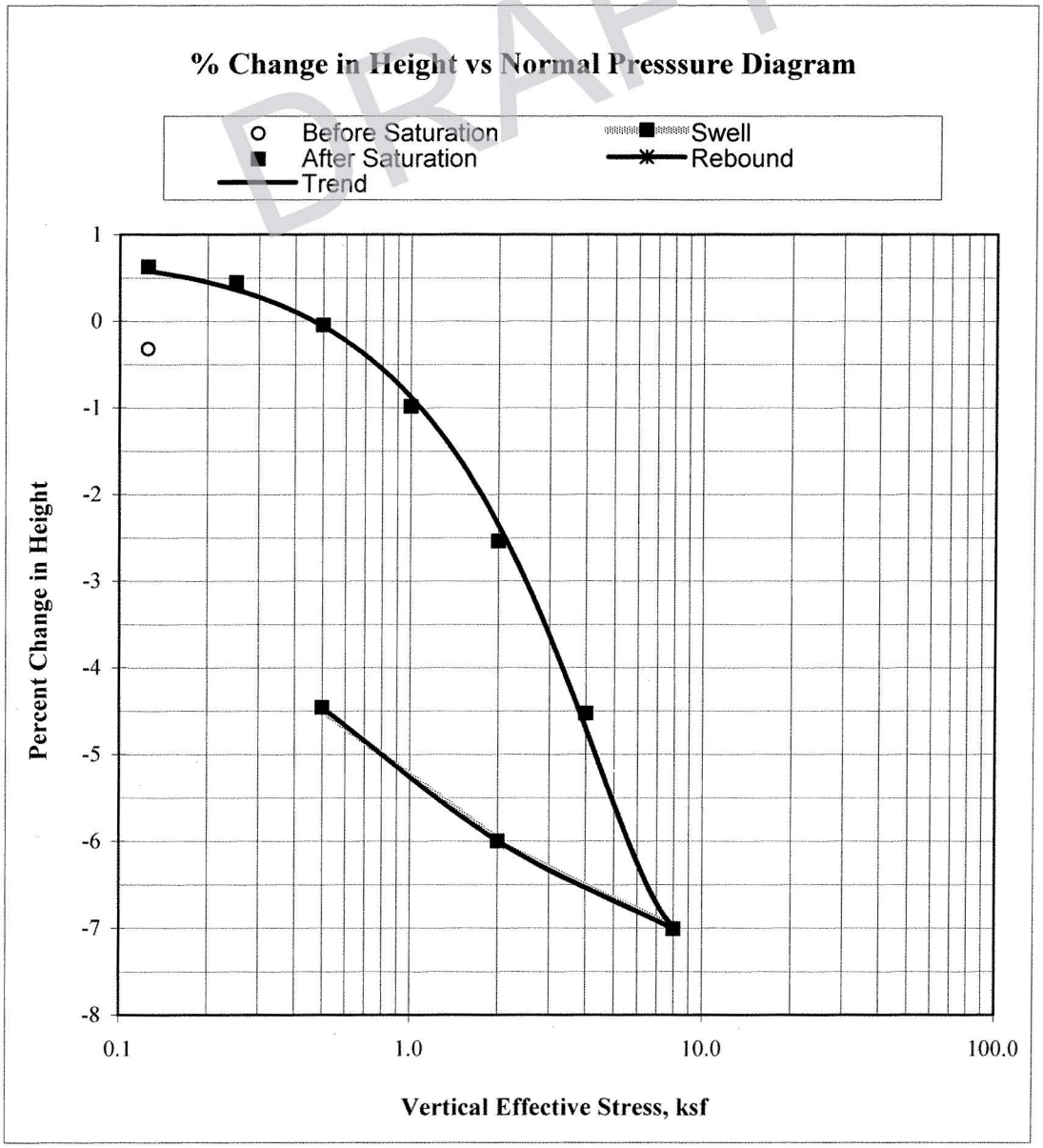
CONSOLIDATION TEST

ASTM D 2435-90

Oxnard College Park
B 1 @ 5
SC/SM
Ring Sample

Initial Dry Density: 88.3 pcf
Initial Moisture, %: 31.1%
Specific Gravity: 2.67 (assumed
Initial Void Ratio: 0.887

DRAFT



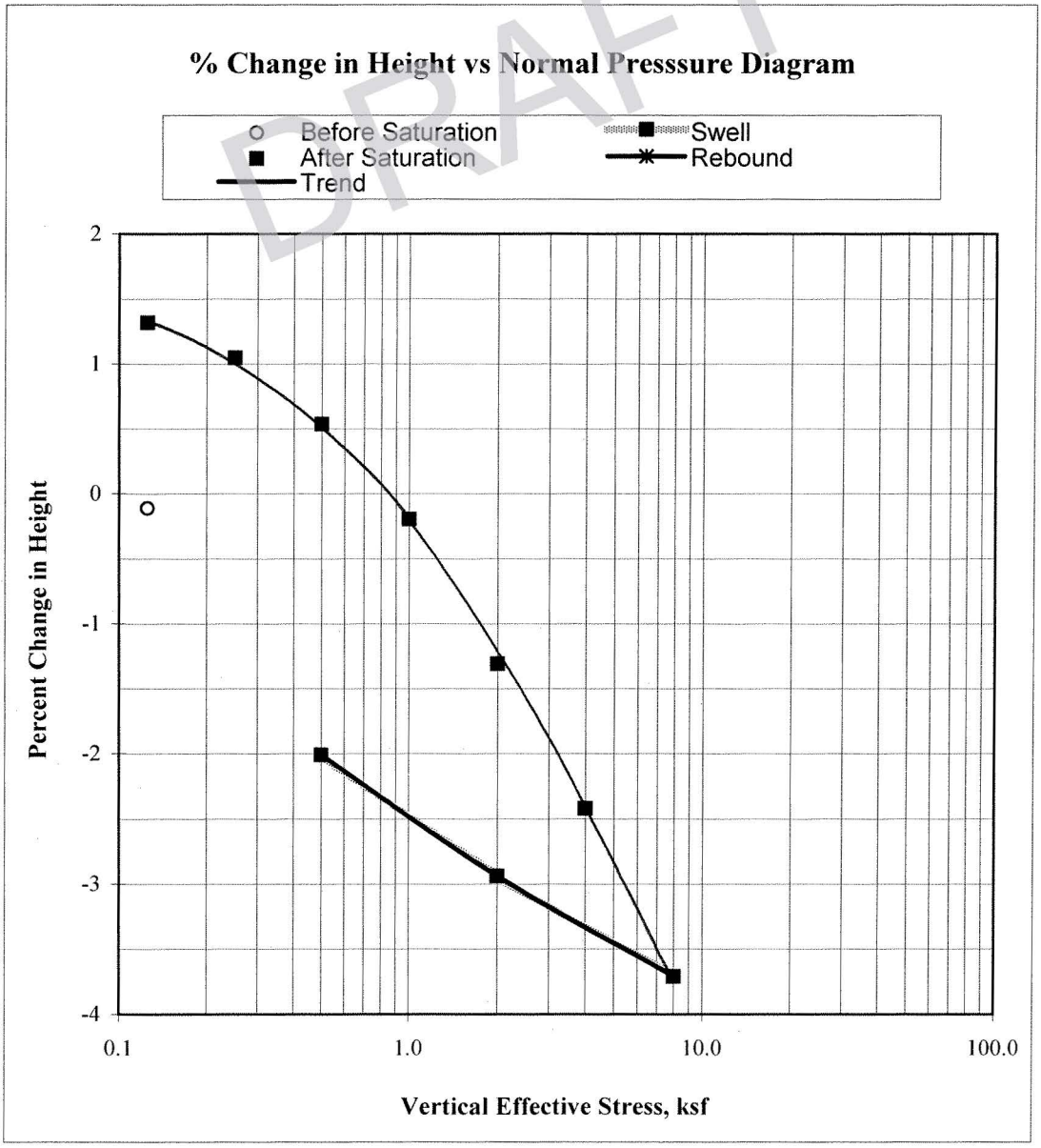
CONSOLIDATION TEST

ASTM D 2435-90

Oxnard College Park
B 2 @ 2
SM
Ring Sample

Initial Dry Density: 91.9 pcf
Initial Moisture, %: 10.4%
Specific Gravity: 2.67 (assumed
Initial Void Ratio: 0.814

DRAFT



VT-23965-01 Jul 23, 2007

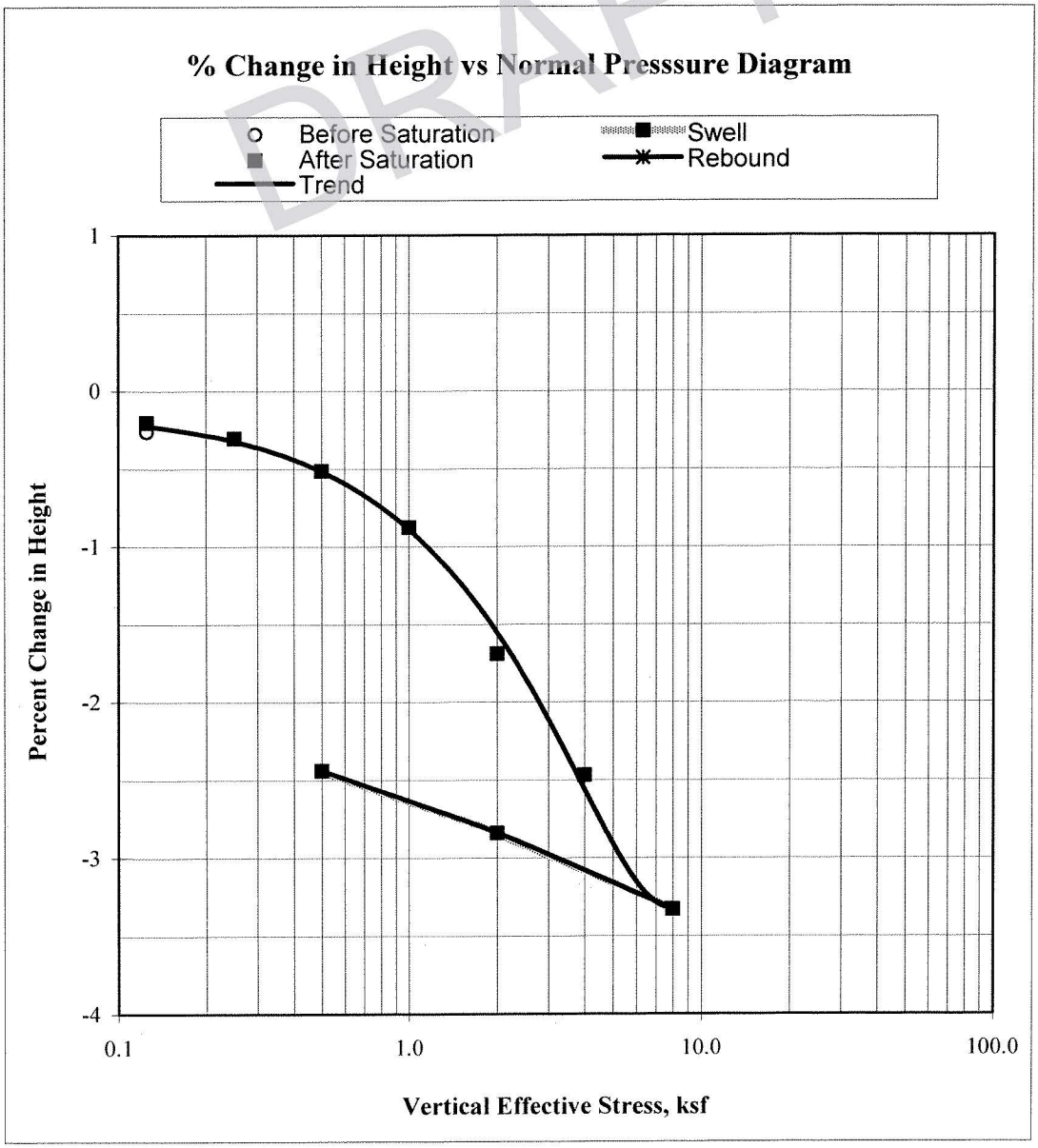
CONSOLIDATION TEST

ASTM D 2435-90

Oxnard College Park
B 5 @ 5
SM
Ring Sample

Initial Dry Density: 101.8 pcf
Initial Moisture, %: 25.3%
Specific Gravity: 2.67 (assumed
Initial Void Ratio: 0.638

DRAFT



VT-23965-01 Jul 23, 2007

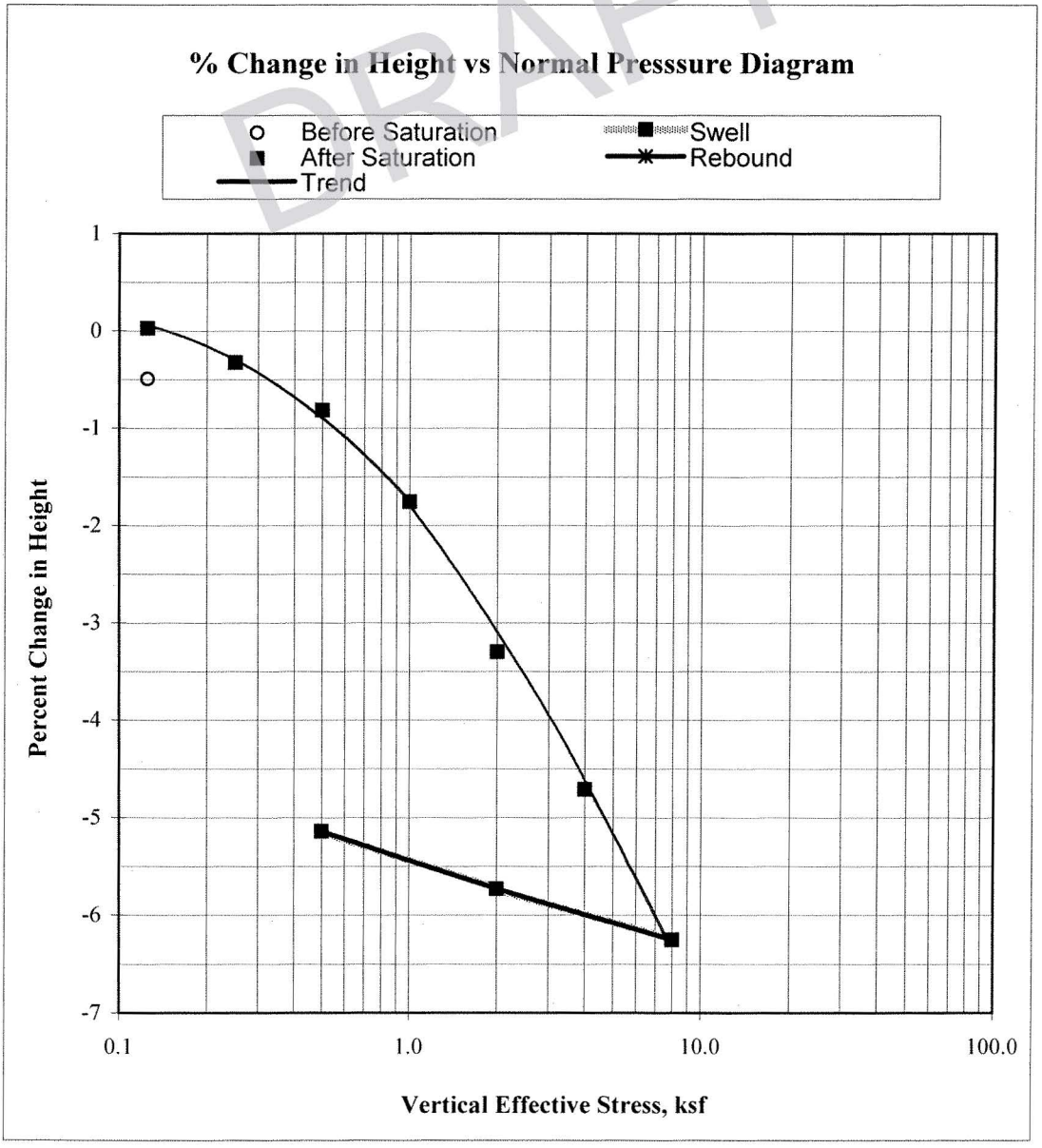
CONSOLIDATION TEST

ASTM D 2435-90

Oxnard College Park
B 6 @ 2
SM
Ring Sample

Initial Dry Density: 101.8 pcf
Initial Moisture, %: 8.8%
Specific Gravity: 2.67 (assumed
Initial Void Ratio: 0.638

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VT-23965-01 Jul 23, 2007

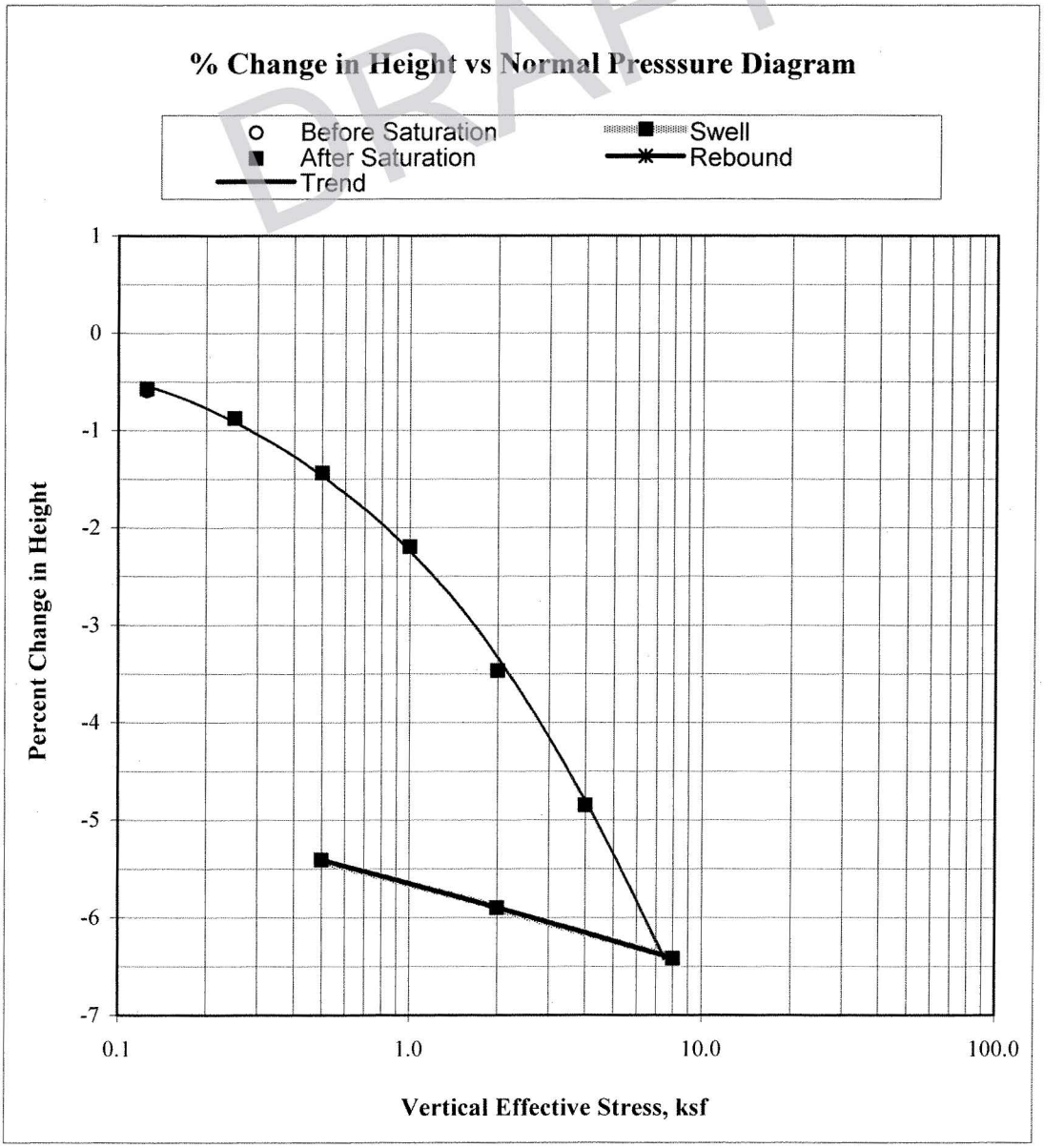
CONSOLIDATION TEST

ASTM D 2435-90

Oxnard College Park
B 8 @ 2
SM
Ring Sample

Initial Dry Density: 99.6 pcf
Initial Moisture, %: 8.4%
Specific Gravity: 2.67 (assumed
Initial Void Ratio: 0.673

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APPENDIX E

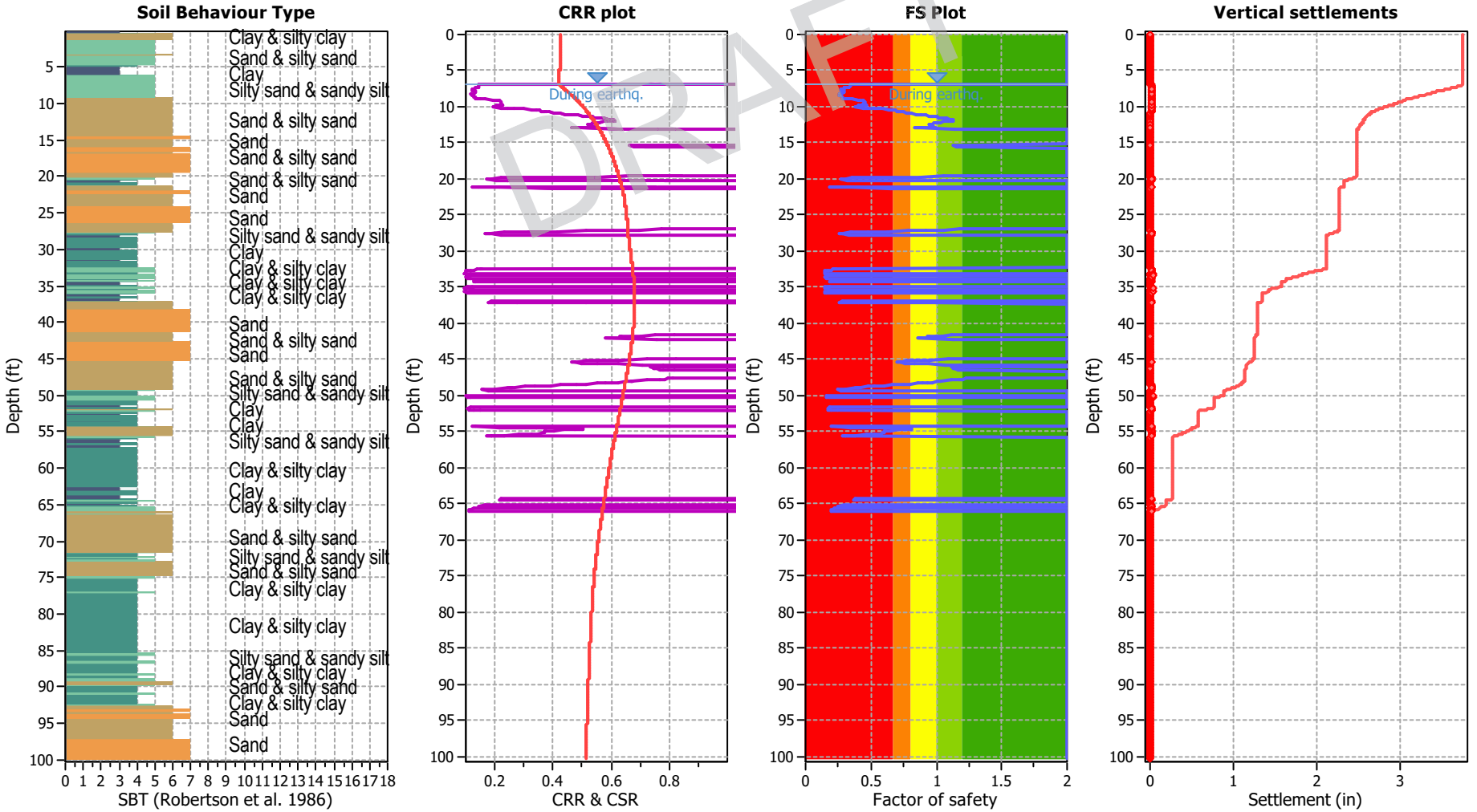
Liquefaction Analyses

GeoLogismiki
Geotechnical Engineers
Merarhias 56
http://www.geologismiki.gr

Project:
Location:

CPT: CPT-1
Total depth: 100.27 ft

DRAFT



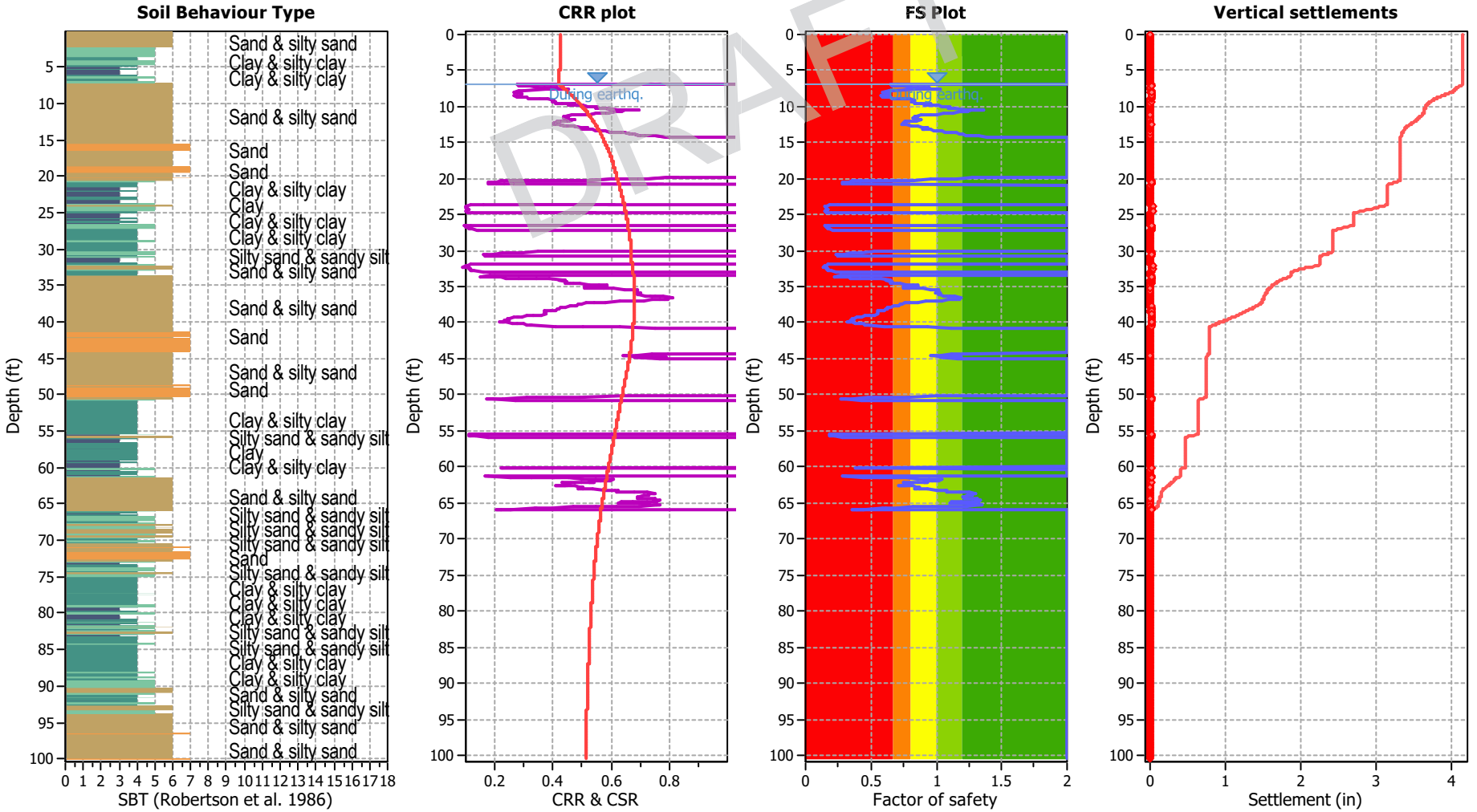
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Peak ground acceleration:	0.68	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

GeoLogismiki
Geotechnical Engineers
Merarhias 56
http://www.geologismiki.gr

Project:
Location:

CPT: CPT-2
Total depth: 100.40 ft

DRAFT



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	13.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
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Points to test:	Based on Ic value	Average results interval:	1	Fill weight:	N/A	Limit depth:	66.00 ft
Earthquake magnitude M_w:	7.40	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.68	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

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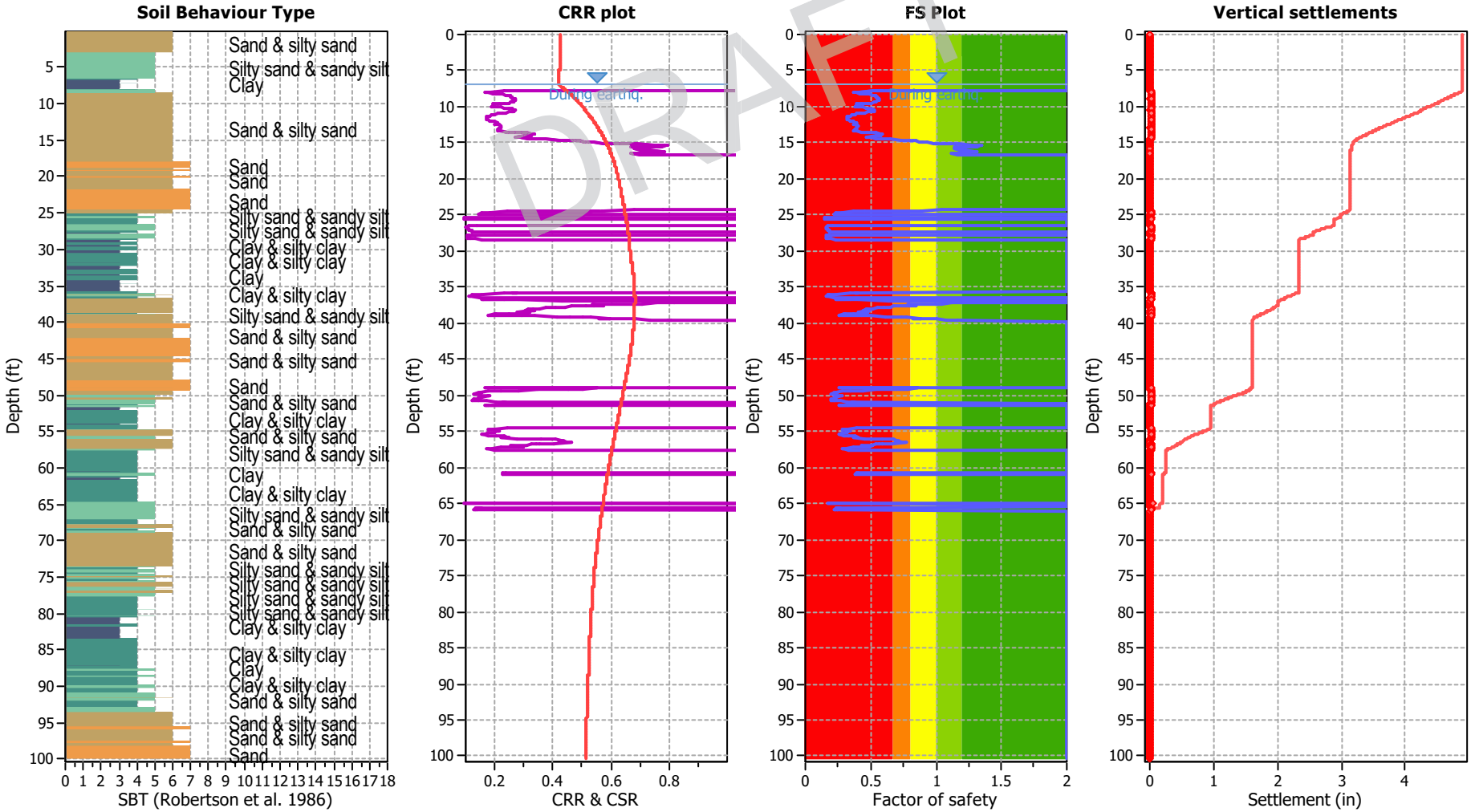
Project:

Location:

CPT: CPT-3

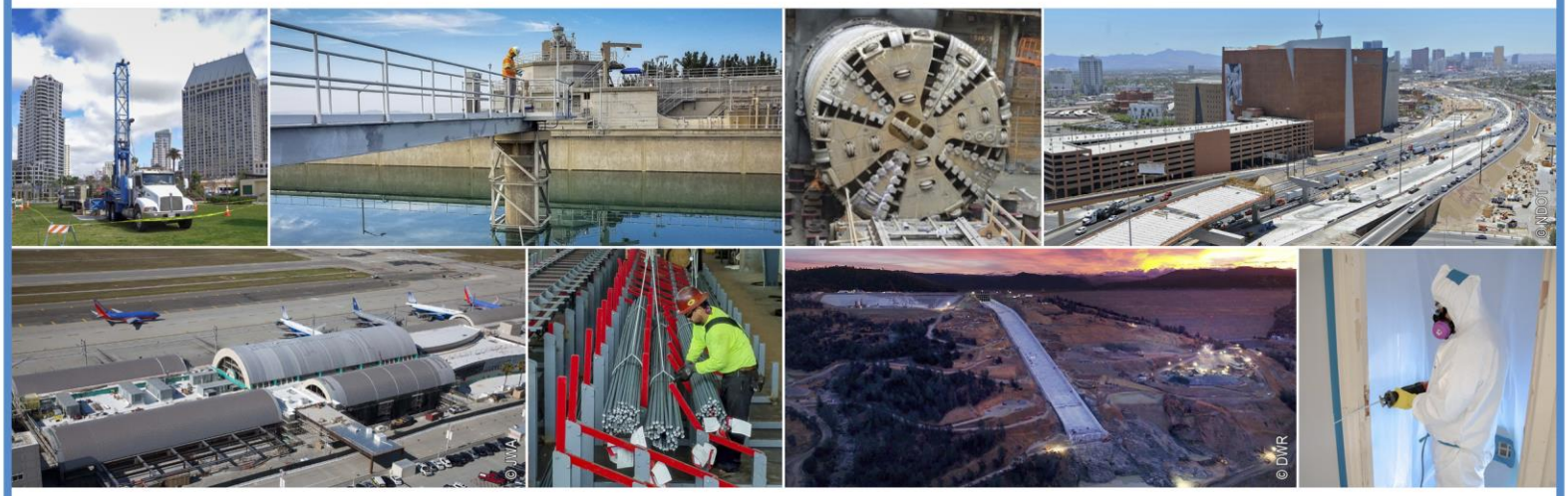
Total depth: 100.33 ft

DRAFT



Analysis method:	NCEER (1998)	G.W.T. (in-situ):	13.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	7.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	1	Fill weight:	N/A	Limit depth:	66.00 ft
Earthquake magnitude M_w:	7.40	Ic cut-off value:	2.60	Trans. detect. applied:	No	MSF method:	Method based
Peak ground acceleration:	0.68	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

DRAFT



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Geotechnical & Environmental Sciences Consultants

Appendix D

Hazardous Materials Evaluation



Hazardous Materials Evaluation

South Oxnard Aquatics Center Project
Oxnard, California

prepared for

City of Oxnard
35 West Third Street
Oxnard, California 93030

prepared by

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

December 2022

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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Ventura, California 93003

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December 23, 2022
Project No.: 22-12588

Mr. Reza Bagherzadeh, P.E.
Senior Project Manager
City of Oxnard, Public Works Department
305 West Third Street
Oxnard, California 93030
Via email: reza.bagherzadeh@oxnard.org

Subject: Hazardous Materials Evaluation
South Oxnard Aquatics Center Project, Oxnard, California

Dear Mr. Bagherzadeh:

This report presents the findings of a Hazardous Materials Evaluation completed by Rincon Consultants, Inc. (Rincon) for the South Oxnard Aquatics Center Project in Oxnard, California. The Hazardous Materials Evaluation was performed in accordance with our proposal dated February 17, 2022.

Thank you for selecting Rincon for this project. If you have any questions, or if we can be of any future assistance, please contact us.

Sincerely,
Rincon Consultants, Inc.

Julie Lynne Welch
Director of Due Diligence

Torin Snyder, PG, CHG
Principal

Savanna Vrevich
Environmental Scientist

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Appendix A Site Photographs

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Introduction

This report presents the findings of a Hazardous Materials Evaluation for the South Oxnard Aquatics Center Project (Project) located at the southeastern corner of College Park in Oxnard, California (Project site; Figure 1). This Hazardous Materials Evaluation was performed by Rincon Consultants, Inc. (Rincon).

The purpose of this Hazardous Materials Evaluation is to provide a preliminary evaluation of the potential for environmental effects from hazardous materials and hazardous wastes for the Project as a result of past or current activities in the area. Our report documents areas of potential environmental concern within the Project site, which have or may have been impacted by hazardous materials or wastes and identifies environmental concerns that have the potential to impact the operation or construction of the Project.

Project Description

The City of Oxnard proposes to construct the South Oxnard Aquatics Center. The Project includes construction of outdoor pools with a total surface area of 23,500 square feet, including a 50-meter competition pool, 25-yard instructional pool, and fun water shallow pool, slide, and splash pad. The Project also includes construction of a 21,300-square foot, one-story "L" shaped building which will frame the western and eastern sides of the pool deck. The building will include locker rooms, administrative space, and utility rooms to support the aquatic activities. Up to 7.425 million British thermal units (BTU) of natural gas would be required to heat the pools. This would include construction of a natural gas pipeline that would connect to the southwestern corner of the proposed aquatic center, trend west along the southern portion of College Park's one-lane ring road, and connect to an existing Southern California Gas Company (SoCalGas) line in South Rose Avenue. The Project includes construction of a dedicated parking lot with 134 parking stalls north of the aquatics center. The parking lot will be supplemented by existing parking along College Park's ring road as well as existing adjacent parking lots within the park. The aquatic center has been designed to inspire all residents of Oxnard, many of whom do not have basic swimming skills, to gain or increase their confidence and enjoyment of aquatic environments.

Location

The Project site is located at the southeastern corner of College Park, which is located at 3250 South Rose Avenue in Oxnard, California. The 7.93-acre Project site is identified as a portion of Assessor's Parcel Number 2240-012-28. Figure 1 shows the location of the Project site in the region, and Figure 2 shows the Project site in its neighborhood context.

Setting and Surrounding Land Uses

The Project site is currently vacant land with a few landscaped areas, and an unnamed College Park ring road. The Project site is bound by College Park to the west, vacant land to the north and east, and recreational sports courts/fields and vacant land to the south. As shown in Figure 1, land uses surrounding the Project site include recreational land uses and vacant land.

Access to the Project site is provided via South Rose Avenue. Regional access to the Project site is provided via State Route 1 and South Oxnard Boulevard.

Figure 1 Regional Location



Basemap provided by Esri and its licensors © 2022.

Project Location

N

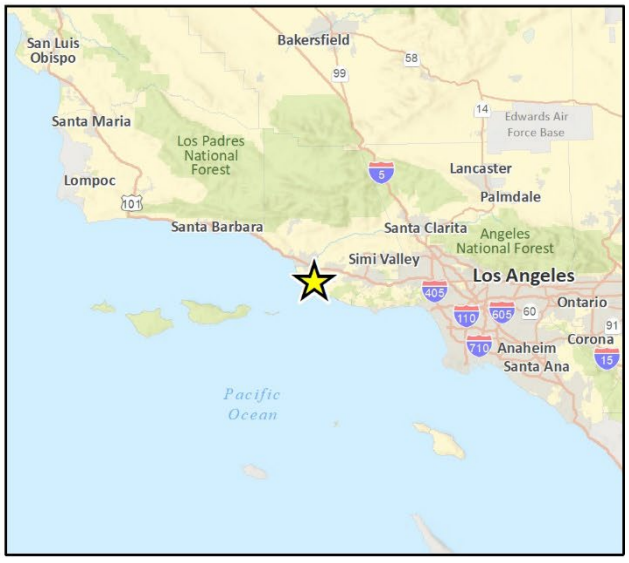


Figure 2 Project Location and Adjacent Land Use



Methodology

The scope of services conducted during the Hazardous Materials Evaluation is outlined below:

- Reviewed City of Oxnard (City)-provided documents relevant to the Project site (Environmental Impact Report [EIR], Phase I Environmental Site Assessment [ESA], and Phase II ESA)
- Reviewed environmental documents available online at the State Water Resources Control Board (SWRCB) GeoTracker website, the California Department of Toxic Substances Control (DTSC) EnviroStor website, the Ventura County Environmental Health Division (VCEHD) website, and the Oxnard City Fire Department website.
- Reviewed solid waste landfills near the Project site using the California Department of Resources, Recycling, and Recovery (CalRecycle) Solid Waste Information System (SWIS) website.
- Reviewed oil and gas wells, and oil fields near the Project site using the California Geologic Energy Management Division (CalGEM) website.
- Reviewed buried hazardous material pipelines near the Project site using the Department of Transportation (USDOT), Pipeline and Hazardous Materials Safety Administration (PHMSA), National Pipeline Mapping System (NPMS) website.
- Reviewed per- and polyfluoroalkyl substances (PFAS) investigations near the Project site using the SWRCB website.
- Reviewed reasonably ascertainable historical resources (e.g., aerial photographs, topographic maps) to assess the historical land use of the Project site and adjacent properties.
- Performed a reconnaissance survey of the Project site to identify obvious indicators of the existence of hazardous materials.
- Observed adjacent or nearby properties from public thoroughfares to see if such properties are likely to use, store, generate, or dispose of hazardous materials.

The results of the records review and reconnaissance survey are discussed in the following sections.

Records Review

Listed Release Sites

A review of the Cortese List online data resources indicates that the Project site and adjacent properties are not associated with Cortese sites or sites that are included on a list of hazardous material release sites compiled pursuant to Government Code Section 65962.5 (California Environmental Protection Agency 2022).

A review of the DTSC EnviroStor database indicates that no hazardous material release cases are associated with the Project site or properties within 0.5 mile of the Project site (DTSC 2022).

A review of the SWCRB GeoTracker database indicates that no hazardous material release cases are associated with the Project site. Four hazardous material release cases are mapped on GeoTracker as located within 0.25 mile of the Project site (SWRCB 2022a). However, based on site maps available on GeoTracker and/or via VCEHD online records, it appears that these release cases have been mis-mapped on GeoTracker and are located over 0.25 mile away from the Project site.

Landfills

According to a review of the CalRecycle online SWIS database, there are no landfills within 2,000 feet of the Project site. Therefore, landfills would have no impact on the operation or construction of the Project.

CalGEM Records

According to a review of CalGEM online oil and gas well and field records, the Project site is not located within an oil/gas field; however, the Oxnard Oil/Gas Field is located north of the Project site. The closest oil well within the Oxnard Oil/Gas Field is a plugged dry hole well located approximately 1,100 feet northwest of the Project site (CalGEM 2022). Based on the distance of the Oxnard Oil/Gas Field and this oil well to the Project site, the oil and gas wells and fields would have no impact on the operation or construction of the Project.

PHMSA Records

According to a review of the PHMSA online NPMS database, there are no high-pressure natural gas transmission or hazardous liquid pipelines within or adjacent to the Project site, or within 1,000 feet of the Project site (USDOT 2022). Therefore, hazardous material pipelines would have no impact on the operation or construction of the Project.

California Statewide PFAS Investigation

Beginning in 2019, the SWRCB issued letters to property owners of sites that may be potential sources of PFAS. These sites currently include select landfills, airports, chrome plating facilities, publicly owned treatment works facilities, Department of Defense sites, and bulk fuel storage terminals and refineries. The letters included a SWRCB Water Code Section 13267 Order

(Investigative Order); an Investigative Order is a directive from the SWRCB to conduct on-site testing of groundwater and/or leachate. This does not mean that PFAS has been produced, used, or discharged at these sites. According to the SWRCB, "PFAS are a large group of human-made substances that do not occur naturally in the environment and are resistant to heat, water, and oil" (SWRCB 2022b).

According to a review of the California Statewide PFAS Investigation online Public Map Viewer, there are no current airport, chrome plating, Department of Defense, landfill, or publicly owned treatment works with PFAS orders at any facilities listed as located within one mile of the Project site (SWRCB 2022b). According to a review of the SWRCB's March 12, 2021, Bulk Fuel Terminal/Refinery Investigative Order, the Project site is not listed on the Bulk Fuel Storage Terminals and Refineries List (Attachment 1 of the Order). Furthermore, none of the Bulk Fuel Storage Terminals or Refineries on the list are located within one mile of the Project site (SWRCB 2021).

According to a review of the California Statewide Drinking Water System Quarterly Testing Results online Public Map Viewer, perfluorooctanoic acid and perfluorooctanesulfonic acid (PFOA and PFOS) were analyzed in three public drinking water wells located approximately two miles east and southeast of the Project site and tested quarterly as part of a PFAS investigative order (SWRCB 2022c). PFOA and PFOS were not detected in these wells. Therefore, PFAS would have no impact on the operation or construction of the Project.

Historical Records

According to our review of online aerial photographs and topographic maps (Nationwide Environmental Title Research [NETR] 2022), it appears the Project site was an orchard from at least 1947 to 1974, dry farming in 1980, and vacant land from at least 1984 to present day. Additionally, soil piles appear to be present in the northern portion of the Project site in 2013 and 2014, and the central/western portion of the Project site in 2021.

Additionally, it appears the alignment of the proposed natural gas pipeline was an orchard from at least 1947 to 1974, dry farming in 1980, vacant land, landscaped areas, and a paved road from 1984 to 2010, and landscaped areas and a paved road from 2012 to present day.

Shallow soils located in agricultural areas are commonly impacted with hazardous materials such as petroleum hydrocarbons, organochlorine pesticides (OCPs), and metals. Therefore, construction of the Project in areas of former agricultural use could create a public health and environmental hazard at the Project site.

City-Provided Documents

2005 Phase I ESA

A 2005 Phase I ESA report prepared by Rincon for the 75-acre College Park project, which includes the Project site and the alignment of the proposed natural gas pipeline, indicates that the College Park site was developed with a ranch and used for dry farming and row crop agriculture from the 1940s to the 1980s. The ranch residence, storage sheds, and three former fuel underground storage tanks (USTs) were formerly located in the northwestern corner of the College Park site, approximately 1,300 feet northwest of the Project site. A former oil well was also identified on the College Park site, approximately 1,100 feet northwest of the Project site. The report identified six

recognized environmental conditions (RECs) in connection with the College Park site: presence of three former fuel USTs, former agricultural use, pesticide storage and staining at the time of the report, improper storage of 55-gallon drums, historical adjacent presence of State Route 1, and a former oil well. Based on distance to the Project site, all but one of these RECs would have no impact on construction or operation of the Project (including the alignment of the proposed natural gas pipeline). The report also identified former agricultural use of the College Park site (including the Project site). The report recommended collecting soil samples from the College Park site and analyzing the soil samples for pesticides, due to the potential for the College Park site to be affected by pesticides or other chemicals routinely used in agricultural production.

2005 EIR

A 2005 EIR prepared by the City of Oxnard with the assistance of Rincon for the 75-acre College Park project, which includes the Project site and the alignment of the proposed natural gas pipeline, indicates that the six RECs identified in Rincon's 2005 Phase I ESA were a "significant but mitigable" impact to the proposed College Park project. The EIR included two mitigation measures related to hazardous materials: completion of a Phase II ESA and additional assessment and/or remediation that "may be required to reduce the soil/groundwater contamination levels to within acceptable ranges considered acceptable for park use." Documentation associated with these mitigation measures were directed to be submitted to the City of Oxnard for review prior to issuance of a grading permit, and the mitigation measures were determined to "mitigate the potential hazard associated with contamination to a level of insignificance" (City of Oxnard 2005).

2007 Phase II ESA

A 2007 Phase II ESA report prepared by Rincon for the 75-acre College Park project, which includes the Project site and the alignment of the proposed natural gas pipeline, was prepared based on the findings of Rincon's 2005 Phase I ESA. As part of the Phase II ESA, a soil and groundwater assessment was conducted at the College Park site to evaluate hazards associated with USTs, former agricultural use, pesticide storage, drums, State Route 1, and a former oil well. During borings conducted as part of the Phase II ESA, groundwater was encountered between 9 and 10 feet below grade in the northwestern corner of the College Park site.

Because the RECs previously identified in connection with the College Park site (except the former agricultural use of the College Park site) would have no impact on construction or operation of the Project, the results of soil and groundwater sampling in those areas are not discussed here.

Of the 57 soil borings advanced in areas historically developed with agriculture at the College Park site, 11 soil borings were advanced within the Project site and two soil borings were advanced in the vicinity of the proposed natural gas pipeline. Soil samples were collected at 0.5 feet below grade, composited on a 4 to 1 basis resulting in three composite soil samples collected at the Project site (with one composite sample including a soil sample collected approximately 30 feet north of the Project site), and analyzed for OCPs. The OCPs 4,4'-dichlorodiphenyldichloroethane (DDD), 4,4'-dichlorodiphenyldichloroethylene (DDE), 4,4'-dichlorodiphenyldichloroethylene (DDT), dieldrin, gamma-chlordane, and alpha-chlordane were detected in the composite soil samples collected at the Project site and in the vicinity of the proposed natural gas pipeline. When compared to the 2019 Residential San Francisco Bay Regional Water Quality Control Board's Environmental Screening Levels (ESLs), the detected concentrations of OCPs in these composite soil samples were below the Residential ESLs for shallow soil exposure at residential properties.

Site Reconnaissance

Rincon staff performed a reconnaissance survey of the Project site (as shown on Figure 2) on September 9, 2022, accompanied by Reza Bagherzadeh, P.E., Senior Project Manager for the City of Oxnard. The purpose of the reconnaissance survey was to observe existing Project site conditions that may indicate the presence of hazardous material releases on the Project site. As discussed below, piles of concrete debris, wood debris, and soil were observed on the Project site during the reconnaissance survey. Figure 3 depicts our observations from the reconnaissance survey.

Current Use of the Project Site

During the reconnaissance survey, Rincon staff confirmed the Project site is currently vacant land.

Piles of Material

Several soil piles of varying sizes were observed on the Project site as follows:

- Five piles of concrete debris in the southeastern corner of the Project site (Appendix A, Photograph 2)
- One pile of wood debris and at least one soil pile in the southeastern portion of the Project site (Appendix A, Photograph 3)
- One approximately 200-foot-long soil pile along the southern boundary of the Project site (Appendix A, Photograph 4)

According to Mr. Bagherzadeh, piles of woodchips/mulch were previously located on the Project site, generated from clearing trees during development of the western adjacent park, and were later moved to the northern adjacent property. Piles of woodchips were observed on the northern adjacent property (Appendix A, Photograph 5).

Figure 3 Project Site



Impact Summary

Based on the research conducted as part of this Hazardous Materials Evaluation, environmental conditions with the potential to impact construction and/or operation of the Project were identified, as described below.

Construction Impacts

Based on the past agricultural use of the Project site and results of soil samples previously collected at the Project site in 2007, the OCPs DDD, DDE, DDT, dieldrin, gamma-chlordane, and alpha-chlordane are present in soil at the Project site at concentrations below the 2019 Residential ESLs.

Since completion of the Phase II ESA in 2007, soil piles of unknown origin were present on the Project site in at least 2013, 2014, 2021, and 2022 (September 9, 2022); therefore, residual fill soils may remain on the Project site. If residual fill soil is present, petroleum hydrocarbons, OCPs, metals and/or other contaminants may be present in the residual fill soil on the Project site and could be disturbed during grading and construction-related work.

Potential environmental conditions identified at the Project site during Rincon's September 2022 reconnaissance survey include soil piles of unknown origin. Soils impacted with petroleum hydrocarbons, OCPs, metals, and/or other contaminants may be present in the on-site soil piles and could be disturbed during grading and construction-related work. Offsite disposal of these materials during Project construction may also require special handling or disposal as a waste.

Consequently, potentially significant impacts may exist at the Project site and, as a result, would potentially create a significant hazard to the public or the environment during grading/construction. Implementation of Mitigation Measures HAZ-1 through HAZ-3 will reduce construction hazardous material impacts to a less-than-significant level.

Operation Impacts

Potential hazardous materials, such as fuels/oils, paint products, lubricants, solvents, cleaning products, and pesticides/herbicides may be used and/or stored on-site during operation of the Project. Operation of the Project would likely involve an incremental increase in the use of commercial hazardous materials, such as pool maintenance chemicals, cleaning products, fertilizers, pesticides, and other materials used in regular property, pool, and landscaping maintenance. It is anticipated that tanks of sodium hypochlorite, muriatic acid, and carbon dioxide (CO_2) would be stored in four storage rooms within the proposed aquatic center building. Specifically, three 1,000-gallon tanks of sodium hypochlorite would be stored in three storage rooms (one in each storage room). One 500-gallon tank of muriatic acid and one canister with 600 pounds of CO_2 would be stored in the fourth room. Transport, use, and storage of hazardous materials during operation of the Project would be conducted pursuant to all applicable local, state, and federal laws, including Title 49 of the Code of Federal Regulations implemented by California Code of Regulations (CCR) Title 13. As required by California Health and Safety Code Section 25507, a business shall establish and implement a Hazardous Materials Business Emergency Plan for emergency response to a release or threatened release of a hazardous material. As required, the hazardous materials would be stored in locations according to compatibility and in storage enclosures (i.e., flammable material

storage cabinets and biological safety cabinets) or in areas or rooms specially designed, protected, and contained for such storage, in accordance with applicable regulations. With proper transport, handling, and storage of hazardous materials at the Project site, operational hazardous material impacts would be less than significant.

Recommendations

Based on the former/current presence of soil piles on the Project site, there may be contaminants present. Soil piles present on the southeastern portion of the Project site may also be impacted by contaminants. Therefore, soils impacted with contaminants may be disturbed during grading and construction-related work on the Project site.

Implementation of Mitigation Measures HAZ-1 through HAZ-3 would identify if impacted soils are present on the Project site and reduce potential hazardous material construction impacts at the Project site to less than significant, as discussed below.

Mitigation Measures

HAZ-1 Subsurface Investigation

Prior to construction, the City shall retain a qualified environmental consultant (Professional Geologist [PG] or Professional Engineer [PE]) to conduct a subsurface investigation in areas of proposed development at the Project site where soil piles were formerly or are currently present. The subsurface investigation may include, but is not limited to, completion of soil sampling and analysis for total petroleum hydrocarbons in the gas, diesel, and oil range, volatile organic compounds, semi-volatile organic compounds, OCPs, and metals.

The PG or PE shall prepare a subsurface investigation report, which will be submitted to the City for review and approval. As part of the subsurface investigation, analytical results shall be screened against the San Francisco Bay RWQCB ESLs. These ESLs are risk-based screening levels for direct exposure of a construction worker and commercial/industrial land use. The subsurface investigation report shall include recommendations to address identified hazards and indicate when to apply those recommended actions in relation to Project activities.

If contaminants are detected at the Project site, the City shall implement the recommendations specified in the subsurface investigation report, and appropriate steps shall be undertaken by the City to protect site workers during Project construction. This would include the preparation of a Soil Management Plan and remediation, if required (see Mitigation Measures HAZ-2 and HAZ-3).

HAZ-2 Soil Management Plan

The City shall retain a qualified environmental consultant (PG or PE) to prepare a Soil Management Plan (SMP) prior to construction. The SMP, or equivalent document, shall be prepared to address handling and management of contaminated soils or other contaminated wastes on the Project site, if any is encountered during the subsurface investigation, and reduce hazards to construction workers and offsite receptors during construction. The City shall review, approve, and implement the SMP prior to grading (construction).

The SMP must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the offsite migration of impacts from the Project site. These measures and practices may include, but are not limited to:

- Stockpile management including stormwater pollution prevention and the installation of Best Management Practices (BMPs)

- Proper disposal procedures of impacted materials
- Monitoring and reporting
- A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection
- The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction
- Proper handling procedures for unexpected contamination, such as halt-work and avoidance protocols, and City and contractor notifications

The SMP shall also specify the procedures to be implemented in the event unexpected hazardous materials are encountered during construction. If unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground-disturbing activities, the construction contractor shall halt work in the immediate area and a qualified environmental consultant (PG or PE) shall be contacted immediately to evaluate the situation. The qualified environmental consultant shall evaluate the material and recommend the appropriate testing, removal, and disposal methods. The construction contractor shall ensure hazardous materials are removed or remediated in accordance with the requirements of the qualified environmental consultant and the SMP. Construction work may continue on other parts of the Project while soil investigation and/or remediation (Mitigation Measure HAZ-3) takes place. The construction contractor shall not resume work until approved by the qualified environmental consultant and the City.

HAZ-3 Remediation

If the subsurface investigation identifies that contaminants are present within the soil piles or construction limits at chemical concentrations exceeding ESLs and/or hazardous waste screening thresholds for contaminants in soil (CCR Title 22, Section 66261.24), the City shall retain a qualified consultant (PG or PE) to properly dispose of the contaminated soil. The qualified consultant shall utilize the Project site analytical results from the subsurface investigation report for waste characterization purposes prior to offsite transportation or disposal of potentially impacted soils or other impacted wastes. The qualified consultant shall provide disposal recommendations and arrange for proper disposal of the waste soils or other impacted wastes (as necessary), and/or provide recommendations for remedial engineering controls, if appropriate.

Remediation of impacted soils and/or implementation of remedial engineering controls may require additional delineation of subsurface impacts; additional analytical testing per landfill or recycling facility requirements; soil excavation; and offsite disposal or recycling.

The City shall review, approve, and implement the Project site disposal recommendations prior to transport of waste soils offsite and remedial engineering controls, prior to construction.

Significance After Mitigation

Implementation of Mitigation Measures HAZ-1 through HAZ-3 during construction would reduce potential hazardous material impacts to a less-than-significant level.

References

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Appendix A

Site Photographs



Photograph 1. View of the subject property from the southern boundary, facing north.



Photograph 2. View of five piles of concrete debris in the southeastern corner of the subject property, facing west.



Photograph 3. View of piles of wood debris and soil in the southeastern portion of the subject property, facing south.



Photograph 4. View of one approximately 200-foot-long soil pile located along the southern boundary of the subject property, facing east.



Photograph 5. View of piles of woodchips on the northern adjacent property, facing north.



Photograph 6. View of the subject property from the northwestern corner, facing southeast.

Appendix E

Phase II Environmental Site Assessment



Phase II Environmental Site Assessment

Proposed South Oxnard Aquatics Center Improvement Project
Oxnard, California

prepared for
City of Oxnard

prepared by
Rincon Consultants, Inc.

March 23, 2023

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March 23, 2023
Project No.: 22-13765

Mr. Reza Bagherzadeh, P.E.
Senior Project Manager
City of Oxnard, Public Works Department
305 West Third Street
Oxnard, California 93030
Via email: reza.bagherzadeh@oxnard.org

Subject: Phase II Environmental Site Assessment
Proposed South Oxnard Aquatics Center Improvement Project, Oxnard, California

Dear Mr. Bagherzadeh:

We are pleased to submit this Phase II Environmental Site Assessment (ESA) report for the proposed South Oxnard Aquatics Center Improvement Project located in Oxnard, California (site). The Phase II ESA was performed in accordance with our proposal dated November 16, 2022. The objective of the assessment was to evaluate chemical constituents of concern in soil at the site and to determine if remediation or mitigation measures may be required to reduce potential health impacts during construction and to future users of the proposed aquatics center.

If you have any questions, or if we can be of any future assistance, please contact us.

Sincerely,
Rincon Consultants, Inc.

R. Scott English, RME
Senior Program Manager

REGISTERED PROFESSIONAL ENGINEER
RYAN THACHER
C 87757
CIVIL
STATE OF CALIFORNIA

This document has been digitally signed and sealed by Ryan Thacher, PhD, PE on 1/12/2023.

Ryan Thacher, PhD, PE
Director of Site Assessment and Remediation

Savanna Vrevich
Environmental Scientist

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Appendix A Field Procedures

Appendix B Soil Matrix Laboratory Analytical Report

Introduction

This report presents the findings of a Phase II Environmental Site Assessment (ESA) consisting of a soil matrix assessment conducted by Rincon Consultants, Inc. (Rincon) for the proposed South Oxnard Aquatic Center Improvement Project located immediately east of Oxnard College (4000 South Rose Avenue) in the City of Oxnard, California (site, Figure 1). The site is currently an approximately 7-acre vacant, graded property. We understand the site is planned for construction of the South Oxnard Aquatics Center to serve the City of Oxnard's (City) youth, adults, and seniors, and provide for expansion of recreation, water fitness, and competitive aquatics opportunities.

Background

The scope of work presented herein is based on the recommendations identified in the Hazardous Materials Evaluation prepared by Rincon and dated October 10, 2022. The mitigation measure identified in the Hazardous Materials Evaluation as HAZ-1 indicates the City shall retain a qualified environmental consultant (Professional Geologist [PG] or Professional Engineer [PE]) to conduct a subsurface investigation in areas of proposed development at the project site where soil piles were formerly or are currently present.

Regulatory Setting and Screening Levels

Environmental Screening Levels (ESLs) have been established by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) for chemicals commonly found in soil, groundwater, soil vapor, and air at sites where releases of hazardous chemicals may have occurred (SFBRWQCB 2019). ESLs are considered to be health-conservative concentration thresholds designed to be protective of the environment and human health and are applied at sites throughout California. Under most circumstances, the presence of a chemical in soil, soil vapor, groundwater, or ambient air at concentrations below the ESL corresponding to the site's exposure scenario (commercial/industrial, residential, etc.) can be assumed to not pose a significant, long term (chronic) threat to human health or the environment. Additional evaluation will generally be necessary at sites where a chemical is present at concentrations above the corresponding ESL. Active remediation may or may not be required depending on site specific conditions and considerations.

Per the Department of Toxic Substances Control's (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA) Note 3 (DTSC 2020), DTSC Screening Levels (DTSC SLs) are risk-based screening levels intended to be protective of future receptors at a site (residential, commercial/industrial, etc.), and are also suitable for comparison to environmental data.

Rincon understands that redevelopment plans include construction of a recreational (aquatics) facility. Therefore, contaminant levels will be compared to the following:

- **Soil Matrix:** Construction worker and commercial/industrial ESLs and commercial/industrial DTSC SLs, except for total chromium for which residential, commercial/industrial, and construction worker ESLs and DTSC SLs have not been established. Therefore, total chromium will be compared to the Tier 1 ESL for total chromium, which was established for terrestrial receptors/habitats.

Because metals can be naturally occurring at elevated concentrations in the environment, metals are compared to regional background levels when background levels exceed risk-based screening levels. A commonly used reference that lists estimates of naturally occurring concentrations of metals in California soil is a Kearney Foundation of Soil Science special report (Kearney 1996). Arsenic concentrations in soil matrix samples collected at the site, which are typically naturally elevated throughout California relative to ESLs, were compared to background concentrations described in the Kearney Foundation special report.

Purpose and Scope

Purpose

Rincon performed a Phase II ESA consisting of soil matrix sampling at the site. The Phase II ESA was based on the recommendations identified in the Hazardous Materials Evaluation prepared by Rincon for the site and dated October 10, 2022. As described in this report, we developed the Phase II ESA scope to incorporate the findings and recommendations of the Hazardous Materials Evaluation report.

The objective of the assessment was to identify potentially impacted soil at the site and to determine if remediation or mitigation measures may be required to reduce potential health impacts during construction and to future occupants of the proposed aquatics center.

Completed Scope

The Phase II ESA scope of work included the following:

- Performed soil boring mark-outs and notified Underground Service Alert (USA)
- Prepared a site-specific Health and Safety Plan
- Advanced a total of eight soil borings at the site, including the areas of former and current soil and debris piles to identify potentially impacted soil
- Analyzed soil samples for the following:
  - TPH in the gasoline range (TPH-g), diesel range (TPH-d), and motor oil range (TPH-o)
  - Volatile organic compounds (VOCs)
  - Semi-volatile organic compounds (SVOCs)
  - Organochlorine pesticides (OCPs)
  - Title 22 Metals
- Evaluated laboratory analytical results and compared analyte concentrations to applicable SFBRWQCB and DTSC commercial/industrial exposure and construction worker exposure screening levels
- Prepared this report documenting the findings of the Phase II ESA

Site Assessment

Sampling Methodology and Analytical Program

On February 7, 2023, Rincon mobilized to the site to complete the soil matrix sampling program described below.

Soil Matrix Sampling

Eight soil borings were advanced using a hand auger in accordance with the field procedures detailed in Appendix A. Soil boring locations are shown on Figure 2. Soil boring logs are in Appendix B. The total number of soil samples and sampling depths are described in Table 1.

Table 1 Soil Sampling Depths and Analytes

Location	Boring ID	Number of Borings	Target Depth (ft bgs)	Soil Sample Intervals (ft bgs)	Analytes
Site, including former and current soil and debris piles	HA1-HA8	8	3.0	0.5 – 1 2.5 – 3	TPH-g, TPH-d, TPH-o, VOCs, SVOCs, OCPs, Title 22 Metals

ft bgs – feet below ground surface

Soil Matrix Analytical Program

Soil samples were transported for analysis via courier under chain-of-custody protocol to Pace Analytical, a state-certified analytical laboratory in Bakersfield, California. The analytical program for the soil matrix samples is summarized below in Table 2.

Table 2 Analytical Methods

Sampled Media	Number of Samples Analyzed	Analytes	Analytical Methods
Soil Matrix	8	TPH-g, TPH-d, and TPH-o	United States Environmental Protection Agency (EPA) Method 8015B(M)/FFP with silica gel treatment
	8	VOCs	EPA Method 8260B with EPA Method 5035 field preservation
	8	SVOCs	EPA Method 8270 SIM
	8	OCPs	EPA Method 8081A
	8	Title 22 Metals	EPA Method 6010B/7471A

Initially, only the samples collected from 0.5 feet below ground surface (bgs) were selected for analysis. The additional soil samples were held at the laboratory pending the results of the initial sample analysis.

Based on the results of the initial sample analysis, the samples collected from 3.0 feet bgs at boring locations HA2 through HA7 were analyzed for TPH and the sample collected from 3.0 feet bgs at

boring location HA8 was analyzed for mercury. In addition, in order to verify the TPH detected was not derived from naturally occurring organic sources, a silica gel cleanup procedure was added to the TPH analysis to confirm that the TPH identified originated from an anthropogenic source.

Decontamination Processes

All reusable (non-disposable) drilling and sampling equipment underwent a three-stage decontamination procedure between samples. Equipment was washed using a phosphate-free detergent solution rinsed with potable water and rinsed again with deionized water.

Upon completion of soil matrix sampling, the soil borings were backfilled with soil cuttings and finished to match existing ground conditions.

Analytical Results

Soil Matrix Sample Analytical Results

A copy of the soil matrix laboratory analytical report is included in Appendix C. Summaries of the soil matrix sample analytical data are included in Tables 9 through 11.

TPH in Soil

Petroleum hydrocarbons were detected in 13 of the 14 soil samples analyzed for TPH. Table 3 below summarizes TPH detections in the soil borings. A detailed table of TPH analytical results is presented in Table 9.

Table 3 Summary of Detected Concentrations of TPH in Soil

Constituent	Number of Detections	Samples Exceeding ESL	Maximum Detected Concentration (mg/kg)/ Boring ID-Depth (ft bgs)	ESL Exceeded (mg/kg)
TPH-g	0	N/A	Not detected	Not detected
TPH-d	8	1	780 (HA3-0.5)	500 (Commercial/ Industrial DTSC SL)
TPH-o	13	0	5,200 (HA3-0.5)	No

mg/kg – milligrams per kilogram

TPH-g was not detected in any of the 14 soil samples analyzed for TPH.

TPH-d was detected in exceedance of its commercial/industrial DTSC SL at boring location HA3 at a depth of 0.5 foot bgs. TPH-d was not detected above the laboratory reporting limit in the 3.0-foot sample from this boring location (HA3).

TPH-o was not detected at or in exceedance of its construction worker ESL, commercial/industrial ESL, or commercial/industrial DTSC SL in any of the 14 soil samples analyzed for TPH.

VOCs in Soil

VOCs were detected in all of the eight soil samples analyzed for VOCs. Table 4 below summarizes VOC detections in the soil borings. A detailed table of VOC analytical results is presented in Table 9.

Table 4 Summary of Detected Concentrations of VOCs in Soil

Constituent	Number of Detections	Samples Exceeding ESL	Maximum Detected Concentration (mg/kg)/Boring ID-Depth (ft bgs)	ESL Exceeded (mg/kg)
Benzene	7	None	0.007 (HA5-0.5)	No
Ethylbenzene	3	None	0.0032 (HA8-0.5)	No
Toluene	8	None	0.0099 (HA5-0.5)	No
1,2,4-Trimethylbenzene	4	None	0.0021 (HA5-0.5)	No

Xylenes	1	None	0.0043 (HA5-0.5)	No

None of the soil samples collected and analyzed for VOCs exceed their respective commercial/industrial or construction worker ESLs, or commercial/industrial DTSC SLs, for VOCs in soil.

SVOCs in Soil

SVOCs were not detected in any of the eight soil samples analyzed for SVOCs, as presented in Table 9.

OCPs in Soil

OCPs were detected in seven of the eight soil samples analyzed for OCPs. Table 5 below summarizes OCP detections in the soil samples. A detailed table of OCP analytical results is presented in Table 10.

Table 5 Summary of Detected Concentrations of OCPs in Soil

Constituent	Number of Detections	Samples Exceeding ESL	Maximum Detected Concentration (mg/kg)/ Boring ID-Depth (ft bgs)	ESL Exceeded (mg/kg)
Chlordane	1	None	0.071 (HA8-0.5)	No
4,4'-Dichlorodiphenyl-dichloroethane (DDD)	3	None	0.0020 (HA2-0.5)	No
4,4'-Dichlorodiphenyl-dichloroethylene (DDE)	4	None	0.0053 (HA2-0.5)	No
4,4'-Dichlorodiphenyl-trichloroethane (DDT)	7	None	0.0085 (HA2-0.5)	No
Dieldrin	1	None	0.00038 (HA8-0.5)	No
Toxaphene	1	None	0.045 (HA1-0.5)	No

None of the soil samples collected and analyzed for OCPs exceed their respective commercial/industrial or construction worker ESLs, or commercial/industrial DTSC SLs, for OCPs in soil.

Title 22 Metals

Metals were detected in each of the eight soil samples analyzed for Title 22 Metals. Table 6 summarizes metals detections in the soil borings that exceed ESLs, DTSC SLs, and/or background concentration ranges. A detailed table of metals analytical results is presented in Table 11.

Table 6 Summary of Detected Concentrations of Title 22 Metals in Soil

Constituent	Number of Detections	Samples Exceeding ESL, DTSC SL, and/or Background Concentration Range	Maximum Detected Concentration (mg/kg)/ Boring ID-Depth (ft bgs)	ESL and/or Background Concentration Range Exceeded (mg/kg)
Arsenic	8	8	4.6 (HA4-0.5)	0.98 (Construction Worker ESL), 0.31 (Commercial/Industrial ESL), 0.36 (Commercial/Industrial DTSC SL)

All eight soil samples analyzed contained arsenic at concentrations exceeding the construction worker ESL, the commercial/industrial ESL, and the commercial/industrial DTSC SL; however, all concentrations are within the background concentration range (Kearny Foundation 1996).

Conclusions and Recommendations

Soil Matrix

Based on the analytical results for soil at the site, the soil matrix is not impacted by VOCs, SVOCs, or OCPs at levels that exceed commercial/industrial or construction worker ESLs and/or DTSC SLs.

