2020 LA River Master Plan

Draft Program Environmental Impact Report

SCH# 2020070128

Appendices Volume II

Prepared for:

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Appendix C

Air Quality and Greenhouse Gas Emissions

LARMP - XS/S Common Elements

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	38.05	1000sqft	0.87	38,050.00	0
City Park	3.00	Acre	3.00	130,680.00	0
Fast Food Restaurant w/o Drive Thru	8.00	1000sqft	0.18	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	833.99	**CH4 Intensity (lb/MWhr)**	0.03	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor extrapolated per Table C-1 of LADWP 2017 Power Strategic Long-Term Resource Plan and State's RPS targets. CH4 and N2O intensity factors per eGRID 2018.

Land Use - Fast food restaurant = cafe; other asphalt spaces = performing arts space; city park = overall site. Added 34,050 SF to Other Asphalt Surfaces to account for paving emissions.

Construction Phase - Demolition phase length per applicant. Other inputs CalEEMod defaults.

Off-road Equipment - trucks onsite accounted for in Trips and VMT at 5 mph speed bin * 8 hours = 40 miles a day

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Grading - Material transfer and area graded per applicant

Demolition - Converted 4,000 CY from applicant to tons per CalEEMod tons per CY conversion factor.

Trips and VMT - commute trips/day and haul trip length per applicant. Water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph speed bin * 8 hours = 40 miles a day

Architectural Coating - VOC g/L per SCAQMD Rule 1113

Vehicle Trips - Other asphalt surfaces changed from 0 to account for maintenance worker vehicle trips.

Vehicle Emission Factors - Vehicle emissions processed for SAFE Rule outside of CalEEMod

Fleet Mix - Maintenance vehicle trips (light duty trucks) entered under Other Asphalt Surfaces

Area Coating - VOC g/L per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, watering 3 times per day reduces PM by 61%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	18.00	15.00
tblConstructionPhase	NumDays	230.00	105.00
tblConstructionPhase	NumDays	8.00	30.00
tblConstructionPhase	NumDays	18.00	15.00
tblConstructionPhase	NumDays	5.00	31.00
tblConstructionPhase	PhaseEndDate	2/23/2022	10/29/2021
tblConstructionPhase	PhaseEndDate	1/4/2022	9/17/2021
tblConstructionPhase	PhaseEndDate	2/16/2021	4/23/2021
tblConstructionPhase	PhaseEndDate	1/28/2022	10/8/2021
tblConstructionPhase	PhaseEndDate	2/4/2021	3/12/2021

tblConstructionPhase	PhaseStartDate	1/29/2022	10/9/2021
tblConstructionPhase	PhaseStartDate	2/17/2021	4/24/2021
tblConstructionPhase	PhaseStartDate	2/5/2021	3/13/2021
tblConstructionPhase	PhaseStartDate	1/5/2022	9/18/2021
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	1.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.1960e-003	0.00
tblFleetMix	MCY	5.1420e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	AcresOfGrading	30.00	3.00
tblGrading	MaterialExported	0.00	5,000.00
tblGrading	MaterialImported	0.00	2,000.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.74
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.37	0.37

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	1227.89	833.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00

tblTripsAndVMT	HaulingTripNumber	500.00	507.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	875.00	878.00
tblTripsAndVMT	HaulingTripNumber	0.00	7.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	74.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblVehicleTrips	CC_TTP	0.00	79.50
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	1.50
tblVehicleTrips	DV_TP	0.00	37.00
tblVehicleTrips	PB_TP	0.00	12.00
tblVehicleTrips	PR_TP	0.00	51.00
tblVehicleTrips	ST_TR	0.00	1.45
tblVehicleTrips	SU_TR	0.00	1.06
tblVehicleTrips	WD_TR	0.00	0.13

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2021	0.1609	1.7411	1.0277	3.3000e-003	0.1076	0.0581	0.1658	0.0225	0.0535	0.0760	0.0000	302.4945	302.4945	0.0617	0.0000	304.0368
Maximum	**0.1609**	**1.7411**	**1.0277**	**3.3000e-003**	**0.1076**	**0.0581**	**0.1658**	**0.0225**	**0.0535**	**0.0760**	**0.0000**	**302.4945**	**302.4945**	**0.0617**	**0.0000**	**304.0368**

