

ATTACHMENT 1

2855 McMillan Ave. Design Plans

2855 MCMILLAN

San Luis Obispo, California



Arris

STUDIO ARCHITECTS

ADDRESS

1337 ARCHER STREET, STE. 220
SAN LUIS OBISPO, CA 93401

CONTACT

805.547.2240
ARRIS-STUDIO.COM

THOMAS E. JESS

ARCHITECT (CA) #C27068

STEPHEN A. BIGOR

ARCHITECT (CA) #C33672

2855 McMillan Ave.

San Luis Obispo, Ca

COVER SHEET

Date

01/26/2022

Scale

NO SCALE

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PROJECT DESCRIPTION

THIS PROJECT PROPOSES THE CONSTRUCTION OF A 2-STORY OFFICE & WAREHOUSE BUILDING AT 2855 MCMILLAN AVE., IN SAN LUIS OBISPO. THE PROPOSED BUILDING IS ROUGHLY 8300 SF AND CONTAINS A PARTIAL 2ND FLOOR OFFICE & STORAGE SPACE. THE SITE AND ADJACENT PARCELS ARE ZONED 'M' MANUFACTURING WITH APPROVED USES FOR LIGHT MANUFACTURING AND STORAGE. THE PROPOSED OFFICE USE REQUIRES A MINOR USE PERMIT. ALL PARKING FOR THE BUILDING WOULD BE PROVIDED ON-SITE INCLUDING ALL REQUIRED ADA PARKING AND ELECTRIC VEHICLE SPACES. ADDITIONAL SITE IMPROVEMENTS INCLUDE SIDEWALK, CURB AND GUTTER, DRIVEWAY ENTRANCE AND TRASH/RECYCLE ENCLOSURE.

A MAJOR ASPECT OF THIS DEVELOPMENT IS THE TREATMENT OF AN EXISTING DRAINAGE SWALE RUNNING THROUGH THE PROPERTY. WE ARE PROPOSING TO CULVERTIZE THE SWALE AS A PART OF THE IMPROVEMENTS. THE ADDITION OF THE CULVERT WILL HELP SOLVE THE EROSION PROBLEM ADJACENT TO MCMILLAN AVE. AS WELL AS IMPROVE SAFETY AND ALLOW FOR A SIDEWALK, CURB AND GUTTER TO BE INSTALLED. IT IS BECAUSE OF THIS WORK THAT WE WILL ALSO NEED THE APPROVAL OF VARIOUS STATE AGENCIES, INCLUDING FISH & WILDLIFE, ARMY CORP OF ENGINEERS AND THE WATER BOARD. A CULTURAL RESOURCES STUDY WILL BE REQUIRED BY THE ARMY CORP OF ENGINEERS FOR THEIR CONSULTATION WITH THE STATE HISTORIC PRESERVATION OFFICER PURSUANT TO SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT. THIS CULTURAL RESOURCES STUDY WILL ALSO BE SUBMITTED TO THE CITY OF SAN LUIS OBISPO FOR THEIR REVIEW AND INCLUSION IN THE INITIAL STUDY. IN THE EVENT THAT CULTURAL RESOURCES ARE FOUND, COMPLIANCE WITH SECTION 106 WILL BE REQUIRED.

BASED ON PREVIOUSLY PROPOSED DEVELOPMENTS FOR THIS PARCEL, A MITIGATED NEGATIVE DECLARATION IS ANTICIPATED, AND IT IS UNLIKELY THAT AN ENVIRONMENTAL IMPACT REPORT WILL BE TRIGGERED. NONE THE LESS, ALL TECHNICAL REPORTS ARE BEING PROVIDED TO ASSESS THE IMPACTS OF WORK ON THIS SITE.

IN ACCORDANCE WITH THE CITY OF SAN LUIS OBISPO ZONING REGULATIONS THE FOLLOWING EXCEPTIONS ARE REQUESTED.

- OFFICE USE IN 'M' ZONE** PER (17.40.030)
PER THE CITY'S ZONING REGULATIONS 17.40.030, APPROVAL OF AN OFFICE IN THE 'M' ZONE REQUIRES THAT THE PROJECT IS COMPATIBLE WITH EXISTING AND ALLOWED LAND USES IN THE AREA AND THAT THE PROJECT WILL NOT PRECLUDE INDUSTRIAL OR SERVICE USES IN THE AREA.
BASED ON THE EXCEPTION REQUIREMENTS, WE FEEL THAT OUR PROJECT COMPLIES BECAUSE THERE ARE A NUMBER OF EXISTING OFFICE USES ON MCMILLAN AVE., INCLUDING BOEING AND CRESCENT HEALTHCARE. ADDITIONALLY, THE PROPOSED OFFICE USE FOR THE PROJECT IS LESS THAN 50% OF THE BUILDING AND WILL PRIMARILY BE USED FOR WAREHOUSE AND STORAGE USES.
- CREEK SETBACK** PER (17.70.030)
WE ARE REQUESTING AN EXCEPTION TO THE CREEK SETBACK DUE TO THE FACT THAT WE ARE PROPOSING TO CULVERTIZE THE CREEK. CULVERTIZING THE CREEK HAS MANY BENEFITS INCLUDING SOLVING AN EROSION PROBLEM ALONG THIS SECTION OF MCMILLAN AS WELL AS ALLOWING FOR THE PUBLIC IMPROVEMENTS OF A CURB, GUTTER AND SIDEWALK TO BE INSTALLED.
- COMPENSATORY TREE PLANTING** (12.24.090 (J))
WE ARE REQUESTING AN EXCEPTION TO THE 1 TO 1 RATIO OF COMPENSATORY TREE PLANTING FOR THE (5) LIVE OAK TREES THAT ARE TO BE REMOVED ON SITE. WE PROPOSE TO PROVIDE (1) REPLACEMENT COASTAL LIVE OAK TREE IN THE CORNER OF THE SITE. THE REMAINING LANDSCAPE AREAS ARE WITHIN PARKING AREAS OR ALONG MCMILLAN AND ARE NOT SUITABLE FOR A TREE OF THAT SIZE (PER THE CITY'S STREET TREE LIST)

INCLUSIONARY HOUSING REQUIREMENT - IN LIEU FEE

PER SLO MC 17.138.040(A)(2) - A METHOD FOR MEETING THE INCLUSIONARY HOUSING REQUIREMENT IS TO PAY AN IN-LIEU FEE AS DESCRIBED IN TABLE 2. THE ESTIMATED AMOUNT FOR THIS PROJECT BASED ON VALUATION IS: \$35,800

PUBLIC ART REQUIREMENT - IN LIEU FEE

PER SLO MC 17.70.140(D)(3) - AS AN ALTERNATIVE TO PUBLIC ART, THE DEVELOPER MAY PAY .5% OF TOTAL CONSTRUCTION COSTS IN EXCESS OF \$100,000 TOWARDS A PUBLIC ART IN-LIEU ACCOUNT. THE ESTIMATED AMOUNT FOR THIS PROJECT BASED ON VALUATION IS: \$3,080

CLEAN ENERGY CHOICE

THIS PROJECT IS SUBJECT TO THE ENERGY REACH CODE.
Ordinance No. 1684 (SLOMC 15.04.110)

Choose one of the following:

☒ The project has chosen the "All-Electric" building design.

☐ The project has chosen the "Mixed-Fuel" building design.

Signature _____

Position/Title Owner

Date 1/24/2022

For compliance instructions, please visit the following website:
www.slocity.org/cleanenergychoice



PROJECT STATISTICS

ADDRESS:	2855 MCMILLAN AVE., SAN LUIS OBISPO, CA
ASSESSOR PARCEL NUMBER:	053-212-005
SITE AREA:	0.40 ACRES (17,250 SF)
ZONING:	M (MANUFACTURING)
ADJACENT ZONING:	M (MANUFACTURING)
EXISTING USE:	VACANT
PROPOSED USE:	OFFICE, LIGHT MANUFACTURING, STORAGE
LOT COVERAGE ALLOWED:	75% (12,938 SF / 17,250 SF)
LOT COVERAGE PROPOSED:	35% (6,062 SF / 17,250 SF)
FLOOR AREA RATIO ALLOWED:	1.5 (25,875 SF / 17,250 SF)
FLOOR AREA RATIO PROPOSED:	0.48 (8,272 SF / 17,250 SF)
CONSTRUCTION TYPE:	TYPE VB
SPRINKLERS:	YES, NFPA 13
BUILDING AREA:	
LIGHT MANUFACTURING:	4,788 SF
OFFICE:	2,973 SF
STORAGE:	511 SF
TOTAL AREA:	8,272 SF

BUILDING HEIGHT:	
ALLOWABLE:	35'
PROPOSED:	34'-8"

PARKING REQUIRED:	
MANUF: (4,328 /1,000SF)	4.3 SPACES
OFFICE: (2,271 /300SF)	7.6 SPACES
STORAGE: (460 /1,500SF)	.3 SPACES
TOTAL REQUIRED:	13 SPACES

PARKING PROVIDED:	
STANDARD SPACES:	11 SPACES
ACCESSIBLE SPACES:	2 SPACES
TOTAL PARKING PROVIDED:	13 SPACES

EV READY SPACES REQUIRED:	2 SPACES
EV READY SPACES PROVIDED:	2 SPACES

EV CAPABLE SPACES REQUIRED:	7 SPACES (50% OF TOTAL)
EV CAPABLE SPACES PROVIDED:	7 SPACES

MOTORCYCLE PARKING REQUIRED:	1 SPACE (13 VEHICLE SPACES / 20)
MOTORCYCLE PARKING PROVIDED:	1 SPACE

BICYCLE PARKING REQUIRED:	
LONG TERM (MANUF):	1 BICYCLE (1 PER 2,000 SF) X 75%
SHORT TERM (MANUF):	1 BICYCLE (1 PER 2,000 SF) X 25%
LONG TERM (OFFICE):	1 BICYCLE (1 PER 1,500SF) X 75%
SHORT TERM (OFFICE):	1 BICYCLE (1 PER 1,000SF) X 25%
TOTAL REQUIRED:	4 BICYCLES

DRAWING INDEX

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A2.2	ROOF PLAN
A3.0	PERSPECTIVES
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A3.4	BUILDING SECTIONS
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A4.1	SITE AMENITIES
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LANDSCAPE	
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L1.1	WATER CONSERVATION INFORMATION
SURVEY	
TS-1	TOPOGRAPHIC SURVEY
TREE REMOVAL	
TR-01	TREE REMOVAL PLAN

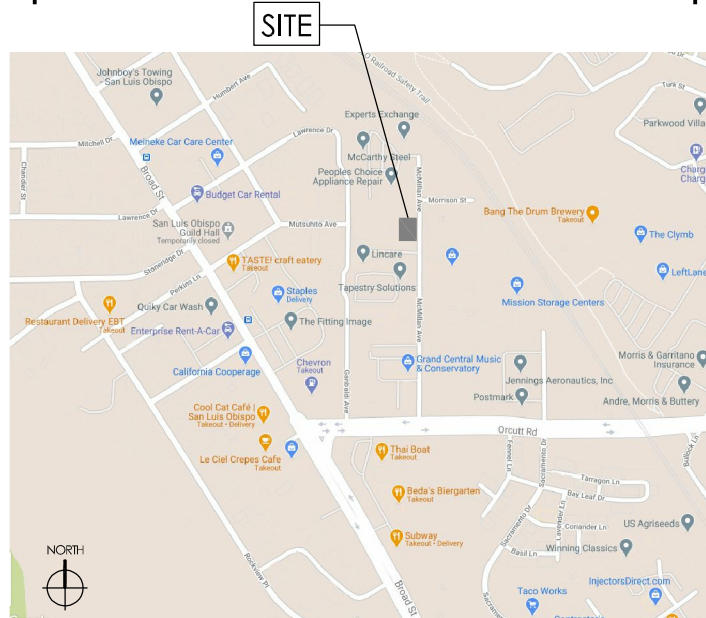
PROJECT DIRECTORY

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EMAIL: WADE@CROSNOCONSTRUCTION.COM

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CIVIL ENGINEER
ASHLEY & VANCE ENGINEERING
1413 MONTEREY STREET
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ATTN: SHANNON JESSICA
PHONE: (805) 545-0010
EMAIL: SHANNON@ASHLEYVANCE.COM

VICINITY MAP



GENERAL NOTES

- FIRE PROTECTION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE CFC AND THE CALIFORNIA BUILDING CODE. AN APPROVED NFPA 14 FIRE SPRINKLER SYSTEM SHALL BE INCLUDED. DRAWINGS AND SPECIFICATIONS SHALL BE A DEFERRED SUBMITTAL.
- FIRE MAIN AND ALL ASSOCIATED CONTROL VALVES SHALL BE INSTALLED PER NFPA 24 STANDARDS AND CITY ENGINEERING STANDARDS.
- FIRE SAFETY DURING CONSTRUCTION: BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION OR DEMOLITION SHALL BE IN ACCORDANCE WITH CHAPTER 34 OF THE CFC.

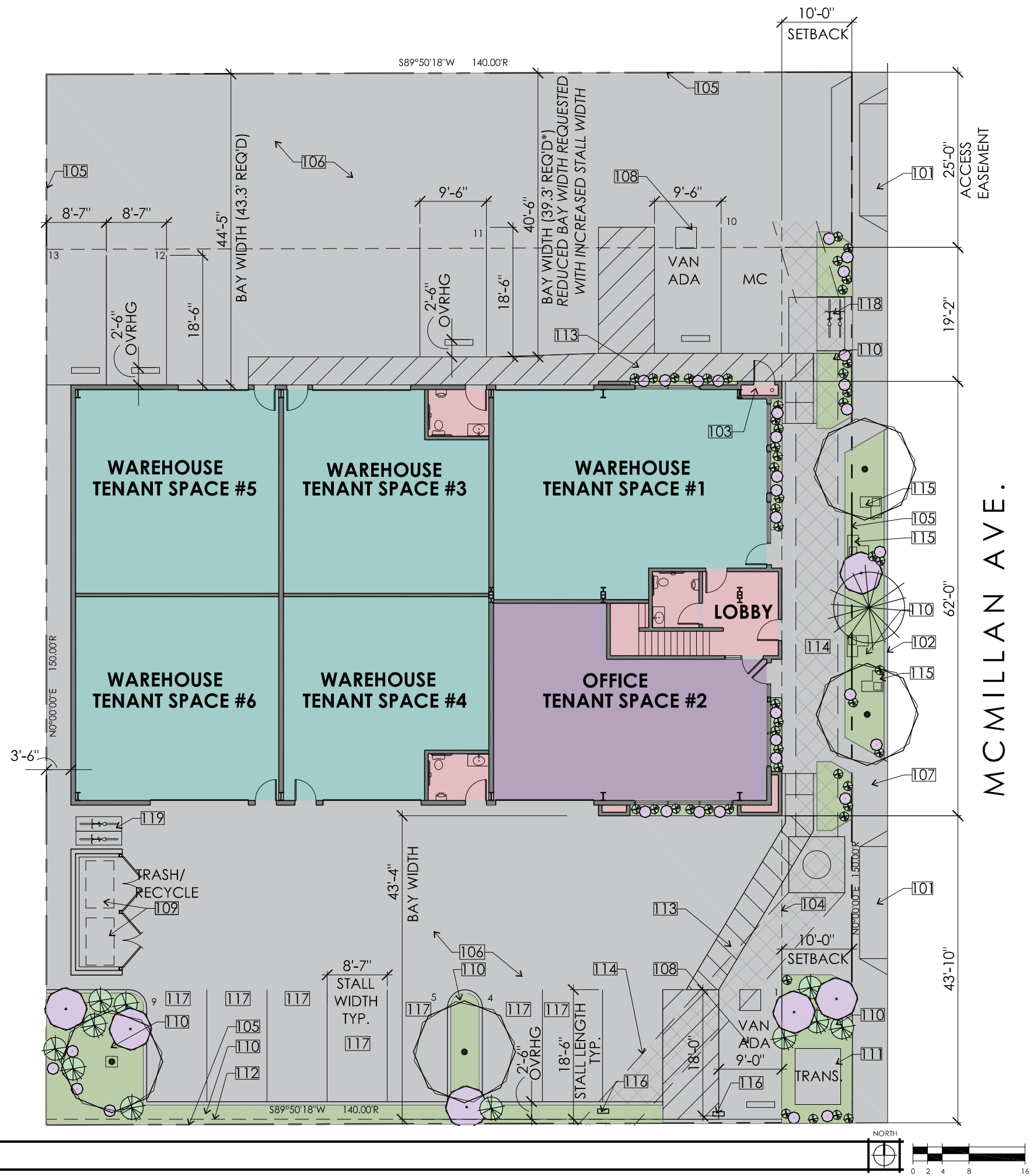


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San Luis Obispo, Ca

PROJECT INFO

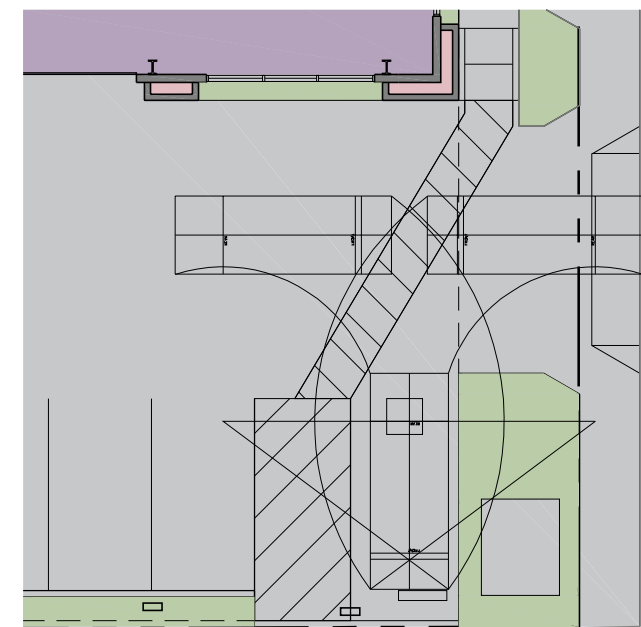
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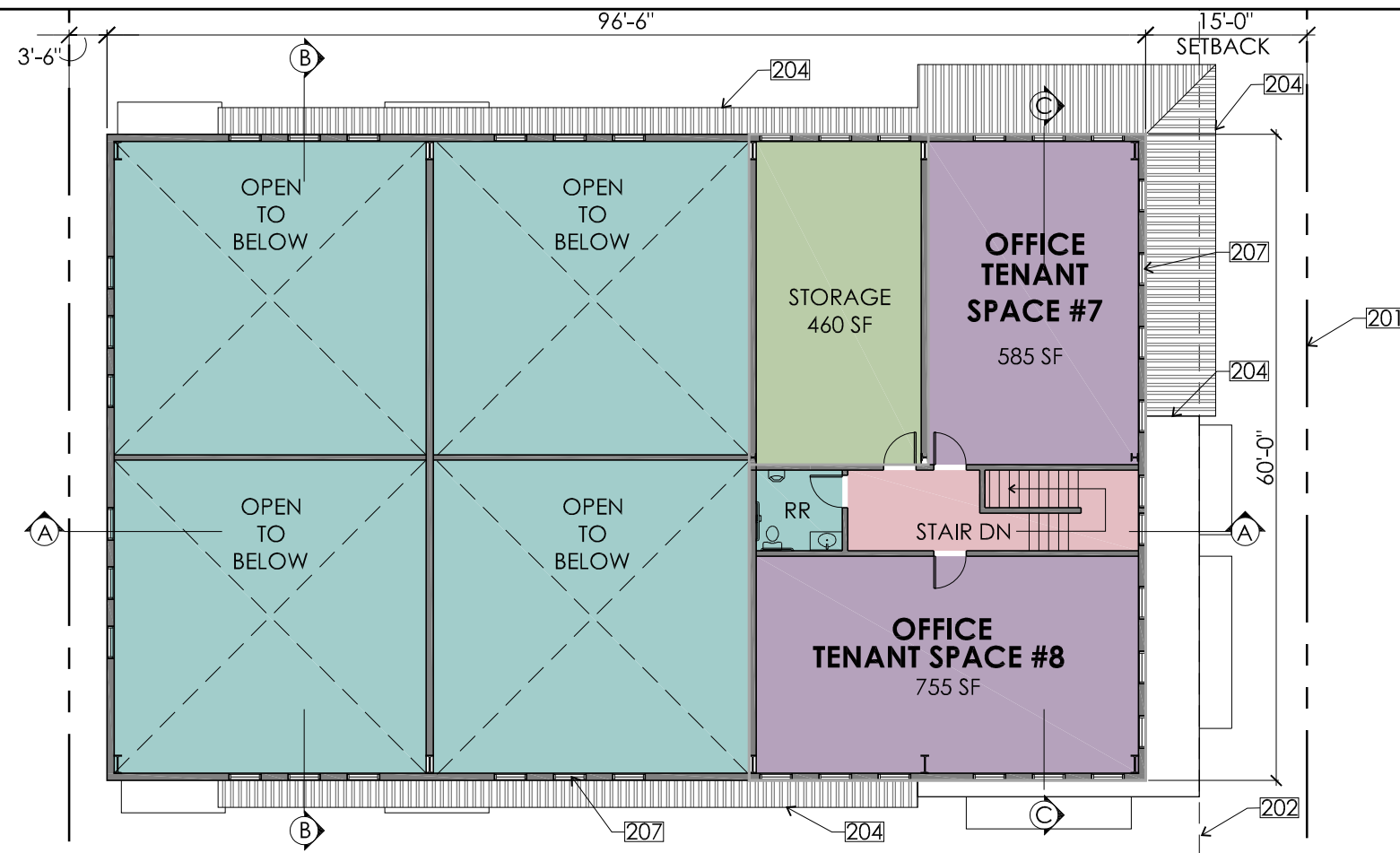


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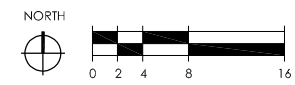
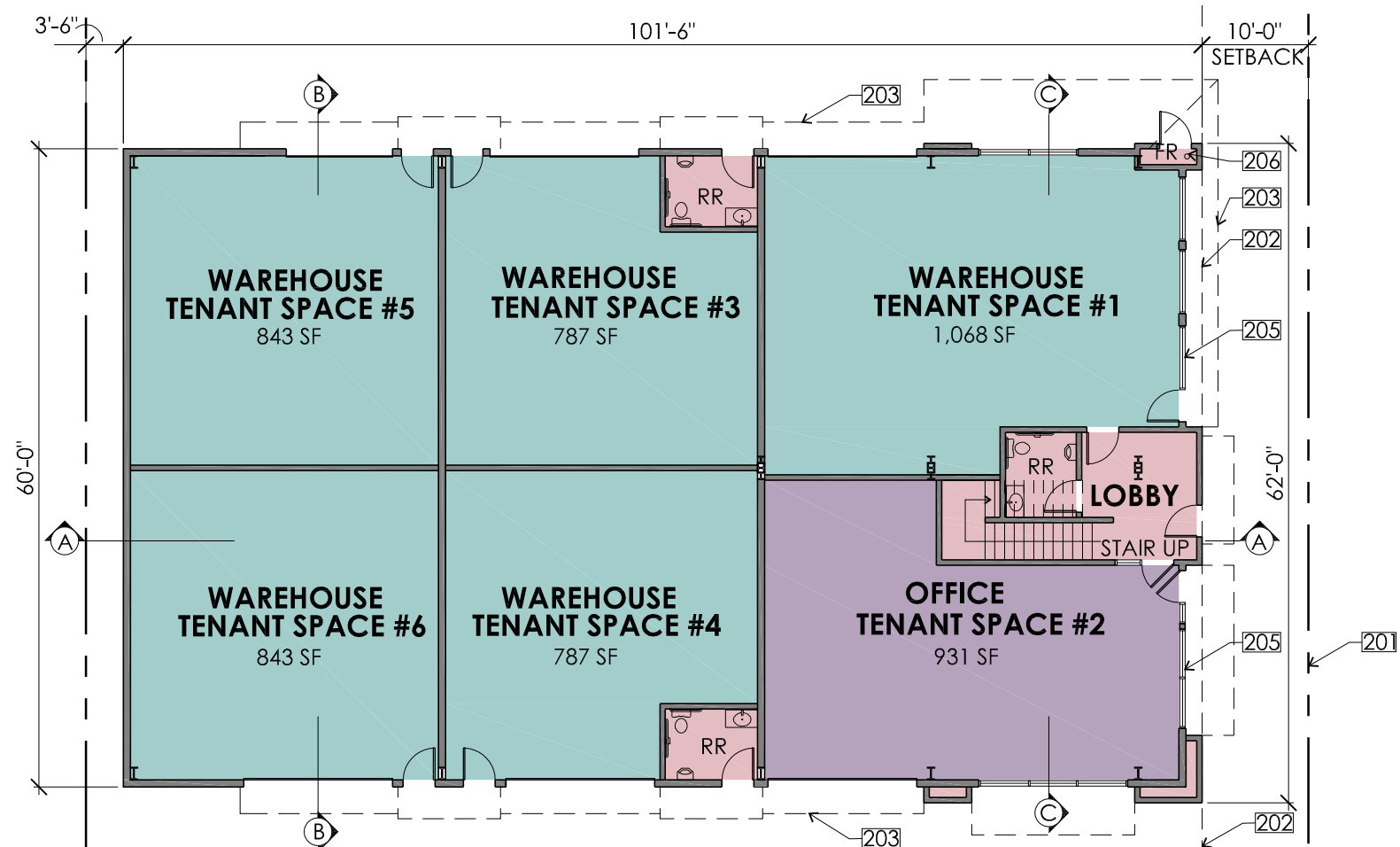
- 101 NEW CURB CUT PER CITY STANDARDS
- 102 NEW CURB, GUTTER, SIDEWALK PER CITY STANDARDS
- 103 FIRE RISER LOCATION
- 104 SET BACK
- 105 PROPERTY LINE
- 106 ASPHALT PAVING AT PARKING LOT
- 107 CONCRETE WALKWAY
- 108 ACCESSIBLE PARKING SPACE
- 109 TRASH/RECYCLING ENCLOSURE PER CITY STANDARDS - (2) 3CY BINS ANTICIPATED.
- 110 LANDSCAPE AREA
- 111 TRANSFORMER
- 112 LINE OF PARKING OVERHANG
- 113 ACCESSIBLE PATH STRIPING
- 114 PROPOSED CULVERT (SHOWN CROSS-HATCHED)
- 115 OUTDOOR SEATING AREA W/ CONCRETE BENCHES
- 116 EV READY CHARGING SPACE
- 117 EV CAPABLE CHARGING SPACE
- 118 SHORT TERM BICYCLE PARKING
- 119 LONG TERM BICYCLE PARKING



SITE MANEUVERABILITY DIAGRAM W/ AASHTO TEMPLATE
SOUTH-EAST PARKING SPACE SHOWN (WORST CASE SCENARIO)



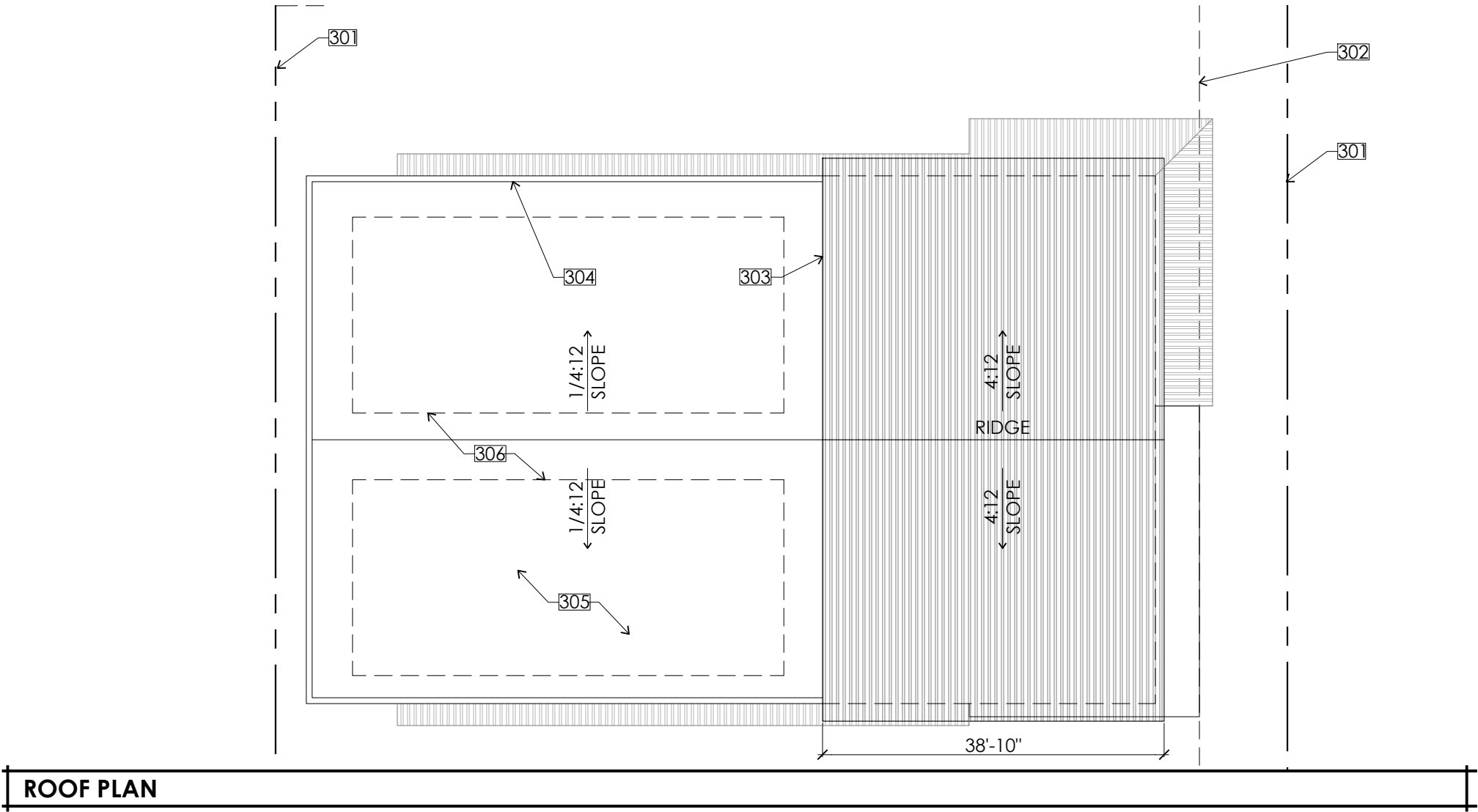
REFERENCE NOTES	
201	PROPERTY LINE
202	SETBACK
203	LINE OF AWNING ABOVE
204	LINE OF ROOF BELOW
205	ALUMINUM STOREFRONT
206	FIRE RISER ROOM
207	ALUMINUM FRAME WINDOWS



	ADDRESS 1327 ARCHER STREET, STE. 220 SAN LUIS OBISPO, CA 93401 CONTACT 805.547.2240 ARRISSTUDIO.COM	2855 McMillan Ave. San Luis Obispo, Ca FIRST AND SECOND FLOOR	Date: 01/26/2022 Scale: 1/16" = 1'-0" @ 11x17 1/8" = 1'-0" @ 24x36 Sheet:
	THOMAS E. JESS ARCHITECT (CA) #C27068 STEPHEN A. RIGOR ARCHITECT (CA) #C33672	A2.1	

REFERENCE NOTES

- 301 PROPERTY LINE
- 302 SETBACK
- 303 GABLE ROOF W/ CORRUGATED METAL ROOFING
- 304 PARAPET WALL @ LOW SLOPE ROOF
- 305 GREY TPO ROOFING @ LOW SLOPE ROOF
- 306 LINE OF SCREENED AREA FOR ROOF TOP MECHANICAL EQUIPMENT / SOLAR



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ROOF PLAN

Date01/26/2022

Scale1/16" = 1'-0" @ 11x17
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FRONT PERSPECTIVE-MCMILLAN STREET VIEW LOOKING NORTH



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PERSPECTIVE

Date 01/26/2022
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FRONT PERSPECTIVE-MCMILLAN STREET VIEW LOOKING SOUTH



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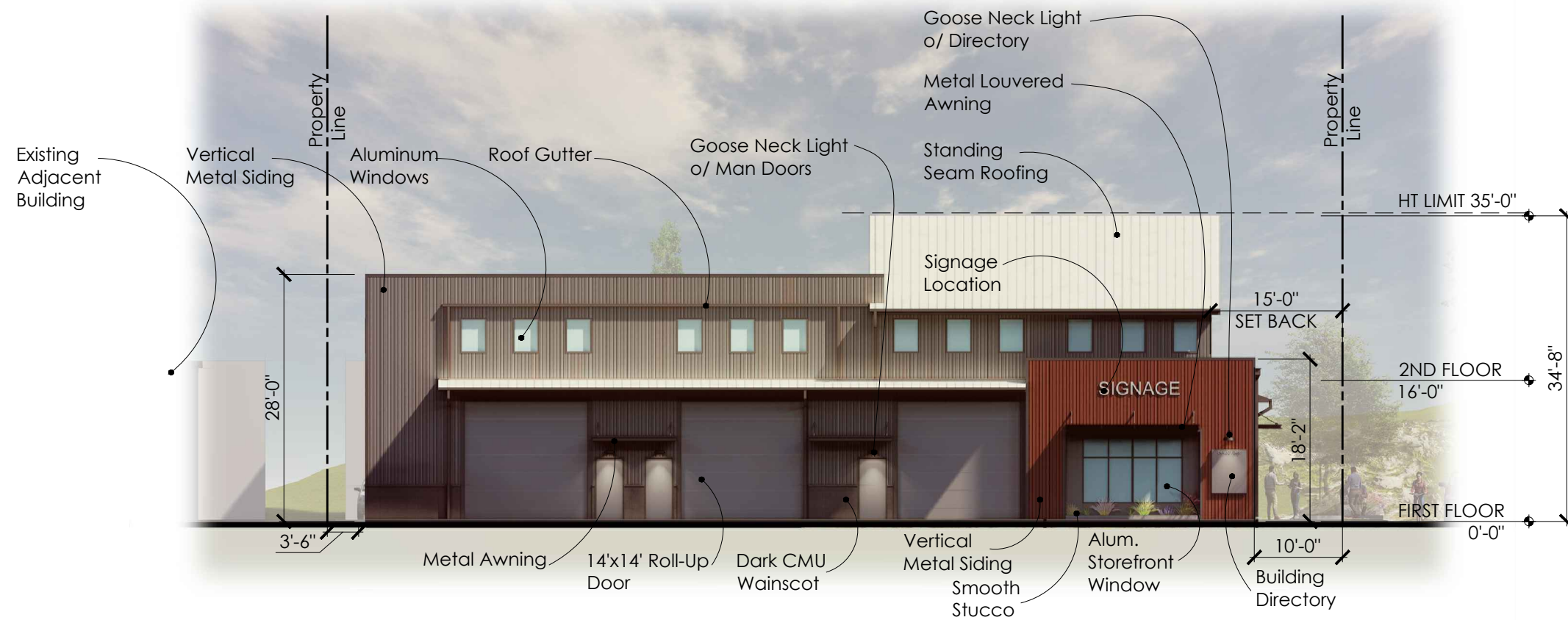
2855 McMillan Ave.
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PERSPECTIVE

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EAST ELEVATION - FACING MCMILLAN



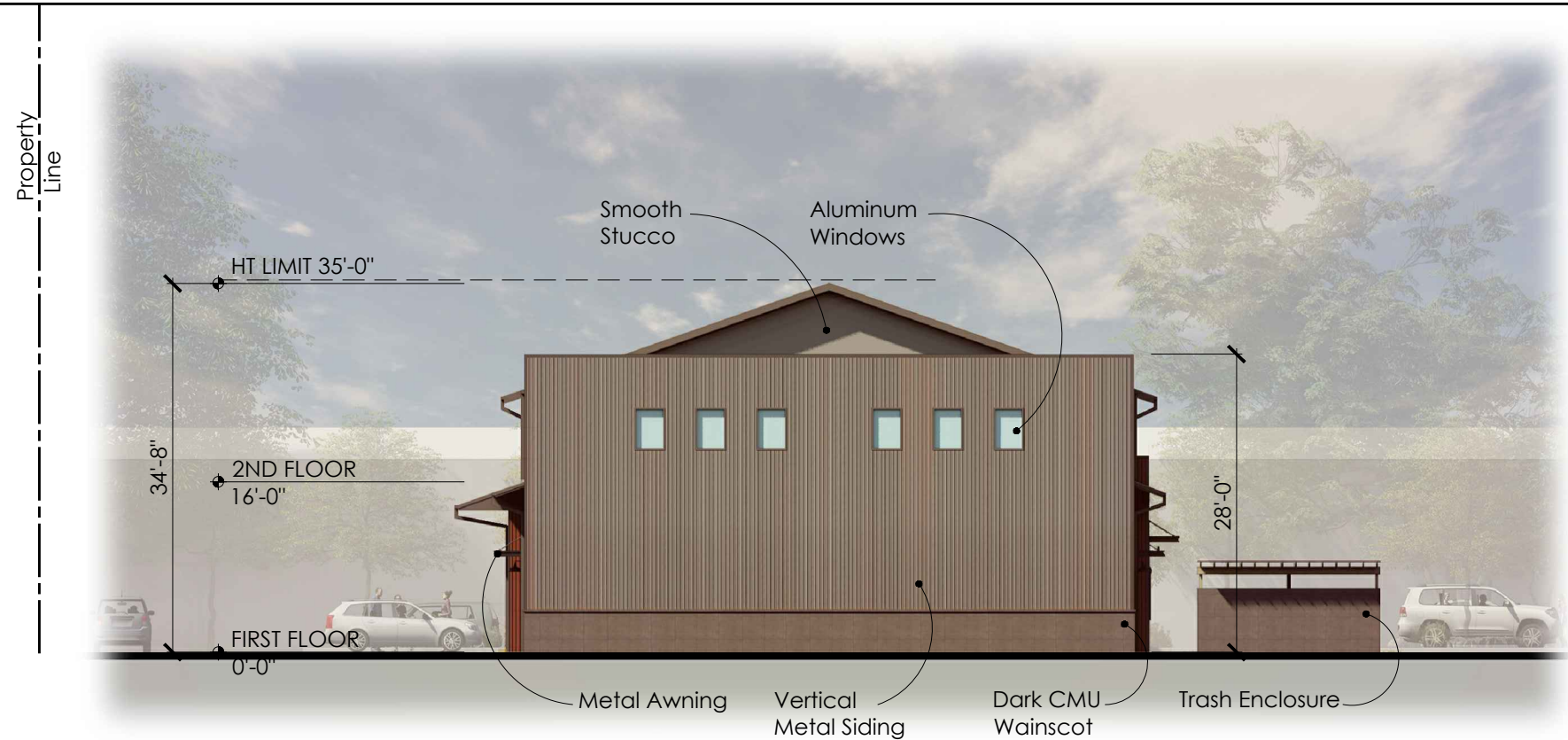
SOUTH ELEVATION



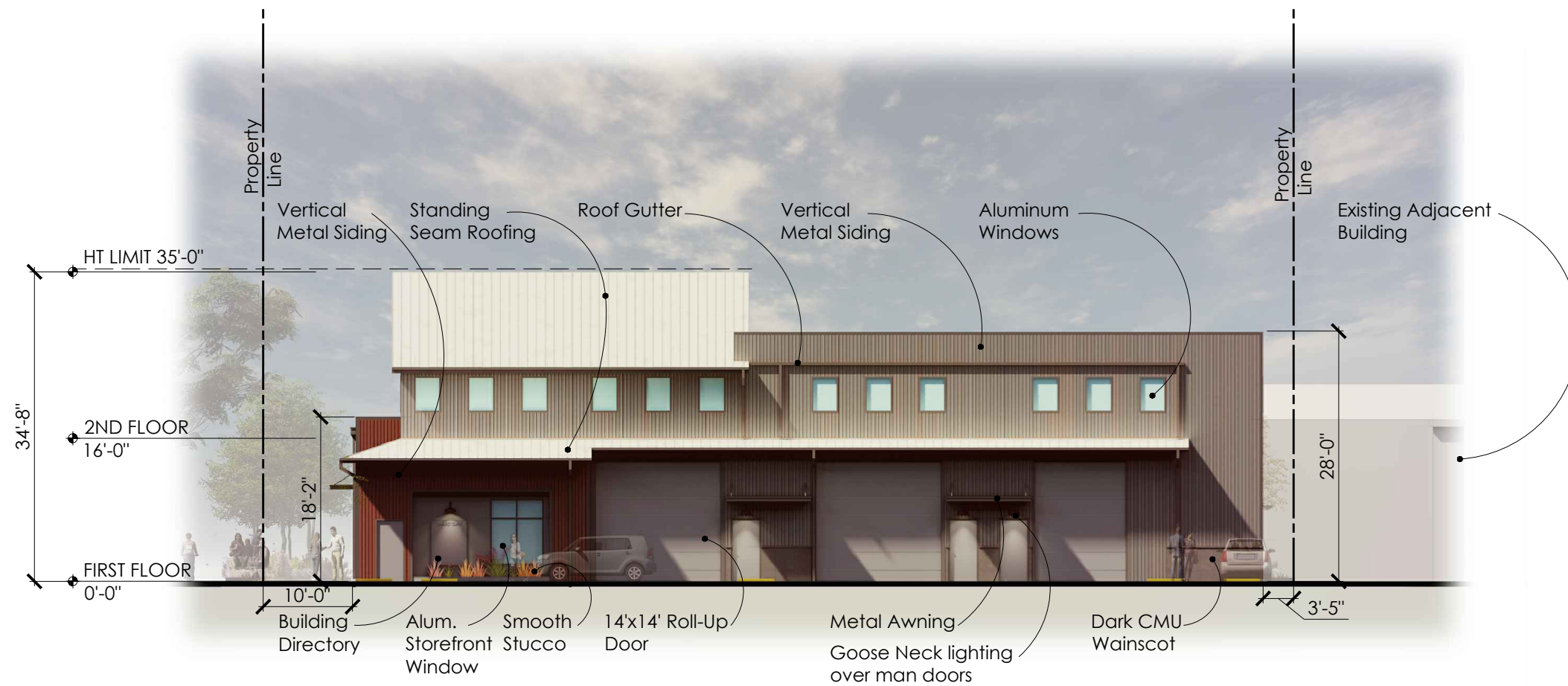
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ELEVATIONS

Date 01/26/2022
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WEST ELEVATION