TPH was detected in 13 of the 14 samples analyzed. TPH-d was detected in exceedance of its commercial/industrial DTSC SL at boring location HA3 at a depth of 0.5 foot bgs. TPH-d was not detected above the laboratory reporting limit in the 3.0-foot sample from this boring location (HA3), indicating that impacts are isolated to shallow soil in that area. We should note that it appears this site is potentially used for some event parking. It is likely the TPH was deposited from vehicles. Therefore, if the site is used for parking the conditions may change. Additionally, only eight soil borings were completed at the site so there is a potential for other areas of the site to contain elevated TPH concentrations.

Arsenic was identified in exceedance of the construction worker ESL, the commercial/industrial ESL, and the commercial/industrial DTSC SL at all eight locations at a depth of 0.5 foot bgs. The detected concentrations are below the upper-end background concentration range for arsenic in California soil (11 mg/kg).

Constituents of Concern

Based on the results of the Phase II ESA, the following constituents of concern have been identified for the site.

Table 7 Summary of Constituents of Concern

Medium	COCs	Boring Location	Exceedances
Soil Matrix	TPH-d	HA3 at 0.5 foot bgs	Commercial/Industrial DTSC SL

Recommendations

The data collected during the Phase II ESA indicate that TPH concentrations in soil across the site generally pose a negligible environmental and human health risk based on its potential use for event parking, and no further assessment or remediation is recommended at this time. We understand that the site may potentially be used for event parking or other uses until constructions activities commence at a date yet to be determined.

Rincon's findings are based on a limited number of samples, and site conditions may change based on potential use for event vehicle parking. Therefore, Rincon recommends preparation of a Soil Management Plan (SMP) to be implemented during construction and grading activities associated with the proposed project. The SMP will provide guidance for the identification, management, and disposal of soil suspected to be impacted by TPH that may be discovered during grading activities.

Limitations

This report has been prepared for and is intended for the exclusive use of the City of Oxnard. The contents of this report should not be relied upon by any other party without the written consent of Rincon.

Our conclusions regarding the site are based on observations of existing conditions at the site and the results of a limited subsurface sampling program. The results of this evaluation are qualified by the fact that only limited sampling and analytical testing was conducted during this assessment.

This scope was not intended to completely establish the quantities and distribution of contaminants present at the site. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations. Furthermore, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions, and other events. Conclusions regarding the condition of the site do not represent a warranty that all areas within the site are similar to those sampled.

References

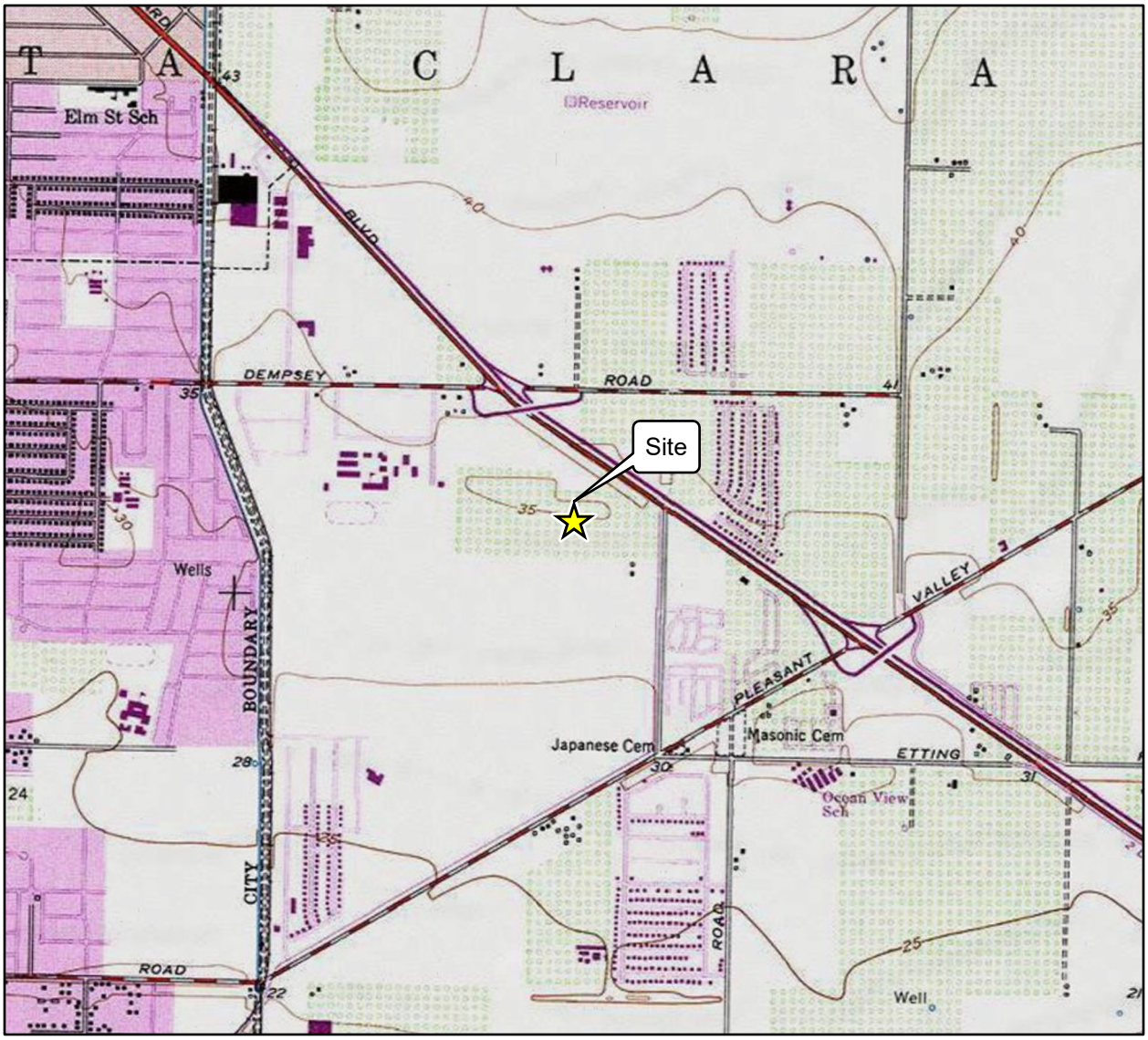
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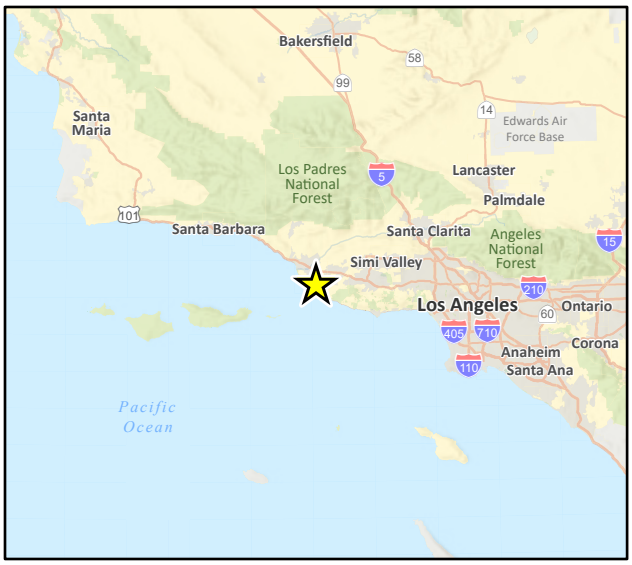
Figures



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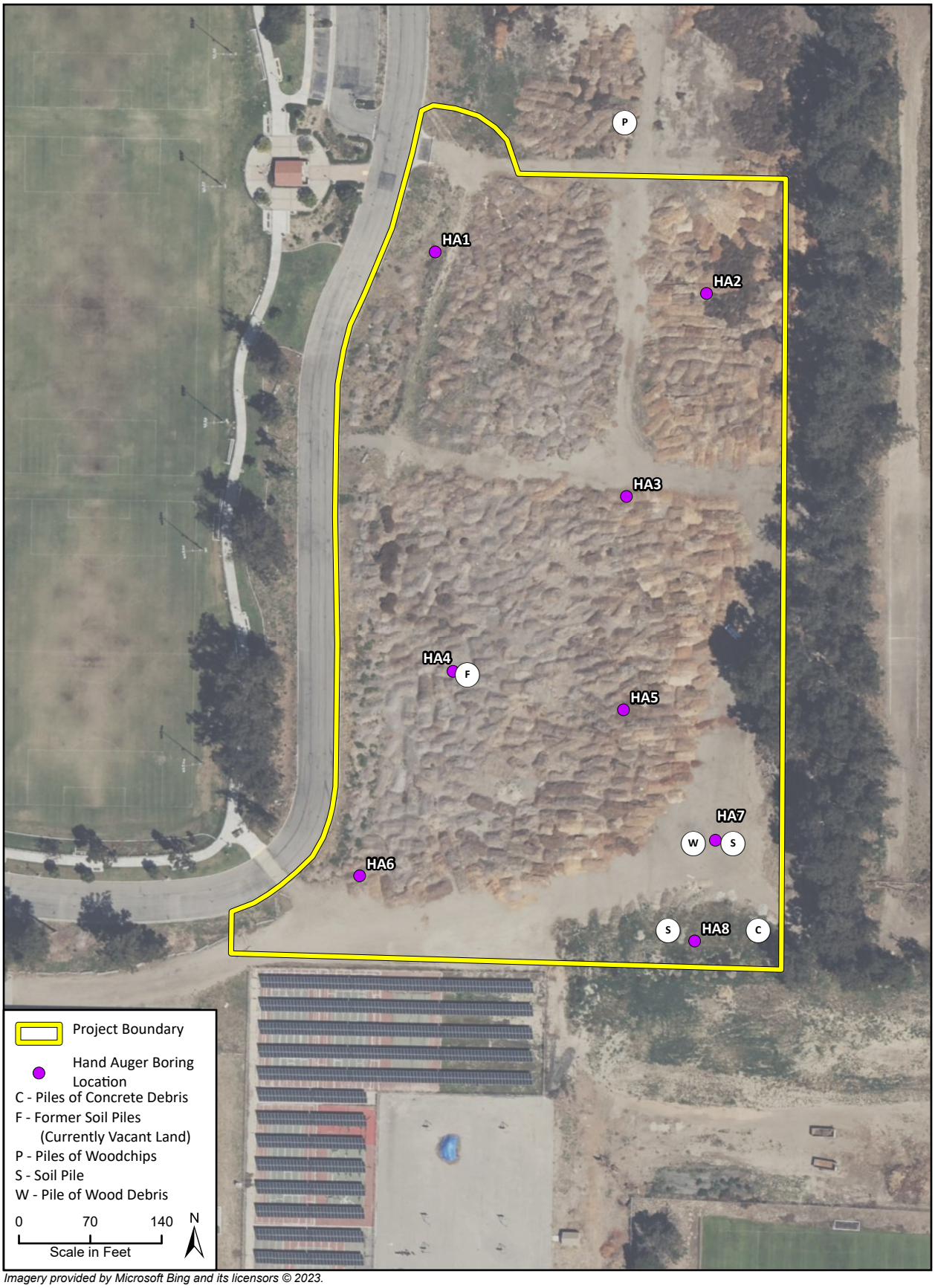
0 1,000 2,000
Scale in Feet

N



Vicinity Map

Figure 1



Imagery provided by Microsoft Bing and its licensors © 2023.

Site Map

Figure 2

Tables Included as Attachments

Table 9: Soil Matrix Analytical Results - TPH, VOCs, and SVOCs

Sample ID	Depth (feet bgs)	Sampling Date	Total Petroleum Hydrocarbons*			Volatile Organic Compounds (VOCs)						Semi-Volatile Organic Compounds
			TPH-g	TPH-d	TPH-o	Benzene	Ethylbenzene	Toluene	1,2,4-Trimethylbenzene	Xylenes	Other VOCs	
			mg/kg									
HA1	0.5	2/7/2023	<5.0	<2.2	<7.0	<0.00090	<0.00092	**0.0016 J**	<0.0011	<0.0034	*<various*	*<various*
	3.0		--	--	--	--	--	--	--	--	--	--
HA2	0.5		<50	**130 A10, A52**	**1,300 A10, A57**	**0.00042 J**	<0.00069	**0.0041 J**	**0.0015 J**	<0.0025	*<various*	*<various*
	3.0		<5.0	**13 A52**	**31 A57**	--	--	--	--	--	--	--
HA3	0.5		<390	**780 J, A10, A52**	**5,200 A10, A57**	**0.0025 J**	<0.00085	**0.0023 J**	**0.0013 J**	<0.0031	*<various*	*<various*
	3.0		<5.0	<2.2	**23 A57**	--	--	--	--	--	--	--
HA4	0.5		<140	**370 A52**	**3,200 A57**	**0.0061 J**	**0.00099 J**	**0.0043 J**	**0.0012 J**	<0.003	*<various*	*<various*
	3.0		<79	**210 A52**	**2,500 A57**	--	--	--	--	--	--	--
HA5	0.5		<94	**270 A52**	**3,400 A57**	**0.007 J**	**0.0021 J**	**0.0099 J**	**0.0021 J**	**0.0043 J**	*<various*	*<various*
	3.0		<110	<47	**2,400 A57**	--	--	--	--	--	--	--
HA6	0.5		<25	**79 A10, A52**	**410 A10, A57**	**0.0035 J**	<0.0015	**0.0032 J**	<0.0017	<0.0053	*<various*	*<various*
	3.0		<5.0	<2.2	**37 A57**	--	--	--	--	--	--	--
HA7	0.5		<110	**260 A52**	**3,600 A57**	**0.0049 J**	<0.0011	**0.0049 J**	<0.0013	<0.0039	*<various*	*<various*
	3.0		<120	<51	**4,400 A57**	--	--	--	--	--	--	--
HA8	0.5		<5.0	<2.2	**37 A57**	**0.0017 J**	**0.0032 J**	**0.0031 J**	<0.00080	<0.0025	*<various*	*<various*
	3.0		--	--	--	--	--	--	--	--	--	--
Construction Worker ESLs			*1,800*	*1,100*	*54,000*	*33*	*540*	*4,700*	*NE*	*2,400*	*Various*	*Various*
Commercial/Industrial ESLs			*2,000*	*1,200*	*180,000*	*1.4*	*26*	*5,300*	*NE*	*2,500*	*Various*	*Various*
Commercial/Industrial DTSC SLs			*NE*	*500*	*18,000*	*1.44*	*NE*	*5,300*	*NE*	*NE*	*Various*	*Various*

Definitions

bold	Analyte detected above the laboratory reporting limit
	Concentration detected above construction worker ESL
	Concentration detected above commercial/industrial ESL and/or DTSC SL
<	Analyte not detected above the laboratory reporting limit or method detection limit
--	Not analyzed
*	TPH by EPA Method 8015B/FFP with silica gel treatment
A10	Laboratory flag indicating that detection and quantitation limits were raised due to matrix interference
A52	Laboratory flag indicating the chromatogram is not typical of diesel
A57	Laboratory flag indicating the chromatogram is not typical of motor oil
bgs	Below ground surface
mg/kg	Milligrams per kilogram
J	Laboratory flag indicating estimated value (between method detection limit and laboratory reporting limit)
NE	Not established
SVOCs	Semi-volatile organic compounds
TPH	Total petroleum hydrocarbons
TPH-g	TPH in the gasoline range
TPH-d	TPH in the diesel range
TPH-o	TPH in the motor oil range
VOCs	Volatile organic compounds

Table 10: Soil Analytical Results - OCPs

Sample ID	Depth (feet bgs)	Sampling Date	Chlordane (Technical)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Toxaphene	Other OCPs
			mg/kg						
HA1	0.5	2/7/2023	<0.0010	**0.0014**	**0.011**	**0.0027**	<0.00036	**0.045 J**	*<various*
	3.0		--	--	--	--	--	--	--
HA2	0.5		<0.020	**0.0020 J, A10**	**0.0053 J, A10**	**0.0085 J, A10**	<0.00072	<0.028	*<various*
	3.0		--	--	--	--	--	--	--
HA3	0.5		<0.46	<0.030	<0.044	<0.018	<0.017	<0.65	*<various*
	3.0		--	--	--	--	--	--	--
HA4	0.5		<0.43	<0.027	<0.041	**0.0810 J, A10**	<0.015	<0.60	*<various*
	3.0		--	--	--	--	--	--	--
HA5	0.5		<0.43	<0.027	<0.041	**0.12 J, A10**	<0.015	<0.60	*<various*
	3.0		--	--	--	--	--	--	--
HA6	0.5		<0.010	<0.00064	**0.013 A10**	**0.0340 J, A10**	<0.00036	<0.014	*<various*
	3.0		--	--	--	--	--	--	--
HA7	0.5		<0.33	<0.021	<0.032	**0.057 J, A10**	<0.012	<0.47	*<various*
	3.0		--	--	--	--	--	--	--
HA8	0.5		**0.071 J, A10**	**0.0011 J, A10**	**0.0030 J, A10**	**0.0030 J, A10**	**0.0004 J, A10**	<0.014	*<various*
	3.0		--	--	--	--	--	--	--
Construction Worker ESLs			*14*	*81*	*57*	*57*	*1.1*	*14*	*Various*
Commercial/Industrial ESLs			*2.2*	*12*	*8.3*	*8.5*	*0.16*	*2.2*	*Various*
Commercial/Industrial DTSC SLs			*6.1*	*6.2*	*9.3*	*7.1*	*0.093*	*1.2*	*Various*
TTLC Thresholds			*2.5*	*1.0*	*1.0*	*1.0*	*8.0*	*5*	*Various*

Definitions

bold	Analyte detected above the laboratory reporting limit
<	Analyte not detected above the laboratory reporting limit
--	Not analyzed
bgs	Below ground surface
mg/kg	Milligrams per kilogram
A10	Laboratory flag indicating that detection and quantitation limits were raised due to matrix interference
DDD	4,4'-Dichlorodiphenyldichloroethane
DDE	4,4'-Dichlorodiphenyldichloroethylene
DDT	4,4'-Dichlorodiphenyltrichloroethane
J	Laboratory flag indicating estimated value (between method detection limit and laboratory reporting limit)
NE	Not established
OCPs	Organochlorine pesticides
TTLC	Total Threshold Limit Concentration thresholds for hazardous waste characterization

Screening Levels

ESLs - Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, July 2019, Revision 2, Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-Cancer Hazard (lower value selected) for:

Commercial/Industrial ESLs - Commercial/Industrial: Shallow Soil Exposure

Construction Worker ESLs - Construction Workers: Any Land Use/Depth Soil Exposure

DTSC SLs - Department of Toxic Substances Control (DTSC)-Modified Screening Levels, DTSC Human and Ecological Risk Office (HERO), Human Health Risk Assessment (HHRA) Note Number 3, June 2020 (revised May 2022), DTSC-Recommended Screening Levels for Soil Analytes (Table 1) (lower value selected) for:

Commercial/Industrial DTSC SLs - Commercial/industrial soil

Table 11: Soil Matrix Analytical Results - Metals

Sample ID	Depth (feet bgs)	Sampling Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
			mg/kg																
HA1	0.5	2/7/2023	<0.33	**3.2**	**72**	**0.25 J**	**0.5**	**11**	**4.5**	**24**	**5.7**	**0.029 J**	**0.26 J**	**12**	<0.98	**0.14 J**	<0.64	**21**	**57**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA2	0.5		**0.74 J**	**3.8**	**91**	**0.24 J**	**0.81**	**17**	**4**	**9.9**	**6.6**	**0.033 J**	**2.1 J**	**16**	**1.2**	**0.13 J**	<0.64	**27**	**34**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA3	0.5		<0.33	**3.3**	**67**	**0.17 J**	**0.71**	**18**	**3.5**	**8.9**	**4.5**	**0.048 J**	**0.57 J**	**21**	**1.4**	**0.11 J**	<0.64	**32**	**28**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA4	0.5		<0.33	**4.6**	**84**	**0.18 J**	**0.49 J**	**17**	**3.3**	**8.1**	**7.6**	**0.024 J**	**1.9 J**	**17**	**1.3**	<0.067	<0.64	**25**	**27**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA5	0.5		**0.45 J**	**2.5**	**89**	**0.17 J**	**0.52**	**19**	**6.2**	**9.9**	**6.7**	**0.11 J**	**0.17 J**	**22**	<0.98	**0.17 J**	<0.64	**31**	**32**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA6	0.5		<0.33	**3.2**	**73**	**0.22 J**	**0.49 J**	**9.6**	**4**	**9.8**	**5.4**	**0.32**	**0.27 J**	**10**	<0.98	**0.13 J**	<0.64	**19**	**35**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA7	0.5		<0.33	**3.7**	**92**	**0.18 J**	**0.57**	**14**	**3.3**	**8.3**	**5.7**	**0.12 J**	**0.68 J**	**17**	<0.98	<0.067	<0.64	**29**	**29**
	3.0		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
HA8	0.5		**0.49 J**	**3.9**	**64**	**0.19 J**	**0.79**	**11**	**4.2**	**14**	**8.2**	**1.9**	**0.5 J**	**11**	<0.98	**0.17 J**	<0.64	**22**	**46**
	3.0		--	--	--	--	--	--	--	--	--	0.087	--	--	--	--	--	--	--
Construction Worker ESLs			*50*	*0.98*	*3,000*	*27*	*51*	*160**	*28*	*14,000*	*160*	*44*	*1,800*	*86*	*1,700*	*1,800*	*3.5*	*470*	*110,000*
Commercial/Industrial ESLs			*160*	*0.31*	*220,000*	*230*	*1,100*	*160**	*350*	*47,000*	*320*	*190*	*5,800*	*11,000*	*5,800*	*5,800*	*12*	*5,800*	*350,000*
Commercial/Industrial DTSC SLs			*NE*	*0.36*	*NE*	*230*	*79*	*NE*	*NE*	*NE*	*500*	*4.4*	*NE*	*11,000*	*NE*	*4,200*	*NE*	*NE*	*NE*
Background Concentrations			*0.15-1.95*	*0.6-11*	*133-1,400*	*0.25 - 2.70*	*0.05 - 1.70*	*23 - 1,579*	*2.7 - 46.9*	*9.1 - 96.4*	*12.4 - 97.1*	*12.4 - 97.1*	*0.1 - 9.6*	*9.0 - 509*	*0.015 - 0.430*	*0.10 - 8.3*	*0.17 - 1.1*	*39 - 288*	*88 - 236*
TTLC Thresholds			*500*	*500*	*10,000*	*75*	*100*	*2,500*	*8,000*	*2,500*	*1,000*	*20*	*3,500*	*2,000*	*100*	*500*	*700*	*2,400*	*5,000*
STLC Screening Criteria/ Thresholds			*150*	*50*	*1,000*	*7.5*	*10*	*50*	*800*	*250*	*50*	*2*	*3,500*	*200*	*10*	*50*	*70*	*240*	*2,500*
TCLP Screening Criteria/ Thresholds			*NE*	*100*	*2,000*	*NE*	*20*	*100*	*NE*	*NE*	*100*	*4*	*NE*	*NE*	*20*	*100*	*NE*	*NE*	*NE*

Definitions

bold	Analyte detected above the laboratory reporting limit
	Concentration detected above construction worker ESL
	Concentration detected above commercial/industrial ESL and/or DTSC SL
<	Analyte not detected above the laboratory reporting limit or method detection limit
--	Not analyzed
bgs	Below ground surface
mg/kg	Milligrams per kilogram
J	Laboratory flag indicating estimated value (between method detection limit and laboratory reporting limit)
NE	Not established
STLC	Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leaching Procedure
TTLC	Total Threshold Limit Concentration
*	Direct exposure human health risk ESLs have not been established for total chromium; therefore, the Tier 1 ESL was used

Screening Levels

Background Concentration - Kearney, Background Concentrations of Trace and Major Elements in California Soils, University of California, 1996

ESLs - Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, July 2019, Revision 2, Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-Cancer Hazard (lower value selected) for:

Commercial/Industrial ESLs - Commercial/Industrial: Shallow Soil Exposure

Construction Worker ESLs - Construction Workers: Any Land Use/Depth Soil Exposure

DTSC SLs - Department of Toxic Substances Control (DTSC)-modified Screening Levels, DTSC Human and Ecological Risk Office (HERO), Human Health Risk Assessment (HHRA) Note Number 3, June 2020 (revised May 2022), DTSC-Recommended Screening Levels for Soil Analytes (Table 1) (lower value selected) for:

Commercial/Industrial DTSC SLs - Commercial/industrial soil

Screening Levels

ESLs - Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board, July 2019, Revision 2, Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-Cancer Hazard (lower value selected) for:

Commercial/Industrial ESLs - Commercial/Industrial: Shallow Soil Exposure

Construction Worker ESLs - Construction Workers: Any Land Use/Depth Soil Exposure

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Commercial/Industrial DTSC SLs - Commercial/industrial soil

Appendix A

Field Procedures

Rincon Consultants, Inc.

Environmental Scientists *Planners* *Engineers*

Field Procedure

1 Soil Matrix Sampling – Hand Auger

1.1 Definitions

- Auger – A hollow cylinder equipped with cutting bits to bore through soil when manually rotated; placed into the sub-surface to advance the boring and collect disturbed soil samples
- Cross Handle – A t-shaped metal bar that is connected to the auger by the rod(s) and is used to manually rotate the auger
- Custody Seal – A laboratory provided seal added to the sample containers or sample cooler once sampling has been completed to identify and protect the integrity of the samples (typically only used if samples will be shipped)
- Rods – Solid metal bars used to connect the auger and cross handle either with threaded or quick connections
- Sample Liner – A plastic (acetate) tube inserted into the soil core sampler used to recover an undisturbed soil sample
- Slide Hammer – A weight that slides along a rod and replaces the cross handle during sampling; used in combination with the soil core sampler to collect undisturbed soil samples
- Soil Core Sampler – A hollow cylinder without cutting bits that is equipped with a sample liner and is used in place of an auger; used in combination with a slide hammer to collect undisturbed soil samples
- Target sample depth – The bottom of the depth interval
- Temperature Blank - A vial filled with tap water and stored in the cooler during sample collection and transportation (not required for all projects)
- Trip Blank - A laboratory provided, volatile vial container filled with lab grade deionized water, affixed with a custody seal. This blank represents the "trip" the volatile vials take from leaving the lab with the bottle order to the field for sample collection and back to the lab for analysis
- Work Plan – The document that specifies the sampling rationale and specific work scope for a site assessment. The Work Plan may or may not be subject to regulatory review. The Work Plan may call for the use of some or all of the methodologies described herein, and should be viewed as a companion document to these Field Procedures

1.2 Introduction

This Field Procedure describes the methodology and techniques used to advance a boring into soil for the collection of soil matrix samples using a hand auger.

Hand augers are used to advance a boring by manually rotating an auger with cutting bits into the sub-surface; this motion forces soil into the auger. Once the auger is filled with soil, it is brought to the surface, and the soil is examined, used to log the stratigraphy, and either disposed or collected into sample containers. As the auger is advanced deeper into the sub-surface, additional rods are added to the assembly to access greater depths. If desired, when the target sample depth is reached, the auger can be replaced with a soil core sampler, and the cross handle with a slide hammer. As the hammer is manually lifted and dropped, the soil core sampler is advanced into the sub-surface and undisturbed soil is forced into the sample liner. Either the sample liner or the sample containers are delivered to the laboratory for analysis.

1.3 Equipment and Instrumentation

The following is a list of instruments and equipment used during field activities.

Typically Provided by the Laboratory	Rincon Equipment
Custody seal[1]	Level D personal protective equipment (PPE) and project-specific PPE as specified in the Work Plan
Sample containers (jars)[1]	Hand auger
Sample cooler	Rubber mallet
Sample labels	Ice for cooler
Trip blanks[1]	Resealable plastic sample bags
Temperature blanks[1]	Sample caps[1]
EPA Method 5035 kits[1]	Acetate sleeves, caps, and Teflon tape[1]
	Photoionization detector (PID)
	Measuring tape
	Impermeable barrier (Visqueen)
	5-gallon bucket
	Two crescent wrenches
	Field sheets
	GPS with sub-meter accuracy
	Investigation derived waste container[1]
1 – If needed; see Work Plan	

All instruments will be calibrated per the manufacturer's specifications at the beginning of each workday.

1.4 Hand Auger Drilling

Prior to drilling activities, a tail-gate meeting will be conducted by Rincon field staff to review the procedures that Rincon personnel (and its subcontractors, if applicable) will follow to minimize the potential for health and safety hazards during the course of work. These procedures are detailed in the site-specific Health and Safety Plan.

If a geophysical or utility survey is planned (see Work Plan), it will be conducted prior to the activities described in this document. Drilling into any utilities/obstructions could result in injury and damage to property.

Hand auger drilling will proceed as follows:

1. The location of the boring will be recorded using a GPS with sub-meter accuracy.
2. Prior to drilling activities, the impermeable barrier and bucket will be placed adjacent to the target location.
3. The hand auger assembly, consisting of the auger, the rods, and the cross handle, will be connected. If the specific hand auger uses threads, thread tape may be used to prevent binding.
4. Once all components are securely attached and the hand auger assembly is properly connected, it will be placed at the target location such that all auger bits make firm contact with the ground surface.
5. Proper form will be used to minimize the risk of injury, which consists of a wide stance, a straight back, and a firm grip on the cross handle such that strain on the wrists is minimized. Using this form, the cross handle will be rotated clock-wise to advance the auger into the ground surface. Progress into the sub-surface will be checked periodically using the measuring tape.
6. Once the auger fills with soil, the hand auger assembly will be carefully lifted out of the boring. If the target sample depth has been reached, sampling will proceed as described in Section 1.5; if the soil will not be retained as a sample, a portion will be transferred to a plastic baggie and set aside. The remaining soil will be emptied onto the impermeable barrier by tilting the hand auger assembly and either shaking it or tapping it with the rubber mallet. The soil will be examined and logged in accordance with the Universal Soil Classification System (USCS) and ASTM International (ASTM) D2488-93, unless otherwise specified in the Work Plan. Observations will be recorded on field sheets.
7. After at least 5 minutes have elapsed since placing the soil into a plastic baggie, the PID will be used to screen the soil for volatile organic compounds (VOCs) by carefully inserting the PID probe tip into the baggie, and holding the probe tip 1/8-inch away from the soil for 10 seconds. The maximum PID reading will be recorded in parts per million (ppm) on the field sheets.
8. As the boring is advanced deeper into the sub-surface, additional rods will be installed onto the hand auger assembly to extend its length.
9. If a physical impediment is encountered (such as a cobble, lithified strata, gravel, hardpan, etc.) that precludes further advancement with the hand auger, the boring will be marked as

having encountered refusal on the field sheet, and the boring will be backfilled as indicated in the work plan.

1.5 Sampling Procedures

Upon reaching the target sample depth, soil sampling may proceed according to one or both procedures described below, as specified by the Work Plan.

1.5.1 Standard Sampling

1. The hand auger assembly will be carefully lifted out of the boring and transferred to the impermeable barrier.
2. If using an EPA Method 5035 kit (5035 kit), soil aliquots will immediately be collected from the auger adjacent to the bits using the kit's dedicated t-handle and transferred to the kit's vials.
3. The sample container (typically a glass jar) will be held beneath the auger, and soil will be carefully transferred from the auger to the sample container using decontaminated (see Section 5) or dedicated hand tools.
10. The sample container will be properly sealed and labeled as described in Section 1.6. After at least 5 minutes have elapsed since sample collection, the PID will be used to screen the soil for VOCs by carefully inserting the PID probe tip into the sample container, and holding the probe tip 1/8-inch away from the soil for 10 seconds. The maximum PID reading will be recorded in ppm on the field sheets.

1.5.2 Soil Core Sampling

1. A sample liner will be installed into the soil core sampler, and the soil core sampler installed onto the hand auger assembly instead of the auger. The cross handle will be replaced with the slide hammer, and the hand auger assembly will be carefully lowered into the boring.
2. Keeping the back straight, the slide hammer will be manually lifted and dropped repeatedly to advance the soil core sampler into the sub-surface. After the soil core sampler has been pushed a distance equal to its length into the sub-surface, it will be carefully removed to the surface.
3. The sample liner will be removed from the soil core sampler, and one end sealed with Teflon tape and a sample cap. If using a 5035 kit, soil aliquots will immediately be collected from the opposite (un-capped) end of the sample liner using the kit's dedicated t-handle and transferred to the kit's vials.
4. The PID will be used to screen the soil for VOCs by carefully holding the probe tip 1/8-inch away from the soil on the sampler liner's un-capped end for 10 seconds. The maximum PID reading will be recorded in ppm on the field sheets. The sample liner will then be sealed with Teflon tape and a sample cap.

1.6 Post Sampling Procedures

1. Immediately following collection, all samples will be labeled and recorded on a chain-of-custody (COC). Each sample will be marked with the following information:
    - Sample ID, preservative, analysis, sampler, date and time, project number, and company name.
2. Sample containers will be double bagged using resealable plastic bags to protect the sample from moisture and to prevent breakage and potential cross contamination during storage and transportation. If transported by a commercial carrier (shipped), all glass sample containers will be protected with bubble wrap and will be double bagged using resealable plastic bags.
3. The samples will be placed into an insulated cooler with ice (to preserve the samples) at 4 Celsius or below. If required, temperature blanks will be placed in the cooler with the samples. If required, trip blanks will be labeled, recorded onto the COC, and placed in the cooler. Additionally, if required, the custody seal will be applied to the cooler, and the date, time, and sampler's name will be written on it.

1.7 Decontamination Procedures

All reusable sampling equipment will undergo a three-stage decontamination process.

Decontamination will proceed as follows:

1. A decontamination station will be pre-established prior to commencement of sampling activities. Three 5-gallon buckets will be used to decontaminate all sampling equipment. An impermeable liner (visqueen) will be placed on the ground beneath the decontamination buckets to prevent/capture liquids from coming into contact with the ground surface.
2. Prior to first use at the site and between each discrete sample location, equipment will be washed using a non-phosphate detergent and potable water (first bucket). Equipment will then be rinsed in potable water (second bucket), and finally rinsed with deionized water (third bucket).
3. All liquids will be containerized prior to appropriate disposal. Equipment intended for one-time use will be packaged for appropriate disposal.

1.8 Investigation Derived Waste

Upon completion of sampling activities, all investigation derived waste (IDW), including decontamination water and un-retained soil cuttings will be stored in a 55-gallon drum or other approved container, and labelled with the following information:

- Contents, generator name, generator address, contact information, and the date of generation.

If specified in the Work Plan, secondary containment may be needed. The container with IDW will then be placed in a secure location as determined in consultation with the client. Disposable sampling equipment and PPE will be disposed in a trash bag.

1.9 Chain-of-Custody Protocol

COC protocols will be employed to protect the integrity of the samples and the traceability of their handling from collection to chemical analysis. The protocol will be in accordance with the protocols detailed in Chapter 9 of the United States Environmental Protection Agency's SW-846 Compendium. The following information will be provided in ink on the COC for each sample:

- Unique sample identifier, date and time of collection, medium type, number of sample containers, requested analyses, GeoTracker Global Id number (where applicable).

In addition, the COC will also include general project information, including, at a minimum:

- Rincon project manager and contact information, name of sampler, Rincon project number, project site address/location, dates and times of relinquishment and receipt, and signature of each person possessing samples.

The COC will be kept with the sample shipment at all times. If samples are to be delivered to the laboratory via courier, a copy of the signed COC will be retained (either a carbon copy or photo-documentation) prior to relinquishing the samples to the courier.

1.10 Record Keeping

Field activities, sample collection details, and boring logs will be recorded on field sheets. Field sheets will be completed in real-time during each day of field work, and will include the following information, at a minimum:

- Names of Rincon field staff and other personnel onsite and their companies, weather conditions, a description of site activities, details of field work with corresponding timestamps, and field maps showing sample locations and other relevant site features.

Field sheets will be scanned/uploaded to the project file at the end of each field day, at the end of the field event if multiple days, or at the end of each week if multiple weeks. Rincon will keep the field activity sheets on-file, and they may be provided upon request. Boring logs (if completed) will be included in the report.

Appendix B

Soil Matrix Laboratory Analytical Report

Date of Report: 03/15/2023

Scott English

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Client Project:	[none]
BCL Project:	22-13765
BCL Work Order:	2303085
Invoice ID:	B470209, B470697, B471487

Enclosed are the results of analyses for samples received by the laboratory on 2/10/2023. If you have any questions concerning this report, please feel free to contact me.

Revised Report: This report supercedes Report ID 1001402681

Sincerely,

Contact Person: Eli Velazquez
Client Service Rep

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.
All results listed in this report are for the exclusive use of the submitting party. Pace Analytical assumes no responsibility for report alteration, separation, detachment or third party interpretation.

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Laboratory Control Sample..... 92
Precision and Accuracy..... 93

Total Petroleum Hydrocarbons

Method Blank Analysis..... 94
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Total Concentrations (TTLC)

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Pace Analytical ENVIRONMENTAL SCIENCES

Pace ANALYTICAL SERVICES

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DAB-02, 02

Chain of Custody Record

2303085

Page 1 of 2

Report To: Client: Rincon Consultants	Project #: 22-~~137605~~ ~~12-127~~
Attn: Scott English	Project Name: S. Oxnard Aggregates
Street Address: 180 N. Ashwood Ave	BID#
City, State, Zip: Ventura, CA 93003	Sampler(s) Name Printed:
Phone: 805.644.4455 Fax:	Samuel Carman
Email: sEnglish@rinconconsultants.com	
Work Order #: 23-03085	

Analysis Requested

Comments:

Sample #	Description		Date Sampled	Time Sampled	TPHg/d/o (8015B)	Title 22 Metals (6010B/7471A)	VOCs (8260)	SVOCs (8270 SIM)	OCPs (8081)	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other
5 jars	HA1-0.5	-1	2/7/23	845	X	X	X	X	X	X					
1 jar	HA1-3.0	-2		910	X	X			X	X					
5 jars	HA2-0.5	-3		930	X	X	X	X	X	X					
1 jar	HA2-3.0	-4		955	X	X			X	X					
5 jars	HA3-0.5	-5		1023	X	X	X	X	X	X					
1 jar	HA3-3.0	-6		1046	X	X			X	X					
5 jars	HA4-0.5	-7		1110	X	X	X	X	X	X					
1 jar	HA4-3.0	-8		1212	X	X			X	X					
5 jars	HA5-0.5	-9		1320	X	X	X	X	X	X					
1 jar	HA5-3.0	-10		1353	X	X			X	X					
5 jars	HA8-0.5	-11		1412	X	X	X	X	X	X					
1 jar	HA8-3.0	-12		1435	X	X			X	X					
5 jars	HA7-0.5	-13		1450	X	X	X	X	X	X					
1 jar	HA7-3.0	-14		1510	X	X			X	X					

Result Request **Surcharge: ☒ STD (10 Days) ☐ 5 Day** ☐ 4 Day** ☐ 3 Day** ☐ 2 Day** ☐ 1 Day** Rush requests must be approved

Notes: * Please hold all 3.0' samples

CHK BY: PNC

DISTRIBUTION: Jar Pkt SUB-OUT

Billing

☒ Same as above

Client:

Address:

City: State Zip

Attn:

P.O. #:

System # (Needed for CLIP)

GIS/Key ☐ Well Star ☐

EDF Required Geotracker ☐ Yes ☒ No Global ID

	Relinquished By	Date	Time	Received By	Date	Time
1.		2.8.23	1430	Daniel Begalla	02/09/23	14:30
2.	Daniel Begalla	02/09/23		Miguel Ac	2/10/23	5:45
3.	Miguel Ac	2/10/23	6:25	Todd L.	2-22-23	1430

Pace Analytical Bakersfield does not accept samples containing radioactive material above background levels. Samples containing radioactive material must be disclosed prior to receipt. Any samples suspected of containing radioactive material above background levels will not be accepted and will be returned to client.

REV 12/2021

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Pace Analytical ENVIRONMENTAL SCIENCES

DAB-02, 02/08, 2A, 2

Chain of Custody Form

Pace ANALYTICAL SERVICES

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Page 2 of 2

Report To:		Project #: 22-13765
Client: Rincon Consultants		Project Name: S. Oxnard Aquatics
Attn: Scott English		BID#
Street Address: 180 N. Ashwood Ave		Sampler(s) Name Printed:
City, State, Zip: Ventura, CA 93003		Sawyer Carmen
Phone: 805.644.4455 Fax:		
Email: senglish@rinconconsultants.com		
Work Order #: 23-03085		

Analysis Requested

Comments:

Sample #	Description	Date Sampled	Time Sampled	TPH gid,o (8015 B)	Title 22 Metals (6010B/7471A)	VOCs (8260)	SVOCs (8270 SIM)	OCPs (8081)	Sample Matrix: Soil	Sludge	Drinking Water	Ground Water	Waste Water	Other	Notes
5 jars	HA6-0.5 -15	2/7/23	1520	X	X	X	X	X	X						* Please hold all
1 jar	HA6-3.0 -16	2/7/23	1555	X	X			X	X						3.0' samples

Result Request **Surcharge: ☒ STD [10 Days] ☐ 5 Day** ☐ 4 Day** ☐ 3 Day** ☐ 2 Day** ☐ 1 Day**
Rush requests must be approved

Billing	☒ Same as above		EDF Required Geotracker ☐ Yes ☒ No	Global ID				
Client:			1. Relinquished By	Date 2.8.23	Time 1430	1. Received By	Date 02/08/23	Time 14:30
Address:		System # (Needed for CLP)	2. Relinquished By	Date 02/07/23	Time	2. Received By	Date 2/8/23	Time 5:45
City: State Zip		GIS/Key ☐ Well Star ☐	3. Relinquished By	Date 2/8/23	Time 0:30	3. Received By	Date 2/8/23	Time 1830
Attn:								
P.O. #:								

Pace Analytical Bakersfield does not accept samples containing radioactive material above background levels. Samples containing radioactive material must be disclosed prior to receipt. Any samples suspected of containing radioactive material above background levels will not be accepted and will be returned to client.

REV 12/2021

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PACE ANALYTICAL — COOLER RECEIPT FORM — Page 1 Of 2

Submission #: 23-03085

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐ Pace Lab Field Service ☑ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☑ NO ☐ W / S

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☑ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☑ YES ☐ NO

Emissivity: 0.97 Container: Cheer cooler Thermometer ID: 27A Date/Time 2-8-23 1830

Temperature: (A) 0.3 °C / (C) 0.1 °C Analyst Init SJC

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{6+}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	E	A	E	A	E	A	AE 2/10/23 TOL	A	E	A
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT	A-D		A-D		A-D		A-D		A-D	
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: TOL Date/Time: 2/10/23 1612

A = Actual / C = Corrected

Rev 23 05/20/22

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PACE ANALYTICAL — COOLER RECEIPT FORM — Page 2 Of 2

Submission #: 23-03085

SHIPPING INFORMATION	SHIPPING CONTAINER	FREE LIQUID
Fed Ex ☐ UPS ☐ GSO / GLS ☐ Hand Delivery ☐ Pace Lab Field Service ☑ Other ☐ (Specify)_____	Ice Chest ☑ None ☐ Box ☐ Other ☐ (Specify)_____	YES ☑ NO ☐ (W) / S

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: 0.97 Container: Cibow (Glass) Thermometer ID: 274 Date/Time 2-8-23 1830

Temperature: (A) 1.1 °C / (C) 1.0 °C Analyst Init TJC

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT PE UNPRES										
4oz / 8oz / 16oz PE UNPRES										
2oz Cr^{6+}										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 4oz / 8oz / 16oz										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 1664B										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608.3/8081A										
QT EPA 515.1/8151A										
QT EPA 525.2										
QT EPA 525.2 TRAVEL BLANK										
40ml EPA 547										
40ml EPA 531.1										
8oz EPA 548.1										
QT EPA 549.2										
QT EPA 8015M										
QT EPA 8270C										
8oz / 16oz / 32oz AMBER										
8oz / 16oz / 32oz JAR	E	A	E	A	E	A				
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
TEDLAR BAG										
FERROUS IRON										
ENCORE										
SMART KIT	A-D		A-D		A-D					
SUMMA CANISTER										

Comments:

Sample Numbering Completed By: TJC Date/Time: 2/10/23 1812

A = Actual / C = Corrected

Rev 23 05/20/22

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura	**Reported:** 03/15/2023 16:41
180 North Ashwood Avenue	Project: 22-13765
Ventura, CA 93003	Project Number: [none]
	Project Manager: Scott English

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2303085-01	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 08:45
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA1-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-02	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 09:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA1-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-03	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 09:30
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA2-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-04	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 09:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA2-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-05	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 10:23
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA3-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-06	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 10:46
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA3-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-07	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 11:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA4-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2303085-08	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 12:12
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA4-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-09	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 13:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA5-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-10	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 13:53
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA5-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-11	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 14:12
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA8-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-12	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 14:35
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA8-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-13	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 14:50
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA7-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-14	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 15:10
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA7-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil

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Rincon Consultants-Ventura	**Reported:** 03/15/2023 16:41
180 North Ashwood Avenue	Project: 22-13765
Ventura, CA 93003	Project Number: [none]
	Project Manager: Scott English

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
2303085-15	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 15:20
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA6-0.5	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil
2303085-16	**COC Number:**	---	**Receive Date:**	02/10/2023 18:30
	Project Number:	---	**Sampling Date:**	02/07/2023 15:55
	Sampling Location:	---	**Sample Depth:**	---
	Sampling Point:	HA6-3.0	**Lab Matrix:**	Solids
	Sampled By:	SAWYER CARMAN	**Sample Type:**	Soil

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.00050	0.000018	EPA-8081A	1.4		1
alpha-BHC	ND	mg/kg	0.00050	0.000038	EPA-8081A			1
beta-BHC	ND	mg/kg	0.00050	0.000048	EPA-8081A			1
delta-BHC	ND	mg/kg	0.00050	0.000037	EPA-8081A			1
gamma-BHC (Lindane)	ND	mg/kg	0.00050	0.000018	EPA-8081A	4.0		1
Chlordane (Technical)	ND	mg/kg	0.050	0.0010	EPA-8081A	2.5		1
4,4'-DDD	**0.0014**	**mg/kg**	**0.00050**	**0.000064**	**EPA-8081A**	1.0		1
4,4'-DDE	**0.011**	**mg/kg**	**0.00050**	**0.000095**	**EPA-8081A**	1.0		1
4,4'-DDT	**0.0027**	**mg/kg**	**0.00050**	**0.000040**	**EPA-8081A**	1.0		1
Dieldrin	ND	mg/kg	0.00050	0.000036	EPA-8081A	8.0		1
Endosulfan I	ND	mg/kg	0.00050	0.000020	EPA-8081A			1
Endosulfan II	ND	mg/kg	0.00050	0.000034	EPA-8081A			1
Endosulfan sulfate	ND	mg/kg	0.00050	0.000026	EPA-8081A			1
Endrin	ND	mg/kg	0.00050	0.000065	EPA-8081A	0.2		1
Endrin aldehyde	ND	mg/kg	0.00050	0.000018	EPA-8081A			1
Heptachlor	ND	mg/kg	0.00050	0.000086	EPA-8081A	4.7		1
Heptachlor epoxide	ND	mg/kg	0.00050	0.000017	EPA-8081A			1
Methoxychlor	ND	mg/kg	0.00050	0.000094	EPA-8081A	100		1
Toxaphene	**0.045**	**mg/kg**	**0.050**	**0.0014**	**EPA-8081A**	5	**J**	1
TCMX (Surrogate)	54.4	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	39.8	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 16:59	HKS	GC-17	1.017	B160370	EPA 3550B

DCN = Data Continuation Number

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	ND	mg/kg	0.0067	0.00090	EPA-8260B			1
Bromobenzene	ND	mg/kg	0.0067	0.0012	EPA-8260B			1
Bromochloromethane	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
Bromodichloromethane	ND	mg/kg	0.0067	0.0010	EPA-8260B			1
Bromoform	ND	mg/kg	0.0067	0.00094	EPA-8260B			1
Bromomethane	ND	mg/kg	0.0067	0.0023	EPA-8260B			1
n-Butylbenzene	ND	mg/kg	0.0067	0.0010	EPA-8260B			1
sec-Butylbenzene	ND	mg/kg	0.0067	0.00095	EPA-8260B			1
tert-Butylbenzene	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
Carbon tetrachloride	ND	mg/kg	0.0067	0.0010	EPA-8260B			1
Chlorobenzene	ND	mg/kg	0.0067	0.0010	EPA-8260B			1
Chloroethane	ND	mg/kg	0.0067	0.0015	EPA-8260B			1
Chloroform	ND	mg/kg	0.0067	0.0012	EPA-8260B			1
Chloromethane	ND	mg/kg	0.0067	0.0015	EPA-8260B			1
2-Chlorotoluene	ND	mg/kg	0.0067	0.0012	EPA-8260B			1
4-Chlorotoluene	ND	mg/kg	0.0067	0.00094	EPA-8260B			1
Dibromochloromethane	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0067	0.0013	EPA-8260B			1
1,2-Dibromoethane	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
Dibromomethane	ND	mg/kg	0.0067	0.0019	EPA-8260B			1
1,2-Dichlorobenzene	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
1,3-Dichlorobenzene	ND	mg/kg	0.0067	0.00098	EPA-8260B			1
1,4-Dichlorobenzene	ND	mg/kg	0.0067	0.00098	EPA-8260B			1
Dichlorodifluoromethane	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
1,1-Dichloroethane	ND	mg/kg	0.0067	0.00086	EPA-8260B			1
1,2-Dichloroethane	ND	mg/kg	0.0067	0.00098	EPA-8260B			1
1,1-Dichloroethene	ND	mg/kg	0.0067	0.0015	EPA-8260B			1
cis-1,2-Dichloroethene	ND	mg/kg	0.0067	0.00072	EPA-8260B			1
trans-1,2-Dichloroethene	ND	mg/kg	0.0067	0.0050	EPA-8260B			1
1,2-Dichloropropane	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
1,3-Dichloropropane	ND	mg/kg	0.0067	0.00090	EPA-8260B			1
2,2-Dichloropropane	ND	mg/kg	0.0067	0.00090	EPA-8260B			1
1,1-Dichloropropene	ND	mg/kg	0.0067	0.00090	EPA-8260B			1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0067	0.00078	EPA-8260B			1
trans-1,3-Dichloropropene	ND	mg/kg	0.0067	0.00088	EPA-8260B			1
Ethylbenzene	ND	mg/kg	0.0067	0.00092	EPA-8260B			1
Hexachlorobutadiene	ND	mg/kg	0.0067	0.00090	EPA-8260B			1
Isopropylbenzene	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
p-Isopropyltoluene	ND	mg/kg	0.0067	0.00079	EPA-8260B			1
Methylene chloride	ND	mg/kg	0.013	0.0015	EPA-8260B			1
Methyl t-butyl ether	ND	mg/kg	0.0067	0.00075	EPA-8260B			1
Naphthalene	ND	mg/kg	0.0067	0.0013	EPA-8260B			1
n-Propylbenzene	ND	mg/kg	0.0067	0.00095	EPA-8260B			1
Styrene	ND	mg/kg	0.0067	0.00083	EPA-8260B			1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0067	0.0013	EPA-8260B			1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
Tetrachloroethene	ND	mg/kg	0.0067	0.0013	EPA-8260B			1
Toluene	**0.0016**	**mg/kg**	**0.0067**	**0.00092**	**EPA-8260B**		**J**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0067	0.0020	EPA-8260B			1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0067	0.0019	EPA-8260B			1
1,1,1-Trichloroethane	ND	mg/kg	0.0067	0.00090	EPA-8260B			1
1,1,2-Trichloroethane	ND	mg/kg	0.0067	0.0013	EPA-8260B			1
Trichloroethene	ND	mg/kg	0.0067	0.00099	EPA-8260B	2040		1
Trichlorofluoromethane	ND	mg/kg	0.0067	0.0020	EPA-8260B			1
1,2,3-Trichloropropane	ND	mg/kg	0.0067	0.0025	EPA-8260B			1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0067	0.0013	EPA-8260B			1
1,2,4-Trimethylbenzene	ND	mg/kg	0.0067	0.0011	EPA-8260B			1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0067	0.00088	EPA-8260B			1
Vinyl chloride	ND	mg/kg	0.0067	0.00079	EPA-8260B			1
Total Xylenes	ND	mg/kg	0.013	0.0034	EPA-8260B			1
p- & m-Xylenes	ND	mg/kg	0.0067	0.0020	EPA-8260B			1
o-Xylene	ND	mg/kg	0.0067	0.0012	EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	110	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 00:08	BYM	MS-V18	1.340	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.0030	0.0013	EPA-8270C-SIM	ND		1
Acenaphthylene	ND	mg/kg	0.0030	0.00092	EPA-8270C-SIM	ND		1
Anthracene	ND	mg/kg	0.0030	0.00081	EPA-8270C-SIM	ND		1
Benzo[a]anthracene	ND	mg/kg	0.0030	0.00096	EPA-8270C-SIM	ND		1
Benzo[b]fluoranthene	ND	mg/kg	0.0030	0.00079	EPA-8270C-SIM	ND		1
Benzo[k]fluoranthene	ND	mg/kg	0.0030	0.0011	EPA-8270C-SIM	ND		1
Benzo[a]pyrene	ND	mg/kg	0.0030	0.00078	EPA-8270C-SIM	ND		1
Benzo[g,h,i]perylene	ND	mg/kg	0.0030	0.00072	EPA-8270C-SIM	ND		1
Chrysene	ND	mg/kg	0.0030	0.0011	EPA-8270C-SIM	ND		1
Dibenzo[a,h]anthracene	ND	mg/kg	0.0030	0.00048	EPA-8270C-SIM	ND		1
Fluoranthene	ND	mg/kg	0.0030	0.00075	EPA-8270C-SIM	ND		1
Fluorene	ND	mg/kg	0.0030	0.00097	EPA-8270C-SIM	ND		1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.0030	0.00047	EPA-8270C-SIM	ND		1
Naphthalene	ND	mg/kg	0.0030	0.00090	EPA-8270C-SIM	ND		1
Phenanthrene	ND	mg/kg	0.0030	0.00086	EPA-8270C-SIM	ND		1
Pyrene	ND	mg/kg	0.0030	0.0012	EPA-8270C-SIM	ND		1
Nitrobenzene-d5 (Surrogate)	70.9	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	66.6	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	39.0	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 13:44	OLH	MS-B7	1.003	B159873	EPA 3550B

DCN = Data Continuation Number

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND		1
TPH - Diesel (FFP)	ND	mg/kg	10	2.2	EPA-8015B/FFP	ND		1
TPH - Motor Oil	ND	mg/kg	20	7.0	EPA-8015B/FFP	ND		1
Tetracosane (Surrogate)	94.8	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/20/23 16:08	BUP	GC-2	1.007	B160385	EPA 3550B