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	tons/yr										MT/yr					
2021	0.1609	1.7411	1.0277	3.3000e-003	0.0734	0.0581	0.1316	0.0174	0.0535	0.0709	0.0000	302.4943	302.4943	0.0617	0.0000	304.0366
Maximum	**0.1609**	**1.7411**	**1.0277**	**3.3000e-003**	**0.0734**	**0.0581**	**0.1316**	**0.0174**	**0.0535**	**0.0709**	**0.0000**	**302.4943**	**302.4943**	**0.0617**	**0.0000**	**304.0366**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**31.78**	**0.00**	**20.64**	**22.84**	**0.00**	**6.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2021**	**3-31-2021**	0.6324	0.6324
2	**4-1-2021**	**6-30-2021**	0.7284	0.7284
3	**7-1-2021**	**9-30-2021**	0.4817	0.4817
		Highest	0.7284	0.7284

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	0.0348	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2200e-003	1.2200e-003	0.0000	0.0000	1.30E-03
Energy	0.0112	0.1017	0.0854	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003	0.0000	221.1070	221.1070	6.0900e-003	2.5600e-003	222.022
Mobile	1.3312	6.4318	14.3878	0.0479	3.7863	0.0410	3.8273	1.0149	0.0383	1.0532	0.0000	4,429.3867	4,429.3867	0.2464	0.0000	4,435.55
Waste						0.0000	0.0000		0.0000	0.0000	18.7584	0.0000	18.7584	1.1086	0.0000	46.4731
Water						0.0000	0.0000		0.0000	0.0000	0.7704	27.6352	28.4056	0.0801	2.0000e-003	31.0048
Total	**1.3772**	**6.5335**	**14.4738**	**0.0485**	**3.7863**	**0.0488**	**3.8351**	**1.0149**	**0.0460**	**1.0609**	**19.5288**	**4,678.1301**	**4,697.6588**	**1.4412**	**4.5600e-003**	**4,735.05**

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	0.0348	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2200e-003	1.2200e-003	0.0000	0.0000	1.3000e-003
Energy	0.0112	0.1017	0.0854	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003	0.0000	221.1070	221.1070	6.0900e-003	2.5600e-003	222.0220
Mobile	1.3312	6.4318	14.3878	0.0479	3.7863	0.0410	3.8273	1.0149	0.0383	1.0532	0.0000	4,429.3867	4,429.3867	0.2464	0.0000	4,435.5459
Waste						0.0000	0.0000		0.0000	0.0000	18.7584	0.0000	18.7584	1.1086	0.0000	46.4731
Water						0.0000	0.0000		0.0000	0.0000	0.7704	27.6352	28.4056	0.0801	2.0000e-003	31.0048
Total	**1.3772**	**6.5335**	**14.4738**	**0.0485**	**3.7863**	**0.0488**	**3.8351**	**1.0149**	**0.0460**	**1.0609**	**19.5288**	**4,678.1301**	**4,697.6588**	**1.4412**	**4.5600e-003**	**4,735.0471**

	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	N20	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	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	3/12/2021	5	31	
3	Grading	Grading	3/13/2021	4/23/2021	5	30	
4	Building Construction	Building Construction	4/24/2021	9/17/2021	5	105	
5	Paving	Paving	9/18/2021	10/8/2021	5	15	
6	Architectural Coating	Architectural Coating	10/9/2021	10/29/2021	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,000; Non-Residential Outdoor: 4,000; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	1	8.00	300	0.38
Demolition	Tractors/Loaders/Backhoes	2	8.00	250	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	2	8.00	187	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Paving	Paving Equipment	1	8.00	132	0.36
Paving	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Architectural Coating	Air Compressors	1	0.00	78	0.48