NORTH ELEVATION



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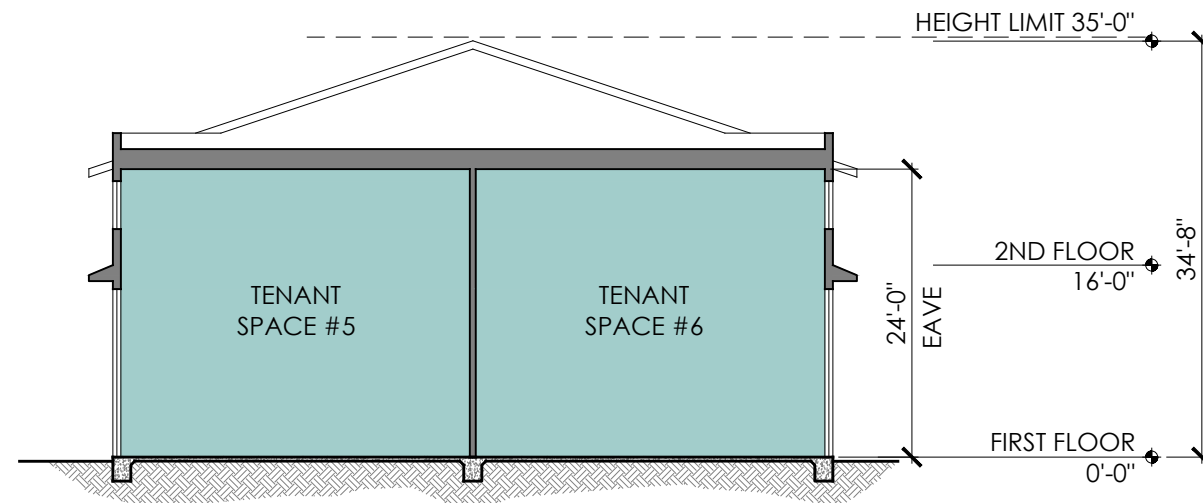
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ELEVATIONS

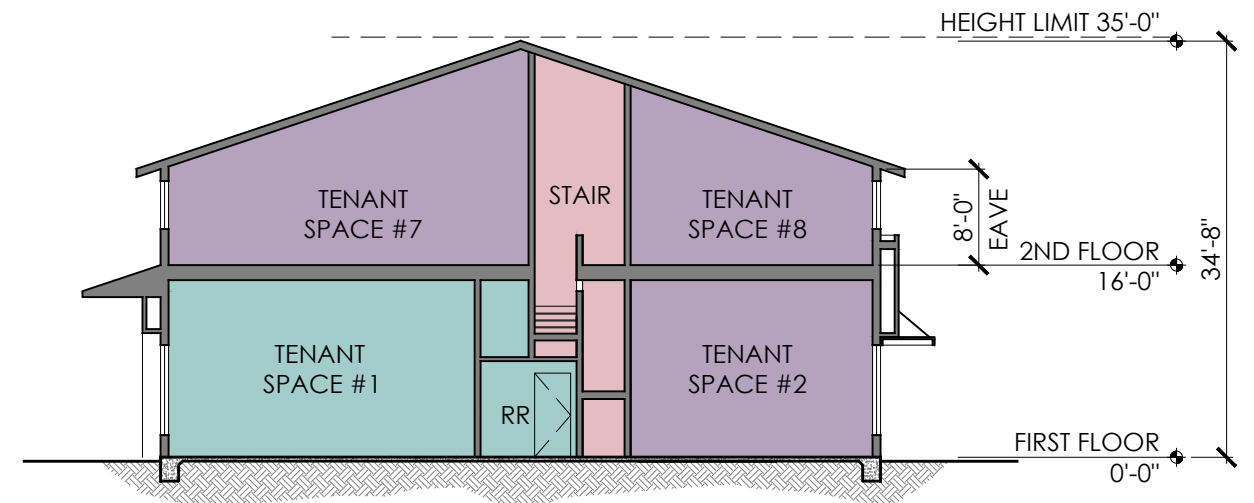
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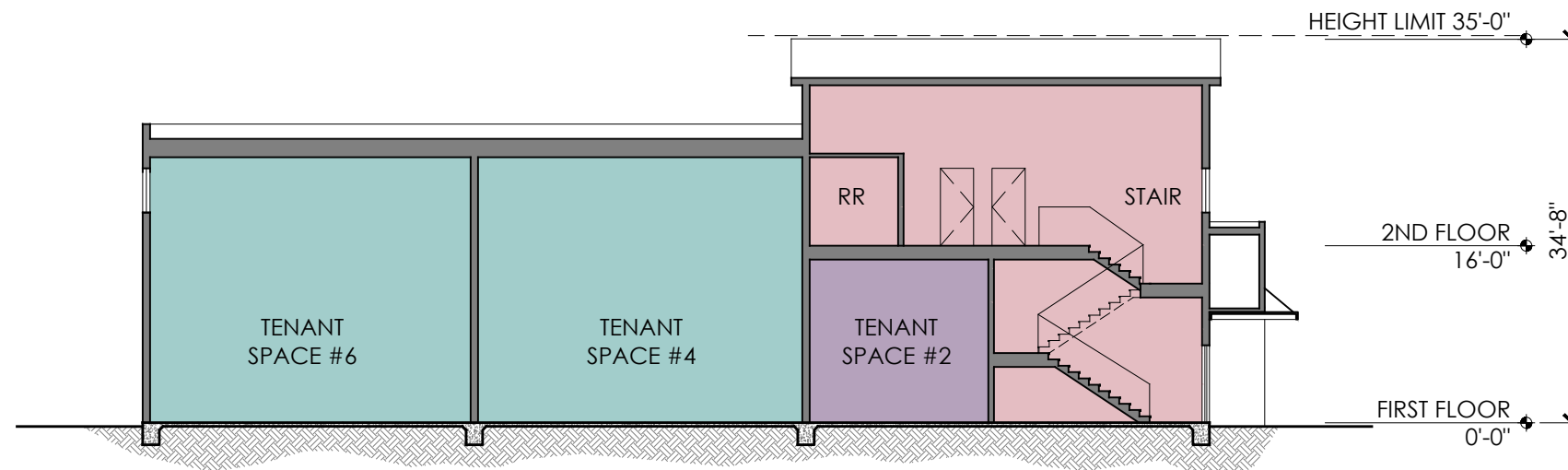
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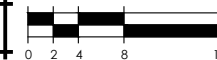
BUILDING SECTION B



BUILDING SECTION C



BUILDING SECTION A



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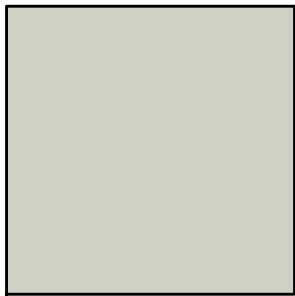
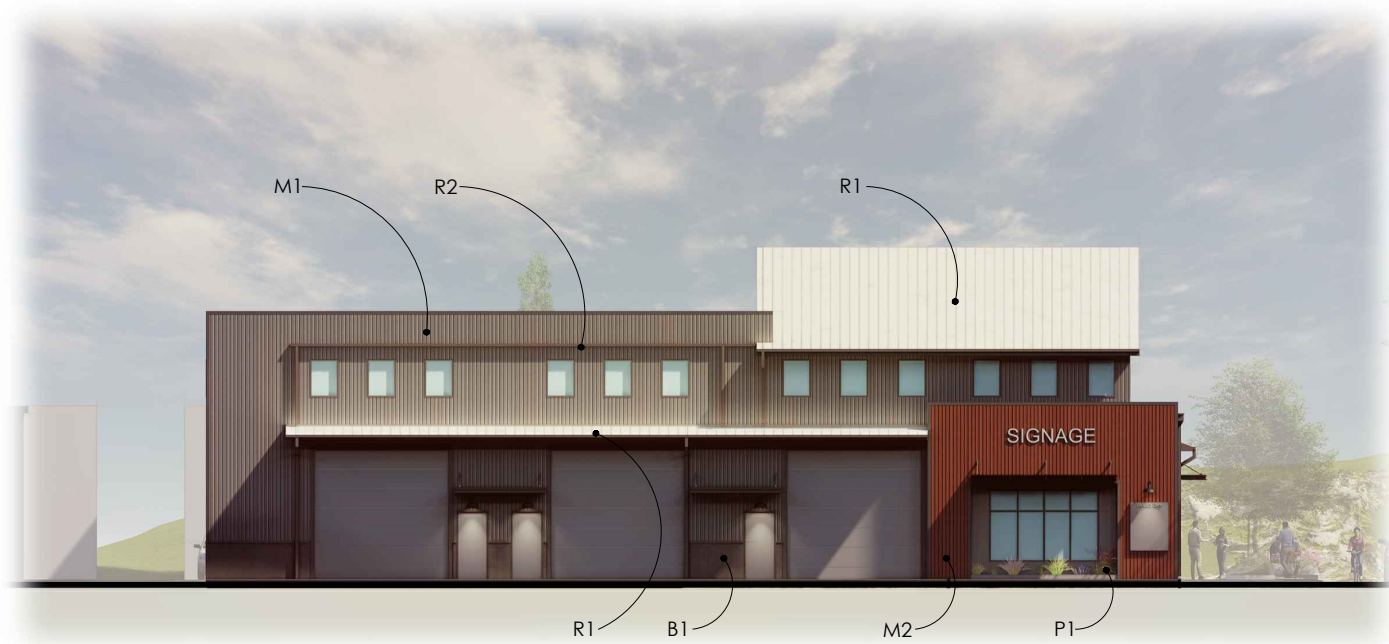
BUILDING SECTIONS

Date 01/26/2022

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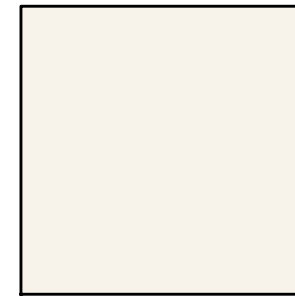
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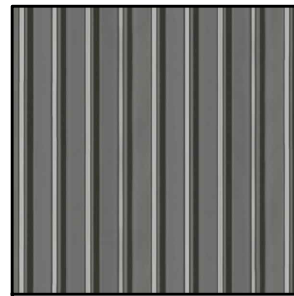
R1: METAL ROOFING
AEP SPAN "SURF WHITE"



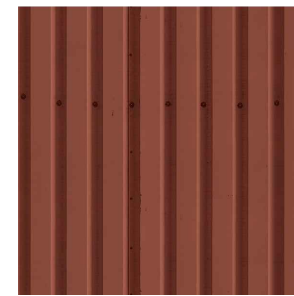
R2: GUTTERS & DOWNSPOUTS
ALUMINUM, PAINTED
SHERWIN-WILLIAMS SW6236 "GRAYS HARBOR"



P1: PAINT
SHERWIN-WILLIAMS SW7100 "ARCADE WHITE"



M1: METAL SIDING
ALUMINUM, PAINTED
AEP SPAN "OLD TOWN GRAY"



M2: METAL SIDING 2
ALUMINUM, PAINTED
AEP SPAN "TERRA-COTTA"



B1: DARK BLOCK

COLORS & MATERIALS

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COLORS & MATERIALS

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CONCRETE BENCH W/ PLANTER



CONCRETE BENCH W/ PLANTER



FULLY ENCLOSED BIKE LOCKER FOR LONG TERM STORAGE



GOOSE NECK BARN LIGHT WITH FULL SHIELD



U-SHAPED BIKE RACK

SITE AMENITIES

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SITE AMENITIES

Date

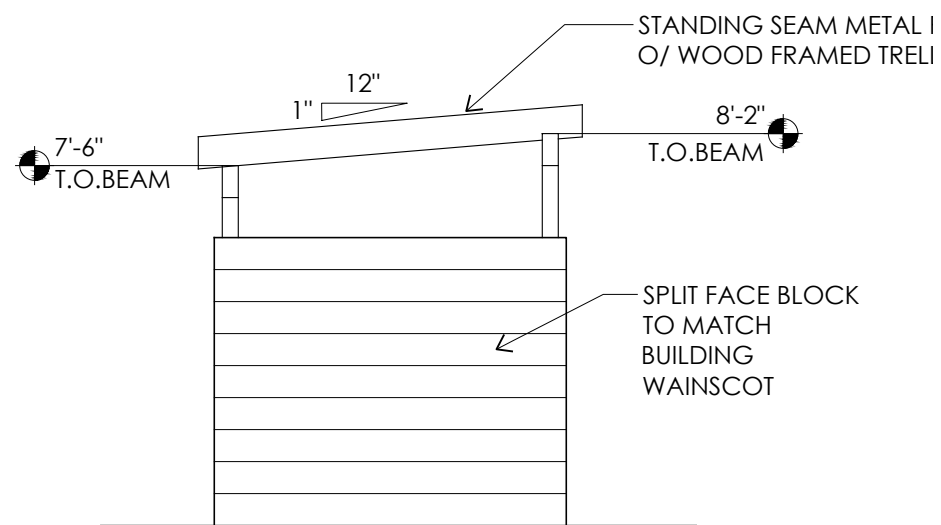
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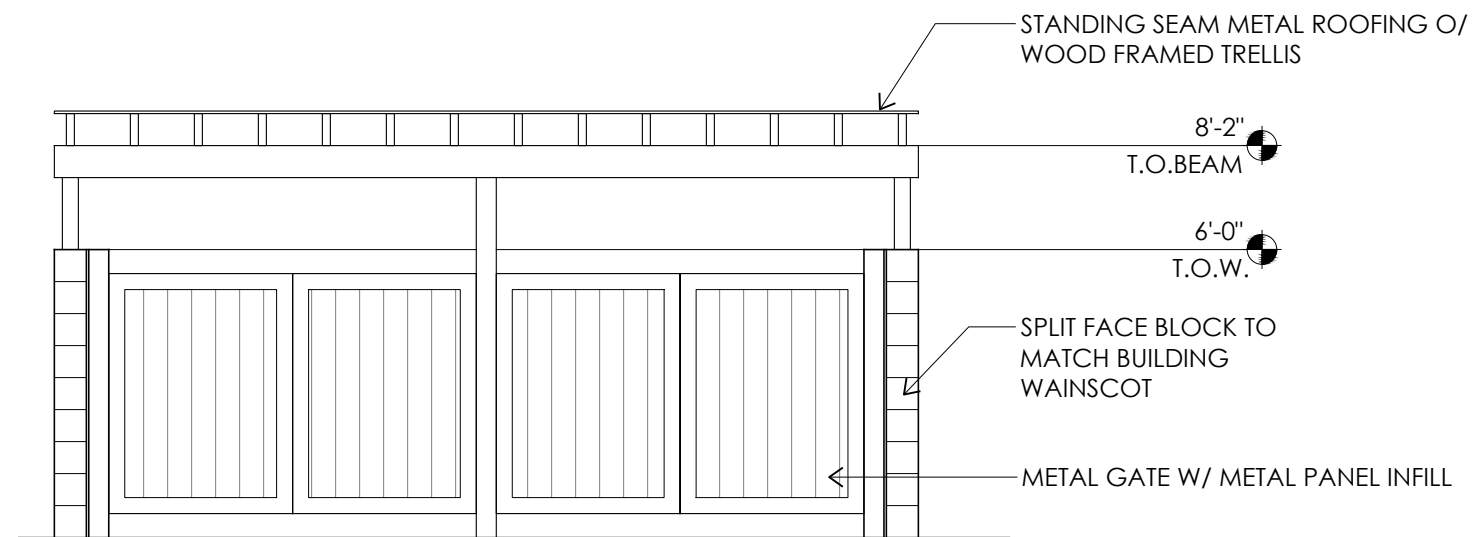
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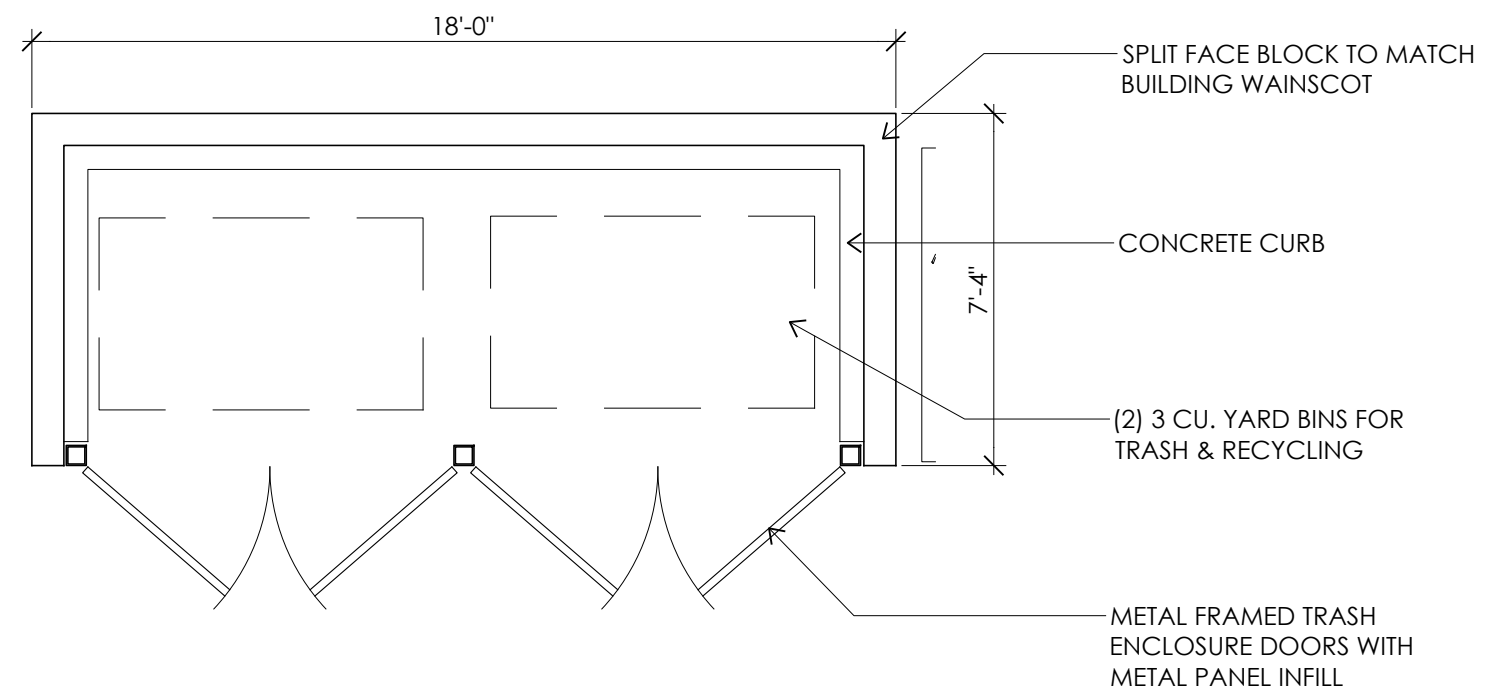
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TRASH ENCLOSURE - SIDE ELEVATION



TRASH ENCLOSURE - FRONT ELEVATION



TRASH ENCLOSURE - PLAN

TRASH ENCLOSURE



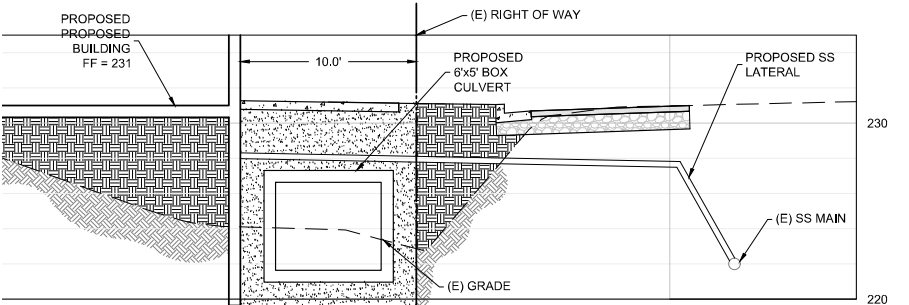
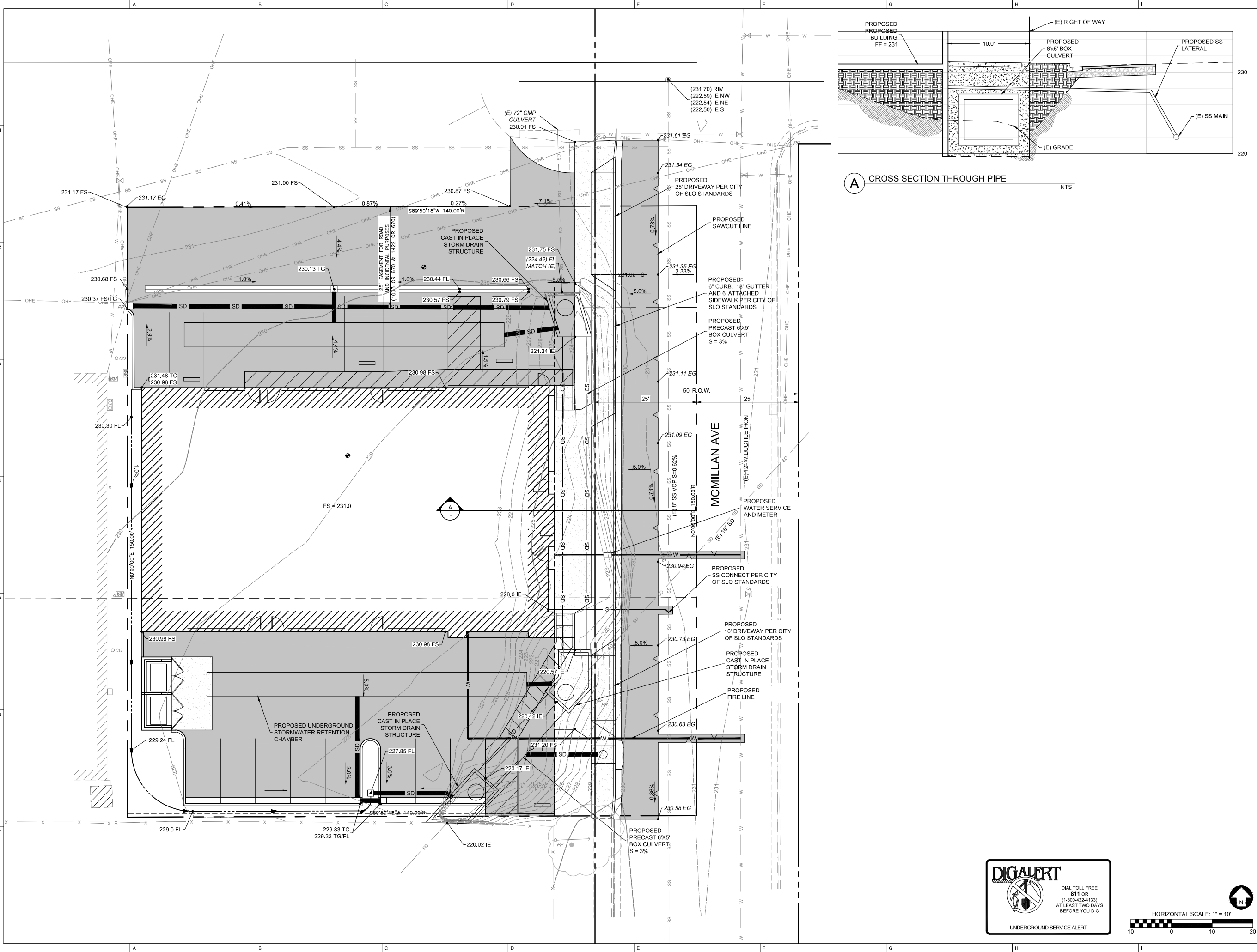
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2855 McMillan Ave.
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TRASH ENCLOSURE

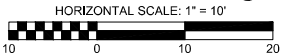
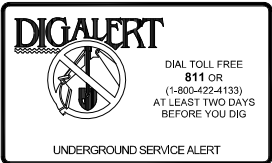
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1/2" = 1'-0" @ 24x36
Sheet

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A CROSS SECTION THROUGH PIPE NTS



Plan Prepared By:

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1413 Monterey Street
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www.ashleyvance.com

CIVIL • STRUCTURAL

McMILLAN
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Revisions:

1	
2	
3	
4	
5	

Project Engineer: KEA Ext: 165

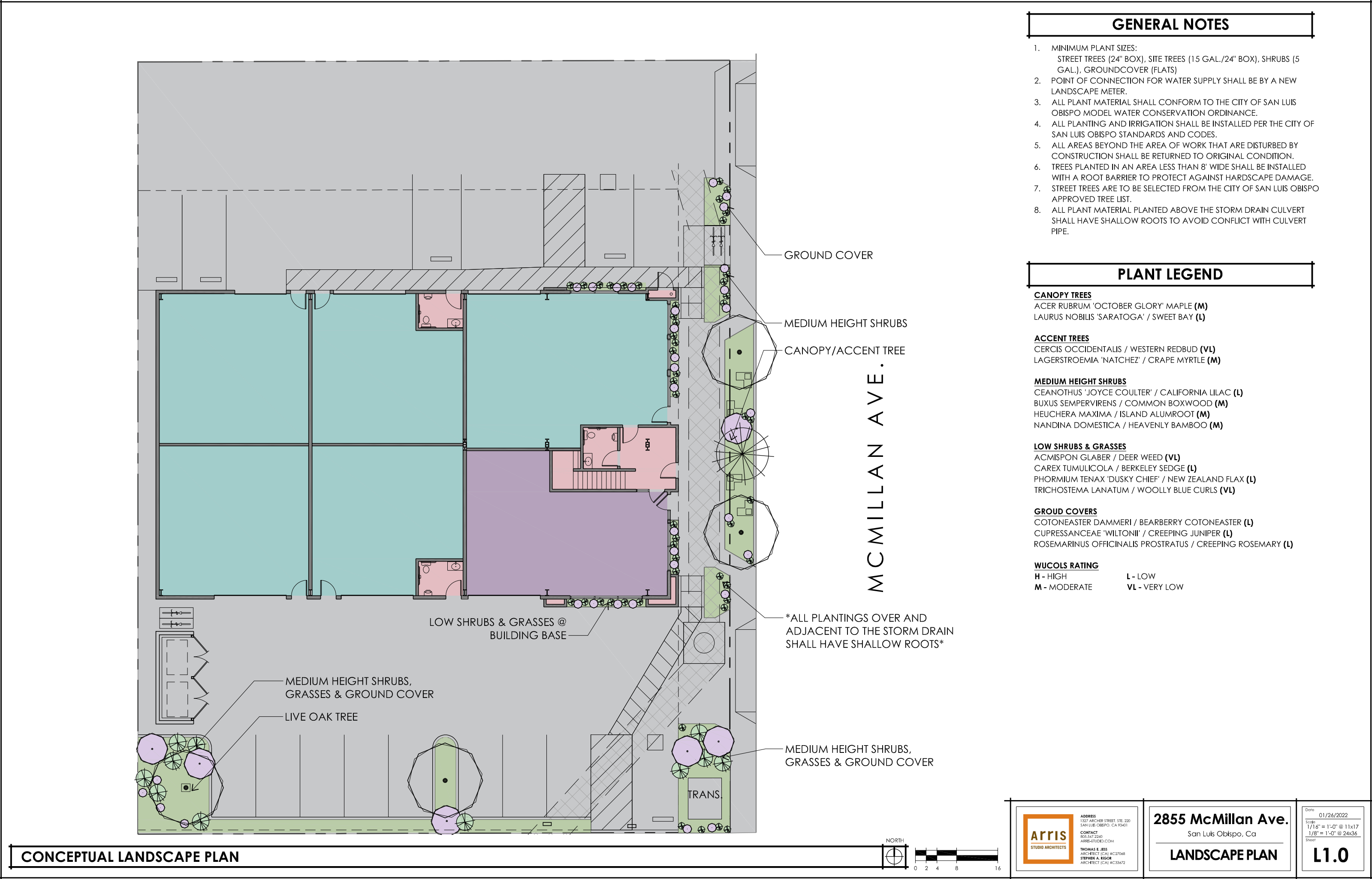
Project Manager: S_J

Date: 1/18/2022 Scale: PER PLAN

AV Job No: 201490 Sheet Size: 24" x 36"

GRADING AND
DRAINAGE PLAN

C-2.1



GENERAL NOTES

- 1. MINIMUM PLANT SIZES:
STREET TREES (24" BOX), SITE TREES (15 GAL./24" BOX), SHRUBS (5 GAL.), GROUND COVER (FLATS)
- 2. POINT OF CONNECTION FOR WATER SUPPLY SHALL BE BY A NEW LANDSCAPE METER.
- 3. ALL PLANT MATERIAL SHALL CONFORM TO THE CITY OF SAN LUIS OBISPO MODEL WATER CONSERVATION ORDINANCE.
- 4. ALL PLANTING AND IRRIGATION SHALL BE INSTALLED PER THE CITY OF SAN LUIS OBISPO STANDARDS AND CODES.
- 5. ALL AREAS BEYOND THE AREA OF WORK THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITION.
- 6. TREES PLANTED IN AN AREA LESS THAN 8' WIDE SHALL BE INSTALLED WITH A ROOT BARRIER TO PROTECT AGAINST HARDSCAPE DAMAGE.
- 7. STREET TREES ARE TO BE SELECTED FROM THE CITY OF SAN LUIS OBISPO APPROVED TREE LIST.
- 8. ALL PLANT MATERIAL PLANTED ABOVE THE STORM DRAIN CULVERT SHALL HAVE SHALLOW ROOTS TO AVOID CONFLICT WITH CULVERT PIPE.

PLANT LEGEND

- CANOPY TREES**
ACER RUBRUM 'OCTOBER GLORY' MAPLE (M)
LAURUS NOBILIS 'SARATOGA' / SWEET BAY (L)
- ACCENT TREES**
CERCIS OCCIDENTALIS / WESTERN REDBUD (VL)
LAGERSTROEMIA 'NATCHEZ' / CRAPE MYRTLE (M)
- MEDIUM HEIGHT SHRUBS**
CEANOTHUS 'JOYCE COULTER' / CALIFORNIA LILAC (L)
BUXUS SEMPERVIRENS / COMMON BOXWOOD (M)
HEUCHERA MAXIMA / ISLAND ALUMROOT (M)
NANDINA DOMESTICA / HEAVENLY BAMBOO (M)
- LOW SHRUBS & GRASSES**
ACMISPON GLABER / DEER WEED (VL)
CAREX TUMULICOLA / BERKELEY SEDGE (L)
PHORMIUM TENAX 'DUSKY CHIEF' / NEW ZEALAND FLAX (L)
TRICHOSTEMA LANATUM / WOOLLY BLUE CURLS (VL)
- GROUD COVERS**
COTONEASTER DAMMERI / BEARBERRY COTONEASTER (L)
CUPRESSANCEAE 'WILTONII' / CREEPING JUNIPER (L)
ROSEMARINUS OFFICINALIS PROSTRATUS / CREEPING ROSEMARY (L)
- WUCOLS RATING**
H - HIGH
M - MODERATE
L - LOW
VL - VERY LOW



ADDRESS
1327 ARCHER STREET, STE. 220
SAN LUIS OBISPO, CA 93401

CONTACT
805.547.2240
ARRIS-STUDIO.COM

THOMAS E. JESS
ARCHITECT (CA) #C27068

STEPHEN A. RIGOR
ARCHITECT (CA) #C33672

2855 McMillan Ave.

San Luis Obispo, Ca

LANDSCAPE PLAN

Date
01/26/2022

Scale
1/16" = 1'-0" @ 11x17
1/8" = 1'-0" @ 24x36

Sheet
L1.0



OCTOBER GLORY MAPLE



SWEET BAY



WESTERN REDBUD



CRAPE MYRTLE



CALIFORNIA LILAC



COMMON BOXWOOD



ISLAND ALUMROOT



HEAVENLY BAMBOO



DEER WEED



BERKELEY SEDGE



NEW ZEALAND FLAX



WOOLLY BLUE CURLS



BEARBERRY COTONEASTER



CREeping JUNIPER



CREeping ROSEMARY

NOTE:
PLANT IMAGERY SHOWN IS REPRESENTATIVE ONLY. FINAL SELECTIONS MAY VARY. SEE CONCEPTUAL PLANTING LEGEND FOR MORE INFORMATION.

WATER CONSERVATION

- WATER CONSERVATION NOTES**
THE FOLLOWING WATER CONSERVATION TECHNIQUES SHALL BE EMPLOYED IN THIS PROJECT:
- WATER CONSERVING PLANTS, DEFINED AS "LOW" OR "VERY LOW" IN THE "WATER USE CLASSIFICATION OF LANDSCAPE SPECIES" (WULCOS IV, UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION), SHALL BE UTILIZED IN 75% OF THE TOTAL PLANT AREA.
 - IRRIGATION SYSTEM SHALL BE SEPARATED INTO DISTINCT HYDROZONES BASED ON PLANT MATERIAL TYPES, EXPOSURE, AND ORIENTATION.
 - SOIL AMENDMENTS AND A 3" LAYER OF MEDIUM BARK MULCH SHALL BE UTILIZED TO IMPROVE WATER HOLDING CAPACITY OF SOIL AND INHIBIT EVAPORATION.
 - LAWN IS NOT USED.

- STATEMENT OF WATER CONSERVING IRRIGATION DESIGN**
THE FOLLOWING PRINCIPLES OF IRRIGATION DESIGN UTILIZED ON THIS PROJECT ARE DIRECTED SPECIFICALLY AS CONSERVING WATER AND IMPROVING THE EFFICIENCY OF THE IRRIGATION SYSTEM.
- ALL IRRIGATION SHALL BE DRIP OR DRIP-TYPE AND/OR MICROSPRAY SYSTEMS ONLY. LOW PRECIPITATION RATE HEADS TO BE USED TO MINIMIZE RUNOFF.
 - IRRIGATION HYDROZONES SHALL ADJUST ACCORDING TO WATER NEEDS AND WEATHER.
 - UTILIZATION OF IRRIGATION SYSTEM MASTER VALVE.
 - UTILIZATION OF IRRIGATION SYSTEM "SMART CONTROLLER" WITH WATER BUDGETING FEATURE.
 - UTILIZATION OF IRRIGATION SYSTEM FLOW SENSOR.
 - UTILIZATION OF RAIN SHUT-OFF DEVICE CONNECTED TO IRRIGATION CONTROLLER.



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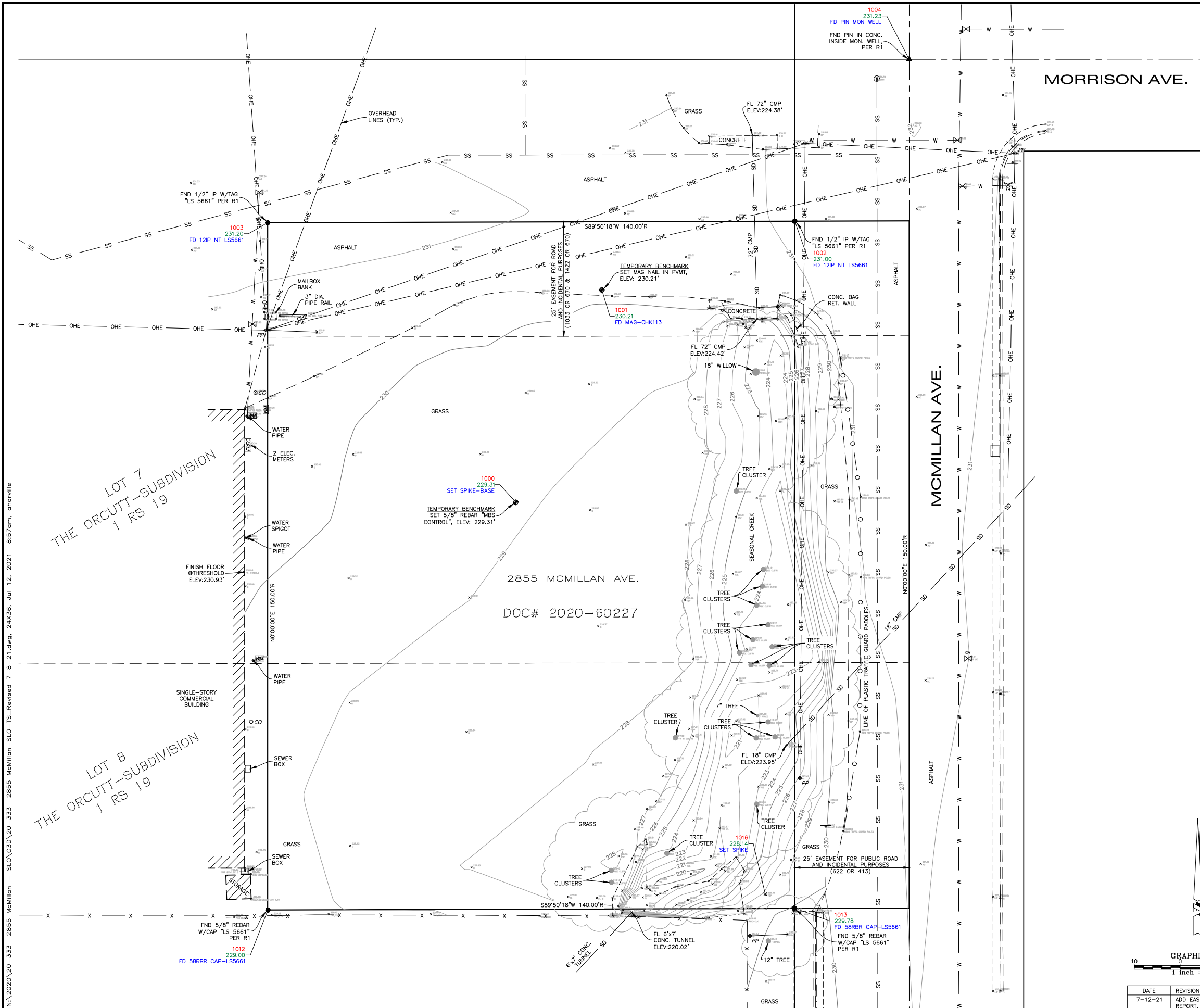
WATER CONSERVATION

Date
01/26/2022

Scale
1/16" = 1'-0" @ 11x17
1/8" = 1'-0" @ 24x36

Sheet
L1.1

N:\2020\20-333 2855 McMillan - SLO\C3D\20-333 2855 McMillan-SLO-TS-Revised 7-8-21.dwg, 24X36, Jul 12, 2021 8:57am, charville



SYMBOL LEGEND:	
	FENCE LINE
	SEWER MAIN
	WATER MAIN
	GAS MAIN
	ELEC/TELEPHONE/CABLE
	OVERHEAD ELECTRIC
	DROP INLET AT CURB
	DROP INLET
	STORM DRAIN MANHOLE
	FIRE HYDRANT
	WATER WELL
	WATER VALVE
	WATER METER
	SEWER MANHOLE
	SEWER CLEANOUT
	RETAINING WALL
	PG&E BOX
	GAS METER
	TELEPHONE BOX
	SIGNAL BOX
	CABLE T.V. BOX
	ELECTRIC BOX
	TELEPHONE MANHOLE
	STREET LIGHT
	JOINT POLE
	POWER POLE
	GUY WIRE
	MONITORING WELL

ABBREVIATIONS	
AC	ASPHALT CONCRETE
AP	ANGLE POINT
BM	BENCH MARK
BLDG	BUILDING
BOW	BACK OF WALK
CB	CATCH BASIN
CF	CURB FACE
CO	CLEAN OUT
COL	COLUMN
COR	CORNER
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNITS
CRN	CROWN OF STREET
DI	DROP INLET
EG	EXISTING GRADE
EP	EDGE OF PAVEMENT
FD	FOUND
FL	FLOW LINE
FF	FINISH FLOOR
FW	FACE OF WALL
HSE	HOUSE COR
GR	GRASS
IP	IRON PIPE
GB	GRADE BREAK
GM	GAS METER
HP	HIGH POINT
LT	LIGHT
MH	MANHOLE
PP	POWER POLE
PVC	POLYVINYL PIPE
RB	REBAR
RCP	REINFORCED CONCRETE PIPE
R10	CANOPY RADIUS
SD	STORM DRAIN
SL	POINT ON SLOPE
SS	SEWER
STP	STEP
STR	STAIRS
TOP	TOP OF SLOPE
TOE	TOE OF SLOPE
TW	TOP OF WALL
W	WATER
WM	WATER METER
WV	WATER VALVE

SURVEYOR'S STATEMENT:
THIS MAP REPRESENTS A FIELD SURVEY OF SURFACE FEATURES AND ELEVATIONS PERFORMED ON NOVEMBER 13, 2020.

MICHAEL B. STANTON, PLS 5702 DATE

- SURVEYOR'S NOTES:**
1. A PRELIMINARY TITLE REPORT WAS PROVIDED TO THE SURVEYOR, PREPARED BY FIRST AMERICAN TITLE COMPANY, AND DATED AUGUST 13, 2020. ANY INCLUDED EASEMENTS WHICH MAY AFFECT THE SUBJECT PROPERTY HAVE BEEN PLOTTED, WHERE POSSIBLE.
 2. ONLY THE SURFACE EVIDENCE OF UNDERGROUND UTILITIES HAVE BEEN MEASURED IN THE FIELD ON THIS SURVEY. IF APPROXIMATE UNDERGROUND ALIGNMENTS ARE SHOWN, I MAKE NO WARRANTY AS TO THE ACTUAL LOCATION, TYPE OR DEPTH OF THOSE UNDERGROUND UTILITIES. CALL UNDERGROUND SERVICE ALERT (USA) AT 1-800-642-2444 TO VERIFY THE ACTUAL LOCATION OF UTILITIES PRIOR TO ANY EXCAVATION. THE SURVEYOR ALSO HAS MADE NO INVESTIGATION AS TO SUBSURFACE ENVIRONMENTAL CONDITIONS THAT WOULD AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.
 3. IT WILL BE THE ARCHITECT'S RESPONSIBILITY TO VERIFY SETBACK AND HEIGHT RESTRICTIONS WITH THE LOCAL GOVERNING AGENCY.
 4. THE SIGNED AND SEALED ORIGINAL DRAWING OF THIS MAP CONSTITUTES THE FINAL WORK PRODUCT. MBS LAND SURVEYS WILL NOT BE LIABLE FOR ELECTRONIC VERSIONS OF THIS MAP PROVIDED TO OTHER PARTIES.
 5. THE PROPERTY LINES SHOWN HEREON REPRESENT THE ACTUAL BOUNDARY LINES BASED ON A BOUNDARY SURVEY WHICH IS CURRENTLY IN PROGRESS. PERMANENT MONUMENTS WILL BE SET AT ALL PROPERTY CORNERS AND A CORNER RECORD MAP OR RECORD OF SURVEY MAP WILL BE SUBMITTED TO THE COUNTY OF SAN LUIS OBISPO AS REQUIRED BY STATE LAW.