DCN = Data Continuation Number

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Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-01 | **Client Sample Name:** HA1-0.5, 2/7/2023 8:45:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	ND	mg/kg	5.0	0.33	EPA-6010B	500		1
Arsenic	**3.2**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**72**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.25**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.50**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100		1
Chromium	**11**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**4.5**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**24**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**5.7**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.029**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**0.26**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**12**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1
Silver	**0.14**	**mg/kg**	**0.50**	**0.067**	**EPA-6010B**	500	**J**	1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**21**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**57**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:15	DVS	PE-OP3	1	B159719	EPA 3050B
2	EPA-7471A	02/15/23 08:40	02/15/23 14:02	TMT	CETAC3	0.992	B159900	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:24	DVS	PE-OP3	1	B159719	EPA 3050B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.010	0.00036	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.010	0.00076	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.010	0.00096	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.010	0.00074	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.010	0.00036	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	1.0	0.020	EPA-8081A	2.5	A10	1
4,4'-DDD	**0.0020**	**mg/kg**	**0.010**	**0.0013**	**EPA-8081A**	1.0	**J,A10**	1
4,4'-DDE	**0.0053**	**mg/kg**	**0.010**	**0.0019**	**EPA-8081A**	1.0	**J,A10**	1
4,4'-DDT	**0.0085**	**mg/kg**	**0.010**	**0.00080**	**EPA-8081A**	1.0	**J,A10**	1
Dieldrin	ND	mg/kg	0.010	0.00072	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.010	0.00040	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.010	0.00068	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.010	0.00052	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.010	0.0013	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.010	0.00036	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.010	0.0017	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.010	0.00034	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.010	0.0019	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	1.0	0.028	EPA-8081A	5	A10	1
TCMX (Surrogate)	52.9	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	55.1	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 17:50	HKS	GC-17	20.134	B160370	EPA 3550B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0042**	**mg/kg**	**0.0050**	**0.00067**	**EPA-8260B**		**J,S08,Z1**	1
Bromobenzene	ND	mg/kg	0.0050	0.00087	EPA-8260B		S08,Z1	1
Bromochloromethane	ND	mg/kg	0.0050	0.00081	EPA-8260B		S08,Z1	1
Bromodichloromethane	ND	mg/kg	0.0050	0.00078	EPA-8260B		S08,Z1	1
Bromoform	ND	mg/kg	0.0050	0.00070	EPA-8260B		S08,Z1	1
Bromomethane	ND	mg/kg	0.0050	0.0017	EPA-8260B		S08,Z1	1
n-Butylbenzene	ND	mg/kg	0.0050	0.00076	EPA-8260B		S08,Z1	1
sec-Butylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B		S08,Z1	1
tert-Butylbenzene	ND	mg/kg	0.0050	0.00085	EPA-8260B		S08,Z1	1
Carbon tetrachloride	ND	mg/kg	0.0050	0.00078	EPA-8260B		S08,Z1	1
Chlorobenzene	ND	mg/kg	0.0050	0.00077	EPA-8260B		S08,Z1	1
Chloroethane	ND	mg/kg	0.0050	0.0011	EPA-8260B		S08,Z1	1
Chloroform	ND	mg/kg	0.0050	0.00090	EPA-8260B		S08,Z1	1
Chloromethane	ND	mg/kg	0.0050	0.0011	EPA-8260B		S08,Z1	1
2-Chlorotoluene	ND	mg/kg	0.0050	0.00087	EPA-8260B		S08,Z1	1
4-Chlorotoluene	ND	mg/kg	0.0050	0.00070	EPA-8260B		S08,Z1	1
Dibromochloromethane	ND	mg/kg	0.0050	0.00080	EPA-8260B		S08,Z1	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0050	0.00096	EPA-8260B		S08,Z1	1
1,2-Dibromoethane	ND	mg/kg	0.0050	0.00082	EPA-8260B		S08,Z1	1
Dibromomethane	ND	mg/kg	0.0050	0.0014	EPA-8260B		S08,Z1	1
1,2-Dichlorobenzene	ND	mg/kg	0.0050	0.00079	EPA-8260B		S08,Z1	1
1,3-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B		S08,Z1	1
1,4-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B		S08,Z1	1
Dichlorodifluoromethane	ND	mg/kg	0.0050	0.00079	EPA-8260B		S08,Z1	1
1,1-Dichloroethane	ND	mg/kg	0.0050	0.00064	EPA-8260B		S08,Z1	1
1,2-Dichloroethane	ND	mg/kg	0.0050	0.00073	EPA-8260B		S08,Z1	1
1,1-Dichloroethene	ND	mg/kg	0.0050	0.0011	EPA-8260B		S08,Z1	1
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	0.00054	EPA-8260B		S08,Z1	1
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	0.0037	EPA-8260B		S08,Z1	1
1,2-Dichloropropane	ND	mg/kg	0.0050	0.00080	EPA-8260B		S08,Z1	1
1,3-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B		S08,Z1	1
2,2-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B		S08,Z1	1
1,1-Dichloropropene	ND	mg/kg	0.0050	0.00067	EPA-8260B		S08,Z1	1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00058	EPA-8260B		S08,Z1	1
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00066	EPA-8260B		S08,Z1	1
Ethylbenzene	ND	mg/kg	0.0050	0.00069	EPA-8260B		S08,Z1	1
Hexachlorobutadiene	ND	mg/kg	0.0050	0.00067	EPA-8260B		S08,Z1	1
Isopropylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B		S08,Z1	1
p-Isopropyltoluene	ND	mg/kg	0.0050	0.00059	EPA-8260B		S08,Z1	1
Methylene chloride	ND	mg/kg	0.010	0.0011	EPA-8260B		S08,Z1	1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00056	EPA-8260B		S08,Z1	1
Naphthalene	ND	mg/kg	0.0050	0.00099	EPA-8260B		S08,Z1	1
n-Propylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B		S08,Z1	1
Styrene	ND	mg/kg	0.0050	0.00062	EPA-8260B		S08,Z1	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00095	EPA-8260B		S08,Z1	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00084	EPA-8260B		S08,Z1	1
Tetrachloroethene	ND	mg/kg	0.0050	0.00097	EPA-8260B		S08,Z1	1
Toluene	**0.0041**	**mg/kg**	**0.0050**	**0.00069**	**EPA-8260B**		**J,S08,Z1**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B		S08,Z1	1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	0.0014	EPA-8260B		S08,Z1	1
1,1,1-Trichloroethane	ND	mg/kg	0.0050	0.00067	EPA-8260B		S08,Z1	1
1,1,2-Trichloroethane	ND	mg/kg	0.0050	0.00094	EPA-8260B		S08,Z1	1
Trichloroethene	ND	mg/kg	0.0050	0.00074	EPA-8260B	2040	S08,Z1	1
Trichlorofluoromethane	ND	mg/kg	0.0050	0.0015	EPA-8260B		S08,Z1	1
1,2,3-Trichloropropane	ND	mg/kg	0.0050	0.0019	EPA-8260B		S08,Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0050	0.0010	EPA-8260B		S08,Z1	1
1,2,4-Trimethylbenzene	**0.0015**	**mg/kg**	**0.0050**	**0.00080**	**EPA-8260B**		**J,S08,Z1**	1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	0.00066	EPA-8260B		S08,Z1	1
Vinyl chloride	ND	mg/kg	0.0050	0.00059	EPA-8260B		S08,Z1	1
Total Xylenes	ND	mg/kg	0.010	0.0025	EPA-8260B		S08,Z1	1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0015	EPA-8260B		S08,Z1	1
o-Xylene	ND	mg/kg	0.0050	0.00093	EPA-8260B		S08,Z1	1
1,2-Dichloroethane-d4 (Surrogate)	105	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.6	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Rincon Consultants-Ventura	**Reported:** 03/15/2023 16:41
180 North Ashwood Avenue	Project: 22-13765
Ventura, CA 93003	Project Number: [none]
	Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID:	2303085-03	**Client Sample Name:**	HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 10:12	BYM	MS-V18	1.099	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.15	0.065	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.15	0.046	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.15	0.040	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.15	0.048	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.15	0.040	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.15	0.055	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.15	0.039	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.15	0.036	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.15	0.055	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.15	0.024	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.15	0.038	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.15	0.048	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.15	0.024	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.15	0.045	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.15	0.043	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.15	0.060	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	67.1	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	61.0	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	43.2	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 20:58	OLH	MS-B7	49.505	B159873	EPA 3550B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	200	50	EPA-8015B/FFP	ND	A10,S05	1
TPH - Diesel (FFP)	**130**	**mg/kg**	**100**	**22**	**EPA-8015B/FFP**	ND	**A10,A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**1300**	**mg/kg**	**200**	**70**	**EPA-8015B/FFP**	ND	**A10,A57,S05**	1
Tetracosane (Surrogate)	85.1	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		A10,S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/24/23 20:00	02/28/23 00:19	BUP	GC-2	10.135	B161016	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	400	100	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**190**	**mg/kg**	**200**	**44**	**EPA-8015B/FFP**	ND	**J,A10,A52**	1
TPH - Motor Oil	**1600**	**mg/kg**	**400**	**140**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	0	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP		A10,A17	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/20/23 21:06	BUP	GC-2	19.672	B160385	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-03 | **Client Sample Name:** HA2-0.5, 2/7/2023 9:30:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	**0.74**	**mg/kg**	**5.0**	**0.33**	**EPA-6010B**	500	**J**	1
Arsenic	**3.8**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**91**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.24**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.81**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100		1
Chromium	**17**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**4.0**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**9.9**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**6.6**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.033**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**2.1**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**16**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	**1.2**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1
Silver	**0.13**	**mg/kg**	**0.50**	**0.067**	**EPA-6010B**	500	**J**	1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**27**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**34**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:16	DVS	PE-OP3	1	B159719	EPA 3050B
2	EPA-7471A	02/15/23 08:40	02/15/23 14:04	TMT	CETAC3	1.008	B159900	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:26	DVS	PE-OP3	1	B159719	EPA 3050B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-04 | **Client Sample Name:** HA2-3.0, 2/7/2023 9:55:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	**13**	**mg/kg**	**10**	**2.2**	**EPA-8015B/FFP**	ND	**A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**31**	**mg/kg**	**20**	**7.0**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	57.3	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	03/03/23 19:35	03/07/23 14:54	BUP	GC-2	1.003	B161414	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.23	0.0083	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.23	0.018	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.23	0.022	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.23	0.017	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.23	0.0083	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	23	0.46	EPA-8081A	2.5	A10	1
4,4'-DDD	ND	mg/kg	0.23	0.030	EPA-8081A	1.0	A10	1
4,4'-DDE	ND	mg/kg	0.23	0.044	EPA-8081A	1.0	A10	1
4,4'-DDT	ND	mg/kg	0.23	0.018	EPA-8081A	1.0	A10	1
Dieldrin	ND	mg/kg	0.23	0.017	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.23	0.0092	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.23	0.016	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.23	0.012	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.23	0.030	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.23	0.0083	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.23	0.040	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.23	0.0078	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.23	0.043	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	23	0.65	EPA-8081A	5	A10	1
TCMX (Surrogate)	103	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	83.3	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 18:07	HKS	GC-17	461.54	B160370	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0025**	**mg/kg**	**0.0062**	**0.00083**	**EPA-8260B**		**J**	1
Bromobenzene	ND	mg/kg	0.0062	0.0011	EPA-8260B			1
Bromochloromethane	ND	mg/kg	0.0062	0.0010	EPA-8260B			1
Bromodichloromethane	ND	mg/kg	0.0062	0.00096	EPA-8260B			1
Bromoform	ND	mg/kg	0.0062	0.00086	EPA-8260B			1
Bromomethane	ND	mg/kg	0.0062	0.0021	EPA-8260B			1
n-Butylbenzene	ND	mg/kg	0.0062	0.00094	EPA-8260B			1
sec-Butylbenzene	ND	mg/kg	0.0062	0.00087	EPA-8260B			1
tert-Butylbenzene	ND	mg/kg	0.0062	0.0010	EPA-8260B			1
Carbon tetrachloride	ND	mg/kg	0.0062	0.00096	EPA-8260B			1
Chlorobenzene	ND	mg/kg	0.0062	0.00095	EPA-8260B			1
Chloroethane	ND	mg/kg	0.0062	0.0014	EPA-8260B			1
Chloroform	ND	mg/kg	0.0062	0.0011	EPA-8260B			1
Chloromethane	ND	mg/kg	0.0062	0.0014	EPA-8260B			1
2-Chlorotoluene	ND	mg/kg	0.0062	0.0011	EPA-8260B			1
4-Chlorotoluene	ND	mg/kg	0.0062	0.00086	EPA-8260B			1
Dibromochloromethane	ND	mg/kg	0.0062	0.00099	EPA-8260B			1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0062	0.0012	EPA-8260B			1
1,2-Dibromoethane	ND	mg/kg	0.0062	0.0010	EPA-8260B			1
Dibromomethane	ND	mg/kg	0.0062	0.0017	EPA-8260B			1
1,2-Dichlorobenzene	ND	mg/kg	0.0062	0.00097	EPA-8260B			1
1,3-Dichlorobenzene	ND	mg/kg	0.0062	0.00090	EPA-8260B			1
1,4-Dichlorobenzene	ND	mg/kg	0.0062	0.00090	EPA-8260B			1
Dichlorodifluoromethane	ND	mg/kg	0.0062	0.00097	EPA-8260B			1
1,1-Dichloroethane	ND	mg/kg	0.0062	0.00079	EPA-8260B			1
1,2-Dichloroethane	ND	mg/kg	0.0062	0.00090	EPA-8260B			1
1,1-Dichloroethene	ND	mg/kg	0.0062	0.0014	EPA-8260B			1
cis-1,2-Dichloroethene	ND	mg/kg	0.0062	0.00067	EPA-8260B			1
trans-1,2-Dichloroethene	ND	mg/kg	0.0062	0.0046	EPA-8260B			1
1,2-Dichloropropane	ND	mg/kg	0.0062	0.00099	EPA-8260B			1
1,3-Dichloropropane	ND	mg/kg	0.0062	0.00083	EPA-8260B			1
2,2-Dichloropropane	ND	mg/kg	0.0062	0.00083	EPA-8260B			1
1,1-Dichloropropene	ND	mg/kg	0.0062	0.00083	EPA-8260B			1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0062	0.00071	EPA-8260B			1
trans-1,3-Dichloropropene	ND	mg/kg	0.0062	0.00081	EPA-8260B			1
Ethylbenzene	ND	mg/kg	0.0062	0.00085	EPA-8260B			1
Hexachlorobutadiene	ND	mg/kg	0.0062	0.00083	EPA-8260B			1
Isopropylbenzene	ND	mg/kg	0.0062	0.00099	EPA-8260B			1
p-Isopropyltoluene	ND	mg/kg	0.0062	0.00073	EPA-8260B			1
Methylene chloride	ND	mg/kg	0.012	0.0014	EPA-8260B			1
Methyl t-butyl ether	ND	mg/kg	0.0062	0.00069	EPA-8260B			1
Naphthalene	ND	mg/kg	0.0062	0.0012	EPA-8260B			1
n-Propylbenzene	ND	mg/kg	0.0062	0.00087	EPA-8260B			1
Styrene	ND	mg/kg	0.0062	0.00076	EPA-8260B			1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0062	0.0012	EPA-8260B			1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0062	0.0010	EPA-8260B			1
Tetrachloroethene	ND	mg/kg	0.0062	0.0012	EPA-8260B			1
Toluene	**0.0023**	**mg/kg**	**0.0062**	**0.00085**	**EPA-8260B**		**J**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0062	0.0018	EPA-8260B			1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0062	0.0017	EPA-8260B			1
1,1,1-Trichloroethane	ND	mg/kg	0.0062	0.00083	EPA-8260B			1
1,1,2-Trichloroethane	ND	mg/kg	0.0062	0.0012	EPA-8260B			1
Trichloroethene	ND	mg/kg	0.0062	0.00091	EPA-8260B	2040		1
Trichlorofluoromethane	ND	mg/kg	0.0062	0.0018	EPA-8260B			1
1,2,3-Trichloropropane	ND	mg/kg	0.0062	0.0023	EPA-8260B			1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0062	0.0012	EPA-8260B			1
1,2,4-Trimethylbenzene	**0.0013**	**mg/kg**	**0.0062**	**0.00099**	**EPA-8260B**		**J**	1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0062	0.00081	EPA-8260B			1
Vinyl chloride	ND	mg/kg	0.0062	0.00073	EPA-8260B			1
Total Xylenes	ND	mg/kg	0.012	0.0031	EPA-8260B			1
p- & m-Xylenes	ND	mg/kg	0.0062	0.0018	EPA-8260B			1
o-Xylene	ND	mg/kg	0.0062	0.0011	EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	111	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.5	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 10:34	BYM	MS-V18	1.232	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.69	0.30	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.69	0.21	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.69	0.19	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.69	0.22	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.69	0.18	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.69	0.25	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.69	0.18	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.69	0.17	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.69	0.25	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.69	0.11	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.69	0.17	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.69	0.22	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.69	0.11	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.69	0.21	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.69	0.20	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.69	0.28	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	60.5	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	61.5	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	41.0	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 19:06	OLH	MS-B7	230.77	B159873	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	1600	390	EPA-8015B/FFP	ND	A10,S05	1
TPH - Diesel (FFP)	**780**	**mg/kg**	**790**	**170**	**EPA-8015B/FFP**	ND	**J,A10,A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**5200**	**mg/kg**	**1600**	**550**	**EPA-8015B/FFP**	ND	**A10,A57,S05**	1
Tetracosane (Surrogate)	57.5	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		A10,S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/24/23 20:00	02/27/23 22:23	BUP	GC-2	78.947	B161016	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	3000	750	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**1100**	**mg/kg**	**1500**	**330**	**EPA-8015B/FFP**	ND	**J,A10,A52**	1
TPH - Motor Oil	**7900**	**mg/kg**	**3000**	**1000**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	117	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP		A10	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/21/23 07:20	BUP	GC-2	150	B160385	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-05 | **Client Sample Name:** HA3-0.5, 2/7/2023 10:23:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	ND	mg/kg	5.0	0.33	EPA-6010B	500		1
Arsenic	**3.3**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**67**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.17**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.71**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100		1
Chromium	**18**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**3.5**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**8.9**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**4.5**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.048**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**0.57**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**21**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	**1.4**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1
Silver	**0.11**	**mg/kg**	**0.50**	**0.067**	**EPA-6010B**	500	**J**	1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**32**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**28**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:18	DVS	PE-OP3	0.990	B159719	EPA 3050B
2	EPA-7471A	02/15/23 08:40	02/15/23 14:06	TMT	CETAC3	0.977	B159900	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:27	DVS	PE-OP3	0.990	B159719	EPA 3050B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-06 | **Client Sample Name:** HA3-3.0, 2/7/2023 10:46:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	ND	mg/kg	10	2.2	EPA-8015B/FFP	ND	S05	1
TPH - Hydraulic Oil / Motor Oil	**23**	**mg/kg**	**20**	**7.0**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	55.4	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	03/03/23 19:35	03/07/23 16:03	BUP	GC-2	0.984	B161414	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-07 | **Client Sample Name:** HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.21	0.0077	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.21	0.016	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.21	0.021	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.21	0.016	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.21	0.0077	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	21	0.43	EPA-8081A	2.5	A10	1
4,4'-DDD	ND	mg/kg	0.21	0.027	EPA-8081A	1.0	A10	1
4,4'-DDE	ND	mg/kg	0.21	0.041	EPA-8081A	1.0	A10	1
4,4'-DDT	**0.081**	**mg/kg**	**0.21**	**0.017**	**EPA-8081A**	1.0	**J,A10**	1
Dieldrin	ND	mg/kg	0.21	0.015	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.21	0.0086	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.21	0.015	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.21	0.011	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.21	0.028	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.21	0.0077	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.21	0.037	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.21	0.0073	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.21	0.040	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	21	0.60	EPA-8081A	5	A10	1
TCMX (Surrogate)	103	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	89.9	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 18:40	HKS	GC-17	428.57	B160370	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-07 | **Client Sample Name:** HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0061**	**mg/kg**	**0.0061**	**0.00081**	**EPA-8260B**		**S08,Z1**	1
Bromobenzene	ND	mg/kg	0.0061	0.0011	EPA-8260B		S08,Z1	1
Bromochloromethane	ND	mg/kg	0.0061	0.00098	EPA-8260B		S08,Z1	1
Bromodichloromethane	ND	mg/kg	0.0061	0.00094	EPA-8260B		S08,Z1	1
Bromoform	ND	mg/kg	0.0061	0.00085	EPA-8260B		S08,Z1	1
Bromomethane	ND	mg/kg	0.0061	0.0021	EPA-8260B		S08,Z1	1
n-Butylbenzene	ND	mg/kg	0.0061	0.00092	EPA-8260B		S08,Z1	1
sec-Butylbenzene	ND	mg/kg	0.0061	0.00086	EPA-8260B		S08,Z1	1
tert-Butylbenzene	ND	mg/kg	0.0061	0.0010	EPA-8260B		S08,Z1	1
Carbon tetrachloride	ND	mg/kg	0.0061	0.00094	EPA-8260B		S08,Z1	1
Chlorobenzene	ND	mg/kg	0.0061	0.00093	EPA-8260B		S08,Z1	1
Chloroethane	ND	mg/kg	0.0061	0.0013	EPA-8260B		S08,Z1	1
Chloroform	ND	mg/kg	0.0061	0.0011	EPA-8260B		S08,Z1	1
Chloromethane	ND	mg/kg	0.0061	0.0013	EPA-8260B		S08,Z1	1
2-Chlorotoluene	ND	mg/kg	0.0061	0.0011	EPA-8260B		S08,Z1	1
4-Chlorotoluene	ND	mg/kg	0.0061	0.00085	EPA-8260B		S08,Z1	1
Dibromochloromethane	ND	mg/kg	0.0061	0.00097	EPA-8260B		S08,Z1	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0061	0.0012	EPA-8260B		S08,Z1	1
1,2-Dibromoethane	ND	mg/kg	0.0061	0.00099	EPA-8260B		S08,Z1	1
Dibromomethane	ND	mg/kg	0.0061	0.0017	EPA-8260B		S08,Z1	1
1,2-Dichlorobenzene	ND	mg/kg	0.0061	0.00096	EPA-8260B		S08,Z1	1
1,3-Dichlorobenzene	ND	mg/kg	0.0061	0.00088	EPA-8260B		S08,Z1	1
1,4-Dichlorobenzene	ND	mg/kg	0.0061	0.00088	EPA-8260B		S08,Z1	1
Dichlorodifluoromethane	ND	mg/kg	0.0061	0.00096	EPA-8260B		S08,Z1	1
1,1-Dichloroethane	ND	mg/kg	0.0061	0.00077	EPA-8260B		S08,Z1	1
1,2-Dichloroethane	ND	mg/kg	0.0061	0.00088	EPA-8260B		S08,Z1	1
1,1-Dichloroethene	ND	mg/kg	0.0061	0.0013	EPA-8260B		S08,Z1	1
cis-1,2-Dichloroethene	ND	mg/kg	0.0061	0.00065	EPA-8260B		S08,Z1	1
trans-1,2-Dichloroethene	ND	mg/kg	0.0061	0.0045	EPA-8260B		S08,Z1	1
1,2-Dichloropropane	ND	mg/kg	0.0061	0.00097	EPA-8260B		S08,Z1	1
1,3-Dichloropropane	ND	mg/kg	0.0061	0.00081	EPA-8260B		S08,Z1	1
2,2-Dichloropropane	ND	mg/kg	0.0061	0.00081	EPA-8260B		S08,Z1	1
1,1-Dichloropropene	ND	mg/kg	0.0061	0.00081	EPA-8260B		S08,Z1	1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-07 | **Client Sample Name:** HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0061	0.00070	EPA-8260B		S08,Z1	1
trans-1,3-Dichloropropene	ND	mg/kg	0.0061	0.00080	EPA-8260B		S08,Z1	1
Ethylbenzene	**0.00099**	**mg/kg**	**0.0061**	**0.00084**	**EPA-8260B**		**J,S08,Z1**	1
Hexachlorobutadiene	ND	mg/kg	0.0061	0.00081	EPA-8260B		S08,Z1	1
Isopropylbenzene	ND	mg/kg	0.0061	0.00097	EPA-8260B		S08,Z1	1
p-Isopropyltoluene	ND	mg/kg	0.0061	0.00071	EPA-8260B		S08,Z1	1
Methylene chloride	ND	mg/kg	0.012	0.0013	EPA-8260B		S08,Z1	1
Methyl t-butyl ether	ND	mg/kg	0.0061	0.00068	EPA-8260B		S08,Z1	1
Naphthalene	ND	mg/kg	0.0061	0.0012	EPA-8260B		S08,Z1	1
n-Propylbenzene	ND	mg/kg	0.0061	0.00086	EPA-8260B		S08,Z1	1
Styrene	ND	mg/kg	0.0061	0.00075	EPA-8260B		S08,Z1	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0061	0.0012	EPA-8260B		S08,Z1	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0061	0.0010	EPA-8260B		S08,Z1	1
Tetrachloroethene	ND	mg/kg	0.0061	0.0012	EPA-8260B		S08,Z1	1
Toluene	**0.0043**	**mg/kg**	**0.0061**	**0.00084**	**EPA-8260B**		**J,S08,Z1**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0061	0.0018	EPA-8260B		S08,Z1	1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0061	0.0017	EPA-8260B		S08,Z1	1
1,1,1-Trichloroethane	ND	mg/kg	0.0061	0.00081	EPA-8260B		S08,Z1	1
1,1,2-Trichloroethane	ND	mg/kg	0.0061	0.0011	EPA-8260B		S08,Z1	1
Trichloroethene	ND	mg/kg	0.0061	0.00090	EPA-8260B	2040	S08,Z1	1
Trichlorofluoromethane	ND	mg/kg	0.0061	0.0018	EPA-8260B		S08,Z1	1
1,2,3-Trichloropropane	ND	mg/kg	0.0061	0.0023	EPA-8260B		S08,Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0061	0.0012	EPA-8260B		S08,Z1	1
1,2,4-Trimethylbenzene	**0.0012**	**mg/kg**	**0.0061**	**0.00097**	**EPA-8260B**		**J,S08,Z1**	1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0061	0.00080	EPA-8260B		S08,Z1	1
Vinyl chloride	ND	mg/kg	0.0061	0.00071	EPA-8260B		S08,Z1	1
Total Xylenes	ND	mg/kg	0.012	0.0030	EPA-8260B		S08,Z1	1
p- & m-Xylenes	ND	mg/kg	0.0061	0.0018	EPA-8260B		S08,Z1	1
o-Xylene	ND	mg/kg	0.0061	0.0011	EPA-8260B		S08,Z1	1
1,2-Dichloroethane-d4 (Surrogate)	109	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.4	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.8	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura 180 North Ashwood Avenue Ventura, CA 93003	**Reported:** 03/15/2023 16:41 Project: 22-13765 Project Number: [none] Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID:	2303085-07	**Client Sample Name:**	HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 10:56	BYM	MS-V18	1.211	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-07 | **Client Sample Name:** HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.30	0.13	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.30	0.092	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.30	0.081	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.30	0.096	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.30	0.079	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.30	0.11	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.30	0.078	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.30	0.072	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.30	0.11	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.30	0.048	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.30	0.075	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.30	0.097	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.30	0.047	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.30	0.090	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.30	0.086	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.30	0.12	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	55.7	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	59.1	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	41.9	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 19:28	OLH	MS-B7	100	B159873	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID:	2303085-07	**Client Sample Name:**	HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	550	140	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	**370**	**mg/kg**	**270**	**60**	**EPA-8015B/FFP**	ND	**A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**3200**	**mg/kg**	**550**	**190**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	85.9	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/24/23 20:00	02/27/23 23:10	BUP	GC-2	27.273	B161016	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-07 | **Client Sample Name:** HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	2300	580	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**1100**	**mg/kg**	**1200**	**250**	**EPA-8015B/FFP**	ND	**J,A10,A52**	1
TPH - Motor Oil	**8900**	**mg/kg**	**2300**	**810**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	123	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP		A10	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/21/23 07:43	BUP	GC-2	115.38	B160385	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-07 | **Client Sample Name:** HA4-0.5, 2/7/2023 11:10:00AM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	ND	mg/kg	5.0	0.33	EPA-6010B	500		1
Arsenic	**4.6**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**84**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.18**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.49**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100	**J**	1
Chromium	**17**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**3.3**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**8.1**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**7.6**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.024**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**1.9**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**17**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	**1.3**	**mg/kg**	**1.0**	**0.98**	**EPA-6010B**	100		1
Silver	ND	mg/kg	0.50	0.067	EPA-6010B	500		1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**25**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**27**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:19	DVS	PE-OP3	0.980	B159719	EPA 3050B
2	EPA-7471A	02/15/23 08:40	02/15/23 14:08	TMT	CETAC3	1.008	B159900	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:29	DVS	PE-OP3	0.980	B159719	EPA 3050B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-08 | **Client Sample Name:** HA4-3.0, 2/7/2023 12:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	320	79	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	**210**	**mg/kg**	**160**	**35**	**EPA-8015B/FFP**	ND	**A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**2500**	**mg/kg**	**320**	**110**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	65.5	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	03/03/23 19:35	03/07/23 16:26	BUP	GC-2	15.789	B161414	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.21	0.0077	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.21	0.016	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.21	0.021	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.21	0.016	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.21	0.0077	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	21	0.43	EPA-8081A	2.5	A10	1
4,4'-DDD	ND	mg/kg	0.21	0.027	EPA-8081A	1.0	A10	1
4,4'-DDE	ND	mg/kg	0.21	0.041	EPA-8081A	1.0	A10	1
4,4'-DDT	**0.12**	**mg/kg**	**0.21**	**0.017**	**EPA-8081A**	1.0	**J,A10**	1
Dieldrin	ND	mg/kg	0.21	0.015	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.21	0.0086	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.21	0.015	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.21	0.011	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.21	0.028	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.21	0.0077	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.21	0.037	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.21	0.0073	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.21	0.040	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	21	0.60	EPA-8081A	5	A10	1
TCMX (Surrogate)	102	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	88.2	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 18:57	HKS	GC-17	428.57	B160370	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0070**	**mg/kg**	**0.0075**	**0.0010**	**EPA-8260B**		**J,S08,Z1**	1
Bromobenzene	ND	mg/kg	0.0075	0.0013	EPA-8260B		S08,Z1	1
Bromochloromethane	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
Bromodichloromethane	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
Bromoform	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
Bromomethane	ND	mg/kg	0.0075	0.0026	EPA-8260B		S08,Z1	1
n-Butylbenzene	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
sec-Butylbenzene	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
tert-Butylbenzene	ND	mg/kg	0.0075	0.0013	EPA-8260B		S08,Z1	1
Carbon tetrachloride	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
Chlorobenzene	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
Chloroethane	ND	mg/kg	0.0075	0.0017	EPA-8260B		S08,Z1	1
Chloroform	ND	mg/kg	0.0075	0.0014	EPA-8260B		S08,Z1	1
Chloromethane	ND	mg/kg	0.0075	0.0017	EPA-8260B		S08,Z1	1
2-Chlorotoluene	ND	mg/kg	0.0075	0.0013	EPA-8260B		S08,Z1	1
4-Chlorotoluene	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
Dibromochloromethane	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0075	0.0014	EPA-8260B		S08,Z1	1
1,2-Dibromoethane	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
Dibromomethane	ND	mg/kg	0.0075	0.0021	EPA-8260B		S08,Z1	1
1,2-Dichlorobenzene	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
1,3-Dichlorobenzene	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
1,4-Dichlorobenzene	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
Dichlorodifluoromethane	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
1,1-Dichloroethane	ND	mg/kg	0.0075	0.00096	EPA-8260B		S08,Z1	1
1,2-Dichloroethane	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
1,1-Dichloroethene	ND	mg/kg	0.0075	0.0017	EPA-8260B		S08,Z1	1
cis-1,2-Dichloroethene	ND	mg/kg	0.0075	0.00081	EPA-8260B		S08,Z1	1
trans-1,2-Dichloroethene	ND	mg/kg	0.0075	0.0056	EPA-8260B		S08,Z1	1
1,2-Dichloropropane	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
1,3-Dichloropropane	ND	mg/kg	0.0075	0.0010	EPA-8260B		S08,Z1	1
2,2-Dichloropropane	ND	mg/kg	0.0075	0.0010	EPA-8260B		S08,Z1	1
1,1-Dichloropropene	ND	mg/kg	0.0075	0.0010	EPA-8260B		S08,Z1	1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0075	0.00087	EPA-8260B		S08,Z1	1
trans-1,3-Dichloropropene	ND	mg/kg	0.0075	0.00099	EPA-8260B		S08,Z1	1
Ethylbenzene	**0.0021**	**mg/kg**	**0.0075**	**0.0010**	**EPA-8260B**		**J,S08,Z1**	1
Hexachlorobutadiene	ND	mg/kg	0.0075	0.0010	EPA-8260B		S08,Z1	1
Isopropylbenzene	ND	mg/kg	0.0075	0.0012	EPA-8260B		S08,Z1	1
p-Isopropyltoluene	ND	mg/kg	0.0075	0.00089	EPA-8260B		S08,Z1	1
Methylene chloride	ND	mg/kg	0.015	0.0017	EPA-8260B		S08,Z1	1
Methyl t-butyl ether	ND	mg/kg	0.0075	0.00084	EPA-8260B		S08,Z1	1
Naphthalene	ND	mg/kg	0.0075	0.0015	EPA-8260B		S08,Z1	1
n-Propylbenzene	ND	mg/kg	0.0075	0.0011	EPA-8260B		S08,Z1	1
Styrene	ND	mg/kg	0.0075	0.00093	EPA-8260B		S08,Z1	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0075	0.0014	EPA-8260B		S08,Z1	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0075	0.0013	EPA-8260B		S08,Z1	1
Tetrachloroethene	ND	mg/kg	0.0075	0.0015	EPA-8260B		S08,Z1	1
Toluene	**0.0099**	**mg/kg**	**0.0075**	**0.0010**	**EPA-8260B**		**S08,Z1**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0075	0.0023	EPA-8260B		S08,Z1	1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0075	0.0021	EPA-8260B		S08,Z1	1
1,1,1-Trichloroethane	ND	mg/kg	0.0075	0.0010	EPA-8260B		S08,Z1	1
1,1,2-Trichloroethane	ND	mg/kg	0.0075	0.0014	EPA-8260B		S08,Z1	1
Trichloroethene	ND	mg/kg	0.0075	0.0011	EPA-8260B	2040	S08,Z1	1
Trichlorofluoromethane	ND	mg/kg	0.0075	0.0023	EPA-8260B		S08,Z1	1
1,2,3-Trichloropropane	ND	mg/kg	0.0075	0.0029	EPA-8260B		S08,Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0075	0.0015	EPA-8260B		S08,Z1	1
1,2,4-Trimethylbenzene	**0.0021**	**mg/kg**	**0.0075**	**0.0012**	**EPA-8260B**		**J,S08,Z1**	1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0075	0.00099	EPA-8260B		S08,Z1	1
Vinyl chloride	ND	mg/kg	0.0075	0.00089	EPA-8260B		S08,Z1	1
Total Xylenes	**0.0043**	**mg/kg**	**0.015**	**0.0038**	**EPA-8260B**		**J,S08,Z1**	1
p- & m-Xylenes	**0.0043**	**mg/kg**	**0.0075**	**0.0023**	**EPA-8260B**		**J,S08,Z1**	1
o-Xylene	ND	mg/kg	0.0075	0.0014	EPA-8260B		S08,Z1	1
1,2-Dichloroethane-d4 (Surrogate)	113	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	98.1	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	87.1	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 11:18	BYM	MS-V18	1.502	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.25	0.11	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.25	0.077	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.25	0.068	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.25	0.080	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.25	0.066	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.25	0.092	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.25	0.065	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.25	0.060	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.25	0.092	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.25	0.040	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.25	0.062	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.25	0.081	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.25	0.039	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.25	0.075	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.25	0.072	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.25	0.10	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	67.6	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	67.1	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	50.4	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 19:51	OLH	MS-B7	83.333	B159873	EPA 3550B

DCN = Data Continuation Number

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Rincon Consultants-Ventura
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Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	380	94	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	**270**	**mg/kg**	**190**	**41**	**EPA-8015B/FFP**	ND	**A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**3400**	**mg/kg**	**380**	**130**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	74.6	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/24/23 20:00	02/27/23 23:33	BUP	GC-2	18.750	B161016	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	1800	440	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**790**	**mg/kg**	**880**	**190**	**EPA-8015B/FFP**	ND	**J,A10,A52**	1
TPH - Motor Oil	**7900**	**mg/kg**	**1800**	**620**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	123	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP		A10	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/21/23 08:06	BUP	GC-2	88.235	B160385	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-09 | **Client Sample Name:** HA5-0.5, 2/7/2023 1:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	**0.45**	**mg/kg**	**5.0**	**0.33**	**EPA-6010B**	500	**J**	1
Arsenic	**2.5**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**89**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.17**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.52**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100		1
Chromium	**19**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**6.2**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**9.9**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**6.7**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.11**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**0.17**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**22**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1
Silver	**0.17**	**mg/kg**	**0.50**	**0.067**	**EPA-6010B**	500	**J**	1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**31**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**32**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:20	DVS	PE-OP3	0.971	B159719	EPA 3050B
2	EPA-7471A	02/20/23 08:15	02/20/23 14:22	TMT	CETAC3	1.008	B160214	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:30	DVS	PE-OP3	0.971	B159719	EPA 3050B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-10 | **Client Sample Name:** HA5-3.0, 2/7/2023 1:53:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	430	110	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	ND	mg/kg	210	47	EPA-8015B/FFP	ND	S05	1
TPH - Hydraulic Oil / Motor Oil	**2400**	**mg/kg**	**430**	**150**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	71.2	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	03/03/23 19:35	03/07/23 16:50	BUP	GC-2	21.429	B161414	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.0050	0.00018	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.0050	0.00038	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.0050	0.00048	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.0050	0.00037	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.0050	0.00018	EPA-8081A	4.0	A10	1
Chlordane (Technical)	**0.071**	**mg/kg**	**0.50**	**0.010**	**EPA-8081A**	2.5	**J,A10**	1
4,4'-DDD	**0.0011**	**mg/kg**	**0.0050**	**0.00064**	**EPA-8081A**	1.0	**J,A10**	1
4,4'-DDE	**0.0030**	**mg/kg**	**0.0050**	**0.00095**	**EPA-8081A**	1.0	**J,A10**	1
4,4'-DDT	**0.0030**	**mg/kg**	**0.0050**	**0.00040**	**EPA-8081A**	1.0	**J,A10**	1
Dieldrin	**0.00038**	**mg/kg**	**0.0050**	**0.00036**	**EPA-8081A**	8.0	**J,A10**	1
Endosulfan I	ND	mg/kg	0.0050	0.00020	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.0050	0.00034	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.0050	0.00026	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.0050	0.00065	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.0050	0.00018	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.0050	0.00086	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.0050	0.00017	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.0050	0.00094	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	0.50	0.014	EPA-8081A	5	A10	1
TCMX (Surrogate)	37.0	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	34.6	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 19:31	HKS	GC-17	10.135	B160370	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0017**	**mg/kg**	**0.0050**	**0.00067**	**EPA-8260B**		**J**	1
Bromobenzene	ND	mg/kg	0.0050	0.00087	EPA-8260B			1
Bromochloromethane	ND	mg/kg	0.0050	0.00081	EPA-8260B			1
Bromodichloromethane	ND	mg/kg	0.0050	0.00078	EPA-8260B			1
Bromoform	ND	mg/kg	0.0050	0.00070	EPA-8260B			1
Bromomethane	ND	mg/kg	0.0050	0.0017	EPA-8260B			1
n-Butylbenzene	ND	mg/kg	0.0050	0.00076	EPA-8260B			1
sec-Butylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B			1
tert-Butylbenzene	ND	mg/kg	0.0050	0.00085	EPA-8260B			1
Carbon tetrachloride	ND	mg/kg	0.0050	0.00078	EPA-8260B			1
Chlorobenzene	ND	mg/kg	0.0050	0.00077	EPA-8260B			1
Chloroethane	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
Chloroform	ND	mg/kg	0.0050	0.00090	EPA-8260B			1
Chloromethane	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
2-Chlorotoluene	ND	mg/kg	0.0050	0.00087	EPA-8260B			1
4-Chlorotoluene	ND	mg/kg	0.0050	0.00070	EPA-8260B			1
Dibromochloromethane	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0050	0.00096	EPA-8260B			1
1,2-Dibromoethane	ND	mg/kg	0.0050	0.00082	EPA-8260B			1
Dibromomethane	ND	mg/kg	0.0050	0.0014	EPA-8260B			1
1,2-Dichlorobenzene	ND	mg/kg	0.0050	0.00079	EPA-8260B			1
1,3-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
1,4-Dichlorobenzene	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
Dichlorodifluoromethane	ND	mg/kg	0.0050	0.00079	EPA-8260B			1
1,1-Dichloroethane	ND	mg/kg	0.0050	0.00064	EPA-8260B			1
1,2-Dichloroethane	ND	mg/kg	0.0050	0.00073	EPA-8260B			1
1,1-Dichloroethene	ND	mg/kg	0.0050	0.0011	EPA-8260B			1
cis-1,2-Dichloroethene	ND	mg/kg	0.0050	0.00054	EPA-8260B			1
trans-1,2-Dichloroethene	ND	mg/kg	0.0050	0.0037	EPA-8260B			1
1,2-Dichloropropane	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,3-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
2,2-Dichloropropane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
1,1-Dichloropropene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00058	EPA-8260B			1
trans-1,3-Dichloropropene	ND	mg/kg	0.0050	0.00066	EPA-8260B			1
Ethylbenzene	**0.0032**	**mg/kg**	**0.0050**	**0.00069**	**EPA-8260B**		**J**	1
Hexachlorobutadiene	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
Isopropylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
p-Isopropyltoluene	ND	mg/kg	0.0050	0.00059	EPA-8260B			1
Methylene chloride	ND	mg/kg	0.010	0.0011	EPA-8260B			1
Methyl t-butyl ether	ND	mg/kg	0.0050	0.00056	EPA-8260B			1
Naphthalene	ND	mg/kg	0.0050	0.00099	EPA-8260B			1
n-Propylbenzene	ND	mg/kg	0.0050	0.00071	EPA-8260B			1
Styrene	ND	mg/kg	0.0050	0.00062	EPA-8260B			1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00095	EPA-8260B			1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0050	0.00084	EPA-8260B			1
Tetrachloroethene	ND	mg/kg	0.0050	0.00097	EPA-8260B			1
Toluene	**0.0031**	**mg/kg**	**0.0050**	**0.00069**	**EPA-8260B**		**J**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0050	0.0014	EPA-8260B			1
1,1,1-Trichloroethane	ND	mg/kg	0.0050	0.00067	EPA-8260B			1
1,1,2-Trichloroethane	ND	mg/kg	0.0050	0.00094	EPA-8260B			1
Trichloroethene	ND	mg/kg	0.0050	0.00074	EPA-8260B	2040		1
Trichlorofluoromethane	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
1,2,3-Trichloropropane	ND	mg/kg	0.0050	0.0019	EPA-8260B			1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0050	0.0010	EPA-8260B			1
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	0.00080	EPA-8260B			1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	0.00066	EPA-8260B			1
Vinyl chloride	ND	mg/kg	0.0050	0.00059	EPA-8260B			1
Total Xylenes	ND	mg/kg	0.010	0.0025	EPA-8260B			1
p- & m-Xylenes	ND	mg/kg	0.0050	0.0015	EPA-8260B			1
o-Xylene	ND	mg/kg	0.0050	0.00093	EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	109	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 11:40	BYM	MS-V18	1.022	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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180 North Ashwood Avenue
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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.015	0.0065	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.015	0.0046	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.015	0.0040	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.015	0.0048	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.015	0.0040	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.015	0.0055	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.015	0.0039	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.015	0.0036	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.015	0.0055	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.015	0.0024	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.015	0.0038	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.015	0.0048	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.015	0.0024	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.015	0.0045	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.015	0.0043	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.015	0.0060	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	65.2	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	46.8	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	26.8	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 18:44	OLH	MS-B7	5.051	B159873	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND		1
TPH - Diesel (FFP)	ND	mg/kg	10	2.2	EPA-8015B/FFP	ND		1
TPH - Motor Oil	**37**	**mg/kg**	**20**	**7.0**	**EPA-8015B/FFP**	ND	**A57**	1
Tetracosane (Surrogate)	108	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/20/23 20:43	BUP	GC-2	0.987	B160385	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-11 | **Client Sample Name:** HA8-0.5, 2/7/2023 2:12:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	**0.49**	**mg/kg**	**5.0**	**0.33**	**EPA-6010B**	500	**J**	1
Arsenic	**3.9**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**64**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.19**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.79**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100		1
Chromium	**11**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**4.2**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**14**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**8.2**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**1.9**	**mg/kg**	**0.32**	**0.032**	**EPA-7471A**	20		2
Molybdenum	**0.50**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**11**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1
Silver	**0.17**	**mg/kg**	**0.50**	**0.067**	**EPA-6010B**	500	**J**	1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**22**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**46**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:22	DVS	PE-OP3	0.980	B159719	EPA 3050B
2	EPA-7471A	02/20/23 08:15	02/20/23 14:37	TMT	CETAC3	1.953	B160214	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:32	DVS	PE-OP3	0.980	B159719	EPA 3050B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-12 | **Client Sample Name:** HA8-3.0, 2/7/2023 2:35:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Mercury	**0.087**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-7471A	03/01/23 10:33	03/01/23 13:16	TMT	CETAC3	1.008	B160988	EPA 7471A

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.17	0.0060	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.17	0.013	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.17	0.016	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.17	0.012	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.17	0.0060	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	17	0.33	EPA-8081A	2.5	A10	1
4,4'-DDD	ND	mg/kg	0.17	0.021	EPA-8081A	1.0	A10	1
4,4'-DDE	ND	mg/kg	0.17	0.032	EPA-8081A	1.0	A10	1
4,4'-DDT	**0.057**	**mg/kg**	**0.17**	**0.013**	**EPA-8081A**	1.0	**J,A10**	1
Dieldrin	ND	mg/kg	0.17	0.012	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.17	0.0067	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.17	0.011	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.17	0.0087	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.17	0.022	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.17	0.0060	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.17	0.029	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.17	0.0057	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.17	0.031	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	17	0.47	EPA-8081A	5	A10	1
TCMX (Surrogate)	100	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	88.3	%	40 - 130 (LCL - UCL)		EPA-8081A			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 20:55	HKS	GC-17	333.33	B160370	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0049**	**mg/kg**	**0.0079**	**0.0011**	**EPA-8260B**		**J,S08,Z1**	1
Bromobenzene	ND	mg/kg	0.0079	0.0014	EPA-8260B		S08,Z1	1
Bromochloromethane	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
Bromodichloromethane	ND	mg/kg	0.0079	0.0012	EPA-8260B		S08,Z1	1
Bromoform	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
Bromomethane	ND	mg/kg	0.0079	0.0027	EPA-8260B		S08,Z1	1
n-Butylbenzene	ND	mg/kg	0.0079	0.0012	EPA-8260B		S08,Z1	1
sec-Butylbenzene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
tert-Butylbenzene	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
Carbon tetrachloride	ND	mg/kg	0.0079	0.0012	EPA-8260B		S08,Z1	1
Chlorobenzene	ND	mg/kg	0.0079	0.0012	EPA-8260B		S08,Z1	1
Chloroethane	ND	mg/kg	0.0079	0.0017	EPA-8260B		S08,Z1	1
Chloroform	ND	mg/kg	0.0079	0.0014	EPA-8260B		S08,Z1	1
Chloromethane	ND	mg/kg	0.0079	0.0017	EPA-8260B		S08,Z1	1
2-Chlorotoluene	ND	mg/kg	0.0079	0.0014	EPA-8260B		S08,Z1	1
4-Chlorotoluene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
Dibromochloromethane	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.0079	0.0015	EPA-8260B		S08,Z1	1
1,2-Dibromoethane	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
Dibromomethane	ND	mg/kg	0.0079	0.0022	EPA-8260B		S08,Z1	1
1,2-Dichlorobenzene	ND	mg/kg	0.0079	0.0012	EPA-8260B		S08,Z1	1
1,3-Dichlorobenzene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
1,4-Dichlorobenzene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
Dichlorodifluoromethane	ND	mg/kg	0.0079	0.0012	EPA-8260B		S08,Z1	1
1,1-Dichloroethane	ND	mg/kg	0.0079	0.0010	EPA-8260B		S08,Z1	1
1,2-Dichloroethane	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
1,1-Dichloroethene	ND	mg/kg	0.0079	0.0017	EPA-8260B		S08,Z1	1
cis-1,2-Dichloroethene	ND	mg/kg	0.0079	0.00085	EPA-8260B		S08,Z1	1
trans-1,2-Dichloroethene	ND	mg/kg	0.0079	0.0058	EPA-8260B		S08,Z1	1
1,2-Dichloropropane	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
1,3-Dichloropropane	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
2,2-Dichloropropane	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
1,1-Dichloropropene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.0079	0.00091	EPA-8260B		S08,Z1	1
trans-1,3-Dichloropropene	ND	mg/kg	0.0079	0.0010	EPA-8260B		S08,Z1	1
Ethylbenzene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
Hexachlorobutadiene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
Isopropylbenzene	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
p-Isopropyltoluene	ND	mg/kg	0.0079	0.00093	EPA-8260B		S08,Z1	1
Methylene chloride	ND	mg/kg	0.016	0.0017	EPA-8260B		S08,Z1	1
Methyl t-butyl ether	ND	mg/kg	0.0079	0.00088	EPA-8260B		S08,Z1	1
Naphthalene	ND	mg/kg	0.0079	0.0016	EPA-8260B		S08,Z1	1
n-Propylbenzene	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
Styrene	ND	mg/kg	0.0079	0.00097	EPA-8260B		S08,Z1	1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.0079	0.0015	EPA-8260B		S08,Z1	1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
Tetrachloroethene	ND	mg/kg	0.0079	0.0015	EPA-8260B		S08,Z1	1
Toluene	**0.0049**	**mg/kg**	**0.0079**	**0.0011**	**EPA-8260B**		**J,S08,Z1**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.0079	0.0024	EPA-8260B		S08,Z1	1
1,2,4-Trichlorobenzene	ND	mg/kg	0.0079	0.0022	EPA-8260B		S08,Z1	1
1,1,1-Trichloroethane	ND	mg/kg	0.0079	0.0011	EPA-8260B		S08,Z1	1
1,1,2-Trichloroethane	ND	mg/kg	0.0079	0.0015	EPA-8260B		S08,Z1	1
Trichloroethene	ND	mg/kg	0.0079	0.0012	EPA-8260B	2040	S08,Z1	1
Trichlorofluoromethane	ND	mg/kg	0.0079	0.0024	EPA-8260B		S08,Z1	1
1,2,3-Trichloropropane	ND	mg/kg	0.0079	0.0030	EPA-8260B		S08,Z1	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.0079	0.0016	EPA-8260B		S08,Z1	1
1,2,4-Trimethylbenzene	ND	mg/kg	0.0079	0.0013	EPA-8260B		S08,Z1	1
1,3,5-Trimethylbenzene	ND	mg/kg	0.0079	0.0010	EPA-8260B		S08,Z1	1
Vinyl chloride	ND	mg/kg	0.0079	0.00093	EPA-8260B		S08,Z1	1
Total Xylenes	ND	mg/kg	0.016	0.0039	EPA-8260B		S08,Z1	1
p- & m-Xylenes	ND	mg/kg	0.0079	0.0024	EPA-8260B		S08,Z1	1
o-Xylene	ND	mg/kg	0.0079	0.0015	EPA-8260B		S08,Z1	1
1,2-Dichloroethane-d4 (Surrogate)	114	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.1	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	91.7	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 12:02	BYM	MS-V18	1.572	B159671	EPA 5035 Soil MS

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.25	0.11	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.25	0.077	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.25	0.068	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.25	0.080	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.25	0.066	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.25	0.092	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.25	0.065	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.25	0.060	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.25	0.092	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.25	0.040	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.25	0.062	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.25	0.081	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.25	0.039	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.25	0.075	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.25	0.072	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.25	0.10	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	56.4	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	50.4	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	37.0	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 20:13	OLH	MS-B7	83.333	B159873	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	430	110	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	**260**	**mg/kg**	**210**	**47**	**EPA-8015B/FFP**	ND	**A52,S05**	1
TPH - Hydraulic Oil / Motor Oil	**3600**	**mg/kg**	**430**	**150**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	87.4	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/24/23 20:00	02/27/23 23:56	BUP	GC-2	21.429	B161016	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	2000	500	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**730**	**mg/kg**	**1000**	**220**	**EPA-8015B/FFP**	ND	**J,A10,A52**	1
TPH - Motor Oil	**6600**	**mg/kg**	**2000**	**700**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	117	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP		A10	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/21/23 08:29	BUP	GC-2	100	B160385	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-13 | **Client Sample Name:** HA7-0.5, 2/7/2023 2:50:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	ND	mg/kg	5.0	0.33	EPA-6010B	500		1
Arsenic	**3.7**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**92**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.18**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.57**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100		1
Chromium	**14**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**3.3**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**8.3**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**5.7**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.12**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20	**J**	2
Molybdenum	**0.68**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**17**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1
Silver	ND	mg/kg	0.50	0.067	EPA-6010B	500		1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**29**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**29**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 19:59	DVS	PE-OP3	1	B159719	EPA 3050B
2	EPA-7471A	02/20/23 08:15	02/20/23 14:26	TMT	CETAC3	1.008	B160214	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 16:52	DVS	PE-OP3	1	B159719	EPA 3050B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-14 | **Client Sample Name:** HA7-3.0, 2/7/2023 3:10:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	460	120	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	ND	mg/kg	230	51	EPA-8015B/FFP	ND	S05	1
TPH - Hydraulic Oil / Motor Oil	**4400**	**mg/kg**	**460**	**160**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	82.2	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	03/03/23 19:35	03/07/23 17:13	BUP	GC-2	23.077	B161414	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Aldrin	ND	mg/kg	0.0050	0.00018	EPA-8081A	1.4	A10	1
alpha-BHC	ND	mg/kg	0.0050	0.00038	EPA-8081A		A10	1
beta-BHC	ND	mg/kg	0.0050	0.00048	EPA-8081A		A10	1
delta-BHC	ND	mg/kg	0.0050	0.00037	EPA-8081A		A10	1
gamma-BHC (Lindane)	ND	mg/kg	0.0050	0.00018	EPA-8081A	4.0	A10	1
Chlordane (Technical)	ND	mg/kg	0.50	0.010	EPA-8081A	2.5	A10	1
4,4'-DDD	ND	mg/kg	0.0050	0.00064	EPA-8081A	1.0	A10	1
4,4'-DDE	**0.013**	**mg/kg**	**0.0050**	**0.00095**	**EPA-8081A**	1.0	**A10**	1
4,4'-DDT	**0.034**	**mg/kg**	**0.0050**	**0.00040**	**EPA-8081A**	1.0	**A10**	1
Dieldrin	ND	mg/kg	0.0050	0.00036	EPA-8081A	8.0	A10	1
Endosulfan I	ND	mg/kg	0.0050	0.00020	EPA-8081A		A10	1
Endosulfan II	ND	mg/kg	0.0050	0.00034	EPA-8081A		A10	1
Endosulfan sulfate	ND	mg/kg	0.0050	0.00026	EPA-8081A		A10	1
Endrin	ND	mg/kg	0.0050	0.00065	EPA-8081A	0.2	A10	1
Endrin aldehyde	ND	mg/kg	0.0050	0.00018	EPA-8081A		A10	1
Heptachlor	ND	mg/kg	0.0050	0.00086	EPA-8081A	4.7	A10	1
Heptachlor epoxide	ND	mg/kg	0.0050	0.00017	EPA-8081A		A10	1
Methoxychlor	ND	mg/kg	0.0050	0.00094	EPA-8081A	100	A10	1
Toxaphene	ND	mg/kg	0.50	0.014	EPA-8081A	5	A10	1
TCMX (Surrogate)	30.7	%	20 - 130 (LCL - UCL)		EPA-8081A			1
Decachlorobiphenyl (Surrogate)	21.9	%	40 - 130 (LCL - UCL)		EPA-8081A		S09	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8081A	02/17/23 20:00	02/20/23 21:12	HKS	GC-17	9.967	B160370	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Benzene	**0.0035**	**mg/kg**	**0.011**	**0.0014**	**EPA-8260B**		**J**	1
Bromobenzene	ND	mg/kg	0.011	0.0019	EPA-8260B			1
Bromochloromethane	ND	mg/kg	0.011	0.0017	EPA-8260B			1
Bromodichloromethane	ND	mg/kg	0.011	0.0017	EPA-8260B			1
Bromoform	ND	mg/kg	0.011	0.0015	EPA-8260B			1
Bromomethane	ND	mg/kg	0.011	0.0036	EPA-8260B			1
n-Butylbenzene	ND	mg/kg	0.011	0.0016	EPA-8260B			1
sec-Butylbenzene	ND	mg/kg	0.011	0.0015	EPA-8260B			1
tert-Butylbenzene	ND	mg/kg	0.011	0.0018	EPA-8260B			1
Carbon tetrachloride	ND	mg/kg	0.011	0.0017	EPA-8260B			1
Chlorobenzene	ND	mg/kg	0.011	0.0016	EPA-8260B			1
Chloroethane	ND	mg/kg	0.011	0.0023	EPA-8260B			1
Chloroform	ND	mg/kg	0.011	0.0019	EPA-8260B			1
Chloromethane	ND	mg/kg	0.011	0.0023	EPA-8260B			1
2-Chlorotoluene	ND	mg/kg	0.011	0.0019	EPA-8260B			1
4-Chlorotoluene	ND	mg/kg	0.011	0.0015	EPA-8260B			1
Dibromochloromethane	ND	mg/kg	0.011	0.0017	EPA-8260B			1
1,2-Dibromo-3-chloropropane	ND	mg/kg	0.011	0.0020	EPA-8260B			1
1,2-Dibromoethane	ND	mg/kg	0.011	0.0017	EPA-8260B			1
Dibromomethane	ND	mg/kg	0.011	0.0030	EPA-8260B			1
1,2-Dichlorobenzene	ND	mg/kg	0.011	0.0017	EPA-8260B			1
1,3-Dichlorobenzene	ND	mg/kg	0.011	0.0016	EPA-8260B			1
1,4-Dichlorobenzene	ND	mg/kg	0.011	0.0016	EPA-8260B			1
Dichlorodifluoromethane	ND	mg/kg	0.011	0.0017	EPA-8260B			1
1,1-Dichloroethane	ND	mg/kg	0.011	0.0014	EPA-8260B			1
1,2-Dichloroethane	ND	mg/kg	0.011	0.0016	EPA-8260B			1
1,1-Dichloroethene	ND	mg/kg	0.011	0.0023	EPA-8260B			1
cis-1,2-Dichloroethene	ND	mg/kg	0.011	0.0011	EPA-8260B			1
trans-1,2-Dichloroethene	ND	mg/kg	0.011	0.0079	EPA-8260B			1
1,2-Dichloropropane	ND	mg/kg	0.011	0.0017	EPA-8260B			1
1,3-Dichloropropane	ND	mg/kg	0.011	0.0014	EPA-8260B			1
2,2-Dichloropropane	ND	mg/kg	0.011	0.0014	EPA-8260B			1
1,1-Dichloropropene	ND	mg/kg	0.011	0.0014	EPA-8260B			1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
cis-1,3-Dichloropropene	ND	mg/kg	0.011	0.0012	EPA-8260B			1
trans-1,3-Dichloropropene	ND	mg/kg	0.011	0.0014	EPA-8260B			1
Ethylbenzene	ND	mg/kg	0.011	0.0015	EPA-8260B			1
Hexachlorobutadiene	ND	mg/kg	0.011	0.0014	EPA-8260B			1
Isopropylbenzene	ND	mg/kg	0.011	0.0017	EPA-8260B			1
p-Isopropyltoluene	ND	mg/kg	0.011	0.0013	EPA-8260B			1
Methylene chloride	ND	mg/kg	0.021	0.0023	EPA-8260B			1
Methyl t-butyl ether	ND	mg/kg	0.011	0.0012	EPA-8260B			1
Naphthalene	ND	mg/kg	0.011	0.0021	EPA-8260B			1
n-Propylbenzene	ND	mg/kg	0.011	0.0015	EPA-8260B			1
Styrene	ND	mg/kg	0.011	0.0013	EPA-8260B			1
1,1,1,2-Tetrachloroethane	ND	mg/kg	0.011	0.0020	EPA-8260B			1
1,1,2,2-Tetrachloroethane	ND	mg/kg	0.011	0.0018	EPA-8260B			1
Tetrachloroethene	ND	mg/kg	0.011	0.0021	EPA-8260B			1
Toluene	**0.0032**	**mg/kg**	**0.011**	**0.0015**	**EPA-8260B**		**J**	1
1,2,3-Trichlorobenzene	ND	mg/kg	0.011	0.0032	EPA-8260B			1
1,2,4-Trichlorobenzene	ND	mg/kg	0.011	0.0030	EPA-8260B			1
1,1,1-Trichloroethane	ND	mg/kg	0.011	0.0014	EPA-8260B			1
1,1,2-Trichloroethane	ND	mg/kg	0.011	0.0020	EPA-8260B			1
Trichloroethene	ND	mg/kg	0.011	0.0016	EPA-8260B	2040		1
Trichlorofluoromethane	ND	mg/kg	0.011	0.0032	EPA-8260B			1
1,2,3-Trichloropropane	ND	mg/kg	0.011	0.0040	EPA-8260B			1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	mg/kg	0.011	0.0021	EPA-8260B			1
1,2,4-Trimethylbenzene	ND	mg/kg	0.011	0.0017	EPA-8260B			1
1,3,5-Trimethylbenzene	ND	mg/kg	0.011	0.0014	EPA-8260B			1
Vinyl chloride	ND	mg/kg	0.011	0.0013	EPA-8260B			1
Total Xylenes	ND	mg/kg	0.021	0.0053	EPA-8260B			1
p- & m-Xylenes	ND	mg/kg	0.011	0.0032	EPA-8260B			1
o-Xylene	ND	mg/kg	0.011	0.0020	EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	116	%	70 - 121 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	103	%	74 - 121 (LCL - UCL)		EPA-8260B			1

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	
1	EPA-8260B	02/13/23 09:00	02/14/23 12:24	BYM	MS-V18	2.128	B159671	EPA 5035 Soil MS

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
Acenaphthene	ND	mg/kg	0.030	0.013	EPA-8270C-SIM	ND	A10	1
Acenaphthylene	ND	mg/kg	0.030	0.0092	EPA-8270C-SIM	ND	A10	1
Anthracene	ND	mg/kg	0.030	0.0081	EPA-8270C-SIM	ND	A10	1
Benzo[a]anthracene	ND	mg/kg	0.030	0.0096	EPA-8270C-SIM	ND	A10	1
Benzo[b]fluoranthene	ND	mg/kg	0.030	0.0079	EPA-8270C-SIM	ND	A10	1
Benzo[k]fluoranthene	ND	mg/kg	0.030	0.011	EPA-8270C-SIM	ND	A10	1
Benzo[a]pyrene	ND	mg/kg	0.030	0.0078	EPA-8270C-SIM	ND	A10	1
Benzo[g,h,i]perylene	ND	mg/kg	0.030	0.0072	EPA-8270C-SIM	ND	A10	1
Chrysene	ND	mg/kg	0.030	0.011	EPA-8270C-SIM	ND	A10	1
Dibenzo[a,h]anthracene	ND	mg/kg	0.030	0.0048	EPA-8270C-SIM	ND	A10	1
Fluoranthene	ND	mg/kg	0.030	0.0075	EPA-8270C-SIM	ND	A10	1
Fluorene	ND	mg/kg	0.030	0.0097	EPA-8270C-SIM	ND	A10	1
Indeno[1,2,3-cd]pyrene	ND	mg/kg	0.030	0.0047	EPA-8270C-SIM	ND	A10	1
Naphthalene	ND	mg/kg	0.030	0.0090	EPA-8270C-SIM	ND	A10	1
Phenanthrene	ND	mg/kg	0.030	0.0086	EPA-8270C-SIM	ND	A10	1
Pyrene	ND	mg/kg	0.030	0.012	EPA-8270C-SIM	ND	A10	1
Nitrobenzene-d5 (Surrogate)	81.2	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1
2-Fluorobiphenyl (Surrogate)	75.5	%	40 - 130 (LCL - UCL)		EPA-8270C-SIM			1
p-Terphenyl-d14 (Surrogate)	51.4	%	30 - 130 (LCL - UCL)		EPA-8270C-SIM			1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8270C-SIM	02/13/23 19:00	02/21/23 20:36	OLH	MS-B7	9.836	B159873	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	100	25	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**79**	**mg/kg**	**50**	**11**	**EPA-8015B/FFP**	ND	**A10,A52**	1
TPH - Hydraulic Oil / Motor Oil	**410**	**mg/kg**	**100**	**35**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	51.5	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		A10	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/24/23 20:00	02/27/23 22:00	BUP	GC-2	5.068	B161016	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	400	100	EPA-8015B/FFP	ND	A10	1
TPH - Diesel (FFP)	**230**	**mg/kg**	**200**	**44**	**EPA-8015B/FFP**	ND	**A10,A52**	1
TPH - Motor Oil	**600**	**mg/kg**	**400**	**140**	**EPA-8015B/FFP**	ND	**A10,A57**	1
Tetracosane (Surrogate)	0	%	40 - 130 (LCL - UCL)		EPA-8015B/FFP		A10,A17	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	02/17/23 21:00	02/20/23 22:15	BUP	GC-2	19.934	B160385	EPA 3550B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

BCL Sample ID: 2303085-15 | **Client Sample Name:** HA6-0.5, 2/7/2023 3:20:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	TTLC Limits	Lab Quals	DCN
Antimony	ND	mg/kg	5.0	0.33	EPA-6010B	500		1
Arsenic	**3.2**	**mg/kg**	**1.0**	**0.40**	**EPA-6010B**	500		1
Barium	**73**	**mg/kg**	**0.50**	**0.18**	**EPA-6010B**	10000		1
Beryllium	**0.22**	**mg/kg**	**0.50**	**0.047**	**EPA-6010B**	75	**J**	1
Cadmium	**0.49**	**mg/kg**	**0.50**	**0.052**	**EPA-6010B**	100	**J**	1
Chromium	**9.6**	**mg/kg**	**0.50**	**0.050**	**EPA-6010B**	2500		1
Cobalt	**4.0**	**mg/kg**	**2.5**	**0.098**	**EPA-6010B**	8000		1
Copper	**9.8**	**mg/kg**	**1.0**	**0.050**	**EPA-6010B**	2500		1
Lead	**5.4**	**mg/kg**	**2.5**	**0.41**	**EPA-6010B**	1000		1
Mercury	**0.32**	**mg/kg**	**0.16**	**0.016**	**EPA-7471A**	20		2
Molybdenum	**0.27**	**mg/kg**	**2.5**	**0.050**	**EPA-6010B**	3500	**J**	1
Nickel	**10**	**mg/kg**	**0.50**	**0.15**	**EPA-6010B**	2000		1
Selenium	ND	mg/kg	1.0	0.98	EPA-6010B	100		1
Silver	**0.13**	**mg/kg**	**0.50**	**0.067**	**EPA-6010B**	500	**J**	1
Thallium	ND	mg/kg	5.0	0.64	EPA-6010B	700		1
Vanadium	**19**	**mg/kg**	**0.50**	**0.11**	**EPA-6010B**	2400		1
Zinc	**35**	**mg/kg**	**2.5**	**0.087**	**EPA-6010B**	5000		3

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-6010B	02/13/23 07:30	02/14/23 20:23	DVS	PE-OP3	0.980	B159719	EPA 3050B
2	EPA-7471A	02/20/23 08:15	02/20/23 14:28	TMT	CETAC3	0.992	B160214	EPA 7471A
3	EPA-6010B	02/13/23 07:30	02/16/23 17:33	DVS	PE-OP3	0.980	B159719	EPA 3050B

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 2303085-16 | **Client Sample Name:** HA6-3.0, 2/7/2023 3:55:00PM, SAWYER CARMAN

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	DCN
TPH - Gasoline	ND	mg/kg	20	5.0	EPA-8015B/FFP	ND	S05	1
TPH - Diesel (FFP)	ND	mg/kg	10	2.2	EPA-8015B/FFP	ND	S05	1
TPH - Hydraulic Oil / Motor Oil	**37**	**mg/kg**	**20**	**7.0**	**EPA-8015B/FFP**	ND	**A57,S05**	1
Tetracosane (Surrogate)	49.1	%	20 - 145 (LCL - UCL)		EPA-8015B/FFP		S05	1

DCN	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID	Prep Method
1	EPA-8015B/FFP	03/03/23 19:35	03/07/23 17:36	BUP	GC-2	1.010	B161414	EPA 3550B

DCN = Data Continuation Number

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B160370							
Aldrin	B160370-BLK1	ND	mg/kg	0.00050	0.000018		1
alpha-BHC	B160370-BLK1	ND	mg/kg	0.00050	0.000038		1
beta-BHC	B160370-BLK1	ND	mg/kg	0.00050	0.000048		1
delta-BHC	B160370-BLK1	ND	mg/kg	0.00050	0.000037		1
gamma-BHC (Lindane)	B160370-BLK1	ND	mg/kg	0.00050	0.000018		1
Chlordane (Technical)	B160370-BLK1	ND	mg/kg	0.050	0.0010		1
4,4'-DDD	B160370-BLK1	ND	mg/kg	0.00050	0.000064		1
4,4'-DDE	B160370-BLK1	ND	mg/kg	0.00050	0.000095		1
4,4'-DDT	B160370-BLK1	ND	mg/kg	0.00050	0.000040		1
Dieldrin	B160370-BLK1	ND	mg/kg	0.00050	0.000036		1
Endosulfan I	B160370-BLK1	ND	mg/kg	0.00050	0.000020		1
Endosulfan II	B160370-BLK1	ND	mg/kg	0.00050	0.000034		1
Endosulfan sulfate	B160370-BLK1	ND	mg/kg	0.00050	0.000026		1
Endrin	B160370-BLK1	ND	mg/kg	0.00050	0.000065		1
Endrin aldehyde	B160370-BLK1	ND	mg/kg	0.00050	0.000018		1
Heptachlor	B160370-BLK1	ND	mg/kg	0.00050	0.000086		1
Heptachlor epoxide	B160370-BLK1	ND	mg/kg	0.00050	0.000017		1
Methoxychlor	B160370-BLK1	ND	mg/kg	0.00050	0.000094		1
Toxaphene	B160370-BLK1	ND	mg/kg	0.050	0.0014		1
TCMX (Surrogate)	**B160370-BLK1**	**87.4**	%	**20 - 130 (LCL - UCL)**			1
Decachlorobiphenyl (Surrogate)	**B160370-BLK1**	**78.9**	%	**40 - 130 (LCL - UCL)**			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B160370-BLK1	PB	EPA-8081A	02/17/23	02/20/23 16:01	HKS	GC-17	1.003

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals	Run #
QC Batch ID: B160370											
Aldrin	B160370-BS1	LCS	0.0046810	0.0050847	mg/kg	92.1		70 - 130			1
gamma-BHC (Lindane)	B160370-BS1	LCS	0.0049905	0.0050847	mg/kg	98.1		60 - 140			1
4,4'-DDT	B160370-BS1	LCS	0.0042644	0.0050847	mg/kg	83.9		60 - 140			1
Dieldrin	B160370-BS1	LCS	0.0046600	0.0050847	mg/kg	91.6		70 - 130			1
Endrin	B160370-BS1	LCS	0.0045037	0.0050847	mg/kg	88.6		60 - 140			1
Heptachlor	B160370-BS1	LCS	0.0048746	0.0050847	mg/kg	95.9		60 - 140			1
TCMX (Surrogate)	B160370-BS1	LCS	0.0092359	0.010169	mg/kg	90.8		20 - 130			1
Decachlorobiphenyl (Surrogate)	B160370-BS1	LCS	0.014920	0.020339	mg/kg	73.4		40 - 130			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B160370-BS1	LCS	EPA-8081A	02/17/23	02/20/23 16:18	HKS	GC-17	1.017

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Organochlorine Pesticides (EPA Method 8081A)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B160370	Used client sample: Y - Description: HA6-0.5, 02/07/2023 15:20											
Aldrin	MS	**2303085-15**	**ND**	**0.0022862**	**0.0049342**	**mg/kg**		**46.3**		**50 - 140**	**J,Q03**	1
	MSD	**2303085-15**	**ND**	**0.0029122**	**0.0050676**	**mg/kg**	**24.1**	**57.5**	**30**	**50 - 140**	**J**	2
gamma-BHC (Lindane)	MS	2303085-15	ND	0.0026678	0.0049342	mg/kg		54.1		50 - 140	J	1
	MSD	2303085-15	ND	0.0029020	0.0050676	mg/kg	8.4	57.3	30	50 - 140	J	2
4,4'-DDT	MS	**2303085-15**	**0.034306**	**0.076579**	**0.0049342**	**mg/kg**		**857**		**50 - 140**	**Q03**	1
	MSD	**2303085-15**	**0.034306**	**0.069814**	**0.0050676**	**mg/kg**	**9.2**	**701**	**30**	**50 - 140**	**Q03**	2
Dieldrin	MS	**2303085-15**	**ND**	**0.042918**	**0.0049342**	**mg/kg**		**870**		**40 - 140**	**Q03**	1
	MSD	**2303085-15**	**ND**	**0.0027128**	**0.0050676**	**mg/kg**	**176**	**53.5**	**30**	**40 - 140**	**J,Q02**	2
Endrin	MS	**2303085-15**	**ND**	**0.013178**	**0.0049342**	**mg/kg**		**267**		**50 - 150**	**Q03**	1
	MSD	**2303085-15**	**ND**	**0.0047399**	**0.0050676**	**mg/kg**	**94.2**	**93.5**	**30**	**50 - 150**	**J,Q02**	2
Heptachlor	MS	**2303085-15**	**ND**	**0.0032763**	**0.0049342**	**mg/kg**		**66.4**		**60 - 140**	**J**	1
	MSD	**2303085-15**	**ND**	**0.0027568**	**0.0050676**	**mg/kg**	**17.2**	**54.4**	**30**	**60 - 140**	**J,Q03**	2
TCMX (Surrogate)	MS	2303085-15	ND	0.0053586	0.0098684	mg/kg		54.3		20 - 130		1
	MSD	2303085-15	ND	0.0044189	0.010135	mg/kg	19.2	43.6		20 - 130		2
Decachlorobiphenyl (Surrogate)	MS	**2303085-15**	**ND**	**0.0063421**	**0.019737**	**mg/kg**		**32.1**		**40 - 130**	**S09**	1
	MSD	**2303085-15**	**ND**	**0.0053446**	**0.020270**	**mg/kg**	**17.1**	**26.4**		**40 - 130**	**S09**	2

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B160370-MS1	MS	EPA-8081A	02/17/23	02/20/23 17:16	HKS	GC-17	9.868
2	B160370-MSD1	MSD	EPA-8081A	02/17/23	02/20/23 17:33	HKS	GC-17	10.135

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B159671							
Benzene	B159671-BLK1	ND	mg/kg	0.0050	0.00067		1
Bromobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00087		1
Bromochloromethane	B159671-BLK1	ND	mg/kg	0.0050	0.00081		1
Bromodichloromethane	B159671-BLK1	ND	mg/kg	0.0050	0.00078		1
Bromoform	B159671-BLK1	ND	mg/kg	0.0050	0.00070		1
Bromomethane	B159671-BLK1	ND	mg/kg	0.0050	0.0017		1
n-Butylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00076		1
sec-Butylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00071		1
tert-Butylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00085		1
Carbon tetrachloride	B159671-BLK1	ND	mg/kg	0.0050	0.00078		1
Chlorobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00077		1
Chloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.0011		1
Chloroform	B159671-BLK1	ND	mg/kg	0.0050	0.00090		1
Chloromethane	B159671-BLK1	ND	mg/kg	0.0050	0.0011		1
2-Chlorotoluene	B159671-BLK1	ND	mg/kg	0.0050	0.00087		1
4-Chlorotoluene	B159671-BLK1	ND	mg/kg	0.0050	0.00070		1
Dibromochloromethane	B159671-BLK1	ND	mg/kg	0.0050	0.00080		1
1,2-Dibromo-3-chloropropane	B159671-BLK1	ND	mg/kg	0.0050	0.00096		1
1,2-Dibromoethane	B159671-BLK1	ND	mg/kg	0.0050	0.00082		1
Dibromomethane	B159671-BLK1	ND	mg/kg	0.0050	0.0014		1
1,2-Dichlorobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00079		1
1,3-Dichlorobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00073		1
1,4-Dichlorobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00073		1
Dichlorodifluoromethane	B159671-BLK1	ND	mg/kg	0.0050	0.00079		1
1,1-Dichloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.00064		1
1,2-Dichloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.00073		1
1,1-Dichloroethene	B159671-BLK1	ND	mg/kg	0.0050	0.0011		1
cis-1,2-Dichloroethene	B159671-BLK1	ND	mg/kg	0.0050	0.00054		1
trans-1,2-Dichloroethene	B159671-BLK1	ND	mg/kg	0.0050	0.0037		1
1,2-Dichloropropane	B159671-BLK1	ND	mg/kg	0.0050	0.00080		1
1,3-Dichloropropane	B159671-BLK1	ND	mg/kg	0.0050	0.00067		1
2,2-Dichloropropane	B159671-BLK1	ND	mg/kg	0.0050	0.00067		1
1,1-Dichloropropene	B159671-BLK1	ND	mg/kg	0.0050	0.00067		1
cis-1,3-Dichloropropene	B159671-BLK1	ND	mg/kg	0.0050	0.00058		1

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ENVIRONMENTAL SCIENCES

Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B159671							
trans-1,3-Dichloropropene	B159671-BLK1	ND	mg/kg	0.0050	0.00066		1
Ethylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00069		1
Hexachlorobutadiene	B159671-BLK1	ND	mg/kg	0.0050	0.00067		1
Isopropylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00080		1
p-Isopropyltoluene	B159671-BLK1	ND	mg/kg	0.0050	0.00059		1
Methylene chloride	B159671-BLK1	ND	mg/kg	0.010	0.0011		1
Methyl t-butyl ether	B159671-BLK1	ND	mg/kg	0.0050	0.00056		1
Naphthalene	B159671-BLK1	ND	mg/kg	0.0050	0.00099		1
n-Propylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00071		1
Styrene	B159671-BLK1	ND	mg/kg	0.0050	0.00062		1
1,1,1,2-Tetrachloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.00095		1
1,1,2,2-Tetrachloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.00084		1
Tetrachloroethene	B159671-BLK1	ND	mg/kg	0.0050	0.00097		1
Toluene	B159671-BLK1	ND	mg/kg	0.0050	0.00069		1
1,2,3-Trichlorobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.0015		1
1,2,4-Trichlorobenzene	B159671-BLK1	ND	mg/kg	0.0050	0.0014		1
1,1,1-Trichloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.00067		1
1,1,2-Trichloroethane	B159671-BLK1	ND	mg/kg	0.0050	0.00094		1
Trichloroethene	B159671-BLK1	ND	mg/kg	0.0050	0.00074		1
Trichlorofluoromethane	B159671-BLK1	ND	mg/kg	0.0050	0.0015		1
1,2,3-Trichloropropane	B159671-BLK1	ND	mg/kg	0.0050	0.0019		1
1,1,2-Trichloro-1,2,2-trifluoroethane	B159671-BLK1	ND	mg/kg	0.0050	0.0010		1
1,2,4-Trimethylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00080		1
1,3,5-Trimethylbenzene	B159671-BLK1	ND	mg/kg	0.0050	0.00066		1
Vinyl chloride	B159671-BLK1	ND	mg/kg	0.0050	0.00059		1
Total Xylenes	B159671-BLK1	ND	mg/kg	0.010	0.0025		1
p- & m-Xylenes	B159671-BLK1	ND	mg/kg	0.0050	0.0015		1
o-Xylene	B159671-BLK1	ND	mg/kg	0.0050	0.00093		1
1,2-Dichloroethane-d4 (Surrogate)	**B159671-BLK1**	**89.8**	%	**70 - 121 (LCL - UCL)**			1
Toluene-d8 (Surrogate)	**B159671-BLK1**	**98.9**	%	**81 - 117 (LCL - UCL)**			1
4-Bromofluorobenzene (Surrogate)	**B159671-BLK1**	**99.8**	%	**74 - 121 (LCL - UCL)**			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159671-BLK1	PB	EPA-8260B	02/10/23	02/10/23 10:40	BYM	MS-V18	1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals	Run #
QC Batch ID: B159671											
Benzene	B159671-BS1	LCS	0.13234	0.12500	mg/kg	106		70 - 130			1
Bromodichloromethane	B159671-BS1	LCS	0.13390	0.12500	mg/kg	107		70 - 130			1
Chlorobenzene	B159671-BS1	LCS	0.12584	0.12500	mg/kg	101		70 - 130			1
Chloroethane	B159671-BS1	LCS	0.12244	0.12500	mg/kg	98.0		70 - 130			1
1,4-Dichlorobenzene	B159671-BS1	LCS	0.13288	0.12500	mg/kg	106		70 - 130			1
1,1-Dichloroethane	B159671-BS1	LCS	0.12709	0.12500	mg/kg	102		70 - 130			1
1,1-Dichloroethene	B159671-BS1	LCS	0.12402	0.12500	mg/kg	99.2		70 - 130			1
Toluene	B159671-BS1	LCS	0.13087	0.12500	mg/kg	105		70 - 130			1
Trichloroethene	B159671-BS1	LCS	0.12952	0.12500	mg/kg	104		70 - 130			1
1,2-Dichloroethane-d4 (Surrogate)	B159671-BS1	LCS	0.045290	0.050000	mg/kg	90.6		70 - 121			1
Toluene-d8 (Surrogate)	B159671-BS1	LCS	0.049940	0.050000	mg/kg	99.9		81 - 117			1
4-Bromofluorobenzene (Surrogate)	B159671-BS1	LCS	0.049830	0.050000	mg/kg	99.7		74 - 121			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159671-BS1	LCS	EPA-8260B	02/10/23	02/10/23 11:02	BYM	MS-V18	1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Volatile Organic Analysis (EPA Method 8260B/5035)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B159671	Used client sample: N											
Benzene	MS	2302953-01	ND	0.13536	0.12500	mg/kg		108		70 - 130		1
	MSD	2302953-01	ND	0.13541	0.12500	mg/kg	0.0	108	20	70 - 130		2
Bromodichloromethane	MS	2302953-01	ND	0.13567	0.12500	mg/kg		109		70 - 130		1
	MSD	2302953-01	ND	0.13505	0.12500	mg/kg	0.5	108	20	70 - 130		2
Chlorobenzene	MS	2302953-01	ND	0.12335	0.12500	mg/kg		98.7		70 - 130		1
	MSD	2302953-01	ND	0.12682	0.12500	mg/kg	2.8	101	20	70 - 130		2
Chloroethane	MS	2302953-01	ND	0.12954	0.12500	mg/kg		104		70 - 130		1
	MSD	2302953-01	ND	0.12695	0.12500	mg/kg	2.0	102	20	70 - 130		2
1,4-Dichlorobenzene	MS	2302953-01	ND	0.12431	0.12500	mg/kg		99.4		70 - 130		1
	MSD	2302953-01	ND	0.12887	0.12500	mg/kg	3.6	103	20	70 - 130		2
1,1-Dichloroethane	MS	2302953-01	ND	0.13034	0.12500	mg/kg		104		70 - 130		1
	MSD	2302953-01	ND	0.12915	0.12500	mg/kg	0.9	103	20	70 - 130		2
1,1-Dichloroethene	MS	2302953-01	ND	0.12837	0.12500	mg/kg		103		70 - 130		1
	MSD	2302953-01	ND	0.12822	0.12500	mg/kg	0.1	103	20	70 - 130		2
Toluene	MS	2302953-01	ND	0.13283	0.12500	mg/kg		106		70 - 130		1
	MSD	2302953-01	ND	0.13206	0.12500	mg/kg	0.6	106	20	70 - 130		2
Trichloroethene	MS	2302953-01	ND	0.13167	0.12500	mg/kg		105		70 - 130		1
	MSD	2302953-01	ND	0.13153	0.12500	mg/kg	0.1	105	20	70 - 130		2
1,2-Dichloroethane-d4 (Surrogate)	MS	2302953-01	ND	0.045760	0.050000	mg/kg		91.5		70 - 121		1
	MSD	2302953-01	ND	0.044520	0.050000	mg/kg	2.7	89.0		70 - 121		2
Toluene-d8 (Surrogate)	MS	2302953-01	ND	0.049760	0.050000	mg/kg		99.5		81 - 117		1
	MSD	2302953-01	ND	0.049520	0.050000	mg/kg	0.5	99.0		81 - 117		2
4-Bromofluorobenzene (Surrogate)	MS	2302953-01	ND	0.048600	0.050000	mg/kg		97.2		74 - 121		1
	MSD	2302953-01	ND	0.050010	0.050000	mg/kg	2.9	100		74 - 121		2

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159671-MS1	MS	EPA-8260B	02/10/23	02/10/23 11:24	BYM	MS-V18	1
2	B159671-MSD1	MSD	EPA-8260B	02/10/23	02/10/23 11:46	BYM	MS-V18	1

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B159873							
Acenaphthene	B159873-BLK1	ND	mg/kg	0.0030	0.0013		1
Acenaphthylene	B159873-BLK1	ND	mg/kg	0.0030	0.00092		1
Anthracene	B159873-BLK1	ND	mg/kg	0.0030	0.00081		1
Benzo[a]anthracene	B159873-BLK1	ND	mg/kg	0.0030	0.00096		1
Benzo[b]fluoranthene	B159873-BLK1	ND	mg/kg	0.0030	0.00079		1
Benzo[k]fluoranthene	B159873-BLK1	ND	mg/kg	0.0030	0.0011		1
Benzo[a]pyrene	B159873-BLK1	ND	mg/kg	0.0030	0.00078		1
Benzo[g,h,i]perylene	B159873-BLK1	ND	mg/kg	0.0030	0.00072		1
Chrysene	B159873-BLK1	ND	mg/kg	0.0030	0.0011		1
Dibenzo[a,h]anthracene	B159873-BLK1	ND	mg/kg	0.0030	0.00048		1
Fluoranthene	B159873-BLK1	ND	mg/kg	0.0030	0.00075		1
Fluorene	B159873-BLK1	ND	mg/kg	0.0030	0.00097		1
Indeno[1,2,3-cd]pyrene	B159873-BLK1	ND	mg/kg	0.0030	0.00047		1
Naphthalene	B159873-BLK1	ND	mg/kg	0.0030	0.00090		1
Phenanthrene	B159873-BLK1	ND	mg/kg	0.0030	0.00086		1
Pyrene	B159873-BLK1	ND	mg/kg	0.0030	0.0012		1
Nitrobenzene-d5 (Surrogate)	**B159873-BLK1**	**77.2**	%	**30 - 130 (LCL - UCL)**			1
2-Fluorobiphenyl (Surrogate)	**B159873-BLK1**	**82.1**	%	**40 - 130 (LCL - UCL)**			1
p-Terphenyl-d14 (Surrogate)	**B159873-BLK1**	**70.9**	%	**30 - 130 (LCL - UCL)**			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159873-BLK1	PB	EPA-8270C-SIM	02/13/23	02/14/23 12:18	OLH	MS-B7	1.017

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals	Run #
QC Batch ID: B159873											
Acenaphthene	B159873-BS1	LCS	0.027385	0.033670	mg/kg	81.3		60 - 130			1
Acenaphthylene	B159873-BS1	LCS	0.028144	0.033670	mg/kg	83.6		60 - 130			1
Anthracene	B159873-BS1	LCS	0.028349	0.033670	mg/kg	84.2		60 - 130			1
Benzo[a]anthracene	B159873-BS1	LCS	0.032567	0.033670	mg/kg	96.7		60 - 130			1
Benzo[b]fluoranthene	B159873-BS1	LCS	0.030590	0.033670	mg/kg	90.9		50 - 130			1
Benzo[k]fluoranthene	B159873-BS1	LCS	0.028510	0.033670	mg/kg	84.7		60 - 130			1
Benzo[a]pyrene	B159873-BS1	LCS	0.026150	0.033670	mg/kg	77.7		60 - 130			1
Benzo[g,h,i]perylene	B159873-BS1	LCS	0.023619	0.033670	mg/kg	70.1		50 - 130			1
Chrysene	B159873-BS1	LCS	0.027554	0.033670	mg/kg	81.8		50 - 130			1
Dibenzo[a,h]anthracene	B159873-BS1	LCS	0.023663	0.033670	mg/kg	70.3		50 - 130			1
Fluoranthene	B159873-BS1	LCS	0.029491	0.033670	mg/kg	87.6		60 - 130			1
Fluorene	B159873-BS1	LCS	0.028593	0.033670	mg/kg	84.9		50 - 130			1
Indeno[1,2,3-cd]pyrene	B159873-BS1	LCS	0.023950	0.033670	mg/kg	71.1		50 - 130			1
Naphthalene	B159873-BS1	LCS	0.026336	0.033670	mg/kg	78.2		50 - 130			1
Phenanthrene	B159873-BS1	LCS	0.026942	0.033670	mg/kg	80.0		50 - 130			1
Pyrene	B159873-BS1	LCS	0.032555	0.033670	mg/kg	96.7		50 - 130			1
Nitrobenzene-d5 (Surrogate)	B159873-BS1	LCS	0.10465	0.13468	mg/kg	77.7		30 - 130			1
2-Fluorobiphenyl (Surrogate)	B159873-BS1	LCS	0.10546	0.13468	mg/kg	78.3		40 - 130			1
p-Terphenyl-d14 (Surrogate)	B159873-BS1	LCS	0.084473	0.13468	mg/kg	62.7		30 - 130			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159873-BS1	LCS	EPA-8270C-SIM	02/13/23	02/14/23 12:40	OLH	MS-B7	1.010