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
Demolition	3	20.00	0.00	507.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	20.00	0.00	12.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Grading	6	20.00	0.00	878.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	20.00	29.00	7.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Paving	4	20.00	0.00	10.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	6.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

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					0.0541	0.0000	0.0541	8.1900e-003	0.0000	8.1900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6900e-003	0.1039	0.0605	2.6000e-004		3.5000e-003	3.5000e-003		3.2200e-003	3.2200e-003	0.0000	22.4811	22.4811	7.2700e-003	0.0000	22.6628
Total	**9.6900e-003**	**0.1039**	**0.0605**	**2.6000e-004**	**0.0541**	**3.5000e-003**	**0.0576**	**8.1900e-003**	**3.2200e-003**	**0.0114**	**0.0000**	**22.4811**	**22.4811**	**7.2700e-003**	**0.0000**	**22.6628**

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	2.9900e-003	0.0936	0.0228	2.8000e-004	6.5300e-003	3.1000e-004	6.8400e-003	1.7900e-003	3.0000e-004	2.0900e-003	0.0000	27.7427	27.7427	1.8200e-003	0.0000	27.7882
Vendor	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	0.0000	0.0000
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**3.8500e-003**	**0.0943**	**0.0304**	**3.0000e-004**	**8.7200e-003**	**3.3000e-004**	**9.0500e-003**	**2.3700e-003**	**3.2000e-004**	**2.6900e-003**	**0.0000**	**29.7205**	**29.7205**	**1.8800e-003**	**0.0000**	**29.7675**

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					0.0211	0.0000	0.0211	3.1900e-003	0.0000	3.1900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0
Off-Road	9.6900e-003	0.1039	0.0605	2.6000e-004		3.5000e-003	3.5000e-003		3.2200e-003	3.2200e-003	0.0000	22.4810	22.4810	7.2700e-003	0.0000	22.6628
Total	**9.6900e-003**	**0.1039**	**0.0605**	**2.6000e-004**	**0.0211**	**3.5000e-003**	**0.0246**	**3.1900e-003**	**3.2200e-003**	**6.4100e-003**	**0.0000**	**22.4810**	**22.4810**	**7.2700e-003**	**0.0000**	**22.6628**

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	2.9900e-003	0.0936	0.0228	2.8000e-004	6.5300e-003	3.1000e-004	6.8400e-003	1.7900e-003	3.0000e-004	2.0900e-003	0.0000	27.7427	27.7427	1.8200e-003	0.0000	27.7882
Vendor	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	0.0000	0
Worker	8.6000e-004	6.7000e-004	7.5600e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9778	1.9778	6.0000e-005	0.0000	1.9793
Total	**3.8500e-003**	**0.0943**	**0.0304**	**3.0000e-004**	**8.7200e-003**	**3.3000e-004**	**9.0500e-003**	**2.3700e-003**	**3.2000e-004**	**2.6900e-003**	**0.0000**	**29.7205**	**29.7205**	**1.8800e-003**	**0.0000**	**29.7675**

3.3 Site Preparation - 2021

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	0.0116	0.1171	0.1396	1.9000e-004		6.9000e-003	6.9000e-003		6.3500e-003	6.3500e-003	0.0000	16.8557	16.8557	5.4500e-003	0.0000	16.9919
Total	**0.0116**	**0.1171**	**0.1396**	**1.9000e-004**		**6.9000e-003**	**6.9000e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**16.8557**	**16.8557**	**5.4500e-003**	**0.0000**	**16.9919**

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	7.0000e-005	2.2200e-003	5.4000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6566	0.6566	4.0000e-005	0.0000	0.6577
Vendor	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	0.0000	0.0000

Worker	1.3300e-003	1.0400e-003	0.0117	3.0000e-005	3.4000e-003	3.0000e-005	3.4200e-003	9.0000e-004	3.0000e-005	9.3000e-004	0.0000	3.0656	3.0656	9.0000e-005	0.0000	3.0679
Total	**1.4000e-003**	**3.2600e-003**	**0.0123**	**4.0000e-005**	**3.5500e-003**	**4.0000e-005**	**3.5800e-003**	**9.4000e-004**	**4.0000e-005**	**9.8000e-004**	**0.0000**	**3.7223**	**3.7223**	**1.3000e-004**	**0.0000**	**3.7256**