BENCH MARK:
THE BENCH MARK FOR THIS PROJECT IS USC&GS BRASS CAP V-530 ON NORTHEASTERLY CURB OF BRIDGE ON ORCUTT ROAD BETWEEN MCMILLAN & BROAD, S.L.O. DATUM BENCHMARK #74.
ELEV.= 216.75' (NAVD88)

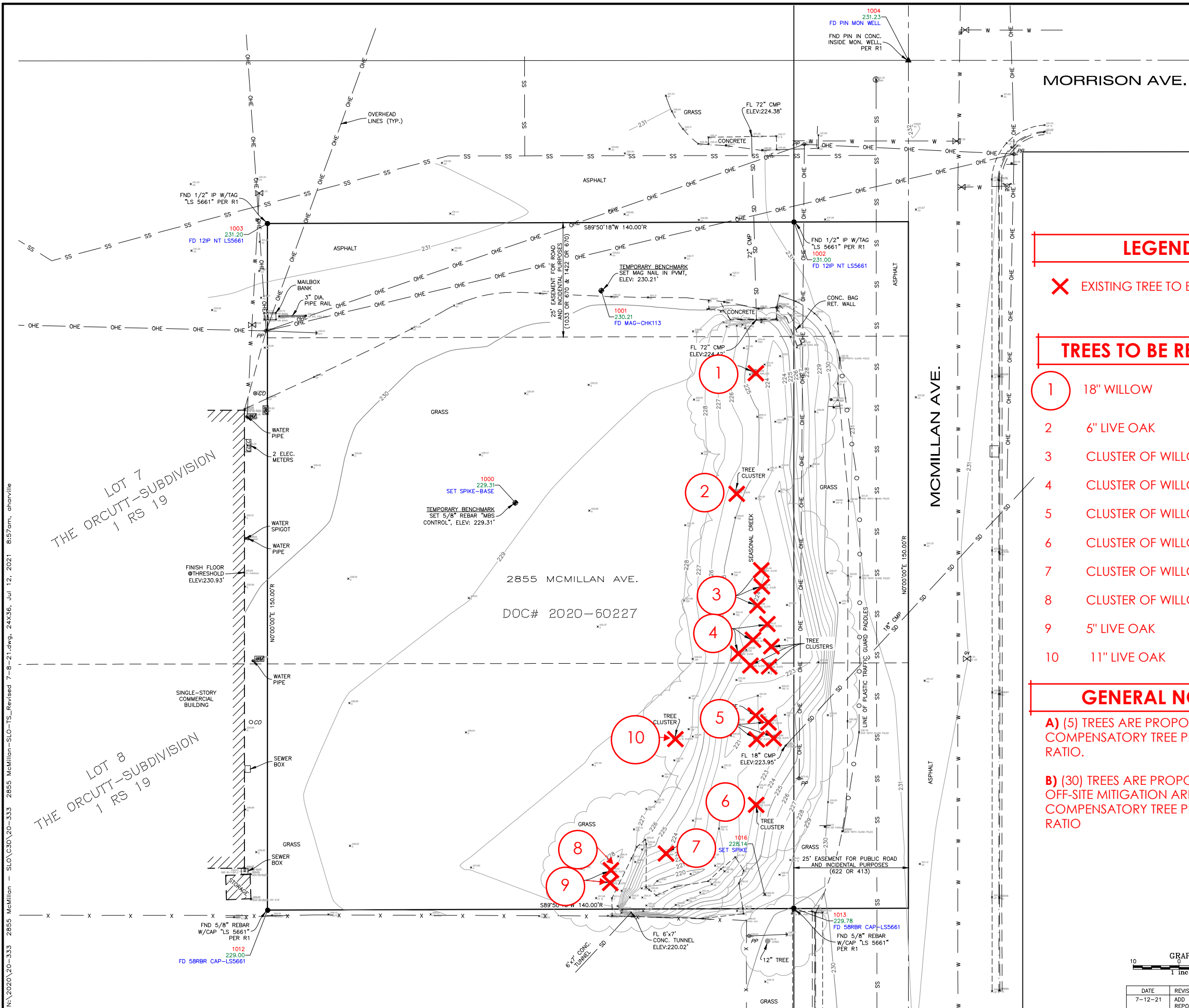
BASIS OF BEARINGS:
THE BASIS OF BEARINGS FOR THIS PROJECT IS BASED ON FOUND MONUMENTS ALONG THE CENTERLINE OF MCMILLAN, BETWEEN THE INTERSECTIONS OF MORRISON AND ORCUTT.
BEARING N 0°00'00" E, PER R.

SITE DATA:
ADDRESS: 2855 MCMILLAN AVE.
ASSESSOR'S PARCEL NO. APN 053-212-005

TOPOGRAPHIC MAP
A PORTION OF LOTS 7 & 8 OF THE ORCUTT-SUBDIVISION AS SHOWN ON RECORD OF SURVEY FILED IN BOOK 1 AT PAGE 19, IN THE CITY OF SAN LUIS OBISPO, COUNTY OF SAN LUIS OBISPO, CALIFORNIA
AT THE REQUEST OF WADE CROSONO
MICHAEL B. STANTON, PLS 5702
3559 SOUTH HIGUERA ST.
SAN LUIS OBISPO, CA 93401
805-594-1960
July 12, 2021 JOB #20-333

GRAPHIC SCALE	
10	0 5 10 20
1 inch = 10 feet	
DATE	REVISION
7-12-21	ADD EASEMENTS LISTED IN TITLE REPORT, AS PROVIDED BY CLIENT

N:\2020\20-333 2855 McMillan - SLO\C3D\20-333 2855 McMillan-SLO-TS-Revise 7-8-21.dwg, 24X36, Jul 12, 2021 8:57am, charville



SYMBOL LEGEND:	
— x —	FENCE LINE
— SS —	SEWER MAIN
— W —	WATER MAIN
— G —	GAS MAIN
— ETC —	ELEC/TELEPHONE/CABLE
— OHE —	OVERHEAD ELECTRIC
—	RETAINING WALL
PG&E BOX	PG&E BOX
GAS METER	GAS METER
TELEPHONE BOX	TELEPHONE BOX
SIGNAL BOX	SIGNAL BOX
CABLE T.V. BOX	CABLE T.V. BOX
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STP	STEP
STR	STAIRS
TOP	TOP OF SLOPE
TDE	TOE OF SLOPE
TW	TOP OF WALL
W	WATER
WM	WATER METER
WV	WATER VALVE

LEGEND

✕ EXISTING TREE TO BE REMOVED

TREES TO BE REMOVED

- 1 18" WILLOW
- 2 6" LIVE OAK
- 3 CLUSTER OF WILLOWS
- 4 CLUSTER OF WILLOWS
- 5 CLUSTER OF WILLOWS
- 6 CLUSTER OF WILLOWS
- 7 CLUSTER OF WILLOWS
- 8 CLUSTER OF WILLOWS
- 9 5" LIVE OAK
- 10 11" LIVE OAK

GENERAL NOTES

- A) (5) TREES ARE PROPOSED ONSITE AS COMPENSATORY TREE PLANTING (1:1) RATIO.
- B) (30) TREES ARE PROPOSED ON AN OFF-SITE MITIGATION AREA AS COMPENSATORY TREE PLANTING (2:1) RATIO

SURVEYOR'S STATEMENT:
THIS MAP REPRESENTS A FIELD SURVEY OF SURFACE FEATURES AND ELEVATIONS PERFORMED ON NOVEMBER 13, 2020.

MICHAEL B. STANTON, PLS 5702 DATE

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BEARING N 0°00'00" E, PER R.

SITE DATA:
ADDRESS: 2855 MCMILLAN AVE.
ASSESSOR'S PARCEL NO. APN 053-212-005

TR-01

PROPOSED TREE REMOVAL PLAN TOPOGRAPHIC MAP

A PORTION OF LOTS 7 & 8 OF THE ORCUTT-SUBDIVISION AS SHOWN ON RECORD OF SURVEY FILED IN BOOK 1 AT PAGE 19, IN THE CITY OF SAN LUIS OBISPO, COUNTY OF SAN LUIS OBISPO, CALIFORNIA

AT THE REQUEST OF WADE CROSON
MICHAEL B. STANTON, PLS 5702
3559 SOUTH HIGUERA ST.
SAN LUIS OBISPO, CA 93401
805-594-1960

July 12, 2021 JOB #20-333

GRAPHIC SCALE	
10	0 5 10 20
1 inch = 10 feet	
DATE	REVISION
7-12-21	ADD EASEMENTS LISTED IN TITLE REPORT, AS PROVIDED BY CLIENT

ATTACHMENT 2

California Emissions Estimator Model version 2020.4.0 Emissions Modeling Report

McMillan Project - San Luis Obispo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

McMillan Project
San Luis Obispo County, Annual

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	8.27	1000sqft	0.19	8,270.00	0
Other Asphalt Surfaces	3.95	1000sqft	0.09	3,954.00	0
Parking Lot	13.00	Space	0.12	5,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - !0 month construction duration
6 days per week

Grading - site preparation - 2 passes over the 0.4 acres
grading - 10 passes over the 0.4 acres

Off-road Equipment - 8 hours/day

Off-road Equipment - 8 hours/day

Off-road Equipment -

Off-road Equipment - 8 hours/day

Off-road Equipment - 8 hours/day

McMillan Project - San Luis Obispo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - Modified based project specific maximums

Vehicle Trips - Modified to reflect project maximum

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	4,135.00	4,136.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	12,405.00	12,408.00
tblArchitecturalCoating	ConstArea_Parking	549.00	758.00
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tblAreaCoating	Area_Nonresidential_Interior	12405	12408
tblAreaCoating	Area_Parking	549	758
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	2.00	40.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	AcresOfGrading	40.00	4.00
tblGrading	AcresOfGrading	2.50	0.80
tblGrading	MaterialImported	0.00	2,700.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

McMillan Project - San Luis Obispo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
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tblOffRoadEquipment	UsageHours	7.00	8.00
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tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	7.00	18.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblVehicleTrips	ST_TR	1.74	5.25
tblVehicleTrips	SU_TR	1.74	5.25
tblVehicleTrips	WD_TR	1.74	5.25

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

[illegible]

McMillan Project - San Luis Obispo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2023	3-31-2023	0.6693	0.6693
2	4-1-2023	6-30-2023	0.6170	0.6170
3	7-1-2023	9-30-2023	0.6238	0.6238
		Highest	0.6693	0.6693

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0428	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004
Energy	1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	4.3646	4.3646	4.9000e-004	8.0000e-005	4.4018
Mobile	0.0290	0.0460	0.2763	5.4000e-004	0.0536	5.3000e-004	0.0542	0.0143	5.0000e-004	0.0148	0.0000	49.4705	49.4705	3.2600e-003	2.5800e-003	50.3208
Waste						0.0000	0.0000		0.0000	0.0000	1.5772	0.0000	1.5772	0.0932	0.0000	3.9075
Water						0.0000	0.0000		0.0000	0.0000	0.6067	0.9575	1.5642	0.0625	1.4900e-003	3.5701
Total	0.0720	0.0474	0.2779	5.5000e-004	0.0536	6.4000e-004	0.0543	0.0143	6.1000e-004	0.0150	2.1840	54.7934	56.9774	0.1594	4.1500e-003	62.2011

McMillan Project - San Luis Obispo County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0428	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004
Energy	1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	4.3646	4.3646	4.9000e-004	8.0000e-005	4.4018
Mobile	0.0290	0.0460	0.2763	5.4000e-004	0.0536	5.3000e-004	0.0542	0.0143	5.0000e-004	0.0148	0.0000	49.4705	49.4705	3.2600e-003	2.5800e-003	50.3208
Waste						0.0000	0.0000		0.0000	0.0000	1.5772	0.0000	1.5772	0.0932	0.0000	3.9075
Water						0.0000	0.0000		0.0000	0.0000	0.6067	0.9575	1.5642	0.0625	1.4900e-003	3.5701
Total	0.0720	0.0474	0.2779	5.5000e-004	0.0536	6.4000e-004	0.0543	0.0143	6.1000e-004	0.0150	2.1840	54.7934	56.9774	0.1594	4.1500e-003	62.2011

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/6/2023	6	5	
2	Grading	Grading	1/7/2023	2/22/2023	6	40	
3	Building Construction	Building Construction	2/23/2023	10/13/2023	6	200	

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4	Paving	Paving	10/14/2023	10/25/2023	6	10
5	Architectural Coating	Architectural Coating	10/26/2023	10/31/2023	6	5

Acres of Grading (Site Preparation Phase): 0.8**Acres of Grading (Grading Phase): 4****Acres of Paving: 0.21****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,408; Non-Residential Outdoor: 4,136; Striped Parking Area: 758 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Grading	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Generator Sets	1	8.00	84	0.74

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	2.00	267.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	18.00	3.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction**3.2 Site Preparation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2000e-004	0.0000	4.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3400e-003	0.0155	9.8100e-003	2.0000e-005		5.7000e-004	5.7000e-004		5.2000e-004	5.2000e-004	0.0000	2.1374	2.1374	6.9000e-004	0.0000	2.1547
Total	1.3400e-003	0.0155	9.8100e-003	2.0000e-005	4.2000e-004	5.7000e-004	9.9000e-004	5.0000e-005	5.2000e-004	5.7000e-004	0.0000	2.1374	2.1374	6.9000e-004	0.0000	2.1547

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	1.0000e-005	2.1000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0721	0.0721	0.0000	1.0000e-005	0.0753
Worker	4.0000e-005	3.0000e-005	3.3000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0924	0.0924	0.0000	0.0000	0.0932
Total	5.0000e-005	4.1000e-004	4.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.2259	0.2259	0.0000	2.0000e-005	0.2330

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.2000e-004	0.0000	4.2000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3400e-003	0.0155	9.8100e-003	2.0000e-005		5.7000e-004	5.7000e-004		5.2000e-004	5.2000e-004	0.0000	2.1374	2.1374	6.9000e-004	0.0000	2.1547
Total	1.3400e-003	0.0155	9.8100e-003	2.0000e-005	4.2000e-004	5.7000e-004	9.9000e-004	5.0000e-005	5.2000e-004	5.7000e-004	0.0000	2.1374	2.1374	6.9000e-004	0.0000	2.1547

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	1.0000e-005	2.1000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0721	0.0721	0.0000	1.0000e-005	0.0753
Worker	4.0000e-005	3.0000e-005	3.3000e-004	0.0000	1.2000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0924	0.0924	0.0000	0.0000	0.0932
Total	5.0000e-005	4.1000e-004	4.3000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.2259	0.2259	0.0000	2.0000e-005	0.2330

3.3 Grading - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1226	0.0000	0.1226	0.0664	0.0000	0.0664	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0345	0.3377	0.2064	6.3000e-004		0.0135	0.0135		0.0125	0.0125	0.0000	55.3260	55.3260	0.0179	0.0000	55.7733
Total	0.0345	0.3377	0.2064	6.3000e-004	0.1226	0.0135	0.1361	0.0664	0.0125	0.0789	0.0000	55.3260	55.3260	0.0179	0.0000	55.7733

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6000e-004	0.0226	4.3100e-003	8.0000e-005	2.2800e-003	1.8000e-004	2.4600e-003	6.3000e-004	1.7000e-004	8.0000e-004	0.0000	8.2024	8.2024	2.9000e-004	1.3000e-003	8.5969
Vendor	5.0000e-005	1.6500e-003	5.3000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5771	0.5771	1.0000e-005	8.0000e-005	0.6027
Worker	5.1000e-004	3.7000e-004	4.2200e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.1821	1.1821	3.0000e-005	3.0000e-005	1.1930
Total	9.2000e-004	0.0246	9.0600e-003	1.0000e-004	4.0000e-003	2.0000e-004	4.2000e-003	1.0900e-003	1.9000e-004	1.2800e-003	0.0000	9.9616	9.9616	3.3000e-004	1.4100e-003	10.3926

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1226	0.0000	0.1226	0.0664	0.0000	0.0664	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0345	0.3377	0.2064	6.3000e-004		0.0135	0.0135		0.0125	0.0125	0.0000	55.3259	55.3259	0.0179	0.0000	55.7732
Total	0.0345	0.3377	0.2064	6.3000e-004	0.1226	0.0135	0.1361	0.0664	0.0125	0.0789	0.0000	55.3259	55.3259	0.0179	0.0000	55.7732

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.6000e-004	0.0226	4.3100e-003	8.0000e-005	2.2800e-003	1.8000e-004	2.4600e-003	6.3000e-004	1.7000e-004	8.0000e-004	0.0000	8.2024	8.2024	2.9000e-004	1.3000e-003	8.5969
Vendor	5.0000e-005	1.6500e-003	5.3000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.5771	0.5771	1.0000e-005	8.0000e-005	0.6027
Worker	5.1000e-004	3.7000e-004	4.2200e-003	1.0000e-005	1.5400e-003	1.0000e-005	1.5500e-003	4.1000e-004	1.0000e-005	4.2000e-004	0.0000	1.1821	1.1821	3.0000e-005	3.0000e-005	1.1930
Total	9.2000e-004	0.0246	9.0600e-003	1.0000e-004	4.0000e-003	2.0000e-004	4.2000e-003	1.0900e-003	1.9000e-004	1.2800e-003	0.0000	9.9616	9.9616	3.3000e-004	1.4100e-003	10.3926

3.4 Building Construction - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1558	1.4043	1.6007	3.4000e-003		0.0636	0.0636		0.0596	0.0596	0.0000	297.6673	297.6673	0.0805	0.0000	299.6793
Total	0.1558	1.4043	1.6007	3.4000e-003		0.0636	0.0636		0.0596	0.0596	0.0000	297.6673	297.6673	0.0805	0.0000	299.6793

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	3.5000e-004	0.0124	3.9800e-003	4.0000e-005	1.3600e-003	7.0000e-005	1.4300e-003	3.9000e-004	7.0000e-005	4.6000e-004	0.0000	4.3282	4.3282	1.0000e-004	6.4000e-004	4.5201
Worker	5.7300e-003	4.1800e-003	0.0475	1.5000e-004	0.0173	9.0000e-005	0.0174	4.6100e-003	8.0000e-005	4.6800e-003	0.0000	13.2985	13.2985	3.7000e-004	3.8000e-004	13.4217
Total	6.0800e-003	0.0168	0.0515	1.9000e-004	0.0187	1.6000e-004	0.0189	5.0000e-003	1.5000e-004	5.1500e-003	0.0000	17.6882	17.6882	4.7000e-004	1.0300e-003	18.0062

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1558	1.4043	1.6007	3.4000e-003		0.0636	0.0636		0.0596	0.0596	0.0000	297.6670	297.6670	0.0805	0.0000	299.6789
Total	0.1558	1.4043	1.6007	3.4000e-003		0.0636	0.0636		0.0596	0.0596	0.0000	297.6670	297.6670	0.0805	0.0000	299.6789

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	3.5000e-004	0.0124	3.9800e-003	4.0000e-005	1.3600e-003	7.0000e-005	1.4300e-003	3.9000e-004	7.0000e-005	4.6000e-004	0.0000	4.3282	4.3282	1.0000e-004	6.4000e-004	4.5201
Worker	5.7300e-003	4.1800e-003	0.0475	1.5000e-004	0.0173	9.0000e-005	0.0174	4.6100e-003	8.0000e-005	4.6800e-003	0.0000	13.2985	13.2985	3.7000e-004	3.8000e-004	13.4217
Total	6.0800e-003	0.0168	0.0515	1.9000e-004	0.0187	1.6000e-004	0.0189	5.0000e-003	1.5000e-004	5.1500e-003	0.0000	17.6882	17.6882	4.7000e-004	1.0300e-003	18.0062

3.5 Paving - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6600e-003	0.0325	0.0410	7.0000e-005		1.5500e-003	1.5500e-003		1.4500e-003	1.4500e-003	0.0000	5.5019	5.5019	1.5800e-003	0.0000	5.5414
Paving	2.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.9400e-003	0.0325	0.0410	7.0000e-005		1.5500e-003	1.5500e-003		1.4500e-003	1.4500e-003	0.0000	5.5019	5.5019	1.5800e-003	0.0000	5.5414

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	1.0000e-005	4.1000e-004	1.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1443	0.1443	0.0000	2.0000e-005	0.1507
Worker	2.9000e-004	2.1000e-004	2.3800e-003	1.0000e-005	8.7000e-004	0.0000	8.7000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6649	0.6649	2.0000e-005	2.0000e-005	0.6711
Total	3.0000e-004	7.9000e-004	2.5400e-003	1.0000e-005	9.4000e-004	0.0000	9.4000e-004	2.4000e-004	0.0000	2.6000e-004	0.0000	0.8706	0.8706	2.0000e-005	5.0000e-005	0.8862

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6600e-003	0.0325	0.0410	7.0000e-005		1.5500e-003	1.5500e-003		1.4500e-003	1.4500e-003	0.0000	5.5019	5.5019	1.5800e-003	0.0000	5.5414
Paving	2.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.9400e-003	0.0325	0.0410	7.0000e-005		1.5500e-003	1.5500e-003		1.4500e-003	1.4500e-003	0.0000	5.5019	5.5019	1.5800e-003	0.0000	5.5414

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	1.0000e-005	4.1000e-004	1.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.1443	0.1443	0.0000	2.0000e-005	0.1507
Worker	2.9000e-004	2.1000e-004	2.3800e-003	1.0000e-005	8.7000e-004	0.0000	8.7000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6649	0.6649	2.0000e-005	2.0000e-005	0.6711
Total	3.0000e-004	7.9000e-004	2.5400e-003	1.0000e-005	9.4000e-004	0.0000	9.4000e-004	2.4000e-004	0.0000	2.6000e-004	0.0000	0.8706	0.8706	2.0000e-005	5.0000e-005	0.8862

3.6 Architectural Coating - 2023**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-004	4.3400e-003	6.0400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.8511	0.8511	5.0000e-005	0.0000	0.8524
Total	0.0991	4.3400e-003	6.0400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.8511	0.8511	5.0000e-005	0.0000	0.8524

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	1.0000e-005	2.1000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0721	0.0721	0.0000	1.0000e-005	0.0753
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0369	0.0369	0.0000	0.0000	0.0373
Total	3.0000e-005	3.9000e-004	2.3000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.1705	0.1705	0.0000	2.0000e-005	0.1770

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0985					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-004	4.3400e-003	6.0400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.8511	0.8511	5.0000e-005	0.0000	0.8524
Total	0.0991	4.3400e-003	6.0400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.8511	0.8511	5.0000e-005	0.0000	0.8524

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	1.7000e-004	3.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0614	0.0614	0.0000	1.0000e-005	0.0644
Vendor	1.0000e-005	2.1000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0721	0.0721	0.0000	1.0000e-005	0.0753
Worker	2.0000e-005	1.0000e-005	1.3000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0369	0.0369	0.0000	0.0000	0.0373
Total	3.0000e-005	3.9000e-004	2.3000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.1705	0.1705	0.0000	2.0000e-005	0.1770

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0290	0.0460	0.2763	5.4000e-004	0.0536	5.3000e-004	0.0542	0.0143	5.0000e-004	0.0148	0.0000	49.4705	49.4705	3.2600e-003	2.5800e-003	50.3208
Unmitigated	0.0290	0.0460	0.2763	5.4000e-004	0.0536	5.3000e-004	0.0542	0.0143	5.0000e-004	0.0148	0.0000	49.4705	49.4705	3.2600e-003	2.5800e-003	50.3208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	43.42	43.42	43.42	143,293	143,293
Total	43.42	43.42	43.42	143,293	143,293

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No Rail	13.00	5.00	5.00	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358
Parking Lot	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unrefrigerated Warehouse-No Rail	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.8465	2.8465	4.6000e-004	6.0000e-005	2.8746
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.8465	2.8465	4.6000e-004	6.0000e-005	2.8746
NaturalGas Mitigated	1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5181	1.5181	3.0000e-005	3.0000e-005	1.5272
NaturalGas Unmitigated	1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5181	1.5181	3.0000e-005	3.0000e-005	1.5272

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28448.8	1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5181	1.5181	3.0000e-005	3.0000e-005	1.5272
Total		1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5181	1.5181	3.0000e-005	3.0000e-005	1.5272

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	28448.8	1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5181	1.5181	3.0000e-005	3.0000e-005	1.5272
Total		1.5000e-004	1.3900e-003	1.1700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.5181	1.5181	3.0000e-005	3.0000e-005	1.5272

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.3 Energy by Land Use - Electricity****Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	1820	0.1684	3.0000e-005	0.0000	0.1701
Unrefrigerated Warehouse-No Rail	28945	2.6781	4.3000e-004	5.0000e-005	2.7046
Total		2.8465	4.6000e-004	5.0000e-005	2.8746

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	1820	0.1684	3.0000e-005	0.0000	0.1701
Unrefrigerated Warehouse-No Rail	28945	2.6781	4.3000e-004	5.0000e-005	2.7046
Total		2.8465	4.6000e-004	5.0000e-005	2.8746

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0428	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004
Unmitigated	0.0428	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0329					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004
Total	0.0428	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.8500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0329					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-005	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004
Total	0.0428	0.0000	4.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	8.3000e-004	8.3000e-004	0.0000	0.0000	8.8000e-004

7.0 Water Detail**7.1 Mitigation Measures Water**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.5642	0.0625	1.4900e-003	3.5701
Unmitigated	1.5642	0.0625	1.4900e-003	3.5701

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.91244 / 0	1.5642	0.0625	1.4900e-003	3.5701
Total		1.5642	0.0625	1.4900e-003	3.5701

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**7.2 Water by Land Use****Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.91244 / 0	1.5642	0.0625	1.4900e-003	3.5701
Total		1.5642	0.0625	1.4900e-003	3.5701

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.5772	0.0932	0.0000	3.9075
Unmitigated	1.5772	0.0932	0.0000	3.9075

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	7.77	1.5772	0.0932	0.0000	3.9075
Total		1.5772	0.0932	0.0000	3.9075

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	7.77	1.5772	0.0932	0.0000	3.9075
Total		1.5772	0.0932	0.0000	3.9075

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

11.0 Vegetation

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

McMillan Project
San Luis Obispo County, Summer

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	8.27	1000sqft	0.19	8,270.00	0
Other Asphalt Surfaces	3.95	1000sqft	0.09	3,954.00	0
Parking Lot	13.00	Space	0.12	5,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - !0 month construction duration
6 days per week

Grading - site preparation - 2 passes over the 0.4 acres
grading - 10 passes over the 0.4 acres

Off-road Equipment - 8 hours/day

Off-road Equipment - 8 hours/day

Off-road Equipment -

Off-road Equipment - 8 hours/day

Off-road Equipment - 8 hours/day

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - Modified based project specific maximums

Vehicle Trips - Modified to reflect project maximum

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	4,135.00	4,136.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	12,405.00	12,408.00
tblArchitecturalCoating	ConstArea_Parking	549.00	758.00
tblAreaCoating	Area_Nonresidential_Exterior	4135	4136
tblAreaCoating	Area_Nonresidential_Interior	12405	12408
tblAreaCoating	Area_Parking	549	758
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	2.00	40.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	AcresOfGrading	40.00	4.00
tblGrading	AcresOfGrading	2.50	0.80
tblGrading	MaterialImported	0.00	2,700.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	7.00	18.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblVehicleTrips	ST_TR	1.74	5.25
tblVehicleTrips	SU_TR	1.74	5.25
tblVehicleTrips	WD_TR	1.74	5.25

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

Mitigated Construction

[illegible]

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Energy	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Mobile	0.1642	0.2375	1.4865	3.0300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		307.8064	307.8064	0.0188	0.0150	312.7396
Total	0.3995	0.2451	1.4955	3.0800e-003	0.3025	3.5100e-003	0.3060	0.0807	3.3400e-003	0.0841		316.9816	316.9816	0.0190	0.0152	321.9697

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Energy	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Mobile	0.1642	0.2375	1.4865	3.0300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		307.8064	307.8064	0.0188	0.0150	312.7396
Total	0.3995	0.2451	1.4955	3.0800e-003	0.3025	3.5100e-003	0.3060	0.0807	3.3400e-003	0.0841		316.9816	316.9816	0.0190	0.0152	321.9697

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/6/2023	6	5	
2	Grading	Grading	1/7/2023	2/22/2023	6	40	
3	Building Construction	Building Construction	2/23/2023	10/13/2023	6	200	
4	Paving	Paving	10/14/2023	10/25/2023	6	10	
5	Architectural Coating	Architectural Coating	10/26/2023	10/31/2023	6	5	

Acres of Grading (Site Preparation Phase): 0.8**Acres of Grading (Grading Phase): 4****Acres of Paving: 0.21****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,408; Non-Residential Outdoor: 4,136; Striped Parking Area: 758 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Grading	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Generator Sets	1	8.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	2.00	267.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	18.00	3.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1697	0.0000	0.1697	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.1697	0.2266	0.3963	0.0183	0.2084	0.2268		942.4317	942.4317	0.3048		950.0517

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1000e-003	0.0655	0.0128	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.0819	27.0819	9.5000e-004	4.2900e-003	28.3844
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	0.0158	0.0105	0.1360	4.2000e-004	0.0494	2.4000e-004	0.0497	0.0131	2.2000e-004	0.0133		42.1960	42.1960	1.0800e-003	1.0900e-003	42.5482
Total	0.0193	0.1561	0.1748	9.7000e-004	0.0657	1.2400e-003	0.0670	0.0177	1.1800e-003	0.0189		101.0630	101.0630	2.7400e-003	0.0101	104.1260

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1697	0.0000	0.1697	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.1697	0.2266	0.3963	0.0183	0.2084	0.2268	0.0000	942.4317	942.4317	0.3048		950.0517

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1000e-003	0.0655	0.0128	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.0819	27.0819	9.5000e-004	4.2900e-003	28.3844
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	0.0158	0.0105	0.1360	4.2000e-004	0.0494	2.4000e-004	0.0497	0.0131	2.2000e-004	0.0133		42.1960	42.1960	1.0800e-003	1.0900e-003	42.5482
Total	0.0193	0.1561	0.1748	9.7000e-004	0.0657	1.2400e-003	0.0670	0.0177	1.1800e-003	0.0189		101.0630	101.0630	2.7400e-003	0.0101	104.1260

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1281	0.0000	6.1281	3.3217	0.0000	3.3217			0.0000			0.0000
Off-Road	1.7234	16.8838	10.3188	0.0315		0.6765	0.6765		0.6224	0.6224		3,049.3209	3,049.3209	0.9862		3,073.9762
Total	1.7234	16.8838	10.3188	0.0315	6.1281	0.6765	6.8046	3.3217	0.6224	3.9441		3,049.3209	3,049.3209	0.9862		3,073.9762

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0183	1.0930	0.2140	4.1500e-003	0.1167	8.8300e-003	0.1255	0.0320	8.4500e-003	0.0404		451.9285	451.9285	0.0158	0.0716	473.6650
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	0.0253	0.0167	0.2175	6.7000e-004	0.0791	3.8000e-004	0.0795	0.0210	3.5000e-004	0.0213		67.5136	67.5136	1.7300e-003	1.7500e-003	68.0771
Total	0.0460	1.1898	0.4576	5.1200e-003	0.2051	9.6800e-003	0.2148	0.0557	9.2500e-003	0.0649		551.2272	551.2272	0.0183	0.0780	574.9355

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1281	0.0000	6.1281	3.3217	0.0000	3.3217			0.0000			0.0000
Off-Road	1.7234	16.8838	10.3188	0.0315		0.6765	0.6765		0.6224	0.6224	0.0000	3,049.3209	3,049.3209	0.9862		3,073.9762
Total	1.7234	16.8838	10.3188	0.0315	6.1281	0.6765	6.8046	3.3217	0.6224	3.9441	0.0000	3,049.3209	3,049.3209	0.9862		3,073.9762

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0183	1.0930	0.2140	4.1500e-003	0.1167	8.8300e-003	0.1255	0.0320	8.4500e-003	0.0404		451.9285	451.9285	0.0158	0.0716	473.6650
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	0.0253	0.0167	0.2175	6.7000e-004	0.0791	3.8000e-004	0.0795	0.0210	3.5000e-004	0.0213		67.5136	67.5136	1.7300e-003	1.7500e-003	68.0771
Total	0.0460	1.1898	0.4576	5.1200e-003	0.2051	9.6800e-003	0.2148	0.0557	9.2500e-003	0.0649		551.2272	551.2272	0.0183	0.0780	574.9355

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957		3,281.2208	3,281.2208	0.8871		3,303.3988
Total	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957		3,281.2208	3,281.2208	0.8871		3,303.3988

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0000e-005	1.6400e-003	3.2000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6771	0.6771	2.0000e-005	1.1000e-004	0.7096
Vendor	3.5600e-003	0.1202	0.0390	4.4000e-004	0.0139	7.0000e-004	0.0146	4.0200e-003	6.7000e-004	4.6900e-003		47.6777	47.6777	1.0600e-003	7.0000e-003	49.7901
Worker	0.0568	0.0376	0.4895	1.5000e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		151.9056	151.9056	3.9000e-003	3.9300e-003	153.1735
Total	0.0604	0.1594	0.5288	1.9500e-003	0.1921	1.5600e-003	0.1936	0.0513	1.4600e-003	0.0527		200.2603	200.2603	4.9800e-003	0.0110	203.6732

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957	0.0000	3,281.2208	3,281.2208	0.8871		3,303.3988
Total	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957	0.0000	3,281.2208	3,281.2208	0.8871		3,303.3988

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0000e-005	1.6400e-003	3.2000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6771	0.6771	2.0000e-005	1.1000e-004	0.7096
Vendor	3.5600e-003	0.1202	0.0390	4.4000e-004	0.0139	7.0000e-004	0.0146	4.0200e-003	6.7000e-004	4.6900e-003		47.6777	47.6777	1.0600e-003	7.0000e-003	49.7901
Worker	0.0568	0.0376	0.4895	1.5000e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		151.9056	151.9056	3.9000e-003	3.9300e-003	153.1735
Total	0.0604	0.1594	0.5288	1.9500e-003	0.1921	1.5600e-003	0.1936	0.0513	1.4600e-003	0.0527		200.2603	200.2603	4.9800e-003	0.0110	203.6732

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7320	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900		1,212.9668	1,212.9668	0.3479		1,221.6649
Paving	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7871	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900		1,212.9668	1,212.9668	0.3479		1,221.6649

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-004	0.0328	6.4100e-003	1.2000e-004	3.5000e-003	2.6000e-004	3.7600e-003	9.6000e-004	2.5000e-004	1.2100e-003		13.5409	13.5409	4.7000e-004	2.1500e-003	14.1922
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	0.0568	0.0376	0.4895	1.5000e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		151.9056	151.9056	3.9000e-003	3.9300e-003	153.1735
Total	0.0598	0.1505	0.5219	1.9200e-003	0.1907	1.5800e-003	0.1923	0.0508	1.4800e-003	0.0523		197.2316	197.2316	5.0800e-003	0.0108	200.5591

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7320	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900	0.0000	1,212.9668	1,212.9668	0.3479		1,221.6649
Paving	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7871	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900	0.0000	1,212.9668	1,212.9668	0.3479		1,221.6649

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.5000e-004	0.0328	6.4100e-003	1.2000e-004	3.5000e-003	2.6000e-004	3.7600e-003	9.6000e-004	2.5000e-004	1.2100e-003		13.5409	13.5409	4.7000e-004	2.1500e-003	14.1922
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	0.0568	0.0376	0.4895	1.5000e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		151.9056	151.9056	3.9000e-003	3.9300e-003	153.1735
Total	0.0598	0.1505	0.5219	1.9200e-003	0.1907	1.5800e-003	0.1923	0.0508	1.4800e-003	0.0523		197.2316	197.2316	5.0800e-003	0.0108	200.5591

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3947					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	39.6503	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1000e-003	0.0655	0.0128	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.0819	27.0819	9.5000e-004	4.2900e-003	28.3844
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	6.3100e-003	4.1800e-003	0.0544	1.7000e-004	0.0198	9.0000e-005	0.0199	5.2400e-003	9.0000e-005	5.3300e-003		16.8784	16.8784	4.3000e-004	4.4000e-004	17.0193
Total	9.7900e-003	0.1498	0.0932	7.2000e-004	0.0361	1.0900e-003	0.0372	9.8400e-003	1.0500e-003	0.0109		75.7454	75.7454	2.0900e-003	9.4000e-003	78.5971

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3947					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	39.6503	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1000e-003	0.0655	0.0128	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.0819	27.0819	9.5000e-004	4.2900e-003	28.3844
Vendor	2.3800e-003	0.0801	0.0260	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1200e-003		31.7851	31.7851	7.1000e-004	4.6700e-003	33.1934
Worker	6.3100e-003	4.1800e-003	0.0544	1.7000e-004	0.0198	9.0000e-005	0.0199	5.2400e-003	9.0000e-005	5.3300e-003		16.8784	16.8784	4.3000e-004	4.4000e-004	17.0193
Total	9.7900e-003	0.1498	0.0932	7.2000e-004	0.0361	1.0900e-003	0.0372	9.8400e-003	1.0500e-003	0.0109		75.7454	75.7454	2.0900e-003	9.4000e-003	78.5971

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1642	0.2375	1.4865	3.0300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		307.8064	307.8064	0.0188	0.0150	312.7396
Unmitigated	0.1642	0.2375	1.4865	3.0300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		307.8064	307.8064	0.0188	0.0150	312.7396

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	43.42	43.42	43.42	143,293	143,293
Total	43.42	43.42	43.42	143,293	143,293

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	13.00	5.00	5.00	59.00	0.00	41.00	92	5	3

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358
Parking Lot	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358
Unrefrigerated Warehouse-No Rail	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
NaturalGas Unmitigated	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	77.9419	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Total		8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas s Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.0779419	8.4000e- 004	7.6400e- 003	6.4200e- 003	5.0000e- 005		5.8000e- 004	5.8000e- 004		5.8000e- 004	5.8000e- 004		9.1696	9.1696	1.8000e- 004	1.7000e- 004	9.2241
Total		8.4000e- 004	7.6400e- 003	6.4200e- 003	5.0000e- 005		5.8000e- 004	5.8000e- 004		5.8000e- 004	5.8000e- 004		9.1696	9.1696	1.8000e- 004	1.7000e- 004	9.2241

6.0 Area Detail**6.1 Mitigation Measures Area**

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Unmitigated	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Total	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Total	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

McMillan Project - San Luis Obispo County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

McMillan Project
San Luis Obispo County, Winter

1.0 Project Characteristics**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	8.27	1000sqft	0.19	8,270.00	0
Other Asphalt Surfaces	3.95	1000sqft	0.09	3,954.00	0
Parking Lot	13.00	Space	0.12	5,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.2	Precipitation Freq (Days)	44
Climate Zone	4			Operational Year	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - !0 month construction duration
6 days per week

Grading - site preparation - 2 passes over the 0.4 acres
grading - 10 passes over the 0.4 acres

Off-road Equipment - 8 hours/day

Off-road Equipment - 8 hours/day

Off-road Equipment -

Off-road Equipment - 8 hours/day

Off-road Equipment - 8 hours/day

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Trips and VMT - Modified based project specific maximums

Vehicle Trips - Modified to reflect project maximum

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	4,135.00	4,136.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	12,405.00	12,408.00
tblArchitecturalCoating	ConstArea_Parking	549.00	758.00
tblAreaCoating	Area_Nonresidential_Exterior	4135	4136
tblAreaCoating	Area_Nonresidential_Interior	12405	12408
tblAreaCoating	Area_Parking	549	758
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	2.00	40.00
tblConstructionPhase	NumDays	100.00	200.00
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblGrading	AcresOfGrading	40.00	4.00
tblGrading	AcresOfGrading	2.50	0.80
tblGrading	MaterialImported	0.00	2,700.00
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	10.00	8.00
tblTripsAndVMT	WorkerTripNumber	7.00	18.00
tblTripsAndVMT	WorkerTripNumber	1.00	2.00
tblVehicleTrips	ST_TR	1.74	5.25
tblVehicleTrips	SU_TR	1.74	5.25
tblVehicleTrips	WD_TR	1.74	5.25

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	39.6606	18.1098	16.5257	0.0366	6.3332	0.6862	7.0194	3.3773	0.6316	4.0090	0.0000	3,598.1351	3,598.1351	1.0046	0.0783	3,646.5679
Maximum	39.6606	18.1098	16.5257	0.0366	6.3332	0.6862	7.0194	3.3773	0.6316	4.0090	0.0000	3,598.1351	3,598.1351	1.0046	0.0783	3,646.5679

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	39.6606	18.1098	16.5257	0.0366	6.3332	0.6862	7.0194	3.3773	0.6316	4.0090	0.0000	3,598.1351	3,598.1351	1.0046	0.0783	3,646.5679
Maximum	39.6606	18.1098	16.5257	0.0366	6.3332	0.6862	7.0194	3.3773	0.6316	4.0090	0.0000	3,598.1351	3,598.1351	1.0046	0.0783	3,646.5679

[illegible]

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Energy	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Mobile	0.1625	0.2544	1.5593	2.9300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		298.4899	298.4899	0.0203	0.0158	303.7018
Total	0.3978	0.2621	1.5683	2.9800e-003	0.3025	3.5100e-003	0.3060	0.0807	3.3400e-003	0.0841		307.6650	307.6650	0.0205	0.0160	312.9318

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Energy	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Mobile	0.1625	0.2544	1.5593	2.9300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		298.4899	298.4899	0.0203	0.0158	303.7018
Total	0.3978	0.2621	1.5683	2.9800e-003	0.3025	3.5100e-003	0.3060	0.0807	3.3400e-003	0.0841		307.6650	307.6650	0.0205	0.0160	312.9318

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2023	1/6/2023	6	5	
2	Grading	Grading	1/7/2023	2/22/2023	6	40	
3	Building Construction	Building Construction	2/23/2023	10/13/2023	6	200	
4	Paving	Paving	10/14/2023	10/25/2023	6	10	
5	Architectural Coating	Architectural Coating	10/26/2023	10/31/2023	6	5	

Acres of Grading (Site Preparation Phase): 0.8**Acres of Grading (Grading Phase): 4****Acres of Paving: 0.21****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,408; Non-Residential Outdoor: 4,136; Striped Parking Area: 758 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	78	0.48
Building Construction	Off-Highway Trucks	1	8.00	402	0.38
Grading	Off-Highway Trucks	1	8.00	402	0.38
Building Construction	Skid Steer Loaders	1	8.00	65	0.37
Building Construction	Generator Sets	1	8.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	8.00	2.00	267.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	18.00	3.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	2.00	2.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1697	0.0000	0.1697	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084		942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.1697	0.2266	0.3963	0.0183	0.2084	0.2268		942.4317	942.4317	0.3048		950.0517

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0500e-003	0.0674	0.0130	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.1036	27.1036	9.4000e-004	4.3000e-003	28.4071
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	0.0174	0.0119	0.1327	4.0000e-004	0.0494	2.4000e-004	0.0497	0.0131	2.2000e-004	0.0133		40.4286	40.4286	1.1700e-003	1.1900e-003	40.8116
Total	0.0208	0.1620	0.1728	9.5000e-004	0.0657	1.2400e-003	0.0670	0.0177	1.1800e-003	0.0189		99.3700	99.3700	2.8100e-003	0.0102	102.4683

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.2 Site Preparation - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1697	0.0000	0.1697	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	0.5348	6.1887	3.9239	9.7300e-003		0.2266	0.2266		0.2084	0.2084	0.0000	942.4317	942.4317	0.3048		950.0517
Total	0.5348	6.1887	3.9239	9.7300e-003	0.1697	0.2266	0.3963	0.0183	0.2084	0.2268	0.0000	942.4317	942.4317	0.3048		950.0517