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B159873	Used client sample: N											
Acenaphthene	MS	2302830-02	ND	ND	0.033557	mg/kg		1.1		50 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	0.4	1.1	30	50 - 130	Q03	2
Acenaphthylene	MS	2302830-02	ND	ND	0.033557	mg/kg		0.5		50 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	8.7	0.5	30	50 - 130	Q03	2
Anthracene	MS	2302830-02	ND	ND	0.033557	mg/kg		0.7		50 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	9.0	0.7	30	50 - 130	Q03	2
Benzo[a]anthracene	MS	2302830-02	ND	ND	0.033557	mg/kg		2.2		50 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	0.3	2.2	30	50 - 130	Q03	2
Benzo[b]fluoranthene	MS	2302830-02	ND	0.0045782	0.033557	mg/kg		13.6		40 - 130	Q03	1
	MSD	2302830-02	ND	0.0045689	0.033445	mg/kg	0.2	13.7	30	40 - 130	Q03	2
Benzo[k]fluoranthene	MS	2302830-02	ND	ND	0.033557	mg/kg		2.9		40 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	2.1	2.8	30	40 - 130	Q03	2
Benzo[a]pyrene	MS	2302830-02	ND	0.0043601	0.033557	mg/kg		13.0		40 - 130	Q03	1
	MSD	2302830-02	ND	0.0043592	0.033445	mg/kg	0.0	13.0	30	40 - 130	Q03	2
Benzo[g,h,i]perylene	MS	2302830-02	ND	0.0028443	0.033557	mg/kg		8.5		40 - 130	J,Q03	1
	MSD	2302830-02	ND	0.0028398	0.033445	mg/kg	0.2	8.5	30	40 - 130	J,Q03	2
Chrysene	MS	2302830-02	ND	ND	0.033557	mg/kg		1.0		40 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	1.7	1.0	30	40 - 130	Q03	2
Dibenzo[a,h]anthracene	MS	2302830-02	ND	0.0042574	0.033557	mg/kg		12.7		40 - 130	Q03	1
	MSD	2302830-02	ND	0.0042391	0.033445	mg/kg	0.4	12.7	30	40 - 130	Q03	2
Fluoranthene	MS	2302830-02	ND	ND	0.033557	mg/kg		1.0		40 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	2.3	1.0	30	40 - 130	Q03	2
Fluorene	MS	2302830-02	ND	ND	0.033557	mg/kg		0.7		40 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	3.4	0.7	30	40 - 130	Q03	2
Indeno[1,2,3-cd]pyrene	MS	2302830-02	ND	0.0037319	0.033557	mg/kg		11.1		30 - 130	Q03	1
	MSD	2302830-02	ND	0.0037100	0.033445	mg/kg	0.6	11.1	30	30 - 130	Q03	2
Naphthalene	MS	2302830-02	ND	ND	0.033557	mg/kg		1.1		50 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	3.4	1.1	30	50 - 130	Q03	2
Phenanthrene	MS	2302830-02	ND	ND	0.033557	mg/kg		1.3		40 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	2.2	1.3	30	40 - 130	Q03	2
Pyrene	MS	2302830-02	ND	ND	0.033557	mg/kg		1.2		40 - 130	Q03	1
	MSD	2302830-02	ND	ND	0.033445	mg/kg	1.6	1.2	30	40 - 130	Q03	2
Nitrobenzene-d5 (Surrogate)	MS	2302830-02	ND	0.0018081	0.13423	mg/kg		1.3		30 - 130	S09	1
	MSD	2302830-02	ND	0.0018742	0.13378	mg/kg	3.6	1.4		30 - 130	S09	2
2-Fluorobiphenyl (Surrogate)	MS	2302830-02	ND	0.00086007	0.13423	mg/kg		0.6		40 - 130	S09	1
	MSD	2302830-02	ND	0.00083344	0.13378	mg/kg	3.1	0.6		40 - 130	S09	2

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Polynuclear Aromatic Hydrocarbons (EPA Method 8270C-SIM)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B159873	Used client sample: N											
p-Terphenyl-d14 (Surrogate)	MS	**2302830-02**	**ND**	**0.0013262**	**0.13423**	**mg/kg**		**1.0**		**30 - 130**	**S09**	1
	MSD	**2302830-02**	**ND**	**0.0012930**	**0.13378**	**mg/kg**	**2.5**	**1.0**		**30 - 130**	**S09**	2

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159873-MS1	MS	EPA-8270C-SIM	02/13/23	02/14/23 13:02	OLH	MS-B7	1.007
2	B159873-MSD1	MSD	EPA-8270C-SIM	02/13/23	02/14/23 13:25	OLH	MS-B7	1.003

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180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B161016							
TPH - Gasoline	B161016-BLK1	ND	mg/kg	20	5.0		1
TPH - Diesel (FFP)	B161016-BLK1	ND	mg/kg	10	2.2		1
TPH - Hydraulic Oil / Motor Oil	B161016-BLK1	ND	mg/kg	20	7.0		1
Tetracosane (Surrogate)	**B161016-BLK1**	**73.0**	%	**20 - 145 (LCL - UCL)**			1
QC Batch ID: B161414							
TPH - Gasoline	B161414-BLK1	ND	mg/kg	20	5.0		2
TPH - Diesel (FFP)	B161414-BLK1	ND	mg/kg	10	2.2		2
TPH - Hydraulic Oil / Motor Oil	B161414-BLK1	ND	mg/kg	20	7.0		2
Tetracosane (Surrogate)	**B161414-BLK1**	**55.0**	%	**20 - 145 (LCL - UCL)**			2

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B161016-BLK1	PB	EPA-8015B/FFP	02/24/23	02/27/23 20:27	BUP	GC-2	1.003
2	B161414-BLK1	PB	EPA-8015B/FFP	03/03/23	03/07/23 14:08	BUP	GC-2	1

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Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals	Run #
QC Batch ID: B161016											
TPH - Diesel (FFP)	B161016-BS1	LCS	67.451	81.967	mg/kg	82.3		64 - 124			1
Tetracosane (Surrogate)	B161016-BS1	LCS	3.0448	3.2787	mg/kg	92.9		20 - 145			1
QC Batch ID: B161414											
TPH - Diesel (FFP)	B161414-BS1	LCS	59.014	83.612	mg/kg	70.6		64 - 124			2
Tetracosane (Surrogate)	B161414-BS1	LCS	2.2184	3.3445	mg/kg	66.3		20 - 145			2

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B161016-BS1	LCS	EPA-8015B/FFP	02/24/23	02/27/23 20:50	BUP	GC-2	0.984
2	B161414-BS1	LCS	EPA-8015B/FFP	03/03/23	03/07/23 14:31	BUP	GC-2	1.003

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Project Number: [none]
Project Manager: Scott English

Purgeable Aromatics and Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B161016	Used client sample: Y - Description: HA6-0.5, 02/07/2023 15:20											
TPH - Diesel (FFP)	MS	2303085-15	79.058	152.95	84.746	mg/kg		87.2		52 - 131		1
	MSD	2303085-15	79.058	155.96	84.175	mg/kg	1.9	91.4	30	52 - 131		2
Tetracosane (Surrogate)	MS	2303085-15	ND	3.3297	3.3898	mg/kg		98.2		20 - 145		1
	MSD	2303085-15	ND	3.1347	3.3670	mg/kg	6.0	93.1		20 - 145		2
QC Batch ID: B161414	Used client sample: Y - Description: HA2-3.0, 02/07/2023 09:55											
TPH - Diesel (FFP)	MS	2303085-04	12.771	61.855	83.056	mg/kg		59.1		52 - 131		3
	MSD	2303085-04	12.771	64.567	83.893	mg/kg	4.3	61.7	30	52 - 131		4
Tetracosane (Surrogate)	MS	2303085-04	ND	2.1942	3.3223	mg/kg		66.0		20 - 145		3
	MSD	2303085-04	ND	2.3139	3.3557	mg/kg	5.3	69.0		20 - 145		4

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B161016-MS1	MS	EPA-8015B/FFP	02/24/23	02/27/23 21:14	BUP	GC-2	5.085
2	B161016-MSD1	MSD	EPA-8015B/FFP	02/24/23	02/27/23 21:37	BUP	GC-2	5.051
3	B161414-MS1	MS	EPA-8015B/FFP	03/03/23	03/07/23 15:17	BUP	GC-2	0.997
4	B161414-MSD1	MSD	EPA-8015B/FFP	03/03/23	03/07/23 15:40	BUP	GC-2	1.007

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Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B160385							
TPH - Gasoline	B160385-BLK1	ND	mg/kg	20	5.0		1
TPH - Diesel (FFP)	B160385-BLK1	ND	mg/kg	10	2.2		1
TPH - Motor Oil	B160385-BLK1	ND	mg/kg	20	7.0		1
Tetracosane (Surrogate)	**B160385-BLK1**	**119**	%	**40 - 130 (LCL - UCL)**			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B160385-BLK1	PB	EPA-8015B/FFP	02/17/23	02/20/23 19:34	BUP	GC-2	1

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Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals	Run #
QC Batch ID: B160385											
TPH - Diesel (FFP)	B160385-BS1	LCS	80.473	83.333	mg/kg	96.6		64 - 124			1
Tetracosane (Surrogate)	B160385-BS1	LCS	3.5392	3.3333	mg/kg	106		40 - 130			1

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B160385-BS1	LCS	EPA-8015B/FFP	02/17/23	02/20/23 15:45	BUP	GC-2	1

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Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B160385	Used client sample: Y - Description: HA1-0.5, 02/07/2023 08:45											
TPH - Diesel (FFP)	MS	2303085-01	ND	71.455	82.508	mg/kg		86.6		52 - 131		1
	MSD	2303085-01	ND	79.441	83.893	mg/kg	10.6	94.7	30	52 - 131		2
Tetracosane (Surrogate)	MS	2303085-01	ND	3.4165	3.3003	mg/kg		104		40 - 130		1
	MSD	2303085-01	ND	3.5852	3.3557	mg/kg	4.8	107		40 - 130		2

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B160385-MS1	MS	EPA-8015B/FFP	02/17/23	02/20/23 16:31	BUP	GC-2	0.990
2	B160385-MSD1	MSD	EPA-8015B/FFP	02/17/23	02/20/23 16:54	BUP	GC-2	1.007

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Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals	Run #
QC Batch ID: B159719							
Antimony	B159719-BLK1	ND	mg/kg	5.0	0.33		1
Arsenic	B159719-BLK1	ND	mg/kg	1.0	0.40		1
Barium	B159719-BLK1	ND	mg/kg	0.50	0.18		1
Beryllium	B159719-BLK1	ND	mg/kg	0.50	0.047		1
Cadmium	B159719-BLK1	ND	mg/kg	0.50	0.052		1
Chromium	**B159719-BLK1**	**0.16022**	**mg/kg**	**0.50**	**0.050**	**J**	1
Cobalt	B159719-BLK1	ND	mg/kg	2.5	0.098		1
Copper	B159719-BLK1	ND	mg/kg	1.0	0.050		1
Lead	B159719-BLK1	ND	mg/kg	2.5	0.41		1
Molybdenum	B159719-BLK1	ND	mg/kg	2.5	0.050		1
Nickel	**B159719-BLK1**	**0.18109**	**mg/kg**	**0.50**	**0.15**	**J**	1
Selenium	B159719-BLK1	ND	mg/kg	1.0	0.98		1
Silver	**B159719-BLK1**	**0.080983**	**mg/kg**	**0.50**	**0.067**	**J**	1
Thallium	B159719-BLK1	ND	mg/kg	5.0	0.64		1
Vanadium	B159719-BLK1	ND	mg/kg	0.50	0.11		1
Zinc	**B159719-BLK2**	**2.1173**	**mg/kg**	**2.5**	**0.087**	**J**	2
QC Batch ID: B159900							
Mercury	B159900-BLK1	ND	mg/kg	0.16	0.016		3
QC Batch ID: B160214							
Mercury	**B160214-BLK1**	**0.040800**	**mg/kg**	**0.16**	**0.016**	**J**	4
QC Batch ID: B160988							
Mercury	B160988-BLK1	ND	mg/kg	0.16	0.016		5

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159719-BLK1	PB	EPA-6010B	02/13/23	02/14/23 19:56	DVS	PE-OP3	1
2	B159719-BLK2	PB	EPA-6010B	02/13/23	02/16/23 16:49	DVS	PE-OP3	1
3	B159900-BLK1	PB	EPA-7471A	02/15/23	02/15/23 13:07	TMT	CETAC3	1
4	B160214-BLK1	PB	EPA-7471A	02/20/23	02/20/23 13:41	TMT	CETAC3	1
5	B160988-BLK1	PB	EPA-7471A	03/01/23	03/01/23 12:36	TMT	CETAC3	1

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Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals	Run #
QC Batch ID: B159719											
Antimony	B159719-BS1	LCS	102.64	100.00	mg/kg	103		75 - 125			1
Arsenic	B159719-BS1	LCS	17.665	20.000	mg/kg	88.3		75 - 125			1
Barium	B159719-BS1	LCS	102.53	100.00	mg/kg	103		75 - 125			1
Beryllium	B159719-BS1	LCS	9.7915	10.000	mg/kg	97.9		75 - 125			1
Cadmium	B159719-BS1	LCS	9.8723	10.000	mg/kg	98.7		75 - 125			1
Chromium	B159719-BS1	LCS	97.014	100.00	mg/kg	97.0		75 - 125			1
Cobalt	B159719-BS1	LCS	99.330	100.00	mg/kg	99.3		75 - 125			1
Copper	B159719-BS1	LCS	95.534	100.00	mg/kg	95.5		75 - 125			1
Lead	B159719-BS1	LCS	103.76	100.00	mg/kg	104		75 - 125			1
Molybdenum	B159719-BS1	LCS	103.40	100.00	mg/kg	103		75 - 125			1
Nickel	B159719-BS1	LCS	103.79	100.00	mg/kg	104		75 - 125			1
Selenium	B159719-BS1	LCS	18.751	20.000	mg/kg	93.8		75 - 125			1
Silver	B159719-BS1	LCS	8.6440	10.000	mg/kg	86.4		75 - 125			1
Thallium	B159719-BS1	LCS	112.89	100.00	mg/kg	113		75 - 125			1
Vanadium	B159719-BS1	LCS	96.100	100.00	mg/kg	96.1		75 - 125			1
Zinc	B159719-BS2	LCS	99.398	100.00	mg/kg	99.4		75 - 125			2
QC Batch ID: B159900											
Mercury	B159900-BS1	LCS	0.69920	0.80000	mg/kg	87.4		80 - 120			3
QC Batch ID: B160214											
Mercury	B160214-BS1	LCS	0.71840	0.80000	mg/kg	89.8		80 - 120			4
QC Batch ID: B160988											
Mercury	B160988-BS1	LCS	0.84320	0.80000	mg/kg	105		80 - 120			5

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159719-BS1	LCS	EPA-6010B	02/13/23	02/14/23 19:57	DVS	PE-OP3	1
2	B159719-BS2	LCS	EPA-6010B	02/13/23	02/16/23 16:50	DVS	PE-OP3	1
3	B159900-BS1	LCS	EPA-7471A	02/15/23	02/15/23 13:10	TMT	CETAC3	1
4	B160214-BS1	LCS	EPA-7471A	02/20/23	02/20/23 14:39	TMT	CETAC3	1
5	B160988-BS1	LCS	EPA-7471A	03/01/23	03/01/23 12:43	TMT	CETAC3	1

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Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B159719	Used client sample: Y - Description: HA7-0.5, 02/07/2023 14:50											
Antimony	DUP	2303085-13	ND	ND		mg/kg			20			1
	MS	2303085-13	ND	32.405	100.00	mg/kg		32.4		16 - 119		2
	MSD	2303085-13	ND	32.408	100.00	mg/kg	0.0	32.4	20	16 - 119		3
Arsenic	DUP	2303085-13	3.7195	4.2170		mg/kg	12.5		20			1
	MS	2303085-13	3.7195	19.838	20.000	mg/kg		80.6		75 - 125		2
	MSD	2303085-13	3.7195	19.867	20.000	mg/kg	0.1	80.7	20	75 - 125		3
Barium	DUP	2303085-13	91.767	90.676		mg/kg	1.2		20			1
	MS	2303085-13	91.767	169.51	100.00	mg/kg		77.7		75 - 125		2
	MSD	2303085-13	91.767	170.55	100.00	mg/kg	0.6	78.8	20	75 - 125		3
Beryllium	DUP	2303085-13	0.18091	0.18612		mg/kg	2.8		20		J	1
	MS	2303085-13	0.18091	8.9113	10.000	mg/kg		87.3		75 - 125		2
	MSD	2303085-13	0.18091	8.8787	10.000	mg/kg	0.4	87.0	20	75 - 125		3
Cadmium	DUP	2303085-13	0.57226	0.57818		mg/kg	1.0		20			1
	MS	2303085-13	0.57226	9.4215	10.000	mg/kg		88.5		75 - 125		2
	MSD	2303085-13	0.57226	9.3154	10.000	mg/kg	1.1	87.4	20	75 - 125		3
Chromium	DUP	2303085-13	14.486	15.183		mg/kg	4.7		20			1
	MS	2303085-13	14.486	101.00	100.00	mg/kg		86.5		75 - 125		2
	MSD	2303085-13	14.486	102.49	100.00	mg/kg	1.5	88.0	20	75 - 125		3
Cobalt	DUP	2303085-13	3.3225	3.4685		mg/kg	4.3		20			1
	MS	2303085-13	3.3225	86.779	100.00	mg/kg		83.5		75 - 125		2
	MSD	2303085-13	3.3225	86.682	100.00	mg/kg	0.1	83.4	20	75 - 125		3
Copper	DUP	2303085-13	8.2574	7.9009		mg/kg	4.4		20			1
	MS	2303085-13	8.2574	95.537	100.00	mg/kg		87.3		75 - 125		2
	MSD	2303085-13	8.2574	94.781	100.00	mg/kg	0.8	86.5	20	75 - 125		3
Lead	DUP	2303085-13	5.7321	6.0809		mg/kg	5.9		20			1
	MS	2303085-13	5.7321	93.160	100.00	mg/kg		87.4		75 - 125		2
	MSD	2303085-13	5.7321	92.924	100.00	mg/kg	0.3	87.2	20	75 - 125		3
Molybdenum	DUP	2303085-13	0.68104	0.58888		mg/kg	14.5		20		J	1
	MS	2303085-13	0.68104	88.006	100.00	mg/kg		87.3		75 - 125		2
	MSD	2303085-13	0.68104	87.277	100.00	mg/kg	0.8	86.6	20	75 - 125		3
Nickel	DUP	2303085-13	16.864	17.233		mg/kg	2.2		20			1
	MS	2303085-13	16.864	103.23	100.00	mg/kg		86.4		75 - 125		2
	MSD	2303085-13	16.864	103.91	100.00	mg/kg	0.7	87.0	20	75 - 125		3
Selenium	DUP	2303085-13	ND	ND		mg/kg			20			1
	MS	2303085-13	ND	16.194	20.000	mg/kg		81.0		75 - 125		2
	MSD	2303085-13	ND	17.620	20.000	mg/kg	8.4	88.1	20	75 - 125		3
Silver	DUP	2303085-13	ND	ND		mg/kg			20			1
	MS	2303085-13	ND	7.8047	10.000	mg/kg		78.0		75 - 125		2
	MSD	2303085-13	ND	7.7867	10.000	mg/kg	0.2	77.9	20	75 - 125		3

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Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals	R#
QC Batch ID: B159719	Used client sample: Y - Description: HA7-0.5, 02/07/2023 14:50											
Thallium	DUP	2303085-13	ND	ND		mg/kg			20			1
	MS	2303085-13	ND	88.910	100.00	mg/kg		88.9		75 - 125		2
	MSD	2303085-13	ND	87.206	100.00	mg/kg	1.9	87.2	20	75 - 125		3
Vanadium	DUP	2303085-13	28.869	29.154		mg/kg	1.0		20			1
	MS	2303085-13	28.869	115.05	100.00	mg/kg		86.2		75 - 125		2
	MSD	2303085-13	28.869	116.40	100.00	mg/kg	1.2	87.5	20	75 - 125		3
Zinc	DUP	2303085-13	28.913	30.376		mg/kg	4.9		20			4
	MS	2303085-13	28.913	109.31	100.00	mg/kg		80.4		75 - 125		5
	MSD	2303085-13	28.913	110.92	100.00	mg/kg	1.5	82.0	20	75 - 125		6
QC Batch ID: B159900	Used client sample: N											
Mercury	DUP	**2303088-05**	**0.058548**	**0.047581**		**mg/kg**	**20.7**		**20**		**J,A02**	7
	MS	**2303088-05**	**0.058548**	**0.75323**	**0.80645**	**mg/kg**		**86.1**		**80 - 120**		8
	MSD	**2303088-05**	**0.058548**	**0.75484**	**0.80645**	**mg/kg**	**0.2**	**86.3**	**20**	**80 - 120**		9
QC Batch ID: B160214	Used client sample: N											
Mercury	DUP	2303099-01	0.082222	0.090952		mg/kg	10.1		20		J	10
	MS	2303099-01	0.082222	0.84286	0.79365	mg/kg		95.8		80 - 120		11
	MSD	2303099-01	0.082222	0.90476	0.79365	mg/kg	7.1	104	20	80 - 120		12
QC Batch ID: B160988	Used client sample: N											
Mercury	DUP	2303382-10	ND	ND		mg/kg			20			13
	MS	2303382-10	ND	0.82381	0.79365	mg/kg		104		80 - 120		14
	MSD	2303382-10	ND	0.79841	0.79365	mg/kg	3.1	101	20	80 - 120		15

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Total Concentrations (TTLC)

Quality Control Report - Precision & Accuracy

Run #	QC Sample ID	QC Type	Method	Prep Date	Run Date Time	Analyst	Instrument	Dilution
1	B159719-DUP1	DUP	EPA-6010B	02/13/23	02/14/23 20:00	DVS	PE-OP3	1
2	B159719-MS1	MS	EPA-6010B	02/13/23	02/14/23 20:04	DVS	PE-OP3	1
3	B159719-MSD1	MSD	EPA-6010B	02/13/23	02/14/23 20:05	DVS	PE-OP3	1
4	B159719-DUP2	DUP	EPA-6010B	02/13/23	02/16/23 16:53	DVS	PE-OP3	1
5	B159719-MS2	MS	EPA-6010B	02/13/23	02/16/23 16:57	DVS	PE-OP3	1
6	B159719-MSD2	MSD	EPA-6010B	02/13/23	02/16/23 16:58	DVS	PE-OP3	1
7	B159900-DUP1	DUP	EPA-7471A	02/15/23	02/15/23 13:14	TMT	CETAC3	1.008
8	B159900-MS1	MS	EPA-7471A	02/15/23	02/15/23 13:22	TMT	CETAC3	1.008
9	B159900-MSD1	MSD	EPA-7471A	02/15/23	02/15/23 13:26	TMT	CETAC3	1.008
10	B160214-DUP1	DUP	EPA-7471A	02/20/23	02/20/23 13:49	TMT	CETAC3	0.992
11	B160214-MS1	MS	EPA-7471A	02/20/23	02/20/23 13:59	TMT	CETAC3	0.992
12	B160214-MSD1	MSD	EPA-7471A	02/20/23	02/20/23 13:55	TMT	CETAC3	0.992
13	B160988-DUP1	DUP	EPA-7471A	03/01/23	03/01/23 12:47	TMT	CETAC3	0.992
14	B160988-MS1	MS	EPA-7471A	03/01/23	03/01/23 12:55	TMT	CETAC3	0.992
15	B160988-MSD1	MSD	EPA-7471A	03/01/23	03/01/23 12:57	TMT	CETAC3	0.992

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Rincon Consultants-Ventura
180 North Ashwood Avenue
Ventura, CA 93003

Reported: 03/15/2023 16:41
Project: 22-13765
Project Number: [none]
Project Manager: Scott English

Notes And Definitions

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected
PQL	Practical Quantitation Limit
A02	The difference between duplicate readings is less than the quantitation limit.
A10	Detection and quantitation limits were raised due to matrix interference.
A17	Surrogate not reportable due to sample dilution.
A52	Chromatogram not typical of diesel.
A57	Chromatogram not typical of motor oil.
Q02	Matrix spike precision is not within the control limits.
Q03	Matrix spike recovery(s) was(were) not within the control limits.
S05	The sample holding time was exceeded.
S08	The internal standard on the sample was not within the control limits.
S09	The surrogate recovery for this compound was not within the control limits.
Z1	IS low due to matrix interference. Interference verified through second analysis.

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Appendix F

Preliminary Drainage Report

Preliminary Drainage Report

December 2022

PREPARED BY:

KPFF Consulting Engineers

700 South Flower Street, Suite 2100

Los Angeles, CA 90017

P: 213.418.0201

Contents

A. Project Scope

B. Existing Drainage Characteristics

C. Proposed Drainage Characteristics

D. Finished Floor & Flood Zone

EXHIBIT 1

EXHIBIT 2

EXHIBIT 3

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

A. Project Scope

The proposed development will be a new aquatics center and recreation facility for the City of Oxnard. Site development will include a 1-story building, a competition pool, training pool, fun water pool, surface parking lot and various site improvements.

B. Existing Drainage Characteristics

In the existing condition, the site is generally undeveloped but there is evidence of the site being used as a dumping ground for soil, mulch and debris. The site is generally flat but ultimately drains to the west into the road. The road drains to the north and the south which are routed to a catch basin that was installed as part of the previous College Park project improvements, see Exhibit 2 – Existing Conditions. In addition, make ready utilities appear to have been installed and stubbed for our site which include storm drain, sewer and water utilities.

C. Proposed Drainage Characteristics

In the proposed condition, the site will be broken up into four drainage areas, see Exhibit 1 - Storm Water Treatment Plan. Each drainage area will be routed to a biofiltration planter that has been sized based on the drainage area size as outlined in the Ventura County Hydrology Manual, see Appendix C – BMP Calculations. We understand that the project site plan and project limits is undergoing changes and the BMP calculations may need to be updated as the site plan design progresses.

In addition, the peak flow rate for each drainage area has been calculated, see Table 4 in Appendix A – Calculation Summary Sheet. The total peak flow rate for the site was found to be 7.7 cubic-feet/second (cfs). Based on the College Park as-built drawings it appears the existing 24” storm drain point of connection that was installed for the Aquatic Center project has an available capacity of 8.3 cubic-feet/second (cfs). Therefore, it appears the existing storm drain line would have the capacity to serve the Aquatic Center project.

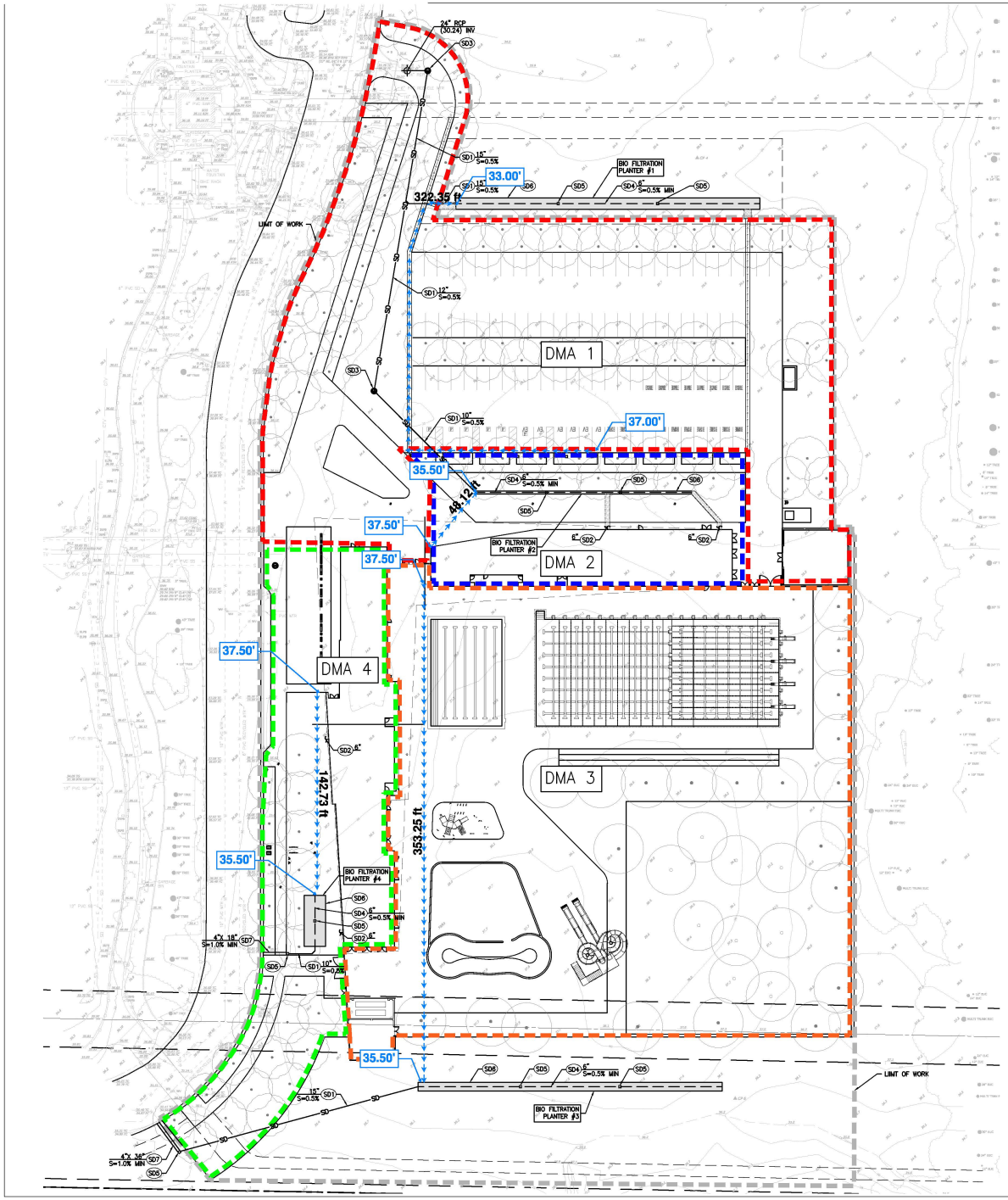
D. Finished Floor & Flood Zone

Based on the FEMA Flood Map the site does not appear to be within a flood zone, see flood map in Appendix C. The finished floor has been set as 37.50 feet, which is approximately 12 inches higher than the high point in the street. The goal is to minimize off-haul from the site and obtain adequate drainage to the proposed biofiltration planters.

EXHIBIT 1

Storm Water Treatment Plan

STORM WATER TREATMENT PLAN



UTILITY CONSTRUCTION NOTES:

STORM DRAIN

- SD1 DUAL WALL HDPE STORM DRAIN PIPE PER DETAIL 1, SHEET C5.00. SIZE AND SLOPE PER PLAN.
- SD2 POINT OF CONNECTION 5 FEET FROM BUILDING FACE. SEE PLUMBING DRAWINGS FOR CONTINUATION.
- SD3 PRECAST CONCRETE MANHOLE.
- SD4 PERFORATED PIPE. PER DETAIL 6, SHEET C5.00 SIZE AND SLOPE PER PLAN.
- SD5 PRECAST CONCRETE CATCH BASIN. JENSEN PRECAST PRODUCTS OR APPROVED EQUIVALENT. SIZE AND GRATE BEARING TYPE PER PLAN.
- SD6 BIOFILTRATION PLANTER. PER DETAIL 6, SHEET C5.00.
- SD7 CURB DRAIN. SIZE AND SLOPE PER PLAN.

LEGEND:

- LIMIT OF WORK
- PROPERTY LINE
- SS SANITARY SEWER
- W WATER
- DW DOMESTIC WATER
- FW FIRE WATER
- SD STORM DRAIN
- G GAS
- E ELECTRIC
- T TELEPHONE
- PERFORATED PIPE
- POINT OF CONNECTION
- COORDINATION POINT
- CAP OR PLUG
- UTILITY MANHOLE
- UTILITY CLEANOUT
- STORM DRAIN INLET
- AREA DRAIN/PLANTER DRAIN
- TRENCH DRAIN
- FIRE HYDRANT
- THRUST BLOCK
- FIRE DEPARTMENT CONNECTION (FDC)
- POST INDICATOR VALVE (PIV)
- WATER VALVE
- BACKFLOW ASSEMBLY
- UTILITY METER VAULT

STORM WATER TREATMENT CALCULATIONS

DRAINAGE MANAGEMENT AREAS (DMA)	TOTAL AREA (SF)	PERVIOUS AREA (SF)	PERCENT IMPERVIOUS	REQUIRED TREATMENT AREA (SF)	TREATMENT AREA PROVIDED (SF)
1	87,270	28,030	68%	1,710	1,712
2	21,271	8,835	58%	304	304
3	78,611	29,834	62%	1,280	1,284
4	35,170	14,480	59%	521	528

N

0 15' 30'

SCALE: 1"=30'

els architecture+ urban design

PROJECT:
SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK
OXNARD, CA

PROJECT NUMBER: 202210

CLIENT:
CITY OF OXNARD PUBLIC WORKS
305 WEST THIRD ST., 2ND FLOOR EAST, OXNARD, CA 93030

PROJECT TEAM:

ARCHITECT:
ELS ARCHITECTURE AND URBAN DESIGN
2040 Addison Street
Berkeley, CA 94704
P: 510.549.2929

CIVIL ENGINEER:
KPFF
700 South Flower Street Suite 2100
Los Angeles, CA 90017
P: 213-418-0201

LANDSCAPE ARCHITECT:
SWA GROUP
2200 Bridgeway
Sausalito, CA 94965-1750
P: 415-332-5100

STRUCTURAL ENGINEER:
JOHN A. MARTIN & ASSOCIATES
*901 Harrison St., Suite 1570
Oakland, CA 94612
P: 510-900-1923
350 South Grand Ave., 4th Floor
Los Angeles, CA 90013
P: 213-483-9490

MECHANICAL, ELECTRICAL, & PLUMBING ENGINEER:
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San Francisco, CA 94111
P: 415-665-4000

LOW VOLTAGE:
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FIRE AND LIFE SAFETY CONSULTANT:
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AQUATICS:
AQUATIC DESIGN GROUP
2228 Faraday Avenue
Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
49 Geary St., Suite 230
San Francisco, CA 94108
P: 415 546-6033

REVISION:

NUMBER	DATE	DESCRIPTION

KEY PLAN:

ISSUE: SCHEMATIC DESIGN

DATE: NOVEMBER 4, 2022

STAMP:

NOT FOR CONSTRUCTION

APPROVED:

CITY ENGINEER, TATIANA B. ARNAOUT R.C.E. 86195 EXP. 03-31-24 DATE

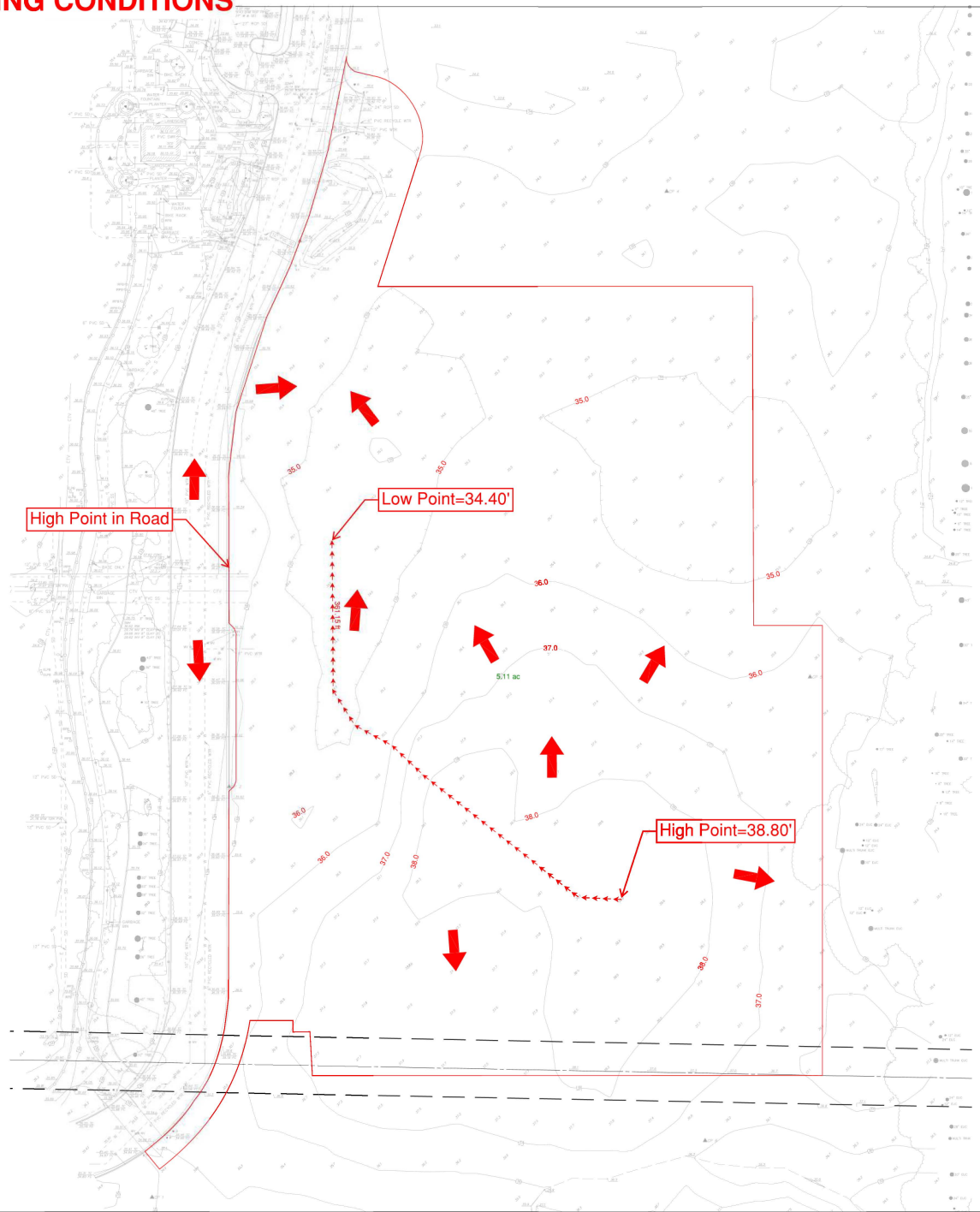
SHEET TITLE: STORM WATER TREATMENT PLAN

SHEET NUMBER: **C1.41**

EXHIBIT 2

Existing Conditions

EXISTING CONDITIONS



N

0 15' 30'

SCALE: 1"=30'

els
architecture+
urban design

PROJECT:

SOUTH OXNARD AQUATICS CENTER

COLLEGE PARK

OXNARD, CA

PROJECT NUMBER:

202210

CLIENT:

CITY OF OXNARD
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Carlsbad, CA 92008

SPECIFICATIONS:
TOPFLIGHT SPECS
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San Francisco, CA 94108
P: 415 546-8033

REVISION

NUMBER	DATE	DESCRIPTION

ISSUE:

SCHEMATIC DESIGN

DATE:

NOVEMBER 4, 2022

STAMP:

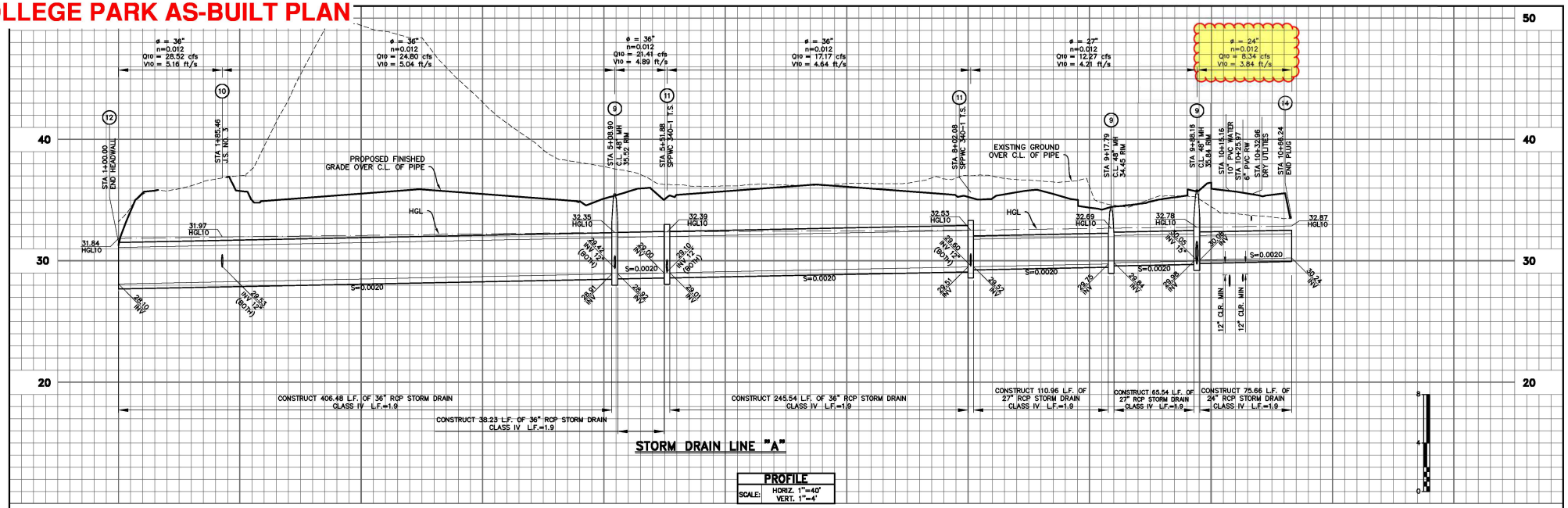
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SHEET NUMBER:

EXHIBIT 3

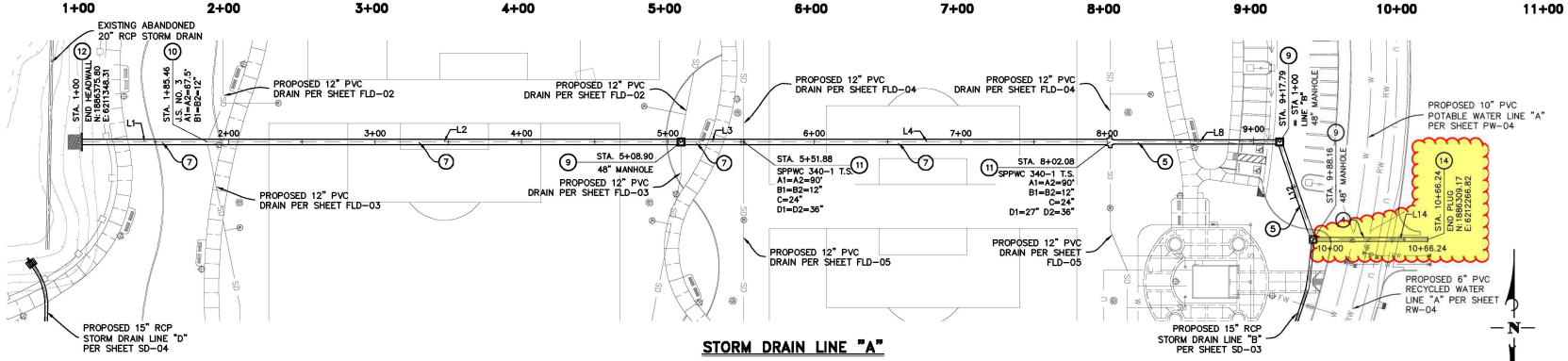
As-Built Reference Document

COLLEGE PARK AS-BUILT PLAN



STORM DRAIN LINE "A"

PROFILE
SCALE: HORIZ. 1"=40' VERT. 1"=4'



STORM DRAIN LINE "A"

SCALE: 1"=40'

STORM DRAIN CONSTRUCTION NOTES

4. CONSTRUCT 24" RCP STORM DRAIN PER CITY OF OXNARD STANDARD PLATE 529 AND 602.
5. CONSTRUCT 27" RCP STORM DRAIN PER CITY OF OXNARD STANDARD PLATE 529 AND 602.
7. CONSTRUCT 36" RCP STORM DRAIN PER CITY OF OXNARD STANDARD PLATE 529 AND 602.
9. CONSTRUCT MANHOLE NO. 1 PER CITY OF OXNARD STANDARD PLATE 513 AND 517.
10. CONSTRUCT JUNCTION STRUCTURE NO. 3 PER CITY OF OXNARD STANDARD PLATE 522, CASE 1.
11. CONSTRUCT TRANSITION STRUCTURE PER SPPWC 340-1.
12. CONSTRUCT STRAIGHT SINGLE HEAD WALL PER CALTRANS STANDARD PLAN D89 AND DETAIL "J", SHEET PG-14.
14. PLUG STORM DRAIN LINE FOR FUTURE EXPANSION.

LINE TABLE

LINE	BEARING	DISTANCE
L1	N90°00'00"E	85.46
L2	N90°00'00"E	323.44
L3	N90°00'00"E	42.98
L4	N90°00'00"E	250.20
L8	N90°00'00"E	115.71
L12	S18°46'01"E	70.37
L14	N90°00'00"E	78.07

Penfield & Smith
Engineering · Surveying · Planning · Construction Management
1327 Del Norte Road, Suite 200, Camarillo, CA 93010
Phone: (805) 981-0706 Fax: (805) 981-0251
SALVADOR CONTRERAS DATE: 07/29/2010
PROJECT ENGINEER
R.C.E. 66720

W.O. 17044.02 17044.02_STORM.dwg

REGISTERED PROFESSIONAL ENGINEER SALVADOR CONTRERAS, JR. NO 66720 CIVIL STATE OF CALIFORNIA

REVISIONS			
MARK	DATE	DESCRIPTION	BY

REVIEWED BY: DATE DATE

GS 09-11
GENERAL SERVICES DIVISION
COLLEGE PARK PHASE 1C IMPROVEMENTS PROJECT
STORM DRAIN PLAN & PROFILE
LINE "A" STA 1+00 TO STA 10+66.24
APPROVED: General Services Superintendent, Michael Henderson 07/29/2010 Date
SCALE: HORIZ. 1" = 40' VERT. 1" = 4'
DRAWN BY: GJM CHECKED BY: SC
SHEET NO. 21 OF 117
DRAWING NUMBER 09-30A
NP 09-06
REF NO. SD-02

PLOT SCALE:1:79.86 PLOT DATE:8/3/2010 10:02:58 AM PLOT BY:Gregory Musser SAVE DATE: 6/10/2010 1:54:17 PM 36-PP1

DRAWING:n:\acad\work\17044\17044\17044\phase 1c\civil\storm drain\17044.02_storm.dwg

APPENDIX A

Calculation Summary Sheet

kpff
700 South Flower Street
Suite 2100
Los Angeles, CA 90017
O: 213.418.0201
F: 213.266.5294
www.kpff.com

PROJECT **Oxnard AC**		BY **JH**	SHEET NO.
LOCATION **College Park**		DATE **11/9/22**	
CLIENT **ELS**		JOB NUMBER **2101010**	
CALCULATION SUMMARY SHEET			

TABLE 1: STORMWATER CALCULATION SUMMARY TABLE

STORM WATER TREATMENT CALCULATIONS					
DRAINAGE MANAGEMENT AREAS (DMA)	TOTAL AREA (SF)	PERVIOUS AREA (SF)	PERCENT IMPERVIOUS	REQUIRED TREATMENT AREA (SF)	TREATMENT AREA PROVIDED(SF)
1	87,270	28,030	68%	1,710	1,712
2	21,271	8,835	58%	304	304
3	78,611	29,834	62%	1,280	1,284
4	35,170	14,480	59%	521	528
TOTAL	222,322	81,179	63%	-	-
TOTAL (EC)	222,322	222,322	100%	-	-

TABLE 2: WEIGHTED CURVE NUMBER (CN) CALCULATION

DMA	Landuse	Area	CN	Weighted CN (Wtd. CN)
DMA 1	Parking Lot	59,240	98	91
	Open Space/Lawn	28,030	76	
DMA 2	Roof/Hardscape	124,365	98	97
	Open Space/Lawn	8,835	76	
DMA 3	Public Facility	48,777	86	82
	Open Space/Lawn	29,834	76	
DMA 4	Roof/Hardscape	20,690	98	89
	Open Space/Lawn	14,480	76	
TOTAL	Parking Lot	59,240	98	91
	Open Space/Lawn	81,179	76	
	Roof/Hardscape	145,055	98	
	Public Facility	48,777	86	
TOTAL (EC)	Open Space/Lawn	222,232	76	76

TABLE 3: CURVE NUMBER (CN) YIELD CALCULATION

	DMA 1	DMA 2	DMA 3	DMA 4	TOTAL	TOTAL (EC)
10-yr 24-hr Prepcip. P (in)	4	4	4	4	4	4
Wtd CN:	91	97	82	89	91	76
Potential Abstraction S = (1000/CN)-10:	1.0	0.4	2.2	1.2	1.0	3.2
Initial Abstraction Ia=0.2S:	0.20	0.07	0.43	0.25	0.20	0.63
Yield = ((P-0.2S)^2)/(P+0.8S):	3.01	3.60	2.22	2.82	3.01	1.74

TABLE 4: TIME OF CONCENTRATION & 10 YR PEAK FLOW RATE

DMA	Time of Concentration (Tc)	10 year Peak Flow (Q10)
DMA 1	13.2 min	3.1 cfs
DMA 2	1.8 min	1.2 cfs
DMA 3	14.5 min	4.5 cfs
DMA 4	5.8 min	2.0 cfs
TOTAL	13.2 min	7.7 cfs
TOTAL (EC)	14.7 min	6.2 cfs

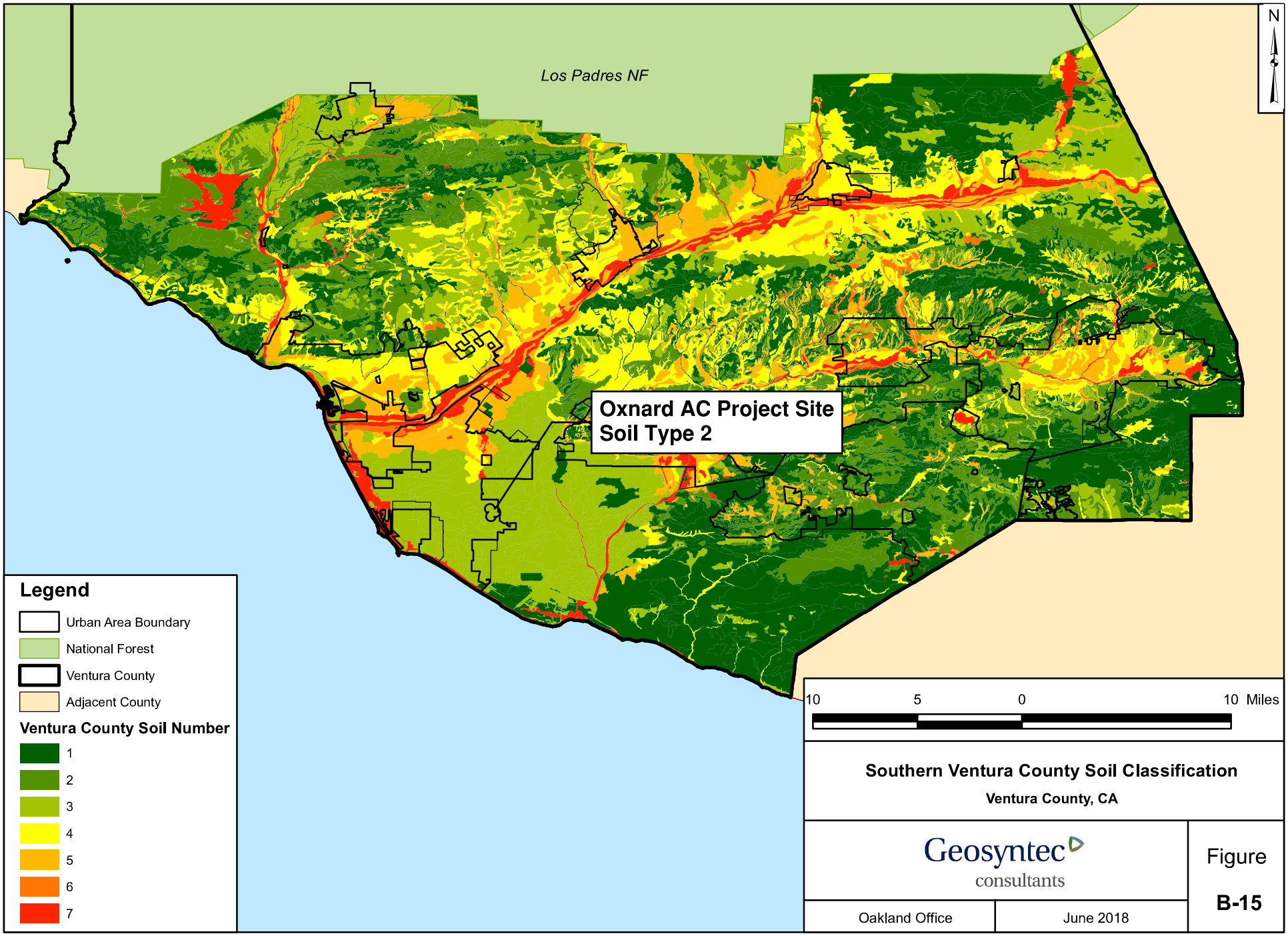
APPENDIX B

Site Specific Information

EXHIBIT 14B. AMC II NRCS CURVE NUMBERS FOR DEVELOPED LAND

DEVELOPED LAND USE	Condition (1)	% IMPERVIOUS		HYDROLOGIC SOIL GROUP (5)						
		EFFEC-TIVE	AVER-AGE	A		B		C		D
				7	6	5	4	3	2	1
Open Spaces, Lawns, Parks, Golf Courses, Cemeteries, etc.	Good	0	0	29	52	57	64	71	76	80
"	Fair	0	0	42	61	65	71	77	81	84
Residential 1 ac. Lot	-	10	20	45	62	66	71	76	80	84
Residential 1/2 ac. Lot	-	13	25	45	65	68	73	78	81	85
Residential 1/3 ac. Lot	-	15	30	48	67	70	75	79	82	86
Residential 1/4 ac. Lot	-	19	38	53	70	73	77	81	84	87
Residential 1/5 ac. Lot	-	23	47	59	74	77	80	84	86	89
Residential 1/6 ac. Lot	-	28	56	66	79	81	84	86	88	90
Residential 1/8 ac. Lot	-	32	65	72	83	84	87	89	90	92
Residential - Condos	-	37	69	74	84	86	88	90	92	93
Industrial Unpaved Yards, etc.	-	36	72	77	86	87	89	91	92	93
Commercial & Business	-	50	85	88	90	91	93	93	95	95
Industrial Parks, Paved Parking, etc.	-	70	93	93	94	95	96	96	97	97
Parking Lots, Roofs, Driveways, Paved Streets with Curbs & Drains	-	90	100	98	98	98	98	98	98	98
Public Facilities & Institutions; Includes Schools, Government CenterS, Military Bases, etc. (2)	-	23	47	59	74	77	80	84	86	89
Transportation and utilities (3)	-	70	93	79	87	88	90	91	92	93
Newly graded/under construction - No veg.	-	0	0	71	83	85	88	90	92	94
Paved Streets with open ditches including right-of-way (3)	-	70	93	79	87	88	90	91	92	93
Gravel streets including right-of-way	-	0	0	71	82	84	86	88	90	91
Dirt street including right-of-way	-	0	0	66	79	81	83	86	88	89
Natural desert landscaping- native vegetation	-	0	0	55	72	75	79	83	86	88
Farmsteads- buildings, lanes, driveways, and surrounding lots (2)	-	23	47	51	69	72	76	80	83	86
Agriculture- Straight Row + Crop Residue Cover on >5% of surface	Good	0	0	57	72	74	77	80	83	85
Agriculture- Straight Row + Crop Residue Cover on <5% of surface	Poor	0	0	64	78	80	83	86	88	90

SOIL TYPE

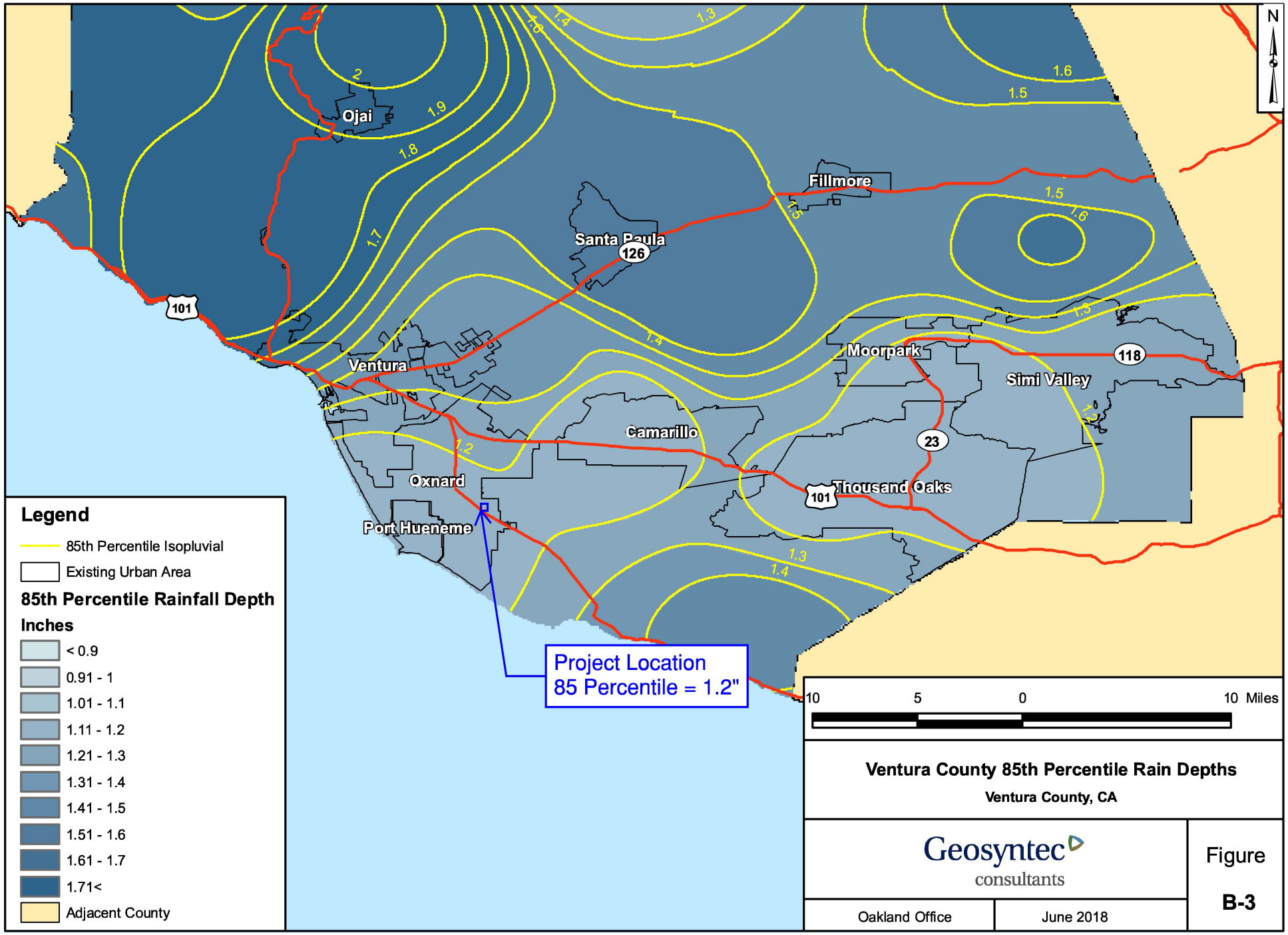


P:\GIS\Ventura_County_Manual\Projects\B-14_Ventura_Soils_092310.mxd, WHL, September 23, 2010

10-YEAR PRECIPITATION

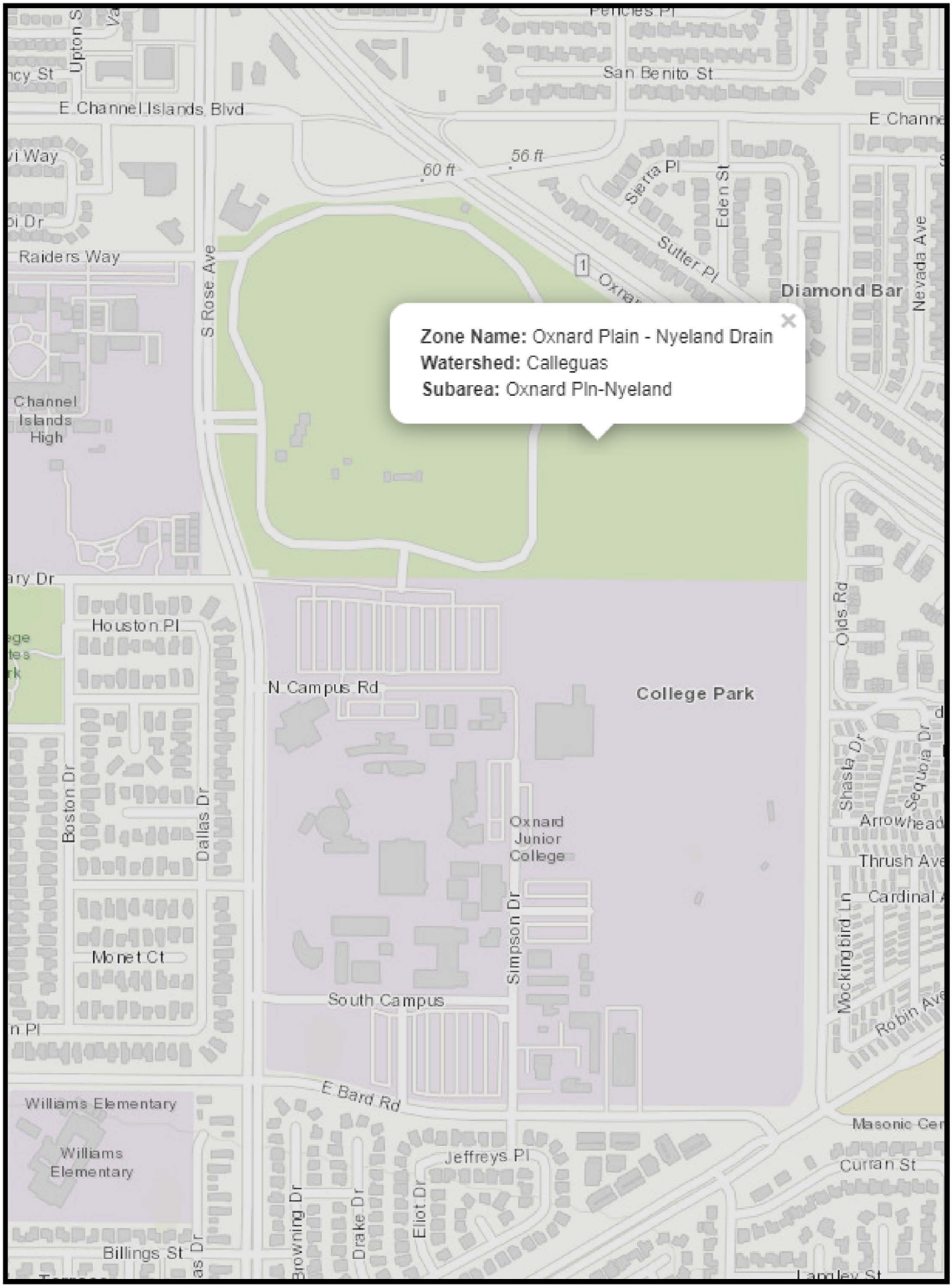


85th PERCENTILE



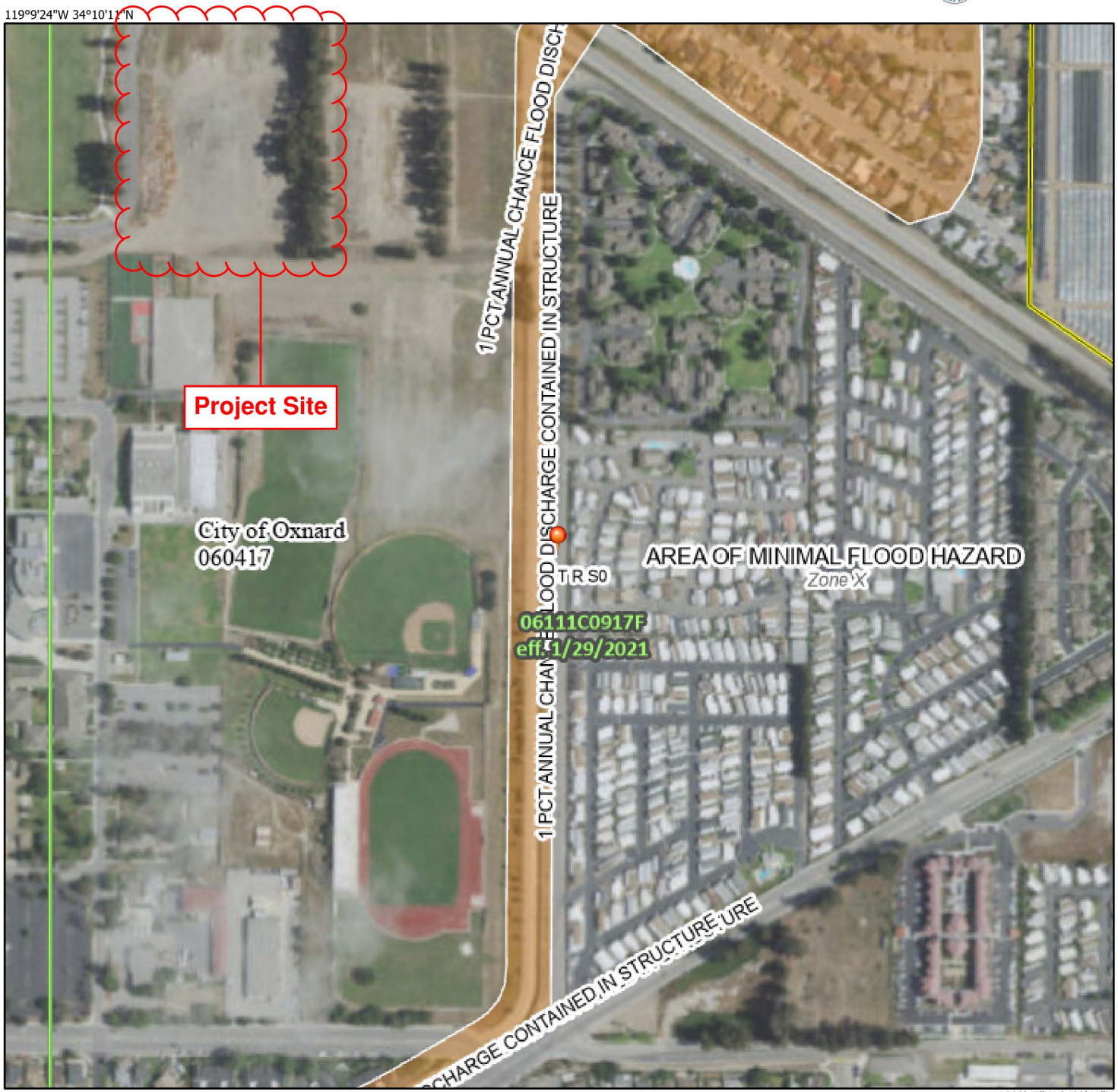
P:\GIS\Ventura_County_Manual\Projects\B-3_Ventura_County_85th_Isopluvials_092010.mxd, WHL, September 20, 2010

STORM ZONE


Zone Name: Oxnard Plain - Nyeland Drain
Watershed: Calleguas
Subarea: Oxnard Pln-Nyeland
San Benito St
E Channel Islands Blvd
60 ft
56 ft
Sierra Pl
Eden St
Sutter Pl
Diamond Bar
Nevada Ave
Raiders Way
S Rose Ave
Channel Islands High
Houston Pl
N Campus Rd
College Park
Olds Rd
Shasta Dr
Sequoia Dr
Arrowhead
Thrush Ave
Cardinal
Mockingbird Ln
Robin Ave
Boston Dr
Dallas Dr
Oxnard Junior College
Simpson Dr
Monet Ct
South Campus
E Bard Rd
Williams Elementary
Jeffreys Pl
Curran St
Masonic Cer
Browning Dr
Drake Dr
Eliot Dr
Billings St
Lanpley St

National Flood Hazard Layer FIRMette

FEMA



0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/8/2022 at 11:26 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX C

BMP Calculations

DMA 1

BMP: **VEG-1 Bioretention/** **VEG-2 Planter Box**

Ventura County Technical Guidance Manual Page E-42

STEP 1 **Determine Stormwater Quality Design Volume (SQDV)**

1-1	Enter Drainage Area, A (acre)	2.00
1-2	Enter Max. $\%_{allowable}$ (5-30%)	5.00
1-3	Determine $EIA_{allowable}$ (acre)	0.10
1-4	Enter Project Impervious Fraction, Imp	0.68
1-5	Determine Total Imp Area, TIA (acre)	1.36
1-6	Determine A_{retain} (acre)	1.26
1-7	Enter Soil Type (1-7)	5
	Determine C_P	0.05
1-8	Calculate Runoff Coefficient, C	0.66
1-9	Enter Design rainfall depth, P_i (in)	1.20
1-10	Calculate Design rainfall depth, P (ft)	0.10
1-11	Calculate SQDV (ft^3)	3633.43

STEP 2 **Determine the Design Percolation Rate**

2-1	Enter Design Saturated Hydraulic Conductivity of the Amended Filter Media, K_{design} (recommend 2.5 in/hr)	2.50

STEP 3 **Calculate the Surface Area**

3-1	Enter SQDV (ft^3)	3,633.43
3-2	Enter K_{design} (in/hr)	2.50
3-3	Enter Ponding Depth, d_p (1.5' for Bioretention, 1' for Planter Box)	1.50
3-4	Calculate Drawdown Time for the Ponded Water to Filter Thru Media, t_{pondig} (hr)	7.20
3-5	Enter Storm Duration for Routing Calculations, $T_{routing}$ (3 hrs)	3.00
3-6	Calculate $d_{filtered,1}$ (ft)	0.63
	Calculate $d_{filtered,2}$ (ft)	0.75
3-7	Determine Resultant Depth, $d_{filtered}$	0.63
3-8	Calculate Required Infiltrating Surface Area, A_{req} (ft^2)	1709.85

DMA 2

BMP: **VEG-1 Bioretention/** **VEG-2 Planter Box**

Ventura County Technical Guidance Manual Page E-42

STEP 1 **Determine Stormwater Quality Design Volume (SQDV)**

1-1	Enter Drainage Area, A (acre)	0.49
1-2	Enter Max. $\%_{allowable}$ (5-30%)	5.00
1-3	Determine $EIA_{allowable}$ (acre)	0.02
1-4	Enter Project Impervious Fraction, Imp	0.58
1-5	Determine Total Imp Area, TIA (acre)	0.28
1-6	Determine A_{retain} (acre)	0.26
1-7	Enter Soil Type (1-7)	5
	Determine C_P	0.05
1-8	Calculate Runoff Coefficient, C	0.57
1-9	Enter Design rainfall depth, P_i (in)	1.20
1-10	Calculate Design rainfall depth, P (ft)	0.10
1-11	Calculate SQDV (ft^3)	644.44

STEP 2 **Determine the Design Percolation Rate**

2-1	Enter Design Saturated Hydraulic Conductivity of the Amended Filter Media, K_{design} (recommend 2.5 in/hr)	2.50

STEP 3 **Calculate the Surface Area**

3-1	Enter SQDV (ft^3)	644.44
3-2	Enter K_{design} (in/hr)	2.50
3-3	Enter Ponding Depth, d_p (1.5' for Bioretention, 1' for Planter Box)	1.50
3-4	Calculate Drawdown Time for the Ponded Water to Filter Thru Media, t_{pondig} (hr)	7.20
3-5	Enter Storm Duration for Routing Calculations, $T_{routing}$ (3 hrs)	3.00
3-6	Calculate $d_{filtered,1}$ (ft)	0.63
	Calculate $d_{filtered,2}$ (ft)	0.75
3-7	Determine Resultant Depth, $d_{filtered}$	0.63
3-8	Calculate Required Infiltrating Surface Area, A_{req} (ft^2)	303.26

DMA 3

BMP: **VEG-1 Bioretention/** **VEG-2 Planter Box**

Ventura County Technical Guidance Manual Page E-42

STEP 1 **Determine Stormwater Quality Design Volume (SQDV)**

1-1	Enter Drainage Area, A (acre)	1.80
1-2	Enter Max. $\%_{allowable}$ (5-30%)	5.00
1-3	Determine $EIA_{allowable}$ (acre)	0.09
1-4	Enter Project Impervious Fraction, Imp	0.62
1-5	Determine Total Imp Area, TIA (acre)	1.12
1-6	Determine A_{retain} (acre)	1.03
1-7	Enter Soil Type (1-7)	5
	Determine C_P	0.05
1-8	Calculate Runoff Coefficient, C	0.61
1-9	Enter Design rainfall depth, P_i (in)	1.20
1-10	Calculate Design rainfall depth, P (ft)	0.10
1-11	Calculate SQDV (ft^3)	2717.31

STEP 2 **Determine the Design Percolation Rate**

2-1	Enter Design Saturated Hydraulic Conductivity of the Amended Filter Media, K_{design} (recommend 2.5 in/hr)	2.50

STEP 3 **Calculate the Surface Area**

3-1	Enter SQDV (ft^3)	2,717.31
3-2	Enter K_{design} (in/hr)	2.50
3-3	Enter Ponding Depth, d_p (1.5' for Bioretention, 1' for Planter Box)	1.50
3-4	Calculate Drawdown Time for the Ponded Water to Filter Thru Media, t_{pondig} (hr)	7.20
3-5	Enter Storm Duration for Routing Calculations, $T_{routing}$ (3 hrs)	3.00
3-6	Calculate $d_{filtered,1}$ (ft)	0.63
	Calculate $d_{filtered,2}$ (ft)	0.75
3-7	Determine Resultant Depth, $d_{filtered}$	0.63
3-8	Calculate Required Infiltrating Surface Area, A_{req} (ft^2)	1278.73

DMA 4

BMP: **VEG-1 Bioretention/** **VEG-2 Planter Box**

Ventura County Technical Guidance Manual Page E-42

STEP 1 **Determine Stormwater Quality Design Volume (SQDV)**

1-1	Enter Drainage Area, A (acre)	0.81
1-2	Enter Max. $\%_{allowable}$ (5-30%)	5.00
1-3	Determine $EIA_{allowable}$ (acre)	0.04
1-4	Enter Project Impervious Fraction, Imp	0.59
1-5	Determine Total Imp Area, TIA (acre)	0.48
1-6	Determine A_{retain} (acre)	0.44
1-7	Enter Soil Type (1-7)	5
	Determine C_P	0.05
1-8	Calculate Runoff Coefficient, C	0.58
1-9	Enter Design rainfall depth, P_i (in)	1.20
1-10	Calculate Design rainfall depth, P (ft)	0.10
1-11	Calculate SQDV (ft^3)	1106.99

STEP 2 **Determine the Design Percolation Rate**

2-1	Enter Design Saturated Hydraulic Conductivity of the Amended Filter Media, K_{design} (recommend 2.5 in/hr)	2.50

STEP 3 **Calculate the Surface Area**

3-1	Enter SQDV (ft^3)	1,106.99
3-2	Enter K_{design} (in/hr)	2.50
3-3	Enter Ponding Depth, d_p (1.5' for Bioretention, 1' for Planter Box)	1.50
3-4	Calculate Drawdown Time for the Ponded Water to Filter Thru Media, t_{pondig} (hr)	7.20
3-5	Enter Storm Duration for Routing Calculations, $T_{routing}$ (3 hrs)	3.00
3-6	Calculate $d_{filtered,1}$ (ft)	0.63
	Calculate $d_{filtered,2}$ (ft)	0.75
3-7	Determine Resultant Depth, $d_{filtered}$	0.63
3-8	Calculate Required Infiltrating Surface Area, A_{req} (ft^2)	520.94

APPENDIX D

Peak Flowrate Calculations

DMA 1

Tc Calculator Data Sheet V6.1

Project Name and Number: Oxnard AC

USER INPUT IN BLUE FIELDS:		
Subarea Name =	DMA 1	User Input
Watershed Area ac =	2.0	Calculated from flowpath data
% Imperviousness =	68	User Input
Land Use Description =	Public	DropMenu
Storm Frequency	10	DropMenu
Storm Zone =	Oxnard Pln-Nyeland	DropMenu
Zone ID =	Rev2_10	Calculated
District Soil Number (1-7) =	2	DropMenu- Rev for Revised C Coefficients
Tc for Intensity Calc min =	**13.00**	**Rounded, Use for Peak Flow Calc.**
Intensity in/hr =	1.726	Calculated
C_undeveloped =	0.732	Calculated
C_composite =	0.880	Calculated
Peak cfs =	3.06	Calculated
Calculated Tc=	**13.15**	**Calculated**

Instructions:

1. Set to manual calculations with File->Options->Formulas
2. Set max iterative calculations to 50
3. Enter required subarea and flowpath data in blue fields
4. Use site-specific topo or District 2005 LiDAR data for elevations
5. LiDAR and rain zone data at: http://vcwatershed.net/publicMaps/data
6. Clear any unnessary flowpath data from blue fields
7. Manually calculate with F9 or Formulas->Calculate Now
8. If error or comments appear, revise input data accordingly
9. Tc's in cells C12 and C17 should converge to the nearest minute.
10. Use result in C12 for peak flow calculation.
11. Print area is set for printing this page on one sheet.