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	0.0116	0.1171	0.1396	1.9000e-004		6.9000e-003	6.9000e-003		6.3500e-003	6.3500e-003	0.0000	16.8556	16.8556	5.4500e-003	0.0000	16.9919
Total	**0.0116**	**0.1171**	**0.1396**	**1.9000e-004**		**6.9000e-003**	**6.9000e-003**		**6.3500e-003**	**6.3500e-003**	**0.0000**	**16.8556**	**16.8556**	**5.4500e-003**	**0.0000**	**16.9919**

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	7.0000e-005	2.2200e-003	5.4000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6566	0.6566	4.0000e-005	0.0000	0.6577
Vendor	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	0.0000	0
Worker	1.3300e-003	1.0400e-003	0.0117	3.0000e-005	3.4000e-003	3.0000e-005	3.4200e-003	9.0000e-004	3.0000e-005	9.3000e-004	0.0000	3.0656	3.0656	9.0000e-005	0.0000	3.0679
Total	**1.4000e-003**	**3.2600e-003**	**0.0123**	**4.0000e-005**	**3.5500e-003**	**4.0000e-005**	**3.5800e-003**	**9.4000e-004**	**4.0000e-005**	**9.8000e-004**	**0.0000**	**3.7223**	**3.7223**	**1.3000e-004**	**0.0000**	**3.7256**

3.4 Grading - 2021

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					1.9900e-003	0.0000	1.9900e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0364	0.4382	0.2463	5.8000e-004		0.0168	0.0168		0.0154	0.0154	0.0000	50.5945	50.5945	0.0164	0.0000	51.0036
Total	**0.0364**	**0.4382**	**0.2463**	**5.8000e-004**	**1.9900e-003**	**0.0168**	**0.0187**	**2.3000e-004**	**0.0154**	**0.0156**	**0.0000**	**50.5945**	**50.5945**	**0.0164**	**0.0000**	**51.0036**

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	5.1800e-003	0.1622	0.0396	4.9000e-004	0.0113	5.4000e-004	0.0119	3.1100e-003	5.1000e-004	3.6200e-003	0.0000	48.0435	48.0435	3.1600e-003	0.0000	48.1224
Vendor	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	0.0000	0.0000
Worker	1.2900e-003	1.0000e-003	0.0113	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.9668	2.9668	9.0000e-005	0.0000	2.9689
Total	**6.4700e-003**	**0.1632**	**0.0509**	**5.2000e-004**	**0.0146**	**5.7000e-004**	**0.0152**	**3.9800e-003**	**5.3000e-004**	**4.5200e-003**	**0.0000**	**51.0103**	**51.0103**	**3.2500e-003**	**0.0000**	**51.0913**

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					7.7000e-004	0.0000	7.7000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0
Off-Road	0.0364	0.4382	0.2463	5.8000e-004		0.0168	0.0168		0.0154	0.0154	0.0000	50.5944	50.5944	0.0164	0.0000	51.0035
Total	**0.0364**	**0.4382**	**0.2463**	**5.8000e-004**	**7.7000e-004**	**0.0168**	**0.0175**	**9.0000e-005**	**0.0154**	**0.0155**	**0.0000**	**50.5944**	**50.5944**	**0.0164**	**0.0000**	**51.0035**

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	5.1800e-003	0.1622	0.0396	4.9000e-004	0.0113	5.4000e-004	0.0119	3.1100e-003	5.1000e-004	3.6200e-003	0.0000	48.0435	48.0435	3.1600e-003	0.0000	48.1224
Vendor	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	0.0000	0
Worker	1.2900e-003	1.0000e-003	0.0113	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.9668	2.9668	9.0000e-005	0.0000	2.9689
Total	**6.4700e-003**	**0.1632**	**0.0509**	**5.2000e-004**	**0.0146**	**5.7000e-004**	**0.0152**	**3.9800e-003**	**5.3000e-004**	**4.5200e-003**	**0.0000**	**51.0103**	**51.0103**	**3.2500e-003**	**0.0000**	**51.0913**