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0500e-003	0.0674	0.0130	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.1036	27.1036	9.4000e-004	4.3000e-003	28.4071
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	0.0174	0.0119	0.1327	4.0000e-004	0.0494	2.4000e-004	0.0497	0.0131	2.2000e-004	0.0133		40.4286	40.4286	1.1700e-003	1.1900e-003	40.8116
Total	0.0208	0.1620	0.1728	9.5000e-004	0.0657	1.2400e-003	0.0670	0.0177	1.1800e-003	0.0189		99.3700	99.3700	2.8100e-003	0.0102	102.4683

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1281	0.0000	6.1281	3.3217	0.0000	3.3217			0.0000			0.0000
Off-Road	1.7234	16.8838	10.3188	0.0315		0.6765	0.6765		0.6224	0.6224		3,049.3209	3,049.3209	0.9862		3,073.9762
Total	1.7234	16.8838	10.3188	0.0315	6.1281	0.6765	6.8046	3.3217	0.6224	3.9441		3,049.3209	3,049.3209	0.9862		3,073.9762

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0175	1.1243	0.2172	4.1500e-003	0.1167	8.8400e-003	0.1256	0.0320	8.4600e-003	0.0405		452.2906	452.2906	0.0158	0.0717	474.0435
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	0.0279	0.0190	0.2124	6.4000e-004	0.0791	3.8000e-004	0.0795	0.0210	3.5000e-004	0.0213		64.6858	64.6858	1.8700e-003	1.9000e-003	65.2986
Total	0.0477	1.2260	0.4566	5.0900e-003	0.2051	9.6900e-003	0.2148	0.0557	9.2600e-003	0.0649		548.8143	548.8143	0.0183	0.0783	572.5917

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.3 Grading - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1281	0.0000	6.1281	3.3217	0.0000	3.3217			0.0000			0.0000
Off-Road	1.7234	16.8838	10.3188	0.0315		0.6765	0.6765		0.6224	0.6224	0.0000	3,049.320 9	3,049.320 9	0.9862		3,073.976 2
Total	1.7234	16.8838	10.3188	0.0315	6.1281	0.6765	6.8046	3.3217	0.6224	3.9441	0.0000	3,049.320 9	3,049.320 9	0.9862		3,073.976 2

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0175	1.1243	0.2172	4.1500e-003	0.1167	8.8400e-003	0.1256	0.0320	8.4600e-003	0.0405		452.2906	452.2906	0.0158	0.0717	474.0435
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	0.0279	0.0190	0.2124	6.4000e-004	0.0791	3.8000e-004	0.0795	0.0210	3.5000e-004	0.0213		64.6858	64.6858	1.8700e-003	1.9000e-003	65.2986
Total	0.0477	1.2260	0.4566	5.0900e-003	0.2051	9.6900e-003	0.2148	0.0557	9.2600e-003	0.0649		548.8143	548.8143	0.0183	0.0783	572.5917

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957		3,281.2208	3,281.2208	0.8871		3,303.3988
Total	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957		3,281.2208	3,281.2208	0.8871		3,303.3988

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0000e-005	1.6800e-003	3.3000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6776	0.6776	2.0000e-005	1.1000e-004	0.7102
Vendor	3.4800e-003	0.1242	0.0405	4.5000e-004	0.0139	7.1000e-004	0.0146	4.0200e-003	6.7000e-004	4.6900e-003		47.7567	47.7567	1.0600e-003	7.0200e-003	49.8744
Worker	0.0627	0.0427	0.4778	1.4400e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		145.5431	145.5431	4.2100e-003	4.2700e-003	146.9218
Total	0.0663	0.1686	0.5187	1.9000e-003	0.1921	1.5700e-003	0.1936	0.0513	1.4600e-003	0.0527		193.9774	193.9774	5.2900e-003	0.0114	197.5064

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.4 Building Construction - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957	0.0000	3,281.2208	3,281.2208	0.8871		3,303.3988
Total	1.5581	14.0431	16.0071	0.0340		0.6363	0.6363		0.5957	0.5957	0.0000	3,281.2208	3,281.2208	0.8871		3,303.3988

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.0000e-005	1.6800e-003	3.3000e-004	1.0000e-005	1.7000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005		0.6776	0.6776	2.0000e-005	1.1000e-004	0.7102
Vendor	3.4800e-003	0.1242	0.0405	4.5000e-004	0.0139	7.1000e-004	0.0146	4.0200e-003	6.7000e-004	4.6900e-003		47.7567	47.7567	1.0600e-003	7.0200e-003	49.8744
Worker	0.0627	0.0427	0.4778	1.4400e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		145.5431	145.5431	4.2100e-003	4.2700e-003	146.9218
Total	0.0663	0.1686	0.5187	1.9000e-003	0.1921	1.5700e-003	0.1936	0.0513	1.4600e-003	0.0527		193.9774	193.9774	5.2900e-003	0.0114	197.5064

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7320	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900		1,212.9668	1,212.9668	0.3479		1,221.6649
Paving	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7871	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900		1,212.9668	1,212.9668	0.3479		1,221.6649

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2000e-004	0.0337	6.5100e-003	1.2000e-004	3.5000e-003	2.7000e-004	3.7600e-003	9.6000e-004	2.5000e-004	1.2100e-003		13.5518	13.5518	4.7000e-004	2.1500e-003	14.2036
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	0.0627	0.0427	0.4778	1.4400e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		145.5431	145.5431	4.2100e-003	4.2700e-003	146.9218
Total	0.0656	0.1592	0.5113	1.8600e-003	0.1907	1.5900e-003	0.1923	0.0508	1.4800e-003	0.0523		190.9327	190.9327	5.3800e-003	0.0111	194.3750

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.5 Paving - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7320	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900	0.0000	1,212.9668	1,212.9668	0.3479		1,221.6649
Paving	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7871	6.5013	8.2001	0.0133		0.3102	0.3102		0.2900	0.2900	0.0000	1,212.9668	1,212.9668	0.3479		1,221.6649

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.2000e-004	0.0337	6.5100e-003	1.2000e-004	3.5000e-003	2.7000e-004	3.7600e-003	9.6000e-004	2.5000e-004	1.2100e-003		13.5518	13.5518	4.7000e-004	2.1500e-003	14.2036
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	0.0627	0.0427	0.4778	1.4400e-003	0.1780	8.5000e-004	0.1788	0.0472	7.8000e-004	0.0480		145.5431	145.5431	4.2100e-003	4.2700e-003	146.9218
Total	0.0656	0.1592	0.5113	1.8600e-003	0.1907	1.5900e-003	0.1923	0.0508	1.4800e-003	0.0523		190.9327	190.9327	5.3800e-003	0.0111	194.3750

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3947					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	39.6503	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0500e-003	0.0674	0.0130	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.1036	27.1036	9.4000e-004	4.3000e-003	28.4071
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	6.9700e-003	4.7400e-003	0.0531	1.6000e-004	0.0198	9.0000e-005	0.0199	5.2400e-003	9.0000e-005	5.3300e-003		16.1715	16.1715	4.7000e-004	4.7000e-004	16.3247
Total	0.0103	0.1549	0.0931	7.1000e-004	0.0361	1.0900e-003	0.0372	9.8400e-003	1.0500e-003	0.0109		75.1128	75.1128	2.1100e-003	9.4500e-003	77.9814

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**3.6 Architectural Coating - 2023****Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3947					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	39.6503	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0500e-003	0.0674	0.0130	2.5000e-004	6.9900e-003	5.3000e-004	7.5200e-003	1.9200e-003	5.1000e-004	2.4200e-003		27.1036	27.1036	9.4000e-004	4.3000e-003	28.4071
Vendor	2.3200e-003	0.0828	0.0270	3.0000e-004	9.2900e-003	4.7000e-004	9.7600e-003	2.6800e-003	4.5000e-004	3.1300e-003		31.8378	31.8378	7.0000e-004	4.6800e-003	33.2496
Worker	6.9700e-003	4.7400e-003	0.0531	1.6000e-004	0.0198	9.0000e-005	0.0199	5.2400e-003	9.0000e-005	5.3300e-003		16.1715	16.1715	4.7000e-004	4.7000e-004	16.3247
Total	0.0103	0.1549	0.0931	7.1000e-004	0.0361	1.0900e-003	0.0372	9.8400e-003	1.0500e-003	0.0109		75.1128	75.1128	2.1100e-003	9.4500e-003	77.9814

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1625	0.2544	1.5593	2.9300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		298.4899	298.4899	0.0203	0.0158	303.7018
Unmitigated	0.1625	0.2544	1.5593	2.9300e-003	0.3025	2.9200e-003	0.3054	0.0807	2.7500e-003	0.0835		298.4899	298.4899	0.0203	0.0158	303.7018

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	43.42	43.42	43.42	143,293	143,293
Total	43.42	43.42	43.42	143,293	143,293

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Parking Lot	13.00	5.00	5.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	13.00	5.00	5.00	59.00	0.00	41.00	92	5	3

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358
Parking Lot	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358
Unrefrigerated Warehouse-No Rail	0.480413	0.056178	0.203888	0.151644	0.040330	0.009776	0.008210	0.005953	0.000975	0.000369	0.033870	0.001035	0.007358

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
NaturalGas Unmitigated	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	77.9419	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Total		8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**5.2 Energy by Land Use - NaturalGas****Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.0779419	8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241
Total		8.4000e-004	7.6400e-003	6.4200e-003	5.0000e-005		5.8000e-004	5.8000e-004		5.8000e-004	5.8000e-004		9.1696	9.1696	1.8000e-004	1.7000e-004	9.2241

6.0 Area Detail**6.1 Mitigation Measures Area**

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Unmitigated	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Total	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**6.2 Area by SubCategory****Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0540					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003
Total	0.2344	2.0000e-005	2.5700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.5200e-003	5.5200e-003	1.0000e-005		5.8800e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

McMillan Project - San Luis Obispo County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT 3

Biological Resources Assessment

**2855 MCMILLAN AVENUE,
SAN LUIS OBISPO,
SAN LUIS OBISPO COUNTY, CALIFORNIA**
(Assessor's Parcel Number 053-212-005)

BIOLOGICAL RESOURCES ASSESSMENT



Prepared for:

GTW SLO LLC
5140 Caballeros Avenue
San Luis Obispo, California 93401

Prepared by:

KMA
Kevin Merk Associates, LLC
P.O. Box 318
San Luis Obispo, California 93406

October 2021

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APPENDICES

- Appendix A – Site Plans
- Appendix B – List of Plants and Animals Observed Onsite During the Site Visits
- Appendix C – Photo Plate
- Appendix D – Special-status Biological Resources Summary

EXECUTIVE SUMMARY

Kevin Merk Associates, LLC (KMA) conducted this biological resources assessment (BRA) for a proposed commercial development project ("project") located at 2855 McMillan Avenue, San Luis Obispo, San Luis Obispo County, California (Assessor's Parcel Number 053-212-005, Lots 7 and 8, Block 8, in the Orcutt Subdivision, within the city limits of San Luis Obispo ["property"]). The property is zoned for Manufacturing in a land use area designated for Services and Manufacturing. It is located in a light industrial and commercial area, and is surrounded by urban development. The 0.4-acre parcel consists of a graded lot and a segment of an unnamed drainage along the property's eastern border adjacent to McMillan Avenue. The project proposes to construct an 8,300 square foot, two-story office and warehouse building. Additional site improvements include a parking area, sidewalk, curb and gutter, driveway entrance and trash/recycle enclosure. The project would require placing the drainage onsite into a culvert, which would allow for full development of the lot and solve long-standing erosion issue along McMillan Avenue.

The purpose of this assessment was to assist GTW SLO LLC with technical biological resources information to support the environmental review process by the City of San Luis Obispo (City). This report evaluates the potential for the project site to support special-status biological resources, evaluates whether these resources could be adversely affected by the project, and provides recommended mitigation to reduce the level of effects. A desktop review of available background information on special-status biological resources in the project vicinity was used for this analysis. This investigation also included focused rare plant surveys and an evaluation of the potential jurisdictional status of the drainage feature.

Four plant communities or land uses were identified within the property, and include: 1) Annual Grassland, 11,760 square feet; 2) Riparian, 3,975 square feet; 3) Developed/Ruderal, 3,050 square feet; and, 4) Ornamental, 60 square feet. The Riparian habitat type, which can be classified as Central Coast Riparian Scrub, is considered to be a sensitive natural community by California Department of Fish and Wildlife (CDFW) and is protected under City of San Luis Obispo *General Plan*. It was dominated by arroyo willow (*Salix lasiolepis*) shrubs that had previously been cut to the base, resprouted, and then had the lower limbs thinned. None of the trees onsite are expected to meet the City's definition of "Significant" or "Heritage" trees since they are small in size. The understory along the drainage was predominantly Annual Grassland and did not meet the criteria as a wetland. Annual Grassland in the upland area of the site had been regularly mowed and was comprised mainly of non-native species.

The drainage feature onsite is a remnant creek segment that has been altered from its natural state, and appears to have been realigned to facilitate construction in the area. It is still hydrologically connected to downstream features that connect to the Pacific Ocean. As such, it is expected to be a jurisdictional drainage feature regulated by the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW. It is not shown as a blue-line stream or as a topographic draw on the USGS topographic map, and is not formally unnamed. It also is not indicated in the National Wetlands Inventory. However, the City has mapped it as a perennial creek unofficially called "Bishop Creek". Site observations confirmed it would be more appropriately characterized as an intermittent drainage that does not support flow all year. It is a tributary of what is locally known as "Acacia Creek", which is a jurisdictional drainage that empties into San Luis Obispo Creek. Culverts are present on both the north and south sides of the property and an open channel traverses approximately 140 feet of the parcel.

The area along the drainage that would be considered sensitive by the City was delineated as the outer edge of the riparian canopy or top of bank, whichever is farther from the channel. This area

consisted of 4,751 square feet and also corresponds to the jurisdictional limits of RWQCB and CDFW. The limits of USACE jurisdiction are the low flow channel below the Ordinary High Water Mark, which was approximately 5 feet wide and meandered within the channel for approximately 815 square feet. The project as proposed will mitigate impacts to the drainage and associated riparian scrub habitat along the same drainage feature at an offsite location on Sinsheimer Park.

One rare plant that is on a watch list, Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*; California Rare Plant Rank 4.2), was found during the focused rare plant surveys, consisting of one small occurrence of two plants by McMillan Avenue. No other rare plants were found onsite, and the focused rare plant surveys conducted for this investigation were considered to be comprehensive; therefore, no further surveys are recommended. Cambria morning glory is a common species in the San Luis Obispo area and is on a watch list; therefore, mitigation for the loss of two roadside plants is not significant from an ecological perspective. As such, no mitigation should be required given the project will not adversely affect its populations in the City.

Special-status animal species that could potentially occur onsite on a transitory basis are monarch butterfly (*Danaus plexippus*, population 1), Cooper's hawk (*Accipiter cooperii*) and yellow warbler (*Setophaga petechia*). No roosting habitat for monarch butterflies is present and mobile individuals such as birds could pass through the site while foraging. Similarly, the hawk and warbler may use the Riparian habitat periodically, but the habitat is not dense enough to support nesting and is maintained on a periodic basis. Other bird species protected under the Migratory Bird Treaty Act could nest onsite, and if vegetation removal occurs during the nesting season, preconstruction bird surveys and avoidance of active nests is required. Special-status bat species including the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), and Yuma myotis (*Myotis yumanensis*) could roost in the culvert on the downstream (south) side of the property, and may be disturbed by construction activities or displaced when the new culvert is installed. Recommended mitigation includes a preconstruction survey for roosting bats and installation of exclusion devices, if found, and delaying construction at the downstream culvert opening if a maternity roost is present. The loss of a small area of disturbed habitat surrounded by urban development is not expected to have a negative effect on wildlife species in general or on movement corridors. The property does not fall within designated critical habitat for any federally listed species.

Construction of the project will involve vegetation removal, grading, and work within the drainage channel to install the culvert and level the site. Disturbed soils could erode into the downstream area of the drainage and be carried into Acacia Creek if these areas are not stabilized and/or protected prior to significant rainfall. Best Management Practices are recommended to avoid or minimize project effects on water quality during and shortly after construction.

The proposed project is infill development on a small lot in an urban area. The property does not provide wildlife habitat or serve as a steppingstone between open space areas due to its small size and the density of development surrounding it. Placing the open channel of a manipulated drainage into a culvert will have minor negative biological effects and will decrease sedimentation by removing a source of erosion. With the incorporation of the mitigation measures described above, there would be no significant effects on biological resources or contribute to cumulative effects of other projects in the area. This evaluation determined that none of the criteria that would meet a mandatory finding of significance under the California Environmental Quality Act (CEQA) would be triggered. Mitigation measures for the six additional impacts evaluated under CEQA are described herein, and would bring project effects below a level of significance.

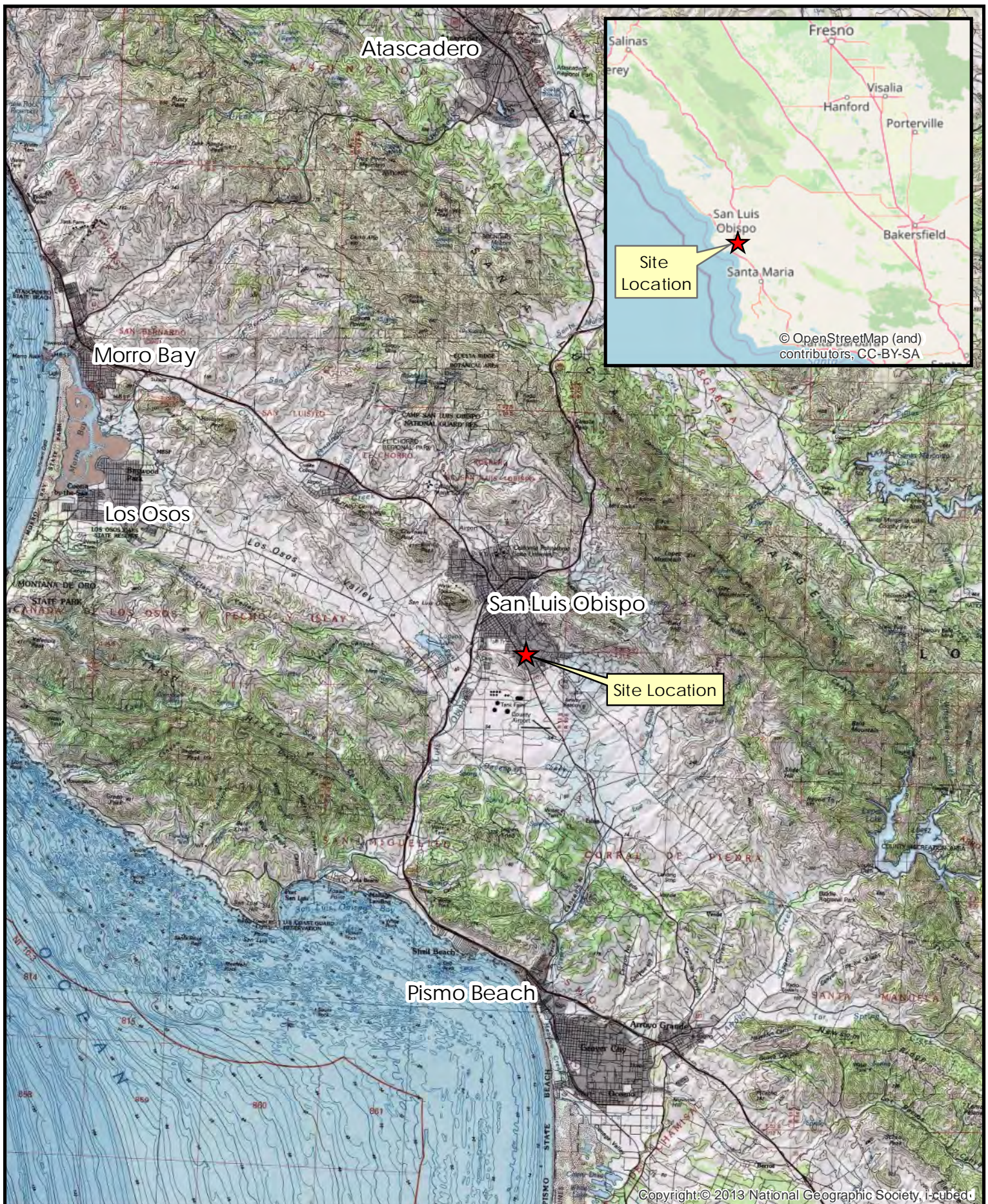
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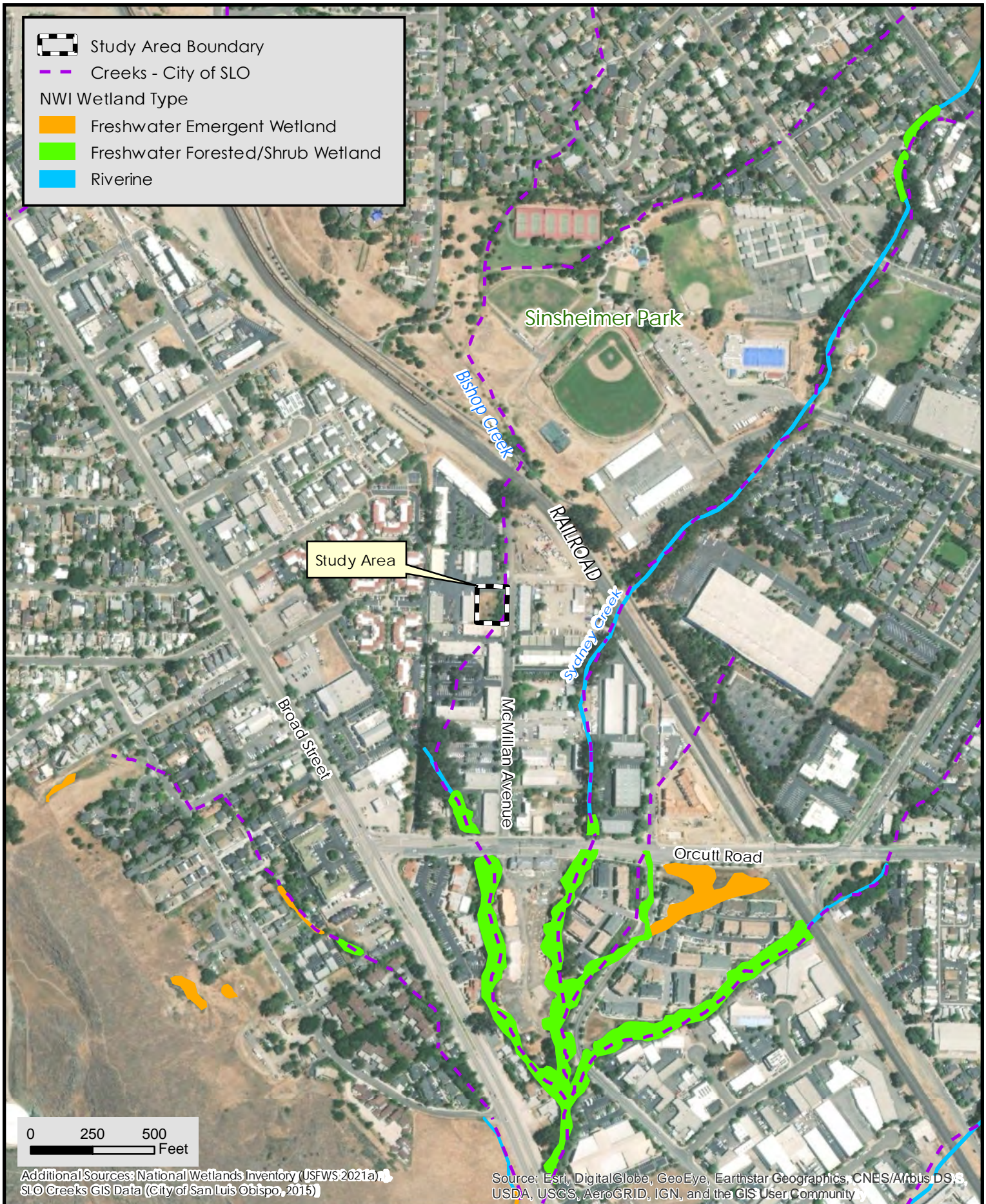
Kevin Merk Associates, LLC (KMA) conducted this biological resources assessment (BRA) for a proposed commercial development project ("project") located at 2855 McMillan Avenue, San Luis Obispo, San Luis Obispo County, California (Figure 1). The project is located on an approximately 0.4-acre property identified by Assessor's Parcel Number (APN) 053-212-005 and Lots 7 and 8, Block 8, in the Orcutt Subdivision, within the city limits of San Luis Obispo ("property"). It is on the U. S. Geological Survey (USGS) San Luis Obispo 7.5-minute topographic quadrangle (T 31 S, R 12 E, northwest quarter of the northwest quarter of Section 1; 35.263967° N, -120.648223° W). The property is zoned for Manufacturing in a land use area designated for Services and Manufacturing. It is located in a light industrial and commercial area, and is surrounded by urban development and the Union Pacific Railroad (Figure 2). The parcel consists of a graded lot and a segment of a drainage feature, known locally as Bishop Creek along the property's eastern border and McMillan Avenue.

The purpose of this BRA is to assist GTW SLO LLC with technical biological resources information for the City of San Luis Obispo's (City's) review of the project under the California Environmental Quality Act (CEQA). This BRA evaluates the site's existing environmental conditions to determine whether special-status biological resources (plants, animals, sensitive natural communities, designated critical habitat and Clean Water Act/California Fish and Game Code jurisdictional areas) may be present onsite and could be adversely affected by the project. Potential impacts of the project on any sensitive biological resources are identified, and mitigation measures are provided to avoid or reduce project effects. To assess jurisdictional limits of the onsite drainage feature, KMA prepared a separate delineation report documenting the limits of federal and state regulatory jurisdiction and City-protected aquatic resources present on the property. A summary of this delineation is provided herein, as well as a conceptual mitigation discussion for impacts to the drainage feature from proposed development of the site. The delineation report will be required by local, state and federal regulatory agencies for proposed drainage impacts and permitting requirements.

1.1 Project Description

The project proposes to construct an 8,300 square foot, two-story office and warehouse building (see Grading and Drainage Plan, prepared by Ashley & Vance Engineering, Inc., July 23, 2021 in Appendix A). All parking for the proposed use would be provided onsite, including ADA and electric vehicle spaces. Additional site improvements include a sidewalk, curb and gutter, driveway entrance and trash/recycle enclosure. The project would require placing the drainage onsite into a culvert, which would allow for full development of the lot and solve an existing erosion issue along McMillan Avenue. The structure would be a precast six (6) feet by five (5) feet and 140 feet long box culvert, and backfilled with 275 cubic yards of native material from the site. New storm drain inlets will direct runoff from the development into the culvert. An underground stormwater retention chamber will infiltrate runoff into the ground and a storm drain will divert water to the box culvert when the chamber is full. Please refer to project plans and the site drawing included in Appendix A.





1.2 Regulatory Overview

1.2.1 Compliance with the California Environmental Quality Act

The CEQA defines a *significant effect on the environment* as “a substantial, or potentially substantial, adverse change in the environment.” Projects that may have significant effects are required to be analyzed in an Environmental Impact Report (EIR). Under CEQA Section 15065, a project’s effects on biotic resources would have a mandatory finding of significance if the project would do any of the following:

- Have 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; or substantially reduce the number or restrict the range of an endangered, rare or threatened species.
- Have the potential to achieve short-term goals to the disadvantage of long-term environmental goals.
- Have possible environmental effects that are individually limited but 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, the effects of other current projects, and the effects of probable future projects.

Prior to the public review of an environmental document, if a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect or mitigate to a level below significance, and EIR would not be required. In addition to the criteria listed above that trigger mandatory findings of significance, *Appendix G of the CEQA Guidelines, Section IV Biological Resources*, includes six additional impacts to consider when analyzing the significance of project effects. A project’s effects on biological resources could be deemed significant if the project would do the following:

- 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 California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS).
- 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 CDFW or USFWS.
- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) 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, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

If the project proponent agrees to mitigation measures or project modifications that would avoid all significant effects or would mitigate the significant effect(s) to a point below the level of significance, an EIR would not be required. The project proponent would be bound to implement

the mitigation measures to reduce the project effects to below a level of significance. Mitigation is not required for effects that are less than significant.

1.2.2 Compliance with City of San Luis Obispo Regulations and Policies

The City has established zoning regulations and several policies regarding biological resources that would apply to the development of the property. The project is located outside of any specific plan area, and falls under the City's General Plan. Within the Conservation and Open Space element, policies are specified for the protection of listed species, species of local concern, wildlife habitat and corridors. Development setbacks from creeks are required from the top of bank and riparian habitat (City 2014). Policy 8.6.3 requires compensatory mitigation for the loss of riparian or wetland habitat at a ratio of 2:1 (area created to area lost), consisting of the following option in order of preference:

1. The same kind on the same site;
2. The same kind on a different site, within the San Luis Obispo planning area;
3. A similar kind on the same site; or
4. A similar kind on a different site, within the San Luis Obispo planning area.

If appropriate mitigation sites are not available onsite or at a different location within the planning area, individual small projects can provide mitigation through payment of a fee that will be used for protecting similar resources within the planning area or through a mitigation bank. Compensatory mitigation shall be implemented in compliance with state and federal requirements and conducted by qualified professionals. Areas selected as mitigation sites should be located and designed to minimize the need for long-term maintenance or support.

The City's Municipal Code 17.70.030 also describes policies related to creek setbacks. These requirements are to apply to all creeks as defined in the General Plan Open Space element and shown on that element's creek map. The location of the top of bank and riparian vegetation are to be shown on all project plans subject to City approval. An exception to the setback requirements shall be requested through a director's hearing, and supported by a biological survey conducted by a qualified, independent person.

The City also has policies regarding tree removal. "Significant trees" are determined by the City Council upon the recommendation of the Tree Committee, Planning or Architectural Review Committee. Significant trees are to be protected to the extent possible and their removal is subject to mitigation. "Heritage trees" are not to be authorized for removal unless the authorized by the city arborist. The City's Municipal Code 12.24.090 defines the provisions for tree preservation, and a process to request tree removal permits. The exact number, species, and locations of trees to be removed by projects and those to remain are required to be specified on final project plans. Any tree removal applications are to be provided at the same time as the development permit application. Compensatory mitigation is specified as planting a minimum number of new trees for each tree authorized to be removed on the same or a different property.

1.2.3 Special-status Species

For the purpose of this BRA, special-status species are those plants and animals listed, or Candidates for listing, as Threatened or Endangered by the USFWS under the federal Endangered Species Act (FESA); those listed as Threatened or Endangered under the California Endangered

Species Act (CESA); animals designated as “Species of Special Concern,” “Fully Protected,” or “Watch List” by the CDFW; plants considered Endangered or Rare under the California Native Plant Protection Act; and, animals considered sensitive that do not have a specific listing status but which are recorded in the California Natural Diversity Database (CNDDDB; CDFW 2021a).

FESA provisions protect federally listed species and their habitats from unlawful take, which is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct.” Under these regulations, “harm” may include significant habitat modification or degradation that kills or injures wildlife. Candidate species are not afforded legal protection under FESA; however, Candidate species typically receive special attention during the CEQA environmental review process. CESA provides for the protection and preservation of native species of plants and animals that are experiencing a significant decline which if not halted would lead to a threatened or endangered designation. Habitat degradation or modification is not expressly included in the definition of take under CESA.

Rare plants are those defined as having a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, 3 or 4 (CDFW 2020a). Rank 4 species are a watch list, and typically do not meet CEQA's rarity definition (Section 15380), but are included here because they may be of local concern. The CRPR definitions are as follows:

- *Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere.* These species are presumed extirpated because they have not been recorded in the wild in California for many years.
- *Rank 1B: Rare, threatened or endangered in California and elsewhere.* Plants that are rare throughout their range and the majority in this rank are endemic to California.
- *Rank 2A: Presumed extirpated in California, but more common elsewhere.* These species are presumed extirpated because they have not been recorded in the wild in California for many years, but they are common outside of the state.
- *Rank 2B: Rare, threatened or endangered in California, but more common elsewhere.* Plants that have ranges that extend into California, where they are rare, but are common in areas outside of the state.
- *Rank 3: Plants needing more information - A review list.* Information necessary to assign the species to one of the lists or reject them is lacking. Most species in this rank are taxonomically unresolved.
- *Rank 4: Plants of limited distribution - A watch list.* Species of limited distribution or infrequent occurrence throughout their range in California but which their vulnerability to extirpation appears low at this time and should be monitored.

Additionally, the CRPR system further assigns threat codes as a decimal extension to the rank, ranging from 1 to 3. CRPR 3 species do not have a threat code due to insufficiency of information needed to assign it, and CRPR 1A and 2A also do not have threat codes because they not know to currently occur in California. The threat code extensions are as follows:

- *.1: Seriously threatened in California.* More than 80% of occurrences are threatened and there is high degree and immediacy of threat.
- *.2: Moderately threatened in California.* Approximately 20 to 80% of occurrences are threatened and there is a moderate degree of immediacy of threat.

- .3: *Not very threatened in California.* Less than 20% of occurrences are threatened and there is a low degree and immediacy of threat, or no current threats are known.

CDFW (2020b) maintains a list of Species of Special Concern for those animal species in which declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as special concern is to halt or reverse their decline early enough to secure their long-term viability. Species of Special Concern may receive special attention during environmental review, but do not have statutory protection. FESA and CESA emphasize early consultation to avoid impacts on Threatened and Endangered species. As part of the consultation process, project proponents are directed to develop appropriate mitigation plans to offset project effects on listed species and their habitats.

Raptors (e.g., eagles, hawks, and owls) and their nests are protected under both federal and state regulations. Birds of prey are protected in California under the California Fish and Game Code Section 3503.5. Disturbance that causes nest abandonment or loss of reproductive effort is considered take by CDFW. Eagles are protected under the Bald and Golden Eagle Protection Act. The federal Migratory Bird Treaty Act (MBTA) applies to many bird species, including common species, and prohibits killing, possessing, or trading in migratory birds, including whole birds, parts of birds, bird nests, and eggs. The act restricts construction disturbance during the nesting season that could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

1.2.4 Designated Critical Habitat

Critical habitat is designated for species listed under FESA, and are areas that contain the physical or biological features which are essential to the conservation of those species and may need special management or protection. A 2018 Supreme Court ruling further defined critical habitat as those areas that provide habitat for the relevant species, exempting areas that are not currently occupied. Critical habitat designations affect only federal agency actions or federally funded or permitted activities. Activities by private landowners are not affected if there is no federal nexus, but biological studies generally address project effects on designated critical habitat when present at the project site.

1.2.5 Sensitive Natural Communities

Sensitive natural communities are those native plant communities listed in the CNDDDB (CDFW 2021a) as rare or of limited distribution. They are evaluated using NatureServe's Heritage Methodology to assign global and state ranks based on rarity and threat, and these ranks are reviewed and adopted by CDFW's (2021b) *Vegetation Classification and Mapping Program* (VegCAMP). Evaluation with the state (S) level results in ranks ranging from 1 (very rare or threatened) to 5 (demonstrably secure). Those with ranks of S1 to S3 are to be addressed in the environmental review process under CEQA (CDFW 2021b).

1.2.6 Jurisdictional Wetlands and Other Waters

Section 404 of the Clean Water Act established a program to regulate the discharge of dredged and fill material into "waters of the United States", which includes such waters as rivers, lakes, streams, and most wetlands, and are regulated by the U.S. Army Corps of Engineers (USACE). In nontidal waters of the United States, USACE jurisdiction extends to the Ordinary High Water Mark (OHWM), which is defined as "the line on the shore established by the fluctuations of water and indicated by

physical characteristics, such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation or the presence of litter and debris.” Identification of the OHWM is conducted by examining physical evidence of surface flow in the stream channel. Wetlands under USACE jurisdiction are defined as meeting three parameters or criteria: hydrophytic vegetation, hydric soils, and wetland hydrology.

The State Water Resources Control Board (SWRCB) regulates discharges of fill and dredged material under the Clean Water Act Section 401, the Porter-Cologne Water Quality Control Act, and the state and federal "No Net Loss" policies for wetlands. The 401 Water Quality Certification and Wetlands Program protects "waters of the state", including wetlands, riparian areas, and headwaters. Most projects are regulated by the Regional Water Quality Control Board (RWQCB) which oversees the local area in which the project is located. Projects that affect only waters of the state, and not waters of the United States, must apply for Waste Discharge Requirements (WDRs) instead of a 401 Certification pursuant to California Water Code Section 13260(a).

California Fish and Game Code Section 1602 requires that CDFW be notified of any proposed activity that may affect any river, stream or lake by: 1) substantially diverting or obstructing the natural flow; 2) substantially changing or using any material from the bed, channel or bank; or, 3) depositing or disposing of debris, waste, or other materials. The notification requirement applies to ephemeral and perennial drainages, including streams, desert washes, and watercourses with subsurface flow, and may apply to projects conducted within flood plains of a regulated water body. The CDFW jurisdictional limits are generally the outer edge of riparian vegetation, or the top of bank, whichever is farther. Projects that would impact CDFW jurisdictional areas are required to complete a notification form and submit a fee, in order to obtain a Lake and Streambed Alteration Agreement (LSAA).

Projects within the boundaries of jurisdictional wetlands or waters would typically require a Section 404 permit from the USACE, a Section 401 Water Quality Certification or WDR from the appropriate RWQCB, and a LSAA from CDFW, depending on the location of project impacts within each agency's jurisdiction. Any projects requiring a Section 404 permit must first obtain a Section 401 permit. Impacts to waters of the state that do not require a Section 404 permit may require a WDR. Additionally, if any species protected under FESA may be present in the project area, the Section 404 permitting pursuant to Fish and Wildlife Coordination Act requires review and authorization by the USFWS and/or National Marine Fisheries Service (NOAA Fisheries), as appropriate.

2.0 METHODS

KMA conducted a desktop review of natural resources databases, maps, literature and online sources to identify special-status biological resources documented from the region that may be present in the project site. Aerial imagery was employed in coordination with field surveys to define the current extent of onsite and adjacent biotic conditions. Time series aerial and streetside photography (Google Earth, Bing) was reviewed to obtain information on the history of land use onsite and abutting properties. KMA's Principal Biologist Kevin Merk and Senior Biologist Susan V. Christopher, PhD conducted a reconnaissance survey of the site on April 8, 2021 from 0930 to 1145 hours to assess the potential of the site to support sensitive biological resources. The weather during the survey was clear, wind 5 to 10 miles per hour, and air temperature ranged from 56° Fahrenheit (° F) at start to 65° F at end. The property was assessed in entirety, which was considered to the study area for this project. An additional survey to evaluate watershed conditions of the drainage on neighboring properties was conducted the Susan Christopher on April

13, 2021 from 1215 to 1300 hours. The sky was overcast, with winds 5 to 10 miles per hour, and air temperature 56° F. Additional surveys of the site and potential mitigation areas were conducted on July 7, 2021 and September 3, 2021.

The field surveys provided a basis to evaluate onsite conditions for the preparation of this BRA as well as an accompanying Preliminary Delineation of Wetlands and Other Waters ("wetland delineation") prepared by KMA for this project. As part of the wetland delineation, the limits of CDFW/RWQCB jurisdictional areas that corresponded to stream resources, including those protected by the City were delineated as the outer edge of the riparian canopy or top of bank, whichever was farther. These limits were recorded in the field using a Trimble GeoXH 600 Global Positioning System (GPS) unit and imported into ArcGIS for map production.

All plant and animal species observed during the surveys were recorded. Plant taxonomy followed the Jepson Flora Project (2021), and nomenclature for animals is reported as it appears in the CNDDDB (CDFW 2021a) or as updates are available (California Herps 2021). Habitat types, representing land use and plant communities, were mapped on ESRI (2021) aerial imagery. Land use types followed *A Guide to Wildlife Habitats in California*, which is updated through the California Wildlife Habitat Relationships (CWHR) System (CDFW 2021c). Designation of plant communities generally followed Holland's (1986) *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Sawyer et al.'s (2009) *Manual of California Vegetation* and *VegCAMP* (CDFW 2021b) were also referenced. Plant communities were determined as to whether or not they met the criteria of sensitive natural communities. Representative photographs of each of the habitat types within the study area are provided in a photo plate.

The surveys were conducted during the blooming period of special-status plant species that are known to occur in the region, which is the period when herbaceous annuals would have been the most readily identifiable. Plant species were identified to a level necessary to determine rarity. The methodology used during the surveys followed the guidance in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (CDFW 2018) and *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000). This included walking the entire study area using evenly spaced transects to observe and document all plant species observed. The extent of a rare plant occurrence found in the study area was recorded using a Trimble GPS unit and imported into ArcGIS for map production.

The *Web Soil Survey* (Natural Resources Conservation Service [NRCS] 2021a) was used to identify the soil mapping units present within the study area. The *National Wetlands Inventory* (NWI) was examined to evaluate the extent of any identified wetlands on the site and in the vicinity (USFWS 2021a). USGS topographic maps were also reviewed for information on hydrologic and topographic features.

A query of the CNDDDB was completed to identify occurrence records of special-status biological resources (plants, animals and sensitive natural communities) documented within five miles of the project site. This search included the following quadrangles: San Luis Obispo, Lopez Mountain, Arroyo Grande Northeast, and Pismo Beach. A full nine-quadrangle search was determined to be unnecessary for this project due to the small size of the lot and location within a developed area. CNDDDB records of special-status plant and animal occurrences within the five-mile buffer of the study area were mapped. For the list of special-status species identified in the search, local distribution and ecological information was obtained from a variety of online and published sources (Jennings and Hayes 1994, Bolster 1998, Moyle et al. 2015, Thompson et al. 2016, Audubon

2021, Calflora 2021, California Native Plant Society [CNPS] 2021, California Herps 2021, The Cornell Lab of Ornithology 2021a, 2021b; CDFW 2021c). Based upon KMA's knowledge of the local area and other sources of species occurrence records (particularly observations recorded in Calflora [2021] and The Cornell Lab of Ornithology [2021a]), additional special-status biological resources that have been documented in the project vicinity were included. Designated critical habitat for species listed under FESA was identified and mapped based upon information provided in *Environmental Conservation Online System* (USFWS 2021b).

For the list of all special-status species known from the project vicinity, an evaluation of those species with potential to occur in the study area was performed based upon the suitability of habitat conditions on the property and the local distribution (geographical and elevational ranges) and specific requirements (plant communities and soils) of the species considered. Definitive surveys for the presence or absence of special-status animal species were not conducted, and focused plant surveys were conducted as described above. We relied on existing information and known occurrence records in the region, coupled with our site-specific observations from other locations in the surrounding area, to make determinations for the probability of occurrence of each special-status species within the study area.

Any special-status species observed during the site surveys were determined to be "Present". Those species considered as "Potential" met the following requirements: records in the site vicinity, appropriate plant community and/or soil associations onsite, and within the elevational range of the species. If any one of these elements was not met or considered to be marginal for the site, but the other elements were present, that species was considered "Unlikely". If onsite environmental conditions were clearly inappropriate, or the species has a limited distribution that does not overlap the site, those species were considered "Not Expected". If any lifestage or particular life history use (i.e., foraging) fit the requirements of the onsite conditions, even while other aspects were inappropriate for certain functions (i.e., breeding), these species were still considered to have potential to occur onsite, but the likelihood of occurring onsite along with a description of site suitability are provided in the special-status species table as well as a more in-depth analysis in the text. Because the background review determined that there were three additional special-status plant species that were documented near the site which bloom after April, an additional plant survey was conducted to search for those species during their blooming period. The evaluation of occurrence for those species was then changed based upon the results of the survey.