FLOWPATH DATA- UPSTREAM TO DOWNSTREAM

Flowpath Number	Type- Selected with DropMenus	Type#	Flowpath Area ac	Upper Elev. Ft	Bott. Elev. Ft	Length ft	Map Slope ft/ft	Mtn Chan. Eff. Slope ft/ft	Diam/ Width ft	n value	Side-slope X; XH:1V	% Area	Q cfs	Cum. Q cfs
1	Overland-Developed	2	2.00	37	33	322	0.012					100.0%	3.1	3.1
2	None	0					#VALUE!	#VALUE!				0.0%	-	3.1
3	None	0										0.0%	-	3.1
4	None	0										0.0%	-	3.1
5	None	0										0.0%	-	3.1
6	None	0										0.0%	-	3.1
7	None	0										0.0%	-	3.1
8	None	0										0.0%	-	3.1
9	None	0										0.0%	-	3.1
10	None	0										0.0%	-	3.1
Sum			**2.0**									**100%**	**3.1**	

DMA 1

VCRat Single Subarea Hydrograph, Mitigation, and Detention Basin Routing Calculations

Project Information: Test Hydrograph, Ventura County

DEVELOPED CONDITION INPUT DATA		
Watershed Area ac =	2.00	User Input
Time of Concentration Tc min =	13.2	User Input
% Imperviousness =	68	User Input
Land Use Description =	Parking lot & AC	User Input
Storm Zone =	Oxnard Pln-Nyeland	Dropdown List
Storm Frequency =	10	Dropdown List
District Soil Number =	2	Dropdown List
NRCS Curve Number Yield in =	3.01	User Input
MITIGATION INPUT DATA		
Mitigation Level	10-yr Dev	User Input
Time of Concentration Tc min =	13	User Input
Storm Frequency =	10	Dropdown List
% Effective Imperviousness =	68	User Input
Land Use Description =		User Input
CALCULATION RESULTS		
Iteration Volume Difference cf =	0.000	
Dev. Subarea Outflow Peak cfs =	3.06	
FLOW THROUGH BASIN RESULTS		
Basin Inflow Peak cfs =	3.06	
Mitigated Hydrograph Peak cfs =	3.06	
Routed Hydrograph Peak cfs =	0.86	
Max Basin Storage af =	0.0142	
Max Basin Elevation ft =	0.71	
BYPASS BASIN RESULTS		
Inflow Hydrograph Peak cfs =	3.06	
Mitigation Hydrograph Peak cfs =	3.06	
Peak Flow into Bypass Basin cfs =	-	
Volume into Bypass Basin cf =	-	

INSTRUCTIONS

1. Under File-Options-Formulas
Check Iterative Calculations
200 iterations
0.001 tolerance
2. Input data in blue fields
3. Press F9 to manually
calculate the hydrology data
if Volume Difference in
B19 is not 0.
4. Choose rain zone at:
vcwatershed.net/publicMaps/data/

Flow-Through Basin Data

Elev. ft	Storage af	Disch. cfs
0.0	0.00	0.00
0.5	0.01	0.54
1.0	0.02	1.31
1.5	0.04	1.83
2.0	0.05	2.22
2.5	0.06	2.53
3.0	0.10	2.83
3.5	0.15	3.09
4.0	1.0	5.0

DMA 2

Tc Calculator Data Sheet V6.1

Project Name and Number: Oxnard AC

USER INPUT IN BLUE FIELDS:		
Subarea Name =	DMA 2	User Input
Watershed Area ac =	0.5	Calculated from flowpath data
% Imperviousness =	58	User Input
Land Use Description =	Public	DropMenu
Storm Frequency	10	DropMenu
Storm Zone =	Oxnard Pln-Nyeland	DropMenu
Zone ID =	Rev2_10	Calculated
District Soil Number (1-7) =	2	DropMenu- Rev for Revised C Coefficients
Tc for Intensity Calc min =	**15.00**	**Tc Outside of Range, Reset to 15**
Intensity in/hr =	1.608	Calculated
C_undeveloped =	0.720	Calculated
C_composite =	0.853	Calculated
Peak cfs =	0.68	Calculated
Calculated Tc=	**1.82**	**Tc Outside of Range, Revise Flowpaths**

Instructions:

1. Set to manual calculations with File->Options->Formulas
2. Set max iterative calculations to 50
3. Enter required subarea and flowpath data in blue fields
4. Use site-specific topo or District 2005 LiDAR data for elevations
5. LiDAR and rain zone data at: http://vcwatershed.net/publicMaps/data
6. Clear any unnessary flowpath data from blue fields
7. Manually calculate with F9 or Formulas->Calculate Now
8. If error or comments appear, revise input data accordingly
9. Tc's in cells C12 and C17 should converge to the nearest minute.
10. Use result in C12 for peak flow calculation.
11. Print area is set for printing this page on one sheet.

FLOWPATH DATA- UPSTREAM TO DOWNSTREAM

Flowpath Number	Type- Selected with DropMenus	Type#	Flowpath Area ac	Upper Elev. Ft	Bott. Elev. Ft	Length ft	Map Slope ft/ft	Mtn Chan. Eff. Slope ft/ft	Diam/ Width ft	n value	Side-slope X; XH:1V	% Area	Q cfs	Cum. Q cfs
1	Overland-Developed	2	0.49	37.5	35.5	50	0.040					100.0%	0.7	0.7
2	None	0					#VALUE!	#VALUE!				0.0%	-	0.7
3	None	0										0.0%	-	0.7
4	None	0										0.0%	-	0.7
5	None	0										0.0%	-	0.7
6	None	0										0.0%	-	0.7
7	None	0										0.0%	-	0.7
8	None	0										0.0%	-	0.7
9	None	0										0.0%	-	0.7
10	None	0										0.0%	-	0.7
Sum			**0.5**									**100%**	**0.7**	

DMA 2

VCRat Single Subarea Hydrograph, Mitigation, and Detention Basin Routing Calculations

Project Information: Test Hydrograph, Ventura County

DEVELOPED CONDITION INPUT DATA

Watershed Area ac =	0.49	User Input
Time of Concentration Tc min =	1.8	Tc outside of requi
% Imperviousness =	58	User Input
Land Use Description =	Parking lot & AC	User Input
Storm Zone =	Oxnard Pln-Nyeland	Dropdown List
Storm Frequency =	10	Dropdown List
District Soil Number =	2	Dropdown List
NRCS Curve Number Yield in =	3.6	User Input

MITIGATION INPUT DATA

Mitigation Level	10-yr Dev	User Input
Time of Concentration Tc min =	2	Tc outside of requi
Storm Frequency =	10	Dropdown List
% Effective Imperviousness =	58	User Input
Land Use Description =		User Input

CALCULATION RESULTS

Iteration Volume Difference cf =	0.000
Dev. Subarea Outflow Peak cfs =	1.23

FLOW THROUGH BASIN RESULTS

Basin Inflow Peak cfs =	1.23
Mitigated Hydrograph Peak cfs =	1.23
Routed Hydrograph Peak cfs =	0.86
Max Basin Storage af =	0.0142
Max Basin Elevation ft =	0.71

BYPASS BASIN RESULTS

Inflow Hydrograph Peak cfs =	1.23
Mitigation Hydrograph Peak cfs =	1.23
Peak Flow into Bypass Basin cfs =	-
Volume into Bypass Basin cf =	-

INSTRUCTIONS

1. Under File-Options-Formulas
Check Iterative Calculations
200 iterations
0.001 tolerance
2. Input data in blue fields
3. Press F9 to manually
calculate the hydrology data
if Volume Difference in
B19 is not 0.
4. Choose rain zone at:
vcwatershed.net/publicMaps/data/

Flow-Through Basin Data

Elev. ft	Storage af	Disch. cfs
0.0	0.00	0.00
0.5	0.01	0.54
1.0	0.02	1.31
1.5	0.04	1.83
2.0	0.05	2.22
2.5	0.06	2.53
3.0	0.10	2.83
3.5	0.15	3.09
4.0	1.0	5.0

DMA 3

Tc Calculator Data Sheet V6.1

Project Name and Number: Oxnard AC

USER INPUT IN BLUE FIELDS:		
Subarea Name =	DMA 3	User Input
Watershed Area ac =	1.8	Calculated from flowpath data
% Imperviousness =	62	User Input
Land Use Description =	Public	DropMenu
Storm Frequency	10	DropMenu
Storm Zone =	Oxnard Pln-Nyeland	DropMenu
Zone ID =	Rev2_10	Calculated
District Soil Number (1-7) =	2	DropMenu- Rev for Revised C Coefficients
Tc for Intensity Calc min =	**14.00**	**Rounded, Use for Peak Flow Calc.**
Intensity in/hr =	1.663	Calculated
C_undeveloped =	0.726	Calculated
C_composite =	0.865	Calculated
Peak cfs =	2.61	Calculated
Calculated Tc=	**14.46**	**Calculated**

Instructions:

1. Set to manual calculations with File->Options->Formulas
2. Set max iterative calculations to 50
3. Enter required subarea and flowpath data in blue fields
4. Use site-specific topo or District 2005 LiDAR data for elevations
5. LiDAR and rain zone data at: http://vcwatershed.net/publicMaps/data
6. Clear any unnessary flowpath data from blue fields
7. Manually calculate with F9 or Formulas->Calculate Now
8. If error or comments appear, revise input data accordingly
9. Tc's in cells C12 and C17 should converge to the nearest minute.
10. Use result in C12 for peak flow calculation.
11. Print area is set for printing this page on one sheet.

FLOWPATH DATA- UPSTREAM TO DOWNSTREAM

Flowpath Number	Type- Selected with DropMenus	Type#	Flowpath Area ac	Upper Elev. Ft	Bott. Elev. Ft	Length ft	Map Slope ft/ft	Mtn Chan. Eff. Slope ft/ft	Diam/ Width ft	n value	Side-slope X; XH:1V	% Area	Q cfs	Cum. Q cfs
1	Overland-Developed	2	1.80	37.5	35.5	350	0.006					100.0%	2.6	2.6
2	None	0					#VALUE!	#VALUE!				0.0%	-	2.6
3	None	0										0.0%	-	2.6
4	None	0										0.0%	-	2.6
5	None	0										0.0%	-	2.6
6	None	0										0.0%	-	2.6
7	None	0										0.0%	-	2.6
8	None	0										0.0%	-	2.6
9	None	0										0.0%	-	2.6
10	None	0										0.0%	-	2.6
Sum			**1.8**									**100%**	**2.6**	

DMA 3

VCRat Single Subarea Hydrograph, Mitigation, and Detention Basin Routing Calculations

Project Information: Test Hydrograph, Ventura County

DEVELOPED CONDITION INPUT DATA		
Watershed Area ac =	1.80	User Input
Time of Concentration Tc min =	14.5	User Input
% Imperviousness =	62	User Input
Land Use Description =	Parking lot & AC	User Input
Storm Zone =	Oxnard Pln-Nyeland	Dropdown List
Storm Frequency =	10	Dropdown List
District Soil Number =	2	Dropdown List
NRCS Curve Number Yield in =	2.22	User Input
MITIGATION INPUT DATA		
Mitigation Level	10-yr Dev	User Input
Time of Concentration Tc min =	2	Tc outside of requi
Storm Frequency =	10	Dropdown List
% Effective Imperviousness =	62	User Input
Land Use Description =		User Input
CALCULATION RESULTS		
Iteration Volume Difference cf =	0.000	
Dev. Subarea Outflow Peak cfs =	2.61	
FLOW THROUGH BASIN RESULTS		
Basin Inflow Peak cfs =	2.61	
Mitigated Hydrograph Peak cfs =	4.54	
Routed Hydrograph Peak cfs =	0.86	
Max Basin Storage af =	0.0142	
Max Basin Elevation ft =	0.71	
BYPASS BASIN RESULTS		
Inflow Hydrograph Peak cfs =	2.61	
Mitigation Hydrograph Peak cfs =	4.54	
Peak Flow into Bypass Basin cfs =	-	
Volume into Bypass Basin cf =	-	

INSTRUCTIONS

1. Under File-Options-Formulas
Check Iterative Calculations
200 iterations
0.001 tolerance
2. Input data in blue fields
3. Press F9 to manually
calculate the hydrology data
if Volume Difference in
B19 is not 0.
4. Choose rain zone at:
vcwatershed.net/publicMaps/data/

Flow-Through Basin Data

Elev. ft	Storage af	Disch. cfs
0.0	0.00	0.00
0.5	0.01	0.54
1.0	0.02	1.31
1.5	0.04	1.83
2.0	0.05	2.22
2.5	0.06	2.53
3.0	0.10	2.83
3.5	0.15	3.09
4.0	1.0	5.0

DMA 4

Tc Calculator Data Sheet V6.1

Project Name and Number: Oxnard AC

USER INPUT IN BLUE FIELDS:		
Subarea Name =	DMA 4	User Input
Watershed Area ac =	0.8	Calculated from flowpath data
% Imperviousness =	59	User Input
Land Use Description =	Public	DropMenu
Storm Frequency	10	DropMenu
Storm Zone =	Oxnard Pln-Nyeland	DropMenu
Zone ID =	Rev2_10	Calculated
District Soil Number (1-7) =	2	DropMenu- Rev for Revised C Coefficients
Tc for Intensity Calc min =	**6.00**	**Rounded, Use for Peak Flow Calc.**
Intensity in/hr =	2.520	Calculated
C_undeveloped =	0.801	Calculated
C_composite =	0.889	Calculated
Peak cfs =	1.83	Calculated
Calculated Tc=	**5.77**	**Calculated**

Instructions:

1. Set to manual calculations with File->Options->Formulas
2. Set max iterative calculations to 50
3. Enter required subarea and flowpath data in blue fields
4. Use site-specific topo or District 2005 LiDAR data for elevations
5. LiDAR and rain zone data at: http://vcwatershed.net/publicMaps/data
6. Clear any unnessary flowpath data from blue fields
7. Manually calculate with F9 or Formulas->Calculate Now
8. If error or comments appear, revise input data accordingly
9. Tc's in cells C12 and C17 should converge to the nearest minute.
10. Use result in C12 for peak flow calculation.
11. Print area is set for printing this page on one sheet.

FLOWPATH DATA- UPSTREAM TO DOWNSTREAM

Flowpath Number	Type- Selected with DropMenus	Type#	Flowpath Area ac	Upper Elev. Ft	Bott. Elev. Ft	Length ft	Map Slope ft/ft	Mtn Chan. Eff. Slope ft/ft	Diam/ Width ft	n value	Side-slope X; XH:1V	% Area	Q cfs	Cum. Q cfs
1	Overland-Developed	2	0.81	37.5	35.5	142	0.014					100.0%	1.8	1.8
2	None	0					#VALUE!	#VALUE!				0.0%	-	1.8
3	None	0										0.0%	-	1.8
4	None	0										0.0%	-	1.8
5	None	0										0.0%	-	1.8
6	None	0										0.0%	-	1.8
7	None	0										0.0%	-	1.8
8	None	0										0.0%	-	1.8
9	None	0										0.0%	-	1.8
10	None	0										0.0%	-	1.8
Sum			**0.8**									**100%**	**1.8**	

DMA 4

VCRat Single Subarea Hydrograph, Mitigation, and Detention Basin Routing Calculations

Project Information: Test Hydrograph, Ventura County

DEVELOPED CONDITION INPUT DATA

Watershed Area ac =	0.81	User Input
Time of Concentration Tc min =	5.8	User Input
% Imperviousness =	59	User Input
Land Use Description =	Parking lot & AC	User Input
Storm Zone =	Oxnard Pln-Nyeland	Dropdown List
Storm Frequency =	10	Dropdown List
District Soil Number =	2	Dropdown List
NRCS Curve Number Yield in =	2.82	User Input

MITIGATION INPUT DATA

Mitigation Level	10-yr Dev	User Input
Time of Concentration Tc min =	2	Tc outside of requi
Storm Frequency =	10	Dropdown List
% Effective Imperviousness =	59	User Input
Land Use Description =		User Input

CALCULATION RESULTS

Iteration Volume Difference cf =	0.000
Dev. Subarea Outflow Peak cfs =	2.04

FLOW THROUGH BASIN RESULTS

Basin Inflow Peak cfs =	2.04
Mitigated Hydrograph Peak cfs =	2.04
Routed Hydrograph Peak cfs =	0.86
Max Basin Storage af =	0.0142
Max Basin Elevation ft =	0.71

BYPASS BASIN RESULTS

Inflow Hydrograph Peak cfs =	2.04
Mitigation Hydrograph Peak cfs =	2.04
Peak Flow into Bypass Basin cfs =	-
Volume into Bypass Basin cf =	-

INSTRUCTIONS

1. Under File-Options-Formulas
Check Iterative Calculations
200 iterations
0.001 tolerance
2. Input data in blue fields
3. Press F9 to manually
calculate the hydrology data
if Volume Difference in
B19 is not 0.
4. Choose rain zone at:
vcwatershed.net/publicMaps/data/

Flow-Through Basin Data

Elev. ft	Storage af	Disch. cfs
0.0	0.00	0.00
0.5	0.01	0.54
1.0	0.02	1.31
1.5	0.04	1.83
2.0	0.05	2.22
2.5	0.06	2.53
3.0	0.10	2.83
3.5	0.15	3.09
4.0	1.0	5.0

TOTAL SITE

Tc Calculator Data Sheet V6.1

Project Name and Number: Oxnard AC

USER INPUT IN BLUE FIELDS:		
Subarea Name =	TOTAL	User Input
Watershed Area ac =	5.1	Calculated from flowpath data
% Imperviousness =	63	User Input
Land Use Description =	Public	DropMenu
Storm Frequency	10	DropMenu
Storm Zone =	Oxnard Pln-Nyeland	DropMenu
Zone ID =	Rev2_10	Calculated
District Soil Number (1-7) =	2	DropMenu- Rev for Revised C Coefficients
Tc for Intensity Calc min =	**13.00**	**Rounded, Use for Peak Flow Calc.**
Intensity in/hr =	1.726	Calculated
C_undeveloped =	0.732	Calculated
C_composite =	0.869	Calculated
Peak cfs =	7.72	Calculated
Calculated Tc=	**13.15**	**Calculated**

Instructions:

1. Set to manual calculations with File->Options->Formulas
2. Set max iterative calculations to 50
3. Enter required subarea and flowpath data in blue fields
4. Use site-specific topo or District 2005 LiDAR data for elevations
5. LiDAR and rain zone data at: http://vcwatershed.net/publicMaps/data
6. Clear any unnessary flowpath data from blue fields
7. Manually calculate with F9 or Formulas->Calculate Now
8. If error or comments appear, revise input data accordingly
9. Tc's in cells C12 and C17 should converge to the nearest minute.
10. Use result in C12 for peak flow calculation.
11. Print area is set for printing this page on one sheet.

FLOWPATH DATA- UPSTREAM TO DOWNSTREAM

Flowpath Number	Type- Selected with DropMenus	Type#	Flowpath Area ac	Upper Elev. Ft	Bott. Elev. Ft	Length ft	Map Slope ft/ft	Mtn Chan. Eff. Slope ft/ft	Diam/ Width ft	n value	Side-slope X; XH:1V	% Area	Q cfs	Cum. Q cfs
1	Overland-Developed	2	5.10	37	33	322	0.012					100.0%	7.7	7.7
2	None	0					#VALUE!	#VALUE!				0.0%	-	7.7
3	None	0										0.0%	-	7.7
4	None	0										0.0%	-	7.7
5	None	0										0.0%	-	7.7
6	None	0										0.0%	-	7.7
7	None	0										0.0%	-	7.7
8	None	0										0.0%	-	7.7
9	None	0										0.0%	-	7.7
10	None	0										0.0%	-	7.7
Sum			**5.1**									**100%**	**7.7**	

TOTAL SITE

VCRat Single Subarea Hydrograph, Mitigation, and Detention Basin Routing Calculations

Project Information: Test Hydrograph, Ventura County

DEVELOPED CONDITION INPUT DATA

Watershed Area ac =	5.10	User Input
Time of Concentration Tc min =	13.15	User Input
% Imperviousness =	63	User Input
Land Use Description =	Parking lot & AC	User Input
Storm Zone =	Oxnard Pln-Nyeland	Dropdown List
Storm Frequency =	10	Dropdown List
District Soil Number =	2	Dropdown List
NRCS Curve Number Yield in =	3.01	User Input

MITIGATION INPUT DATA

Mitigation Level	10-yr Dev	User Input
Time of Concentration Tc min =	13	User Input
Storm Frequency =	10	Dropdown List
% Effective Imperviousness =	63	User Input
Land Use Description =		User Input

CALCULATION RESULTS

Iteration Volume Difference cf =	0.000
Dev. Subarea Outflow Peak cfs =	7.72

FLOW THROUGH BASIN RESULTS

Basin Inflow Peak cfs =	7.72
Mitigated Hydrograph Peak cfs =	7.72
Routed Hydrograph Peak cfs =	0.86
Max Basin Storage af =	0.0142
Max Basin Elevation ft =	0.71

BYPASS BASIN RESULTS

Inflow Hydrograph Peak cfs =	7.72
Mitigation Hydrograph Peak cfs =	7.72
Peak Flow into Bypass Basin cfs =	-
Volume into Bypass Basin cf =	-

INSTRUCTIONS

1. Under File-Options-Formulas Check Iterative Calculations 200 iterations 0.001 tolerance
2. Input data in blue fields
3. Press F9 to manually calculate the hydrology data if Volume Difference in B19 is not 0.
4. Choose rain zone at: vcwatershed.net/publicMaps/data/

Flow-Through Basin Data

Elev. ft	Storage af	Disch. cfs
0.0	0.00	0.00
0.5	0.01	0.54
1.0	0.02	1.31
1.5	0.04	1.83
2.0	0.05	2.22
2.5	0.06	2.53
3.0	0.10	2.83
3.5	0.15	3.09
4.0	1.0	5.0

TOTAL SITE - EXISTING CONDITIONS

Tc Calculator Data Sheet V6.1

Project Name and Number: Oxnard AC

USER INPUT IN BLUE FIELDS:		
Subarea Name =	TOTAL	User Input
Watershed Area ac =	5.1	Calculated from flowpath data
% Imperviousness =	0	User Input
Land Use Description =	Public	DropMenu
Storm Frequency	10	DropMenu
Storm Zone =	Oxnard Pln-Nyeland	DropMenu
Zone ID =	Rev2_10	Calculated
District Soil Number (1-7) =	2	DropMenu- Rev for Revised C Coefficients
Tc for Intensity Calc min =	**15.00**	**Rounded, Use for Peak Flow Calc.**
Intensity in/hr =	1.608	Calculated
C_undeveloped =	0.720	Calculated
C_composite =	0.720	Calculated
Peak cfs =	5.95	Calculated
Calculated Tc=	**14.70**	**Calculated**

Instructions:

1. Set to manual calculations with File->Options->Formulas
2. Set max iterative calculations to 50
3. Enter required subarea and flowpath data in blue fields
4. Use site-specific topo or District 2005 LiDAR data for elevations
5. LiDAR and rain zone data at: http://vcwatershed.net/publicMaps/data
6. Clear any unnessary flowpath data from blue fields
7. Manually calculate with F9 or Formulas->Calculate Now
8. If error or comments appear, revise input data accordingly
9. Tc's in cells C12 and C17 should converge to the nearest minute.
10. Use result in C12 for peak flow calculation.
11. Print area is set for printing this page on one sheet.

FLOWPATH DATA- UPSTREAM TO DOWNSTREAM

Flowpath Number	Type- Selected with DropMenus	Type#	Flowpath Area ac	Upper Elev. Ft	Bott. Elev. Ft	Length ft	Map Slope ft/ft	Mtn Chan. Eff. Slope ft/ft	Diam/ Width ft	n value	Side-slope X; XH:1V	% Area	Q cfs	Cum. Q cfs
1	Overland-Developed	2	5.10	38.8	34.4	360	0.012					100.0%	6.0	6.0
2	None	0					#VALUE!	#VALUE!				0.0%	-	6.0
3	None	0										0.0%	-	6.0
4	None	0										0.0%	-	6.0
5	None	0										0.0%	-	6.0
6	None	0										0.0%	-	6.0
7	None	0										0.0%	-	6.0
8	None	0										0.0%	-	6.0
9	None	0										0.0%	-	6.0
10	None	0										0.0%	-	6.0
Sum			**5.1**									**100%**	**6.0**	

TOTAL SITE - EXISTING CONDITIONS

VCRat Single Subarea Hydrograph, Mitigation, and Detention Basin Routing Calculations

Project Information: Test Hydrograph, Ventura County

DEVELOPED CONDITION INPUT DATA		
Watershed Area ac =	5.10	User Input
Time of Concentration Tc min =	14.7	User Input
% Imperviousness =	0	User Input
Land Use Description =	Parking lot & AC	User Input
Storm Zone =	Oxnard Pln-Nyeland	Dropdown List
Storm Frequency =	10	Dropdown List
District Soil Number =	2	Dropdown List
NRCS Curve Number Yield in =	1.74	User Input
MITIGATION INPUT DATA		
Mitigation Level	10-yr Dev	User Input
Time of Concentration Tc min =	15	User Input
Storm Frequency =	10	Dropdown List
% Effective Imperviousness =	0	User Input
Land Use Description =		User Input
CALCULATION RESULTS		
Iteration Volume Difference cf =	0.000	
Dev. Subarea Outflow Peak cfs =	6.21	
FLOW THROUGH BASIN RESULTS		
Basin Inflow Peak cfs =	6.21	
Mitigated Hydrograph Peak cfs =	6.21	
Routed Hydrograph Peak cfs =	0.86	
Max Basin Storage af =	0.0142	
Max Basin Elevation ft =	0.71	
BYPASS BASIN RESULTS		
Inflow Hydrograph Peak cfs =	6.21	
Mitigation Hydrograph Peak cfs =	6.21	
Peak Flow into Bypass Basin cfs =	-	
Volume into Bypass Basin cf =	-	

INSTRUCTIONS

1. Under File-Options-Formulas Check Iterative Calculations 200 iterations 0.001 tolerance
2. Input data in blue fields
3. Press F9 to manually calculate the hydrology data if Volume Difference in B19 is not 0.
4. Choose rain zone at: vcwatershed.net/publicMaps/data/

Flow-Through Basin Data

Elev. ft	Storage af	Disch. cfs
0.0	0.00	0.00
0.5	0.01	0.54
1.0	0.02	1.31
1.5	0.04	1.83
2.0	0.05	2.22
2.5	0.06	2.53
3.0	0.10	2.83
3.5	0.15	3.09
4.0	1.0	5.0

APPENDIX E

Geotechnical Report

and CPT logs are presented in Appendices A and B, respectively, and the approximate locations of the borings and CPT soundings are shown on Figure 2.

Geotechnical laboratory testing of representative soil samples included tests to evaluate in-situ moisture content and dry density, the percentage of particles finer than the number 200 sieve, Atterberg limits, consolidation, direct shear strength, R-value, and soil corrosivity. In-situ moisture content and dry density test results are presented on the boring logs in Appendix A. The remaining laboratory test results are presented in Appendix C.

In-situ percolation testing was performed in one boring (B-4) to evaluate the infiltration rates of the on-site soils at a potential stormwater infiltration location for the project. Details regarding the percolation testing are provided in the Field Percolation Testing section of this report.

DRAFT

5 GEOLOGY AND SUBSURFACE CONDITIONS

5.1 Regional Geologic Setting

The project site is located within the Ventura Basin, which is situated in the Transverse Ranges Geomorphic Province (Norris and Webb, 1990). The Ventura Basin is part of a large synclinal fold approximately 120 miles in length that extends from the Santa Barbara Channel inland to the Santa Clarita region and it is underlain by marine Cretaceous to Cenozoic sedimentary rocks (Norris and Webb, 1990). The site is located on the broad, relatively flat coastal lowlands of the Oxnard Plain, which are underlain by variable thicknesses of Holocene alluvium. According to the California Division of Mines and Geology (CDMG, 2002a), the Oxnard Plain is covered by approximately 200 to 250 feet of Holocene-age sediments derived from the highland regions of northern Ventura and western Los Angeles counties and deposited by the Santa Clara River.

The proposed new aquatic center is located along a drainage channel located on a coastal alluvial plain approximately 3 miles from the Pacific Ocean. Prior to land development activities in the mid-1970s, the area in the vicinity of the site was farmland and ranch lands (Historic Aerials, 2022). Regional geologic mapping indicates that the site is underlain by Holocene-age alluvial fan and flood plain overbank deposits consisting of predominantly of clay with interbedded lenses of sand and occasional gravel (Figure 3) (Clahan, 2003). Our review of geologic literature and aerial photographs did not indicate the presence of landslides or active faulting at the site.

5.2 Site Geology

The results of our subsurface exploration indicate that the site is underlain by fill soils and alluvium. Fill soils were encountered at the ground surface in borings B-5 and B-7 through B-15

to depths ranging from approximately 4 to 6½ feet below the ground surface. The fill generally consisted of moist, loose to medium dense, silty sand with gravel. Alluvium was encountered at the ground surface in borings B-1 through B-4 and B-6, and below the fill soils in the above borings to the total depths explored of up to approximately 31½ feet. The alluvium generally consisted of moist to wet, loose to very dense silty sand, clayey sand, and poorly graded sand, and firm to very stiff silt and lean clay.

6 GROUNDWATER

Groundwater was observed in our exploratory borings at depths ranging from approximately 12 to 16 feet below the ground surface. Groundwater was also encountered in Earth Systems' borings near the project site as shallow as approximately 7½ feet below the ground surface (Earth Systems, 2007) (Appendix D). Regional maps indicate that the historic high groundwater level in the vicinity of the site is approximately 7 feet below the ground surface (CDMG, 2002a). Groundwater levels observed at the time of drilling are not considered stabilized. It should be noted that fluctuations in the level of groundwater will occur due to variations in ground surface topography, subsurface stratification, rainfall, irrigation practices, groundwater pumping, and other factors which may not have been evident at the time of our field evaluation.

DRAFT

7 FIELD PERCOLATION TESTING

Percolation testing was performed in boring B-4 in general accordance with the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures (VCTGM) (GCLWA, 2018). The testing was performed to evaluate the infiltration rate of the on-site soils in the general vicinity of a possible stormwater infiltration area for use in design of Best Management Practices (BMPs) by others. The approximate location of the percolation test boring (B-4) is shown on Figure 2.

Boring B-4 was drilled to a depth of approximately 5 feet below the existing ground surface. Preparation of the drilled boring for percolation testing included the installation of a 2-inch-diameter polyvinyl chloride (PVC) pipe in the boring and backfilling the annular space between the borehole wall and pipe with clean pea gravel. After the boring was pre-soaked for 24 hours, a Falling-Head Borehole Infiltration Test (GCLWA, 2018) was performed in the boring. The falling-head test method involved placing clean water into the PVC pipe to a depth of approximately 26 inches below the ground surface. The depth of the water was measured after one hour. The PVC pipe was refilled to a depth of 26 inches below the ground surface and the test procedure was repeated for a total of four times. The last field percolation rate measurement was 14 inches per hour.

Based on our preliminary percolation testing and the VCTGM, the site may be suitable for stormwater infiltration using a relatively shallow infiltration BMP, such as permeable pavements, infiltration trenches, and vegetated swales. However, the design infiltration rate should first be calculated using the above field percolation rate divided by a Safety Factor. The Safety Factor should be calculated based on several "Suitability Assessment" and "Design" factors, as described in the VCTGM and shown in Table 1 below. Based on our knowledge of the site, we have inserted values the Suitability Assessment Factor Category; however, the Design Factor Category should be based on information provided by the project civil engineer.

DRAFT

Table 1 – Infiltration Facility Safety Factor Worksheet

Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p)
A	Suitability Assessment	Soil Assessment Methods	0.25	3	0.75
		Predominant Soil Texture	0.25	3	0.75
		Site Soil Variability	0.25	2	0.50
		Depth to Groundwater / Impervious Layer	0.25	3	0.75
		Suitability Assessment Safety Factor, $S_A = \sum p$			2.75
B	Design	Tributary Area Size	0.25	TBD	TBD
		Level of Pre-Treatment / Expected Sediment Loads	0.25	TBD	TBD
		Redundancy	0.25	TBD	TBD
		Compaction During Construction	0.25	TBD	TBD
		Design Safety Factor, $S_B = \sum p$			TBD
Combined Safety Factor = $S_A \times S_B$					

Notes:
TBD – To be determined by the project civil engineer

As discussed in the VCTGM, some additional limitations should be considered before choosing an infiltration BMP, including the following:

- A 5-foot vertical separation is needed between the bottom of the infiltration BMP and groundwater. Due to a historic high groundwater of approximately 7 feet below the ground surface, the BMP invert should be 2 feet deep, or less.
- Infiltration BMPs must be setback from building foundations of 8 feet or more; however, we typically recommend a setback from building foundations of 15 feet or more.

8 FAULTING AND SEISMICITY

The site is located in a seismically active area, as is the majority of southern California, and the potential for strong ground motion in the project area is considered significant during the design life of the proposed improvements. Figure 4 shows the approximate site location relative to the principal faults in the region. Based on our background review and site reconnaissance, the project site is not transected by known active or potentially active faults, nor is it located within a

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Appendix G

CEQA Transportation Analysis

FEHR PEERS

Memorandum



Date: January 13, 2023

To: Reza Bagherzadeh & Kumar Neppalli, City of Oxnard

From: John Muggridge, Nico Boyd & Sarah Brandenberg, Fehr & Peers

Subject: CEQA Transportation Analysis for the South Oxnard Aquatics Center Project

LA22-3410

This memorandum has been prepared at the request of the City of Oxnard to evaluate the South Oxnard Aquatics Center project's (Project) potential to result in a significant transportation impact under the California Environmental Quality Act (CEQA). In addition to describing the Vehicle Miles Traveled (VMT) analysis that was conducted for the Project, this memorandum also summarizes the analyses that were conducted for the other items in the City of Oxnard's CEQA checklist. The CEQA checklist items that were analyzed were based on the City of Oxnard CEQA Guidelines (May 2017) and CEQA Guidelines Section 15064.3. The CEQA checklist items are as follows:

- Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3?
- Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Would the project result in inadequate emergency access?
- Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The following sections present the Project description, the daily and peak hour trip generation estimates that have been developed for the Project, and the CEQA transportation analyses that were conducted for the Project, including the qualitative assessment of Project-generated VMT.

Project Description

The City of Oxnard proposes to construct the South Oxnard Aquatics Center (Project) on a 7.93-acre site at the southeast corner of College Park, which is located at 3250 South Rose Avenue in Oxnard, California (**Figure 1**). Specifically, the Project encompasses portions of Section 14 of Township 1N, Range 22W on the Oxnard Quadrangle, California United States Geological Survey (USGS) 7.5-minute topographic quadrangle (**Figure 2**).

The Project includes construction of a 23,571 square foot outdoor swim area with a 50-meter competition pool, 25-yard instructional pool, and fun water shallow pool, slide, and splash pad. The Project also includes construction of a 18,342 square foot one-story "L" shaped building which will frame the western and eastern sides of the pool deck. The building will include locker rooms, administrative space, and utility rooms to support the aquatic activities. The Project includes construction of a dedicated parking lot with 103 parking stalls north of the aquatics center. The parking lot will be supplemented by the existing parking adjacent to the soccer field along College Park's ring road as well as existing adjacent parking lots within the park. The City anticipates that the aquatics center would serve only the local community of Oxnard, and would not be used for regional events. **Figure 3** shows the Project site plan.

Trip Generation

Based on attendance estimates prepared by ELS Architecture + Urban Design, it is anticipated that the summer season (Memorial Day to Labor Day) will be the season with the highest levels of visitation of the Project, with daily attendance of approximately 4,425 visitors on a weekend day with a total of 100 employees on site over the course of the day. According to information provided by the City and ELS Architecture + Urban design, it is expected that visitation will be higher on weekend days than on weekdays, with the peak hour of visitation occurring in the early afternoon. Because of this, daily and midday trip generation estimates were developed for the Project for a weekend day during the summer season.

Trip generation estimates were developed for the Project using daily attendance estimates and estimates of the number of arrivals per hour provided by ELS Architecture + Urban Design, estimates of average vehicle occupancy (AVO) developed by Hotel & Leisure Advisors for the Elk Grove Civic Center Aquatics Complex EIR[1], and estimates of the directional distribution of trips (inbound vs. outbound trips) from the Institute of Transportation Engineers (Trip Generation, 11th

[1] The Elk Grove Civic Center Aquatics Complex EIR includes a comparable transportation study for an aquatics center in a similar urban context as the proposed Project. Because of this, assumptions from the Elk Grove Civic Center Aquatics Complex EIR were used to inform the trip generation estimates for the proposed Project.



Basemap provided by Esri and its licensors © 2022.

Project Location

N

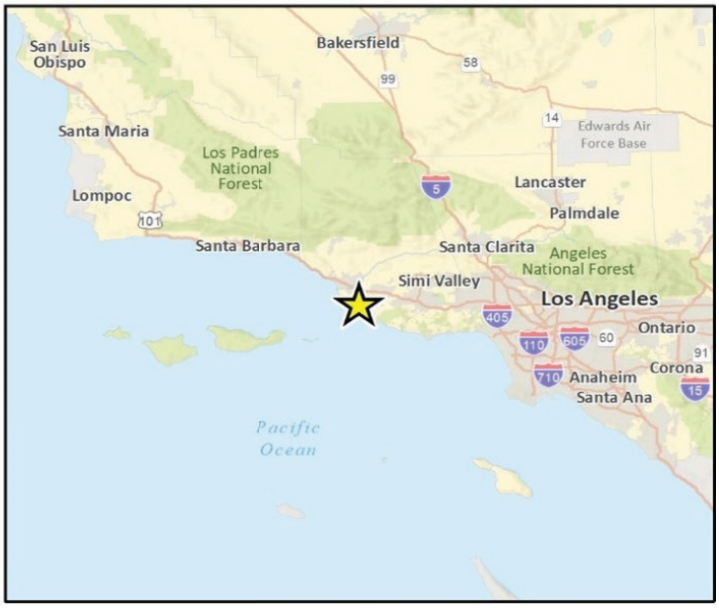


Figure 1
Regional Project Location

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.



Imagery provided by Microsoft Bing and its licensors © 2022

Fig 2 Project Location_Landscape

Figure 2

Project Site Boundary

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

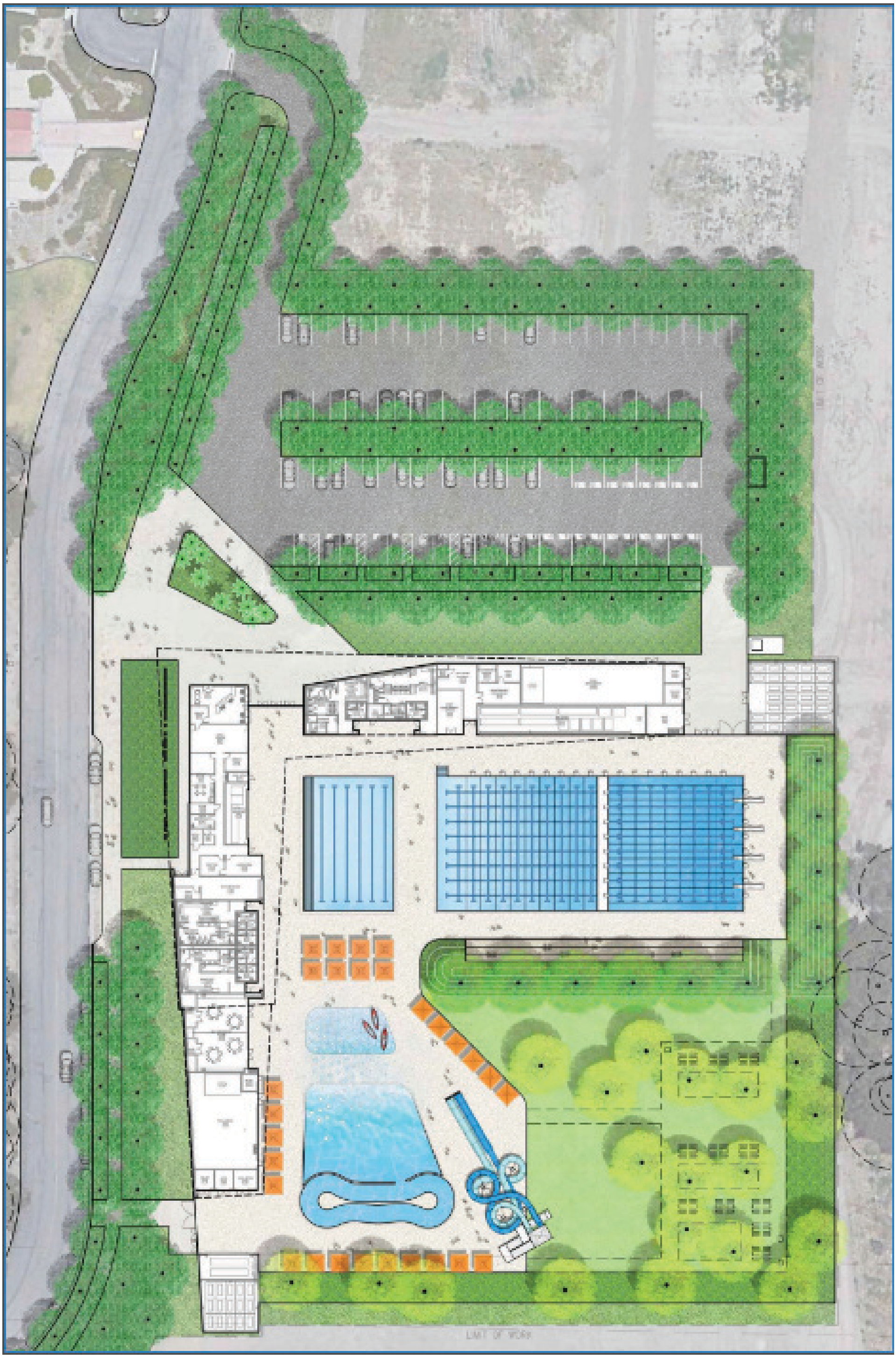


Figure 3

Project Site Plan

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Edition) using Land Use Code 482 – Water Slide Park. **Table 1** presents the vehicle trip generation estimates for the Project.

Table 1. Project Trip Generation Estimates

Land Use	Daily Attendance (Persons)[2]	Auto Occupancy[3] (Persons/ Vehicle)	Vehicles	Estimated Trip Generation			
				Daily[4]	MD Peak Hour Trips		
					In[5]	Out[6]	Total
Aquatics Center[1]	4,425	2.3	1,924	3,848	261	189	450
Total External Vehicle Trips				*3,848*	*261*	*189*	*450*

Notes:

[1] Summer Season (Memorial Day to Labor Day) Hours of Operation - 5am-8pm Monday through Thursday, 5am-10pm Friday, 10am-10pm Saturday, 10am-8pm Sunday. Off Season (Fall/Winter/Spring) Hours of Operation - 5am-8pm Monday through Friday, 10am-8pm Saturday and Sunday. Analysis scenarios include Saturday peak hour (~1-2pm) conditions, which are estimated to be the peak annual demand.

[2] Attendance estimate based on usage levels developed by ELS Architecture + Urban Design.

[3] Auto occupancy based on the ratio of total visitors to adult chaperones developed by Hotel & Leisure Advisors for the Elk Grove Civic Center Aquatics Complex EIR.

[4] Daily vehicle trips developed by multiplying total vehicles by two to account for vehicles entering and exiting the project.

[5] Estimate of inbound vehicle trips during the midday peak hour based on estimated visitor arrivals developed by ELS Architecture + Urban Design. The estimate of 600 peak hour visitor arrivals was divided by the average auto occupancy of 2.3.

[6] Estimate of outbound vehicle trips during the midday peak hour based on the directional distribution from Trip Generation, 11th Edition (Institute of Transportation Engineers) for Water Slide Park (Land Use 482) for the Saturday Peak Hour of the Generator.

Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3?

The City of Oxnard is currently developing guidance on VMT impact analysis consistent with the *Technical Advisory on Evaluating Transportation Impacts* in CEQA, California Governor's Office of Planning and Research (OPR), December 2018 for office, retail, industrial, and residential land uses. However, neither the City's nor OPR's guidance provide direction on how VMT should be assessed for aquatics center uses.

OPR recommends screening local-serving serving uses from conducting a VMT analysis on the grounds that local-serving uses tend to shorten trips and reduce VMT. While the OPR guidance specifically applies this logic to retail development projects, the same logic can be applied to other local-serving land use development projects. The CEQA Guidelines Section 15064.3(b)(3) allow for the use of a qualitative methodology and recommend considering factors such as the availability of transit and proximity to other destinations to gauge potential VMT impacts. These factors influence the ability to access the project site by walking, bicycling, and transit while also contributing to shorter trip lengths for vehicle trips. Another factor in qualitative assessment is whether the approval of the project would encourage development in a travel efficient location (page 17, OPR *Technical Advisory*). Therefore, for this study, a project would be considered to generate a significant impact if it is estimated to result in a net increase in VMT.

The City of Oxnard currently has one public swimming pool, located at the Colonia Park Recreation Center in North Oxnard at 197 N Marquita Street. City of Oxnard residents may utilize this existing swimming pool or travel to comparable facilities in neighboring jurisdictions, including the City of Ventura and the City of Camarillo. Because the City of Oxnard anticipates that the aquatics center would serve only the local community of Oxnard, and would not be used for regional events, the Project would allow residents of South Oxnard to travel a shorter distance to access a public pool than under existing conditions. While the Project would generate new employment that would generate new vehicle trips and VMT, these trips and VMT are expected to be offset by the much larger number of visitors using the site, especially over the course of a full year. Given the proposed Project land use (aquatics center) and the location (conveniently located near residential neighborhoods in South Oxnard), the majority of trips to the Project site are likely to be shifted trips rather than new trips and the trip lengths would likely be similar, if not shorter, than existing trips to other aquatics centers/recreational uses. Therefore, the net effect of the Project on VMT would be negligible or possibly negative.

Impact Assessment

Based on the evidence presented above, it is concluded that the Project could be presumed to have a **less than significant VMT impact**.

Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Oxnard Airport is approximately 3.14 miles northwest of the project site. The project site is outside of the airport's sphere of influence, defined in the Municipal Code as bounded by Wooley Road, approximately 2.05 miles northwest of the project site (City of Oxnard, 2022). Because the project site is not within the airport sphere of influence, the aquatics center would not interfere with air traffic from the Oxnard Airport.

The project site is located approximately 3.5 miles northwest of the airport landing strip on the Naval Base Ventura County (NBVC) Point Mugu. The project site is within the 500-foot airfield imaginary surface but is not within the flight path for the NBVC Point Mugu. The proposed building would not exceed 25 feet in height, and would not interfere with air traffic from the NBVC Point Mugu.

Additionally, the Project does not feature a helicopter landing pad and would therefore not generate new air traffic or divert existing air traffic. For these reasons, it is not anticipated that the Project would result in a change in air traffic patterns.

Impact Assessment

Based on the evidence presented above, it is concluded that the Project could be presumed to have **no impact**.

Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impacts regarding the potential increase of hazards due to a geometric design feature generally relate to the design of access points to and from the Project site. Impacts can be related to vehicle/vehicle, vehicle/bicycle, or vehicle/pedestrian conflicts as well as to operational delays caused by vehicles slowing and/or queuing to access a project site. These conflicts may be created by the driveway configuration or through the placement of project driveway(s) in areas of inadequate visibility, adjacent to bicycle or pedestrian facilities, or too close to busy or congested intersections. These impacts are typically evaluated for permanent conditions after project completion but can also be evaluated for temporary conditions during project construction.

As shown in the Project site plan in **Figure 3**, the Project is adding a new driveway with an alignment that is perpendicular to the public right-of-way (College Park ring road). The new driveway is adequately spaced from existing signalized and unsignalized intersections, and the Project does not introduce land uses that are incompatible with the surrounding community. The site access and

circulation configuration were evaluated based on the proposed Project site plan to determine its adequacy based on traffic engineering principles and the anticipated number of vehicle trips during the mid-day peak hour. The evaluation included a vehicle turn template analysis to determine whether the Project driveway width is adequate and a sight distance analysis to determine whether there is adequate visibility from the Project driveway to ensure that oncoming vehicles on the ring road have enough time to reach a complete stop if a vehicle exits the Project driveway. **Figure 4** presents the vehicle turn template analysis, and **Figure 5** presents the sight distance analysis. As shown in the figures, the Project driveway width is sufficient to allow incoming and exiting vehicles to pass one another, and the stopping sight distance and corner sight distance are sufficient to allow adequate visibility from the Project driveway (for vehicles exiting the Project parking lot) and to the Project driveway (for oncoming vehicles approaching the driveway.

Impact Assessment

Based on the evidence presented above, it is concluded that the Project could be presumed to have a **less than significant impact**.

Would the project result in inadequate emergency access?

The Project is expected to increase the number of vehicles on the road primarily during the weekend midday peak hour compared with existing conditions, as shown in **Table 1**. Because this falls outside of the typical weekday commute periods when traffic congestion is at its highest within the City of Oxnard, the Project is expected to have a negligible effect on response times. Additionally, Oxnard Fire Station 8 is located adjacent to College Park, where the Project site is located, and has direct access to the College Park ring road via a driveway that connects to the intersection of Rose Avenue and Raiders Way. The immediate proximity of Oxnard Fire Station 8 to the Project site would allow for rapid emergency response times. As such, there would be adequate emergency access to the Project site.

Impact Assessment

Based on the evidence presented above, it is concluded that the Project could be presumed to have a **less than significant impact**.

P

		feet
Width	:	7.00
Track	:	6.00
Lock to Lock Time	:	6.0
Steering Angle	:	31.6

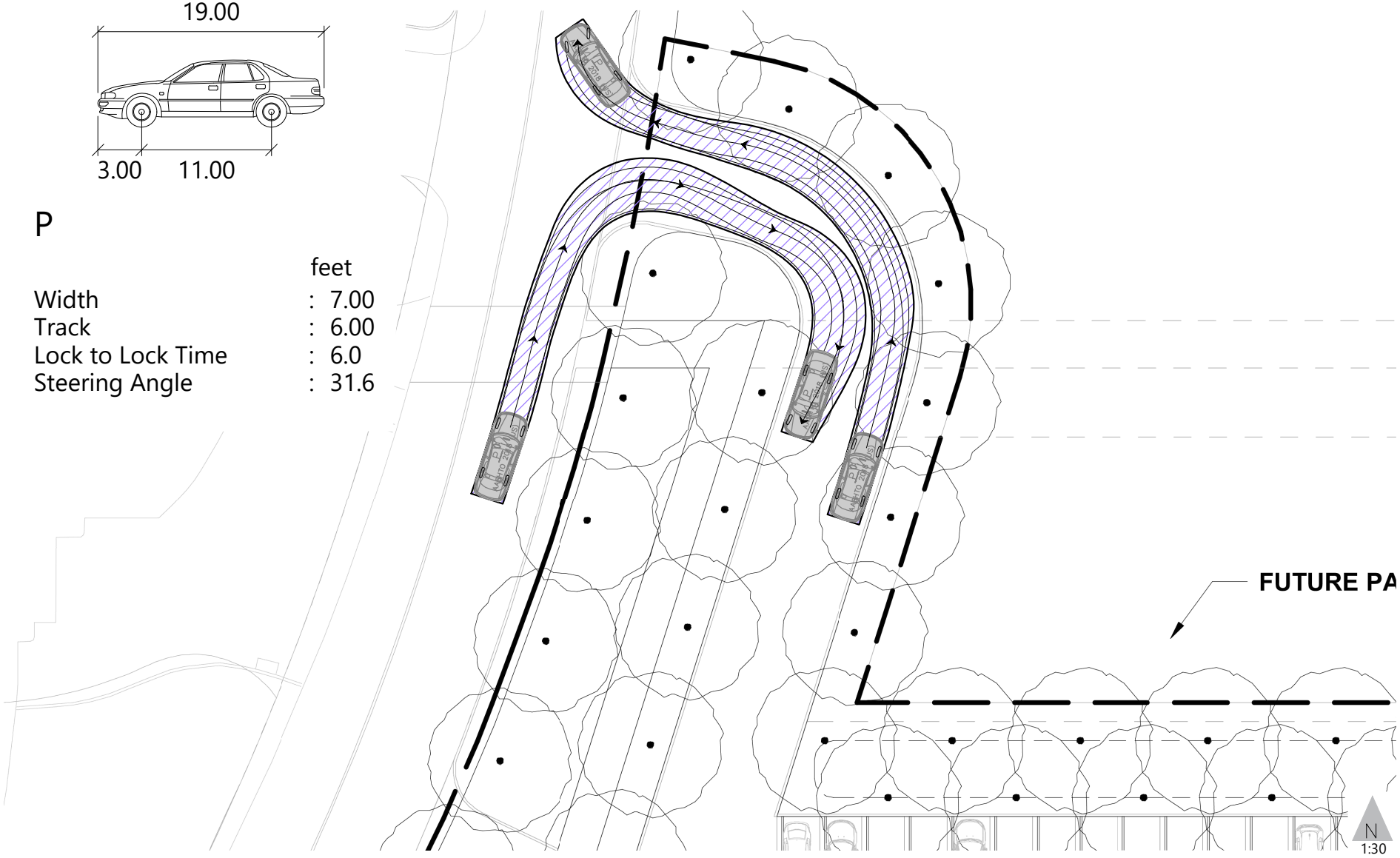


Figure 4

Proposed Project Driveway
Turn Template Analysis

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

Jan 09, 2023 CADD FILE: N:\Jobs\Active\3400s\3410_So Oxnard Aquatic Cntr\Graphics\CAD\3410-Autoturn.dwg

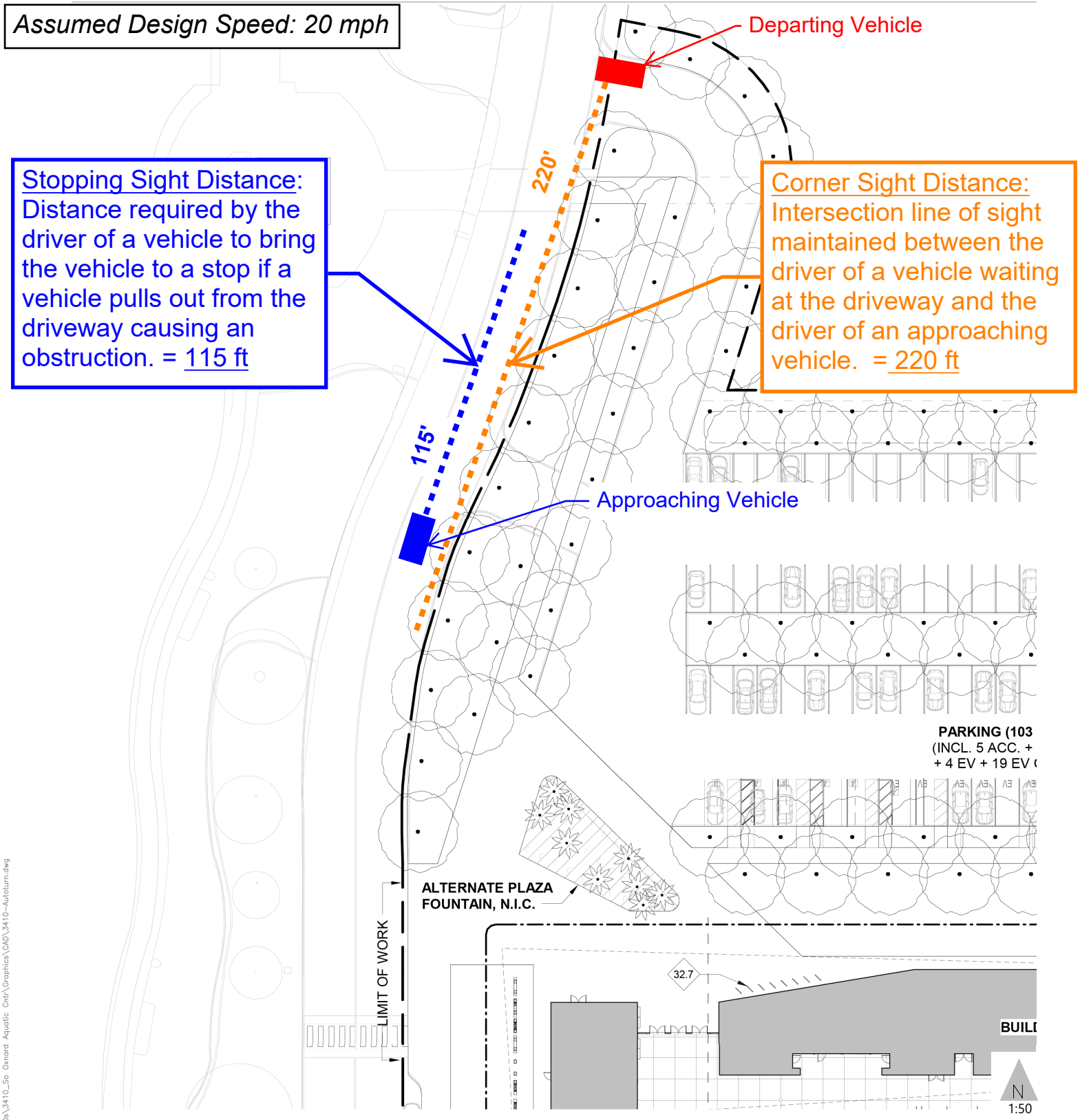


Figure 5

Proposed Project Driveway
Sight Distance Analysis

CONCEPTUAL - NOT FOR CONSTRUCTION. ADDITIONAL
DETAILED ANALYSIS AND ENGINEERING DESIGN REQUIRED.

CADD FILE: N:\Jobs\Active\3400s\3410_So Oxnard Aquatic Cntr\Graphics\CAD\3410-Autoturn.dwg
Jan 09, 2023

Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Table 2 below discusses local plans and policies that could have the potential to be inconsistent with the Project. Relevant plans, goals, policies and/or objectives that affect transportation and mobility in the City of Oxnard were evaluated and, as summarized in **Table 2**, no conflicts were identified. Therefore, no significant transportation impact is anticipated based on this criterion and no mitigation would be required.

Table 2 – Programs, Plans, Ordinances, and Policies Consistency Review

Plans	Description	Relevant Goals, Policies and/or Objectives	Consistency
Southern California Association of Governments Regional Transportation Plan	Every 4 years, SCAG updates its RTP for the 191-city SCAG region. Beginning with the 2012 RTP, SB 375 required the inclusion of a SCS in RTPs prepared by MPOs such as SCAG. The key goal of the SCS is to achieve GHG emission reduction targets through integrated land use and transportation strategies. A key objective is for planners and developers to consider how land use patterns influence travel demand. As part of the transportation modeling and analysis for the RTP/SCS, SCAG prepares population and employment growth projections by Transportation Analysis Zone (TAZ) and creates a future transportation network that represents the changes to the existing network based on the regional project list. TAZs are geographic polygons representing communities and neighborhoods at a sub-city level of detail.	1) Goal 2: Improve mobility, accessibility, reliability, and travel safety for people and goods. 2) Goal 4: Increase person and goods movement and travel choices within the transportation system. 3) Goal 5: Reduce greenhouse gas emissions and improve air quality. 4) Goal 6: Support healthy and equitable communities. 5) Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.	As part of the transportation modeling and analysis for the RTP/SCS, SCAG prepares population and employment growth projections by TAZ and creates a future transportation network that represents the changes to the existing network based on the regional project list. TAZs are geographic polygons representing communities and neighborhoods at a sub-city level of detail. The proposed Project was compared against the RTP/SCS forecasts and network changes included in the 2020 SCAG RTP model. Given that the proposed Project would not result in any changes to the existing transportation network, it does not conflict with the RTP/SCS.

Plans	Description	Relevant Goals, Policies and/or Objectives	Consistency
City of Oxnard 2030 General Plan Land Use Element and Circulation Element (Goals & Policies)	The City of Oxnard 2030 General Plan Land Use Element and Circulation Element were adopted in 2011 and provide goals and policies for land use and development and the circulation system.	1) Policy CD-1.2 – Promote the efficient use of larger vacant parcels and vacant areas of the City by encouraging infill development, with a priority to mixed uses that reduce vehicle trips and GHG emissions and promote sustainable development goals and objectives. 2) Policy CD1.4 – Promote the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices (pedestrian, bicycle, transit, automobile). 3) Policy ICS-7.2 – Reduce single-occupancy automobile use and increase the use of alternative forms of transportation as a means of reducing energy consumption and vehicle emissions. 4) Policy ICS-8.5 – Consider and require where appropriate and feasible the enhancement of the pedestrian environment as part of private development and public works projects, especially for public sidewalks. 5) Policy ICS-8.14 – Create a physical link for pedestrian and bicycle traffic between parks and recreation facilities as specified in the Bike and Pedestrian Master Plan.	The proposed Project's increased land use intensity compared to existing conditions will result in a net increase of 3,848 daily vehicle trips per day. However, the Project's location inside of an existing City park is consistent with the Community Development policy of promoting the efficient use of larger vacant parcels and vacant areas of the City by encouraging infill development, and the proximity of the Project to existing residential neighborhoods that can be accessed via walking and biking is consistent with the Community Development policy of promoting the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices. The proximity of the Project to existing residential neighborhoods that can be accessed via walking and biking and the presence of existing bus stops on Rose Avenue adjacent to College Park is also consistent with the Circulation Element policies of reducing single-occupancy automobile use and increasing the use of alternative forms of transportation, considering where appropriate and feasible the enhancement of the pedestrian environment, and creating a physical link for pedestrian and bicycle traffic between parks and recreation facilities. As such, the Project does not conflict with the City of Oxnard 2030 General Plan.

Plans	Description	Relevant Goals, Policies and/or Objectives	Consistency
City of Oxnard Bicycle & Pedestrian Facilities Master Plan	The Bicycle & Pedestrian Facilities Master Plan was adopted in in 2011 and provides a broad vision, strategies, and actions for the improvement of bicycling and walking in the City of Oxnard. The purpose of the plan is to expand the existing networks, close gaps, address constrained areas, provide greater connectivity, educate, encourage, and maximize funding sources.	1) Goal 2.1 – The Oxnard Bicycle and Pedestrian Facilities Master Plan intends to make bicycling and walking integral modes of transportation in Oxnard through a safe, interconnected system of bicycle and pedestrian facilities.	While the proposed Project would not include the construction of new bicycle facilities, it would preserve the existing bicycle lanes on Rose Avenue adjacent to College Park and would include the installation of a new crosswalk on the College Park ring road to connect the Project site with the interior of College Park and existing pedestrian facilities on Rose Avenue. Additionally, the proposed Project would provide 16 bicycle parking spaces to facilitate bicycle travel to the Project site. As such, the Project does not conflict with the City of Oxnard Bicycle & Pedestrian Facilities Master Plan.

Impact Analysis

Based on the evidence presented above, it is concluded that the Project could be presumed to have a **less than significant impact**.

Appendix H

Noise and Vibration Study



South Oxnard Aquatics Center Project

Noise and Vibration Study

prepared by

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May 2023

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Appendices

Appendix A Roadway Construction Noise Model (RCNM) Outputs

1 Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by the City of Oxnard (City) to conduct a noise and vibration study for the South Oxnard Aquatics Center Project (project), in Oxnard, Ventura County, California. The 7.93-acre vacant, graded project site is located at the southeast corner of College Park at 3250 South Rose Avenue. The project includes the construction of three outdoor pools (including a 50 meter competition pool, 25 yard instructional pool, and a fun water shallow pool, slide, and splash pad), a building structure, and a parking lot. In order to heat the pools, the proposed project includes construction of a natural gas line that would connect to the southwest corner of the proposed aquatics center, run west along the southern portion of College Park's one-lane ring road, and connect to an existing SoCalGas line in South Rose Avenue. The aquatics center will provide recreation, water fitness, and competitive aquatics opportunities for the residents of the City and surrounding communities.

The project is subject to the California Environmental Quality Act (CEQA). The City of Oxnard is the lead agency under CEQA. In addition to CEQA, several laws and regulations govern noise and the generation of noise in the City, including Title 24, Part 11 of the California Code of Regulations, the City of Oxnard 2030 General Plan Safety and Hazards Chapter, the City of Oxnard Municipal Code, and the City of Oxnard CEQA Guidelines.

This study includes analysis of noise and vibration impacts associated with construction and operation of the project. Noise monitoring was conducted to capture ambient noise levels at the project site and in vicinity of the project site. Seven short-term (15 minute) noise measurements were conducted on Saturday, January 7, 2023. Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). Existing noise levels ranged from 51 to 70 dBA L_{eq}.

Construction activities would result in temporary noise increases in the project site vicinity and would typically be higher during the heavier periods of initial construction (i.e., site preparation and grading) and would be lower during the later construction phases (i.e., building construction and paving). Construction of the project would temporarily increase ambient noise levels up to approximately 80 dBA L_{eq} during pipeline construction, which would occur approximately 195 feet from the nearest sensitive receptor, College Park located east of the pipeline construction project area. Construction noise would be less than 80 dBA L_{eq} at all other sensitive receptors during construction of the project. Construction noise generated by the project could therefore have the potential to generate or expose persons to noise levels in excess of applicable standards and generate a substantial temporary or periodic increase in ambient noise. With adherence to Mitigation Measure NOI-1, which requires preparation and implementation of a Construction Noise Reduction Plan, construction noise impacts would be ***less-than-significant with mitigation***.