We determined whether special-status plant and animal species, designated critical habitat, sensitive natural communities and jurisdictional area could or do occur on or the site. Potential impacts of the proposed project were evaluated for each of these biological resource issues, including the six additional impacts in CEQA Appendix G. An evaluation of significance as defined under CEQA is provided for each potential impact, and mitigation is proposed to reduce impacts to a level below the significance threshold. We also incorporated compliance with the City's biological resources protection rules and regulations into the proposed mitigation measures.

3.0 RESULTS

A list of plants and animals observed during the surveys is provided in Appendix B. A plate of photographs taken during the site visits to characterize onsite conditions and habitat types is provided in Appendix C. Appendix D is a summary of all special-status species, sensitive plant communities, and designated critical habitat recorded within the site vicinity, and KMA's evaluation of their potential presence onsite. Figure 1 is a site location map and Figure 2 is an aerial overview

map with wetland habitats recorded in the NWI in the site vicinity. Figure 3 is a habitat map of the study area showing the area occupied by each of the habitat types, location of a rare plant occurrence, as well as drainage characteristics and jurisdictional area relevant to the City, state and federal mitigation requirements. Figures 4 and 5 show the locations of special-status plants and animals, respectively, recorded in the CNDDDB within five miles of the study area. Figure 6 shows sensitive natural communities recorded in the CNDDDB and designated critical habitat.

3.1 Existing Conditions

The property consists of a graded lot surrounded by light industrial and urban development, with a segment of drainage (known locally as a segment of Bishop Creek) that has been confined to an eroding roadside ditch along McMillan Avenue. The drainage habitat is discussed further in Section 3.2 below. A review of time series aerial photography shows that the upland area of the lot has been regularly mowed, and the willows along the drainage have been removed in the past and trimmed regularly. The pad is level with an elevation of approximately 227 feet (69 meters) above mean sea level, and slopes slightly to the southeast. The western top of bank is at the 225/226-foot (69 meters) elevation line, the eastern top of bank is at 228-foot (69 meters) elevation, and the low flow channel is at 219 feet (67 meters) in elevation (William R. Dyer, Drainage Analysis, dated 11/6/2000). Thus, the channel banks are particularly steep and the east side is eroding (refer to photographs in Appendix C). A substantial amount of trash, including syringes, was present in the channel, showing racking against objects from past flows.

3.2 Hydrologic Features, Wetlands and Riparian Habitats

The drainage feature onsite is a remnant creek segment that has been altered from its natural state, and likely its historic location. It is not shown as a blue-line stream or as a topographic draw on the USGS topographic map, and therefore is unnamed by the USGS. It also is not indicated in the NWI (Figure 2). However, it is mapped in the City's (2014) *General Plan* as a perennial creek and the City's GIS layer indicates that it is unofficially called "Bishop Creek". It is a tributary of what is locally known as "Acacia Creek" further downstream that is part of the headwaters of the East Fork of San Luis Obispo Creek.

The drainage originates in the southwestern slope of what is locally known as High School Hill, which is located between the Johnson Avenue area of San Luis Obispo and Reservoir Canyon. The drainage enters a series of underground culverts at the City limits and daylights at Sinsheimer Park (Figure 2). Within the park the drainage is an eroded channel with patchy riparian and ornamental shrubs and scattered native trees such as California sycamores (*Platanus racemosa*) that have been planted along the bank. This upstream section of the drainage was dry at the time of the April 2021 survey, but had evidence of flow and cobble/rock substrate. It passes under a series of bridges for the SLO Railroad Safety Trail, Union Pacific Railroad, and driveways to businesses along upper McMillan Avenue. The drainage flows through a 48-inch diameter culvert on the upstream (north) side of the property that provides access for a driveway to offsite businesses in this area. It enters another approximately 48-inch more oval shaped culvert on the downstream end of the property where it goes underground beneath an industrial complex. It resurfaces on the east side of Garibaldi Avenue where there is a stand of mature eucalyptus mixed with riparian habitat and flows under a bridge for Orcutt Road. Downstream from Orcutt Road, the channel has a narrow band of riparian vegetation. It joins other drainage features before passing under Broad Street, where it runs south along Broad Street in an eroded, treeless channel. At this point, the drainage is referred to as Acacia Creek, and continues in a southerly direction and traverses the Damon-Garcia Sports Fields. The Damon Garcia Sports Field project included an extensive habitat restoration

component that planted trees and shrubs along the creek, which now form a well-developed riparian corridor. Further downstream, Acacia Creek joins "Orcutt Creek" from the east to form the "East Fork of San Luis Obispo Creek" on the south Tank Farm property. Both of these drainages are also unnamed on the USGS topographic maps. The East Fork of San Luis Obispo Creek joins with the main channel of San Luis Obispo Creek, and then flows southwesterly where it empties into the Pacific Ocean at Avila Beach.

There was a small trickle of flow out of the upstream culvert at the time of the April surveys, and one pool with standing water to a depth of approximately 18 inches further downstream. Racking of trash and other debris to approximately two (2) feet high indicated the limits of high flow, which helped delineate the ordinary high water mark within the channel area. The drainage onsite had a series of small pools and riffles, with no flow in riffle areas. The substrate was clay, rock and cobble with some areas of chunks of pavement and road base. The slope around the two culverts and a small erosion gully along the upper top of bank on the west side were stabilized with concrete, cement bags, and rock. The east side of the bank was steeply incised and eroded, and contained an outfall of an 18-inch diameter stormwater pipe. The bank on the west side was more gradual, with a terrace in the bend of the drainage that supported willows and may be inundated during large storms. One slightly undercut bank at a willow was present at the deepest pool. The active channel was approximately five (5) feet wide.

The water was clear with a layer of filamentous green algae along the bottom of the pools. Sierran treefrog (*Pseudacris sierra*) tadpoles, eggs and one adult frog were seen in the creek, and one called briefly from the upper bank. Aquatic invertebrates such as freshwater snails (*Physa* sp.) and water fleas (Order Cladocera) were observed. A band of thinned riparian habitat was present along the channel. Time series aerial photography shows that the riparian vegetation had been removed and thinned overtime. Streetside photography shows all but the largest red willow (*Salix laevigata*) had been cut to the base around 2014. Arroyo willow (*Salix lasiolepis*) shrubs had grown back over the channel from multiple small (less than 3 inches in diameter at breast height [DBH]) trunks at the time of the surveys. The lower limbs had been trimmed, and the willows formed a nearly closed canopy over the channel.

No areas of predominantly wetland vegetation were present along the drainage, but scattered umbrella plant (*Cyperus involucratus*), a non-native species, occurred along the channel. The vegetation on the streambanks and along the edge of the channel was similar in composition to the upland grassland vegetation found on the rest of the site, with a few additional upland species as described in Section 3.4.2 below. No depressions that could support wetland vegetation were observed in the upper grassland habitat. Tire ruts at the edge of the adjacent offsite parking area were dried mud and vegetated by non-native, upland grassland species. Aerial photography shows the southern portion of the site staying green longer into the summer possibly from shading of the neighboring buildings, but this area was entirely searched and only upland grassland species and a few Himalayan blackberry (*Rubus armeniacus*) stems were present. This area is at the lower end of the gently sloping site, and appears to have had a larger thicket of blackberry that had been cleared, which were resprouting at the time of the survey.

The drainage onsite would be considered to be a Palustrine system, which are nontidal wetlands dominated by trees, shrubs or persistent emergents (Cowardin et al. 1992). The channel below the OHWM had an Aquatic Bed, and immediately above the OHWM was an Unconsolidated Bottom (Cowardin et al. 1992). The riparian habitat is a type of Scrub/Shrub Wetland (Cowardin et al. 1992). Scrub-Shrub Wetlands are dominated by woody vegetation less than 20 feet (6 meters) tall, including shrubs, young trees, and stunted trees (Cowardin et al. 1992).

3.3 Soils

There is only one soil type mapped within the study area in the *Web Soil Survey* — Cropley clay, 0 to 2 percent slopes, MLRA 14 (NRCS 2021a). This is a clay soil to approximately 32 inches deep in profile, underlain by sandy clay loam. These soils form on alluvial fans and terraces, and are derived from calcareous shale. Despite the high clay composition, these soils are considered to be moderately well-drained, are not subject to flooding or ponding (NRCS 2021a). This soil type is considered to be a hydric soil in the Coastal Part of San Luis Obispo County (NRCS 2021b).

Observations in the field were of dark clay soils with some gravel-sized rocks. A past geotechnical study of the parcel indicated that the soils are generally soft and very moist to saturated slightly sandy silty clays over moderately dense silty sandy clays (Buena Geotechnical Services 2004).

3.4 Habitat Types

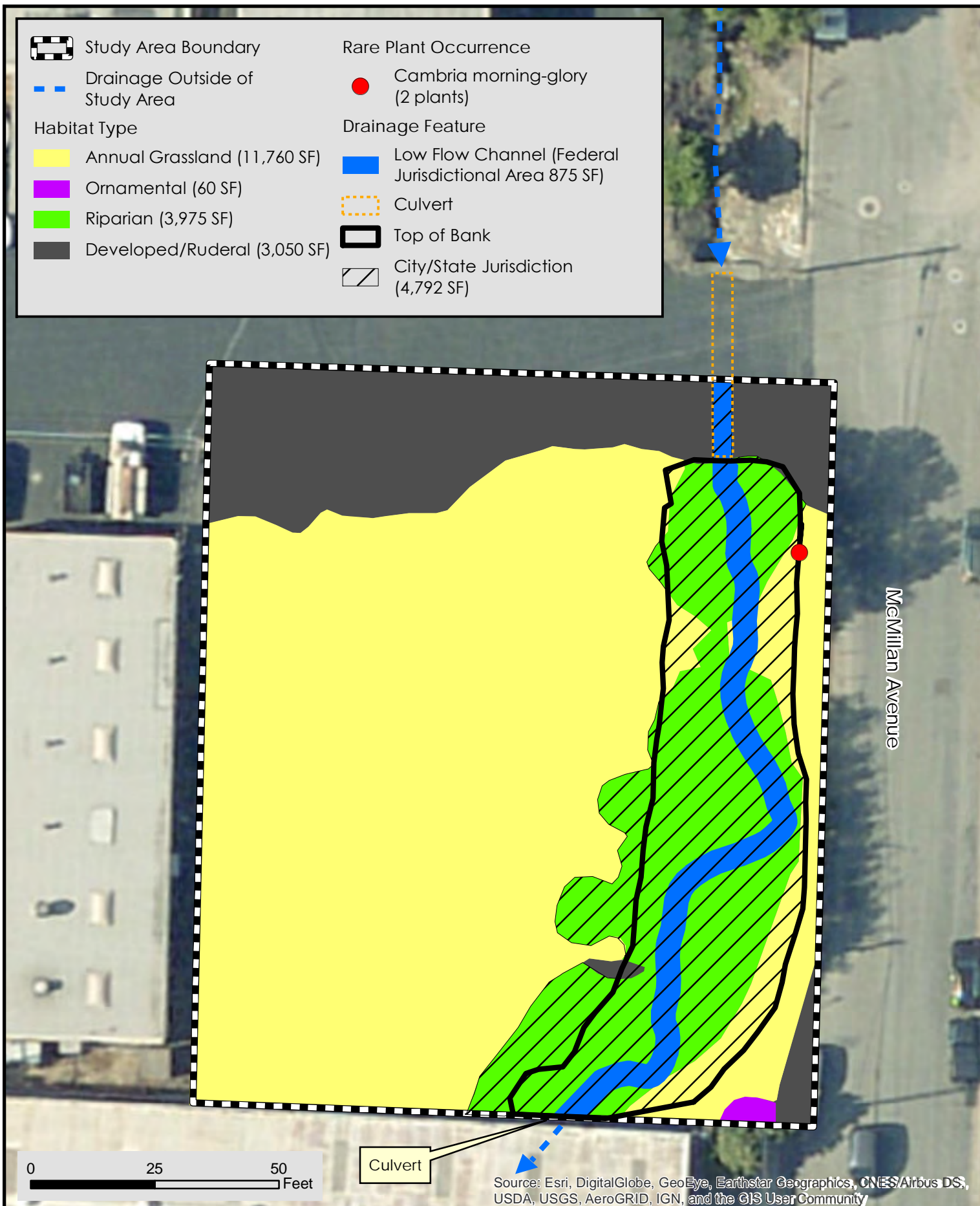
Four plant communities or land uses were identified within the study area, and include: 1) Annual Grassland; 2) Riparian; 3) Developed/Ruderal; and, 4) Ornamental. Each of these habitat types is described below. The areas occupied by these habitat types are shown on Figure 3 and representative photographs are provided in Appendix C.

3.4.1 Annual Grassland

Annual Grassland occurs on the graded pad in the western two-thirds of the property, and in the understory of the Riparian habitat. Upland areas containing Annual Grassland consisted of 11,760 square feet (Figure 3). It had lush spring growth at the time of the survey, and time series aerial photography shows the area is regularly mowed. The Annual Grassland habitat type was dominated by non-native grasses and herbs such as slender wild oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), wild radish (*Raphanus sativus*), English plantain (*Plantago lanceolata*), black mustard (*Brassica nigra*), foxtail barley (*Hordeum murinum* ssp. *leporinum*) and big heron bill (*Erodium botrys*). Native species were present only in small patches, and included a small occurrence of California poppy (*Eschscholzia californica*). A few scattered Himalayan blackberry, curly dock (*Rumex crispus*) and goose grass (*Galium aparine*) were present in this habitat where shading from willows and buildings may affect vegetation distribution. Five small coast live oaks (*Quercus agrifolia*) were along the southern property line that may have been planted. This habitat type corresponds to the Non-native Grassland community described by Holland (1986) and the Wild Oats and Annual Brome Grasslands semi-natural alliance (CDFW 2021b).

3.4.2 Riparian

The Riparian habitat along the creek channel, consisting of 3,975 square feet, was dominated by arroyo willow shrubs that had previously been cut to the base, resprouted, and then had the lower limbs thinned. Also were a red willow tree, small coast live oaks, Peruvian pepper tree (*Schinus molle*) seedlings, one small California coffeeberry (*Frangula californica*) shrub, and Himalayan blackberry in the understory of this habitat type. Coast live oaks onsite were small trees above the top of bank, with canopy continuous with the willow riparian. There were also several coast live oak seedlings observed in the understory on the streambank. The understory had all of the same non-native upland grassland species that occurred in the Annual Grassland habitat. Additional species present under the riparian canopy were Bermuda buttercup (*Oxalis pes-caprae*), smilo grass (*Stipa miliacea*), spring vetch (*Vicia sativa*), English ivy (*Hedera helix*) and coast morning glory



(*Calystegia macrostegia* ssp. *cyclostegia*). This habitat type corresponds to the Central Coast Riparian Scrub community described by Holland (1986) and the Arroyo Willow Thickets alliance described by Sawyer et al. (2009).

3.4.3 Developed/Ruderal

The Developed areas within the study area included a portion of the driveway and culvert that provides access for the offsite property to the north (Figure 3). There was also a small eroded ditch draining into the creek channel that had been filled with rock and debris toward the southeastern corner of the site. Ruderal (disturbed) habitat occurs along the margin of the roads and parking area where there were non-native species characteristic of the Annual Grassland habitat and a higher proportion of bare ground. Other non-native species observed in Ruderal areas included spiny sowthistle (*Sonchus asper*) and California burclover (*Medicago polymorpha*). Due to the highly disturbed condition of the Annual Grassland habitat, there was not a clear line denoting a separation between grassland and ruderal areas. This habitat type is not represented by a natural plant community because it is mostly bare ground with only sparse cover by non-native species. The paved areas would be classified as the Barren habitat type in the CWHR (CDFW 2021c). The ruderal areas would be considered to be an Urban habitat type, in the Demolition Site category, which includes vacant urban lots lacking native vegetation within commercial and industrial portions of urban areas (CDFW 2021c). Together the Developed and Ruderal areas comprised 3,050 square feet.

3.4.4 Ornamental

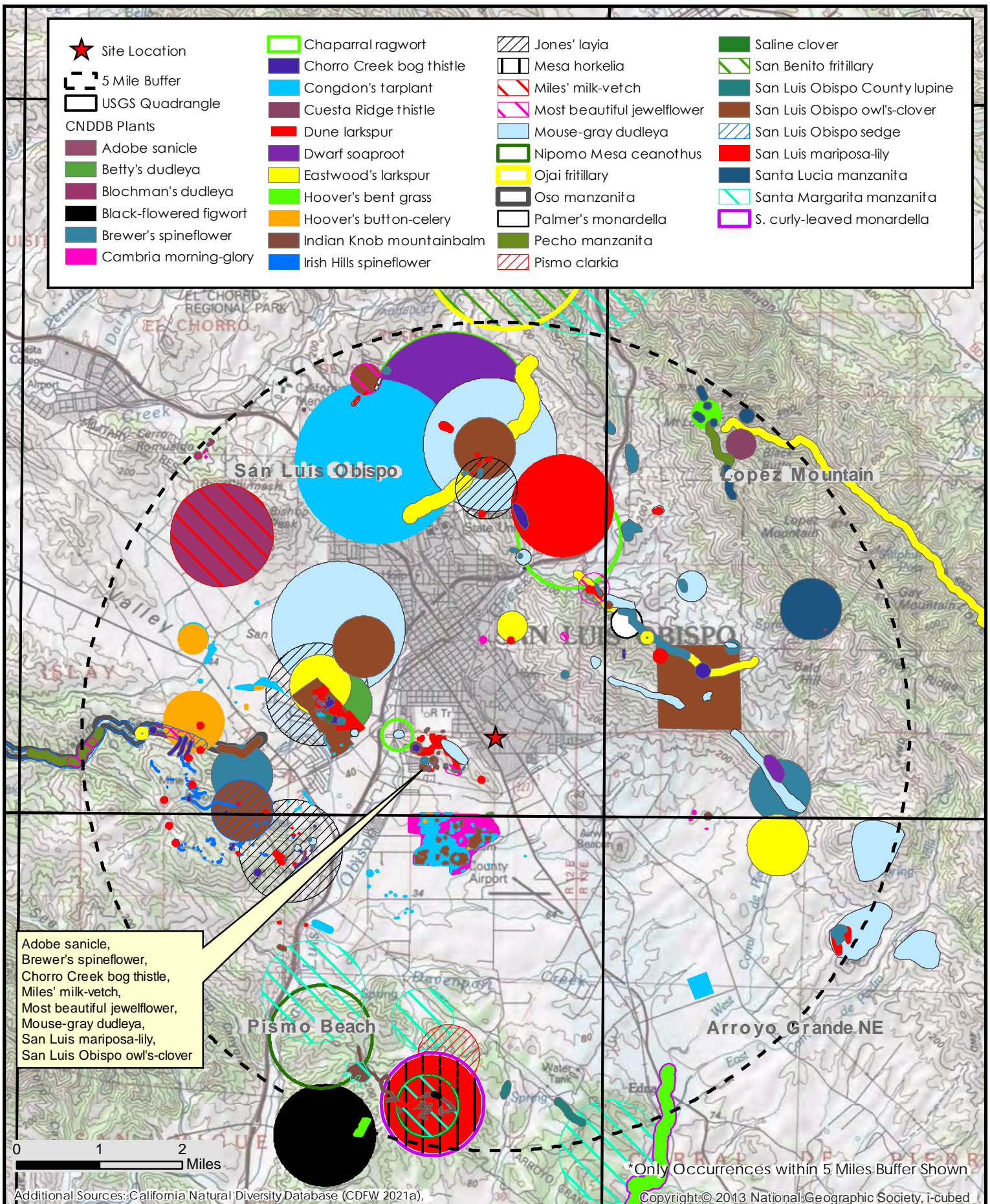
One Brazilian pepper tree (*Schinus terebinthifolius*) was planted offsite and its canopy overhung the southeastern corner of the property occupying 60 square feet. This habitat type is not a native plant community and would be classified as an Urban habitat within the CWHR System (CDFW 2021c).

3.5 Special-status Biological Resources

The property consists of a vacant lot surrounded by urban development, with disturbed grassland and riparian habitats. Although the background review contained a large number of special-status biological resources that have been documented within the project vicinity (Appendix D), there is low potential for the site to support special-status animal species due to its small size, ongoing disturbance, and isolation. Surveys of the site in 2021 were conducted to evaluate the potential presence of special status plants. The drainage has likely been moved from its historic alignment during the construction of McMillan Avenue, and although it has low potential to support wildlife, it would be considered to be a sensitive habitat type since it supports a continuous canopy of riparian scrub habitat and has seasonal flowing water that connects to larger drainage features downstream.

3.5.1 Special-status Plants

One rare plant species, **Cambria morning-glory**, was found in a small occurrence of approximately two plants on the northeastern upper streambank (Figure 4). Cambria morning-glory has a CRPR of 4.2 and is a perennial rhizomatous herb in the family Convolvulaceae. It is also called San Luis Obispo County morning glory. This species occurs in chaparral, cismontane woodland, coastal prairie and valley and foothill grassland habitats, usually on clay soils (CNPS 2021). It blooms from March until July. This species is widely distributed in San Luis Obispo County, occurring along the



north coast, Santa Lucia Range, and from Morro Bay and Los Osos inland through the vicinity of San Luis Obispo and extending to Arroyo Grande and Nipomo (Calflora 2021). Its type locality is from Cambria (CDFW 2021a). This species is recorded in the hills surrounding San Luis Obispo, a large population occurs on either side of Tank Farm Road, and there is an occurrence from the Johnson Avenue area within city limits (CDFW 2021a). Extensive occurrences are present in grasslands that are a part of the City-owned Irish Hills Natural Reserve. The clay soils onsite are suitable for this species, but it was not found in the larger grassland to the west of the drainage. Only two small plants were located at the base of a sign along McMillan Avenue.

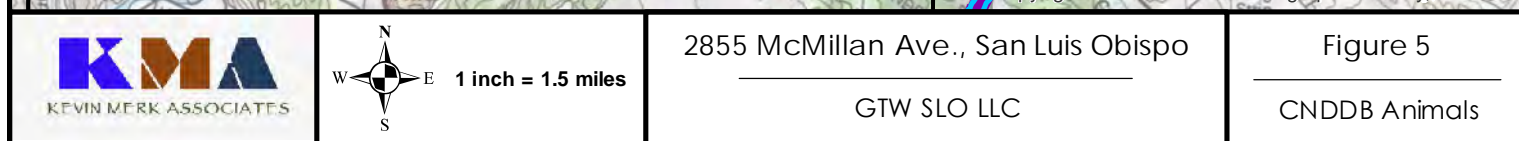
No other special status plants were observed onsite during the focused surveys in the spring and summer of 2021. Given the highly disturbed nature of the site, and lack of serpentine derived soils and rock outcrops or topographic depressions with seasonal wetlands, no other rare plants are expected to occur on the site. Please refer to Appendix D for further details related to special status plants evaluated in this study.

3.5.2 Special-status Animals

Based upon our background review of special-status species records, one invertebrate, two birds, and four mammals were considered to have "Potential" to occur on the property. No special-status amphibian or fish species would occur because the drainage has insufficient water to support these species. No special-status reptiles were considered to have potential to occur due to the small size of the habitat and surrounding industrial and urban land uses. The listing status, habitat associations and evaluation of occurrence of the species recorded in the project vicinity are summarized in Appendix D, and a map of CNDDB animal records within five miles of the property is provided in Figure 5. These special status animal species that were determined to have Potential to occur onsite are expected as transients moving or foraging through the area, and are not expected to use the site for breeding activities. They are described in further detail below.

The **monarch butterfly** (*Danaus plexippus*, population 1) is a Candidate for federal listing by the USFWS under the Endangered Species Act and considered sensitive by CDFW for overwintering colonies. Roosting sites are considered to be of local concern within the City's (2014) *General Plan*. This species undertakes multi-generational migrations of thousands of miles (Center for Biological Diversity et al. 2014). In the late summer, the butterflies leave Canada and the northern United States to their overwintering habitat on the south-central California/Baja California coast or mountains of central Mexico. "Population 1" of the species refers to those that overwinter in California, historically ranging from northern Mendocino County through San Diego County.

In the California central coast region, they roost colonially during the winter in wind-protected groves of eucalyptus, Monterey pine and cypress. These colonial roost sites may be occupied by large numbers of butterflies throughout the winter and the individual sites are generally reused each year. The butterflies cluster together at the roost sites, which have specific microclimates that keep them cool enough to conserve lipid reserves but do not reach freezing temperatures that could result in death (Center for Biological Diversity et al. 2014). Overwintering is the most vulnerable element in the monarch life cycle, and over the past 30 years the overwintering population has declined by at least 95% (Schultz et al. 2017). "Autumnal sites" are temporary sites used for roosting that do not persist through the winter and may not be used every year. During the spring and summer, they disperse throughout the United States and southern Canada (Center for Biological Diversity et al. 2014). Adults nectar on a variety of blooming plants, including



milkweeds, asters, lilies, verbenas, mallows, wild carrots, legumes, clover, and alfalfa (Brower et al. 2006). Milkweed is required as a host plant for caterpillars, and is where the eggs are laid, but was not seen in the study area.

Eggs can hatch from between 25 days and 7 weeks (Center for Biological Diversity et al. 2014). The larvae use compounds in the milkweed plant as a defense against predators and other specific functions in their lifecycle (Agrawal et al. 2012). After metamorphosis, breeding adults lay eggs within just a few days, resulting in several generations of breeding butterflies during one summer season. Breeding generations live only two to five weeks, and generally move to the north and east following cooler temperatures and higher quality milkweed. Those that metamorphose in the fall go into reproductive diapause instead of mating, and can live up to nine months (Center for Biological Diversity et al. 2014). They undergo a series of physiological changes in order to survive their migrations, and travel 25 to 30 miles per day (Brower et al. 2006). Individuals that arrive at the roosting sites are thus "great-great-grandchildren" of those that departed the overwintering site the previous spring, and it is not known how they find the exact roost sites that were used by their ancestors (Center for Biological Diversity et al. 2014). There are several records of overwintering populations and autumnal sites from within the urban limits of San Luis Obispo; however, most overwintering occurs along the coast in the Pismo Beach, Los Osos, and Morro Bay areas where winter temperatures are moderated by the Pacific Ocean (CDFW 2021a). The thinned, shrubby riparian habitat onsite is unsuitable as a roost site for this species, but individuals could periodically fly through the site and feed on flowering plants in the grassland habitat.

Cooper's hawk (*Accipiter cooperii*) is on the CDFW Watch List for nesting and is considered a species of local concern by the City (2014). This is a woodland species that prefers dense stands of coast live oak, riparian forest, and mixed coniferous forests near a source of water, but also can occur in suburban habitats with tall trees. They prey on birds, small mammals, reptiles and amphibians. There are numerous observations from areas throughout the urban area of San Luis Obispo, including several very close to the property (The Cornell Lab of Ornithology 2021a). This species could occur as a transient or perch in the riparian habitat, but there is no dense woodland for nesting and the small size of the available tree habitat and lack of a significant prey base makes foraging unlikely.

The **yellow warbler** (*Setophaga petechia*) is a CDFW Species of Special Concern for nesting and is considered a species of local concern by the City (2014). In California, this species breeds along coastal areas from Del Norte County south to Ventura County, where it prefers medium-density riparian woodlands (CDFW 2021c). This is a migratory species that occurs in this area only during the breeding season. They are closely tied to riparian habitat for foraging and nesting, but they also use residential areas and orchards. There are records of this species from close to the site in an industrial park and at Damon-Garcia Sports Fields (The Cornell Lab of Ornithology 2021a). The riparian habitat onsite is of relatively low density and is not be of sufficient structure for breeding by this species, but they could forage or occur as a transient while moving through the area.

The **pallid bat** (*Antrozous pallidus*) is a CDFW Species of Special Concern. This species forages in a variety of dry, open habitats such as grassland, deserts, woodland, shrubland and coniferous forest. Maternity and winter roosting sites are cavities or caves in rock features, large trees or buildings, and these structures must substantially moderate temperature. Day roosts are in caves, crevasses, mines and occasionally hollow trees or buildings. Night roosts are in more open areas such as porches or agricultural buildings. They forage on beetles, moths, spiders, scorpions and Jerusalem crickets (CDFW 2021c). **Townsend's big-eared bat** (*Corynorhinus townsendii*) is a CDFW Species of Special Concern. This species occurs in a variety of habitats, including dry upland areas,

semidesert, coniferous forest, and riparian woodland. They prefer foraging along the edges of riparian vegetation and they drink water from ponds. They roost in caves, mines, abandoned buildings and under bridges (Gruver and Keinath 2006). They are considered to widespread throughout California except for high elevations in the Sierra Nevada and occur in this area throughout the year (CDFW 2021c). The **western mastiff bat** (*Eumops perotis californicus*) is a CDFW Species of Special Concern. It occurs in coniferous and deciduous woodlands, coastal scrub, grasslands, chaparral, deserts and urban areas (CDFW 2021c). This species is resident year-round in this region, and are active nocturnally throughout the year. They roost in cliff faces, tunnels, on buildings or in trees. Maternity roosts are restricted to crevices in rock formations or buildings (CDFW 2021c). The **Yuma myotis** (*Myotis yumanensis*) does not have a specific listing status but is considered sensitive by the CDFW (2020b). This species forages in open forests and woodlands, usually over water sources such as ponds and streams (CDFW 2021c). They prey on flying insects as well as ants. The Yuma myotis roost in buildings, mines, caves, crevices and under bridges (CDFW 2021c). This species is considered to be common and widespread throughout all but the deserts of California, and they are known to occur year-round in San Luis Obispo county (CDFW 2021c). Roosting sites of all bat species are considered to be of local concern by the City (2014). There is a chance that these bat species could forage over the site, and although the amount of natural habitat is limited, invertebrates and other prey could be present, especially around street lights. Each of these species is known to roost in tunnels. For example, the pallid bat has been documented roosting in the 1000-foot long tunnel for San Luis Obispo Creek in downtown (CDFW 2021a). While the culverted part of San Luis Obispo creek has a much larger opening, the culvert on the downstream end of the drainage extends for a considerable distance underground and may be suitable for roosting. The upstream culvert was inspected for roosting bats, including their sign such as guano piles, prey remains and urine stained walls, and none were observed.

3.5.3 Designated Critical Habitat

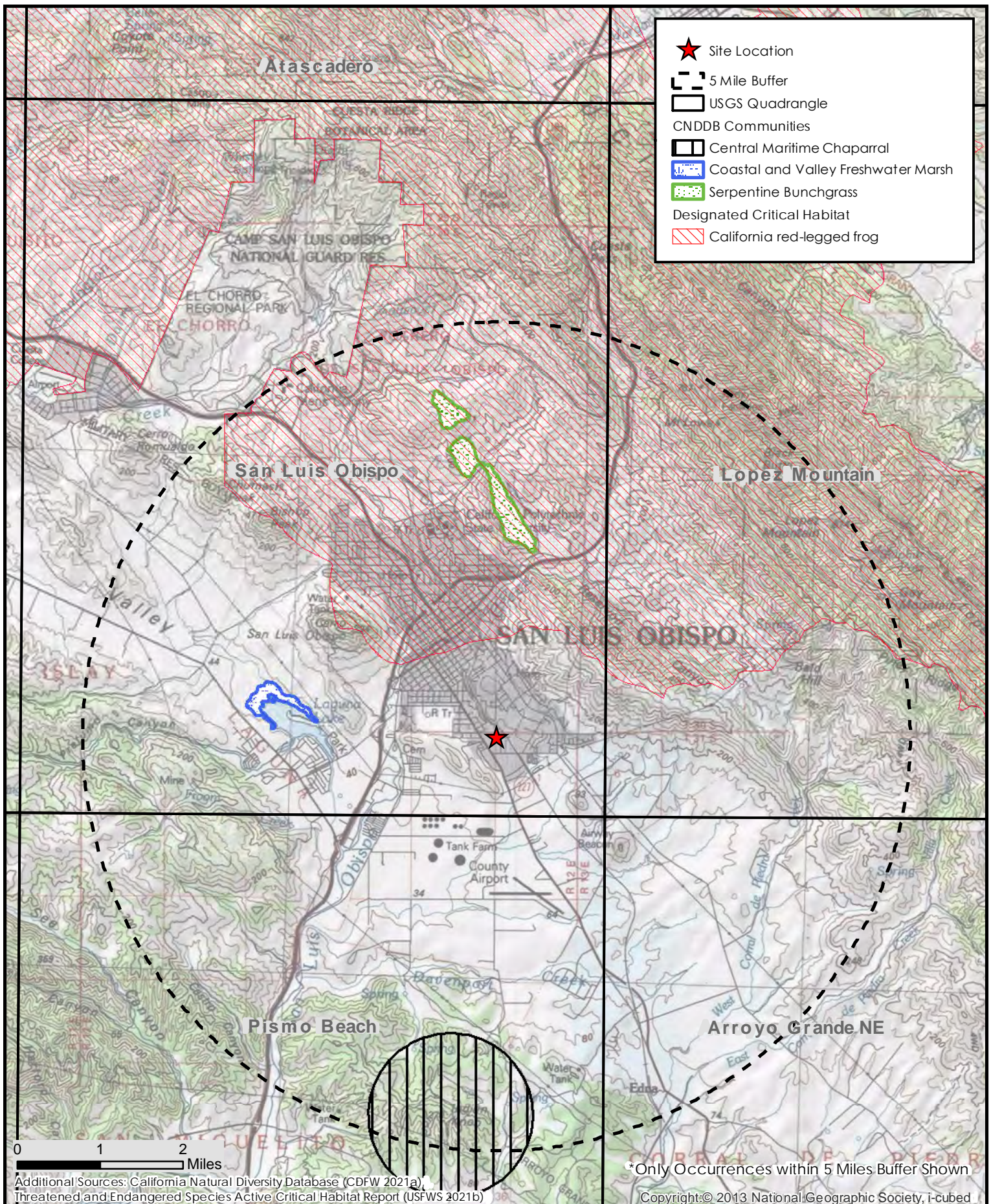
No designated critical habitat for federally listed species occurs on the site or in adjacent areas (USFWS 2021b; Appendix D). California red-legged frog critical habitat Unit SLO-3 occurs in the northern portion of San Luis Obispo, and extends west to the coast and north and east through the Santa Lucia Range (Figure 6).

3.5.4 Migratory Birds and Raptors

Common bird species protected under the MBTA could nest onsite in the willow shrubs and oak trees, but no old nests or signs of nesting activity were observed during the spring and summer surveys. There is a slight chance that the yellow warbler could nest in the riparian habitat, but because the shrubs have been thinned and the site is maintained regularly, the probability is low. Raptors are not expected to nest onsite due to the small size of the trees and the available habitat area. As stated above, no old nests were observed in the onsite riparian corridor, but nesting in the future by a suite of birds protected by the MBTA is still possible.

3.5.5 Sensitive Natural Communities and Protected Trees

Figure 6 illustrates the sensitive natural communities in the project vicinity documented in the CNDDB. Although not mapped in the CNDDB, the Riparian habitat onsite would be considered to be Central Coast Riparian Scrub, which has a State Rarity Rank S3 and is considered to be a sensitive natural community by CDFW (2021b); therefore, it meets the threshold for consideration under CEQA. The City also regards Riparian habitat as a sensitive natural resource. The City's "SLO Creeks" GIS layer maps the onsite drainage as a perennial stream with a required 20-foot setback.



However, based on observations made of onsite, upstream and downstream segments of this drainage, it should be classified as an intermittent stream since it only contains flowing water during and shortly after storm events. The Riparian habitat and drainage feature would be regulated by CDFW pursuant to Section 1600 et seq. of California Fish and Game Code and the RWQCB pursuant to the Clean Water Act and Porter-Cologne Water Quality Control Act, as described further in Section 3.5.6 below and in the wetland delineation report currently in preparation.

No significant or heritage trees are located on the property, since the majority of willows are small (less than 6 inches DBH) and each of the coast live oak trees onsite was roughly two (2) inches DBH or less. The clusters of arroyo willow shrubs had individual trunks less than three (3) inches in diameter. The red willow is a native species and was approximately eight (8) inches DBH. As such, it would meet the City's criteria to be considered a tree. Each of the trees and shrubs with continuous canopy along the drainage, while not individually meeting the City requirement of protected trees, would be subject to mitigation under protection of Riparian habitat.

3.5.6 Jurisdictional Wetlands and Other Waters

The area along the onsite drainage considered sensitive by the City was delineated as the outer limits of the riparian canopy or top of bank, whichever was farther. This area consisted of approximately 4,792 square feet and is shown on Figure 3, and also corresponds to the jurisdictional limits of RWQCB and CDFW pursuant to their respective regulations. The limits of USACE jurisdiction is the low flow channel below the OHWM, which was approximately five (5) feet wide throughout the site over a linear distance of about 163 feet, for a total of approximately 815 square feet. The section of culvert within the study area would also be included in each agencies jurisdiction for an additional area of approximately 60 square feet (15 linear feet x 4 feet wide = 60 square feet). Because the onsite drainage is hydrologically connected to San Luis Obispo Creek and the Pacific Ocean, it is expected to be considered to be a jurisdictional waterway. Moreover, the USACE and RWQCB took jurisdiction over the drainage feature for a previously proposed bank stabilization project that was never constructed (refer to Nationwide Permit No. 199915061-TW and Waiver of Water Quality Certification from 1999). The current evaluation of this feature and its regulatory status will be further detailed in the Preliminary Delineation of Wetlands and Other Waters currently in preparation for this project. It is envisioned that the delineation report will be submitted to USACE, RWQCB and CDFW for permitting the proposed culverting of the drainage feature.

4.0 IMPACT ANALYSIS AND RECOMMENDED MITIGATION

The following impact analysis and recommended mitigation measures are intended to help guide project planning efforts and support the environmental review process being conducted by the City for the project. The impact discussion addresses the range of impacts that could result from implementation of the proposed project. Direct effects (or impacts) are caused by a project at the same time and place, and occur as a direct result of project activities. Indirect effects are caused by a project, but occur at a different time or place, such as in an adjacent area and occurring incidental to project activities. Cumulative effects are those that result from when the effects of the subject project combine with effects from other unrelated projects to compound environmental harm. Our understanding of the extent of proposed development footprint, along with the observations of onsite conditions from the site visits and desktop evaluation of special-status biological resources in the project vicinity, provided the basis for this analysis. Statements defining potential impacts on biological resources and proposed mitigation measures to reduce project-related impacts are provided below.

4.1 Direct and Indirect Effects

The project proposes to develop the entire 0.4-acre property, including placing the drainage into a culvert between the two existing culverts. This would result in the loss of approximately 11,760 square feet of isolated and disturbed Annual Grassland and 3,975 square feet of Riparian habitat. One red willow tree within the riparian habitat would be lost, as well as several willow shrubs and young coast live oaks. The riparian habitat is a biological resource associated with a drainage feature protected by federal, state and local agencies. Mitigation for impacts to the drainage and associated riparian scrub would be completed along the same drainage feature at an upstream location on Sinsheimer Park. Mitigation would be in the form of non-native weed abatement and shrub/tree plantings to increase the habitat value and function on City-owned land.

Due to the small size of the site, the drainage having shallow water with flashy flows, past/ongoing disturbance regime and surrounding industrial land use, the property has low potential to support special status wildlife. One small occurrence of a watch list plant, Cambria morning glory, was found onsite, and the habitat suitability assessment determined there was potential for several special-status wildlife species to occur on a transitory basis. In addition, potential for indirect effects on habitats or species located downstream from the site could occur through surface runoff of disturbed areas entering the creek channel during and after the work has been completed. Each of these potential effects is discussed in the following sections.

4.1.1 *Adverse Effects on Candidate, Sensitive or Special-status Species*

The project would remove a small occurrence of Cambria morning-glory, consisting of two individual plants. Cambria morning glory is a relatively common species in the region and is on a watch list with a CRPR of 4.2, which is a species of limited distribution that is moderately threatened. CDFW recommends that these species be evaluated under CEQA, and if the species is regionally rare or unique, it must be fully analyzed in a CEQA document. The level of significance of effects is to be based on:

- The type locality of a California Rare Plant Rank 4 taxon;
- Occurrences at the periphery of a species' range;
- Areas where the taxon is especially uncommon;
- Areas where the taxon has sustained heavy losses (declining);
- Occurrences exhibiting unusual morphology or occurring on unusual substrates;
- Species maintained on Bureau of Land Management (BLM), USFWS, or U.S. Forest Service (USFS) sensitive species lists; and
- Taxa associated with a habitat that is declining in California at a significant rate (CNPS 2020).

None of these conditions apply to this particular species within this localized area because numerous records of the species were identified in the CNDDDB search as well as our past studies from the region. The site is located within the center of the species' local distribution with extensive grassland habitats surrounding the City (Calflora 2021). This species is only found in the Central Coast region, but it is a common associate of coastal grasslands from San Luis Obispo west to Los Osos and north to San Simeon. The proposed project will not jeopardize the continued existence of this species in the region because it is known from a large number of occurrences locally, including City-owned open space. Extensive occurrences with sustaining populations of this

species are present in grasslands throughout the City of San Luis Obispo including on the Irish Hills Natural Reserve, the South Hills Open Space and in Laguna Lake Park. As such, loss of two plants growing along the road shoulder in an urban area would be considered less than significant from an ecological perspective and should not be considered a significant impact under CEQA.

Individual monarch butterflies could occur onsite periodically while moving through the area, but there are no substantial food resources and no roosting (i.e., autumnal or overwintering) habitat onsite. The butterflies are highly mobile species and would avoid disturbance during vegetation removal. No effects on monarch butterfly habitat would occur because no roosting habitat will be affected and compensatory mitigation for other species described below will also benefit the butterfly in the local area.

Similarly, the Cooper's hawk, yellow-warbler and common species of wildlife that could use the riparian habitat onsite on a transitory basis would not be affected by the loss of approximately 4,000 square feet of this isolated patch. The willows have been cut several times in the past and do not consist of a mature, dense stand that would support nesting sites for riparian species. No birds were seen in this habitat during the surveys, nor were any active or old nests observed. The onsite riparian would only be expected to be used as a stopover point, and there are larger riparian and grassland habitats in the surrounding area such as South Hills Open Space, Islay Hill Open Space, and a portion of the Tank Farm Road property that is planned to be preserved. Additionally, the project would provide compensatory mitigation for the loss of Riparian habitat within a City-owned property, as described below. While the loss of this small disturbed patch of Riparian habitat would not be considered to be significant from a biological perspective or under CEQA, project impacts on active bird nests that could be in this habitat prior to construction could be considered to be significant, and mitigation is prescribed below.

Special-status bat species could forage over the site, and as described above for monarch butterflies and birds, project effects on foraging would not be substantial and will be mitigated by offsite habitat creation/enhancement along the upper reach of this drainage on Sinsheimer Park. However, if bats roost in the culverts adjacent to the site, they could be disturbed by construction activities and potentially displaced by the installation of a longer culvert section at their access point. These effects and mitigation to address the effects are described below.

There would be no effect on designated critical habitat for federally listed species because none occurs on or near the site.

Impact BIO-1. Construction activities could potentially impact nesting of special-status avian species as well as bird species protected under the Migratory Bird Treaty Act. This is a significant but mitigable impact.

If construction activities are initiated during the nesting season (February 1 to August 31), impacts on protected nesting birds could occur. Active nests containing eggs and/or young could be killed during vegetation removal in the riparian habitat, and potentially in the adjacent grassland. The effects of construction activities on nesting birds would be limited to the seasonal time period that birds nest in this area; if the nesting season is avoided, no adverse effects are expected. To reduce potential project impacts to a level below significance, the following mitigation is required.

Mitigation Measure BIO-1a: If feasible, conduct the initiation of construction activities outside of the nesting season. All initial site disturbance should be limited to the time period between September 1 and January 31, if feasible. The preferred time period for vegetation removal would be September

prior to the start of the rain season. If tree removal and grading cannot be conducted outside the nesting season, then implementation of Mitigation Measure BIO-2b is required.

***Mitigation Measure BIO-1b:** Conduct a preconstruction nesting bird survey and avoid active nests.*

For any initial construction scheduled to start between February 1 and August 31, a qualified biologist shall conduct a preconstruction survey for nesting birds within the limits of the property. The survey shall be conducted within seven days before the initiation of construction. During this survey, the qualified biologist shall search for birds exhibiting nesting behavior and inspect all potential nest substrates in the impact area. Any nests identified shall be monitored to determine if they are active. If no active nests are found, construction may proceed. If an active nest is found within the construction area, the nest shall be monitored by the qualified biologist until the young have left the nest. A no disturbance buffer around the nest site shall be established based on species, which would include 50 feet for common songbirds and upwards of 250 feet for raptors. The biologist shall coordinate with the City biologist and also assess topography and vegetation and other relevant factors in developing the buffer at the site. Once the young are no longer reliant on the nest, work in the area may proceed.

Implementation of these mitigation measures would reduce project effects on protected nesting birds to a level below significance.

Impact Bio-2. Construction of the drainage improvements including extending the culvert could directly impact roosting bats. This is a potentially significant but mitigable impact.

Sensitive bat species may roost in the culverts adjacent to the site, particularly on the south side of the study area as the culvert goes under adjacent buildings. Construction disturbance may cause the bats to abandon the roost during the day and become disoriented. The installation of a new culvert will block the entrance to the potential roost area. No signs of a maternity roost site were present, but if one was present when the culvert installation was occurring, young could be affected or killed. To reduce potential project impacts to a level below significance, the following mitigation is required.

***Mitigation Measure BIO-2:** Conduct a preconstruction survey for roosting bats and install exclusion devices, if found.* Within seven days prior to the start of construction, a biologist approved by the City shall survey the culverts adjacent to the project site for sign of roosting bats such as guano piles, urine staining or prey remains. A night exit survey conducted at sunset shall also be included. If no evidence of bat activity is found, work may proceed. If more than one bat is observed leaving the culvert, the biologist shall determine whether a maternity roost is present by carefully observing individuals on the roost. If young are present, construction shall be delayed until they have matured and can fly on their own. When it has been determined that no young bats are present, the biologist shall monitor the roost in the evening immediately prior to vegetation disturbance in the drainage channel. When the bats leave to forage, the biologist will install bat exclusion netting over the opening of the culvert. The netting shall be inspected the following morning to ensure that no bats have become entangled in the netting and that none remain inside the culvert. The netting shall remain in place until the new culvert is installed, and shall be monitored on a daily basis to ensure no impacts to wildlife occur from the netting.

Implementation of these mitigation measures would reduce project effects on special-status bat species to a level below significance.

4.1.2 Adverse Effects on Riparian Habitat or Sensitive Natural Communities

The riparian habitat is considered to be a sensitive natural community by CDFW, RWQCB and the City, as well as under CEQA. It is under the jurisdiction of the RWQCB under Section 401 of the Clean Water Act and Porter Cologne Water Quality Act, by CDFW under Section 1602 of the California Fish and Game Code, and the City under General Plan policy. The active channel bottom is also included in their jurisdictions and would also be under the USACE's regulatory authority under Section 404 of the Clean Water Act. The City's General Plan requires avoidance of riparian habitat during construction projects, and Policy 8.6.3 requires mitigation for the loss of riparian habitat. The project is the last remaining lot in an industrial area with an eroding section of the road likely due to the accumulated trash and debris that affects flow dynamics. Construction of the project will require the removal of the onsite riparian scrub and placement of the drainage in a culvert so that the proposed commercial development including adjacent roadway improvements can be constructed on top of it. Due to the small size of the lot in context with surrounding development, retaining an open channel would be expected to continue eroding the roadway and contributing to sediment loading to downstream areas. The project as proposed will result in the loss of 4,732 square feet of jurisdictional riparian and stream habitat. Of this area, approximately 3,975 square feet of riparian scrub habitat would be permanently lost.

Work in the stream channel to remove vegetation and install the culvert will create disturbed soils. Sedimentation and/or toxic pollutants from equipment working in the stream channel can indirectly affect downstream areas. Riparian habitat downstream from the project site could potentially be indirectly affected by project construction should runoff from the project site and sediment from work in the stream corridor be transported offsite.

Impact Bio-3. Construction of the project will remove Central Coast Riparian Scrub and place a section of drainage into a culvert. Riparian habitat and the drainage are special status biological resources under the jurisdiction of USACE, RWQCB, CDFW and the City. This is a potentially significant but mitigable impact.

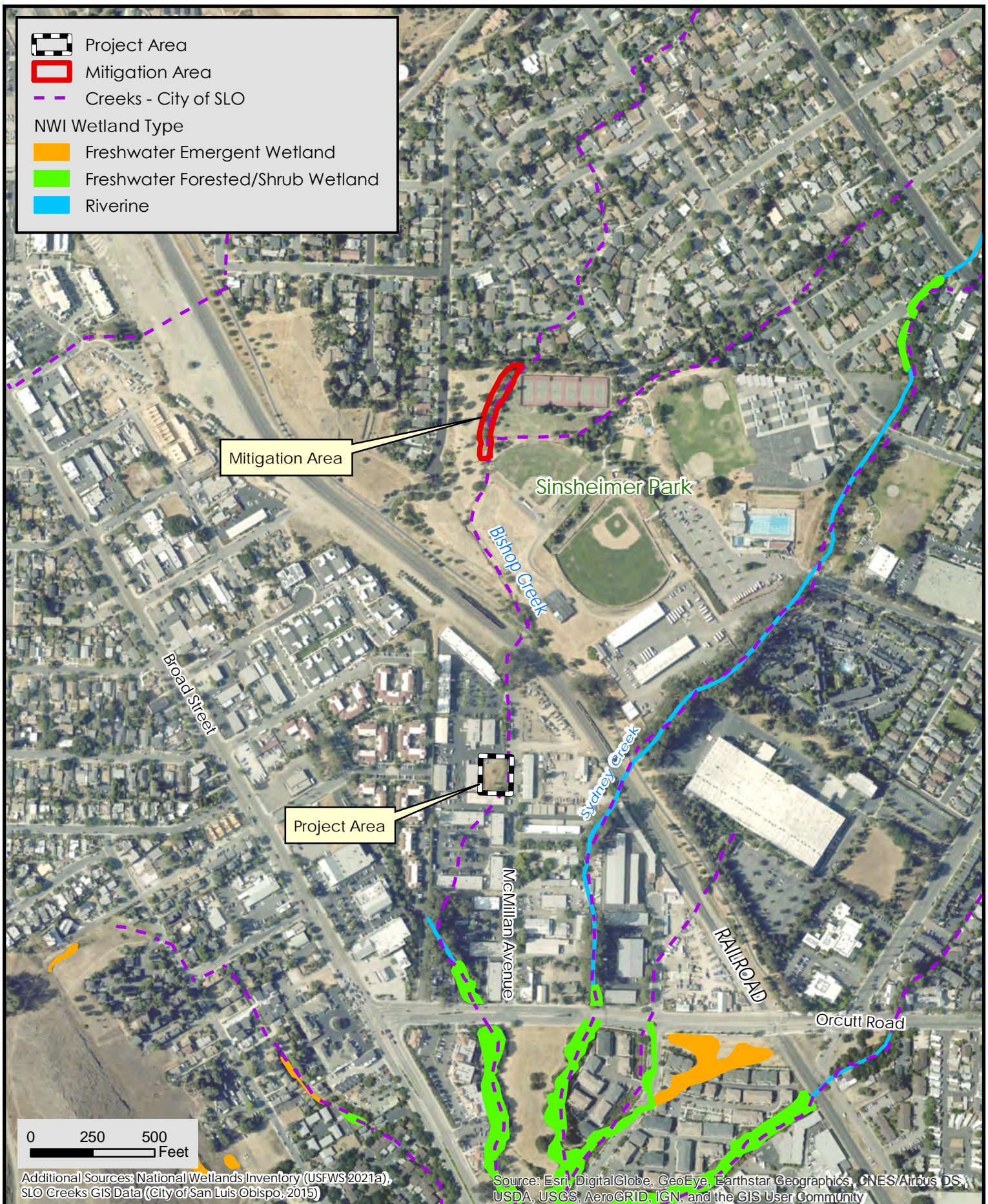
The project proposes full build-out of the lot, which involves installing an approximately 140-foot long culvert between the two existing culverts on the north and south sides of the property. The riparian trees and shrubs would be removed, the culvert installed, and the surrounding area filled and graded. This would result in the loss of approximately 4,732 square feet under the jurisdiction of the City, RWQCB and CDFW, and approximately 815 square feet under the jurisdiction of USACE (also refer to the wetland delineation report prepared by KMA 2021). These effects will be permanent as the habitat will be converted to commercial structures and parking areas. There will be no temporary effects since the entire site will be developed. The City requires compensatory mitigation for development within the riparian canopy and/or below the top of bank, whichever is farther, at a ratio of 2:1 (area created/restored to area lost). This area has been calculated at 4,732 square feet, and does not include the section of existing culvert (approximately 60 square feet) on the north side of the property that falls under the jurisdiction of the three respective agencies. Additionally, the onsite drainage is listed in the City's SLO Creeks geospatial data as requiring a setback of 20 feet from the edge of riparian/top of bank, and will require a creek setback exemption. Prior to project implementation, permits from the RWQCB, CDFW and USACE will also need to be obtained. The permits will require compensatory mitigation for the loss of riparian habitat and stream function and value. A Habitat Mitigation and Monitoring Plan (HMMP) is in preparation with a goal to provide a minimum ratio of 3:1 for habitat restoration/enhancement for the area lost. This mitigation plan is being prepared to meet the City's requirements for impacts on riparian habitats and associated setback areas, as well as the USACE, RWQCB and CDFW compensatory mitigation

requirements for future permit acquisition. Mitigation would occur on the same drainage upstream from the site at an offsite location approved by the City. The implementation of the following mitigation measures would bring the level of effects to the drainage feature and associated riparian scrub habitat below significance under CEQA.

***Mitigation Measure BIO-3a:** Obtain necessary permits for permanent impacts on waters of the state and waters of the United States.* The applicant shall prepare and submit applications to obtain a Clean Water Act Section 401 Water Quality Certification from RWQCB, a California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement from CDFW, and a Clean Water Act Section 404 Permit from USACE. As a component of the application packages, KMA's Preliminary Delineation of Wetlands and Other Waters will be submitted, along with the HMMP describing the methods and techniques to restore and enhance the mitigation area further upstream. The applicant would then be required to show the City proof of permit acquisition or a determination from each agency that a permit is not required prior to the issuance of a grading permit. As a condition of these permits, a compensatory mitigation plan will be required for impacts on jurisdictional areas. The state agencies may require a mitigation ratio that is greater than that required by the City to ensure no net loss of stream resources. As such, the HMMP currently in preparation proposes to restore and enhance the upstream section of the same creek on Sinsheimer Park at a minimum 3:1 ratio (habitat restored to habitat impacted). The below measure provides further detail.

***Mitigation Measure BIO-3b:** Prepare and implement a Habitat Mitigation and Monitoring Plan (HMMP) to be implemented at the City-approved offsite area.* Early consultation with the City Biologist, Mr. Freddy Otte, confirmed that an upstream portion of the subject drainage on the City-owned and managed Sinsheimer Park can be used as the compensatory mitigation site for this project. The total area of habitat restoration shall be established at a minimum 3:1 ratio to ensure state requirements are met. This equates to restoring and enhancing approximately 420 linear feet of drainage channel assuming approximately 140 linear feet of culvert will be installed. The HMMP will propose to create a roughly 50 foot wide riparian corridor (i.e., 25 feet on each side of the channel) for a total area of 0.42 acre to ensure a minimum of 14,196 square feet of disturbed area is restored to intact native riparian habitat. The proposed 0.42 acre area would equate to approximately 18,295 square feet to ensure sufficient area is restored, and this would be well over the City's 2:1 ratio. Additional requirements may be required by the USACE, RWQCB and CDFW as part of the permitting process and shall be incorporated into the HMMP accordingly. The mitigation area identified in consultation with the City Biologist is shown on Figure 7, the Mitigation Site Location Map. The HMMP will at a minimum include the following components:

1. Description of restoration site, including its location, size, current environmental conditions, ownership and measures to ensure its long-term protection.
2. Overall goals and measurable objectives to create a self-sustaining riparian habitat that requires minimal maintenance. A description of how habitat enhancement work in the creek corridor and buffer area will promote the ecological integrity of the restoration site and compensate for the loss of onsite stream channel.
3. An implementation plan, including schedule, site preparation (including non-native invasive species removal), planting plan (species and number of each, propagule type, seeding/planting density), and responsible party.
4. A maintenance plan detailing activities to be conducted during the establishment period (irrigation, non-native species removal) and schedule for implementation. The maintenance plan shall also address the long-term guidelines and constraints to



maintaining the vegetation in the mitigation area. No pesticides, herbicides or fertilizers shall be used in a manner in which these substances can affect the creek habitat and biota. Guidelines should be provided for the maintenance of planted trees, such as trimming or replacement.

5. A monitoring plan, including data collection methodology, how success criteria will be measured, and monitoring schedule for a period of at least five years. Monitoring will include establishing photo points that will aid in tracking the success of the planted propagules during each annual monitoring period. The vegetative density, cover and species richness of the mitigation site will be assessed.
6. Final success criteria based on the goals and measurable objectives to ensure that a viable riparian community is established consistent with the requirements established by the City and other involved regulatory agencies.
7. Contingency measures, such as supplemental planting, seeding or herbivore control, if success criteria are not being met.
8. Reporting requirements and notification of completion to responsible agencies.

Implementation of the above mitigation measures together with those resulting from regulatory agency permitting would reduce construction-related impacts on riparian and associated stream habitat function and value to a less than significant level.

Impact Bio-4. Project construction activities could generate sediment and/or pollutants that could degrade downstream riparian habitat and water quality. This is a potentially significant but mitigable impact.

Construction of the project will involve vegetation removal, grading, and work within the drainage channel to install the new culvert. Disturbed soils could erode into the downstream area of the drainage and be carried into downstream reaches if work occurred during the rainy season and these areas were not stabilized and/or protected prior to significant rainfall. Sedimentation is considered to be a type of pollutant in aquatic systems because it decreases water quality through increased turbidity, fills in pools or causes lateral spread of channels, and covers instream vegetation and other aquatic life. The Best Management Practices (BMPs) outlined below are recommended to avoid or minimize project effects during construction activities. Measures are described for the prevention of erosion, sedimentation, and toxic substances from reaching stream habitat on the site as well as further downstream. Toxic substances include those from construction equipment such as oil, gas, diesel, and hydraulic fluid could leak or be spilled and be carried in stormwater runoff into the drainage. To reduce the chance of indirect effects on protected riparian habitat and aquatic resources in offsite areas to a level below significance, the following mitigation measures are required.

Mitigation Measure BIO-4: Install appropriate erosion and sediment controls during construction.

The following erosion and sedimentation control methods are required to be implemented during the construction phases of the project:

1. If possible, the potential for erosion and sedimentation shall be minimized by scheduling construction activities associated with culvert installation to occur when the drainage is dry and no flowing or ponded water is present.
2. Sediment and erosion control measures shall be developed by a qualified engineer to protect water quality and comply with appropriate local and state regulations. Measures

may include the use of silt fence, straw wattles, erosion control blankets, straw bales, sandbags, fiber rolls and other appropriate techniques employed to protect the drainage feature on and further downstream of the property. All areas with soil disturbance shall have appropriate erosion controls and other stormwater protection BMPs installed to prevent erosion potential. All sediment and erosion control measures shall be installed per the engineer's requirements.

3. Spill kits shall be maintained on the site, and a Spill Response Plan shall be in place.
4. Equipment shall be refueled in designated areas with appropriate spill containment. Equipment storage shall utilize drip pans or ground covers as appropriate to ensure leaks are contained. All equipment and vehicles should be checked and maintained on a daily basis to ensure proper operation and to avoid potential leaks or spills.
5. Concrete washout shall be conducted in specified areas and with appropriate containment measures to ensure washout does not leave the site and enter the City's storm drain system. Washing of equipment, tools, etc. should occur in specified locations where the tainted water will not affect the drainage or City's storm drain system.
6. The use of chemicals, fuels, lubricants, or biocides shall be in compliance with all local, state, and federal regulations. All uses of such compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation.
7. All project-related spills of hazardous materials within or adjacent to the project site should be cleaned up immediately.

Implementation of the above BMPs would bring project impacts on offsite Riparian habitats and water quality to a level below significance.

4.1.3 Protected Wetlands

No wetland habitat is present on the property, and none is present in adjacent downstream areas because the drainage flows into a culvert offsite the runs underground beneath an industrial park. Where the channel daylight downstream from this culvert, the habitat type is riparian and mature eucalyptus woodland. Therefore, there would be no direct or indirect effects on wetland habitat. The BMPs described in Mitigation Measure BIO-4 would reduce potential project effects to a level below significance on offsite riparian habitat and water quality.

4.1.4 Interference with Movement of Native Fish or Wildlife, Wildlife Corridors, and Wildlife Nursery Sites

The proposed project will place an approximately 140-foot long culvert in a segment of a drainage between two existing culverts. Given the small channel size and intermittent nature of the drainage along with multiple instream barriers downstream of the site, no fish are expected to occur in this section of drainage. None were seen during the surveys, and the drainage upstream from the property was dry. No suitable spawning habitat for steelhead is present. For fish to reach the site, they would need to move through an approximately 475-foot long culvert on the downstream side of the property and get over/through other instream barriers. The new culvert section would not be a barrier to the movement of fish, but would increase the total distance between open sections of the drainage to roughly 655 feet, including the existing culvert on the upstream side of the property. There is no suitable habitat for fish as the drainage is a trash-filled roadside ditch with

insufficient water.

The movement of wildlife, wildlife corridors, and wildlife nursery sites would not be affected by the project because these functions would not be present in an urban land use type. The 0.4-acre property is not large enough and does not contain suitable habitat to support wildlife, and is isolated by industrial development.

Project effects on the movement of native fish or wildlife, wildlife corridors and wildlife nursery sites are expected to be less than significant, and no mitigation is required.

4.1.5 Conflicts with Local Policies or Ordinances, Such as Tree Preservation

Project impacts and mitigation regarding City policies on riparian habitat and setbacks from creeks is described above in Section 4.1.2. The City's Municipal Code 12.24.090 defines the provisions approved for tree preservation, and a process to request tree removal permits. Because the willows along the drainage have been cut to the base in the past, they are currently composed of multiple trunks less than three (3) inches DBH. Each of the coast live oak trees onsite were two (2) inches DBH or less. Only one red willow tree was just over six (6) inches DBH and meets the City's tree definition threshold. Mitigation for this tree will be covered under the HMMP described above in Mitigation Measure BIO-3b. While the City has requested that no willows be planted due to the ongoing homeless encampment issues, a suite of native trees, including California sycamore (*Platanus racemosa*), coast live oak, and alder (*Alnus rubra*), will be planted at the offsite mitigation area. Therefore, the loss of protected trees would be fully mitigated and no further measures are necessary.

4.1.6 Conflicts with Conservation Plans

No local, regional or state conservation plans have been prepared for the area in which the project is located. There would be no conflicts with conservation plans, and no mitigation is required.

4.2 Cumulative Effects

The project site is located in an area of southeastern San Luis Obispo where there is a substantial amount of existing development and infill projects. It is specifically located within an industrial area near the railroad tracks. The project will build out a 0.4-acre lot that is surrounded by urban development. In its undeveloped state, the lot does not provide wildlife habitat or serve as a steppingstone or movement corridor between open space areas due to its small size and the density of development surrounding it. Although it contains a drainage channel, it has been significantly modified in the past from its natural state, and development in the area appears to have altered its historic alignment. The project would place the onsite segment of drainage into a culvert and eliminate a source of sedimentation by removing an eroding bank. Placing an open channel into a culvert is not without any biological effects, but in this instance those effects would be minor, especially with the implementation of a robust habitat restoration and enhancement program on the same drainage feature just upstream from the site. With the incorporation of the mitigation measures described above, there would be no significant effects on biological resources. In addition, the City has protected extensive natural areas within and adjacent to the urban environment. Given the presence of large swaths of open land in the vicinity, the project as proposed would not contribute to cumulative effects to biological resources considering other known or foreseeable projects in the area.

5.0 CONCLUSIONS

The proposed project involves the construction of a warehouse and office building on an undeveloped lot in an existing industrial area. The lot is heavily disturbed from being graded during development of the industrial area and regular cycle of mowing and management. It supports a thin band of riparian scrub habitat along a drainage feature that is functioning as a roadside ditch. The riparian habitat has been removed and trimmed in the past, and due to trash and debris in the channel, is actively eroding McMillan Avenue. No wetland habitat is present in the drainage since it does not support water for a sufficient duration. A small occurrence of a native plant on a watch list (consisting of two plants) was observed along McMillan Avenue. The site observations coupled with a habitat suitability analysis determined there is only low probability that special-status wildlife species could use the site on a transitory basis (i.e., flyover, foraging, etc.).

There is potential for nesting birds to occur seasonally in the trees, shrubs and grasses. Potential also exists for protected bat species to roost in an adjacent offsite culvert under the neighboring building, but there is no roosting habitat on the property. The plans involve placing a roadside drainage into a culvert that will connect with existing culverts on either side of the property. It is expected that permitting from USACE under Section 404 of the Clean Water Act and RWQCB pursuant to Section 401 of the Clean Water Act and Porter-Cologne Water Quality Act will be required for the placement of fill (culvert and soil) into waters of the United States and state. Additionally, the CDFW requires notification of the proposed activity through Section 1602 of the California Fish and Game Code and issuance of a Lake and Streambed Alteration Agreement, and the City of San Luis Obispo requires compensatory mitigation for impacts on riparian habitat and the rare plant occurrence. As described above, habitat mitigation would occur upstream on Sinsheimer Park. Mitigation measures for special-status wildlife species and to protect water quality are also provided herein to avoid and minimize project effects on the natural environment. This analysis determined that the proposed project meets none of the criteria that trigger mandatory findings of significance under CEQA. With the incorporation of the mitigation measures described herein, project impacts on the six additional impacts to be considered during CEQA review will be reduced to a level below significance.

6.0 REFERENCES

- Agrawal, A.A., G. Petschenka, R.A. Bingham, M.G. Weber, and S. Rasmann. 2012. Toxic cardenolides: Chemical ecology and coevolution of specialized plant-herbivore interactions. *New Phytologist* 194:28-45.
- Audubon. 2021. Guide to North American Birds. Accessed via: <https://www.audubon.org/bird-guide> in April 2021.
- Bolster, B.C. (editor). 1998. Draft Terrestrial Mammal Species of Special Concern in California. Contributing authors: P.V. Brylski, P.W. Collins, E.D. Pierson, W.E. Rainey and T.E. Kucera. Prepared for California Department of Fish and Game, Wildlife Management Division, Nongame Bird and Mammal Conservation Program. Contract FG3146WM.
- Brower, L.P., L.S. Fink, and P. Walford. 2006. Fueling the fall migration of the monarch butterfly. *Integrative and Comparative Biology* 46:1123-1142.
- Buena Geotechnical Services. 2004 (March 1). Geotechnical Engineering Report for Proposed 3 Unit Industrial Building, 2855 McMillan Avenue, San Luis Obispo, California. B-043672. Prepared for Rengel & Company, Architects, Inc. Paso Robles, California.

- Calflora. 2021. Information on Wild California Plants for Conservation, Education, and Appreciation. Berkeley, California. Accessed via <http://www.calflora.org/> in April 2021.
- California Department of Fish and Wildlife (CDFW). 2018 (March 20). Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities.
- California Department of Fish and Wildlife (CDFW). 2020a (January). Special Vascular Plants, Bryophytes, and Lichens List. California Natural Diversity Database.
- California Department of Fish and Wildlife (CDFW). 2020b (July). Special Animals. Biogeographic Data Branch, California Natural Diversity Database.
- California Department of Fish and Wildlife (CDFW). 2021a. California Natural Diversity Database (CNDDB). Commercial version dated April 2, 2021. Accessed via: <https://www.wildlife.ca.gov/Data/CNDDB> in April 2021.
- California Department of Fish and Wildlife (CDFW). 2021b. Vegetation Classification and Mapping Program (VegCAMP). Accessed via: <https://www.wildlife.ca.gov/Data/VegCAMP> in April 2021.
- California Department of Fish and Wildlife (CDFW). 2021c. California Wildlife Habitat Relationships System. Accessed via: <https://www.wildlife.ca.gov/data/cwhr> in April 2021.
- California Herps. 2021. A Guide to the Amphibians and Reptiles of California. Accessed via: <http://www.californiaherps.com> in April 2021.
- California Native Plant Society (CNPS). 2020. Considerations for Including CRPR 4 Plant Taxa in CEQA Biological Resource Impact Analysis. Adopted by the CNPS Rare Plant Program Committee 21 January 2020. Sacramento, California.
- California Native Plant Society (CNPS). 2021. Inventory of Rare and Endangered Plants of California. Online edition V8-03 0.39. Accessed via: <http://www.rareplants.cnps.org> in April 2021.
- Center for Biological Diversity, Center for Food Safety, The Xerces Society, and Dr. Lincoln Brower. 2014 (August 26). Petition to Protect the Monarch Butterfly (*Danaus plexippus plexippus*) Under the Endangered Species Act. Submitted to the U.S. Secretary of Interior, U.S. Fish and Wildlife Service.
- City of San Luis Obispo (City). 2014 (December 9). General Plan; Chapter 6, Conservation and Open Space.
- The Cornell Lab of Ornithology. 2021a. eBird. Accessed via: <https://ebird.org> in April 2021.
- The Cornell Lab of Ornithology. 2021b. All About Birds. Accessed via: <https://www.allaboutbirds.org> in April 2021.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1992. Classification of Wetlands and Deepwater Habitats of the United States. Prepared for U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington, D.C. FWS/OBS-79/31.
- Gruver, J.C. and D.A. Keinath. 2006 (October 25). Townsend's Big-eared Bat (*Corynorhinus townsendii*): A Technical Conservation Assessment. Prepared for the USDA Forest Service, Rocky Mountain Region, Species Conservation Project.
- Google Earth. 2021. Google Earth Pro Version 7.3.3.7786. 1994 to 9/7/2018.
- Hershler, R. 1995. New freshwater snails of the genus *Pyrgulopsis* (Rissooidea: Hydrobiidae) from California. The Veliger 38(4):343-373.

- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. California Department of Fish and Game, Sacramento.
- Hoover, R.F. 1970. The Vascular Plants of San Luis Obispo County, California. University of California Press, Berkeley, California.
- Jennings, M. R., and M. P. Hayes. 1994. Amphibian and reptile species of special concern in California, 1 November 1994. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, California. 255 pp.
- Jepson Flora Project (editors). 2021. Jepson eFlora. The Jepson Herbarium, University of California, Berkeley. Accessed via: <http://ucjeps.berkeley.edu/eflora/> in April 2021.
- Moyle, P.B., R.M. Quinones, J.V. Katz, and J. Weaver. 2015. Fish Species of Special Concern in California, Third Edition. California Department of Fish and Wildlife, Sacramento.
- Natural Resources Conservation Service (NRCS). 2021a. Web Soil Survey. National Cooperative Soil Survey, U.S. Department of Agriculture. Accessed via: <http://websoilsurvey.nrcs.usda.gov/> in April 2021.
- Natural Resources Conservation Service (NRCS). 2021b. Hydric Soils. U.S. Department of Agriculture. Accessed via: <https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/> in April 2021.
- Padre Associates, Inc. 2013 (January 9). Biological Resource Survey Letter-Report for the Off-site Flower Mound Impact Area, Chevron San Luis Obispo Tank Farm, San Luis Obispo County, California. Prepared for Chevron Environmental Management Company, San Luis Obispo, California. Project No. 0601-3284.
- Sawyer, J. O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second Edition. California Native Plant Society, Sacramento, California.
- Schultz, C.B., L.M. Brown, E. Pelton, and E.E. Crone. 2017. Citizen science monitoring demonstrates dramatic declines of monarch butterflies in western North America. Biological Conservation 214:343-346.
- Thompson, R.C., A.N. Wright, and H.B. Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. University of California Press, Oakland, California.
- United States Fish and Wildlife Service (USFWS). 2000 (January). Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants.
- United States Fish and Wildlife Service (USFWS). 2021a. National Wetlands Inventory. U.S. Department of the Interior, Washington, D.C. Accessed via: <http://www.fws.gov/wetlands/> in April 2021.
- United States Fish and Wildlife Service (USFWS). 2021b. Threatened and Endangered Species Active Critical Habitat Report. ECOS Environmental Conservation Online System. Accessed via: <https://ecos.fws.gov> in April 2021.

APPENDIX A

Site Plans



APPENDIX B

List of Plants and Animals Observed Onsite During the Surveys



Appendix B. List of Plants and Animals Observed During the Surveys

Scientific Name	Common Name
Plants	
<i>Allium triquetrum</i> *	White flowered onion
<i>Avena barbata</i> *	Slender wild oat
<i>Baccharis pilularis</i>	Coyote brush
<i>Brassica nigra</i> *	Black mustard
<i>Bromus diandrus</i> *	Rippgut brome
<i>Calystegia macrostegia</i> ssp. <i>cyclostegia</i>	Coast morning glory
<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	Cambria morning-glory (CRPR 4.2)
<i>Carduus pycnocephalus</i> *	Italian thistle
<i>Cyperus involucratus</i> *	Umbrella plant
<i>Erodium botrys</i> *	Big heron bill
<i>Erodium cicutarium</i> *	Red-stemmed filaree
<i>Eschscholzia californica</i>	California poppy
<i>Festuca perennis</i> *	Italian rye grass
<i>Frangula californica</i>	California coffeeberry
<i>Galium aparine</i>	Goose grass
<i>Geranium carolinianum</i> *	Carolina geranium
<i>Hedera helix</i> *	English ivy
<i>Hordeum murinum</i> ssp. <i>leporinum</i> *	Foxtail barley
<i>Malva nicaeensis</i> *	Bull mallow
<i>Medicago polymorpha</i> *	California burclover
<i>Melilotus indicus</i> *	Yellow sweetclover
<i>Oxalis pes-caprae</i> *	Bermuda buttercup
<i>Plantago lanceolata</i> *	English plantain
<i>Quercus agrifolia</i>	Coast live oak
<i>Raphanus sativus</i> *	Wild radish
<i>Rubus armeniacus</i> *	Himalayan blackberry
<i>Rumex crispus</i> *	Curly dock
<i>Salix laevigata</i>	Red willow
<i>Salix lasiolepis</i>	Arroyo willow
<i>Schinus molle</i> *	Peruvian pepper tree
<i>Schinus terebinthifolius</i> *	Brazilian pepper tree
<i>Sonchus asper</i> *	Spiny sowthistle
<i>Stipa miliacea</i> *	Smilo grass
<i>Vicia sativa</i> *	Spring vetch
Animals	
<i>Calypte anna</i>	Anna's hummingbird
Cladocera	Water fleas
<i>Corvus brachyrhynchos</i>	American crow (flyover)
<i>Haemorhous mexicanus</i>	House finch [#]
<i>Mimus polyglottos</i>	Northern mockingbird [#]
<i>Physa</i> sp.	Freshwater snail
<i>Pseudacris sierra</i>	Sierran treefrog

*Non-native species

Bold indicates special-status species

[#]Seen on adjacent property

APPENDIX C

Photo Plate



Appendix C. Photo Plate

Photo 1. Southerly view across the parcel showing Annual Grassland habitat. Note the thick seasonal growth of non-native species comprised of wild oats, Italian ryegrass and bromes.



Photo 2. Easterly view across the parcel with Annual Grassland in the foreground and a band of thinned riparian shrubs along the roadside drainage in the background.



Photo 3. Southerly view along the western property line abutting existing industrial development.



Photo 4. Easterly view along the southern property line with the riparian habitat along the roadside drainage in the distance.



Photo 5. View from the southeast corner of the parcel looking north. Mc Millan Avenue is on the right. The road is actively eroding in this location.



Photo 6. View from the eastern property boundary looking north. A portion of the paved driveway and culvert fall within the parcel boundary. The drainage enters the property from this culvert and the upstream area is a ditch along McMillan Avenue seen in the distance. Two Cambria morning glory plants were seen at the base of the sign in this photo.



Photo 7. Westerly view across the northern portion of the parcel. A small patch of native California poppy (*Eschscholzia californica*) is seen in the foreground, otherwise, the site was dominated by non-native species.



Photo 8. One rare plant species, Cambria morning-glory (*Calystegia subacaulis* ssp. *episcopalis*), was found along the northeastern creek bank. It was not yet in flower but two plants were identifiable by the characteristics of the leaves and growth habit. Additional surveys confirmed it was Cambria morning glory.



Photo 9. View from the northeastern corner of the parcel looking downstream. One red willow (*Salix laevigata*) tree is seen on the right. Note the racking of trash, which was present throughout the drainage, indicating the limits of high water.



Photo 10. View from within the channel looking upstream at the culvert, with concrete slope protection around it. The tree is the same red willow as in Photo 9.



Photo 11. View from within the channel, looking upstream. Arroyo willows (*Salix lasiolepis*) that had previously been cut to the base had resprouted with multiple small stems. The active channel had shallow standing water. In-channel vegetation was mainly upland grassland species, but an umbrella plant (*Cyperus involucratus*) was also present.



Photo 12. View of the eastern eroded bank along McMillan Avenue. A terrace within the channel is seen on the right.



Photo 13. An outfall pipe into the channel is seen on the left. View is downstream. Note the racking of vegetation on the willow clump.



Photo 14. View of the culvert on the downstream side of the drainage with concrete slope protection. From this point the drainage runs under an industrial complex offsite.

APPENDIX D

Special-status Biological Resources Summary



Appendix D. Special-status Biological Resources Summary

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
PLANTS/LICHENS/BRYOPHYTES						
Adobe sanicle	<i>Sanicula maritima</i>	—	R	1B.1	Perennial herb; chaparral, coastal prairie, meadows and seeps, valley and foothill grassland on clay and serpentine soils; 30-240 meters in elevation; blooms February to May.	Not expected. While grassland habitat is present onsite, no suitable serpentine soils with seeps or mesic conditions are present. Moreover, this perennial species would have been detectable during the April surveys. Species occurs from the northern coast of SLO Co. through the city of SLO. Recorded from the South Hills Open Space on serpentine influenced soils.
Betty's dudleya	<i>Dudleya abramsii</i> ssp. <i>bettinae</i>	—	—	1B.2	Perennial herb; chaparral, coastal scrub and valley and foothill grassland on rocky, serpentine soils; 20-180 meters in elevation; blooms May to July.	Not expected. No suitable serpentine soils or rocky areas are present onsite. Species is restricted to serpentine outcrops in the SLO area of endemism.
Black-flowered figwort	<i>Scrophularia atrata</i>	—	—	1B.2	Perennial herb; coniferous forest, chaparral, coastal dunes, coastal scrub and riparian scrub on sand or diatomaceous shale; 10-500 meters in elevation; blooms March to July.	Not expected. No suitable soils are present and this perennial species would have been seen during the surveys. Within SLO Co., species is restricted to the hills around Pismo Beach. Site is outside of the species' local distribution.
Blochman's dudleya	<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	—	—	1B.1	Perennial herb; coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland on rocky, often clay or serpentine soils and sandstone rock outcrops; 5 - 450 meters in elevation; blooms April to June.	Not expected. No suitable serpentine soils or rocky (even sandstone) areas are present onsite. Species is generally restricted to serpentine rock outcrops in the SLO area.
Brewer's spineflower	<i>Chorizanthe breweri</i>	—	—	1B.3	Annual herb; coniferous forest, chaparral, cismontane woodland and coastal scrub on serpentinite or gravelly soils; 45-800 meters in elevation; blooms April to August.	Not expected. No suitable soils are present. Species occurs in hills and mountains surrounding SLO.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Cambria morning-glory	<i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	—	—	4.2	Perennial rhizomatous herb; chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland usually on clay soils; 30-500 meters in elevation; blooms March to July.	Present. Grassland habitat is of marginal quality given past disturbance and development. Clayey soils are present, and a small occurrence consisting of two plants was recorded along the road shoulder at the base of a sign during the surveys.
Chaparral ragwort	<i>Senecio aphanactis</i>	—	—	2B.2	Annual herb; chaparral, cismontane woodland, coastal scrub in drying alkaline flats; 15-800 meters in elevation; blooms January to April.	Not expected. No suitable habitat or soils present, and surveys conducted during the species' blooming period did not locate this species. Records in the hills surrounding SLO are from pre-1970 and "need fieldwork".
Chorro Creek bog thistle	<i>Cirsium fontinale</i> var. <i>obispoense</i>	E	E	1B.2	Perennial herb; chaparral, cismontane woodland, coastal scrub, valley and foothill grassland in seeps and drainages with serpentine; 35-385 meters in elevation; blooms February to September.	Not expected. No suitable soils are present and the site is slightly outside of the species' local distribution. Species occurs to the west and northwest of SLO in serpentine seeps.
Congdon's tarplant	<i>Centromadia parryi</i> ssp. <i>congonii</i>	—	—	1B.1	Annual herb; valley and foothill grassland and disturbed sites on alkaline soils; 0-230 meters in elevation; blooms May to November.	Not expected. No seasonal wetland habitat or depressions are present. Species can tolerate disturbance, but typically is found in the historic vernal pool areas of the Laguna Lake area and along Tank Farm Road. July site visit did not observe this species, and several reference sites were visited to confirm it would have been in identifiable condition at the time the survey was conducted.
Cuesta Ridge thistle	<i>Cirsium occidentale</i> var. <i>lucianum</i>	—	—	1B.2	Perennial herb; openings in chaparral, steep rocky slopes and disturbed roadsides; 500-750 meters in elevation; blooms April to June.	Not expected. No suitable habitat is present, the site is greatly outside of the species' elevational range and restricted distribution.
Dune larkspur	<i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	—	—	1B.2	Perennial herb; maritime chaparral and coastal dunes; 0-200 meters in elevation; blooms April to June.	Not expected. No suitable habitat is present, and this species is restricted to coastal areas. Records from SLO are from the 1880s and only have general locality information.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Dwarf soaproot	<i>Chlorogalum pomeridianum</i> var. <i>minus</i>	—	—	1B.2	Perennial bulbiferous herb; chaparral on serpentine soils; 305-1000 meters in elevation; blooms May to August.	Not expected. No suitable habitat or soils are present, and the site is greatly outside of the species' elevational range. Species is recorded in the serpentine hills surrounding the city of San Luis Obispo.
Eastwood's larkspur	<i>Delphinium parryi</i> ssp. <i>eastwoodiae</i>	—	—	1B.2	Perennial herb; chaparral and valley and foothill grassland generally in serpentine soils; 75-500 meters in elevation; blooms February to March.	Not expected. No suitable soils are present and the site is outside of the species' elevational range. Several records in foothills surrounding the site.
Hoover's bent grass	<i>Agrostis hooveri</i>	—	—	1B.2	Stoloniferous perennial herb; chaparral, cismontane woodland, and valley and foothill grassland habitats in sandy soils; 60-600 meters in elevation; blooms April to July.	Not expected. No suitable soils are present and the site is outside of the species' local distribution. Recorded from coastal hills and east Cuesta Ridge.
Hoover's button-celery	<i>Eryngium aristulatum</i> var. <i>hooveri</i>	—	—	1B.1	Herb that can occur as either an annual or a perennial; vernal pools, seasonally wet grasslands, and roadside ditches; 3-45 meters in elevation; blooms June to August.	Not expected. No seasonal wetland habitat or depressions are present. Typically is found in the historic vernal pool areas of the Laguna Lake region and along Tank Farm Road. July site visit did not observe this species, and a reference site was visited to confirm it would have been in identifiable condition at the time the survey was conducted.
Indian Knob mountainbalm	<i>Eriodictyon altissimum</i>	E	E	1B.1	Perennial evergreen shrub; maritime chaparral, cismontane woodland, and coastal scrub in sandstone soils; 80-270 meters in elevation; blooms March to June.	Not expected. No suitable soils or habitat are present and the site is outside of the species' elevational range. Occurs in coastal mountains south of Morro Bay and the Indian Knob area.
Irish Hills spineflower	<i>Chorizanthe aphanantha</i>	—	—	1B.1	Annual herb; openings in chaparral and restricted to serpentine; approx. 305 meters in elevation; blooms from April to August.	Not expected. Known only from a very restricted area in the Irish Hills to the southwest of San Luis Obispo; no suitable habitat or soils are present.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Jones' layia	<i>Layia jonesii</i>	—	—	1B.2	Annual herb; chaparral and valley and foothill grassland on clay or serpentine; 5-400 meters in elevation; blooms March to May.	Not expected. Marginal grassland habitat is present, but soils are not associated with serpentine, and therefore, no suitable habitat present. Would have been seen during surveys conducted during the species' blooming period.
Mesa horkelia	<i>Horkelia cuneata</i> var. <i>puberula</i>	—	—	1B.1	Perennial herb; chaparral, cismontane woodland, and coastal scrub on sandy or gravelly soils; 70- 810 meters in elevation; blooms February to September.	Not expected. No suitable habitat or soils are present. The species has a wide range in the county but the closest records are from west Cuesta. Perennial species that would have been seen during the surveys.
Miles' milk-vetch	<i>Astragalus didymocarpus</i> var. <i>milesianus</i>	—	—	1B.2	Annual herb; coastal scrub habitats with clay soils; 20-90 meters in elevation; blooms March to June.	Not expected. Although clay soils are present, suitable coastal scrub habitat and rocky serpentine areas are absent. Surveys were conducted during the species' blooming period. Recorded from several occurrences in the SLO area including Laguna Lake near an ephemeral drainage.
Most beautiful jewelflower	<i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	—	—	1B.2	Annual herb; chaparral, cismontane woodland, and valley and foothill grassland on serpentine soils; 94-1000 meters in elevation; blooms March to October.	Not expected. No suitable soils are present and the site is outside of the species' elevational range. Species occurs in the Coast Range from Ragged Point to the city of SLO most always on serpentine.
Mouse-gray dudleya	<i>Dudleya abramsii</i> ssp. <i>murina</i>	—	—	1B.3	Perennial leaf succulent; chaparral, cismontane woodland and valley and foothill grassland on serpentine soils; 50-525 meters in elevation; blooms May to June.	Not expected. No suitable soils are present and perennial species that would have been seen during the surveys. Distribution is centered around the city of SLO.
Nipomo Mesa ceanothus	<i>Ceanothus impressus</i> var. <i>nipomensis</i>	—	—	1B.2	Perennial shrub; chaparral on sandy soil; 30-245 meters in elevation; blooms February to April.	Not expected. No suitable habitat or soils are present, and this species has a restricted range on the Nipomo Mesa with a few historic localities in the hills north of Pismo Beach.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Ojai fritillary	<i>Fritillaria ojaiensis</i>	—	—	1B.2	Perennial bulbiferous herb; broad-leafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forest on rocky soils; 225-998 meters in elevation; blooms February to May.	Not expected. No suitable habitat or soils are present and the site is greatly outside of the elevational range of this species. Species occurs in mountainous areas surrounding SLO.
Oso manzanita	<i>Arctostaphylos osoensis</i>	—	—	1B.2	Perennial evergreen shrub; chaparral and cismontane woodland on dacite porphyry buttes; 95-500 meters in elevation; blooms February to March.	Not expected. No suitable habitat or soils are present, the site is outside of the elevational range of this species, and no manzanita shrubs were seen during the surveys. Species has a highly restricted range to the east of Morro Bay.
Palmer's monardella	<i>Monardella palmeri</i>	—	—	1B.2	Perennial herb; chaparral and cismontane woodland on serpentine soils; 200-800 meters in elevation; blooms June to August.	Not expected. No suitable habitat or soils are present and the site is greatly outside of the elevational range of this species. Species occurs in the coastal mountains to the east of Morro Bay and in the Irish Hills.
Pecho manzanita	<i>Arctostaphylos pechoensis</i>	—	—	1B.2	Perennial evergreen shrub; coniferous forest, chaparral and coastal scrub on siliceous shale soils; 125-850 meters in elevation; blooms November to March.	Not expected. No suitable habitat or soils are present, the site is outside of the species' elevational range, and no manzanita shrubs were seen during the surveys. Species is restricted to the coastal mountains between Los Osos and Avila Beach.
Pismo clarkia	<i>Clarkia speciosa</i> ssp. <i>immaculata</i>	E	R	1B.1	Annual herb; margins and openings of chaparral, cismontane woodland, and valley and foothill grassland; highly restricted to sandy soils; 25-185 meters in elevation; blooms May to July.	Not expected. No suitable soils are present. Site is outside of the restricted distribution of this species. Species occurs only in the hills between Pismo Beach and Edna, extending toward north of Arroyo Grande.
Saline clover	<i>Trifolium hydrophilum</i>	—	—	1B.2	Annual herb; marshes and swamps, mesic valley and foothill grassland, and vernal pools on alkaline soils; 0-300 meters in elevation; blooms April to June.	Not expected. Suitable habitat and soils are not present. Not found during surveys conducted during the blooming period.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
San Benito fritillary	<i>Fritillaria viridea</i>	—	—	1B.2	Perennial bulbiferous herb; chaparral and cismontane woodland on rocky serpentine slopes, streambanks and roadsides; 200-1525 meters in elevation; blooms March to May.	Not expected. No suitable habitat or soils are present, the site is greatly outside of the species' elevational range, and the only records in the vicinity is from 1964.
San Luis mariposa-lily	<i>Calochortus obispoensis</i>	—	—	1B.2	Bulbiferous, perennial herb; chaparral, coastal scrub and valley and foothill grassland on sandstone (south SLO County) or serpentine soils; 75-730 meters in elevation; blooms May to July.	Not expected. No suitable serpentine or sandstone rock outcrops present. Distribution is inland around the city of San Luis Obispo, with large populations nearby.
San Luis Obispo County lupine	<i>Lupinus ludovicianus</i>	—	—	1B.2	Perennial herb; chaparral and cismontane woodland on sandstone or sandy soils; 50-525 meters in elevation; blooms April to July.	Not expected. No suitable habitat or soils are present. Species occurs in south SLO Co.
San Luis Obispo owl's-clover	<i>Castilleja densiflora</i> var. <i>obispoensis</i>	—	—	1B.2	Annual herb; meadows, seeps, and valley and foothill grassland sometimes on serpentine; 10-400 meters in elevation; blooms March to May.	Not expected. While the site is within the documented elevational range and local distribution of the species and annual grassland is present, site is highly disturbed from surrounding development and regular mowing. Species was not found during focused surveys conducted during the species' blooming period. Species occurs in the grasslands on hills surrounding SLO, and has been documented on the former Tank Farm and Froom Ranch areas.
San Luis Obispo sedge	<i>Carex obispoensis</i>	—	—	1B.2	Perennial herb; coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland, often on serpentine and associated clay soils in seeps; 10-820 meters in elevation; blooms April to June.	Not expected. No suitable serpentine wetlands are present onsite. The majority of known extant populations are at higher elevations along the Santa Lucia ridge, Irish Hills or other foothill locations in serpentine influenced soils. Was not observed during focused surveys conducted during the blooming period.