On-site operational noise sources after completion of construction would include heating, ventilation, and air condition (HVAC) equipment, pool utility equipment, voices from people recreating, and noise from swim competitions, such as use of a public address (PA) system and spectators. Off-site operational noise sources include traffic noise generated by visitors traveling to and from the project site in automobiles. The combined noise levels from on-site operational noise sources would reach up to 52 dBA during the daytime. Noise generated by the project would not exceed the City's most stringent daytime exterior noise level limit of 55 dBA and project operational activities would not occur during the nighttime. The maximum increase in traffic noise associated with project operation would be 4 dBA L_{eq} which would not exceed the City's significance thresholds

for traffic noise. Therefore, operational noise generated by the project does not have the potential to generate or expose persons to noise levels in excess of applicable standards or generate a substantial permanent increase in ambient noise. Operational noise impacts would be ***less than significant***.

The greatest anticipated source of vibration during project construction activities would be from a vibratory roller, which would be used during paving and pipeline construction activities. A vibratory roller would generate up to approximately 0.01 inches per second (in/sec) peak particle velocity (PPV) at the closest sensitive receptor to paving and pipeline activities and up to 41 vibration decibels (VdB) at the Oxnard College Letters and Science Building, which may contain science classrooms and laboratories with vibration-sensitive equipment such as scanning electron microscopes, optical microscopes, and other sensitive laboratory equipment. Therefore, vibration levels at nearby sensitive receptors would not exceed the significance thresholds of 0.2 in/sec PPV and 65 VdB. The project does not include substantial vibration sources associated with operation. Therefore, bibration generated by the project does not have the potential to generate or expose persons to excessive groundborne vibration or groundborne noise levels. Vibration impacts would be ***less than significant***.

The project is not located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mogu. The project therefore does not expose people residing or working in the project area to excessive aviation related noise. Therefore, ***no impact*** related to aviation noise would occur.

The mature eucalyptus trees surrounding the project site provide suitable habitat for overwintering monarch butterflies and nesting birds. Construction noise generated by the project therefore could have the potential to expose non-human species to excessive noise. With adherence to the Mitigation Measures BIO-1 and BIO-2, which require monarch butterfly avoidance and minimization and pre-construction nesting bird surveys, impacts related to exposure of non-human species to excessive noise would be ***less-than-significant with mitigation***.

2 Project Description and Impact Summary

2.1 Introduction

This study analyzes the potential noise and vibration impacts associated with the construction and operation of the proposed South Oxnard Aquatics Center project (hereafter referred to as project or proposed project) located in Oxnard, California. Rincon Consultants, Inc. (Rincon) prepared this study under contract to the City of Oxnard in support of the environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). Table 1 provides a summary of project impacts.

Table 1 Summary of Impacts

Impact Statements	Proposed Project's Level of Significance	Applicable Mitigation Measures
Would the project generate or expose persons to noise levels in excess of standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies?	Less than significant impact with mitigation incorporated (Construction) Less than significant impact (Operation)	Mitigation Measure NOI-1 Construction Noise Reduction Plan
Would the project generate or expose persons to excessive groundborne vibration or groundborne noise levels?	Less than significant impact (Construction) Less than significant impact (Operation)	None
Would the project generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Less than significant impact with mitigation incorporated (Construction)	Mitigation Measure NOI-1 Construction Noise Reduction Plan
Would the project generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project?	Less than significant impact (Operation)	None
For a project located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the project area to excessive noise levels?	No impact	None
Would the project expose non-human species to excessive noise?	Less than significant with mitigation (Construction)	Mitigation Measure BIO-1 Monarch Butterfly Avoidance and Minimization and Mitigation Measure BIO-2 Pre-Construction Nesting Bird Survey

2.2 Project Summary

Project Location

The 7.93-acre project site is located at 3250 South Rose Avenue (Assessor's Parcel Number [APN] 224-001-228) in Oxnard, California. The project site is located in the southeast corner of College Park, approximately 340 feet south of South Oxnard Boulevard. The project site is primarily vacant, with existing trees encroaching into the project site's eastern border. Figure 1 shows the regional location of the project site, while Figure 2 shows the project site boundary.

Project Description

The proposed project would include construction of a 57,233 square foot outdoor pool area with four pool areas totaling 23,571 square feet, one slide area totaling 822 square feet, a one-story "L" shaped building totaling 18,342 square feet, a 103-stall parking lot, and ancillary facilities. Pool areas would consist of a 50-meter competition pool, 25-yard instructional pool, splash pad, recreation pool, and slide area. The one-story building would frame the western and northern sides of the pool deck and would be used to house locker rooms, administrative space, utility rooms, a concession stand, and other ancillary facilities. The proposed project also includes construction of a natural gas line that would connect to the southwest corner of the proposed aquatics center, run west along the southern portion of College Park's one-lane ring road, and connect to an existing SoCalGas line in South Rose Avenue. Figure 3 shows the project layout.

Construction

Construction of the proposed project is anticipated to begin in the first quarter of 2026 and end in the first quarter of 2028. Underground stone columns, up to 50 feet in depth, may be required to increase the load-bearing capacity of the soil. Excavation up to 15 feet in depth would be required for the pool areas and utilities. The proposed project would require cut of approximately 11,000 cubic yards (CY) and approximately 7,000 CY of fill. Approximately 6,000 CY of soil would be exported from the project site. Soil debris would be hauled to the Toland Road Landfill or the Simi Valley Landfill, or other landfills with available capacity. The proposed haul route for soil export and material delivery would be as follows:

- Toland Road Landfill: Rose Avenue to State Route (SR) 118 to SR 126 to Toland Road
- Simi Valley Landfill: Pleasant Valley Road to United States Highway 101 (U.S. 101) to SR 23 to SR 118 to Madera Road

Construction staging would be located on the project site. Construction workers would park on the project site, on the street immediately west of the project site, or in the adjacent parking lot located approximately 460 feet west of the project site. No nighttime or weekend construction would occur.

Figure 1 Regional Location



Basemap provided by Esri and its licensors © 2022.

Project Location

N

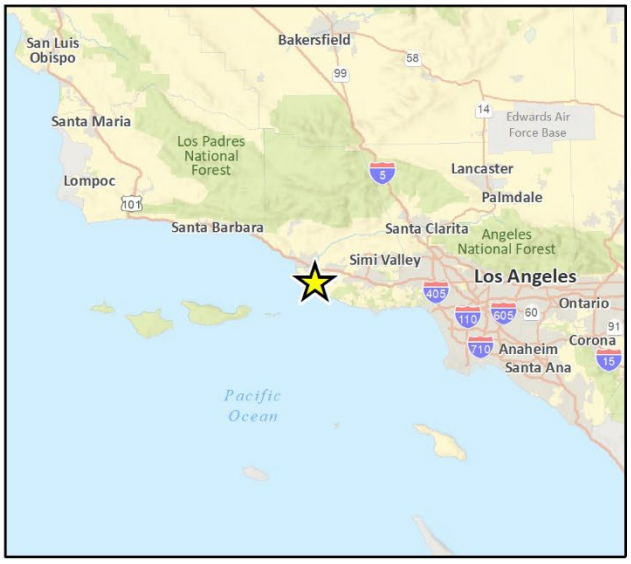
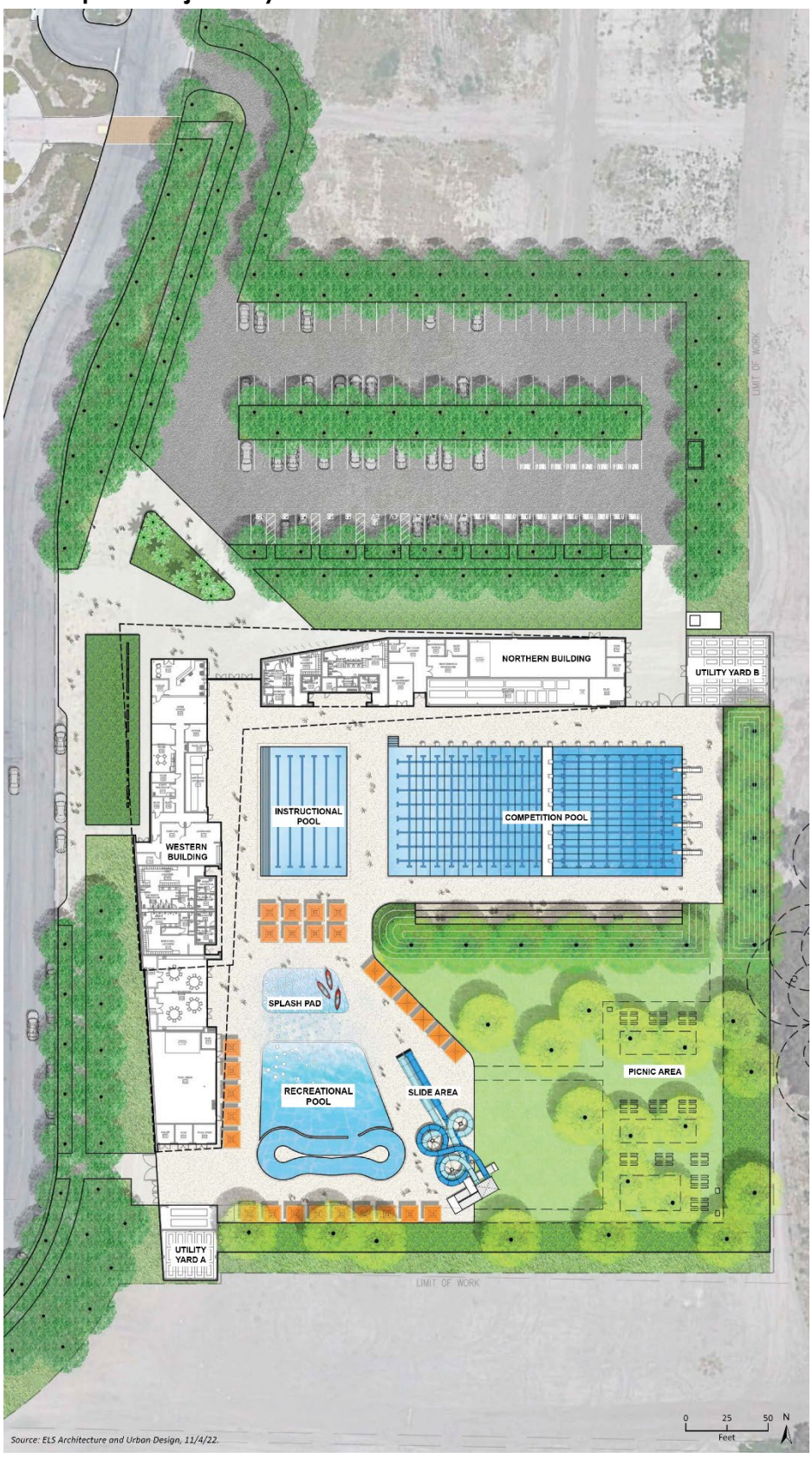


Figure 2 Project Site Boundary



Imagery provided by Microsoft Bing and its licensors © 2022.

Figure 3 Conceptual Project Layout



3 Background

3.1 Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dBA; dividing the energy in half would result in a 3 dBA decrease (Harris 1991).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud (Harris 1991).

Sound changes in both level and frequency spectrum as it travels from the source to the receptor. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line, the path the sound will travel, site conditions, and obstructions). Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5 dBA reduction in source noise levels at the receptor (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce exposure to interior noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs, and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time.

Sound power is the total airborne sound energy radiated by a sound source per unit of time irrespective of the distance from the source. Sound pressure, on the other hand, is the result of sound sources radiating sound energy that is transferred into a specific acoustical environment and measured at a specific location and distance from the source.

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. It is also measured using the Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013). Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of traffic during the day, evening, and night.

3.2 Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of hertz (Hz). The frequency of a vibrating object describes how rapidly it oscillates.

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration amplitudes are usually expressed in peak particle velocity (PPV), which is normally described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration and other construction activities because it is related to the stresses that are experienced by buildings. Vibration amplitudes can also be expressed in root mean square (RMS) velocity, which is measured in vibration decibels (VdB). VdB is a measure of vibration expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1

micro-inch per second (1x10-6 in/sec). RMS is typically more suitable for evaluating impacts to vibration-sensitive equipment (Caltrans 2020).

3.3 Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. The City of Oxnard CEQA Guidelines (City of Oxnard 2017) define noise sensitive uses as residences, transient lodgings, schools, libraries, churches, hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks. Noise sensitive receptors near the site include College Park adjacent to the project site along the western project boundary, single-family residences approximately 425 feet northeast of the project site boundary on Sutter Place, Oxnard College adjacent to the southern project boundary, single-family residences approximately 850 feet east of the project site boundary on Olds Road, and Channel Islands High School located across Rose Avenue northwest from the western terminus of the proposed pipeline associated with the project.

Vibration sensitive receptors are similar to noise sensitive receptors, including residences and institutional uses such as schools, churches, and hospitals. However, vibration sensitive receptors also include buildings where vibrations may interfere with vibration-sensitive equipment. Vibration sensitive receptors near the site include single-family residences northeast of the project site, Oxnard College to the south, single-family residences to the east of the project site, and Channel Islands High School located to the northwest of the proposed pipeline.

3.4 Project Noise Setting

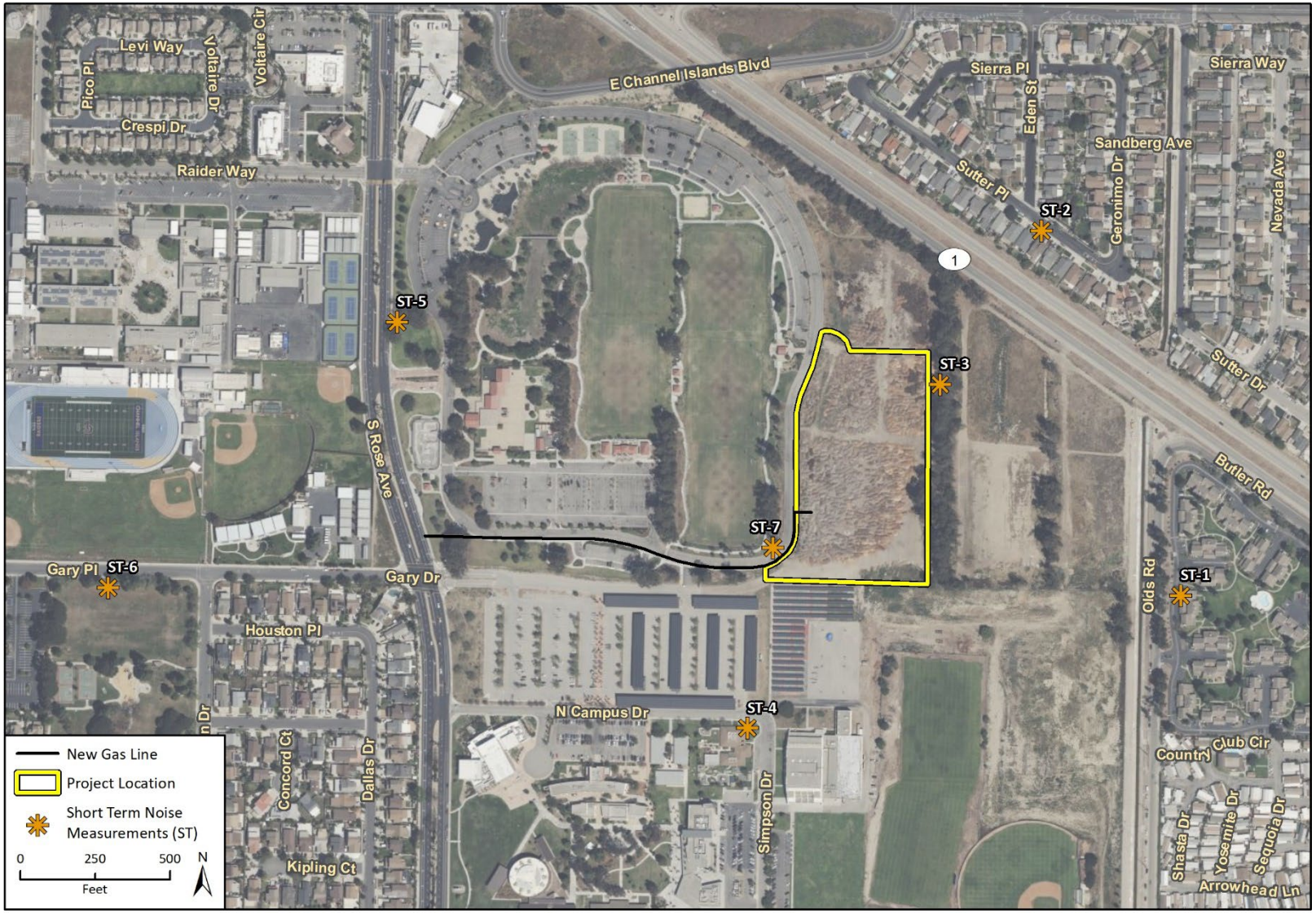
The most common source of noise in the project site vicinity is vehicular traffic from South Oxnard Boulevard and Rose Avenue. To characterize ambient noise levels in the project vicinity, seven short term (15 minute) noise measurements were conducted on Saturday, January 7, 2023. The approximate noise measurement locations are shown in Figure 4. Short term noise measurement (ST)-1 and ST-2 were conducted at the closest off-site residences east and northeast of the project site to capture ambient noise levels at the residences. ST-3 was conducted near the northeastern corner of the project site to capture ambient noise levels attributable to South Oxnard Boulevard at the project site. ST-4 was conducted at the Oxnard College Child Development Center Building at the corner of North Campus Road and Simpson Drive to capture ambient noise levels at the Oxnard College building located closest to the project site. ST-5 was conducted 50 feet from the centerline of Rose Avenue between Raiders Way and the College Park entrance to capture ambient noise levels attributable to Rose Avenue. ST-6 was conducted 50 feet from the centerline of Gary Drive at the northern boundary of College Estates Park on Gary Drive between Frankfort Court and Boston Drive to capture ambient noise levels from Gary Drive. ST-7 was conducted at the southeast corner of College Park to capture ambient noise levels at College Park. Figure 4 summarizes the results of the short-term noise measurements.

Table 2 Short-Term Noise Level Measurement Results

Measurement Location	Measurement Location	Sample Times	Approximate Distance to Primary Noise Source or Project Site	L_{eq} (dBA)	L_{min} (dBA)	L_{max} (dBA)
ST 1	Residences along Olds Road, east of the project site	7:01 – 7:16 p.m.	Approximately 850 feet to the project site	58	42	83
ST 2	Residences along Sutter Place, northeast of the project site	7:27 – 7:42 p.m.	Approximately 550 feet to the project site	51	42	62
ST 3	Northeast corner of the project site	3:26 – 3:41 p.m.	Approximately 400 feet to centerline of South Oxnard Boulevard	55	48	72
ST-4	Oxnard College Child Development Center	3:51 – 4:06 p.m.	Approximately 580 feet to the project site	67	63	70
ST-5	Rose Avenue between Raiders Way and the College Park Entrance	2:16 – 2:31 p.m.	Approximately 50 feet to the centerline of Rose Avenue	70	50	85
ST-6	Gary Drive between Frankfort Court and Boston Drive	2:40 – 2:55 p.m.	Approximately 50 feet to the centerline of Gary Drive	58	43	74
ST-7	Southeast corner of College Park	3:04 – 3:19 p.m.	Approximately 30 feet to the center of the road circling College Park	52	45	64

dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{min} = minimum noise level, L_{max} = maximum noise level

Figure 4 Approximate Noise Measurement Locations



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Fig X Noise Measurement Locations

3.5 Regulatory Setting

Federal

There are no federal regulations that are directly appliable to the proposed project.

State

California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires each county and city to adopt a General Plan that includes a Noise Element prepared per guidelines adopted by the Governor's Office of Planning and Research. The purpose of the Noise Element is to limit the exposure of the community to excessive noise levels. CEQA requires all known environmental effects of a project be analyzed, including environmental noise impacts.

California Building Code: California Green Building Standards Code

The State of California's noise insulation standards for nonresidential uses are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 11, California Green Building Standards Code. The California Green Building Standards Code noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (Section 5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA $L_{eq(1hr)}$.

City of Oxnard Noise Standards

City of Oxnard 2030 General Plan

The City of Oxnard 2030 General Plan was adopted October 2011. The Safety and Hazards Chapter identifies policies to ensure a quiet and safe residential and working environment. The following policies within the General Plan apply to the proposed project:

Goal SH-5	**A quiet and safe residential and working environment in terms of exposure to and/or generation of noise.**
SH-5.2	**State Noise Insulation Standard**s. Continue to enforce State Noise Insulation Standards for projects in high noise environments and require developers to comply with noise mitigation measures, designed by an acoustical engineer.
SH-5.3	**Sound Attenuation Measures.** Promote, where feasible, alternative sound attenuation measures such as berms, heavy landscaping, resurfacing of noise walls to promote noise absorption as well as deflection, berms and landscaping, or location of buildings away from roadways or other noise sources.
Goal SH-6	**Consideration of noise levels and impacts in the land use planning and development process.**

SH-6.1 **Construction Noise Control.** Provide best practices guidelines to developers for reducing potential noise impacts on surrounding land uses.

SH-6.2 **Limiting Construction Activities.** Continue to limit construction activities to the hours of 7 a.m. to 7 p.m., Monday through Saturday. No construction shall occur after hours, on Sundays, or national holidays without permission from the City.

SH-6.3 **Buffering of Sensitive Receptors.** Require noise buffering and/or other construction treatments in development located near major streets, highways, the airport, railroad tracks, or other significant noise sources as recommended by a noise analysis.

SH-6.4 **New Development Noise Compatibility.** Require that proposed development projects not generate more noise than that classified as "satisfactory" based on CEQA Thresholds of significance on a nearby property.

SH-6.5 **Land Use Compatibility with Noise.** Encourage non-noise sensitive land uses to locate in areas that are permanently committed to noise producing land uses, such as transportation corridors and industrial zones.

SH-6.12 **Development Near Railroads and Oxnard Airport.** Require that new habitable structures be setback at least 85 feet from the nearest railroad track measured from the edge of the outermost railroad track, and only compatible new development is located within the Oxnard Airport 65 dBA CNEL contour.

SH-6.13 **Noise Acceptable for Open Windows and Patios.** Continue to require noise analysis of proposed development projects as part of the environmental review process and require mitigation measures to reduce noise impacts to acceptable levels within outside activity areas and within residential structures without relying on mechanical ventilation, if feasible.

City of Oxnard Municipal Code

The City's Noise Ordinance (Chapter 7, Article XI, of the Oxnard Municipal Code) identifies noise standards for various sources and includes specific noise restrictions for sources of noise within the city. The following sections of the City's Noise Ordinance are relevant to the analysis:

- **Section 7-184 of the Oxnard Municipal Code** designates sound zones for properties within the city based on their corresponding land use. Residential uses are designated as Sound Zone I; Commercial properties are designated Sound Zone II; Industrial areas are designated as Sound Zone III; and all property within the contours around a roadway, railroad track, or the Oxnard Airport (as identified in Figure IX-2 of the Noise Element of the 2020 General Plan) are designated as Sound Zone IV. Table 3 shows the allowable noise levels and corresponding times of day for each of the identified sound zones.

Table 3 Exterior Noise Standards

		Allowable Exterior Sound Level (dBA)	
Sound Zone	**Type of Land Use**	**7:00 a.m. to 10:00 p.m.**	**10:00 p.m. to 7:00 a.m.**
I	Residential	55	50
II	Commercial	65	60
III	Industrial	70	70
IV	As identified in Figure IX-2 of the 2020 General Plan		

dBA = A-weighted decibel

Source: Oxnard Municipal Code Section 7-185

- **Section 7-185 of the Municipal Code** specifies that no person at any location within the city shall create, maintain, cause, or allow any sound on property which causes the sound level, when measured on any other property, to exceed:
  1. The allowable exterior sound level for a cumulative period of more than 30 minutes in any hour;
  2. The allowable exterior sound level plus five dBA for a cumulative period of more than 15 minutes in any hour;
  3. The allowable exterior sound level plus ten dBA for a cumulative period of more than five minutes in any hour;
  4. The allowable exterior sound level plus 15 dBA for a cumulative period of more than one minute in any hour; or
  5. The allowable exterior sound level plus 20 dBA for any period of time.
- **Section 7-188 of the Municipal Code** states exemptions for specific activities. Activities for which a permit or license has been issued and are conducted on public parks or public playgrounds would be exempt from the noise standards. Outdoor gatherings, public dances, shows, sporting or entertainment events that are conducted pursuant to a permit or license are exempt from the noise standards. Activities associated with construction are exempt from the quantitative noise limitations shown in Table 3, but are restricted to the hours between 7:00 a.m. and 6:00 p.m. on weekdays and Saturdays.

4 Methodology

4.1 Construction Noise

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) (FHWA 2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise sensitive receptors near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation rate of 6 dBA per doubling of distance for stationary equipment.

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle of the activity to determine the L_{eq} of the operation (FHWA 2006). Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some having higher continuous noise levels than others, and some have high-impact noise levels.

Construction activity would result in temporary noise in the project site vicinity, exposing surrounding nearby receptors to increased noise levels. Construction noise would typically be higher during the heavier periods of initial construction (i.e., site preparation and grading) and would be lower during the later construction phases (i.e., building construction and paving). Typical heavy construction equipment during project grading could include dozers, loaders, graders, and dump trucks. It is assumed that diesel engines would power all construction equipment. Construction equipment would not all operate at the same time or location. In addition, construction equipment would not be in constant use during the workday.

Construction equipment is typically dispersed in various areas of the project site, with only a limited amount of equipment operating near a given location at a particular time. The FTA *Transit Noise and Vibration Impact Assessment* document recommends an approach where the distance variable in its construction noise calculation "assumes that all equipment operates at the center of the project" (FTA 2018). Therefore, it is common, industry standard practice to analyze average construction noise from the center of the site or phase because this is the approximate center of where noise is being generated, as equipment moves around the site throughout the workday. In accordance with FTA recommendations, construction noise from site preparation, grading, and stone column construction was analyzed from the center of the site, as construction equipment for these phases would be moving throughout the site. Construction noise from building construction, paving, and architectural coating was analyzed based upon the closest proposed parking area or building to the sensitive receptors, as buildings and parking areas are proposed at different locations throughout the project site. Construction noise from pipeline construction was analyzed from the middle point of the pipeline length as construction equipment for this phase would be moving throughout the pipeline alignment. The closest sensitive receptors to the project site are College Park adjacent to the western project boundary, single-family residences to the northeast and east of the project site, Oxnard College south of the project site, and Channel Islands High School northwest of the project site. Construction activities would be located as close as approximately 125 feet to the nearest sensitive receptors but would typically be located at an average distance further away due to the

nature of construction. Noise levels from each phase of construction were modeled in RCNM based on the equipment list provided by the City.

4.2 Groundborne Vibration

The project does not include any substantial vibration sources associated with operation. Thus, construction activities have the greatest potential to generate ground-borne vibration affecting nearby receptors, especially during grading and paving of the project site. The greatest vibratory source during construction in the project vicinity would be a roller used during paving. Neither blasting nor pile driving would be required for construction of the project. Construction vibration estimates are based on vibration levels reported by the FTA. Table 4 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration (FTA 2018).

Table 4 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 feet (in/sec)
Vibratory Roller	0.21
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

PPV = peak particle velocity; in/sec = inches per second

Source: FTA 2018

4.3 Operational Noise Sources

The noise sources on the project site after completion of construction are anticipated to be those that would be typical of an aquatics and recreation center, such as heating, ventilation, and air condition (HVAC) equipment, pool utility equipment, voices from people recreating, and noise from swim competitions, such as use of a public address (PA) system and spectators.

The primary on-site operational stationary noise source from the project would HVAC units, exhaust fans in the locker rooms and at the concession area, and mechanical rooms housed at the utility yards. A typical HVAC system generates noise levels ranging up to 72 dBA at a distance of 3 feet. The HVAC units would be rooftop-mounted units. Mechanical equipment such as pumps and boilers are proposed to be located inside mechanical rooms and are not anticipated to be substantial sources of noise.

The PA system would place ceiling speakers spaced 20 to 25 feet apart throughout the exterior of the building. Exterior pole mounted speakers would be provided for coverage to all exterior areas. The system would be designed and required to have a 70 dBA sound level limit throughout the aquatics center, which would result in announcements approximately three to five decibels higher than typical conversation.

Finally, reference noise levels from the SoundPLAN 8.2 computer acoustical modeling program were used to estimate operational noise from large groups of people using the swimming pools and facilities. The reference noise level of 108 dB sound power level for “open air swimming pool” was selected from the SoundPLAN library. The combination of noise sources anticipated from the project

are then estimated at nearby sensitive receptors using the principles of sound propagation and taking into account any major shielding such as from proposed project buildings.

4.4 Traffic Noise

Noise affecting the project site is primarily from traffic on South Oxnard Boulevard, Gary Road and the existing road that encircles College Park. Project traffic noise increases were estimated using the average peak hour turning movement volumes data provided by Fehr & Peers for the project (Fehr & Peers 2023). Existing traffic volume estimates along the roadway study segments along with project peak hour volumes distribution are shown in Table 5. Cumulative and Cumulative with Project traffic volumes were obtained from Fehr & Peers and are shown in Table 6.

Table 5 Existing and Existing Plus Project Roadway Peak Hour Volumes

Roadway	Segment	Existing Peak Hour Volumes	Project Peak Hour Volumes Distribution	Existing Plus Project Peak Hour Volumes
Rose Avenue	Rose Avenue - North of Channel Islands Boulevard	1,715	157	1,872
Rose Avenue	Rose Avenue - South of Channel Islands Boulevard	1,566	246	1,812
Channel Islands	Channel Islands Boulevard - West of Rose Avenue	1,696	67	1,763
Channel Islands	Channel Islands Boulevard - East of Rose Avenue	1,185	22	1,207
Rose Avenue	Rose Avenue - North of Raiders Way	1,560	247	1,807
Rose Avenue	Rose Avenue - South of Raiders Way	1,481	135	1,616
Raiders Way	Raiders Way - West of Rose Avenue	60	0	60
Raiders Way	Raiders Way - East of Rose Avenue	183	202	385
Rose Avenue	Rose Avenue - North of College Park Entrance	1,482	136	1,618
Rose Avenue	Rose Avenue - South of College Park Entrance	1,434	202	1,636
College Park Entrance	College Park Entrance - East of Rose Avenue	168	248	416
Rose Avenue	Rose Avenue - North of Gary Drive	1,425	202	1,627
Rose Avenue	Rose Avenue - South of Gary Drive	1,302	180	1,482
Gary Drive	Gary Drive - West of Rose Avenue	185	22	207
Gary Drive	Gary Drive - East of Rose Avenue	26	0	26

Source: Fehr & Peers 2023.

Table 6 Cumulative and Cumulative With Project Roadway Peak Hour Volumes

Roadway	Segment	Cumulative Peak Hour Volumes	Project Peak Hour Volumes Distribution	Cumulative With Project Peak Hour Volumes
Rose Avenue	Rose Avenue - North of Channel Islands Boulevard	1,859	157	2,016
Rose Avenue	Rose Avenue - South of Channel Islands Boulevard	1,902	0	1,902
Channel Islands	Channel Islands Boulevard - West of Rose Avenue	1,879	0	1,879
Channel Islands	Channel Islands Boulevard - East of Rose Avenue	1,249	0	1,249
Rose Avenue	Rose Avenue - North of Raiders Way	1,651	248	1,899
Rose Avenue	Rose Avenue - South of Raiders Way	1,569	137	1,706
Raiders Way	Raiders Way - West of Rose Avenue	62	1	63
Raiders Way	Raiders Way - East of Rose Avenue	190	202	392
Rose Avenue	Rose Avenue - North of College Park Entrance	1,570	135	1,705
Rose Avenue	Rose Avenue - South of College Park Entrance	1,521	201	1,722
College Park Entrance	College Park Entrance - East of Rose Avenue	174	247	421
Rose Avenue	Rose Avenue - North of Gary Drive	1,511	202	1,713
Rose Avenue	Rose Avenue - South of Gary Drive	1,384	180	1,564
Gary Drive	Gary Drive - West of Rose Avenue	192	22	214
Gary Drive	Gary Drive - East of Rose Avenue	27	0	27

Source: Fehr & Peers 2023.

The posted speed limit on Rose Avenue is 45 miles per hour, except near Channel Islands High School where it is 25 miles per hour. Additionally, the speed limit for Channel Islands Boulevard is 40 miles per hour and the speed limit for Gary Drive is 30 miles per hour. No speed limit is posted for Raiders Way and College Park Entrance. As an aquatics center development with recreational and park land uses, the vehicle mix would be similar to existing conditions.

4.5 Significance Thresholds

The City of Oxnard CEQA Guidelines state that an affirmative answer to any of the following questions typically indicates a significant land use impact. A "no" response to all questions indicates that there would be no significant impact with respect to land use.

1) Would the project generate or expose persons to noise levels exceeding standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies?
2) Would the project generate or expose persons to excessive groundborne vibration or groundborne noise levels?
3) Would the project generate a substantial temporary or periodic increase in ambient noise in the project vicinity above levels existing without the project?
4) Would the project generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project?
5) For a project located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the project area to excessive noise levels?
6) Would the project expose non-human species to excessive noise?

Construction Noise

- As stated in the Oxnard CEQA Guidelines, activities associated with construction are exempt from specific quantitative noise limitations in the City Noise Ordinance, but are restricted to the hours between 7:00 a.m. and 6:00 p.m. on weekdays and Saturdays pursuant to the City's Municipal Code Section 7-188(D). Construction-related noise impacts would normally be less than significant if construction activity occurs within the timing restrictions specified in the Noise Ordinance.

Construction Vibration

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as, vibratory compaction or excavation, are based on information contained in the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018). Groundborne vibration levels that could induce potential architectural damage to buildings are identified in Table 7. Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec PPV at non-engineered timber and masonry buildings (which would apply to the nearby residential structures and Oxnard College) would prevent architectural damage.

Table 7 Groundborne Vibration Architectural Damage Criteria

Building Category		PPV (in/sec)
I.	Reinforced concrete, steel, or timber (no plaster)	0.5
II.	Engineered concrete and masonry (no plaster)	0.3
III.	Non-engineered timber and masonry buildings	0.2
IV.	Buildings extremely susceptible to vibration damage	0.12

in/sec = inches per second; PPV = peak particle velocity

Source: FTA 2018

The FTA provides criteria for acceptable levels of groundborne vibration for buildings containing vibration-sensitive equipment, including but not limited to scanning electron microscopes, optical microscopes, and other sensitive laboratory equipment. For the purposes of this analysis, 65 VdB is used as a threshold for nearby Oxnard College buildings potentially containing vibration-sensitive equipment, such as science classrooms and laboratories.

On-site Stationary Operational Noise

- The City has adopted exterior noise standards in the Oxnard Municipal Code regulating operational noise sources in the city. The proposed project would result in a significant impact if noise from project stationary operational and recreational noise sources exceed the Municipal Code standards shown in Table 3.

Traffic Noise

A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas. The following thresholds of significance, included in the Oxnard CEQA guidelines and recommended by the FTA, are used to assess traffic noise impacts at sensitive receptor locations. Table 8 shows the significance thresholds for increases in traffic-related noise levels. These standards are applicable to project-related noise impacts on existing sensitive receptors.

Table 8 Significance of Changes in Operational Roadway Noise Exposure

Existing Noise Exposure (dBA L_{dn} or L_{eq})	Allowable Noise Exposure Increase (dBA L_{dn} or L_{eq})
45-49	7
50-54	5
55-59	3
60-64	2
65-74	1
75+	0

Source: City of Oxnard 2017.

On-Site Land Use Compatibility

- As a result of the Supreme Court decision regarding the assessment of the environment's impacts on projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. As a result, while the noise from existing sources (e.g., adjacent roadways) is taken into account as part of the baseline condition, the direct effects of exterior noise from nearby noise sources relative to land use compatibility of a proposed project is typically no longer a required topic for impact evaluation under CEQA. Generally, no determination of significance is required except for certain school projects, projects affected by airport noise, and projects that would exacerbate existing conditions (i.e., projects that would have a significant operational impact).

5 Impact Analysis

Threshold 1:	Would the project generate or expose persons to noise levels in excess of standards established in the Oxnard 2030 General Plan or Noise Ordinance, or applicable standards of other agencies?
Threshold 3:	Would the project generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
Threshold 4:	Would the project generate a substantial permanent increase in ambient noise in the project vicinity above levels existing without the project?

Impact N-1 CONSTRUCTION OF THE PROJECT WOULD TEMPORARILY INCREASE AMBIENT NOISE LEVELS AND WOULD BE SIGNIFICANT IF UNCONTROLLED. WITH MITIGATION, CONSTRUCTION NOISE WOULD BE LESS THAN SIGNIFICANT. ALTHOUGH AMBIENT NOISE IN THE PROJECT VICINITY COULD INCREASE FROM ON-SITE OPERATIONAL ACTIVITIES AND INCREASED TRAFFIC RESULTING FROM THE PROJECT, OPERATIONAL NOISE INCREASES WOULD NOT EXCEED APPLICABLE STANDARDS AND OPERATIONAL NOISE IMPACTS WOULD BE LESS THAN SIGNIFICANT. NOISE IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Construction

As described under Section 3, *Methodology*, over the course of a typical construction day, construction equipment would be located as close as 125 feet to the nearest sensitive receptor, College Park, but would typically be located at an average distance further away due to the nature of construction where equipment is mobile throughout the site during the day. Table 9, on the following page, identifies the estimated noise levels at the closest sensitive receptors from the center of the specific phase based on the conservatively assumed combined use of all construction equipment during each phase of construction.

As shown in Table 9, construction noise could be as high as approximately 80 dBA L_{eq} during pipeline construction, which would occur approximately 195 feet from the nearest sensitive receptor, College Park located east of the pipeline construction project area. Construction noise would be less than 80 dBA L_{eq} at all other sensitive receptors during construction of the project. Construction would occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and Saturdays, pursuant to the City's Municipal Code Section 7-188(D). According to the City of Oxnard CEQA Guidelines, when construction would occur within 500 feet of a noise sensitive use, noise minimization measures are prudent. Therefore, if uncontrolled, project construction noise would be considered significant. Implementation of Mitigation Measure NOI-1 would reduce this impact to a level of less-than-significant.

Table 9 Estimated Noise Levels by Construction Phase

Construction Phase	L_{eq} dBA					
	RCNM Reference Noise Level[1]	College Park to the West	Single-Family Residences to the Northeast	Single-Family Residences to the East	Oxnard College to the South	Channel Islands HS to the Northwest
Distance in feet	**50**	**290**	**835**	**1,040**	**845**	**1,700**
Site Preparation	84	69	59	58	59	53
Grading	87	72	63	61	62	56
Stone Column Construction	78	63	54	52	53	47
Distance in feet	**50**	**125**	**780**	**1,005**	**735**	**1,5000**
Building Construction	85	77	61	59	62	55
Architectural Coating	76	68	52	50	53	46
Distance in feet	**50**	**300**	**665**	**1,045**	**1,025**	**1,725**
Paving	87	71	65	61	61	56
Distance in feet	**50**	**195**	**1,550**	**1,900**	**800**	**790**
Pipeline Construction	92	80	62	60	68	68

[1] RCNM reference noise levels are noise levels generated during each construction phase measured from a point 50 feet from the location of the construction phase. These reference noise levels are then used to calculate noise levels from the construction phase at a distance greater than 50 feet from the construction phase.

Source: Roadway Construction Noise Model (RCNM). See Appendix A for modeling outputs.

On-Site Operational Stationary Sources

The primary on-site operational noise sources from the project would be from the combination of on-site recreational activities, use of the PA system, and mechanical equipment such as HVAC units. Using the reference noise levels from Section 3, *Methodology*, project operational noise levels are estimated at nearby sensitive receptors and shown in Table 10.

Table 10 Project On-Site Stationary Operational Noise Levels, dBA

Source	College Park to the West[1]	Single-Family Residences to the Northeast[2]	Single-Family Residences to the East	Oxnard College to the South
Voices from swimming pool and facilities use	43	46	51	52
PA System	36	22	21	24
Mechanical Equipment	38	24	23	26
Combined Noise Levels	**45**	**46**	**51**	**52**

[1] Includes 15 dBA of reduction due to shielding from the proposed project Western Building.

[2] Includes 5 dBA of reduction due to shielding from the South Oxnard Boulevard sound wall.

Project operational activities are proposed during the daytime. No activities are proposed after 10:00 p.m. As shown in Table 10, noise generated by the project would not exceed the City's most stringent daytime exterior noise level limit of 55 dBA shown in Table 3. Therefore, impacts related to operational stationary noise would be less than significant.

Off-Site Traffic

The project would generate new vehicle trips that would increase noise levels on nearby roadways. The project is anticipated to generate up to 2,048 new daily vehicle trips (Fehr & Peers 2023).

The project would not make substantial alterations to roadway alignments or substantially change the vehicle classifications mix on local roadways. Therefore, the primary factor affecting off-site noise levels would be increased traffic volumes. Table 11 summarizes the estimated project and cumulative traffic noise increases based on peak hour traffic volumes (Fehr & Peers 2023). As shown in Table 11, the maximum increase in traffic noise would be 4 dBA L_{eq} under cumulative conditions at the College Park entrance east of Rose Avenue. Similarly, under cumulative conditions traffic noise along Raiders Way east of Rose Avenue would increase by 3.3 dBA L_{eq}. Both of these roadways lead to the road encircling College Park, where ambient noise levels were measured at 52 dBA L_{eq} during the afternoon peak commute hours (ST-7). The projected traffic noise increase of 4 dBA L_{eq} would not exceed the City's significance threshold of 5 dBA L_{eq} for areas with existing ambient of 50 to 54 dBA L_{eq}. Projected traffic noise increases would be less than 1 dBA L_{eq} on all other roadway study segments. Therefore, increases in traffic noise associated with the project would be less than significant.

Table 11 Summary of Project and Cumulative Traffic Noise Increases

		Roadway Segment Peak Hour Volumes				dBA (L_{eq})		
Roadway	Segment	Existing	Existing + Project	Cumulative	Cumulative + Project	Project Noise Increase	Cumulative Increase	Project Cumulative Contribution
Rose Avenue	Rose Avenue - North of Channel Islands Boulevard	1,715	1,872	1,859	2,016	0.4	0.7	0.4
Rose Avenue	Rose Avenue - South of Channel Islands Boulevard	1,566	1,812	1,902	1,902	0.6	0.8	<0.1
Channel Islands	Channel Islands Boulevard - West of Rose Avenue	1,696	1,763	1,879	1,879	0.2	0.4	<0.1
Channel Islands	Channel Islands Boulevard - East of Rose Avenue	1,185	1,207	1,249	1,249	0.1	0.2	<0.1
Rose Avenue	Rose Avenue - North of Raiders Way	1,560	1,807	1,651	1,899	0.6	0.9	0.6
Rose Avenue	Rose Avenue - South of Raiders Way	1,481	1,616	1,569	1,706	0.4	0.6	0.4
Raiders Way	Raiders Way - West of Rose Avenue	60	60	62	63	<0.1	0.2	0.1
Raiders Way	Raiders Way - East of Rose Avenue	183	385	190	392	3.2	3.3	3.2
Rose Avenue	Rose Avenue - North of College Park Entrance	1,482	1,618	1,570	1,705	0.4	0.6	0.4
Rose Avenue	Rose Avenue - South of College Park Entrance	1,434	1,636	1,521	1,722	0.6	0.8	0.5
College Park Entrance	College Park Entrance - East of Rose Avenue	168	416	174	421	3.9	4.0	3.8
Rose Avenue	Rose Avenue - North of Gary Drive	1,425	1,627	1,511	1,713	0.6	0.8	0.5
Rose Avenue	Rose Avenue - South of Gary Drive	1,302	1,482	1,384	1,564	0.6	0.8	0.5
Gary Drive	Gary Drive - West of Rose Avenue	185	207	192	214	0.5	0.6	0.5
Gary Drive	Gary Drive - East of Rose Avenue	26	26	27	27	<0.1	0.2	<0.1

Source: Fehr & Peers 2023

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Mitigation Measures

The City shall implement the following measures during project construction:

NOI-1 Construction Noise Reduction Plan

- The construction contractor shall prepare and implement a Construction Noise Control Plan. The construction contractor shall submit the Construction Noise Control Plan to the City of Oxnard Public Works Department for review and approval prior to initiation of construction. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set. The Construction Noise Control Plan shall include the following measures:
- At least 21 days prior to the start of construction activities, all off-site businesses and residents within 500 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.
- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, the representative shall investigate, take appropriate corrective action, and report the action to the City.
- During the entire active construction period, equipment, tools, and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. During the entire active construction period, stationary noise sources shall be located as far from sensitive receivers as possible, muffled, and enclosed within temporary sheds or insulation barriers, or other measures for equivalent noise reduction will be incorporated to the extent feasible.
- The contractor shall be required to use impact tools that are hydraulically or electrically powered wherever feasible. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Stockpiling of materials shall be located as far as feasible from nearby noise-sensitive receptors.
- Signs shall be posted at the job site entrance(s) to reinforce the prohibition of unnecessary engine idling. All equipment shall be turned off if not in use for more than 5 minutes.
- Use of stereos and other amplified noise not necessary for the completion of construction work shall be prohibited.
- During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. The construction manager shall ensure the use of use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with safety requirements and laws.

Significance After Mitigation

Implementation of Mitigation Measure NOI-1 would entail several noise reduction measures, including use of mufflers and shielding to minimize construction noise to the degree feasible. With implementation of Mitigation Measure NOI-1 project construction noise would be less than significant.

Threshold 2:	Would the project generate or expose persons to excessive groundborne vibration or groundborne noise levels?

Impact N-2 PROJECT CONSTRUCTION WOULD TEMPORARILY GENERATE GROUNDBORNE VIBRATION ON THE PROJECT SITE DURING CONSTRUCTION, BUT WOULD NOT EXCEED APPLICABLE STANDARDS. OPERATION OF THE PROJECT WOULD NOT GENERATE SUBSTANTIAL VIBRATION. THEREFORE, VIBRATION IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction activities known to generate excessive groundborne vibration, such as pile driving, would not be needed to construct the project. Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec PPV at residential and institutional structures would prevent architectural damage regardless of building construction type. Additionally, based on FTA recommendations, limiting vibration levels to 65 VdB at nearby Oxnard College buildings potentially containing vibration-sensitive equipment would prevent damage to vibration-sensitive equipment. The greatest anticipated source of vibration during project construction activities would be from a vibratory roller, which would be used during paving and pipeline construction activities. Based on the project site plan, it is assumed the vibratory roller may be used within 500 feet of the nearest off-site residential structures to the northeast of the project site during paving activities. For pipeline construction, a vibratory roller may be used within 190 feet of the nearest off-site institutional structure to the pipeline, Channel Island High School northwest of the eastern terminus of the pipeline. A vibratory roller generates up to approximately 0.01 in/sec PPV at distance of 190 feet and approximately 0.002 in/sec PPV at a distance of 500 feet, which would not exceed the significance threshold of 0.2 in/sec PPV. A vibratory roller used during pipeline construction may be used within 1,500 feet of the Oxnard College Letters and Science Building, which may contain science classrooms and laboratories with vibration-sensitive equipment such as scanning electron microscopes, optical microscopes, and other sensitive laboratory equipment. A vibratory roller generates 41 VdB at a distance of 1,500 feet, which would not exceed the significance threshold of 65 VdB. Therefore, construction activities would not generate or expose persons to excessive vibration and impacts would be less than significant.

The project does not include substantial vibration sources associated with operation. Therefore, operational vibration impacts would be less than significant.

Mitigation Measures

- No mitigation measures would be required.

Significance After Mitigation

Impacts would be less than significant, and no mitigation is required.

Threshold 5:	For a project located within the airport land use plan for Oxnard Airport or within two miles of Naval Base, Ventura County at Point Mugu, would the project expose people residing or working in the project area to excessive noise levels?

Impact N-3 THE PROJECT IS NOT LOCATED WITHIN THE AIRPORT LAND USE PLAN FOR OXNARD AIRPORT OR WITHIN TWO MILES OF NAVAL BASE, VENTURA COUNTY AT POINT MUGU. THEREFORE, THE PROJECT WOULD NOT EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE AVIATION RELATED NOISE AND THE PROJECT WOULD HAVE NO IMPACT.

The Oxnard Airport is located approximately 3.5 miles northwest of the project site. The project site is not located within the airport land use plan for the Oxnard Airport and the project site is not within two miles of Naval Base, Ventura County at Point Mugu (Ventura County 2004). Therefore, the project would not expose people working in the project area to excessive noise levels. There would be no impact.

Mitigation Measures

No mitigation measures would be required.

Threshold 6:	Would the project expose non-human species to excessive noise?

Impact N-4 NOISE GENERATED DURING PROJECT CONSTRUCTION COULD EXPOSE MONARCH BUTTERFLY AND NESTING BIRDS TO EXCESSIVE NOISE. THE EXPOSURE OF NON-HUMAN SPECIES TO EXCESSIVE NOISE WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The project site is a disturbed dirt lot and there is no suitable habitat present for supporting non-human species. However, the mature eucalyptus trees surrounding the project site provides suitable habitat for overwintering monarch butterfly and nesting birds. Project construction may indirectly disturb roosting overwintering monarchs through construction noise and other human disturbances. Construction of the project may indirectly impact nesting birds through construction noise and other human disturbances that may cause a nest to fail. Therefore, non-human species could be exposed to excessive noise generated by the project and is considered potentially significant and mitigation is required.

Following project completion, the eucalyptus trees will remain in place, continuing to provide roosting habitat for monarch butterflies and nesting habitat for birds. Noise from the operations of the facility would be minimal due to the peripheral tree planting along the eastern boundary of the facility, screening noise between the facility and the eucalyptus. Therefore, no significant long-term permanent noise impacts would occur.

Mitigation Measures

BIO-1 Monarch Butterfly Avoidance and Minimization

- Project construction activities, including equipment staging, grading, and construction shall be avoided during the monarch butterfly overwintering season between October 15 through March 15. In the event project activities cannot be avoided during the overwintering season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct surveys for roosting monarch butterflies every two weeks during the overwintering season to confirm their absence. If construction activities occur during the overwintering season and monarch

butterflies are present, the qualified biologist shall establish a protective buffer, ranging from 100-300 feet from the roosting site in which monarch butterflies are aggregating. The buffer will be delineated by the biologist with flagging or staking visible by construction personnel. The construction contractor shall ensure that no construction occurs within the protective buffer, including staging of equipment or stopping or idling in the buffer, during the overwintering season. In the event construction activities, or other use of equipment, is needed to work within the buffer, the qualified biologist shall be on site to monitor construction activities and determine if the work is disturbing the aggregated butterflies. If the biologist determines that the work is disturbing the butterflies, the biologist shall stop work within the protective buffer at any time. In addition, due to the regular movement of the butterflies and locations of the aggregations, the biologist shall have the discretion to adjust the protective buffers, as necessary.

BIO-2 Pre-Construction Nesting Bird Survey

Project construction activities, including (but not limited to) equipment staging, grading, and construction shall be avoided during the nesting bird season (February 1 through August 31). In the event project construction activities cannot be avoided during the nesting bird season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a nesting bird survey within three days prior to initiation of such activities to determine the presence/absence, location, and status of any active nests on-site or within 100 feet of the site for songbirds and passerine species and up to 500 feet for raptors. The findings of the survey will be summarized in a report to be submitted to the City of Oxnard Public Works Department for review and approval prior to undertaking construction activities at the site.

If nesting birds/active nest(s) are observed on site, the qualified biologist shall establish a construction buffer with fencing or flagging. The buffer shall be 500 feet from the active nest for nesting raptors or threatened or endangered species and 100 feet of all other nesting birds. The nest buffer may be adjusted at the direction of the qualified biologist based on the species, location of the nest, and the type of construction activities occurring during the nesting period. The construction contractor shall communicate to all construction personnel that no person or construction related activity shall occur within the buffer without prior approval from the qualified biologist. Nests shall be monitored at a minimum of once per week by the qualified biologist until it has been determined that the nest is no longer being used by either the young or adults. The construction contract shall ensure that no ground disturbance occurs within this buffer until the qualified biologist confirms that the breeding/nesting is completed, including confirmation that all the young have fledged (if the nest was successful). If construction activities must occur within the buffer, the activity shall be conducted at the discretion of the qualified biologist. The construction contractor shall obtain approval from the qualified biologist prior to conducting any construction activities within the buffer.

- If no nesting birds are observed during pre-construction surveys, no further actions would be necessary.

Significance After Mitigation

Implementation of Mitigation Measures BIO-1 and BIO-2 would require preconstruction surveys and establishment of buffer zones to minimize noise impacts during construction to the monarch butterfly and nesting birds. Impacts would be less than significant with mitigation incorporated.

6 Conclusion

Project construction would generate temporary construction-related noise and construction activities would occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and Saturdays pursuant to the City's Municipal Code Section 7-188(D). Impacts from construction noise would be less than significant with implementation of Mitigation Measure NOI-1.

The project's stationary noise sources (e.g., on-site recreational activities, use of the PA system, and mechanical equipment such as HVAC units) would not exceed City standards at the nearest sensitive receptors. Therefore, stationary noise impacts would be less than significant.

The maximum increase in traffic noise would be 4 dBA L_{eq} under cumulative conditions at the College Park entrance east of Rose Avenue. Similarly, under cumulative conditions traffic noise along Raiders Way east of Rose Avenue would increase by 3.3 dBA L_{eq}. Both of these roadways lead to the road encircling College Park, where ambient noise levels were measured to be 52 dBA L_{eq} during the afternoon peak commute hours. The projected traffic noise increase of 4 dBA L_{eq} would not exceed the City's significance threshold of 5 dBA L_{eq} for areas with existing ambient noise levels of 50 to 54 dBA L_{eq}. Projected traffic noise increases would be less than 1 dBA L_{eq} on all other roadway study segments. Therefore, increases in traffic noise with the project would be less than significant.

The project would generate groundborne vibration during construction. Groundborne vibration would not exceed the 0.2 in/sec PPV vibration threshold at the nearest structures or the 65 VdB threshold for building potentially containing vibration-sensitive equipment, and construction-related vibration impacts would be less than significant.

The project site is not located within the airport land use plan for the Oxnard Airport and the project site is not within two miles of Naval Base, Ventura County at Point Mugu. Therefore, no substantial noise exposure would occur to people working in the project area from aircraft noise.

In terms of potential impacts to non-human species, implementation of Mitigation Measures BIO-1 and BIO-2 would require preconstruction surveys and establishment of buffer zones to minimize noise impacts to the monarch butterfly and nesting birds during construction. Impacts would be less than significant with mitigation incorporated.

Given the aforementioned, the project would result in less than significant noise impacts with mitigation incorporated.

7 References

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Appendix A

Roadway Construction Noise Modeling (RCNM) Outputs

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/23/2022
Case Description: Site Prep

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Site Prep	Residential	55.0	50.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Dozer	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	83.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/23/2022
Case Description: Grading

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Grading	Residential	55.0	50.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40	85.0		50.0	0.0
Grader	No	40	85.0		50.0	0.0
Dozer	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Excavator	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	86.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/30/2023
Case Description: Stone Column Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Stone Column Construction	Residential	55.0	50.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Auger Drill Rig	No	20	85.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Auger Drill Rig	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/23/2022
Case Description: Building Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Building Construction	Residential	55.0	50.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16	85.0		50.0	0.0
Man Lift	No	20	85.0		50.0	0.0
Generator	No	50	82.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Welder / Torch	No	40	73.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Crane	85.0	77.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	82.0	79.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Welder / Torch	73.0	69.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

| | | |

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/23/2022
Case Description: Paving

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Paving	Residential	55.0	50.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40	85.0		50.0	0.0
Paver	No	50	85.0		50.0	0.0
Roller	No	20	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Concrete Mixer Truck	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paver	85.0	82.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roller	85.0	78.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	86.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/23/2022
Case Description: Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Architectural Coating	Residential	55.0	50.0	50.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40	80.0		50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Compressor (air)	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.0	76.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 01/30/2023
Case Description: Pipeline Construction

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Pipeline Construction	Residential	55.0	50.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84.0		50.0	0.0
Excavator	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Excavator	No	40	85.0		50.0	0.0
Roller	No	20	85.0		50.0	0.0
Front End Loader	No	40	80.0		50.0	0.0
Scraper	No	40	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0
Compressor (air)	No	40	80.0		50.0	0.0
Generator	No	50	82.0		50.0	0.0
Grader	No	40	85.0		50.0	0.0
Compactor (ground)	No	20	80.0		50.0	0.0
Pumps	No	50	77.0		50.0	0.0
Man Lift	No	20	85.0		50.0	0.0
Scraper	No	40	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0
Paver	No	50	85.0		50.0	0.0
Roller	No	20	85.0		50.0	0.0
Backhoe	No	40	80.0		50.0	0.0

Results

Noise Limit Exceedance (dBA)				Noise Limits (dBA)		
Calculated (dBA)				Day	Evening	
Night	Day	Evening	Night			

Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor			84.0	80.0			N/A	N/A	N/A	N/A	N/A	N/A
Excavator			85.0	81.0			N/A	N/A	N/A	N/A	N/A	N/A
Tractor			84.0	80.0			N/A	N/A	N/A	N/A	N/A	N/A
Excavator			85.0	81.0			N/A	N/A	N/A	N/A	N/A	N/A
Roller			85.0	78.0			N/A	N/A	N/A	N/A	N/A	N/A
Front End Loader			80.0	76.0			N/A	N/A	N/A	N/A	N/A	N/A
Scraper			85.0	81.0			N/A	N/A	N/A	N/A	N/A	N/A
Backhoe			80.0	76.0			N/A	N/A	N/A	N/A	N/A	N/A
Compressor (air)			80.0	76.0			N/A	N/A	N/A	N/A	N/A	N/A
Generator			82.0	79.0			N/A	N/A	N/A	N/A	N/A	N/A
Grader			85.0	81.0			N/A	N/A	N/A	N/A	N/A	N/A
Compactor (ground)			80.0	73.0			N/A	N/A	N/A	N/A	N/A	N/A
Pumps			77.0	74.0			N/A	N/A	N/A	N/A	N/A	N/A
Man Lift			85.0	78.0			N/A	N/A	N/A	N/A	N/A	N/A
Scraper			85.0	81.0			N/A	N/A	N/A	N/A	N/A	N/A
Backhoe			80.0	76.0			N/A	N/A	N/A	N/A	N/A	N/A
Paver			85.0	82.0			N/A	N/A	N/A	N/A	N/A	N/A
Roller			85.0	78.0			N/A	N/A	N/A	N/A	N/A	N/A
Backhoe			80.0	76.0			N/A	N/A	N/A	N/A	N/A	N/A
	Total		85.0	91.8			N/A	N/A	N/A	N/A	N/A	N/A

South Oxnard Aquatics Center Project
Construction Noise Attenuation

	Noise Level @ 50 ft	College Park - West	SF Residential - North	Residential Area - East	Oxnard College - South	Channel Islands HS - NW
Distance (feet)		290	835	1040	845	1700
Site Preparation	**84**	**68.731**	**59.546**	**57.639**	**59.442**	**53.370**
Grading	**87**	**71.731**	**62.546**	**60.639**	**62.442**	**56.370**
Stone Column Construction	**78**	**62.731**	**53.546**	**51.639**	**53.442**	**47.370**

	Noise Level @ 50 ft	College Park - West	SF Residential - North	Residential Area - East	Oxnard College - South	Channel Islands HS - NW
Distance (feet)		125	780	1005	735	1500
Building Construction	**85**	**77.041**	**61.138**	**58.936**	**61.654**	**55.458**
Architectural Coating	**76**	**68.041**	**52.138**	**49.936**	**52.654**	**46.458**

Paving	Noise Level @ 50 ft	College Park - West	SF Residential - North	Residential Area - East	Oxnard College - South	Channel Islands HS - NW
Distance (feet)		300	665	1045	1025	1725
Paving	**87**	**71.437**	**64.523**	**60.597**	**60.765**	**56.244**

Pipeline Construction	Noise Level @ 50 ft	College Park - West	SF Residential - North	Residential Area - East	Oxnard College - South	Channel Islands HS - NW
Distance (feet)		195	1550	1900	800	790
Pipeline Construction	**92**	**80.179**	**62.173**	**60.404**	**67.918**	**68.027**

Appendix I

Response to Comments



South Oxnard Aquatics Center

Responses to Comments

prepared by

City of Oxnard
305 West Third Street
Oxnard, California 93030
Contact: Reza Bagherzadeh, P.E., Senior Project Manager

prepared with the assistance of

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

December 2025

RINCON CONSULTANTS

Responses to Comments

This section includes responses to comments received during public circulation of the Draft Initial Study-Mitigated Negative Declaration (IS-MND) prepared for the South Oxnard Aquatics Center Project (proposed project). Responses to these comment letters were prepared to address the environmental concerns raised by the commenters and to indicate where and how the Draft IS-MND was revised to address pertinent environmental issues. Any changes made to the text of the Draft IS-MND correcting information, other than minor typographical corrections or minor working changes, are noted in the Final IS-MND as changes from the Draft IS-MND. The changes that occurred between the Draft IS-MND and Final IS-MND are shown in underline for text additions and ~~strikethrough~~ for text deletions in the response to comments in this section and in applicable sections of the Final IS-MND.

The Draft IS-MND was circulated for a 30-day public review period that began on November 13, 2023 and ended on December 13, 2023. The City of Oxnard received nine comment letters on the Draft IS-MND. The commenters and the page number on which each commenter's letter appears are listed below.

Letter No.	and Commenter	Page No.
1	The Xerces Society for Invertebrate Conservation	2
2	Ventura County Public Works Watershed Planning & Permits Division	9
3	California Department of Transportation	13
4	Ventura County Air Pollution Control District	17
5	Ventura County Resource Management Agency	21
6	University of California Agriculture and Natural Resources	29
7	United States Fish and Wildlife Service	33
8	Hobson Park East Neighborhood Council	36
9	United States Fish and Wildlife Service	39

The comment letters and responses follow. The comment letters have been numbered sequentially and each separate issue raised by the commenter, if more than one, has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue (Response 1-1, for example, indicates that the response is for the first issue raised in comment Letter 1).

Letter 1

December 13, 2023

Reza Bagherzadeh, P.E., Senior Project Manager
City of Oxnard
Public Works Department
305 West Third Street
Oxnard, California 93030

SUBJECT: Response to South Oxnard Aquatics Center Notice of Intent to Adopt a Mitigated Negative Declaration

Dear Reza Bagherzadeh,

Thank you for the opportunity to comment regarding the Notice of Intent to Adopt a Mitigated Negative Declaration for the South Oxnard Aquatics Center.

We are writing to express our concerns about the proposed development which is planned at western monarch butterfly overwintering site #3152. While the proposed mitigation measure "BIO-1 Monarch Butterfly Avoidance and Minimization" appears to preserve the site's core roost trees during construction activities, there was no biological assessment completed to determine the full extent of overwintering habitat on-site. Therefore, there were no other mitigation measures proposed to address the project's potential impacts. 1-1

This is concerning because an overwintering site relies on more than just the core roost trees. Monarch butterflies have declined extensively over the past four decades, and active management and protection of overwintering sites are key elements to the species' recovery. **We urge the City of Oxnard to revisit their proposed plan and conduct a biological assessment (by a monarch overwintering expert) to determine the extent of overwintering habitat on the project site. In addition, there is a need to develop mitigation measures to avoid direct and indirect impacts to overwintering monarch habitat on the site over the course of this project.** 1-2

Background and importance of overwintering habitat to western monarchs:
The population of western migratory monarchs overwintering primarily in California has declined by more than 90% since the 1980s (Schultz et al. 2017, Xerces Society 2023). Research to date suggests that western monarchs are most vulnerable during the overwintering and early spring time periods (Espeset et al. 2016, Pelton et al. 2019). Although the geographic footprint of the overwintering sites used by western monarchs is small compared to their migratory range, the conservation of these sites is essential for ensuring that the migration continues. In contrast to breeding habitat, overwintering habitat cannot be replaced or moved to a new location if existing habitat is made 1-3

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unsuitable for monarch use. Protecting and restoring monarchs' overwintering habitat is identified as a crucial part of the species' recovery, but significant knowledge gaps remain and have hindered effective conservation action to protect this stage of the migratory cycle. Over 60 overwintering sites have been lost to development over the last several decades and additional sites are lost or degraded each year (Xerces Society 2020). In addition, coastal development is associated with population decline in western monarchs (Crone et al. 2019). Disease, senescence, and drought have stressed the trees in many remaining overwintering sites; managers must also address the risk of wildfire, which is particularly concerning to nearby human communities. Thus, active management of the groves is critical to maintaining overwintering habitat quality and quantity in order to aid the recovery of the western population.

1-3 cont.

The Xerces Society's Western Monarch Count website includes a map of known monarch overwintering habitat and the option to download a summary table of Thanksgiving and New Year's count data. We have additional site information and counts in our Western Monarch Overwintering Sites Database which we can provide upon request. We concur with overwintering site boundary definitions that are described in the Fish and Wildlife Service's *Western Monarch Butterfly Conservation Recommendations* in the "Coastal California Overwintering Habitat" section which defines an overwintering site as consisting of both core and shelter zones (with a 500' support zone outside of the shelter zone). **Note: this particular site's boundaries have not yet been updated to conform to this habitat mapping concept and current boundaries shown our webmap are not a complete description of the relevant trees on the site.** Thus, additional biological surveys and engaging a monarch overwintering expert is necessary to determine the extent of habitat necessary for the preservation of the habitat conditions for overwintering monarchs.

1-4

We would also like to highlight that the monarch is currently a candidate species under the federal Endangered Species Act, with a proposed ruling in the upcoming year. In the meantime, the US Fish and Wildlife Service's *Western Monarch Butterfly Conservation Recommendations*, "Coastal California Overwintering Habitat", provides the Service's recommendations. In particular, part 3b section includes the following recommendation: "*Avoid the removal of living trees or shrubs within 500 feet of overwintering sites, except for specific grove enhancement purposes (e.g., if select thinning is recommended to benefit monarchs), and/or for human safety concerns substantiated by a hazard tree assessment.*" We ask the City to follow this guidance in as much as possible in the 500' support zone

1-5

The Aquatics Center project offers an opportunity to highlight the natural resources value of the site for overwintering monarchs and engage the community through conservation messaging. We recommend incorporating signage and possibly an educational component to project plans. The Western Monarch Trail has interpretative signage

1-6

1-6

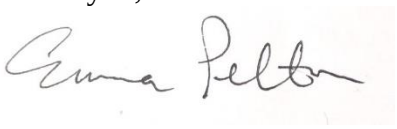
available in both English and Spanish as well as a Story Walk format sign series. In addition, planting native monarch nectar plants could be an attractive addition in the landscaping palette. A list of relevant species can be found on Xerces' Nectar Plant List for California.

1-6 cont.

The Xerces Society has worked to conserve monarch butterflies across the U.S. since the early 1990s. We worked extensively on the conservation of the western monarch population, including significant work partnering with public and private land managers to restore the monarch's essential overwintering habitat in California. If requested, we would be happy to provide additional guidance on monarch overwintering habitat management and protection; we have recommendations for technical assistance sources as well.

1-7

Thank you,



Emma Pelton
Western Monarch Lead
The Xerces Society for Invertebrate Conservation
emma.pelton@xerces.org

References cited

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Pelton, E.M., Schultz, C.B., Jepsen, S.J., Black, S.H. and Crone, E.E. 2019. Western monarch population plummets: status, probable causes, and recommended conservation actions. *Frontiers in Ecology and Evolution*, 7, p.258. https://doi.org/10.3389/fevo.2019.00258.

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The Xerces Society for Invertebrate Conservation. 2023. Western Monarch Thanksgiving Count Tallies Over 330,000 Butterflies Before Storms Batter Overwintering Sites. Available online at: https://xerces.org/blog/western-monarch-thanksgiving-count-tallies-over-330000-butterflies-before-storms-batter.

Letter 1

COMMENTER: Emma Pelton, Western Monarch Lead, The Xerces Society for Invertebrate Conservation

DATE: December 13, 2023

Response 1-1

The commenter identifies the project is planned at a western monarch butterfly overwintering site. The commenter also suggests that while Mitigation Measure BIO-1 appears to preserve the core roost trees, there was no biological assessment completed to determine the full extent of overwintering habitat on-site.

Based on field observations, the project site is located adjacent to a western monarch butterfly overwintering site and is a disturbed dirt lot that does not contain suitable monarch habitat. As discussed in Section 4, *Biological Resources*, of the IS-MND, the monarch butterfly population was assumed to be present in the trees bordering the project site to the east and north due to the existing suitable habitat of eucalyptus trees and recent documentation by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and the Xerces Society. No other areas provide suitable monarch butterfly roosting habitat in the immediate vicinity; therefore, no focused monarch butterfly surveys are necessary.

Response 1-2

This comment suggests the City revisit the project plan and conduct a biological assessment to determine the extent of overwintering habitat on the project site. The comment also states there is a need to develop mitigation measures to avoid direct and indirect impacts to monarch habitat on the project site.

While a standalone biological assessment report was not prepared, impacts to biological resources were analyzed in Section 4, *Biological Resources*, of the IS-MND. The analysis included a search of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB), the Cornell Lab of Ornithology's eBird, and the USFWS Information for Planning and Consulting, which was used to identify documented occurrences of special status species in the vicinity of the project site. The project site is a disturbed dirt lot and does not contain suitable monarch habitat; however, the trees adjacent to the project site to the east and north contain suitable habitat for monarch butterfly. As discussed in Response 1-1 focused monarch surveys of the project site were not conducted because the overwintering habitat for monarch butterfly was presumed present in the eucalyptus trees to the east and north due to the recent documentation of the species by the CDFW CNDDB and Xerces Society. The project does not include tree removals or removal of adjacent suitable foraging habitat; therefore, there would be no direct impacts to monarch butterfly habitat. To address direct impacts to monarch butterfly individuals, Mitigation Measure BIO-1, *Monarch Butterfly Avoidance and Minimization*, was developed to provide guidance throughout the construction period to avoid and minimize potential direct impacts to monarch butterflies that may traverse through the project site during the overwintering period. Operation of the project, after construction, will be consistent with the surrounding land use and would not significantly impact the overwintering monarch aggregates; therefore, additional mitigation beyond Mitigation Measure BIO-1 is not required.

Response 1-3

This comment provides background information on the monarch butterfly. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 1-4

This comment provides background information on the monarch butterfly and suggests additional biological surveys are needed to determine the extent of overwintering habitat for monarch butterflies.

No species-specific surveys were completed for monarch butterfly because the overwintering population is known to occur in the eucalyptus trees adjacent to the project site. The eucalyptus trees occurring adjacent to the project site have been an existing population which the Xerces Society has been aware of at least since 1999. Therefore, there was adequate data to assume presence of the species and a stable site that provides suitable overwintering habitat. This information was considered during development of the Project Description to ensure no eucalyptus trees are removed and retain the existing monarch butterfly overwintering habitat. No additional surveys or determination of extent of the habitat is necessary. Refer to Responses 1-1 and 1-2 for further discussion on why additional biological surveys are not required.

Response 1-5

The comment states the monarch butterfly is a candidate species under the federal Endangered Species Act and requests the City follow the United States Fish and Wildlife Services' Western Monarch Butterfly Conservation Recommendations, and avoid removal of trees or shrubs within 500 feet of overwintering sites.