Common Name	Scientific Name	Fed	CA	CRPR	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Santa Lucia manzanita	<i>Arctostaphylos luciana</i>	—	—	1B.2	Perennial evergreen shrub; chaparral and cismontane woodland on shale soils; 350-850 meters in elevation; blooms December to March.	Not expected. No suitable habitat or soils are present, the site is greatly outside of the species' elevational range, and no manzanitas were observed during the surveys. Distribution is centered on the Santa Lucia Range east of Cuesta Grade.
Santa Margarita manzanita	<i>Arctostaphylos pilosula</i> (= <i>A. wellsii</i>)	—	—	1B.2	Evergreen perennial shrub; occurs in closed-cone coniferous forests, broadleaved upland forest, cismontane woodland, and maritime chaparral sometimes on sandstone; ranges from 75-1100 meters in elevation; blooms December to May.	Not expected. No suitable habitat or soils are present, and no manzanitas were observed during the surveys. Species is widely distributed throughout mountainous areas of SLO Co. except the north coast.
Southern curly-leaved monardella	<i>Monardella sinuata</i> ssp. <i>sinuata</i>	—	—	1B.2	Annual herb; chaparral, cismontane woodland, coastal dunes, and openings in coastal scrub on sandy soils; elevations below 300 meters; blooms May to September.	Not expected. No suitable habitat or soils are present. Species occurs to the southeast of Morro Bay to Pismo Beach in coastal areas.

*E = Endangered; T = Threatened; R = Rare; '—' = no status; CRPR: Rank 1A - Presumed extirpated in California and either rare or extinct elsewhere; Rank 1B – Rare, threatened or endangered in California and elsewhere; Rank 2A – Presumed extirpated in California, but more common elsewhere; Rank 2B – Rare, threatened, or endangered in California, but more common elsewhere; Rank 3 - Plants needing more information, a review list; Rank 4 – Limited distribution, a watch list. Sources: California Natural Diversity Database (California Department of Fish and Wildlife 2021a); Special Vascular Plants, Bryophytes, and Lichens List (California Department of Fish and Wildlife 2020a); Inventory of Rare and Endangered Plants of California (California Native Plant Society 2021); Information on Wild California Plants for Conservation, Education, and Appreciation (Calflora 2021).

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
ANIMALS						
INVERTEBRATES						
Atascadero June beetle	<i>Polyphylla nubila</i>	—	—	—	Sandy soils in annual grassland, chamise chaparral, and oak woodland and savannah. Restricted to Atascadero and San Luis Obispo.	Not expected. Onsite soils are not sandy and the only record from the vicinity is from 1956 and has an imprecise location.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
California linderiella	<i>Linderiella occidentalis</i>	—	—	—	Seasonal pools or vernal pools in grasslands or in sandstone depressions. Can occur in very small pools and are heat tolerant.	Not expected. No topographic depressions capable of holding water are present on this site, and species does not occur in flowing water. Recorded along Tank Farm Road.
Crotch bumble bee	<i>Bombus crotchii</i>	—	CE	—	Inhabits grasslands and scrub, especially hot and dry areas. It nests and overwinters underground. Food plants include milkweed, lupine, phacelia, sage, clarkia, poppy, and buckwheat.	Unlikely. Small size of the property and surrounding industrial development make the site unlikely to be inhabited by this species. One small patch of poppies was observed and no other food plants were present on this disturbed site. One individual documented in downtown SLO in 2009; otherwise little information is known about the status of the species in the area.
Monarch butterfly	<i>Danaus plexippus</i> pop. 1	C	—	— (overwintering population)	Adults feed on the nectar of various blooming plants. During breeding can be found in fields, pastures, residential areas, grassland and scrub. Eggs are laid on and caterpillars feed on milkweed. Overwinters in wind-protected tree groves of eucalyptus, Monterey pine and cypress along the coast.	Potential. No groves of suitable trees occur in the study area to be used as an overwintering site. However, individuals could occur periodically while foraging. There are several overwintering records from small groves and linear windrows in urban SLO and the surrounding area.
San Luis Obispo pyrg	<i>Pyrgulopsis taylori</i>	—	—	—	Freshwater snail with planktonic larvae. Also has been recorded on rocks and in leaf litter. Endemic to the San Luis Obispo Creek watershed.	Unlikely. Other records from the area are from perennial headwater creeks near Cuesta Grade and springs that feed into San Luis Obispo Creek. Onsite drainage does not have this type of habitat and is highly disturbed from past development and excessive trash and debris from homeless encampments. Freshwater aquatic snails were seen during the survey but were determined to be of a different genus.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T	—	—	Grasslands with temporary ponded water. Inhabits small clear-water depressions in rock, vernal pools and swales, as well as anthropogenic habitats such as tire ruts, dozer scrapes and railroad pools. Needs standing water for at least 18 days to complete its lifecycle.	Not expected. No topographic depressions capable of holding water are present on the site, and species does not occur in flowing water. Documented from seasonal pools along Tank Farm Rd.
Wawona riffle beetle	<i>Atractelmis wawona</i>	—	—	—	Small- to medium-sized clear mountain streams with riffles; uses submerged algae. Elevational range reported to be 2000-5000 feet from Mariposa County north to Oregon and Idaho, but there is a record in San Luis Obispo Creek at 98 feet elevation identified only by larvae.	Not expected. The drainage in the study area is unsuitable for this species, and there is only one record in the vicinity and it is greatly outside of the known distribution of the species.
Western bumble bee	<i>Bombus occidentalis</i>	—	CE	—	Generalist foragers and found on agricultural crops such as tomatoes, peppers, cranberries, alfalfa, avocado, apples, cherries, blackberries, and blueberries. Only females survive the winter and establish new colonies the following spring. Colonies contain one queen, female workers, larvae, and when the season nears, male and female reproductive members. Nests are underground in cavities or burrows.	Unlikely. Potentially could forage on native plant species onsite, but species has undergone substantial range reduction, and no longer occurs in central California. Historic record from 1936 from south of San Luis Obispo.
FISH						
South-central California coast DPS steelhead	<i>Oncorhynchus mykiss irideus</i> pop. 9	T	—	—	Adults spawn in freshwater streams with clear, well-oxygenated, cool water and clean gravel substrate. Also require instream cover (branches, logs) and streamside vegetation. Juveniles rear in freshwater reaches or lagoons before going to the ocean to mature, and then return to freshwater to reproduce.	Not expected. The onsite drainage is not suitable habitat due to insufficient flows/depth, and the downstream Acacia Creek does not support quality habitat and pools in its current condition. Past surveys in the area documented steelhead in Acacia Creek even though some instream barriers are present (pers. comm. F. Otte). Documented in San Luis Obispo Creek.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
AMPHIBIANS/REPTILES						
Blainville's (=coast) horned lizard	<i>Phrynosoma blainvillii</i>	—	—	SSC	Grasslands, sandy washes, coastal scrub, chaparral, coniferous forest and woodlands with patches of open areas for sunning and bushes for cover. Often with loose sandy soils for burial, but also uses small mammal burrows. Preys on native species of ants and other small invertebrates.	Not expected. No suitable habitat or soils are present. Would not occur in an urban area. There are no records from the city of SLO area.
California red-legged frog	<i>Rana draytonii</i>	T	—	SSC	Forages and breeds in streams with deep slow-moving pools, stock ponds, reservoirs, springs, lagoons, and marshes; usually with emergent or riparian vegetation but also found at sites lacking vegetation. Uses riparian and various upland habitats in winter and for dispersal.	Not expected. Onsite drainage lacks pools of sufficient depth and size for this species. Riparian habitat is limited and highly disturbed. Surrounding urban environment is likely to support high density of predators, such as raccoons. Drainage upstream through Shinsheimer Park does not have sufficient water. Potentially suitable habitat is present in the drainage system downstream from Damon-Garcia to SLO Creek, but species has not been found despite numerous protocol surveys. The nearest records are 2.2 and 2.3 miles away, which is beyond the species' migratory distance and substantial barriers are located between these sites and the property.
Coast Range newt	<i>Taricha torosa</i>	—	—	SSC	Primarily terrestrial in forests, oak woodlands, chaparral, and rolling grassland. Breeds in ponds, reservoirs and pools of clear streams with rocky substrates and cascades.	Not expected. Onsite drainage does not have sufficient amount of water or appropriate rocky habitat with pools and cascades. Known to occur in San Luis Obispo Creek at Reservoir Canyon, but not found in areas further downstream.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Foothill yellow-legged frog - Central Coast Population	<i>Rana boylei</i>	Under Review	E	SSC	Rocky streams and rivers with open sunny banks, surrounded by forests, chaparral, riparian and grassland. Sometimes found in isolated pools, backwaters, and spring-fed pools. Reproduction is exclusively in streams and rivers. Usually found near water and both diurnal and nocturnal.	Not expected. Onsite drainage does not have sufficient water or rocky habitat, and downstream reaches also are unsuitable. Species is considered to be extirpated south of Rocky Point in far northwestern SLO County. Historically recorded in Brizzolari Creek, Reservoir Canyon, and Arroyo Grande Creek but not found since 1958.
Northern California legless lizard	<i>Anniella pulchra</i>	—	—	SSC	Beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, oak woodland, and stream terraces with riparian vegetation. Fossorial species requires moist, loose soils or leaf litter with plant cover or surface objects (rocks, boards, logs, etc.). Can occur in residential areas.	Not expected. Heavy clay soils are typically unsuitable for the species. No records are from within or in the vicinity of the city of San Luis Obispo.
Southwestern (=western) pond turtle	<i>Actinemys pallida</i> (= <i>Emys marmorata</i>)	—	—	SSC	Ponds, lakes, rivers, streams, marshes, brackish lagoons, and irrigation ditches with a mosaic of vegetation and open areas for basking. Uses upland areas for nesting and in winter, including woodland, forest, grassland, chaparral, and grasslands.	Unlikely. The onsite drainage does not have sufficient water depth/pools for this species. Can use small streams while moving between suitable sites, but no suitable habitat is present nearby. Upstream areas on Shinsheimer Park are unsuitable (i.e., eroded ditch with short hydroperiod). Marginally suitable habitat may be present downstream from Orcutt Road and have been observed at Damon Garcia Sports Complex and near Tank Farm Road (Merk observation), but turtles are unlikely to move through the culvert to reach the site or through the dense urban development. It is highly unlikely that they would move upstream into a more developed area with lesser quality habitat.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
BIRDS						
Bald eagle	<i>Haliaeetus leucocephalus</i>	—	E	FP	Open areas near water where they feed on fish, and may also eat birds, amphibians, reptiles, small mammals, and crabs. Does not breed in this area. Occurs in the winter.	Not expected. Site is only 0.4 acre and surrounded by industrial development. There are records of this species in eBird from open space areas surrounding SLO, and may fly over the property but would not forage onsite.
Burrowing owl	<i>Athene cunicularia</i>	—	—	SSC (burrow sites & some wintering sites)	Open treeless areas with low sparse vegetation such as grasslands, deserts, pastures, agricultural fields, airports, and artificial embankments where they prey on small vertebrates and various invertebrates. Nests in burrows created by other animals with nearby lookouts such as fence posts or shrubs. Formerly occurred year-round in this area, but now restricted to winter.	Not expected. Area of grassland habitat is only 0.4 acre and is surrounded by urban development. No burrows seen. Wintering has been recorded along Tank Farm Rd., where there is an open expanse of suitable habitat. Does not nest in this area.
California horned lark	<i>Eremophila alpestris actia</i>	—	—	WL	Areas with sparse vegetation or bare ground in prairies, deserts, tundra, beaches, dunes, airports, plowed fields and heavily grazed pastures where they eat seeds and insects. Nesting is on bare ground. Occurs year-round in this area.	Unlikely. Marginally suitable habitat is present due to the density of surrounding development. There are a few observations in eBird at scattered locations surrounding the city.
Cooper's hawk	<i>Accipiter cooperii</i>	—	—	WL (nesting)	Mature and open woodlands including oak forest, conifers and riparian; may also be found in suburban areas with tall trees. Feeds on birds, small mammals, reptiles and amphibians. Nesting is in dense woodlands. Occurs in this area year-round.	Potential. Could occur onsite as a transient and may perch on the riparian, but the property is small and riparian has been thinned. They have been recorded in eBird at numerous locations throughout the city and close to the site.
Ferruginous hawk	<i>Buteo regalis</i>	—	—	WL (wintering)	Open country such as grasslands, sagebrush, saltbush shrubland, and edges of pinyon-juniper forest where they prey on small mammals. Nests on lone trees, cliffs, utility poles, and shrubs from ground-level to 65-feet high. Occurs in this area during winter.	Not expected. The 0.4 acre of grassland habitat onsite is unsuitable to support foraging of this species, which requires open habitats. Does not nest in this area. There are records from open space areas surrounding the city.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Golden eagle	<i>Aquila chrysaetos</i>	—	—	FP, WL (nesting & wintering)	Uncommon resident of mountainous and valley-foothill areas. Foraging typically occurs in open terrain where they prey on small mammals. Nesting usually occurs on cliff ledges, and less commonly in large trees or on structures such as electrical towers. Occurs in this area year-round.	Not expected. Site is only 0.4 acre and surrounded by industrial development. There are records of this species in eBird from open space areas surrounding SLO, and may fly over the property but would not forage onsite.
Great blue heron	<i>Ardea herodias</i>	—	—	— (nesting colony)	Freshwater and saltwater marshes, also foraging in grasslands and agricultural fields. Nesting colonies are near lakes, ponds and wetlands bordered by forests. Nests are placed mainly in trees, but may also nest on the ground, in bushes or artificial structures. Occurs year-round in this area.	Unlikely. Very low potential to forage onsite periodically due to the small size of the property and density of surrounding industrial development. No nesting habitat is present. There are records in eBird downstream along Acacia Cr. at Broad St., but larger areas of undeveloped habitat are present at these locations.
Great egret	<i>Ardea alba</i>	—	—	— (nesting colony)	Forages in marshes, swamps, streams, rivers, ponds, lakes, lagoons, tidal flats, canals, ditches, flooded fields, and sometimes in upland where they prey on fish, amphibians, reptiles, crustaceans, and invertebrates. Roosts communally in trees. Nesting colonies are on lakes, ponds, marshes, and estuaries, but does not nest in this area. Occurs in this area during non-breeding season.	Unlikely. Very low potential to forage onsite periodically due to the small size of the property and density of surrounding industrial development. Does not nest in this area. There are records in eBird within the urban boundary of SLO, including an observation along Orcutt Rd. close to the site.
Loggerhead shrike	<i>Lanius ludovicianus</i>	—	—	SSC (nesting)	Open country with low vegetation and well-spaced shrubs or trees such as coastal scrub, grasslands, agricultural fields, pastures, riparian areas, desert scrub, savannas, prairies, golf courses, and along roadsides where they prey on insects, amphibians, reptiles and small mammals. Nests in trees, shrubs, or brush piles. Occurs in this area year-round.	Not expected. Property is of insufficient size for this species and surrounded by urban development. Riparian habitat has been thinned and is likely not shrubby enough for nesting. Species has been recorded in open habitats surrounding the city.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Merlin	<i>Falco columbarius</i>	—	—	WL (wintering)	Coastlines, open grasslands, savannas, woodlands, lakes, wetlands, and montane conifer forests where they prey on small birds, small mammals and insects. Nests in existing corvid or hawk nest but does not nest in California. Occurs in this area during winter.	Unlikely. Very low potential to occur as a transient while moving through the area due to the small size of the property and surrounding industrial uses. Has been recorded in eBird at several locations within the city limits, including close to the site.
Prairie falcon	<i>Falco mexicanus</i>	—	—	WL (nesting)	Grasslands, desert shrubland, tundra, coastal scrub, feedlots, and agricultural fields where they feed on small mammals, insects and birds. Nests on high cliff ledges and steep bluffs overlooking open areas. Occurs year-round in this area.	Unlikely. Small size of property and surrounding urban land use is not suitable for this species. No nesting habitat is present in the vicinity. Has been recorded at various locations on the outskirts of city limits as a transient or while foraging.
Sharp-shinned hawk	<i>Accipiter striatus</i>	—	—	WL (nesting)	Forages along the edges of dense mixed woodlands and forests where they prey on birds. Nests are in dense coniferous forests with closed canopies, but not in this region. Occurs only in winter in this area.	Not expected. Site is only 0.4 acre and surrounded by industrial development. There are records of this species in eBird from open space areas surrounding SLO, and may fly over the property but would not forage onsite.
Tricolored blackbird	<i>Agelaius tricolor</i>	BCC	T	SSC (nesting colony)	Forages in a variety of habitats including pastures, agricultural fields, rice fields, and feedlots. Nests colonially in freshwater marshes with tules or cattails, or in other dense thickets of willow, thistle, blackberry, or wild rose in close proximity to open water. Occurs year-round in this area.	Not expected. No suitable habitat is present on this small lot that is surrounded by urban development. Observed in open space areas surrounding the city.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	T	E	—	Riparian, desert riparian, and orchards with dense cover and a water source. Preys primarily on caterpillars, but food includes other invertebrates, amphibians, reptiles, fruits and seeds. Once common in CA's central and coastal valleys, now breeds only along a few inland rivers. Dense willows required for roosting and nesting. Migratory only occurring in CA in summer.	Not expected. Degraded riparian habitat is present, but species has been dramatically reduced and no longer breeds in this area. Historic records from the general area are from 1921 and 1932. Transient individuals recorded only from along the immediate coast.
White-tailed kite	<i>Elanus leucurus</i>	—	—	FP (nesting)	Savannas, open woodlands (oak or pine), riparian forest, marshes, desert grasslands, and fields where they prey on small mammals, birds, lizards, and insects. Nests and roosts in the edges of forests or in tall isolated trees. Occurs in this area year-round.	Unlikely. Property is too small to support foraging, but could occur in open space areas nearby and fly over the site. There are numerous observations in eBird from within city limits.
Yellow warbler	<i>Setophaga petechia</i>	—	—	SSC	Wetland and riparian habitats with willows, cottonwoods, bay, maple, sycamores and alders where they eat insects. Also uses gardens, orchards, residential areas and roadside thickets. Nesting is in shrubs or small trees. Occurs year-round in this area, although is rare in winter.	Potential. Could forage in the riparian but likely is not of insufficient size for breeding due to trimming and site management. Has been recorded nearby in eBird so could fly and forage throughout the area.
MAMMALS						
American badger	<i>Taxidea taxus</i>	—	—	SSC	Open grasslands, fields and the edge of scrub and woodland habitats; requires dry loose soils for burrowing and shelter and feeds on a variety of small mammals such as California ground squirrel and pocket gopher. Young are born in dens in March and April.	Not expected. Urban development surrounding site would be unsuitable for movement into or through the parcel. Site is small in size and lacks prey. No burrows seen. Last recorded at nearby areas on Tank Farm Rd. in 2008.

Common Name	Scientific Name	Fed	CA	CDFW	Ecological Information	Evaluation of Occurrence/ Site Suitability / Local Records
Pallid bat	<i>Antrozous pallidus</i>	—	—	SSC	Open dry habitats including deserts, grasslands, shrublands, woodlands, and forests. Roosts in rocky outcrops, caves, crevasses, mines, hollow trees, and buildings that moderate temperature. Night roosts on porches and open buildings.	Potential. Could forage over the site and roost in the downstream culvert even though it was narrow and more suitable roosting structures are present elsewhere. Has been recorded on Camp SLO and the city downtown area.
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	—	—	SSC	Desert scrub, grassland, sagebrush, chaparral, oak woodlands, riparian and coniferous forests; prefers mesic habitats and closely tied to rock cliffs with crevasses. Roosts in caves, cliffs, mines, tunnels and bridges. The year-round range of the species is considered to be all of California except high elevations in the Sierra Nevada.	Potential. Could forage onsite and roost in the downstream culvert or under bridges near the site. Individuals and roost sites have been recorded nearby. Has been recorded in the vicinity at Camp SLO and Chorro Creek, and individuals at Shell Beach.
Western mastiff bat	<i>Eumops perotis californicus</i>	—	—	SSC	Desert scrub, coastal scrub, chaparral, oak woodland, and coniferous forest. Roosts colonially in rock crevasses, buildings, tunnels and in trees. Does not undergo seasonal migrations or prolonged hibernation, and is present in this area year-round.	Potential. Could forage over the site and roost in the downstream culvert. Has been recorded in the San Luis Obispo area.
Yuma myotis	<i>Myotis yumanensis</i>	—	—	—	Open forests and woodlands with water sources such as ponds, streams, and stock tanks; roosts in buildings, mines, caves, crevices and under bridges; night roosts in more open areas.	Potential. Could forage over the site and roost in the downstream culvert or under the bridges nearby. There were no records in the CNDDDB, but their year-round range includes all of San Luis Obispo/Santa Barbara County.

*E = Endangered; T = Threatened; C = Candidate; BCC = Birds of Conservation Concern; SSC = Species of Special Concern; FP = Fully Protected; WL = Watch List; '—' = no status; California Natural Diversity Database (California Department of Fish and Wildlife 2021a); Special Animals List (California Department of Fish and Wildlife 2020b); California Wildlife Habitat Relationships System (CDFW 2021c); A Guide to the Amphibians and Reptiles of California (California Herps 2021); eBird (The Cornell Lab of Ornithology 2021a); All About Birds (The Cornell Lab of Ornithology 2021b); Guide to North American Birds (Audubon 2021).

DESIGNATED CRITICAL HABITAT	
California Red-legged Frog	Absent. Does not occur at the subject property. Unit SLO-3 occurs in the northern portion of San Luis Obispo, and extends west to the coast and north and east through the Santa Lucia Range.

Source: *Threatened and Endangered Species Active Critical Habitat Report (United States Fish and Wildlife Service 2021b).*

SENSITIVE NATURAL COMMUNITIES	
Central Coast Live Oak Riparian Forest — State Rarity Rank 3.2	Absent. Band of riparian on drier, outer floodplains along perennial streams between the more mesic cottonwood or willow-dominated communities and more xeric chaparral. Dominated by coast live oak (<i>Quercus agrifolia</i>) with a relatively open understory of grasses. Other species in the understory include coyote brush (<i>Baccharis pilularis</i>), California rose (<i>Rosa californica</i>), fragrant sumac (<i>Rhus aromatica</i>), and blue elderberry (<i>Sambucus mexicana</i>). The riparian habitat onsite has been frequently disturbed by clearing and thinning and more closely aligns with Central Coast Riparian Scrub.
Central Coast Riparian Scrub — State Rarity Rank S3	Present. A dense, shrubby streamside thicket dominated by any of several species of willows (<i>Salix</i> spp.) and has coyote brush (<i>Baccharis pilularis</i>) as a secondary component. Occurs on sand or gravel bars along rivers and streams with ground water close to the surface. Also occurs around dune slack ponds. The riparian habitat onsite would be classified as this community.
Central Maritime Chaparral — State Rarity Rank S2.2	Absent. Occurs on well-drained, sandy soils within the summer fog zone. Composed of sclerophyll shrubs dominated by one or more species of manzanita (<i>Arctostaphylos</i> spp.). No manzanita species occur on the site and this community is not present.
Coastal and Valley Freshwater Marsh — State Rarity Rank S2.1	Absent. Occurs in permanently flooded sites with freshwater and lacking significant flow, dominated by perennial, emergent vegetation such as bulrushes (<i>Scirpus</i> sp. and <i>Schoenoplectus</i> sp.) and cattails (<i>Typha</i> sp.). No freshwater marsh vegetation was present along the drainage. The majority of the understory was upland grassland species. The few scattered umbrella sedge species were not dominant to classify the habitat as a wetland.
Serpentine Bunchgrass — State Rarity Rank S2.2	Absent. Restricted to areas with serpentine soils. Dominated by native perennial bunchgrasses and herbs with low total cover. Characteristic species include needlegrass (<i>Stipa</i> spp.), California poppy (<i>Eschscholtzia californica</i>), and small fescue (<i>Festuca microstachys</i>). No suitable serpentine soils occur, and the onsite grassland has dense cover by non-native species.

Sources: *Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland 1986); California Natural Diversity Database (California Department of Fish and Wildlife 2021a); California Sensitive Natural Communities (California Department of Fish and Wildlife 2021b).*

ATTACHMENT 4
CEQA GHG Checklist

CEQA GHG EMISSIONS ANALYSIS COMPLIANCE CHECKLIST

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST FOR New Development

The City of San Luis Obispo has prepared a Climate Action Plan (CAP) that establishes 2030 greenhouse gas emissions (GHG) targets and a communitywide goal of carbon neutrality by 2035 and provides foundational actions to establish a trajectory towards achieving that goal. The CAP includes specific actions to achieve the short-term communitywide emissions reduction targets of 45 percent below 1990 levels by 2030 and 66 percent below 1990 levels by 2035. This is consistent with California's goal of reducing GHG emissions to 40 percent below 1990 levels (Senate Bill 32) by 2030 and provides substantial progress towards achieving the state's long-term GHG reduction goal of carbon neutrality (Executive Order B-55-18). The City Council, City staff, and community will continue to develop an approach to the long-term aspirational goal of carbon neutrality.

Over the years, new City programs have been implemented while others have evolved. Plans from a range of departments have been executed and updated. Per the 2020 SLO CAP, the CAP will be updated every four years with annual reviews of progress on implementation of specific CAP foundational actions. The City Office of Sustainability is updating the City's progress towards GHG reductions in 2019 to align with the next major CAP update milestone year.

Pursuant to CEQA Guidelines Section 15183.5, a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted plan or mitigation program under specified circumstances. In order for the 2020 SLO CAP to be considered a qualified GHG reduction strategy and provide for CEQA streamlining of GHG analysis for future development the CAP it must identify those measures that are applicable to new development. The 2020 SLO CAP includes measures that are applicable to existing developments, municipal government operations, as well as voluntary and mandatory measures to be applied to new development for public and private projects. Mandatory GHG reduction programs that are applicable to new development are summarized in the following California Environmental Quality Act (CEQA) GHG Emissions Compliance Checklist (referred to herein as the CEQA GHG Checklist). This CEQA GHG Checklist identifies applicable regulations, applicability, requirements, and monitoring and reporting required by regulations. The purpose of the CEQA GHG Checklist is to assist with determining project consistency with the CAP and other applicable sustainability-focused regulations and provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the CEQA.

This CEQA GHG Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with CAP assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects or plans that are consistent with the CAP as determined through the use of this CEQA GHG Checklist may rely on the CAP Initial Study-Negative Declaration GHG emissions analysis

for the respective project- and cumulative-level GHG emissions impacts analysis. Projects that are identified as not consistent with the CAP through the use of this CEQA GHG Checklist must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to the SLO CEQA GHG Threshold(s) and incorporation of the CAP foundational actions in this CEQA GHG Checklist to the extent feasible.

Cumulative GHG emissions associated with construction from a land use development project are generally orders of magnitude lower than the operational emissions from a project, because construction emissions are generally short in duration compared to the project's overall lifetime, and thus can be assessed qualitatively as part of related CEQA GHG emissions analysis. However, some projects may have long construction periods or entail large quantities of cut and fill that could result in construction-related GHG emissions that may be considered significant. Thus, the City retains the discretion on a project-by-project basis to consider whether a project's construction-related GHG emissions could be cumulatively considerable and require more detailed quantitative CEQA GHG emissions analysis and respective mitigation.

This CEQA GHG Checklist may be periodically updated to incorporate new GHG reduction techniques, to comply with later amendments to the CAP, or to reflect changes in other sustainability-focused local, State, or federal laws, regulations, ordinances, and programs. At a minimum, this CEQA GHG Checklist will be updated every four years consistent with CAP update timing.

APPLICATION SUBMITTAL REQUIREMENTS

The CEQA GHG Checklist is required to accompany the City's Environmental Determination Application Checklist for all projects and plans subject to CEQA review, whether supported by private or government (local or State) funding, proposed within the City limits. The CEQA GHG Checklist is designed to assist the applicant in identifying the minimum CAP and other applicable sustainability-focused requirements specific to a proposed project or plan. However, it may be necessary to supplement the completed CEQA GHG Checklist with supporting materials, calculations, or certifications to demonstrate compliance with CAP and other applicable sustainability-focused requirements. If not already committed to clearly as part of the CEQA project description, in the CEQA GHG Checklist will be included in the respective project or plan conditions of approval.

GENERAL PROJECT INFORMATION

Contact Information

Project or Plan Name: 2855 McMillan

Address: 2855 McMillan, San Luis Obispo, CA 93401

Applicant Name and Co.: Rebecca Newman, Arris Studio Architects

Contact Phone: (805) 547-2240 x122

Contact Email: rebecca@arris-studio.com

Was a consultant retained to complete this checklist? Yes ☐ No ☒

If Yes, complete the following:

Consultant Name: _____

Contact Phone: _____

Company Name: _____

Contact Email: _____

Project Information

What is the size of the project site or plan area (acres)?

Gross: .4 Acres (17,250 sf)

Net: .31 Acres (13,746 sf)

Identify all applicable proposed land uses:

☐ Residential (indicate # of single-family dwelling units):

☐ Residential (indicate # of multi-family dwelling units):

☒ Commercial (indicate total square footage, gross and net):
2,973 sf

☒ Industrial (indicate total square footage, gross and net):
5,299 sf

☐ Agricultural (indicate total acreage, gross and net):

☐ Other (describe):

Project description. This description should be consistent with the project description that will be used for the CEQA document. The description may be attached to the GHG Checklist if there are space constraints.

See project description attached

	<p>If “No” the applicant must prepare a project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions compared to the SLO CEQA GHG Threshold(s) and incorporation of the CAP foundational actions in this CEQA GHG Checklist to the extent feasible.</p>		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
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CAP FOUNDATIONAL ACTIONS CONSISTENCY

Pillar 1: Lead by Example

The foundational actions of this pillar pertain exclusively to municipal operations of the City of San Luis Obispo. In order to display consistency with the Climate Action Plan for the purposes of CEQA, applicants must complete the questions for pillars two through six.

Pillar 2: Clean Energy Systems

Regulation	Requirements	Project/Plan Compliance	Explanation
Climate Action Plan Volume II, Energy 1.1	2. Does the Project/Plan include an operational commitment to participate in Monterey Bay Community Power?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>

Pillar 3: Green Buildings

Regulation	Requirements	Project/Plan Compliance	Explanation
Clean Energy Choice Program for New Buildings Municipal Code Section 15.04.110	3. Does the Project/Plan exclusively include “All-electric buildings”? For the purpose of this checklist, the following definitions and exemptions apply: <i>All-electric building.</i> A new building that has no natural gas plumbing installed within the building and that uses electricity as the source of energy for all space heating, water heating, cooking appliances, and clothes drying appliances. An All-Electric Building may be plumbed for the use of natural gas as fuel for appliances in a commercial kitchen.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Clean Energy Choice Program for New Buildings Municipal Code Section 15.04.110	4. If the Project/Plan includes a new mixed-fuel building or buildings (plumbed for the use of natural gas as fuel for space heating, water heating, cooking or clothes drying appliances) does that building/those buildings meet or exceed the City's Energy Reach code?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Pillar 4: Connected Community			
Regulation	Requirements	Project/Plan Compliance	Explanation
Municipal Code Chapter 17.72	5. Does the Project/Plan comply with requirements in the City's Municipal Code with no exceptions, including bicycle parking, bikeway design, and EV charging stations?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>
Multimodal Transportation Impact Study Guidelines	6a. Is the estimated Project/Plan-generated Vehicle Miles Traveled (VMT) within the City's adopted thresholds, as confirmed by the City's Transportation Division?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	See email attached from Luke Schwartz, City transportation Manager <hr/>
Multimodal Transportation Impact Study Guidelines	6b. If "No", does the Project/Plan include VMT mitigation strategies and/or a Transportation Demand Management (TDM) Plan approved by the City's Transportation Division? Please explain. TDM components may include, but are not limited to: <ul style="list-style-type: none"> • Telecommuting • Car Sharing 	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/>

	<ul style="list-style-type: none"> • Shuttle Service • Carpools • Vanpools • Bicycle Parking Facilities • Participate in Rideshare's Back n Forth Club • Transit Subsidies • Off-Site Sustainable Transportation Infrastructure Improvements 		<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Bicycle Transportation Plan	7. Does the Project/Plan demonstrate consistency with the City's Bicycle Transportation Plan ¹ ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Pillar 5: Circular Economy			
Regulation	Requirements	Project/Plan Compliance	Explanation
Development Standards for Solid Waste Services	8. Will the Project/Plan subscribe all units and/or buildings to organic waste pick up and provide the appropriate on-site enclosures consistent with the provisions of the City of San Luis Obispo Development Standards for Solid Waste Services? Please provide a letter from San Luis Garbage company verifying that the project complies with their standards and requirements for organic waste pick up.	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	There is no organic waste anticipated. However, we have included a letter from SLO Garbage verifying that our project meets their requirements and they will provide service.
Pillar 6: Natural Solutions			

¹ The City is set to adopt an Active Transportation Plan (ATP) in October of 2020 which will effectively update and replace the current Bicycle Transportation Plan. Upon adoption, the ATP will become the new regulation with which compliance is required for the purposes of this checklist.

Regulation	Requirements	Project/Plan Compliance	Explanation
Municipal Code Chapter 12.24	9. Does the Project/Plan comply with Municipal Code requirements for trees?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Compensatory Tree planting will be provided onsite and off site at a 1 to 1 ratio.



Date: July 8, 2021

To: City of San Luis Obispo
Planning Dept

Re: 2855 McMillan Project Description

To Whom It May Concern,

This project proposes the construction of a 2-story office and warehouse building at 2855 McMillan. The proposed building is roughly 8,300 sf and contains a partial second floor office and storage space. The site and adjacent parcels are zoned M-Manufacturing with approved uses for light manufacturing and storage. The proposed office use requires a Minor Use Permit. All parking for the building would be provided on-site including all required ADA parking and electric vehicle spaces. Additional site improvements include sidewalk, curb and gutter, driveway entrance and trash/recycle enclosure.

A major aspect of this development is the treatment of an existing drainage swale running through the property. We are proposing to culvertize the swale as a part of the improvements. The addition of the culvert will help solve the erosion problem adjacent to McMillan Ave. as well as improve safety and allow for a sidewalk, curb and gutter to be installed. It is because of this work that we will also need the approval of various state agencies, including Fish & Wildlife, Army Corp of Engineers and the Water Board. A cultural resources study will be required by the Army Corp of Engineers for their consultation with the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act. This cultural resources study will also be submitted to the City of San Luis Obispo for their review and inclusion in the Initial Study. In the event that cultural resources are found, compliance with Section 106 will be required.

Based on previously proposed developments for this parcel, a Mitigated Negative Declaration is anticipated, and it is unlikely that an Environmental Impact Report will be triggered. None the less, all technical reports are being provided to assess the impacts of work on this site.

Sincerely,

Rebecca Newman, (805) 547-2240 x122
Arris Studio Architects

Rebecca Newman

From: Schwartz, Luke <LSchwartz@slocity.org>
Sent: Tuesday, April 13, 2021 1:04 PM
To: Rebecca Newman
Cc: Wade Crosno; Bell, Kyle
Subject: RE: VMT Analysis for 2855 McMillan

Hi Rebecca,

I reviewed the development proposal in more detail this AM. The project would generate approximately 60 new daily auto trips, which would qualify for exemption from VMT analysis based on the City's adopted VMT analysis thresholds, which I've excerpted below.

VMT Impact Analysis for Land Use Projects

Per OPR guidance, land use projects that meet the following screening thresholds may be assumed to result in a less-than-significant transportation impact under CEQA, and will not require a detailed quantitative VMT assessment.

Screening Criteria for Land Use Projects Exempt from VMT Analysis

Project Type	OPR Recommended Threshold
Small Development Projects	Projects anticipated to generate < 110 daily vehicle trips (11 peak hour vehicle trips) may be assumed to cause a less-than-significant impact, unless substantial evidence indicates that a project would generate a potentially significant level of VMT or create inconsistency with the SLOCOG RTP Sustainable Communities Strategy (SCS).
Medium-Sized	Not based on trip generation for projects that generate < 100 peak hour vehicle

No additional traffic analysis will be required from our division for this development proposal.

For future projects that do require focused traffic analysis, the process works as follows:

1. City staff prepared scope of work for Transportation Impact Analysis Study
2. City requests 3 proposals from qualified traffic engineering consultants through our existing on-call contract list and selects consultant with highest-rated proposal
3. Applicant provides deposit to City for consultant costs plus 30% for City staff administrative time coordinating technical studies
4. Consultant prepares work under direction of City
5. Upon completion of study, any remaining unused funds get returned to applicant.

Please let me know if you have any other questions.

Thanks,

Luke Schwartz, PE
Transportation Manager



Public Works
Transportation Planning/Engineering
919 Palm Street, San Luis Obispo, CA 93401-3218
E LSchwartz@slocity.org
T 805.781.7190
slocity.org

From: Rebecca Newman <rebecca@arris-studio.com>
Sent: Monday, April 12, 2021 4:20 PM
To: Schwartz, Luke <LSchwartz@slocity.org>
Cc: Wade Crosno <wade@crosnoconstruction.com>
Subject: VMT Analysis for 2855 McMillan

This message is from an **External Source**. Use caution when deciding to open attachments, click links, or respond.

Good Afternoon Luke,

I wanted to follow up on my voicemail with an email if it was more convenient.

We are working with the City Planning Department on a small warehouse building at 2855 McMillan and as a part of the environmental review we have been asked to provide a VMT Analysis. I had reached out to a local transportation consultant and they let me know that this is typically something that gets coordinated through the City and since Kyle Bell gave me your contact info, I thought I would start with you. Is a VMT Analysis something that needs to be initiated by the City?

Any information or guidance you can provide on the process is helpful.