As of December 2024, the monarch butterfly has been proposed for listing as a threatened species under the federal Endangered Species Act. The City does understand the importance of the species and their overwintering habitat, including habitat (i.e., foraging and nectaring) adjacent to overwintering areas that may be used as support zones. As stated in Threshold (a) of Section 4, *Biological Resources*, of the IS-MND, project construction will not require vegetation or tree removal. As such, the project does not include removal of the eucalyptus trees that support monarch butterflies, nor does it include removal of trees or potentially suitable foraging/nectaring vegetation within 500 feet of the eucalyptus trees. The project site is located west and south of eucalyptus tree rows and has been disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment, and does not support suitable habitat for monarch butterfly. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site.

The following changes have been made to the *Monarch Butterfly* discussion on Page 43 of the Final IS-MND as a result of this comment:

The California overwintering population of monarch butterfly is ~~a candidate species proposed for federal listing~~ proposed for listing as a threatened species under the federal Endangered Species Act

In addition, the following changes have been made to the *Federal Endangered Species Act* discussion on Page 121 of the Final IS-MND as a result of this comment:

Section 4, *Biological Resources*, of the *Environmental Checklist* chapter, indicates the project site does not contain suitable habitat for federally listed species; however, the trees occurring adjacent to the project site contain suitable habitat for the California overwintering population of monarch butterfly, which is ~~a candidate species proposed for federal listing~~ proposed for listing as a threatened species under the federal Endangered Species Act.

Response 1-6

The comment recommends signage and educational materials on the monarch butterfly be incorporated into project plans. The comment also recommends native monarch nectar plants be incorporated into the project landscaping.

The inclusion of signage or educational materials specific to the monarch butterfly or inclusion of nectar plants that may attract monarch butterfly in project landscaping is not required to reduce or minimize impacts to monarch butterflies. The proposed project's landscaping includes Howard McMinn Manzanita (*Arctostaphylos densiflora*), which is identified by Xerces Society as a monarch nectar plant (Attachment A).

Response 1-7

This comment concludes the letter, provides information on the Xerces Society, and states the Xerces society is available to provide guidance on monarch overwintering habitat management. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Letter 2

Please see the following comments from Yunsheng Su, Watershed Jurisdictional Drainage review:

APPLICATION COMPLETENESS:

COMPLETE – for our area of concern

ENVIRONMENTAL IMPACT ANALYSIS:

Item 31a. Flood Control Facilities/Watercourses – Flood Control Facilities / Watercourses – Ventura County Public Works Agency, Watershed Protection is deemed to be **Less Than Significant (LS).** 2-1

The proposed Project is situated about 1,200 feet from Rice Road Drain, which is a WP jurisdictional redline channel. No direct connections to this WP channel or activities within WP's easement appear to be proposed or indicated on the applicant's submitted materials. 2-2

This proposed project would result in an increase of impervious area within the subject property. It is understood that impacts from the proposed increase in impervious area and stormwater drainage design within the project site will be required to be mitigated to less than significant under the conditions imposed by the City of Oxnard. The mitigation requires that runoff from the proposed project site be released at no greater than the existing flow rate and in such manner as to not cause an adverse impact downstream in peak discharge, velocity, or duration. 2-3

WP staff determines that the proposed project design with the conditions mentioned above mitigates the direct and indirect project-specific and cumulative impacts to flood control facilities and watercourses. Therefore, the environmental impact is less than significant (LS) on redline channels under the jurisdiction of the Ventura County Public Works Agency - Watershed Protection. 2-4

WATERSHED PROTECTION COMMENTS:
None

2-5

WATERSHED PROTECTION CONDITIONS:
None

Sonnette S. Aquino
Supervising, Support Specialist
Watershed Planning & Permits Division

PUBLIC WORKS
VENTURA COUNTY

800 S. Victoria Ave. / #1610
Ventura, CA 93009
P: 805.650-4060
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Letter 2

COMMENTER: Sonnette Aquino, Supervising, Support Specialist, Ventura County Public Works Watershed Planning & Permits Division

DATE: December 13, 2023

Response 2-1

The commenter states impacts related to flood control facilities and watercourses are deemed to be less than significant. This statement is consistent with the analysis and conclusions in Section 10, *Hydrology and Water Quality*, of the IS-MND, which concluded impacts would be less than significant. The City acknowledges the Ventura County Public Works Department's concurrence with the conclusions of the IS-MND. No further response is required.

Response 2-2

The commenter states the project site is approximately 1,200 feet from Rice Road Drain which is a jurisdictional redline channel. The commenter states no direct connections to this channel or activities within the channel easement are proposed by the project. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 2-3

The commenter states the project would increase impervious area and suggests mitigation is required to reduce stormwater runoff to existing flow rates. As discussed in Section 10, Hydrology and Water Quality, the project would increase the amount impervious surfaces on the project site which would increase stormwater runoff from the project site. As required by Municipal Code Section 22-223, the project design includes stormwater BMPs, including four biofiltration planters, and storm drains which would accommodate peak stormwater flows in accordance with the requirements of the Municipal Separate Storm Sewer (MS4) Permit and Ventura County Technical Guidance Manual. According to a Preliminary Drainage Report prepared for the project, the project would increase total peak flow rate from 6.2 cubic feet per second to 7.7 cubic feet per second, and would not reduce runoff to existing conditions as stated by the commenter. The existing storm drain point of connection has an available capacity of 8.3 cubic feet per second to accommodate increased stormwater flows from the project site to prevent flooding. The project would be consistent with the MS4 Permit and Ventura County Technical Guidance Manual requirements and drainage impacts would be less than significant, and no mitigation is required.

Response 2-4

The commenter states the Ventura County Public Works Department has determined impacts related to redline channels under the jurisdiction of the Ventura County Public Works Agency would be less than significant. This statement is consistent with the analysis and conclusions in Section 10, *Hydrology and Water Quality*, the IS-MND, which concluded that impacts would be less than significant. The City acknowledges the Ventura County Public Works Department's concurrence with the conclusions of the IS-MND. No further response is required.

Response 2-5

The commenter states they have no additional comments or proposed conditions of approval related to watershed protection. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

DEPARTMENT OF TRANSPORTATION
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Letter 3

Making Conservation a California Way of Life

December 5, 2023

Reza Bagherzadeh, Senior Project Manager
City of Oxnard Public Works Department
305 West Third Street
Oxnard, CA 93030

RE: South Oxnard Aquatics Center – Mitigated Negative Declaration (MND)
SCH #2023110316
GTS #07-VEN-2023-00572
Vic. VEN-1/PM 15.11

Dear Reza Bagherzadeh,

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The City of Oxnard proposes the construction of a 57,233 square foot outdoor pool area with four pool areas totaling 23,571 square feet, one slide area totaling 822 square feet, a one-story "L" shaped building totaling 18,342 square feet, and a dedicated parking area with a total of 103 parking spaces north of the aquatics center. Of the 103 spaces, five would be Americans with Disabilities Act (ADA) compliant, two would be both ADA compliant and allow electric vehicle (EV) parking, four would be reserved for EV parking only, and 19 would be EV capable, meaning infrastructure that would support the future installation of an EV charging station would be provided. The parking lot would be supplemented by existing parking along College Park's one-lane ring road as well as existing adjacent parking lots within College Park.

3-1

Additionally, the proposed project would preserve existing bicycle lanes on Rose Avenue and would include installation of a new crosswalk to connect the project site with the interior of College Park. Bicycle racks would be installed at the main entry/exit point of the aquatics center and would provide space for 16 bicycles. The project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue, within a quarter of a mile of the project site which provides visitors alternative transportation to and from the project site.

After reviewing the MND, Caltrans has the following comments:

Caltrans concurs with the City of Oxnard 2030 General Plan Policy CD-1.4 in promoting the application of land use and community designs that provide residents with the opportunity for a variety of transportation choices. To assist in reducing Vehicle Miles Traveled (VMT) and Greenhouse Gas (GHG) emissions, potential Transportation Demand Management (TDM) strategies include transit subsidies for employees and improvements to bicycle/pedestrian infrastructure. Additional physical and programmatic elements for a plan may consist of public directions prioritizing rideshare modes, and locating information such as current maps, routes, and schedules for public transit routes within one-half mile of the project site where visitors may easily access to view on site. 3-2

It is recommended that proposed improvements to pedestrian facilities consider examples of effective physical design such as wide sidewalks, pedestrian refuge islands, and reductions in crossing distances through roadway narrowing. The provision of bicycle parking space on-site would be best supplemented with an upgraded bike lane facility near the project, as supported by the objectives of City's Bicycle and Pedestrian Facilities Master Plan Goal 2.1 which intends to make bicycling and walking integral modes of transportation in Oxnard. In providing quality services for transit-oriented and non-motorized travel, Caltrans' targets of tripling trips made by bicycle, doubling trips made by walking and public transit, and a 15% reduction in statewide VMT can be achieved through collaborative improvements to the state-wide transportation network. 3-3

Any transportation of heavy construction equipment and/or materials which requires use of oversized-transport vehicles on State highways will need a Caltrans transportation permit. It is recommended that large size truck trips be limited to off-peak commute periods. 3-4

If you have any questions, please contact project coordinator Anthony Higgins, at anthony.higgins@dot.ca.gov and refer to GTS #07-VEN-2023-00572. 3-5

Sincerely,

Frances Duong

Frances Duong
Acting LDR/CEQA Branch Chief

email: State Clearinghouse

Letter 3

COMMENTER: Frances Duong, Acting LDR/CEQA Branch Chief, California Department of Transportation

DATE: December 5, 2023

Response 3-1

This comment is introductory and summarizes the project. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 3-2

The commenter concurs with the City's 2030 General Plan Policy CD-1.4 in promoting designs that provide residents a variety of transportation choices. The commenter provides examples of transportation demand management strategies to reduce vehicle miles traveled and greenhouse gas emissions. The City acknowledges Caltrans concurrence with the General Plan policy. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 3-3

The commenter recommends the City consider wide sidewalks, pedestrian refuge islands, and reductions in crossing distances in the proposed pedestrian improvements. The commenter notes the provision of bicycle parking space could be supplemented with an upgraded bicycle lane facility near the project. The commenter notes Caltrans' targets of tripling trips made by bicycle, doubling trips made by walking and public transit, and a 15 percent reduction in statewide vehicle miles traveled.

As stated in Section 16, *Transportation and Circulation*, of the IS-MND, the project would include the creation of a link for pedestrian and bicycle traffic between parks and recreational facilities. The project would achieve this by preserving existing bicycle lanes on Rose Avenue, providing 16 spaces for bicycle parking, and installing a new crosswalk to connect the project site with the interior of College Park. These design features are consistent with the City's General Plan Policy CD-1.4 of promoting land uses that provide residents with the opportunity for a variety of transportation choices. In addition, the project site has access to Gold Coast Transit bus stops 8 and 17 along Rose Avenue. Accordingly, the project is designed to promote Caltrans' alternative transportation targets stated above. In addition, the project would not result in a net increase in VMT; therefore, VMT impacts would be less than significant. No changes to the IS-MND are warranted as a result of this comment.

Response 3-4

The commenter states the transportation of heavy construction equipment and oversized-transport vehicles on state highways requires a transportation permit. The commenter recommends large size truck trips be limited to off-peak commute periods.

It is not currently anticipated that oversized vehicles would be required during construction. While not currently anticipated, in the event project construction requires the transportation of heavy construction equipment or the use of oversized-transport vehicles on state highways the City and construction contractor would obtain the required Caltrans permit and trips during peak commute hours would be limited to the extent feasible.

Response 3-5

This comment concludes the letter and provides contact information for Caltrans. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Ventura County
Air Pollution
Control District

4567 Telephone Rd
Ventura, California 93003

tel 805/303-4005
fax 805/456-7797
www.vcapcd.org

Ali Reza Ghasemi, PE
Air Pollution Control Officer

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

Letter 4

TO: Reza Bagherzadeh, Senior Project Manager DATE: December 12, 2023

FROM: Nicole Collazo, Air Quality Specialist, VCAPCD Planning Division NC

SUBJECT: Notice of Intent to Adopt Mitigated Negative Declaration for the City of Oxnard Aquatics Center Project (RMA 23-021)

Ventura County Air Pollution Control District (APCD) staff has reviewed the subject Mitigated Negative Declaration (MND) for the project referenced above, which analyzed the environmental impacts of a project to construct and operate an aquatics center which would include construction of a 57,233 ft^2 outdoor pool area that would be operated 50 weeks out of the year, seven days per week. The outdoor pool area would have four pool areas totaling 23,571 ft^2, one slide area totaling 822 ft^2, a one-story "L" shaped building totaling 18,342 ft^2, a 103-stall parking lot, and ancillary facilities. The project location is 3250 South Rose Avenue. The Lead Agency is the City of Oxnard. 4-1

APCD has the following comments regarding the project's MND.

Item 1- It was not clear if the aquatics center is proposed to have an emergency diesel-powered generator(s) for emergency/planned power outages. The MND states the project would have 2 utility yards (MND, Page 16). If such an equipment is proposed, please include this information in the MND and add APCD to the list of agencies where a permit approval is required in Page 23. 4-2

Item 2- It was not clear if the proposed 4 high-efficiency gas-powered condensing boilers would need a permit to operate with the APCD. If the boilers will need permits, please include this information in the MND and add APCD to the list of agencies where a permit approval is required in Page 23. A list of permit requirements for boilers (greater than 1 MMBTU/hr) and engines can be found here on Page 2. 4-3

Item 3- The MND on Page 39 states that the construction operations have a "potential to release [San Joaquin Valley Fever] fungal spores, if they are present on the project site". Because a potential exists, we recommend a mitigation measure to protect the construction workers directly working on the soil/grading, if the soil is undisturbed. The Air Quality and Greenhouse Gas Study in Appendix A states "*if there is the potential to expose workers or nearby residents to Coccidioidomycosis then implementation of the VCAPCD measures to reduce exposure should be included as mitigation for a project*" PDF Page 170 of 855. As such, a measure such as the one we recommend in our Air Quality Assessment Guidelines section 7.4.2, Valley Fever Mitigation Measures, at the very least the measure that would require crews to use the appropriate protection during project clearing, grading, and excavation operations. 4-4

Item 4- It is not clear how the City of Oxnard's Aquatic Center will comply with its 2022 Climate Action and Adaptation Plan's (CAAP) 2030 target of 40% GHG reductions compared to its 1990 levels given the project is proposing natural gas to heat its pools, buildings for space heating, and kitchen oven for cooking in the western building (MND, Page 16). Specifically, how the project is complying with CAAP Strategy E2.7, E2.8, E2.9 (Increase Local Solar Generation), B1.8 (Municipal Operations), and B2.1-B2.5 (Electrify Buildings for New Buildings). 4-5

Thank you for the opportunity to comment on the project's MND. If you have any questions, you may contact me at nicole@vcapcd.org.

Letter 4

COMMENTER: Nicole Collazo, Air Quality Specialist, Ventura County Air Pollution Control District Planning Division

DATE: December 12, 2023

Response 4-1

This comment is introductory and summarizes the project. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 4-2

The commenter requests information on emergency diesel-powered generators for power outages and required permits.

The project would not include the use of emergency diesel-powered generators. No changes to the IS-MND are warranted as a result of this comment.

Response 4-3

The commenter questions if a permit to operate will be needed for the gas-powered condensing boilers.

The boilers would exceed greater than 1 million btu/hour use, and therefore requires a permit to operate. The following changes have been made in the *Other Public Agencies Whose Approval is Required* discussion on Page 23 of the Final IS-MND as a result of this comment:

The City of Oxnard is the lead agency for the proposed project~~, and no approvals are required from any other agency~~. The proposed project requires the following discretionary approvals from the City:

- Building permit to construct proposed project facilities
- Grading permit for the cut and fill of soil
- Encroachment permit to connect utilities to the City's point of connection
- Design Development Review permit to approve the proposed design of the aquatics center

<u>The proposed project also requires the following approvals from other agencies:</u>

- <u>Ventura County Air Pollution Control District Permit to Operate for the operation of the gas-powered condensing boilers</u>

Response 4-4

The commenter recommends mitigation measures to protect workers from Valley Fever spores.

Per Section 6.3 of the Ventura County Air Quality Assessment Guidelines, there is no recommended threshold for a significant San Joaquin Valley Fever impact. The guidelines list several factors to determine the potential for a significant San Joaquin Valley Fever impact, including previous land disturbance and the presence of archaeological resources. Using these guidelines, the project site would not be considered undisturbed as it has been historically farmed dating back to at least the

1940s. There are also no known archaeological resources or archaeological deposits at the project site. Accordingly, no factors exist that would indicate a potential to create significant Valley Fever impacts. As discussed in Section 3, *Air Quality*, of the IS-MND, implementation of standard construction practices that comply with VCAPCD rules, such as Rule 55 (Fugitive Dust), would ensure the project would not substantially increase the risk to public health associated with dust emissions. Therefore, additional measures beyond VCAPCD rule compliance and standard construction practices are not required as the project site's characteristics and construction activities do not convey a substantial increase in public health risk from Valley Fever spores.

Response 4-5

The comment requests clarification on how the project will comply with the City's 2022 Climate Action and Adaptation Plan's 2030 target of 40 percent greenhouse gas reduction given that the project includes natural gas use.

As shown in Table 7 in *Section 5, Climate Change and Greenhouse Gas Emissions*, of the IS-MND, approximately 94% of the project's emissions would be emitted from mobile sources. Therefore, greenhouse gas reduction measures are focused on transportation-related measures. The project would comply with the City's Climate Action and Adaptation transportation strategies that expand zero emissions infrastructure, alternative modes of transportation, and improve transit. The project would include electric vehicle charging stations, bicycle racks, and would have access to Gold Coast Transit. In addition, the project would include energy reduction measures through complying with the latest Title 24 Green Building Code and Building Efficiency Energy Standards. The project would also allocate six passenger vehicle spaces for electric vehicle charging. In addition, the project would install water efficient fixtures to conform to State water conservation requirements. The project would be served by Southern California Edison, which is required to increase its renewable energy procurement in accordance with SB 100, which requires renewable energy and zero-carbon resources to supply 100 percent of electric retail sales to end-use customers by 2045. Therefore, the project would be consistent with the City's 2022 Climate Action and Adaptation Plan in achieving its 2030 greenhouse gas emissions targets.

COUNTY of VENTURA
RESOURCE MANAGEMENT AGENCY
DAVE WARD
Planning Director

SUSAN CURTIS
Assistant Planning Director

Letter 5

December 13, 2023

Reza Bagherzadeh, P.E., Senior Project Manager
Public Works Department
City of Oxnard
305 West Third Street
Oxnard, California 93030

SUBJECT: Response to South Oxnard Aquatics Center Notice of Intent to Adopt a Mitigated Negative Declaration

Dear Reza Bagherzadeh,

Thank you for providing the Ventura County Planning Division (Planning Division) with the opportunity to comment regarding the Notice of Intent to Adopt a Mitigated Negative Declaration (MND) for the South Oxnard Aquatics Center (proposed project). The Planning Division coordinates with neighboring jurisdictions and provides review and comment on environmental documents prepared for projects that could affect the unincorporated area. The Planning Division is supportive of the proposed project and appreciates the addition of this important recreational resource for the community. 5-1

The proposed South Oxnard Aquatics Center (proposed project) is located on a 7.93-acre vacant site at 3250 South Rose Avenue in the Southeast portion of Oxnard within College Park. The project includes construction of a 57,233 square foot outdoor pool area that would be operated 50 weeks out of the year, seven days per week. The proposed project also includes a one-story building totaling 18,342 square feet, a 103-stall parking lot, and ancillary facilities. The project site is bounded to the north, south and west by Oxnard College and College Park, and to the East by a row of trees extending in a north-south direction, which separates the project site from adjacent vacant land. This row of trees and the area surrounding it is the focus of this letter.

The proposed project is sited immediately adjacent to a row of eucalyptus trees that are identified as Western Monarch Butterfly Overwintering Site #3152, which was first monitored by Xerces Society in 1999[1]. The MND indicates that no biological assessments were conducted (page 42-46) for the project because there was no suitable biological habitat in the area for any of the potential sensitive species. Additionally, the MND incorrectly identified the size of the active monarch roost area that the USFWS considers critical for supporting microsite conditions, which as described below, should include a 500-foot supportive habitat area around the roost trees[2]. Furthermore, the analysis indicates that the roost site may be active but does not present the publicly available data that definitively shows the roost was occupied by 5-2

[1] https://westernmonarchcount.org/map-of-overwintering-sites/
[2] https://xerces.org/sites/default/files/publications/21-015_03.pdf

HALL OF ADMINISTRATION #1740
(805) 654-2481 • FAX (805) 654-2509 • 800 South Victoria Avenue, Ventura, CA 93009 • vcrma.org

monarchs in 2022[1]. The fact that monarchs were last observed in 2022 should be referenced in the MND. It also appears ground disturbance activities have already commenced prior to the release of the MND between August 28 – October 24, 2023 (see Exhibit A) at the time that migrating Western monarch butterflies are arriving in Oxnard for the overwintering season (September - November)[3] which may have impacted roosting numbers for 2023. 5-2 cont.

It should be noted within the MND analysis that in December 2020, the U.S. Fish and Wildlife Service reviewed and considered the monarch butterfly for listing under the Endangered Species Act (ESA) and the species will be considered and reviewed for listing in 2024[4]. In California, monarchs are included on the California Department of Fish and Wildlife's (CDFW) Terrestrial and Vernal Pool Invertebrates of Conservation Priority List and identified as a "Species of Greatest Conservation Need" in California's State Wildlife Action Plan. This is because Western monarch populations have been in significant decline and the number of monarchs making the annual migration to coastal California has declined by greater than 90 percent. 5-3

As mentioned previously, the monarch roost site in Section 4 Biological Resources of the draft MND was not measured and analyzed correctly. Monarch overwintering roost site conditions are influenced by physical changes that occur in the landscape beyond the roost trees themselves. Monarchs flock to these roost sites for protection from the prevailing winds (buffered by structures or other trees), heat (dappled sunlight), humidity (close to the coast/dappled sunlight), nectar (nearby plants in flower), and water.[5] Therefore, the actual conditions that make a monarch overwintering site viable include the environment surrounding the roost trees. This is why an overwintering roost site includes not only the core area of the roost trees, but also a 500-foot support zone (or more, depending on the roost) for the essential resources listed above[6]. 5-4

While the proposed mitigation measure "BIO-1 Monarch Butterfly Avoidance and Minimization" would protect the overwintering site's core roost trees during construction activities, there was no analysis within the MND that evaluated the proposed project's design, maintenance, or management activities long-term impacts on the overwintering roost. The analysis should include direct/indirect/cumulative impacts associated with landscape maintenance (pesticide use, fire-human safety issues-tree removal, tree replacement plan), night lighting, large water resource attractants, etc. 5-5

The project footprint and buildings as designed would not need to be altered because it appears to shield the roost site from the prevailing northwest winds. However, it is recommended that a mitigation measure is included that redesigns the landscape plan and its associated components so that it is integrated into a USFWS approved monarch overwintering site management plan[8] to best mitigate all significant impacts because it is located immediately within the 500-foot support area of the roost site. The project design and features should be confirmed through a consultation with USFWS/Xerces overwintering site specialist. 5-6

[3] https://monarchwatch.org/migration/
[4] https://www.fws.gov/sites/default/files/documents/national-domestic-listing-workplan-fiscal-years-2023-2027.pdf
[5] https://xerces.org/sites/default/files/2018-05/15-016_01_XercesSoc_Conservation-Status-Ecology-Monarch-US-web.pdf
[6] https://xerces.org/sites/default/files/publications/21-015_03.pdf

In addition to including the information described above in the MND, the following mitigation measures are recommended for inclusion in the MND that will reduce the potentially significant impacts to less than significant for this active monarch overwintering site:

- Provide nectar and water resources that support overwintering monarchs during winter construction years of the project within the core roosting trees.
- Prior to certificate of occupancy, develop an approved USFWS/Xerces monarch roost management plan that is integrated with the landscaping plan of the facility.
    - Ensure that hazard trees that are removed are replaced with appropriate roost tree species.
    - Require that any significant deviations from approved management plan are defined within the plan and approved by an experienced monarch biologist[7].
- Prior to certificate of occupancy, ensure that all alternative fresh water sources according to the approved overwintering site management plan are functioning.
- Ensure all outdoor lighting will not attract roosting monarchs to aquatics facility.
- Prior to occupancy provide an educational component in the picnic area with displays and information about monarch butterflies and this active overwintering site.

5-7

The South Oxnard Aquatics Center will provide a valuable recreational resource for the community. The recommended revisions to the MND would enhance this monarch butterfly overwintering roost site and provide an opportunity to the City (and possibly Oxnard College) to transform a project constraint into a major draw to the community and visitors. Other cities such as Pismo Beach have included their monarch overwintering sites in publicly accessible parks and recreation areas with great success.

5-8

Thank you again for the opportunity to comment on this MND. If you have any questions about this letter, please contact Abigail Convery at Abigail.Convery@ventura.org or 805.654.2489.

5-9

Sincerely,

Susan Curtis for Dave Ward

Dave Ward, AICP I Planning Director
County of Ventura, Planning Division

[7] https://xerces.org/sites/default/files/2018-07/17-066_01_Monarch-Butterfly-Site-Management-Plan-for-Lighthouse-Field-State-Beach.pdf

Exhibit A: Land work and grading occuring on project site between August 28, 2023 (left) and October 16, 2023 (right).



Letter 5

COMMENTER: Dave Ward, AICP, Planning Director, Ventura County Resource Management Agency

DATE: December 13, 2023

Response 5-1

The commenter explains their role in Ventura County and provides a summary of the project. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 5-2

The commenter expresses concern about the project which is planned at a western monarch butterfly overwintering site. The commenter suggests there was no biological assessment completed and the IS-MND incorrectly identified the size of the active roost area. The commenter notes the USFWS recommendation for a 500-foot supportive habitat area around roost trees. The commenter also recommends the monarch observance in 2022 should be noted in the IS-MND. The commenter notes ground disturbing activities commenced at the site prior to the release of the IS-MND between August 28, 2023 and October 4, 2023 which may have impacted 2023 roosting numbers.

As detailed in Responses 1-1 and 1-2, the overwintering habitat for monarch butterfly was presumed present due to the recent documentation of the species by the CDFW CNDDB and Xerces Society and due to the presence of suitable roosting habitat in the row of eucalyptus trees occurring adjacent to the project site. Specific data on yearly population and roost area size was not provided in the IS-MND because the analysis in the IS-MND was based on the presumed presence of the monarch butterfly overwintering population. As identified in Response 1-1, observations of the project site indicate it is a disturbed dirt lot and does not contain suitable monarch habitat. As discussed in Response 1-5, the project does not include removal of the eucalyptus trees that support monarch butterfly, nor does it include removal of trees or vegetation within 500 feet of the eucalyptus trees. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site. Ground disturbing activities were conducted to inform the Phase II Environmental Site Assessment (Appendix E of the IS-MND) on February 7, 2023, which is also outside the time range noted by the commenter. Basic data collection and information activities are considered exempt from CEQA. In addition, the area west of the row of eucalyptus trees has been regularly disturbed by ongoing stockpiling of mulch and use of tractors and other equipment and does not provide suitable foraging/support habitat for monarch butterfly.

Response 5-3

The commenter recommends the IS-MND note that in December 2020 USFWS reviewed the monarch butterfly for listing under the ESA and will do so again in 2024. The commenter notes monarchs are included on the CDFW Terrestrial and Vernal Pool Invertebrates of Conservation and Priority List and identified as a “Species of Greatest Conservation Need” in California’s State Wildlife Action Plan.

As discussed in Response 1-5, as of December 2024, the monarch butterfly has been proposed for listing as a threatened species under the federal Endangered Species Act. The City does, however, understand the importance of the species and their overwintering habitat, including habitat adjacent to overwintering areas that may be used as support zones/foraging habitat. The project does not include removal of the eucalyptus trees and the project site is located to the west and south of the eucalyptus tree rows and is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat for monarch butterfly. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site. Further, with the incorporation of Mitigation Measure BIO-1, direct impacts (i.e., monarch mortality) and indirect impacts (i.e., habitat disturbance and/or reduction) to monarch butterfly during project activities would be reduced to a less-than-significant level.

The following changes have been made to the *Monarch Butterfly* discussion on Page 43 of the Final IS-MND as a result of this comment:

The California overwintering population of monarch butterfly is ~~a candidate species proposed for federal listing~~ proposed for listing as a threatened species under the federal Endangered Species Act

In addition, the following changes have been made to the *Federal Endangered Species Act* discussion on Page 121 of the Final IS-MND as a result of this comment:

Section 4, *Biological Resources*, of the *Environmental Checklist* chapter, indicates the project site does not contain suitable habitat for federally listed species; however, the trees occurring adjacent to the project site contain suitable habitat for the California overwintering population of monarch butterfly, which is ~~a candidate species proposed for federal listing~~ proposed for listing as a threatened species under the federal Endangered Species Act.

Response 5-4

The commenter restates their recommendation of a 500-foot supportive habitat area around roost trees.

A 500-foot habitat area for monarch butterflies has not been included as part of the project because the project area to the west and south of the eucalyptus tree rows does not support suitable butterfly habitat. In addition, as discussed in Response 1-5, the project does not include removal of trees or vegetation within 500 feet of the eucalyptus trees.

Response 5-5

The commenter states there is no analysis within the IS-MND that evaluated the project's design, maintenance, or management activities long-term impacts on the overwintering roost. The commenter recommends the analysis include direct, indirect, and cumulative impacts associated with landscape maintenance, night lighting, and water resource attractants.

As discussed in Threshold (a) in Section 4, *Biological Resources*, of the IS-MND, operation of the project would be consistent with surrounding land uses. The project site does not support suitable habitat for monarch butterfly. The project would not remove nectar plants or other shrub/tree that may support the species. The project would not create a substantial source of light or glare. The project does not include tall structures that would impede or block the monarchs from future use of the eucalyptus habitat adjacent to the site. Therefore, operation of the project would not

substantially impact the overwintering monarch butterfly population documented in the eucalyptus trees adjacent to the project site beyond existing conditions.

Response 5-6

The commenter recommends mitigation to redesign the landscape plan so it is integrated into a USFWS-approved monarch overwintering site management plan. The commenter states project design and features should be confirmed through a consultation with USFWS/Xerces overwintering site specialist.

The project does not include removal of eucalyptus trees and the site is located west and south of the eucalyptus tree rows. The project site is disturbed by regular activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat for monarch butterfly, including foraging habitat or other supportive zone habitat. Therefore, mitigation for habitat that is not being removed by the project is not necessary.

Response 5-7

The commenter provides recommended mitigation to reduce impacts to the active monarch overwintering site.

The area west of the row of eucalyptus presumed occupied by overwintering monarch butterfly has been regularly disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment, and does not provide suitable foraging/support habitat for monarch butterfly. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site. The project does not include tree removals or removal of adjacent suitable foraging habitat; therefore, there are no anticipated direct impacts to monarch butterfly habitat. To address direct impacts to monarch butterfly individuals, Mitigation Measure BIO-1 was developed to provide guidance throughout the construction period. Implementation of Mitigation Measure BIO-1 would avoid and minimize potential direct impacts to monarch butterflies that may be present during the overwintering period adjacent to or transiting through the project site. Operation of the project would be consistent with the surrounding land use and would not substantially impact the overwintering monarch aggregates; therefore, additional mitigation is not necessary.

Response 5-8

This comment restates the recommended revisions to the IS-MND would enhance the monarch butterfly overwintering roost site and provide an opportunity to make the area a major draw in Oxnard.

The project does not include removal of the eucalyptus trees or nectar plants that support the monarch butterfly. Operation of the project would be consistent with the surrounding land use would not substantially impact the overwintering monarch aggregates. Direct impacts to monarch butterfly would be less than significant with incorporation of Mitigation Measure BIO-1. Therefore, the project would not result in substantial impacts to the monarch butterfly, allowing the overwintering site to provide a similar draw in Oxnard as under existing conditions. Enhancement of the monarch butterfly overwintering roost site as part of the project is not required; however, the recommendations from the commenter have been provided to the City decision-makers for consideration during the project approval process.

Response 5-9

This comment concludes the letter and provides contact information for the County of Ventura Resource Management Agency. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

December 13, 2023

Letter 6

Reza Bagherzadeh, P.E.
Public Works Department
City of Oxnard
305 West Third Street
Oxnard, California 93030

RE: IS-MND Comments: South Oxnard Aquatics Center

Dear Mr. Bagherzadeh,

Thank you for the opportunity to comment on the Mitigated Negative Declaration (MND) for the South Oxnard Aquatics Center project. We offer a few concerns regarding the design, construction, and ongoing management of this community project that should mutually benefit the public and a key existing natural resource documented onsite. 6-1

The University of California (UC) Agriculture and Natural Resources connects the power of UC research in agriculture, natural resources, nutrition and youth development with local communities to improve the lives of all Californians. Our local offices in Ventura have served farmers and the public in the county since 1914. We are involved with local and regional issues pertinent to natural resources management, agriculture, public engagement and benefit.

Monarch butterflies are a key insect pollinator species, with the two North American populations having experienced drastic declines during the last two decades from habitat loss, chemical exposure, and climate change. The estimated annual decline is 1.6%.[1] Adjacent to the project site is **Western Monarch Butterfly Overwintering Site 3152**, which has been documented and designated by the California Department of Fish and Wildlife. This site has been monitored by the science-based insect-focused Xerces Society since 1991. Data from 2022 confirm this site as active.[2] 6-2

The MND for the proposed South Oxnard Aquatics Center neither considers onsite nor adjacent sensitive natural resources. The overwintering monarch roost, which is tangent to the project property, is tacitly mentioned and analyzed in the document. However, analytical criteria used do not conform to either US Fish and Wildlife or Xerces Society standards. **Recommendations to support an overwintering monarch population include:** roost trees plus a 500-foot or greater support zone, including fresh water source, natural or built protective structures to buffer wind, and nectar-producing plants.[3] 6-3

[1] Dramatic decline in western butterfly populations linked to fall warming (phys.org)(https://phys.org/news/2021-03-decline-western-butterfly-populations-linked.html)
[2] Map of Overwintering Sites – Western Monarch Count (https://westernmonarchcount.org/map-of-overwintering-sites)
[3] https://xerces.org/sites/default/files/2018-05/15-016_01_XercesSoc_Conservation-Status-Ecology-Monarch-US-web.pdf

UC ANR believes that consideration to incorporate the recommended protections for the overwintering monarch site listed above can benefit the public who frequent the aquatic center, as well as become a naturalist or tourist destination. A long-term maintenance and guardianship plan should be either integrated into the project planning or entrusted to a local entity as part of the MND before it is certified.

6-4

We thank you for your consideration of our comments and suggestions. Please contact our offices with questions regarding this letter at (805) 645-1451.

6-5

Sincerely,



Annemiek Schilder, Ph.D.

UCCE County Director

Letter 6

COMMENTER: Annemiek Schilder, Ph.D., UCCE County Director, University of California Agriculture and Natural Resources

DATE: December 13, 2023

Response 6-1

The commenter provides information on the University of California Agriculture and Natural Resources and provides a summary of the project. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 6-2

The commenter provides information on the adjacent monarch butterfly overwintering site. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 6-3

The commenter states USFWS and Xerces Society recommend a 500-foot supportive habitat area around roost trees and include a fresh water source, natural or protective structures to buffer wind, and nectar-producing plants.

As discussed in Response 1-5, the project does not include removal of the eucalyptus trees that support monarch butterfly, nor does it include removal of trees or vegetation within 500 feet of the eucalyptus trees. The project site is in a location to the west and south of eucalyptus tree rows that is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat or supportive zones for monarch butterfly. Therefore, a 500-foot buffer is not required to reduce impacts to monarch butterfly.

Response 6-4

The commenter recommends incorporation of the measures identified in Response 6-3. The commenter suggests a long-term maintenance and guardianship plan should be integrated into project planning or entrusted to a local entity prior to MND certification.

As discussed in Response 1-5, the project does not include removal of the eucalyptus trees, nor does it include removal of trees or vegetation within 500 feet of the eucalyptus trees. The project site is located west and south of eucalyptus tree rows that is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat for monarch butterfly, including foraging habitat or other supportive zone habitat. Therefore, mitigation for long-term maintenance or a guardianship plan are not required to reduce impacts to monarch butterfly.

Response 6-5

This comment concludes the letter and provides contact information for the University of California Agriculture and Natural Resources. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Letter 7

Ethan Knox

From: Jennifer Haddow
Sent: Thursday, December 14, 2023 2:49 PM
To: Ethan Knox
Cc: Nicole Chavez
Subject: FW: South Oxnard Aquatics Center - Extension Request

Jennifer Haddow, PhD, Executive Vice President
805-644-4455 Main | 805-804-7277 Mobile
jhaddow@rinconconsultants.com

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From: Bagherzadeh, Reza <reza.bagherzadeh@oxnard.org>
Sent: Thursday, December 14, 2023 1:35 PM
To: Joe Pearson II <joe.pearson@oxnard.org>; Jennifer Haddow <jhaddow@rinconconsultants.com>
Cc: William Gordon <wgordon@elsarch.com>
Subject: Fwd: South Oxnard Aquatics Center - Extension Request

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FYI
---------- Forwarded message ---------
From: **Sinclair, Karen D** <karen_sinclair@fws.gov>
Date: Wed, Dec 13, 2023 at 4:14 PM
Subject: South Oxnard Aquatics Center - Extension Request
To: reza.bagherzadeh@oxnard.org <reza.bagherzadeh@oxnard.org>
Cc: Termondt, Sarah E <sarah_termondt@fws.gov>, Diel, Christopher <christopher_diel@fws.gov>

Dear Reza Bagherzadeh,

We have reviewed your Notice of Intent and Public Review Draft Initial Study - Mitigated Negative Declaration for the South Oxnard Aquatics letter. 7-1
Because the project occurs directly adjacent to an occupied monarch butterfly overwintering site, the project may have direct and indirect impacts to monarch butterflies and their habitat. However, the current documents do not provide sufficient analysis of impacts to monarch butterflies and their habitat.

We are interested in submitting a comment letter, however need additional time to finalize our response. 7-2
Can you please extend the comment window for us by at least a week?

Thank you,
Karen Sinclair

Karen Sinclair, *Fish and Wildlife Biologist*
pronouns: she/her
U.S. Fish and Wildlife Service, Ventura Field Office
2493 Portola Road, Suite B | Ventura, California 93003
(805) 677-3315 | karen_sinclair@fws.gov
Visit us online or on social media, and check out our Year in Review magazine and video for our latest stories.

--

Reza Bagherzadeh, P.E.

Senior Project Manager
Public Works Department
305 West Third Street, East Wing, Second Floor
Oxnard, California 93030

O: 805.271.2280 C: 805.297.3194

www.oxnard.org

Letter 7

COMMENTER: Karen Sinclair, Fish and Wildlife Biologist, United States Fish and Wildlife Service

DATE: December 14, 2023

Response 7-1

The commenter suggests the project may have direct and indirect impacts to monarch butterflies, and the current documents do not provide sufficient analysis of impacts to monarch butterflies and their habitats.

As discussed in Response 1-5, the project does not include removal of the eucalyptus trees that support monarch butterfly. As discussed in Response 1-2, Mitigation Measure BIO-1 is provided to reduce direct and indirect impacts to monarch butterfly to a less-than-significant level. The project site is located west and south of eucalyptus tree rows and is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat for monarch butterfly, including foraging/nectaring habitat or other supportive zone habitat. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site. Operation of the project would be consistent with the current surrounding land use and would not substantially impact the overwintering monarch population. The analysis presented in the IS-MND is sufficient to reduce potential impacts to monarch butterfly to a less-than-significant level.

Response 7-2

The commenter requests an additional week from the close of public review to submit a comment letter. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No further response is required. See Response 9-2 for further information.

Letter 8

Ethan Knox

From: Jennifer Haddow
Sent: Thursday, December 14, 2023 2:49 PM
To: Ethan Knox; Nicole West
Subject: FW: IS-MND Comments: South Oxnard Aquatics Center

Jennifer Haddow, PhD, Executive Vice President
805-644-4455 Main | 805-804-7277 Mobile
jhaddow@rinconconsultants.com

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Environmental Scientists | Planners | Engineers

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From: Bagherzadeh, Reza <reza.bagherzadeh@oxnard.org>
Sent: Thursday, December 14, 2023 1:32 PM
To: Jennifer Haddow <jhaddow@rinconconsultants.com>; Joe Pearson II <joe.pearson@oxnard.org>
Cc: William Gordon <wgordon@elsarch.com>
Subject: Fwd: IS-MND Comments: South Oxnard Aquatics Center

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FYI

---------- Forwarded message ---------
From: **Roger Poirier** <rogerpear@yahoo.com>
Date: Wed, Dec 13, 2023 at 4:18 PM
Subject: IS-MND Comments: South Oxnard Aquatics Center
To: reza.bagherzadeh@oxnard.org <reza.bagherzadeh@oxnard.org>
Cc: angelawhitecomb@gmail.com <angelawhitecomb@gmail.com>

Dear Mr. Bagherzadeh

Oxnard is fortunate to have two overwintering sites for the endangered Western Monarch, a critical aspect in the life this migratory pollinator.

8-1

One of these overwintering sites has been decimated by construction next to the Masonic Cemetery...there was a lush eucalyptus windrow which served to protect overwintering monarchs from cold and winds. This windrow is now a fraction of what it once was, and cannot now provide the protection that monarchs need during the winter. Hopefully it will be able to in the future as the new trees planted there mature.

The other overwintering site that is still fully functional is adjacent to the proposed aquatic center construction site. It will no doubt be a long-needed and welcome facility in Oxnard. I hope the City of Oxnard will do what it can to prevent any disturbance to the last monarch overwintering site in our city.

8-2

Please work with the most knowledgable agencies and nonprofits dedicated to saving the monarch from extinction. They will be more than happy to work with the City of Oxnard to achieve the ultimate win-win for all of us. I can recommend the Ventura County Resource Conservation District https://vcrcd.org/ and the Xerces Society https://www.xerces.org/. 8-3

Roger Poirier, Chair
Hobson Park East
Neighborhood Council
310-570-3738

--

Reza Bagherzadeh, P.E.

Senior Project Manager
Public Works Department
305 West Third Street, East Wing, Second Floor
Oxnard, California 93030

O: 805.271.2280 C: 805.297.3194

www.oxnard.org



Letter 8

COMMENTER: Roger Poirier, Chair, Hobson Park East Neighborhood Council

DATE: December 13, 2023

Response 8-1

The commenter states Oxnard contains two overwintering sites for monarchs, and suggests one of the overwintering sites has been disturbed by construction next to the Masonic Cemetery. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 8-2

The commenter requests the City prevent disturbance to the monarch overwintering site near the project site.

The project site is located west and south of eucalyptus tree rows and is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat for monarch butterfly, including foraging habitat or other supportive zone habitat. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site. As discussed in Response 1-5, the project does not include removal of the eucalyptus trees that support monarch butterfly, nor does it include removal of trees or vegetation within 500 feet of the eucalyptus trees. As discussed in Response 1-2, Mitigation Measure BIO-1 is provided to reduce direct impacts to monarch butterfly to a less-than-significant level. Therefore, the City would prevent disturbance to the monarch butterfly overwintering site near the project site.

Response 8-3

The commenter requests the City works with knowledgeable agencies and recommends the Ventura County Resource Conservation District and Xerces Society. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Letter 9

Ethan Knox

From: Jennifer Haddow
Sent: Wednesday, January 10, 2024 11:51 AM
To: Ethan Knox
Subject: FW: South Oxnard Aquatics Center - Extension Request

Jennifer Haddow, PhD, Executive Vice President
805-644-4455 Main | 805-804-7277 Mobile
jhaddow@rinconconsultants.com

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From: Bagherzadeh, Reza <reza.bagherzadeh@oxnard.org>
Sent: Friday, December 22, 2023 9:13 AM
To: Jennifer Haddow <jhaddow@rinconconsultants.com>
Cc: Joe Pearson II <joe.pearson@oxnard.org>; William Gordon <wgordon@elsarch.com>
Subject: Fwd: South Oxnard Aquatics Center - Extension Request

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Hi Jennifer,
I would like you to prepare a response for me. Once I receive your response, I will share it with FWS and copy the team.
Happy holiday,
Thank you,

---------- Forwarded message ---------
From: **Diel, Christopher** <christopher_diel@fws.gov>
Date: Thu, Dec 21, 2023 at 4:05 PM
Subject: Re: South Oxnard Aquatics Center - Extension Request
To: Sinclair, Karen D <karen_sinclair@fws.gov>, reza.bagherzadeh@oxnard.org <reza.bagherzadeh@oxnard.org>
Cc: Termondt, Sarah E <sarah_termondt@fws.gov>

Hi Reza,

The Service unfortunately did not have the staffing capacity to be able to provide a comment letter by the deadline. 9-1
However, we reviewed the project and would recommend the City review formal comments provided by the Xerces society. We encourage the City to contact the Service directly for guidance on creating robust minimization and conservation measures to be implemented during the proposed project and facility operation. 9-2
We are available to provide our species and regulatory expertise and to answer any questions you may have. Please feel free to contact me at this email address or Karen Sinclair at karen_sinclair@fws.gov. 9-3

Sincerely,

Christopher J. Diel
Assistant Field Supervisor
U.S. Fish & Wildlife Service, Ventura Field Office
2493 Portola Road, Suite B
Ventura, CA 93003
805/677-3366
(he/they)

Please note: The best way to reach me is through email or Chat me on Teams!

Visit us online or on social media, and check out our Year in Review magazine and video for our latest stories.

From: Sinclair, Karen D <karen_sinclair@fws.gov>
Sent: Wednesday, December 13, 2023 4:14 PM
To: reza.bagherzadeh@oxnard.org <reza.bagherzadeh@oxnard.org>
Cc: Termondt, Sarah E <sarah_termondt@fws.gov>; Diel, Christopher <christopher_diel@fws.gov>
Subject: South Oxnard Aquatics Center - Extension Request

Dear Reza Bagherzadeh,

We have reviewed your Notice of Intent and Public Review Draft Initial Study - Mitigated Negative Declaration for the South Oxnard Aquatics letter.
Because the project occurs directly adjacent to an occupied monarch butterfly overwintering site, the project may have direct and indirect impacts to monarch butterflies and their habitat. However, the current documents do not provide sufficient analysis of impacts to monarch butterflies and their habitat.

We are interested in submitting a comment letter, however need additional time to finalize our response. Can you please extend the comment window for us by at least a week?

Thank you,
Karen Sinclair

Karen Sinclair, *Fish and Wildlife Biologist*
pronouns: she/her
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Public Works Department
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Oxnard, California 93030

O: 805.271.2280 C: 805.297.3194

www.oxnard.org



Letter 9

COMMENTER: Christopher J. Diel, Assistant Field Supervisor, United States Fish and Wildlife Service

DATE: December 21, 2023

Response 9-1

The commenter states a formal comment letter was unable to be provided by the close of public review. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Response 9-2

The commenter suggests the City review formal comments provided by Xerces Society. The commenter suggests the City contact USFWS directly for guidance on integrating monarch butterfly measures into the proposed project.

Refer to Responses 1-1 through 1-7 for responses to formal comments provided by Xerces Society. The project site is located west and south of eucalyptus tree rows and is disturbed by regular site activities, including stockpiling of mulch and use of tractors and other equipment and does not support suitable habitat for monarch butterfly, including foraging habitat or other supportive zone habitat. In addition, Rincon Consultants, Inc., conducted a site reconnaissance on November 24, 2025, which found no monarch butterflies or evidence of monarch overwintering activity on-site or within the eucalyptus trees adjacent to the project site. As discussed in Response 1-5, the project does not include removal of the eucalyptus trees that support monarch butterfly, nor does it include removal of trees or vegetation within 500 feet of the eucalyptus trees. As discussed in Response 1-2, Mitigation Measure BIO-1 is provided to reduce impacts to monarch butterfly to a less-than-significant level. Therefore, the City would prevent disturbance to the monarch butterfly overwintering site near the project site.

Response 9-3

This comment concludes the letter and provides contact information for USFWS. This comment does not contain a substantive comment on the analysis or conclusions of the IS-MND. No response is required.

Attachment I-1

Monarch Nectar Plants

MONARCH NECTAR PLANTS

California



Left to right: Monarch butterflies on rabbitbush, Pacific aster, and clustered together on eucalyptus in a California overwintering site.

California is one of the most floristically biodiverse regions in the world, supporting unique plant communities such as prairie grasslands, chaparral, giant sequoia groves, and Joshua tree woodlands. The native plants that make up these communities in turn support an incredible array of insects and other animals, including the monarch butterfly. During spring and summer, monarchs leave hundreds of overwintering sites along the California coast and fan out across the western landscape to breed and lay eggs on milkweed (*Asclepias* spp.), the monarch's host plant. Several generations are likely produced during this time. In the fall, adults from throughout the western U.S. migrate back to overwintering sites in California and central Mexico, where they generally remain in reproductive diapause until the spring, when the cycle begins again.

Once, millions of monarchs overwintered along the Pacific coast of California and Baja, Mexico. By 2018, the population of western monarchs hit a record low of less than 29,000 butterflies, which represents a 99.4% decline since the 1980's. The significant problems afflicting western monarchs include habitat loss, pesticide use, and climate change. Because of the monarch's migratory life cycle, it is important to protect and restore habitat across their entire range. Adult monarchs depend on diverse nectar sources for food during all stages of the year, from spring and summer breeding to fall migration and overwintering. Caterpillars, on the other hand, are completely dependent on their milkweed host plants. Inadequate milkweed or nectar plant food sources at any point may impact the number of monarchs that successfully arrive at overwintering sites in the fall.

Providing milkweeds and other nectar-rich flowers that bloom where and when monarchs need them is one of the most significant actions you can take to support monarch butterfly populations. This guide features native California plants that have documented monarch visitation, bloom during the times of year when monarchs are present and are commercially available... This list is not exhaustive, but focuses on the plants that appear to be the most important for western monarchs. The list also includes moisture requirements, so that you can choose plants to create a drought-tolerant monarch garden, if needed. These species are well-suited for wildflower gardens, urban greenspaces, and farm field borders. Beyond supporting monarchs, many of these plants attract other nectar- and/or pollen-seeking butterflies, bees, moths, and hummingbirds. For a list of native plants that host butterflies and moths specific to your zip code see www.nwf.org/nativeplantfinder. The species in this guide will be adaptable to growing conditions across most of the state, but may be less suitable for planting in the High Sierras, Modoc Plateau, and Eastern Interior Desert regions. Please consult Calflora (www.calflora.org) for details on species' distributions in your specific area.

MONARCH JOINT VENTURE

XERCES SOCIETY for Invertebrate Conservation

GARDEN FOR WILDLIFE













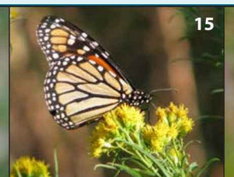
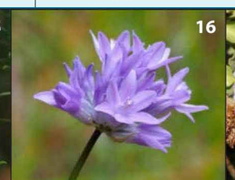

Bloom		Common Name	Scientific Name	Flower Color	Max. Height (Feet)	Water Needs (Low, Med., or High)	Notes
		Forbs					All species perennials, unless otherwise noted. Monarchs can be found year-round in California.
Spring to Summer	1	Nettleleaf giant hyssop	*Agastache urticifolia*	Purple/red	2	L	Establishes better from transplant than seed. Tolerates clay soil and wet or dry conditions.
	2	Yarrow	*Achillea millefolium*	White	3	L	Tolerates clay soil and wet or dry conditions. Attractive to many insects.
Spring to Fall	3	Coastal sand verbena	*Abronia latifolia*	Yellow	1	L	Tolerates salt spray and prefers sandy soils. Can bloom year-round.
	4	Gumplant	*Grindelia camporum*	Yellow	4	L–H	Tolerates clay soil and wet or dry conditions.
	5	Milkweed	*Asclepias* spp.	Pink/white/purple	2–4	L/M	Monarch caterpillar host plant. *Likely entire genus is attractive to monarchs.*
	6	Oregon gumweed	*Grindelia stricta*	Yellow	5	H	Wetland / riparian.
	7	Western vervain	*Verbena lasiostachys*	Purple	3	L	Good butterfly plant. Tolerates seasonal flooding, sand and clay. Can be used for erosion control.
Summer	8	Coyote mint	*Monardella villosa*	Pink/purple	2	L	Requires good drainage.
	9	Indian hemp	*Apocynum cannabinum*	White/pink	6	M/H	Poisonous to humans, pets and livestock.
	10	Mountain monardella	*Monardella odoratissima*	White/purple	1	L	Does best at mid to high elevations. Attracts many species of butterflies.
	11	Pacific aster	*Symphyotrichum chilense*	Yellow/violet	4	L	Tolerates clay soils and wet or dry conditions. *Likely entire genus is attractive to monarchs.*
Summer to Fall	12	Goldenrod	*Solidago* spp.	Yellow	3	L	Important late-season forage for bees, butterflies, wasps, beetles, and more. *Likely entire genus is attractive to monarchs.*
	13	Smooth beggartick	*Bidens laevis*	Yellow	3	H	Prefers wet areas and can be used in bioswales. Attracts beneficial insects and butterflies in the fall.
	14	Sunflowers	*Helianthus* spp.	Yellow	5–8	M	Excellent butterfly nectar plant. Attractive to many insects. *Likely entire genus is attractive to monarchs.*
	15	Western goldentop	*Euthamia occidentalis*	Yellow	6	H	Wetland-riparian. *Likely entire genus is attractive to monarchs.*
Winter to Spring	16	Bluedicks	*Dichelostemma capitatum*	Purple	3	L	Attracts bees, butterflies, and hummingbirds. An early spring bloomer.
Winter to Summer	17	Seaside fleabane	*Erigeron glaucus*	Purple	2	L	A great butterfly plant.
		Shrubs and Trees					
Year-round	18	Coyotebrush, mulesfat, desertbroom	*Baccharis* spp.	White/yellow/pink	6–10	L	Easy to grow and attractive to many insects. *Likely entire genus is attractive to monarchs.*
Spring to Summer	19	Black sage	*Salvia mellifera*	Blue/purple	6	L	Important butterfly and hummingbird plant. Quail eat the seeds.
	20	Desert sage	*Salvia dorrii*	Purple	4	L	Very drought tolerant.
Summer to Fall	21	Common buttonbush	*Cephalanthus occidentalis*	White	6	H	Fragrant, showy flowers that attract butterflies.
	22	Rabbitbrush, goldenbush, mock heather	*Ericameria* spp.	Yellow	4–8	L	Great late season nectar source for bees and butterflies. Very drought tolerant. *Likely entire genus is attractive to monarchs.*
Winter to Spring	23	Manzanita	*Arctostaphylos* spp.	Pink/white	1–30	L/M	Some species/varieties are very drought tolerant. *Likely entire genus is attractive to monarchs.*
	24	Willow	*Salix* spp.	White	20–50	H	Tolerates sand and seasonal flooding. Important wildlife plant. *Likely entire genus is attractive to monarchs.*

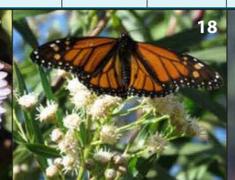
PLEASE NOTE: *In general, milkweed should not be planted within 5 miles of the coast north of Santa Barbara, nor within 1 mile of the coast from Santa Barbara south. These areas are generally outside of milkweed's historical range and planting milkweed too close to overwintering sites may interfere with monarch migration and overwintering behavior.*

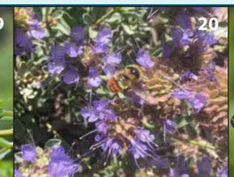
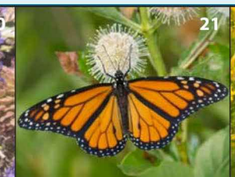
This list was produced by the Xerces® Society. www.xerces.org.

XERCES SOCIETY for Invertebrate Conservation








Planting for Success

Monarch nectar and host plants often do best in open, sunny sites. You can attract more monarchs by planting flowers in single species clumps and choosing a variety of plants that have overlapping and sequential bloom periods. Monarchs can be present year-round in California, so you may want to provide nectar plants for migrating and breeding monarchs from spring through fall, as well as milkweeds in the spring and summer.

Why Plant Native?

Although monarchs use a variety of nectar plant species, including exotic invasives such as ice plant and cape ivy, we recommend planting native species. Native plants are often more beneficial to ecosystems, are adapted to local soils and climates, and help promote biological diversity. They can also be easier to maintain in the landscape, once established.

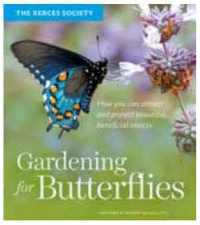
Tropical milkweed (*Asclepias curassavica*) is a non-native plant that is widely available in nurseries. This milkweed can persist year-round in mild climates, allowing monarchs to breed throughout the winter rather than going into diapause. Tropical milkweed may foster higher loads of a monarch parasite called OE (*Ophryocystis elektroscirrha*), which negatively impacts monarch health. **In general, milkweed should not be planted within 5 miles of the coast north of Santa Barbara, nor within 1 mile of the coast from Santa Barbara south. These areas are generally outside of milkweed's historical range and planting milkweed too close to overwintering sites may interfere with monarch migration and overwintering behavior.** Because of these implications, we recommend planting native milkweeds in areas where they historically occurred. You can read more about OE in this Monarch Joint Venture fact sheet: http://monarchjointventure.org/images/uploads/documents/Oe_fact_sheet.pdf.

Protect Monarchs from Insecticides

Both insecticides and herbicides can be harmful to monarchs. Herbicides can reduce floral resources and host plants. Although dependent on timing, rate, and method of application, most insecticides have the potential to poison or kill monarchs and other pollinators. Systemic insecticides, including neonicotinoids, have received significant attention for their potential role in pollinator declines (imidacloprid, dinotefuran, clothianidin, and thiamethoxam are examples of systemic insecticides now found in various farm and garden products). Because plants absorb systemic insecticides as they grow, the chemicals become distributed throughout all plant tissues, including the leaves and nectar. New research has shown that some neonicotinoids are toxic to monarch caterpillars that are poisoned as they feed on leaf tissue of treated plants. You can help protect monarchs by avoiding the use of these and other insecticides. Before purchasing plants from nurseries and garden centers, be sure to ask whether they have been treated with systemic insecticides. To read more about threats to pollinators from pesticides, please visit: www.xerces.org/pesticides.

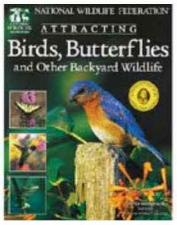
Additional Resources

***Gardening for Butterflies* by The Xerces Society**



www.xerces.org/books

Attracting Birds, Butterflies, and Other Backyard Wildlife



http://bit.ly/1Xhxfgu

From the Xerces Society

- ***Conservation Status and Ecology of the Monarch Butterfly in the U.S.:*** xerces.org/us-monarch-consv-report
- ***Guide to Milkweeds and Monarchs in the Western U.S.:*** xerces.org/western-us-monarch-guide
- ***Guide to California Native Milkweeds*:** xerces.org/ca-mw-guide
- **Milkweed Seed Finder:** xerces.org/milkweed-seed-finder

Websites

- **The Xerces Society:** www.xerces.org/monarchs
- **Monarch Joint Venture:** www.monarchjointventure.org/resources
- **Natural Resources Conservation Service:** www.nrcs.usda.gov/monarchs
- **National Wildlife Federation:** www.nwf.org/butterflies

Citizen Science Efforts in California

- **Xerces Society Western Monarch Thanksgiving Count:** www.westernmonarchcount.org
- **Xerces Society & USFWS Milkweed and Monarch Survey:** www.xerces.org/milkweedsurvey
- **Journey North:** www.learner.org/jnorth/monarch
- **Monarch Larva Monitoring Project:** www.mlmp.org
- **Project Monarch Health:** www.monarchparasites.org

Data Sources

Nectaring data and observations, background information, and other contributions to this publication were taken from the published literature and generously provided by multiple researchers, gardeners, partners, and biologists. For the full list of data sources, please see the Monarch Nectar Guides page on our website (www.xerces.org/monarch-nectar-plants).

Acknowledgements

Funding provided by the Monarch Joint Venture and USDA Natural Resources Conservation Service. Additional support comes from Cascadian Farm, Ceres Trust, Cheerios, CS Fund, Disney Conservation Fund, The Dudley Foundation, The Edward Gorey Charitable Trust, Gaia Fund, General Mills, Hind Foundation, National Co+op Grocers, Nature Valley, Turner Foundation, Inc., Whole Foods Market and its vendors, and Xerces Society Members.

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Appendix J

Mitigation Monitoring and Reporting Program



South Oxnard Aquatics Center

Mitigation Monitoring and Reporting Program

prepared by

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December 2025

RINCON CONSULTANTS

Mitigation Monitoring and Reporting Program for the South Oxnard Aquatics Center

The California Environmental Quality Act (CEQA) requires that a reporting or monitoring program be adopted for the conditions of project approval that are necessary to mitigate or avoid significant effects on the environment (Public Resources Code 21081.6). This mitigation monitoring and reporting program is intended to track and ensure compliance with adopted mitigation measures during the project implementation phase. For each mitigation measure recommended in the South Oxnard Aquatics Center Project Final Initial Study-Mitigated Negative Declaration (State Clearinghouse Number 2023110316), specifications are made herein that identify the action required, the monitoring that must occur, and the agency or department responsible for oversight.

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Mitigation Measure	Implementing Action	Implementation Monitoring/ Reporting Responsibility	Implementation Timing Requirements	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
Air Quality						
AQ-1: NOx Construction Reduction Measures						
During construction, the construction contractor shall implement the following measures pursuant to the requirements of the Ventura County Air Pollution Control District Guidelines. ▪ Ensure all on-site vehicles and equipment with 50 horsepower or more shall meet, at a minimum, United States Environmental Protection Agency (USEPA) Tier 4 final engine certification requirements. If Tier 4 final equipment is not available, the contractor may apply other technologies available for construction equipment which would achieve a reduction in nitrous oxide (NO_X) (as well as particulate matter [PM]) emissions comparable to Tier 4 final construction equipment. Where alternatives to USEPA Tier 4 equipment are utilized, the contractor shall be required to provide evidence these alternative technologies would achieve comparable emissions reductions. Certifications or alternative reduction strategies shall be required prior to receiving a construction permit. ▪ Minimize equipment idling time. ▪ Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. ▪ Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time. ▪ Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible. Prior to initiation of construction activities, the City of Oxnard Public Works Department shall ensure that the measures listed above are included in the construction specifications for the proposed project.	Construction personnel will comply with the Ventura County Air Pollution Control District Guidelines requirements listed in this mitigation measure.	The construction contractor is responsible for ensuring the Ventura County Air Pollution Control District Guidelines measures are implemented. The City of Oxnard Public Works Department is responsible for: ▪ Ensuring the Ventura County Air Pollution Control District Guidelines measures are included in the construction contracts and specifications for the proposed project. ▪ Verifying the construction contractor has implemented Ventura County Air Pollution Control District Guidelines measures.	Prior to the release of bid documents; during construction.			
Biological Resources						
BIO-1: Monarch Butterfly Avoidance and Minimization						
Project construction activities, including equipment staging, grading, and construction shall be avoided during the monarch butterfly overwintering season between October 15 through March 15, if practicable. In the event project construction activities cannot be avoided during the overwintering season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a survey for roosting monarch butterflies within seven days prior to initiation of construction activities to determine their presence/absence. If construction activities occur during the overwintering season and monarch butterflies are present, the qualified biologist shall establish a protective buffer, ranging from 100 to 300 feet from the roosting site in which monarch butterflies are aggregating. The buffer will be delineated on site by the biologist with flagging or staking visible by construction personnel. The construction contractor shall ensure no construction occurs within the protective buffer, including staging of equipment or stopping or idling in the buffer, during the overwintering season. In the event construction activities, or other use of equipment, is needed to work within the buffer, the qualified biologist shall be present on site to monitor construction activities and determine if the work is disturbing the aggregated butterflies. If the biologist determines the work is disturbing the butterflies, the biologist shall stop work within the protective buffer at any time. In addition, due to the regular movement of the butterflies and locations of the aggregations, the biologist shall have the discretion to adjust the protective buffers, as necessary. If no monarch butterflies are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses for a period of 7 days or more, if construction is planned to restart during the monarch butterfly overwintering season (October 15 through March 15), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.	A monarch butterfly survey will be conducted if construction occurs between October 15 through March 15. If monarch butterflies are present, a protective buffer will be established.	The City of Oxnard Public Works Department is responsible for: ▪ Hiring a qualified biologist. ▪ Verifying construction workers are working outside of established buffers. The qualified biologist is responsible for: ▪ Conducting a survey for roosting monarch butterflies within seven days prior to the start of construction. ▪ If monarch butterflies are present, establish a buffer from the roosting site. ▪ If construction during the overwintering season halts for 7 days or more, conduct an additional survey for roosting monarch butterflies within 7 days of construction resuming. The construction contractor is responsible for avoiding work within the buffer determined by the biologist.	During construction.			
BIO-2: Pre-Construction Nesting Bird Survey						
Project construction activities, including (but not limited to) equipment staging, grading, and construction shall be avoided during the nesting bird season (February 1 through August 31), if practicable. In the event project construction activities cannot be avoided during the nesting bird season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a nesting bird survey within seven days prior to initiation of such activities to determine the presence/absence, location, and status of any active nests on site or within 100 feet of the site for songbirds and passerine species and up to 500 feet for raptors. The findings of the survey shall be	A nesting bird survey will be conducted if construction occurs between February 1 through August 31. If nesting birds are present, a buffer will be established.	The City of Oxnard Public Works Department is responsible for: ▪ Hiring a qualified biologist and reviewing and approving the qualified biologist's report. ▪ Verifying construction workers are working outside of established buffers.	Prior to the start of construction; during construction.			

Mitigation Measure	Implementing Action	Implementation Monitoring/ Reporting Responsibility	Implementation Timing Requirements	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
summarized in a report and submitted to the City of Oxnard Public Works Department for review and approval prior to undertaking construction activities at the site. If nesting birds/active nest(s) are observed on site, the qualified biologist shall establish a construction buffer with fencing or flagging. The buffer shall be 500 feet from the active nest for nesting raptors or threatened or endangered species and 100 feet from all other nesting birds. The nest buffer may be adjusted at the direction of the qualified biologist based on the species, location of the nest, and the type of construction activities occurring during the nesting period. The construction contractor shall communicate to all construction personnel that no person or construction-related activity shall occur within the buffer without prior approval from the qualified biologist. Nests shall be monitored at a minimum of once per week by the qualified biologist until it has been determined the nest is no longer being used by either the young or adults. The construction contractor shall ensure no ground disturbance occurs within this buffer until the qualified biologist confirms the breeding/nesting is completed, including confirmation all the young have fledged (if the nest was successful). If construction activities must occur within the buffer, the activity shall be conducted at the discretion of the qualified biologist. The construction contractor shall obtain approval from the qualified biologist prior to conducting any construction activities within the buffer. If no nesting birds are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses for a period of 7 days or more, if construction is planned to restart during the nesting bird season (February 1 through August 31), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.		The qualified biologist is responsible for: ▪ Conduct a nesting bird survey within 7 days from the start of construction. ▪ Summarizing survey results in a report. ▪ Establishing a buffer from the nesting birds/active nests, if identified. ▪ Monitoring active nests once per week. ▪ If construction halts for 7 days or more, conduct an additional survey for nesting birds within 7 days of construction resuming, if within nesting bird season. The construction contractor is responsible for avoiding work within the buffer determined by the qualified biologist.				
Cultural Resources						
CUL-1: Unanticipated Discovery of Cultural Resources						
In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determine it to be appropriate, archaeological testing for California Register of Historic Resources eligibility shall be completed. If the resource proves to be eligible for the California Register of Historic Resources and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of California Code of Regulations Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The City shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per California Code of Regulations Guidelines Section 15126.4(b)(3)(C).	The construction contractor will immediately halt work and notify the City if unanticipated cultural resources are discovered during construction. The City will contact a qualified archaeologist to evaluate the resource.	The City of Oxnard Public Works Department is responsible for: ▪ Hiring an archaeologist who meets or exceeds the Secretary of the Interior's Professional Qualifications Standards for archaeology. ▪ Including an inadvertent discovery clause in construction contracts and specifications. ▪ Reviewing and approving of the archaeologist's recommendations. ▪ Authorizing execution of the data recovery plan. ▪ Submitting documentation to the repository of the California Historical Resources Information System. ▪ Contacting a Native American representative. The archaeologist is responsible for: ▪ Determining if the resource is prehistoric. ▪ Preparing a data recovery plan. The construction contractor is responsible for immediately halting work and contacting the City after the discovery of an archeological resource.	During construction.			

Mitigation Measure	Implementing Action	Implementation Monitoring/ Reporting Responsibility	Implementation Timing Requirements	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
Geology and Soils						
GEO-1: Liquefaction Risk Minimization						
The City Community Development Department shall ensure project design and construction complies with all recommendations presented within the Geotechnical Evaluation, titled Geotechnical Evaluation South Oxnard Aquatic Center Project Oxnard College Park Oxnard, California (Ninyo and Moore 2022) or the most recent subsequent version. Prior to the issuance of grading permits, the City Community Development Department shall review the design and construction plans for the proposed project and ensure all recommendations from the Geotechnical Evaluation are incorporated into the plans. Prior to the start of construction, the City Community Development Department shall retain a qualified professional (Professional Geologist [PG] or Professional Engineer [PE]) to ensure all recommendations from the Geotechnical Evaluation are implemented by the construction contractor. During construction, the qualified environmental professional shall perform field observation and testing during grading activities to confirm construction is occurring in accordance with the recommendations of the Geotechnical Evaluation. The qualified professional shall summarize the results of the field observation and testing performed during grading activities into a Final Geotechnical Evaluation report and shall submit the report to the City Community Development Department. Prior to issuance of a Certificate of Occupancy, the City Community Development Department shall review the Final Geotechnical Evaluation report to confirm the recommendations of the Geotechnical Evaluation have been implemented.	The recommendations of the *Geotechnical Evaluation South Oxnard Aquatic Center Project Oxnard College Park Oxnard, California* will be included in construction plans and implemented by the construction contractor.	The City Community Development Department is responsible for: ▪ Ensuring the geotechnical recommendations are included in the construction contracts and specifications. ▪ Retaining a qualified professional (PG or PE). ▪ Reviewing and approving the qualified professional's report. The qualified professional is responsible for: ▪ Performing field observation and testing during grading. ▪ Summarizing results of field observation and testing into a Final Geotechnical Evaluation report. ▪ Submitting the Final Geotechnical Evaluation report to the City Community Development Department. The construction contractor is responsible for implementing recommendations of the *Geotechnical Evaluation South Oxnard Aquatic Center Project Oxnard College Park Oxnard, California*.	Prior to the issuance of grading permits; during construction; prior to the issuance of a Certificate of Occupancy.			
Hazards and Hazardous Materials						
HAZ-1: Soil Management Plan						
The City shall retain a qualified consultant (Professional Geologist or Professional Engineer) to prepare a Soil Management Plan prior to construction. The Soil Management Plan shall be prepared to address handling and management of soils or other contaminated wastes on the project site, if any is encountered during subsurface investigation, to reduce hazards to construction workers and off-site receptors during construction. The City shall review, approve, and implement the Soil Management Plan prior to grading activities. The Soil Management Plan must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of impacts from the project site. These measures and practices may include, but are not limited to: ▪ Stockpile management including stormwater pollution prevention and the installation of Best Management Practices ▪ Proper disposal procedures for impacted materials ▪ Monitoring and reporting ▪ A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection. The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction ▪ Proper handling procedures for unexpected contamination, such as halt-work and avoidance protocols, and City and contractor notifications The Soil Management Plan shall also specify the procedures to be implemented in the event unexpected hazardous materials are encountered during construction. If unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground disturbing activities, the construction	A Soil Management Plan will be prepared and implemented for the proposed project.	The City of Oxnard Public Works Department is responsible for: ▪ Hiring a qualified consultant. ▪ Reviewing and approving the Soil Management Plan. ▪ Approving construction in impacted areas. ▪ Verifying the measures in the Soil Management Plan are implemented by the construction contractor. The qualified consultant is responsible for: ▪ Preparing the Soil Management Plan. ▪ Evaluating indications of unexpected hazardous materials encountered during construction. ▪ Recommending testing, removal, and disposal methods for hazardous materials evaluated. ▪ Advising on construction in impacted areas.	Prior to release of bid documents; during construction.			

Mitigation Measure	Implementing Action	Implementation Monitoring/ Reporting Responsibility	Implementation Timing Requirements	Compliance Verification Initial	Compliance Verification Date	Compliance Verification Comments
contractor shall halt work in the immediate area and a qualified consultant (Professional Geologist or Professional Engineer) shall be contacted immediately to evaluate the situation. The qualified consultant shall evaluate the material and recommend the appropriate testing, removal, and disposal methods. The construction contractor shall ensure hazardous materials are removed or remediated in accordance with the requirements of the qualified environmental consultant and the Soil Management Plan. Construction work may continue on other parts of the project site while soil investigation and/or remediation takes place. The construction contractor shall not resume work at the impacted area(s) until approved by the qualified consultant and the City.		The construction contractor is responsible for: ▪ Implementing the Soil Management Plan. ▪ Halting work in the event unexpected hazardous materials are encountered during construction. ▪ Removing and remediating hazardous materials in accordance with the requirements of the qualified consultant and the Soil Management Plan.				
Noise						
NOI-1: Construction Noise Reduction Plan						
The construction contractor shall prepare and implement a Construction Noise Control Plan. The construction contractor shall submit the Construction Noise Control Plan to the City of Oxnard Public Works Department for review and approval prior to initiation of construction. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set. The Construction Noise Control Plan shall include the following measures: ▪ At least 21 days prior to the start of construction activities, all off-site businesses and residents within 500 feet of the project site shall be notified of the planned construction activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. ▪ At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, the representative shall investigate, take appropriate corrective action, and report the action to the City. ▪ During the entire active construction period, equipment, tools, and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. During the entire active construction period, stationary noise sources shall be located as far from sensitive receivers as practicable, muffled, and enclosed within temporary sheds or insulation barriers, or other measures for equivalent noise reduction will be incorporated to the extent feasible. ▪ The contractor shall be required to use impact tools that are hydraulically or electrically powered wherever practicable. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools. ▪ Stockpiling of materials shall be located as far as feasible from nearby noise-sensitive receptors. ▪ Signs shall be posted at the job site entrance(s) to reinforce the prohibition of unnecessary engine idling. All equipment shall be turned off if not in use for more than 5 minutes. ▪ Use of stereos and other amplified noise not necessary for the completion of construction work shall be prohibited. ▪ During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. The construction manager shall ensure the use of use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with safety requirements and laws.	The construction contractor will prepare and implement a Construction Noise Control Plan that includes the eight bulleted measures listed in this mitigation measure.	The City of Oxnard Public Works Department is responsible for: ▪ Reviewing and approving the Construction Noise Control Plan. ▪ Ensuring the Construction Noise Control Plan details are included as part of the application plans and construction plans. ▪ Verifying the measures in the Construction Noise Control Plan are implemented throughout construction. The construction contractor is responsible for: ▪ Preparing and submitting the Construction Noise Control Plan to the City of Oxnard Public Works Department. ▪ Implementing the Construction Noise Control Plan.	Prior to the start of construction; during construction.			

ATTACHMENT D

PARKING ANALYSIS

Exhibit A

South Oxnard Aquatics Center Parking Analysis

South Oxnard Aquatics Center Parking Analysis

In order to determine the number of parking spaces needed at the future South Oxnard Aquatics Center, a study was conducted to compare the center's layout and capacity to three existing aquatics facilities of a similar scale. The existing facilities included Elk Grove Aquatics Center, Morgan Hill Aquatics Center, and Ventura Aquatic Center. All four facilities have similar building programs and gross square footage, although the centers in Morgan Hill and Ventura have fewer building amenities and slightly reduced building areas. Also, in comparison to Oxnard's aquatic center, the three existing facilities have fenced site areas anywhere from 60 to 80 percent larger in size allowing them to accommodate more users.

While the aquatics center in Oxnard will have a 30-meter competition pool as compared to a 50-meter pool at the other facilities, all four facilities include a lessons pool (measuring 25 or more yards long by 6 lanes wide), an activities pool, and a slide. With the reduced size of the competition pool, Oxnard's center will present slightly less pool area to program for classes, lessons, and training, which implies a slight reduction in the number of users compared to the other centers. BerryDunn, the project's aquatics operations consultant, is now wrapping up an in-depth market analysis of the three existing facilities, the results of which are shared on pages 7 through 15 of this report. Their research has included a compilation of demographic data about the communities where the centers are located and operations data about the centers' programs and amenities. All three facilities offer similar programs that resemble the likely programming at the Oxnard center, creating a venue of roughly similar attractiveness to its surrounding community. BerryDunn reached out to the existing centers on multiple occasions to request user data including the average number of visitors during the summer season; unfortunately, they were not able to obtain this information.

Given that all four of these facilities are of a comparable size as well as have comparable programs, parking quantities at the three existing Aquatic Centers were determined to help inform the number of parking spaces needed at Oxnard's center. It is important to note that each comparable facility is located within a large park. Two of the existing centers (Ventura and Morgan Hill) offer some parking dedicated for users of the aquatic center; all three offer nearby parking inside the park, shared with other activities. Elk Grove has approximately 200 stalls near the front entry, while Morgan Hill has 134 dedicated stalls, and Ventura has 211 dedicated stalls. For each site, we have included aerial photos of their respective parks and parking areas. To align with the amount of available parking at the existing centers, it was determined that South Oxnard Aquatics Center should have a dedicated lot with 98 parking stalls, another 76 spaces along the adjoining loop road, and 26 in the adjacent lot, for a total of 200 stalls. In combination with the dedicated lot, these overflow stalls should allow for ample parking by aquatics center users and people enjoying other park activities. College Park currently has parking for over 900 vehicles with 616 off-street stalls and approximately 300 on-street spaces, as shown on the park map on page 6. If additional parking is needed during special events, undeveloped park land could be used temporarily for this purpose. Likewise, a partnership could be formed with Oxnard College to share their parking lot just south of the center outside of class hours.

We feel this approach to accommodating those who choose to drive to College Park's aquatic center balances the need for sufficient parking with the city's desire to preserve as much land as possible for current and future recreational uses.

Comparable Aquatics Center Summary

	Gross Building Area	Fenced in Site Area	Competition Pool	Lessons Pool	Activities Pool	Slide
South Oxnard Aquatics Center	13,691 sf	63,000 sf	30M x 25Yd	25Yd x 6 Lane	Included	Included
Elk Grove Aquatics Center	13,390 sf	102,000 sf	50M x 25Yd	25Yd x 6 Lane	Included	Included
Morgan Hill Aquatics Center	9,690 sf	112,000 sf	50M x 25Yd	25Yd x 6 Lane	Included	Included
Ventura Aquatic Center	10,410 sf	114,000 sf	50M x 25Yd	25M x 6 Lane	Included	Included


ELK GROVE


ELK GROVE - 200

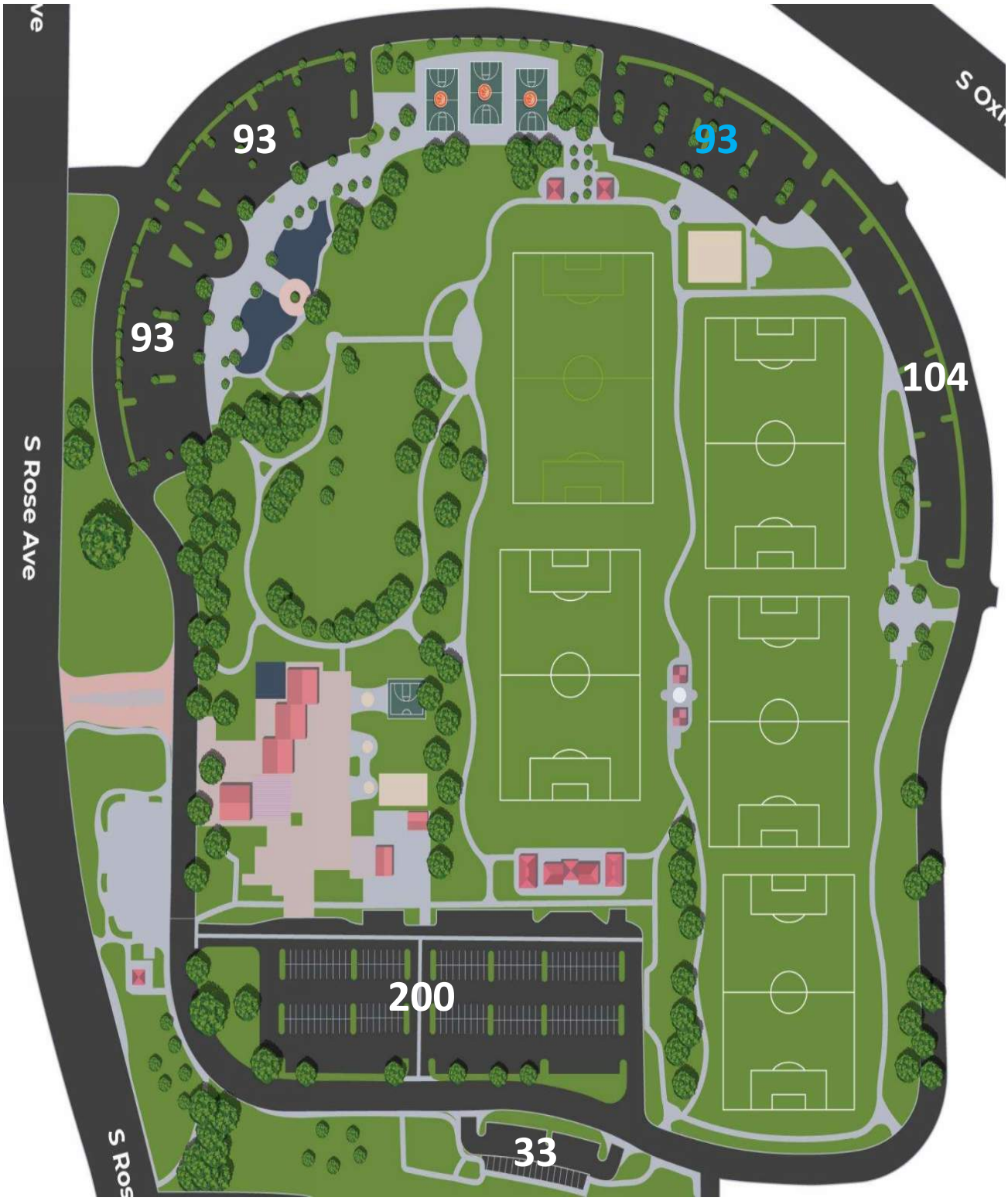

MORGAN HILL


MORGAN HILL - 134


VENTURA


VENTURA - 211

OXNARD COLLEGE PARK
Available Onsite Parking Space



Total Parking Spaces
616 parking stalls

3 Comparable Facility Analysis

This study identifies three facilities with similar proposed components to the South Oxnard Aquatics Center. These facilities are located in California, with the addresses listed below.

Table 5: Comparable Facilities to South Oxnard Aquatics Center (Ordered Alphabetically)

Facility	Address
South Oxnard Aquatics Center	3250 Rose Ave, Oxnard, CA 93036
Elk Grove Pool	9701 Big Horn Blvd, Elk Grove, CA 95757
Morgan Hill Aquatic Center	16200 Condit Rd, Morgan Hill, CA 95037
Ventura Aquatic Center	901 S Kimball Rd, Ventura, CA 93004

3.1 Summary of Key Findings of Comparable Facilities

- The aquatic facilities compared here offer, at a minimum, eight short-course (25 meter or yard) lanes. All three offer long-course (50 meter or yard) lanes.
- All of the aquatic facilities in this study have splash pad/spray park or water park components, such as buckets, splash zones, etc. Two of the four aquatic facilities offer a lazy river. Three of the four aquatic facilities have large slides.
- All of the facilities offer swim lessons, aqua fitness programs, and lifeguard/water safety courses.
- The admission rates ranged between $5 to $15 for adults and $4 to $12 for youth. Morgan Hill, with the highest median household income, also charged the highest adult daily drop-in rate of $15.
- One of the three facilities offer concessions costing, on average, $1 to $3 per item, primarily offering pre-packaged snacks and drinks.

3.2 Demographic Summary

Table 6: Community Profile and Fee Overview of Comparable Facilities (Ordered by Household Income)

	South Oxnard Aquatics Center	**Ventura** Aquatic Center	**Elk Grove** Pool	**Morgan Hill** Aquatic Center
Population	200,946	112,281	179,941	46,536
Median Age	32.2	41	36.4	37.9
Median Household Income	$84,220	$89,432	$107,467	$140,856
Adult Daily Rate		$10	$8	$15
Group Swim Lessons (per lesson avg)		$10.05	$9.15	$12.38
Private Swim Lessons (per lesson avg)		$31.29	$27	$32
Water Fitness Classes		$7	$14.50	$15**

Additional fee information can be found under each facility in the pages below.

**Indicates fees based off resident/non-resident rather than youth and adult. Adult daily rate reflects resident pricing*

***Water fitness classes in Morgan Hill are included in the price of admission but otherwise is $15*

Elk Grove Aquatics Center

9701 Big Horn Blvd, Elk Grove, CA 95757

(916) 405-4550; https://www.yourcsd.com/880/Elk-Grove-Aquatics-Center

179,941	36.4 Years	$107,467
2022 Estimated Population	Median Age	Median Household Income

Facility Details

LAP LANES



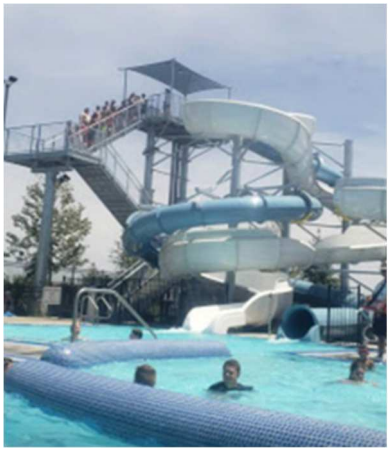
ZERO-DEPTH ENTRY



LAZY RIVER



WATERSLIDES



Overview

Elk Grove Aquatics Center features the region's largest competition pool (eight 50-meter lanes or 18 short-course lanes), a 25-yard instructional pool, a recreational pool with a lazy river and two 30-foot waterslides. Concessions are also available, in addition to facilities for rental/birthday parties.

Daily Fees

- Day Pass Daily Rate
  - Ages 5+: $8
  - Ages 2 – 4: $5
  - Ages 0 – 1: Free
- Season Pass
  - Ages 5+: $90
  - Ages 2 – 4: $80
- Swim for Fitness (Only) Passes
  - $60 Monthly Membership
  - $55 Auto-Pay Monthly Membership
  - $7 Daily Drop-In

Lessons & Programs

Fees

- Group swim lessons are $7.80 – $10.50 per session ($9.15 avg)
- Private swim lessons are $27 per session
- Water fitness classes are (on average) $14.50 per class
- Program fees vary based on age, ability level, and number of sessions
- Lifeguard classes are available, including American Red Cross Lifeguard Training ($160) and Water Safety Instructor Class ($225)
- Aquatic programs include:
    - Shallow-Water Fitness, Swim for Fitness, Recreation Swim, Swim Team/Club, Lifeguard Start Academy

Rentals

Private Rental Rates

- Splash Party – $300 – Paid entry for 30 guests, designated party area (2 hours), party tablecloths, plates cups, etc., available
- Adventure Party – $380 – Paid entry for 30 guests, designated party area (2 hours), party tablecloths, plates cups, etc., available, pizza and drinks
- A damage deposit is required for all Cosumnes CSD Facility rentals; the deposit is collected in the form of a credit card
- A facility inspection will be conducted before and immediately following the event by Cosumnes CSD staff to determine the condition of the facility, including the assembly area, pool deck, and locker rooms
- If an event causes the need for: a) cleaning procedures beyond the scope of normal maintenance, b) repairs or replacement due to structural or equipment damage, c) the event exceeds the terms of the contract, or d) event payment is returned as non-sufficient funds, the credit card damage deposit may be used, in part or in total, to pay for these services

Concessions

Elk Grove's concession stand menu offers:

- Entrées including pizza, hot dogs, nachos, and a salad
    - The cost of an entrée is between $3 and $4.
- Snacks including chips, candy, granola bars, and ice cream
    - The cost of a snack is between $.50 and $1.50
- Beverages including fountain drinks, Gatorade, fruit slushies, and frappes
    - The cost of a beverage is between $2 and $4
- Meal deals are available for $5 or $7 and include an entrée, chips or nachos, and a large drink •

The menu can be viewed here.

Morgan Hill Aquatic Center

16200 Condit Rd, Morgan Hill, CA 95037

(408) 782-2134; https://www.morgan-hill.ca.gov/189/Aquatics-Center-AC

46,536	37.9 Years	$140,856
2022 Estimated Population	Median Age	Median Household Income

Facility Details

LAP LANES



ZERO-DEPTH ENTRY



WATER PARK ELEMENTS



SLIDES



CABANAS & GREEN SPACE



Overview

The Morgan Hill Aquatic Center offers lap swim and aqua fitness classes year-round as well as summer recreation swim. The Aquatics Center shares membership access to Centennial Recreation Center. The lap pool offers a competition pool (eight 50-yards lanes) and an instructional pool (six 25-yard lanes), a dedicated leisure pool with water park elements, and two waterslides. It also features multiple cabanas for rent and ample outdoor/green space for additional space.

Daily Fees

- Day Pass Daily Rate
  - Adults, Ages 18+: $15
  - Ages 2 to 17: $12
  - Youth (under 2): Free
- Daily drop-in fee rates increased from $13 in 2021 to $15 in 2022 for adults; from $7 in 2021 to $15 in 2022 for youth
- Membership Rates (Resident)
  - Adult membership ($76/month)
  - Family Membership ($104/month)
  - Youth/Teen Membership ($36/month)
- Passes include access to all core programs
- Membership enrollment fee applies ($75/individuals; $100/family)
- Additional memberships available for special hours, additional adults, etc.
- Non-resident rates range from $4 – $6 more per month
- Membership to Morgan Hill Aquatic Center also includes access to the Centennial Recreation Center

Lessons & Programs

Fees

- Program fees vary based on age, ability level, and number of sessions
- Group swim lessons range from $11.75/lesson to $13/lesson for eight sessions, depending on level ($12.38 avg)
- Private swim lessons start at $28.75/lesson to $35.25/lesson for four sessions ($32 avg)
- Aqua fitness classes such as Shallow Tone and Deep H20 classes are included in membership or available for the daily drop-in fee
- Aquatic programs include:
    - Splash Youth Swim Team
    - Red Cross Lifeguarding Learning Class
    - Shallow Tone
    - Deep H20 Dynamic

Rentals

Private Rental Rates

- **Picnic Areas (four available) – $100/day**

  Includes three tables, seats 18 comfortably
- **Cabanas (six available) – $50/day**

  10’x10 ’poolside cabanas come with two lounge chairs, two chairs
- **Party Room (one full room) – $225**

  Seven tables in the room; seats 40 comfortably, max 60
- Party rentals do not include entry into the facility. Those reserving the space must also purchase admission tickets for all guests.
- Private rental rates of the 50-meter pool were not available during the time of the study; however, Morgan Hill Aquatic Center’s aquatics strategic plan mentions that it should consider this option.

Concessions

This facility offered concessions prior to the COVID-19 pandemic; however, the facility does not currently offer concessions. Staff contacted during this research did not have knowledge of what items were previously offered.

Ventura Aquatic Center

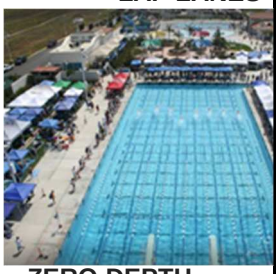
901 S Kimball Rd, Ventura, CA 93004

805-654-7511; https://www.cityofventura.ca.gov/612/Ventura-Aquatic-Center

112,281	41 Years	$89,432
2022 Estimated Population	Median Age	Median Household Income

Facility Details

LAP LANES



ZERO-DEPTH ENTRY



WATER PARK ELEMENTS



SLIDES



Overview

The facility features 50- and 25-meter pools, as well as a recreation area with waterslides and activity pool. The 50-meter competition pool has two one-meter and two three-meter diving boards. The facility also has locker rooms and picnic areas. The City of Ventura offers a wide variety of swim lessons for many ages and abilities, including specialized programs. Inclusive programs and special accommodations are available. The facility offers pool parties, swim meet and water polo event rentals, filming rentals, team pool parties, and end-of-school parties, among other events.

Daily Fees

- Open Swim Fees
  - Ages 2 and under: Free
  - Ages 3 and older: $10
- Lap Swim Daily Rate
  - Ages 16 – 61: $5
  - Ages 62+: $4
- Lap Swim Passes (available in 25 or 50 entry packs)
  - Ages 16 – 61: Avg $4/entry
  - Ages 62+: Avg $3/entry

Lessons & Programs

Fees

- Program fees vary based on age, ability level, and number of sessions
- Group swim lessons range from $9.80/lesson for six sessions to $10.30/lesson for three sessions ($10.05 avg)

- Private swim lessons start at $31.33/lesson for three sessions to $31.25/lesson for three sessions ($31.29 avg)
- Ventura Aquatic Center hosts adult and pediatric First Aid/CPR/AED for $100/session; lifeguard training for $250; and Water Safety Instructor courses ($295)
- Shallow-water and deep-water fitness classes cost $7/class
- Aquatic programs include:
    - Private Swim Lessons
    - Group Swim Lessons
    - Swimming with Autism
    - Adult and Teen Learn to Swim
    - Youth Swim Conditioning
    - Swim Team Prep
    - Adult Water Polo
    - Shallow-Water Exercise
    - Deep-Water Exercise

Rentals

Party Fees

- 50 guest tickets = $400
- 75 guest tickets = $600
- Party reservations include early admission for party preparations, reserved picnic area, and guaranteed guest entry and “Youth Swim Conditioning”

Private Rental Rates

- Category 1: Nonprofit and not-for-profit groups, schools, and government agencies
    - 25- and 50-Meter: $6/lane/hr or $11.75 long-course lane/hr
    - Recreation Area: $112.50/hr
    - Full Facility: $217.50
- Category 2: Private citizens and community members o
    - 25- and 50-Meter: $7.25/lane/hr or $13.50 long course/lane/hr
    - Recreation Area: $180/hr
    - Full Facility: $310/hr
- Category 3: Private companies and commercial filming. o
    - 25- and 50-Meter: $15.25/lane/hr or $21.25 long course lane/hr
    - Recreation Area: $247.50/hr (slides only, $175/hr)
    - Full Facility: $519/hr

In addition to the hourly rate:

- Lifeguard fee: One lifeguard is required for every 25 guests. During sole use, a minimum of two lifeguards is required for the competition pool and 25-meter pool; a five-guard minimum is required for the recreation area. Lifeguard fee: $15/hr.
- A $25 non-refundable application fee is required.

	• A $200 facility/equipment deposit may be required. This deposit will be refunded if the facility and all equipment are returned in the condition they were prior to the rental. The refunded deposit will be processed and mailed within 14 working days after the rental. • Use of diving boards is a three-lane minimum rental plus an additional $20 per hour. • Colorado Time System use fee is $100 per day. This fee includes one table, one double canopy, two chairs, console, starter, touchpads, pickles, clocks, and scoreboard. • Additional canopy, table, and chair rentals are available for $50 per day. For large events of 500+ participants: ● $200 trash fee applies ● $300 cleaning fee applies ● Special Events application is required

Concessions

This facility does not offer concessions.

ATTACHMENT
E

RESOLUTION (DEVELOPMENT DESIGN REVIEW PERMIT)

RESOLUTION NO. PZ 23-200-10

A RESOLUTION OF THE COMMUNITY DEVELOPMENT DIRECTOR OF THE CITY OF OXNARD APPROVING PLANNING AND ZONING PERMIT NOS. 23-200-10 (DEVELOPMENT DESIGN REVIEW) TO ALLOW FOR THE CONSTRUCTION OF A 57,233 SQUARE-FOOT OUTDOOR POOL AREA WITH FOUR POOL AREAS, ONE SLIDE AREA, A ONE-STORY "L" SHAPED BUILDING TOTALING 19,664 SQUARE FEET, AND ANCILLARY FACILITIES. LOCATED AT 3250 SOUTH ROSE AVENUE (APN 224-0-012-285) SUBJECT TO CERTAIN FINDINGS AND CONDITIONS. FILED BY THE PUBLIC WORKS DEPARTMENT, 305 W. THIRD ST. EAST WING 2ND FLOOR, OXNARD CA 93030.

WHEREAS, the Public Works Department of The City of Oxnard, ("Property Owner" and/or "Permittee") submitted a request to approve Planning and Zoning Permit No. 23-200-10 (Development Design Review) to permit the construction of the South Oxnard Aquatics Center, located at 3250 South Rose Avenue (APN 224-0-012-285) (the "Project"); and

WHEREAS, the City of Oxnard as the Lead Agency, has prepared Final IS/MND 23-04 in accordance with the requirements of the California Environmental Quality Act (CEQA, Public resources Code § 21000, et seq.), the regulations promulgated thereunder (14 California Code of Regulations, §15000, et seq., CEQA Guidelines), and the City's Environmental Review Guidelines; and

WHEREAS, pursuant to provisions of the California Environmental Quality Act and CEQA Guidelines, Section 15063, and following an Initial Study and environmental assessment of possible adverse impacts, the project will not have a significant effect on the environment because of the inclusion of certain mitigation measures for which lessened potential adverse impacts to a level of less than significant. Therefore, the Planning Division has prepared a Mitigated Negative Declaration with mitigation measures and monitoring program in accordance with the provisions of CEQA, including, without limitation CEQA Guidelines Sections 15070, 15071, 15072, and 15073, which have been incorporated as conditions; and

WHEREAS, a Notice of Intent to Adopt an Initial Study and Draft Mitigated Negative Declaration (IS/MND) (MND 23-04) for the Project was published and posted on November 10, 2023, at the State Office of Planning and Research (OPR) website and at the Ventura County Recorder's Office pursuant to CEQA Guidelines Sections 15072 and 15073; and

WHEREAS, the public comment period on the Draft IS/MND ran for thirty (30) days commencing on November 10, 2023 to and ending on December 11, 2023; and

WHEREAS, after the close of the comment period on the IS/MND, the IS/MND was modified as set forth in Chapter 4 of the Response to Comment document; and

WHEREAS, in accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, the City has prepared Final IS/MND 23-04 containing all comments

received on the Draft IS/MND 23-04, written responses to all substantive comments, and necessary changes to the text of the Draft IS/MND 23-04; and

WHEREAS, pursuant to CEQA Guidelines §15074, the Final MND reflects the City's independent judgment and analysis. The Community Development Director has independently reviewed and analyzed the Final IS/MND 23-04 prepared for the Project. The Final IS/MND 23-04 is an accurate and complete statement of the potential environmental impacts of the project. The Final IS/MND 23-04 was prepared under the direction of the City of Oxnard Planning Division and reflects its independent judgment and analysis of the environmental impacts.

WHEREAS, in accordance with the California Environmental Quality Act, the Community Development Director considered the proposed Final IS/MND 23-04 before making its recommendation, on the basis of the whole record before it finds, there is no substantial evidence that the project will have a significant effect on the environment, and recommends that the City Council adopt the Final IS/MND 23-04; and

WHEREAS, on December 16, 2025, the Community Development Director conducted a duly noticed public hearing to consider the Applicant's request to approve Planning and Zoning Permit 23-200-10 (Development Design Review Permit), in accordance with Section 16-525 through 16-525.11 of the Oxnard City Code; and

WHEREAS, Section 16-525 of the OCC authorizes the Community Development Director of the City of Oxnard (**"Director"**) to approve a Development Design Review Permit; and

WHEREAS, the Director finds, after due study, deliberation and public hearing, that the project meets the criteria set out in Sections 16-525.5 of the OCC; and

WHEREAS, the Project has been reviewed by the Development Advisory Committee (DAC) and the DAC has prepared conditions of approval that are incorporated within the recommended permit; and

WHEREAS, the Director finds that the Project conforms to the City of Oxnard 2030 General Plan elements thereof and the Oxnard City Code for the reasons set forth in the Community Development Director Hearing Staff Report; and

WHEREAS, the Director has held a duly noticed public hearing and received and reviewed written and oral comments related to the Project; and

WHEREAS, the Director finds after due study and deliberation that the applicant agrees with the necessity of and accepts all elements, requirements, and conditions of this Resolution as being a reasonable manner of preserving, protecting, providing for, and fostering the health, safety, and welfare of the citizenry in general and the persons who work, visit or live in this development in particular.

NOW, THEREFORE, BE IT RESOLVED BY THE COMMUNITY DEVELOPMENT DIRECTOR OF THE CITY OF OXNARD:

SECTION 1. Based on the entire record before the Community Development Director and all written and oral evidence presented, including the Development Design Review Staff Report and all attachments thereto, the Community Development Director finds:

1. **The proposed use is in conformance with the General Plan and other adopted policies of the City of Oxnard.**

   The applicant proposes the construction of an aquatic center and related site improvements. The proposed aquatic center will consist a 57,233 square-foot outdoor pool area with four pool areas, one slide area, a one-story "L" shaped building totaling 19,664 square feet, a 98-stall parking lot, 4 bicycle racks each with a 4 bicycle capacity, landscaping and ancillary facilities. As conditioned, the aquatic center has been designed to meet the required development standards identified in the 2030 General Plan. Therefore, the proposed use is in compliance with the 2030 General Plan and other adopted policies of the City of Oxnard.

2. **The proposed use will not adversely affect or be materially detrimental to the adjacent uses, buildings or structures or to the public health, safety or general welfare.**

   Pursuant to the 2030 General Plan land use designation "Park," the proposed use of the project site as an aquatic center with associated site improvements, is an allowed use and falls under the "Special Purpose Facilities" city park classification. The surrounding uses are characterized by other park facilities to the north, south, east and west. east and west. Construction activities, anticipated uses, and development design are subject to standard construction requirements of the local Building, Fire, and Traffic Codes.

3. **The site for the proposed use is adequate in size and shape to accommodate the setbacks, parking, landscaping, and other City standards except as may be specifically excepted by the special findings and conditions of this Resolution.**

   The Project site consists of a 7.93-acre vacant lot.The Project provides one dedicated parking area with a total of 103 parking spaces north of the aquatics center. Of the 103 spaces, five would be Americans with Disabilities Act (ADA) compliant, two would be ADA compliant and allow electric vehicle (EV) parking, four would be reserved for EV parking only, and 19 would be EV capable, meaning infrastructure that would support the future installation of an EV charging station would be provided. Bicycle racks would be installed at the main entry/exit point of the aquatics center and would provide spaces for 16 bicycles. The parking lot would be supplemented by existing parking along College Park's one-lane ring road as well as existing adjacent parking lots within College Park. The proposed Project's landscaping is designed to comply with Chapter 2, Article XIII (Landscape Water Conservation Standards) of the City's Code of Ordinances. Given these circumstances, the site for the proposed use is adequate in size and shape to accommodate the setbacks, parking, landscaping, and other City standards.

4. **The site for the proposed use will be served by streets and highways adequate in width and structure to carry the kind and quantity of traffic such use will generate.**

   The Project site is located south of Oxnard Blvd and east of Rose Ave. Access to the site will be provided from the existing College Park's ring road. The proposed project is adding a new driveway with an alignment perpendicular to the public right-of-way at College Park's ring road. The new driveway is adequately spaced from existing signalized and unsignalized intersections, and the proposed project does not introduce land uses incompatible with the surrounding community. The site access and circulation configuration were evaluated based on the proposed project's site plan to determine its adequacy based on traffic engineering principles and the anticipated number of vehicle trips during the mid-day peak hour. The evaluation included a vehicle turn template analysis to determine whether the proposed driveway width is adequate and a sight distance analysis to determine whether there is adequate visibility from the proposed driveway to ensure oncoming vehicles on the ring road have enough time to reach a complete stop if a vehicle exits the proposed project driveway. The proposed driveway width is sufficient to allow incoming and exiting vehicles to pass one another, and the stopping sight distance and corner sight distance are sufficient to allow adequate visibility for vehicles exiting the proposed parking lot and for oncoming vehicles approaching the proposed driveway.

5. **The site for the proposed use will be provided with adequate sewerage, water, fire protection and storm drainage facilities.**

   The Project site is currently connected to sewer lines managed by the City of Oxnard, which direct wastewater to the Oxnard Wastewater Treatment Plant (OWTP). The proposed Project will not require additional wastewater conveyance or treatment capacity to serve proposed Project demands. The proposed Project expected water demand is within City demand projections outlined in the 2020 Urban Water Management Plan (UWMP). The proposed Project will not result in new or expanded fire facilities to serve the development.The Oxnard Fire Department anticipates the proposed project would require two personnel to provide fire protection services to the aquatics center. These personnel would not require the construction of new or expanded fire protection facilities, and funding for these positions would be administered by the City. In addition, the proposed project would comply with the requirements of the 2022 California Fire Code, CBC, California Electric Code, and California Plumbing and Mechanical Codes, each of which have specific requirements to reduce the potential for a fire to occur. The proposed Project will include construction of on-site stormwater drainage systems to limit excess stormwater runoff into City storm drainage facilities. Therefore, the site for the proposed use will be provided with adequate sewerage, water, fire protection and storm drainage facilities.

SECTION 2. The City of Oxnard as the Lead Agency has prepared Final IS/MND 23-04 in accordance with the requirements of the California Environmental Quality Act (CEQA, Public Resources Code Section 21000, et seq.), the regulations promulgated thereunder (14 California Code of Regulations, Section 15000, et seq., CEQA Guidelines, and the City's

Environmental Review Guidelines. Pursuant to provisions of the California Environmental Quality Act and CEQA Guidelines, Section 15063, and following an Initial Study and environmental assessment of possible adverse impacts, the Project will not have a significant effect on the environment because of the inclusion of certain mitigation measures for which lessened potential adverse impacts to a level of less than significant. Therefore, the Planning Division has prepared a Mitigated Negative Declaration (23-04) with mitigation measures and monitoring program in accordance with the provisions of CEQA which have been incorporated as conditions.

SECTION 3. The Community Development Director, in accordance with the California Environmental Quality Act (CEQA), determines that the Project will not have a significant impact on the environment as identified and discussed in MND 23-04. Pursuant to the California Environmental Quality Act (CEQA) Section 15060, the City of Oxnard as the Lead Agency, has prepared an IS/MND (State Clearinghouse No. 2023110316) in accordance with the requirements of the California Environmental Quality Act (CEQA, Public resources Code § 21000, et seq.), the regulations promulgated thereunder (14 California Code of Regulations, §15000, et seq., CEQA Guidelines), and the City's Environmental Review Guidelines. The IS/MND identifies and discusses potential impacts, mitigation measures, and monitoring requirements.

SECTION 4**.** Based on the findings set forth herein and the Staff Report and all attachments thereto, the Community Development Director hereby approves Planning and Zoning Permit No. 23-200-10 (Development Design Review Permit) subject to the attached conditions of approval.

SECTION 5. The decision of the Director shall be final unless an appeal of the action is filed in accordance with the provisions of Oxnard City Code.

CONDITIONS OF APPROVAL

Note: The abbreviations below identify the City department or division responsible for determining compliance with these standard conditions. The first department or division listed has responsibility for compliance at plan check, the second during inspection and the third at final inspection, prior to issuance of a certificate of occupancy, or at a later date, as specified in the condition. If more than one department or division is listed, the first will check the plans or inspect the project before the second confirms compliance with the condition. The italicized code at the end of each condition provides internal information on the source of each condition: Some are standard permit conditions (e.g. *G-1*) while some are taken from environmental documents (e.g. *MND-S2*).

DEPARTMENTS AND DIVISIONS			
CA	City Attorney	PL	Planning Division
DS	Dev Services/Eng Dev/Inspectors	TR	Traffic Division
PD	Police Department	B	Building Plan Checker

SC	Source Control	FD	Fire Department
PK	Landscape Design	CE	Code Compliance

GENERAL PROJECT CONDITIONS

1. This Project permit is granted for the plans approved December 16, 2025, (collectively, "the plans") on file with the Planning Division and approved pursuant to this Resolution. The Project shall conform to the plans, except as otherwise specified in these conditions or a modification is approved pursuant to the approval of the Community Development Director.

2. This permit shall automatically become null and void 36 months from the date of its issuance, unless the Permittee has diligently developed the proposed project, as shown by the issuance of a grading, foundation, or building permit and the construction of substantial improvements. Request for permit extension is subject to review and approval by the Community Development Director. (PL, G-3)

3. All required off-site and on-site improvements for the project, as outlined for each phase, including structures, paving, and landscaping, shall be completed prior to final inspection unless the Community Development Director allows for the improvements to be deferred.

4. By commencing any activity related to the project or using any structure authorized by this permit, Permittee accepts all of the conditions and obligations imposed by this permit and waives any challenge to the validity of the conditions and obligations stated therein. (CA, G-5)

5. Permittee shall complete the "Notice of Land Use Restrictions and Conditions" form, using the form provided by the City, for recording with the Ventura County Recorder. Before the City issues building permits, the original completed, signed and notarized document, together with the required fees, shall be submitted to the Planning Manager for recordation.

6. Permittee shall provide off-street parking for the project, including the number of spaces, stall size, paving, striping, location, and access, as required by the City Code.

7. Permittee shall obtain a building permit for any new construction or modifications to structures, including interior modifications, authorized by this permit.

8. Permittee shall not permit any combustible refuse or other flammable materials to be burned on the project property.

9. Permittee shall not permit any materials classified as flammable, combustible, radioactive, carcinogenic or otherwise potentially hazardous to human health to be handled, stored or used on the project property, except as provided in a permit issued by the Fire Chief.

LANDSCAPE STANDARD CONDITIONS

10. Prior to issuance of building permits or the proposed use is initiated, whichever comes first, the Permittee shall submit two copies of landscape and irrigation plans, along with the appropriate permit application and fees, to the Community Development Department and obtain approval of such plans. (PK/DS, *PK-2*)

11. At the time of landscape plan check submittal, the landscape planting and irrigation plans shall comply with the current title 23 Model Water Efficient Landscape Ordinance (MWELO). (PK, PK-7.1)

WATER CONSERVATION

12. The design of the irrigation system shall include a water sensor shut off device as a water conservation measure. (PK, *PK-22*)

13. At time of submittal for plan check, the project's Landscape Architect or Architect shall provide the Community Development Department with written confirmation that they have reviewed the civil engineering construction drawings and that the NPDES requirements are not in conflict with meeting the City's landscape requirements. (PK, PK-23)

14. The Landscape Plans submitted to the Building and Engineering Division shall include a note that "all landscaping and irrigation comply with Ordinance No. 2822, which adopted the City of Oxnard Landscape Water Conservation Standards, and applicable water conservation requirements of the State of California". (PK, PK-24)

LANDSCAPE SPECIAL CONDITIONS

15. The final landscape plan shall be reviewed and approved by the Public Works Director or their designee prior to the issuance of a building permit. (PL)

PLANNING DIVISION CONDITIONS

16. Plans submitted for building permit applications, including pre-manufactured structures, shall show on the building elevation sheets all exterior building materials and colors, including product and finish manufacturer name, color name and number, and surface finish type (such as: stucco with sand finish, plaster with smooth finish) to be used in construction. (PL/B, PL-1)

17. Any application for a Minor Modification to the project shall be accompanied by three copies of plans reflecting the requested modification, together with applicable processing fees. (PL, PL-2)

18. Before building permits are issued, the improvement plans prepared for the project shall include a reproduction of all conditions of this permit as adopted by Resolution of the

Community Development Director in all sets of construction documents and specifications for the project. If the architectural, structural, and civil improvements are submitted as one set for building permits, the conditions shall be on the architectural set. (PL, PL-3)

19. Permittee may not modify any use approved by this permit unless the Planning Division Manager determines that Permittee has provided the parking required by the City Code for the modified use. (PL, PL-7)

20. Parking areas, shall be between 1 and 7-foot candles and shall be in harmony with existing adjacent lighting schemes. Lighting bollards shall not be used as part of the foot candle calculation on photometric sheets.

21. During the plan check review process, the Permittee shall provide a lighting plan that provides design details (light standards, bollards, wall mounted packs, etc.) and illumination site information within alleyways, pathways, streetscapes, and open spaces proposed throughout the development. An electrical engineer shall prepare the site lighting plan demonstrating that adequate lighting ranges will be provided throughout the development without creating light spillover, light pollution, or conflicts with surrounding factors such as tree locations, off-site or adjacent lighting. (PL)

22. Prior to issuance of building permits, Permittee shall demonstrate that light standards illustrated on conceptual lighting plan do not conflict with tree locations. The Permittee shall submit a plan showing both the lighting and landscape on the same sheet.

23. Outdoor lighting instruments shall not be placed in close proximity to trees. In the event outdoor lighting instruments and trees are in close proximity a Integrated landscape/lighting/photometric plan shall be submitted illustrating a 20-year tree maturity. This plan shall include all outdoor areas as well as the parking facility. This is to ensure that tree growth will not adversely impact future lighting and therefore site safety as the project matures. Integrated landscape/lighting/photometric plan shall be submitted illustrating a 20-year tree maturity. This plan shall include all outdoor areas as well as the parking facility. Plan sheet shall include:

    a. Tree species table which shows canopy bottom, top, and broadest diameter at a 20-year maturity. Bottom of tree canopies shall not be less than 15-above any drive area to provide clearance for Fire and Solid Waste Vehicles.

    b. Uplighting shall not count towards the photometric foot-candle requirements.

    c. Areas where walkways exist opposite from parking stalls, Pole and arm instruments should be placed directly opposite from finger-planters.

    d. Luminaires used in the photometric calculations shall only include those instruments mounted 8-feet or more above walking/driving surface. (PL)

24. Project on-site lighting shall be of a type and in a location that does not constitute a hazard to vehicular traffic, either on private property or on adjoining streets. To prevent damage from vehicles, standards in parking areas shall be mounted on reinforced concrete pedestals or otherwise protected. Permittee shall recess or conceal under-canopy lighting elements so as not to be directly visible from a public street to the satisfaction of the Public Works Director. (PL/B, *PL-8*)

25. In order to minimize light and glare on the project property, all parking lot and exterior structure light fixtures shall be high cut-off type that divert lighting downward onto the property and shall not cast light on any adjacent property or roadway. (PL, *PL-9*)

26. Dust control shall be provided at all times during project property preparation and construction activities. (B/DS, PL-13)

27. Prior to issuance of building permits, Permittee shall pay the document imaging fee for the planning files in an amount calculated by planning staff at the time of building permit review based on fees then in effect. (PL/B, PL-16).

28. If roof heating and cooling systems and other exterior mechanical equipment are proposed and located from adjoining property and public streets, the design shall recess or screen the roof exterior mechanical components. Plumbing vents, ducts and other appurtenances protruding from the roof of structures shall be placed so that they will not be visible from the front of the property or other major public vantage points. A note shall be placed on the construction plumbing drawings of exterior elevations to indicate to contractors that roof features shall be grouped and located in the described manner. Roof vents shall be shown on construction drawings and painted to match roof material color. (PL/B, PL-41)

29. Exterior utility meter panels if proposed shall be painted to match the structure upon which it is located. Such panels shall be located to take advantage of screening (e.g. landscaping or other building elements) from public right-of-ways, to the maximum extent feasible. (PL, PL-43)

30. The Permittee shall comply with the provisions of applicable VCAPCD (Ventura County Air Pollution Control District) Rules and Regulations, which include but are not limited to, Rule 50 (Opacity), Rule 51 (Nuisance), Rule 55 (Fugitive Dust), and Rule 55.1 (Removal of Visible Roadway Accumulations). (PL)

PLANNING DIVISION MITIGATED NEGATIVE DECLARATION MITIGATION MEASURES

31. The following Mitigation Measures originally set forth in the Reporting/Monitoring Program, adopted for Aquatics Center Mitigated Negative Declaration (MND 23-04), shall be fully satisfied to the extent each applies to the Project, as set forth in detail in the

Project's CEQA Consistency Checklist. The measures shall be included as conditions of required permit action to the extent each applies to the Project, and compliance shall result in potential impacts reduced to a level of less than significant and there shall be no residual impacts from the proposed Project. In the event of a conflict between the Project's CEQA MMRP and the below conditions, the former shall govern and control. Proposed mitigation for those impacts is as follows:

Air Quality

Mitigation Measure AQ-1: *During construction, the construction contractor shall implement the following measures pursuant to the requirements of the VCAPCD Guidelines.*

- Ensure all on-site vehicles and equipment with 50 horsepower or more shall meet, at a minimum, United States Environmental Protection Agency (USEPA) Tier 4 final engine certification requirements. If Tier 4 final equipment is not available, the contractor may apply other technologies available for construction equipment which would achieve a reduction in NOX (as well as PM) emissions comparable to Tier 4 final construction equipment. Where alternatives to USEPA Tier 4 equipment are utilized, the contractor shall be required to provide evidence these alternative technologies would achieve comparable emissions reductions. Certifications or alternative reduction strategies shall be required prior to receiving a construction permit.
- Minimize equipment idling time.
- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
- Lengthen the construction period during smog season (May through October) to minimize the number of vehicles and equipment operating at the same time.
- Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible.

Prior to initiation of construction activities, the City of Oxnard Public Works Department shall ensure that the measures listed above are included in the construction specifications for the proposed project.

Biological Resources

Mitigation Measure BIO-1: Project construction activities, including equipment staging, grading, and construction shall be avoided during the monarch butterfly overwintering season between October 15 through March 15, if practicable. In the event project construction activities cannot be avoided during the overwintering season, the City of Oxnard Public Department shall retain a qualified biologist to conduct a survey for roosting monarch butterflies within seven days prior to initiation of construction activities to determine their presence/absence. If construction activities occur during the overwintering season and monarch butterflies are present, the qualified biologist shall establish a protective buffer, ranging from 100 to 300 feet from the roosting site in which monarch butterflies are aggregating. The buffer will be delineated on site by the biologist with flagging or staking visible by construction personnel. The construction contractor shall ensure no construction occurs within the protective buffer, including staging of equipment or stopping or idling in the

buffer, during the overwintering season. In the event construction activities, or other use of equipment, is needed to work within the buffer, the qualified biologist shall be present on site to monitor construction activities and determine if the work is disturbing the aggregated butterflies. If the biologist determines the work is disturbing the butterflies, the biologist shall stop work within the protective buffer at any time. In addition, due to the regular movement of the butterflies and locations of the aggregations, the biologist shall have the discretion to adjust the protective buffers, as necessary.

If no monarch butterflies are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses for a period of 7 days or more, if construction is planned to restart during the monarch butterfly overwintering season (October 15 through March 15), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.

Mitigation Measure BIO-2: Project construction activities, including (but not limited to) equipment staging, grading, and construction shall be avoided during the nesting bird season (February 1 through August 31), if practicable. In the event project construction activities cannot be avoided during the nesting bird season, the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a nesting bird survey within seven days prior to initiation of such activities to determine the presence/absence, location, and status of any active nests on site or within 100 feet of the site for songbirds and passerine species and up to 500 feet for raptors. The findings of the survey shall be summarized in a report and submitted to the City of Oxnard Public Works Department for review and approval prior to undertaking construction activities at the site.

If nesting birds/active nest(s) are observed on site, the qualified biologist shall establish a construction buffer with fencing or flagging. The buffer shall be 500 feet from the active nest for nesting raptors or threatened or endangered species and 100 feet from all other nesting birds. The nest buffer may be adjusted at the direction of the qualified biologist based on the species, location of the nest, and the type of construction activities occurring during the nesting period. The construction contractor shall communicate to all construction personnel that no person or construction related activity shall occur within the buffer without prior approval from the qualified biologist. Nests shall be monitored at a minimum of once per week by the qualified biologist until it has been determined the nest is no longer being used by either the young or adults. The construction contractor shall ensure no ground disturbance occurs within this buffer until the qualified biologist confirms the breeding/nesting is completed, including confirmation all the young have fledged (if the nest was successful). If construction activities must occur within the buffer, the activity shall be conducted at the discretion of the qualified biologist. The construction contractor shall obtain approval from the qualified biologist prior to conducting any construction activities within the buffer.

If no nesting birds are observed during pre-construction surveys, no further actions would be necessary. In the event construction pauses for a period of 7 days or more, if construction is planned to restart during the nesting bird season (February 1 through August 31), the City of Oxnard Public Works Department shall retain a qualified biologist to conduct a new survey in accordance with the requirements of this mitigation measure.

Cultural Resources and Tribal Cultural Resources

Mitigation Measure CUL-1: In the event archaeological resources are unexpectedly encountered during ground-disturbing activities, work within 50 feet of the find shall halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the resource. If the resource is determined by the qualified archaeologist to be prehistoric, then a Native American representative shall also be contacted to participate in the evaluation of the resource. If the qualified archaeologist and/or Native American representative determine it to be appropriate, archaeological testing for California Register of Historic Resources eligibility shall be completed. If the resource proves to be eligible for the California Register of Historic Resources and significant impacts to the resource cannot be avoided via project redesign, a qualified archaeologist shall prepare a data recovery plan tailored to the physical nature and characteristics of the resource, per the requirements of California Code of Regulations Guidelines Section 15126.4(b)(3)(C). The data recovery plan shall identify data recovery excavation methods, measurable objectives, and data thresholds to reduce any significant impacts to cultural resources related to the resource. Pursuant to the data recovery plan, the qualified archaeologist and Native American representative, as appropriate, shall recover and document the scientifically consequential information that justifies the resource's significance. The City shall review and approve the treatment plan and archaeological testing as appropriate, and the resulting documentation shall be submitted to the regional repository of the California Historical Resources Information System, per California Code of Regulations Guidelines Section 15126.4(b)(3)(C).

Geology and Soils

Mitigation Measure GEO-1: The City Community Development Department shall ensure project design and construction complies with all recommendations presented within the Geotechnical Evaluation, titled Geotechnical Evaluation South Oxnard Aquatic Center Project Oxnard College Park Oxnard, California (Ninyo and Moore 2022) or the most recent subsequent version. Prior to the issuance of grading permits, the City Community Development Department shall review the design and construction plans for the proposed project and ensure all recommendations from the Geotechnical Evaluation are incorporated into the plans. Prior to the start of construction, the City Community Development Department shall retain a qualified environmental professional (Professional Geologist [PG] or Professional Engineer [PE]) to ensure all recommendations from the Geotechnical Evaluation are implemented by the construction contractor. During construction, the qualified environmental professional shall perform field observation and testing during grading activities to confirm construction is occurring in accordance with the recommendations of the Geotechnical Evaluation. The qualified environmental professional shall summarize the results of the field observation and testing performed during grading activities into a Final Geotechnical Evaluation report and shall submit the report to the City Community Development Department. Prior to issuance of a Certificate of Occupancy, the City Community Development Department shall review the Final Geotechnical Evaluation report to confirm the recommendations of the Geotechnical Evaluation have been implemented

Hazards and Hazardous Materials

Mitigation Measure HAZ-1: The City shall retain a qualified environmental consultant (Professional Geologist or Professional Engineer) to prepare a Soil Management Plan prior to construction. The Soil Management Plan shall be prepared to address handling and management of soils or other contaminated wastes on the project site, if any is encountered during subsurface investigation, to reduce hazards to construction workers and off-site receptors during construction. The City shall review, approve, and implement the Soil Management Plan prior to grading activities. The Soil Management Plan must establish remedial measures and/or soil management practices to ensure construction worker safety, the health of future workers and visitors, and the off-site migration of impacts from the project site. These measures and practices may include, but are not limited to:

- Stockpile management including stormwater pollution prevention and the installation of Best Management Practices
- Proper disposal procedures for impacted materials
- Monitoring and reporting
- A health and safety plan for contractors working at the site that addresses the safety and health hazards of each phase of site construction activities with the requirements and procedures for employee protection. The health and safety plan will also outline proper soil handling procedures and health and safety requirements to minimize worker and public exposure to hazardous materials during construction
- Proper handling procedures for unexpected contamination, such as halt-work and avoidance protocols, and City and contractor notifications

The Soil Management Plan shall also specify the procedures to be implemented in the event unexpected hazardous materials are encountered during construction. If unexpected odorous or visually stained soils, other indications of hydrocarbon piping or equipment, or debris are encountered during ground disturbing activities, the construction contractor shall halt work in the immediate area and a qualified consultant (Professional Geologist or Professional Engineer) shall be contacted immediately to evaluate the situation. The qualified consultant shall evaluate the material and recommend the appropriate testing, removal, and disposal methods. The construction contractor shall ensure hazardous materials are removed or remediated in accordance with the requirements of the qualified environmental consultant and the Soil Management Plan. Construction work may continue on other parts of the project site while soil investigation and/or remediation takes place. The construction contractor shall not resume work at the impacted area(s) until approved by the qualified consultant and the City.

Noise

Mitigation Measure NOI-1: The construction contractor shall prepare and implement a Construction Noise Control Plan. The construction contractor shall submit the Construction Noise Control Plan to the City of Oxnard Public Works Department for review and approval prior to initiation of construction. The details of the Construction Noise Control Plan shall be included as part of the permit application drawing set and as part of the construction drawing set. The Construction Noise Control Plan shall include the following measures:

- At least 21 days prior to the start of construction activities, all off-site businesses and residents within 500 feet of the project site shall be notified of the planned construction

activities. The notification shall include a brief description of the project, the activities that would occur, the hours when construction would occur, and the construction period's overall duration. The notification shall include the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint.

- At least 10 days prior to the start of construction activities, a sign shall be posted at the entrance(s) to the job site, clearly visible to the public, that includes permitted construction days and hours, as well as the telephone numbers of the City's and contractor's authorized representatives that are assigned to respond in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, the representative shall investigate, take appropriate corrective action, and report the action to the City.
- During the entire active construction period, equipment, tools, and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds), wherever feasible. During the entire active construction period, stationary noise sources shall be located as far from sensitive receivers as practicable, muffled, and enclosed within temporary sheds or insulation barriers, or other measures for equivalent noise reduction will be incorporated to the extent feasible.
- The contractor shall be required to use impact tools that are hydraulically or electrically powered wherever practicable. Where the use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used along with external noise jackets on the tools.
- Stockpiling of materials shall be located as far as feasible from nearby noise-sensitive receptors.
- Signs shall be posted at the job site entrance(s) to reinforce the prohibition of unnecessary engine idling. All equipment shall be turned off if not in use for more than 5 minutes.
- Use of stereos and other amplified noise not necessary for the completion of construction work shall be prohibited.
- During the entire active construction period and to the extent feasible, the use of noise producing signals, including horns, whistles, alarms, and bells shall be for safety warning purposes only. The construction manager shall ensure the use of use smart back-up alarms, which automatically adjust the alarm level based on the background noise level or switch off back-up alarms and replace with human spotters in compliance with safety requirements and laws.

32. Prior to issuance of a site improvement permit, Permittee shall provide a written status report to the City for all mitigation measures indicated in the mitigation monitoring program as required prior to this point in the construction process.

FIRE DEPARTMENT CONDITIONS

33. All vehicle access driveways on the project property shall be designed to be at least 26 feet wide, exclusive of shoulders. The civil improvements shall be designed to mark curbs adjacent to designated fire lanes in parking lots to prohibit stopping and parking in the fire lanes. All designated fire lanes shall be marked in accordance with the California Vehicle Code. (FD/B, *F-1*)

34. All roof covering materials on the project property shall be of non-combustible or fire retardant materials approved by the Fire Chief and in compliance with the City Code. (FD, *F-2*)

35. Before the City issues building permits, Permittee shall obtain the Fire Chief's approval of a plan to ensure fire equipment access and the availability of water for fire combat operations to all areas of the project property. The Fire Chief shall determine whether or not the plan provides adequate fire protection. (FD/DS, *F-3*)

36. Two certified fire flow tests for the project property shall be obtained. The first test shall be completed before City approval of building plans and the second shall be completed after construction and prior to the issuance of a certificate of occupancy. The tests must be certified by a mechanical, civil, or fire protection engineer. the results of the tests to the Fire Chief and the City Engineer. (FD/DS, *F-4*)

37. All structures on the project property shall conform to the minimum standards prescribed in Title 19 of the California Code of Regulations. (FD, *F-5*)

38. The project shall meet the minimum requirements of the "Fire Protection Planning Guide" published by the Fire Department. (FD, *F-6*)

39. At all times during construction, Permittee shall maintain paved surfaces capable of handling loads of 76,000 pounds which will provide access for firefighting apparatus to all parts of the project property. (FD/DS, *F-7*)

40. Permittee shall identify all hydrants and fire protection equipment on the project property as required by the Fire Chief. (FD, *F-8*)

41. The turning radius of all project property driveways and turnaround areas used for emergency access shall be reviewed and approved by the City Traffic Engineering Department. (FD, *F-11*)

42. Automatic fire sprinklers as required by the City Code and shall contact the Fire Chief to ascertain the location of all connections. (FD/PD, F-12)

43. Permittee shall install in each structure in the project an alarm system with a central station monitor that will automatically notify the Fire Department in the event of a fire in the structure. The alarm system shall include a UL or State Fire Marshal approved device, which shall not exceed design specifications, that reports the location of the fire and provides floor by floor water flow monitoring and allows the central station monitor to inform the Fire Department. (FD/PD, F-13)

44. Areas designated by the Fire Marshal as Fire Lanes shall be identified by a red curb and signage per the California Department of Motor Vehicles.

45. Before the city issues a certificate of occupancy, the Permittee shall install a Knox key vault at a location to be determined by the Fire Department.

46. Fire sprinkler coverage is required for:
    a. Patios, overhangs or any other projections that are 48" or more from the structure.
    b. Open areas beneath stairs that serve a habitable space or when that area is accessible for storage or has mechanical equipment.
    c. The protection of the forced air unit when located in the attic or other areas that are normally inaccessible.

47. All landscape on project property will coordinate with the fire protection features, to prevent access problems to fire protection features.

48. Fire hydrants shall be operational and accessible at all times. No parking, storage or staging of equipment/supplies shall be located within 15 feet on either side of fire hydrants. Prior to final inspection, blue reflective hydrant location markers shall be placed on the access roads in accordance with Fire Department standards.

49. The pool waterslide shall meet environmental health requirements under Title 8, California Code of Regulations (CCR) and ASTM F1159.

POLICE DEPARTMENT CONDITIONS:

50. The pool area shall be enclosed by an engineered non-climbable fencing system.

SECURITY CAMERA SYSTEMS

51. If the applicant plans to install a Security Camera System it should meet the Police Department's Security Plan Guidelines. These guidelines can be obtained upon request via specialprojects@oxnardpd.org.

52. If Security cameras are installed the system should be designed to capture images of all persons and all vehicles that enter the site. The following recommendations should be considered if a security system is incorporated:
    a. The camera system should be cloud based to facilitate off-site and mobile monitoring.
    b. If the Police Department is provided access to the cloud based camera system, privacy of facility users shall be taken into consideration.
    c. Cameras and supporting equipment shall supply digital color images under normal lighting conditions. Greyscale images are expected for infra-red lighting.
    d. Cameras shall be made by a reputable manufacturer and maintained to current industry standards.
    e. Cameras shall have low light capability to facilitate the later identification of persons involved in criminal or problem activities.
    f. The video system shall utilize a Digital Video Recorder (DVR). VHS and other formats are prohibited.
    g. The video system shall allow recording, live viewing and playback of recorded video for a period of a period of at least 30 days.
    h. Recorded images shall bear a date and time stamp that cannot be altered.
    i. All entry doorways and gated entrances to the premises shall be monitored by a

camera or cameras that are strategically mounted for face capture of persons who enter. Such cameras shall be mounted no higher than 7-feet above the floor/ground. Face capture images shall be determined as those images where the clarity of a person's facial image is sufficient for later identification.

j. Cameras in domed casings are highly encouraged as their area of focus is not easily determined by a casual observer.
k. Site management shall provide in a timely manner any digital records of security camera or access control systems requested pursuant to a police investigation or for the periodic inspection of equipment required under these conditions.
l. Security cameras shall be installed to monitor activity around each side of the building's exterior.

SECURITY PLAN

53. Unless alternate arrangements are made in coordination with the Oxnard Police Department, a Security Plan shall be submitted to specialprojects@oxnardpd.org and approved prior to the issuance of building permits. The purpose of the Security Plan is to align the applicant's need to secure the development site for its end users with current security standards and to provide the Police Department an understanding of the layout of the site in the event of a critical incident. The Security Plan, when submitted directly to the Police Department, is considered a confidential document. The plan shall include:

a. a. The Security Plan Sheet will identify the location of each security camera, camera recording/support equipment, all elements of an access control system, and any safe or secure room or rooms designed to maintain valuable assets or records (if cameras are to be provided).
b. b. The Security Plan shall include a chart identifying each camera by an alpha-numeric, the scope of their capture area, and placement of the camera above the floor/ground (if cameras are to be provided).
c. c. The Security Plan shall identify all doors and gates with an alpha-numeric (e.g. D-1, D-2, and G-1, G-2 etc.) that serve passage between public & enclosed or interior areas. Each entrance shall have a camera positioned for face capture and it shall be noted on the camera chart (if cameras are to be provided).
d. The Security Plan shall identify any area which is served by an intrusion/burglary alarm system.
e. Click-to-Enter technology shall be installed to provide access for first responders to all fenced entrances to the facility that serve as an interface between public and fenced enclosed areas. All such access points shall be identified on the Security Plan.
f. All security features shall be kept in good working condition and consistent with industry standards.

ALARMS

54. Any intrusion alarm system installed at the site shall utilize motion and infrared technology or similar technology to differentiate between human and non-human motion. The alarm system shall be compliant with Oxnard City Code 11-95 through 11-100.

55. Trees shall be maintained so that the canopies do not interfere with pedestrian or vehicular traffic and safe sightlines are maintained.

BUILDING & ENGINEERING DIVISION STANDARD CONDITIONS

56. All plan check and processing fees shall be paid by the Permittee in effect at the time of construction plan submittal. All development fees and other applicable fees in effect at permit issuance shall be paid prior to permit issuance. (DS-1)

57. Before connecting the project to existing sewer and water service laterals the service laterals shall be inspected (pothole or video). Within the boundary of the project site, permittee is required to bring all existing water services into compliance with current City standards, including removal of unused water or sewer laterals by disconnection at the main to the satisfaction of the Public Works Director. (DS-7)

58. The water system shall be designed to provide fire hydrants such that all points of all structures are within one hundred fifty (150) feet of a fire hydrant, or as otherwise approved by the Fire Department. Fire hydrant line improvements shall be designed in accordance with City standards and shown on the civil site improvement plans prior to issuance of a site improvement/grading permit. (DS-11)

59. All new on-site and off-site electric, cable, telephone and similar utility service laterals shall be installed underground in accordance with City ordinances in effect at the time City issues a building permit. Services shall be installed underground to the nearest suitable riser pole as determined by the appropriate utility service provider or to the satisfaction of the Public Works Director. (DS-12)

60. All grading shall conform to City's standard grading notes, City Code, and recommendations of the project soils engineer as approved by the City Engineer. (DS-30)

61. Permittee shall construct sufficient drainage facilities concurrent with rough grading operations to mitigate any potential flooding or erosion affecting adjacent properties and public right-of-way. (DS-31)

62. All slopes steeper than 5 (horizontal) to 1 (vertical) shall have a minimum 18-inch wide level area (at both top and bottom of slope) where it adjoins a wall, fence, sidewalk, trail, curb, or similar improvement. (DS-32)

63. The grading plan shall be designed to convey stormwater to a street, alley, or approved drain so that there are no undrained depressions. (DS-35)

64. The civil improvements shall be designed to provide adequate vehicle sight distance at all driveways and intersections as specified by Caltrans specifications. (TR-71)

65. Install bike racks in accordance with City standards at locations approved by the City Traffic Engineer. (TR-73)

66. The project shall be designed to minimize degradation of stormwater quality by complying with the applicable sections of the Los Angeles Regional Water Quality Control Board's municipal separate storm sewer system ("MS4") permit (Order R4-2010-0108 including all revisions) for new development and redevelopment projects. All stormwater quality calculations and associated construction plans shall demonstrate compliance with the MS4 permit. Calculations shall generally be organized to follow the steps outlined in Chapter 2 of the 2011 Technical Guidance Manual for Stormwater Control Measures ("2011 TGM"). (DS-78)

67. The stormwater quality calculations shall include site-specific analysis and recommendations from a geotechnical engineer, and if applicable, a landscape architect for design and implementation of stormwater treatment and infiltration devices. Geotechnical Engineering analysis and recommendations shall include, but not necessarily be limited to, determination of site specific soil infiltration rates, depth to permeable soil layers, methods to reach permeable soil layers, appropriate compaction rates, recommendations to enhance infiltration, and other requirements of the 2011 TGM. Landscape architectural recommendations shall include, but not necessarily be limited to, suggestions regarding appropriate vegetation and soil amendments for vegetated infiltration devices. Project plans shall implement approved design recommendations. (DS-81)

68. Using forms provided by the Building & Engineering Division, a stormwater quality control measures maintenance and operations plan ("the Plan") for this project shall be submitted to the Community Development Engineering Division for review and approval. If the BMPs implemented with this project include proprietary products that require regular replacement and/or cleaning, the Plan shall provide proof of a contract or contacts with an entity qualified to provide such periodic maintenance. The property owner is responsible for the long-term maintenance and operation of all BMPs included in the project design. No grading or building permit shall be issued until the Community Development Director or his designee approves the Plan and the stormwater covenant with the Plan included as an exhibit is ready for recordation by the City. (DS-82)

69. The stormwater quality control measures maintenance and operations plan shall include: 1) Requirement to clean on-site storm drains at least twice a year; once immediately before the first of October (the beginning of the rainy season) and once in January. The Director of Public Works or their designee may require additional cleaning; 2) Requirement to maintain parking lots free of litter and debris. The sidewalks, drive aisles, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. When swept or cleaned, debris must be trapped and collected to prevent entry into the storm drain system. It is prohibited to discharge any cleaning agent into the storm drain system; 3) Requirement to label all on-site storm drain inlets with the message "Don't Dump - Drains to Ocean" in accordance with City standards. (DS-83)

70. The design engineer shall communicate with the project landscape architect and shall submit written confirmation that the project landscape drawings comply with the landscape

requirements of the Technical Guidance Manual for Stormwater Quality Control Measures for all landscape-based stormwater quality best management practices. (DS-84)

71. Prior to issuance of a grading, building or demolition permit and prior to commencement of any clearing, grading or excavation, Permittee shall obtain an assignment of a permit identification number by the California State Water Resources Control Board indicating submittal of a Notice of Intent (NOI) by the Permittee in accordance with the NPDES Construction General Permit. The project shall comply with all requirements of the General Permit and the Ventura Countywide MS4 Permit, including preparation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP shall be updated to reflect current site conditions and a copy of the SWPPP shall be kept onsite. (DS-86)

BUILDING & ENGINEERING SPECIAL CONDITIONS:

72. A current Title Report shall be submitted with the civil improvements on the first plan check. (DS)

73. All existing utilities and easements shall be clearly shown on the engineering improvement plans. The existing 40-foot drainage easement impacted by the proposed improvements shall be vacated or relocated prior to site and building permit issuance. (DS)

74. The project shall include the design and construction of the sidewalk connecting the project site to the existing pedestrian crosswalk located about 150-feet north of the project site. The improvement shall also include constructing a new accessible curb ramp with a marked crosswalk connecting to the existing curb ramp on the west side. (DS)

75. The driveway for the parking lot shall be the commercial type with a curb return radius of 25-feet minimum on each side. (DS)

76. Standard parking spaces shall be 19’ x 9’, 17’ x 9’ with a 2-foot overhang, or 18’ x 9’ with a 1-foot overhang. Trees, posts, and other vertical obstructions shall not be permitted inside the parking overhang area. (DS)

77. Electric Vehicle (EV) parking spaces shall be provided per the latest California Green Building Standards Code that applies at the time of the building plan check. (DS)

78. Except for access parking aisles for accessible and EV parking spaces, parking stalls shall be delineated with double 3-inch stripes. (DS)

79. The design of the parking lot structural sections shall be designed based on an analysis of the soils R-value and a traffic index (T.I.) approved by the City Engineer. Prior to constructing the pavement structural section, the subgrade shall be field tested to validate the R-value and ensure it meets or exceeds the design value. (DS)

80. A trash enclosure shall be constructed to the latest requirements specified by the City to store three (3) bins minimum with a solid non-combustible roof (8-foot minimum clearance) that prevents stormwater from entering the refuse bins. The trash enclosure shall include architectural screens between the top of the wall and the ceiling. Unless directed otherwise by

Public Works Technical Services, the design shall also include a traffic-rated floor drain connecting to a grease interceptor and a hose bib located outside of the trash enclosure. (DS)

SPECIAL STORMWATER CONDITIONS

81. A stand-alone drainage report amendment for the College Park Master Drainage Report shall be submitted for the proposed design concept that alters the original design intent. The proposed drainage report amendment shall demonstrate that the previous flow rates will be kept even with the proposed alterations, and the downstream facilities will not be impacted. Detention facilities shall be constructed to maintain the previously established design flow rates if necessary. (DS)

82. For flow calculations using the City's Modified Cooks Method, the composite "C-Factor" shall be 70 unless a different value is approved by the City Engineer. (DS)

83. The project shall demonstrate that during a 100-year storm event, the overflow will be directed away from the structures into the roadway or parking lot. The drainage design shall be prepared to protect building pads from inundation during a 1% chance (100-year) storm. (DS)

84. The drainage system onsite shall be designed to include the installation of the 'Full Capture System Devices' ("Devices") certified by the State Water Resources Control Board Executive Director at the outlet basins in each biofiltration facility in compliance with the Statewide Trash Amendments ("Amendments") to capture and prevent trash flowing offsite. The Devices shall be sized and designed to treat the 1-year 1-hour storm event in accordance with the requirements of the Amendments. (DS-88)

85. Existing bioswale facility shall be reconstructed to the original design parameters if disturbed or affected by the project. The length of the swale shall be increased if the project site discharges additional area to the facility. The curb inlet or under-sidewalk drain shall be upgraded with a 50% clogging factor for the 10-year storm event. (DS)

86. The new sidewalk adjacent to the bioswale shall include design measures to prevent abrupt elevation drop from the sidewalk to the bioswale. (DS)

87. The proposed underground storm drainage system shall not intersect with the existing bioswale. (DS)

88. Hydraulic calculations shall be submitted in the drainage report to demonstrate the flow control and determine the hydraulic grade line along the new storm drain conduits and the detention facility. The storm drain profiles on the plans shall show the hydraulic grade line information. (DS)

89. The hydraulic calculations shall determine the required water elevation inside the detention facility necessary for the system to achieve the required detention volume while discharging the permitted flow rate downstream. (DS)

90. If surface ponding is required inside the detention facility, additional hydraulic calculations shall be prepared to demonstrate that catch basins connecting the detention facility to the downstream storm drain conduit will be able to convey upstream stormwater runoff into the system via surface method or underground. (DS)

91. The lateral pipe connecting to the detention system shall be 18-inches minimum to permit stormwater to take in upstream runoff into the detention system unless demonstrated otherwise by hydraulic calculations that a larger pipe is required. At the discretion of the design engineer, the 18-inch pipe can be considered storage volume for detention purposes. (DS)

SPECIAL UTILITIES CONDITIONS

92. Public utilities shall be located at a horizontal distance of at least 10-feet away from any proposed or existing trees. (DS)

93. All potable water pipelines shall be located at least 5-feet away from biofiltration facilities. (DS)

94. Existing utilities that are no longer needed by the project shall be removed at the City's main. (DS)

PASSED AND ADOPTED by the Community Development Director of the City of Oxnard on this December 16, 2025.

_____ _____

Date

Jeff Pengilley
Community Development Director