Thank You,

Rebecca Newman | Arris Studio Architects

1327 Archer Street, Suite 220
San Luis Obispo, CA 93401
Ph: (805) 547-2240 ext 122
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Email: Rebecca@arris-studio.com
Web: ARRIS-STUDIO.com



- SAN LUIS GARBAGE
- SOUTH COUNTY SANITARY
- MISSION COUNTRY DISPOSAL
- MORRO BAY GARBAGE



Safety • Integrity • Service

March 11, 2021

Rebecca Newman
Arris Studio Architects
1327 Archer Street, Suite 220
San Luis Obispo, CA 93401

Re: 2855 McMillan Ave

Rebecca,

San Luis Garbage Co. has reviewed the garbage and recycling plan for the project at 2855 McMillan Ave. in San Luis Obispo. We approve Floor Plan A2.0 dated 12/15/2020 for commercial solid waste and recycling services. All bin enclosures must meet building standards established by the City of San Luis Obispo. The gates for the enclosures must open outward and there must be cane bolts added to keep the door secure when open. Holes will need to be drilled into the concrete for the cane bolts to drop in to.

Truck access point and path of travel must be designed in a manner that will accommodate the solid waste and recycling collections vehicles. San Luis Garbage reserved the right to require a waiver, release and hold harmless agreement for damages that may occur during normal collection activities.

Peter Cron
San Luis Garbage Co.
805.550.4089
pcron@wateconnections.com

ATTACHMENT 5

Geotechnical Engineering Report

Geotechnical Engineering Report

For

Proposed Commercial Metal Building

2855 McMillan Avenue

San Luis Obispo, California

December 4, 2020

F-102534

Prepared For

GTW SLO LLC

By

Beacon Geotechnical, Inc.
P.O. Box 4814
Paso Robles, California 93447



December 4, 2020

F-102534

GTW SLO LLC

819 Sheridan Road
Arroyo Grande, CA 93420

Project: Proposed Commercial Metal Building
2855 McMillan Avenue
San Luis Obispo, California

Subject: Geotechnical Engineering Report

As authorized, we have performed a Geotechnical Study for the above referenced project. The accompanying Geotechnical Engineering Report presents the results of our subsurface exploration, laboratory-testing program and conclusions and recommendations for geotechnical engineering aspects of project design. Our services were performed using the standard of care ordinarily exercised in this locality at the time this report was prepared.

Based on our study, it is our opinion that the site is suitable for the proposed development from a geotechnical engineering standpoint provided the recommendations of this report are successfully implemented.

We have appreciated this opportunity to be of service to you on this project. Please call if you have any questions, or if we can be of further service.

Respectfully submitted,
Beacon Geotechnical, Inc.

A handwritten signature in blue ink, appearing to read "Greg McKay", is written over a light blue rectangular background.

Greg McKay
Project Manager

Copies: 3-GTW SLO LLC
1-File



Nicholas A. McClure
Geotechnical Engineer

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1. INTRODUCTION

This report presents results of a Geotechnical Engineering Study performed for the proposed commercial metal building to be located in San Luis Obispo, California.

1.1 Description

- 1.1.1. It should be noted that grading and foundation plans were not provided for the purpose of this report. Prior to any construction, this firm should review the grading and foundation plans to verify or modify the recommendations offered herein. We anticipate that the site will be developed by building at or near existing grade.
- 1.1.2. The proposed structure is assumed to be one (1) or two (2) stories of metal framed construction.
- 1.1.3. Structural considerations for maximum wall loads of 1.65 kips per square foot and maximum point loads of 35.0 kips were used as a basis for the recommendations of this report. If actual loads vary significantly from these assumed loads, Beacon Geotechnical, Inc. should be notified as re-evaluation of the recommendations contained herein may be required.

2 SCOPE OF WORK

- 2.1 The purpose of the geotechnical investigation that led to this report was to evaluate the soil conditions of the site with respect to the proposed development. These conditions include surface and subsurface soil types, expansion potential, settlement potential, bearing capacity, and presence or absence of subsurface water. The scope of our work included:
 - Reconnaissance of the site.
 - Drilling, sampling, and logging of two (2) borings to investigate soils and groundwater conditions.
 - Laboratory testing of soil samples obtained from subsurface exploration to determine their physical and engineering properties.
 - Geotechnical analysis of the data obtained.
 - Consultation with owner representatives and design professionals.
 - Preparation of this report.
- 2.2 Contained in the report are:
 - Discussions on local soil and groundwater conditions.
 - Results of laboratory and field tests.
 - Conclusions and recommendations pertaining to site grading and structural design.

3 SITE SETTING

- 3.1 The site of the proposed development is located in San Luis Obispo, California, with the approximate geographical coordinates 35°15'50.50"N and 120°38'54.50"W. See the Vicinity Map in Appendix A.
- 3.2 The site is a relatively level vacant lot.

4 SITE CONDITIONS

4.1 Soil Conditions

- 4.1.1 Evaluation of the subsurface indicates that soils are generally brown silty clayey sand with gravel overlain by dark brown and brown silty clayey sand.
- 4.1.2 Soils encountered at approximate bearing depths should be designed as Site Classification D in accordance with the local building code.
- 4.1.3 Expansion determination indicates that the bearing soils lie in the "Medium" range.

4.2 Groundwater

- 4.2.1 Groundwater was not encountered to a maximum depth of twenty (20) feet.

5 SEISMIC HAZARDS

This portion of Central California is subject to significant seismic hazards from moderate to large earthquake events. Ground shaking resulting from earthquakes is the primary geologic hazard at the project site. Ground displacement resulting from faulting is a potential hazard at or near faults.

5.1 Nearby Faults

- 5.1.1 The site does not lie within an Earthquake Fault Zone identified on a State of California Earthquake Fault Zone Map.
- 5.1.2 Faults closest to the site, which would most affect the proposed project:

Nearby Active Faults	Approximate Distance (km)	Maanitude M_w
Los Osos Fault	3.9	6.9
San Luis Range Fault	8.7	7.1
Rinconada Fault	11.8	7.5
Hosgri Fault	24.2	7.3
San Andreas Fault Zone	58.5	8.0

5.2 Liquefaction

Earthquake-induced vibrations can be the cause of several significant phenomena, including liquefaction in fine sands and silty sands. Liquefaction results in a complete loss of strength and can cause structures to settle or even overturn if it occurs in the bearing zone. If liquefaction occurs beneath sloping ground, a phenomenon known as lateral spreading can occur. Liquefaction is typically limited to the upper 50 feet of the subsurface soils and to soils that have a relative density of less than 70%.

- 5.2.1 Based on the quality and conditions of the in-place soils and the absence of groundwater in our boring explorations, it is our opinion that the potential for liquefaction and/or lateral spreading is low at this site.

5.3 Landslide Hazards

- 5.3.1 The site topography and exposed soils types indicate that the potential for landslides is minimal at this site. Furthermore, no evidence of previous landslides was observed at the site.

5.4 Seismic Design Parameters

The following estimated ground motion parameters have been established using the methods outlined in the 2019 California Building Code with reference to the acceleration contour maps provided by the U.S. Geological Survey (USGS) and the National Earthquake Hazards Reduction Program (NEHRP-2015). These ground motion parameters represent the Maximum Considered Earthquake (MCE) spectral response of seismic events experiencing 5 percent damped acceleration and having a 2 percent probability of exceedance within a 50 year period.

2019 California Building Code Seismic Parameters	
Parameter	Value
Seismic Design Category	D
Site Class	D
Short Period Spectral Acceleration, S_s	1.070
1-second period spectral acceleration, S_1	0.394
Short period site coefficient, F_a	1.200
1-second period site coefficient, F_v	1.906
Adjusted short period spectral acceleration, S_{ms}	1.284
Adjusted 1-second period spectral acceleration, S_{m1}	0.751
Short period design spectral acceleration, S_{DS}	0.856
1-second period design spectral acceleration, S_{D1}	0.501

6 CONCLUSIONS AND RECOMMENDATIONS

The site is suitable for the proposed development from a geotechnical engineering standpoint provided the recommendations contained herein are properly implemented into the project.

6.1 General Grading

- 6.1.1 Grading, at a minimum, should conform to Chapter 18, and any additional locally approved appendices relating to grading, of the 2019 California Building Code.
- 6.1.2 The existing ground surface should be initially prepared for grading by removing all vegetation, trees, large roots, debris, non-complying fill and all other organic material. Voids created by removal of such material should not be backfilled unless the underlying soils have been observed by a representative of this firm.
- 6.1.3 **The bottom of all excavations should be observed by a representative of this firm prior to processing or placing fill.**
- 6.1.4 Fill and backfill placed **at 2%-3% above optimum moisture content** in layers with loose thickness not greater than eight (8) inches should be compacted to a minimum of 90% of maximum dry density obtainable by the ASTM D 1557 Test Method.
- 6.1.5 Import soils used to raise site grade should be equal to or better than on-site soils in strength, expansion and compressibility characteristics. Import soils can be evaluated, but will not be pre-qualified by the geotechnical engineering firm. Final comments on the characteristics of the import soils will be offered after the material is at the project site.
- 6.1.6 Roof draining systems should be designed so that water is not discharged onto bearing soils or near structures.
- 6.1.7 Final site grade should be such that all water is permanently diverted away from the structure and is not allowed to pond. The ground immediately adjacent to the building shall be sloped 5% for a minimum of ten (10) feet measured perpendicular to the face of the wall. All diverted water is to be directed to an approved drainage. Alternative grading methods can be found in 2019 California Building Code Section 1804.4.
- 6.1.8 It should be noted that uniform soil moisture conditions around the perimeter of the structure will help decrease the potential for differential swelling and heaving associated with expansive soils. Post-construction care should be taken to create long-term landscaping and irrigation solutions that do not allow for frequent changes in soil moisture content or irregular application of water around the perimeter of the structure.

- 6.1.9 The above referenced site drainage conditions should be maintained over the course of the life of the structure. Proper long term performance of the foundation and building pad may be compromised if the surrounding site drainage and grading is adversely modified.
- 6.1.10 It is recommended that Beacon Geotechnical, Inc. be retained to provide intermittent geotechnical engineering services during site development, grading and foundation construction phases of the work to observe compliance with the design concepts, specifications and recommendations, and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.
- 6.1.11 Plans and specifications should be provided to Beacon Geotechnical, Inc. prior to grading. Plans should include the grading plans, and foundation details. Structural loads should be shown on the foundation plans.
- 6.1.12 Should soils become unstable during grading due to excessive subsurface moisture, alternatives to correct instability may include aeration or the use of gravels and/or geotextiles as stabilizing measures. Recommendations for stabilization should be provided by this firm as needed during construction.
- 6.1.13 All water associated with drainage and runoff should not be discharged onto slope faces. All outflow of drainage structures and drainage facilities should be designed by the project Civil Engineer to minimize erosion.

6.2 Specific Site Development, Grading Pads, and Foundation Excavations

- 6.2.1 Due to the presence of low density soils at shallow bearing depths, overexcavation and recompaction of soils in the building area (including covered deck areas) will be necessary to decrease the potential for differential settlement and to provide more uniform bearing conditions. Soils should be overexcavated to a depth of two (2) feet below the bottom of footings, five (5) feet below existing grade, or 75% of the deepest fill thickness, whichever is greater. The over-excavation should extend to a distance of five (5) feet beyond the building perimeter. The resulting surface should be scarified to a depth of one (1) foot, **moisture conditioned to 2%-3% above optimum moisture** and recompact to a minimum of 90% of maximum dry density. The intent of these recommendations is to provide a minimum of two (2) feet of compacted soils below the bottom of all footings, and recompact the loose topsoil.
- 6.2.2 **It should be noted that overexcavation, recompaction, and presaturation of soils below slab areas does not mitigate the effects of the expansive soils.**

- 6.2.3 In order to help mitigate the effects of the expansive soils below concrete slabs within the building or surrounding flatwork areas, the upper eighteen (18) inches of fill directly below concrete slab areas shall be non-expansive ($EI < 10$) import. It should be noted that the four (4) inch sand layer directly below the slab may be included in the measurement of the eighteen (18) inch non-expansive section. The lower fourteen (14) inches of fill should be recompact to 90% of maximum dry density and the upper four (4) inches of fill should be clean free draining sand.
- 6.2.4 Any excavated material from foundation and septic or drainage systems should be properly recompact in accordance with all the recommendations for engineered fill. Alternatively, excavated soil may be hauled off site when adequate placement area is not available at the project location.
- 6.2.5 Areas outside the building area to receive fill, exterior slabs-on-grade, sidewalks, and paving should be overexcavated to a depth of one (1) foot below finish subgrade or existing grade whichever is deeper. The exposed surface should be scarified, moisture conditioned and recompact.
- 6.2.6 On-site soils may be used for fill once they are cleaned of all organic material, rock, debris and irreducible material larger than eight (8) inches.
- 6.2.7 Although not encountered in our borings, should any trash, debris or subsurface structures be encountered during grading, removals will be necessary to adequate depths and horizontal limits as recommended by this firm at the time of grading.
- 6.2.8 Grading inspections shall be performed in accordance with the 2019 California Building Code Table 1705.6. See Appendix B for project specific grading observation requirements.

6.3 Slope Construction

- 6.3.1 All hillside grading and construction of fill slopes should conform to the minimum standards listed in Chapter 18 of the 2019 California Building Code. It is recommended that a representative of this firm review the grading plans prior to grading and site development.
- 6.3.2 Fill slopes should be keyed and benched into firm natural ground when the existing slope to receive fill is 10:1, horizontal to vertical, or steeper. The keys should be tilted into the slope, should be a minimum of one equipment width wide, and should extend a minimum of three (3) feet deep at the outside edge.
- 6.3.3 Fill slopes should be overfilled, compacted, and cut back to planned configurations. This will yield better compaction on the slope faces than other methods.

- 6.3.4 Lined drainage swales and down drains should be provided at the tops of all cut and fill slopes to divert drainage away from the slope faces.
- 6.3.5 Cut and fill slopes should not be constructed steeper than 2:1 (horizontal to vertical). Setbacks of structures from slopes should be maintained as per the 2019 California Building Code.

6.4 Paving

- 6.4.1 All finished subgrade soils in areas to be paved should be scarified to a depth of one (1) foot, moisture conditioned and re-compacted to a minimum of 95% of maximum dry. Any soft or loose areas encountered should be removed to a depth to satisfy the representative of this firm. Finished pavement sections should be composed of Class II Base compacted to a minimum of 95% of maximum dry density overlain by compacted asphalt. The actual Traffic Index should be determined by the project Civil Engineer. Final pavement section will be determined upon completion the project grading.

Estimated Pavement Sections			
<u>R-Value</u>	<u>Traffic Index</u>	<u>Class II Base (in.)</u>	<u>Asphalt (in.)</u>
14	4.5	9.0	2.0
14	5.0	9.5	2.5
14	6.0	12.0	3.0
14	7.0	14.5	3.5

6.5 Utility Trenches

- 6.5.1 Utility trench backfill should be governed by the provisions of this report relating to minimum compaction standards. In general, service lines inside of the property lines may be backfilled with native soils and compacted to a minimum of 90% of maximum dry density. Backfill of offsite service lines will be subject to the specifications of the jurisdictional agency or this report, whichever is more stringent.
- 6.5.2 A representative of this firm is to monitor compliance with these recommendations.

6.6 Structural Design – Foundations

- 6.6.1 Conventional interconnected continuous footings may be used for support of the structure.
- 6.6.2 Footings shall extend a minimum of twenty-four (24) inches below lowest adjacent grade or six (6) inches minimum below the base of the non-expansive fill layer, whichever is deeper.

- 6.6.3 Based on the project expansive soil conditions and considering the expected footing depths, footings should be reinforced with a minimum of two (2) #5 bars at the top and bottom of the footing. The structural engineer of record may incorporate additional and/or alternative means of mitigating the expansive soils and should clearly state the design conditions on the project foundation plans and details.
- 6.6.4 At slab-on-grade foundation areas and in order to address the expansive properties of the soils below slabs within the building areas, footings and grade beam spacing should be designed to be spaced at a maximum of sixteen to twenty (16-20) feet on center each way. Interior grade beams not supporting the building bearing loads may be designed for a reduced depth of eighteen (18) inches below grade and may be reinforced with one (1) #5 bar top and bottom. The structural engineer of record may incorporate additional and/or alternative means of mitigating the expansive soils and should clearly state the design conditions on the project foundation plans and details.
- 6.6.5 Conventional interconnected continuous footings may be designed based on an allowable bearing value of 1650 psf.
- 6.6.6 Allowable bearing values are net (weight of footing and soils surcharge may be neglected) and are applicable for dead plus reasonable live loads.
- 6.6.7 Bearing values may be increased by one-third when transient loads such as wind and/or seismicity are incorporated into designs using the alternate load combinations in 2019 California Building Code Section 1605.3.2.
- 6.6.8 Lateral loads may be resisted by soils friction on floor slabs and foundations and by passive resistance of the soils acting on foundation stem walls. Lateral capacity is based on the assumption that any required backfill adjacent to foundations and grade beams is properly compacted.
- 6.6.9 For structures to be constructed above slopes, the outside faces at the bottom of footings should provide a minimum horizontal distance of ten (10) feet from the slope face.
- 6.6.10 Conventional continuous footings for buildings where the ground surface slopes at 10:1, horizontal to vertical, or steeper should be stepped so that both top and bottom are level.
- 6.6.11 Reinforcement of footings bottomed in soils in the "Medium" expansion range should be designed by the Project Structural Engineer to properly resist the effects of the expansive soil. Additionally, soils should be presaturated to 130% of optimum moisture content to a depth of twenty-seven (27) inches below lowest adjacent grade.

- 6.6.12 Foundation excavations should be observed by a representative of Beacon Geotechnical, Inc. after excavation, but prior to placing reinforcing steel or forms.**

6.7 Slabs on Grade

- 6.7.1 Due to expansive soils present at the project, concrete slabs shall be a minimum of five (5) inches thick, reinforced with a minimum of #3 bars spaced at eighteen (18) inches on center, each way.
- 6.7.2 Concrete slabs should be supported by compacted structural fill as recommended earlier in this report.
- 6.7.3 Reinforcement dowels shall be provided at the connection between concrete slabs on grade and continuous footings.
- 6.7.4 The plans and details shall clearly denote non-expansive import soils below slab areas.
- 6.7.5 Although supporting the structure on deepened footings and recompacting imported non-expansive material below slabs as recommended earlier in this report will provide a foundation system that mitigates the effects of the expansive soils and satisfies the minimum intent of the building code, it should be noted that slabs requiring improved performance or traffic areas with may be thickened to a minimum of six (6) inches with a minimum of #4 bars placed at eighteen (18) inches on center each way, centered in the slab section.
- 6.7.6 Slabs constructed over non-expansive import should be directly underlain with a minimum of four (4) inches of clean and free draining sand. Areas where floor wetness would be undesirable should be underlain with a 10mil moisture barrier to reduce moisture transmission from the subgrade soils to the slab. The membrane should be placed at mid-height in the clean sand.
- 6.7.7 Prior to setting the vapor barrier, soils below slab areas shall be presaturated so that the expansive sub-grade soils below the non-expansive import are presaturated to 130% of optimum moisture content to a depth of twenty-four (24) inches below lowest adjacent grade.
- 6.7.8 Reinforcement and slab thickness should be determined by the Project Structural Engineer.

6.8 Structural Design – Lateral Resistance Parameters

- 6.8.1 Resistance to lateral loading may be provided by friction acting on the base of foundations. A coefficient of friction of 0.32 may be applied to dead load forces. This value does not include a factor of safety.

- 6.8.2 Passive resistance acting on the sides of foundation stems equal to 300 pcf of equivalent fluid weight may be included for resistance to lateral load. This value does not include a factor of safety.
- 6.8.3 A one-third increase in the quoted passive value may be used when considering transient loads such as wind and seismicity.

6.9 Structural Design – Settlement Considerations

- 6.9.1 Maximum expected settlements approximately 3/4 inches are anticipated for foundations and floor slabs designed as recommended.
- 6.9.2 Differential settlement between adjacent load bearing members should be less than one-half the total settlement.
- 6.9.3 The majority of settlement should occur during construction. Post construction settlement should be minimal.

6.10 Structural Design – Retaining Walls

- 6.10.1 Conventional cantilever retaining walls bearing in soils prepared in accordance with the "Grading Pads – Site Development and Foundation Excavations" section of this report and backfilled with compacted soils may be designed for the lateral pressures listed below:

Active Case	45 pcf
At Rest Case	70 pcf
Passive Case	300 pcf
Max. Toe Pressure	1650 psf
Coefficient of Sliding Friction	0.32

- 6.10.2 Retaining walls extending greater than six (6) feet in height should be designed for an additional seismic horizontal line load of $15H^2$ (#/ft-of-wall) assumed to be acting at a height of $0.33H$ (ft) above the base of the wall, where H is the height of the wall in feet. This seismic surcharge should be added to an active pressure design utilizing an active pressure of 45 psf.
- 6.10.3 It should be noted that where structural retaining walls would otherwise be designed based on an at-rest pressure case, the seismic-and-active design results should be compared to the at-rest design results and the governing conditions should be used for the purpose of the project.
- 6.10.4 In addition to the static soil pressures described above, it is important to note that the active pressure condition will only fully develop if the retaining wall structure is allowed to move a sufficient distance. The necessary lateral movements required to establish the active pressure condition are shown below,

Non-Expansive Granular Soil
Expansive Cohesive Soil

0.001H – 0.004H
0.01H – 0.04H

where H represents the height of the wall. At-rest pressures should be used for design purposes where retaining wall systems connected or adjacent to building structures would be adversely affected by the above referenced lateral displacements.

- 6.10.5 Design pressures noted above are applicable to a horizontally retained surface behind the wall. Walls having a retained surface that slopes upward from the wall should be designed for an additional equivalent fluid pressure of 1 pcf for the active case and 1.5 pcf for the at-rest case, for every two degrees of slope inclination. Walls positioned on or near descending slopes should be evaluated by this firm on an individual basis.
- 6.10.6 The pressures listed above were based on the assumption that backfilled soils will be compacted to 90% of maximum dry density as determined by ASTM D 1557 Test Method.
- 6.10.7 The lateral earth pressure to be resisted by the retaining walls or similar structures should include the loads from any structures or temporary loads that influence the wall design.
- 6.10.8 A back drain or an equivalent system of backfill drainage should be incorporated into the retaining wall design. Backfill immediately behind the retaining structure should be a free-draining granular material. Alternatively, the back of the wall could be lined with a geodrain system.
- 6.10.9 Compaction on the uphill side of the wall within a horizontal distance equal to one wall height should be performed by hand-operated or other lightweight compaction equipment. This is intended to reduce potential "locked-in" lateral pressures caused by compaction with heavy grading equipment.
- 6.10.10 Water should not be allowed to pond near the top of the wall. To accomplish this, the final backfill site grade should be such that all water is diverted away from the retaining wall.

7 REFERENCES CITED

USGS, Online, Geologic Hazards Science Center, United States Geological Society, in Cooperation with California Geological Society (CGS), www.geohazards.usgs.gov/qfaults/ca/California.php

8 ADDITIONAL SERVICES

This report is based on the assumption that an adequate program of monitoring and testing will be performed by Beacon Geotechnical, Inc. during construction to check compliance with the recommendations given in this report. The recommended tests and observations include, but are not necessarily limited to the following:

- 8.1 Review of the building and grading plans during the design phase of the project.
- 8.2 Observation and testing during site preparation, grading, placing of engineered fill, and foundation construction.
- 8.3 Consultation as required during construction.

9 PROJECT LIMITATIONS AND UNIFORMITY OF CONDITIONS

- 9.1 The analysis and recommendations submitted in this report are based in part upon the data obtained from the borings drilled on site. The nature and extent of variations between and beyond the borings may not become evident until construction. If variations then appear evident, it may be necessary to re-evaluate the recommendations of this report.
- 9.2 The scope of our services did not include environmental assessment or geological study. The scope of services did not include investigation for the presence or absence of wetlands, hazardous or toxic materials in the soil, surface water, groundwater or air. Any statements in this report or on the soil boring logs regarding odors, unusual or suspicious items or conditions observed are strictly for the information of the client.
- 9.3 Findings of this report are valid as of this date, however, changes in a condition of a property can occur with passage of time whether they be due to natural processes or works of man on this or adjacent properties. In addition, changes in applicable or appropriate standard may occur whether they result from legislation or broadening knowledge. Accordingly, findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of one (1) year.
- 9.4 In the event that any changes in the nature, design, or location of the structure and other improvements are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

- 9.5 This report is issued with the understanding that it is the responsibility of the owner or his representatives to insure the information and recommendations offered herein are called to the attention of the project architect and engineers. It is also the responsibility of the owner or his representatives to insure the information and recommendations offered herein are incorporated into the project plans and specifications and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
- 9.6 Beacon Geotechnical, Inc. has prepared this report for the exclusive use of the client and authorized agents. This report has been prepared in accordance with generally accepted geotechnical engineering practices. No other warranties, either expressed or implied, are made as to the professional advice provided under the terms of this agreement.
- 9.7 It is recommended that Beacon Geotechnical, Inc. be provided the opportunity for a general review of final design and specifications in order that earthwork and foundation recommendations may be properly interpreted and implemented in the design and specifications. If Beacon Geotechnical, Inc. is not accorded the privilege of making this recommended review, we can assume no responsibility for misinterpretation of our recommendations.

END OF TEXT

Appendices

APPENDIX A

Vicinity Map

Site Plan

Quaternary Fault Map

Investigation Parameters

Unified Soil Classification Table

Boring Logs



PROJECT #: F-102534

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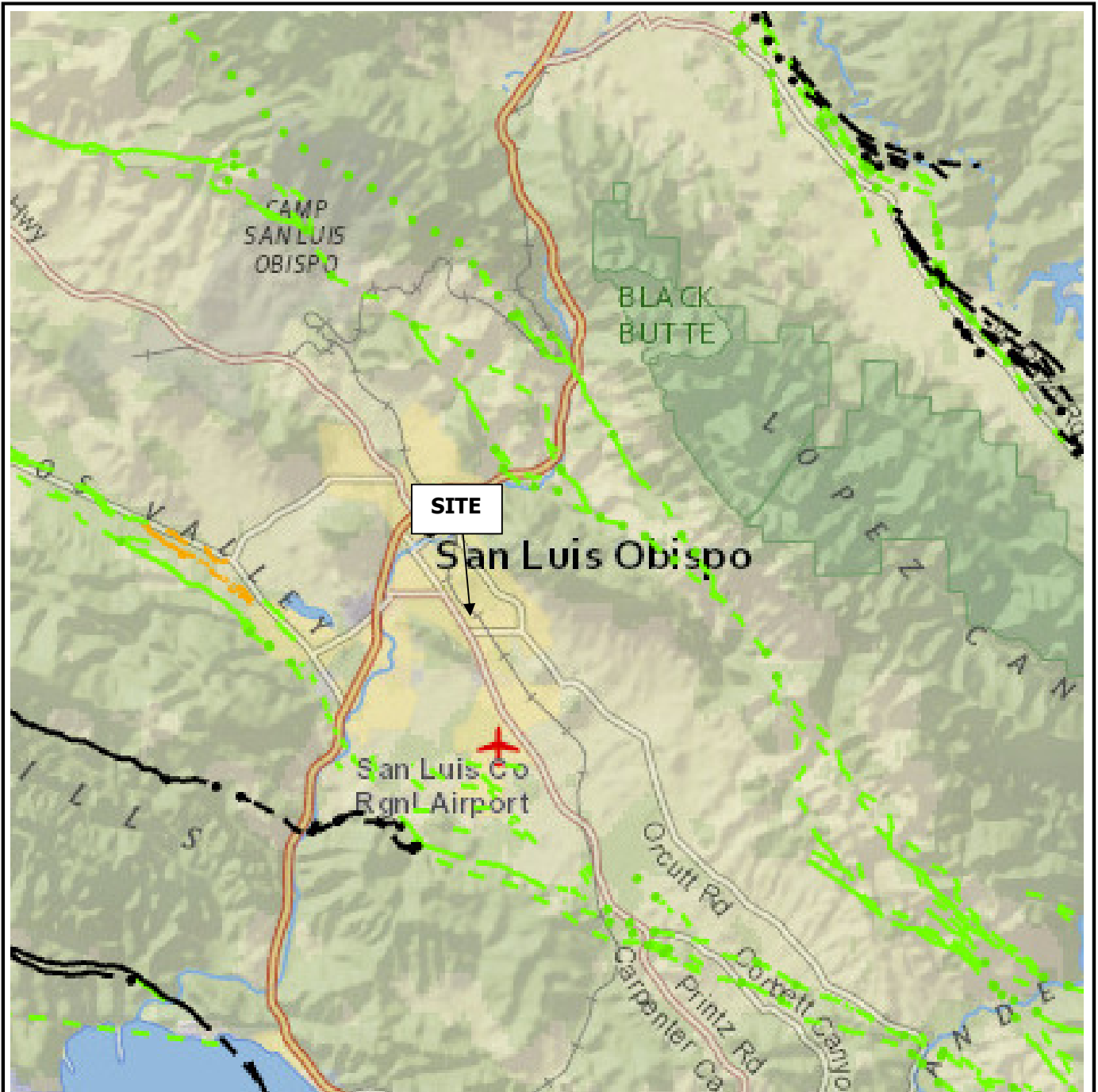
VICINITY MAP



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SITE MAP



Map Showing Nearby Quaternary Aged Faults (USGS, Online)

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QUATERNARY FAULT MAP

INVESTIGATION PARAMETERS

- The borings were drilled to a maximum depth of fifteen (20) feet below the existing ground surface to observe the soil profile and to obtain samples for laboratory analysis. The borings were drilled on November 11, 2020 using a mobile drill rig. The approximate locations of the borings were determined in the field by pacing and sighting, and are shown on the Site Plan in this Appendix.
- Blow counts were obtained within the test borings with Standard Penetration Test (S.P.T.) equipment. The blow counts were obtained by driving the sampler with a 140 pound hammer dropping thirty (30) inches in accordance with ASTM D 1586-11.
- Bulk samples of the soils encountered were gathered from the auger cuttings.
- The final logs of borings represent our interpretation of the contents of the field logs and the results of laboratory testing performed on the samples obtained during the subsurface investigation. The final logs are included in this Appendix.

UNITED SOIL CLASSIFICATION (ASTM D-2487)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES			GROUP SYMBOL	SOIL GROUP NAMES
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	$C_u \geq 4$ AND $1 \leq C_c \leq 3$	GW	WELL-GRADED GRAVEL
			$C_u \geq 4$ AND/OR $1 \geq C_c \geq 3$	GP	POORLY-GRADED GRAVEL
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL
	SANDS >50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	$C_u \geq 6$ AND $1 \leq C_c \leq 3$	SW	WELL-GRADED SAND
			$C_u \geq 6$ AND/OR $1 \geq C_c \geq 3$	SP	POORLY-GRADED SAND
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR MH	SM	SILTY SAND
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT<50	INORGANIC	PI>7 AND PLOTS>"A" LINE	CL	LEAN CLAY
			PI>4 AND PLOTS<"A" LINE	ML	SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OL	ORGANIC CLAY OR SILT
	SILTS AND CLAYS LIQUID LIMIT>50	INORGANIC	PI PLOTS >"A" LINE	CH	FAT CLAY
			PI PLOTS <"A" LINE	MH	ELASTIC SILT
		ORGANIC	LL (oven dried)/LL (not dried)<0.75	OH	ORGANIC CLAY OR SILT
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT

PENETRATION RESISTANCE (RECORDED AS BLOWS / 0.5 FT)				
SAND & GRAVEL		SILT & CLAY		
RELATIVE DENSITY	BLOWS/FOOT*	CONSISTENCY	BLOWS/FOOT*	COMPRESSIVE STRENGTH (TSF)
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.50
MEDIUM DENSE	10 - 30	FIRM	4 - 8	0.50 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

* NUMBER OF BLOWS OF 140 LB HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1-3/8 INCH I.D.) SPLIT-BARREL SAMPLER THE LAST 12 INCHES OF AN 18-INCH DRIVE (ASTM-1586 STANDARD PENETRATION TEST).

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BEACON GEOTECHNICAL, INC.

UNITED SOIL CLASSIFICATION CHART

Site Location: San Luis Obispo, CA
Driller/Helper:
Rig Type: Giddings
Auger Diameter: 4"
Date: November 11, 2020

BORING NO. 1

GROUNDWATER	Not Encountered
TimeDepth	

SAMPLE TYPE
SPT=Standard Penetration Test (uncorrected value, N/**corrected value, N**)

LOG OF BORING
for:
2855 McMillan Avenue

Site Location: San Luis Obispo, CA
Driller/Helper:
Rig Type: Giddings
Auger Diameter: 4"
Date: November 11, 2020

F-102534

BORING NO. 2

Depth (ft.)	Blow Type	Blows per ft.	Drilling comments	Voids	Moisture	Description	USCS	Beacon Soil ID
0			Loose			Dark brown very clayey silty sand with gravel	SC-SM	A1
	SPT	5	↓		-5%	↓		
						Brown silty clayey sand	SM-SC	A2
	SPT	9	↓		-2%	↓		
						Dark brown very clayey silty sand	SC-SM	A3
5	SPT	11	↓		-1%	↓		
			Medium Dense			Brown silty clayey sand with gravel	SM-SC	A4
			↓			↓		
10	SPT	20	↓		+1%	↓		
						Total Depth @ 11.0'		
15								
20								
25								
30								
35								
40								
45								
50								

GROUNDWATER Time Depth **Not Encountered**

SAMPLE TYPE
SPT=Standard Penetration Test (uncorrected value, N/**corrected value, N**)

APPENDIX B

Laboratory Testing Parameters

Laboratory Results

Bench & Keyway Detail

Transition Lot Detail

2019 CBC -- Table 1705.6

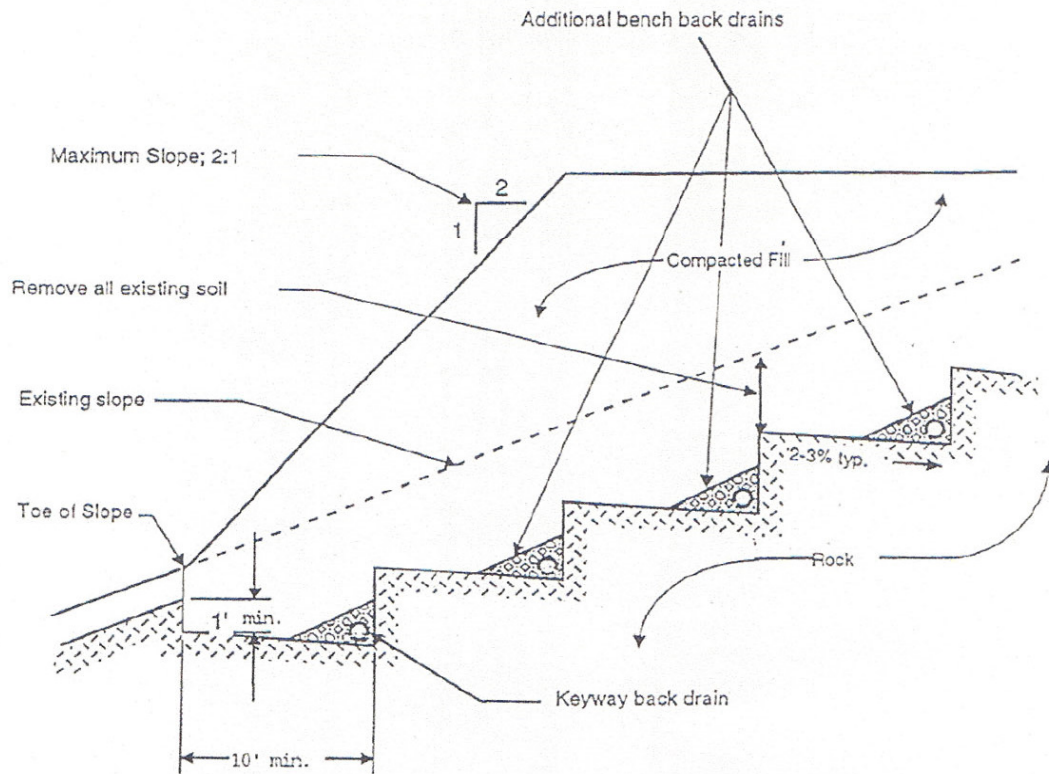
LABORATORY PARAMETERS

- Samples were reviewed along with field logs to determine which would be analyzed further. Those chosen for laboratory analysis were considered representative of soils that would be exposed and/or used during grading, and those deemed to be within the influence of the proposed structure. Test results are presented in this Appendix.
- ASTM D2487-11 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D1557-12e1 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
- ASTM D2216-10 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318-10e1 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D4829-11 Standard Test Method for Expansion Index of Soils

LABORATORY RESULTS

	Boring Depth	USCS	Max. Density (pcf)	Opt. Moisture (%)	E.I.	P.I.
Material A1	1@0'-2'	SC-SM	115.8	13.2	65	17
Material A2	1@2'-4'	SM-SC	116.8	13.6	31	8
Material A3	1@4'-6'	SC-SM	115.4	12.8	70	20
Material A4	1@6'-20'	SM-SC	116.9	12.4	25	7

BENCH AND KEYWAY DETAIL
(Typical)
NOT TO SCALE

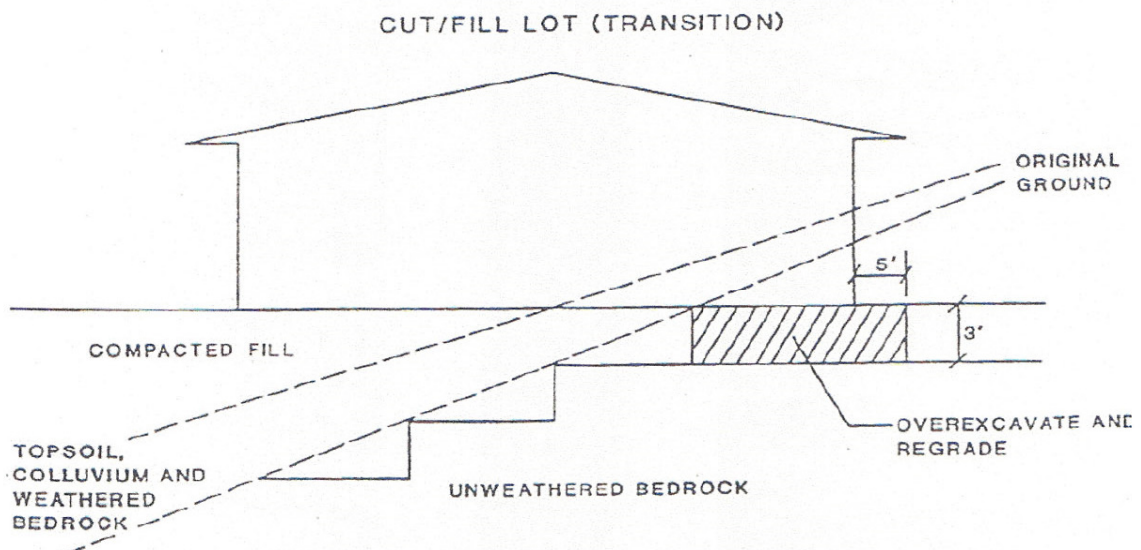
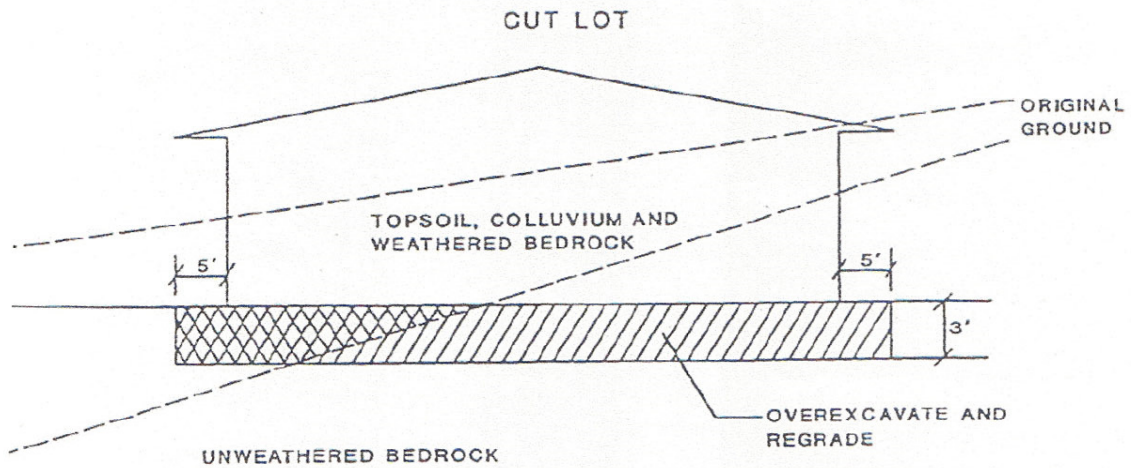


PROJECT #: F-102534

BEACON GEOTECHNICAL, INC.

BENCH AND KEYWAY DETAIL

GENERAL GRADING RECOMMENDATIONS



PROJECT #: F-102534

BEACON GEOTECHNICAL, INC.

TRANSITION LOT DETAIL

TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X
2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X

ATTACHMENT 6

Preliminary Hydrology Letter

Hal Hannula
City of SLO, Engineering
919 Palm Street
San Luis Obispo, CA 93401

July 23, 2021

Hal,

This letter provides a summary of the Hydrology and Post Construction Stormwater requirements for the project located at 2855 McMillan Avenue in the City of San Luis Obispo. Once this project enters the construction document phase a full Stormwater Control Plan, Hydrology, and Hydraulics report will be submitted.

The proposed project will include the construction of an office and warehouse building, associated onsite parking and flatwork, and a new street frontage. This project will include the undergrounding of a portion of Bishop Creek that runs through the lot.

Flow rates for Bishop Creek were taken from Appendix I from the 4 Creeks EIR. The 4 Creeks EIR is for a project located downstream of this project, and so any flow rates used will be conservative for this project. The flow rate during the 100-year event used to size the box culvert is 400 cfs. We used the Mannings equation to size the proposed box culvert that will be installed through the site. The attached calculations show that the 6'x5' box culvert will have 2 feet of freeboard during the 100-year event.

Construction of this site will include the construction of over 15,000 sf of impervious surface and so the project is subject to performance requirements 1-3. This project will meet these requirements through the use of underground chambers that will infiltrate the runoff back into the ground. Once the chambers are full, a storm drain will direct the runoff to the proposed box culvert.

The chambers will also act as a detention basin to slow the increase in runoff due to the new impervious area and reduce project flow rates to pre-project levels.

If you have any questions, please let me know.

Sincerely,



Kathleen Allwine, PE

Concrete Box Culvert for McMillan

System Characteristics	
Design Flow Rate (cfs)	400.0
Channel bottom width	6.0
Channel depth	5.0
Channel left bank slope	:1
Channel right bank slope	:1
Channel flowline slope	3%
Design minimum freeboard (ft)	0.2

Outlet Layout	
Mannings n	0.015
Design Flow Depth (ft)	2.97
Design Freeboard (ft)	2.03
Design Flow Velocity (fps)	22.42