3.5 Building Construction - 2021

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	0.0529	0.6050	0.3250	7.6000e-004		0.0264	0.0264		0.0243	0.0243	0.0000	67.1466	67.1466	0.0217	0.0000	67.6895
Total	**0.0529**	**0.6050**	**0.3250**	**7.6000e-004**		**0.0264**	**0.0264**		**0.0243**	**0.0243**	**0.0000**	**67.1466**	**67.1466**	**0.0217**	**0.0000**	**67.6895**

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	4.0000e-005	1.2900e-003	3.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3830	0.3830	3.0000e-005	0.0000	0.3837
Vendor	4.7300e-003	0.1503	0.0407	3.9000e-004	9.5900e-003	3.1000e-004	9.9000e-003	2.7700e-003	2.9000e-004	3.0600e-003	0.0000	37.5291	37.5291	2.3000e-003	0.0000	37.5867
Worker	4.5200e-003	3.5200e-003	0.0397	1.1000e-004	0.0115	9.0000e-005	0.0116	3.0600e-003	9.0000e-005	3.1400e-003	0.0000	10.3836	10.3836	3.1000e-004	0.0000	10.3913
Total	**9.2900e-003**	**0.1551**	**0.0808**	**5.0000e-004**	**0.0212**	**4.0000e-004**	**0.0216**	**5.8500e-003**	**3.8000e-004**	**6.2300e-003**	**0.0000**	**48.2958**	**48.2958**	**2.6400e-003**	**0.0000**	**48.3616**

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	0.0529	0.6050	0.3250	7.6000e-004		0.0264	0.0264		0.0243	0.0243	0.0000	67.1465	67.1465	0.0217	0.0000	67.6894
Total	**0.0529**	**0.6050**	**0.3250**	**7.6000e-004**		**0.0264**	**0.0264**		**0.0243**	**0.0243**	**0.0000**	**67.1465**	**67.1465**	**0.0217**	**0.0000**	**67.6894**

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	4.0000e-005	1.2900e-003	3.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3830	0.3830	3.0000e-005	0.0000	0.3837
Vendor	4.7300e-003	0.1503	0.0407	3.9000e-004	9.5900e-003	3.1000e-004	9.9000e-003	2.7700e-003	2.9000e-004	3.0600e-003	0.0000	37.5291	37.5291	2.3000e-003	0.0000	37.5867
Worker	4.5200e-003	3.5200e-003	0.0397	1.1000e-004	0.0115	9.0000e-005	0.0116	3.0600e-003	9.0000e-005	3.1400e-003	0.0000	10.3836	10.3836	3.1000e-004	0.0000	10.3913
Total	**9.2900e-003**	**0.1551**	**0.0808**	**5.0000e-004**	**0.0212**	**4.0000e-004**	**0.0216**	**5.8500e-003**	**3.8000e-004**	**6.2300e-003**	**0.0000**	**48.2958**	**48.2958**	**2.6400e-003**	**0.0000**	**48.3616**

3.6 Paving - 2021

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	5.6500e-003	0.0572	0.0699	1.0000e-004		3.2300e-003	3.2300e-003		2.9700e-003	2.9700e-003	0.0000	8.8257	8.8257	2.8500e-003	0.0000	8.8971
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7900e-003**	**0.0572**	**0.0699**	**1.0000e-004**		**3.2300e-003**	**3.2300e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.8257**	**8.8257**	**2.8500e-003**	**0.0000**	**8.8971**

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	6.0000e-005	1.8500e-003	4.5000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.3000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5472	0.5472	4.0000e-005	0.0000	0.5481
Vendor	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	0.0000	0.0000
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
Total	**7.1000e-004**	**2.3500e-003**	**6.1200e-003**	**3.0000e-005**	**1.7700e-003**	**2.0000e-005**	**1.7900e-003**	**4.8000e-004**	**2.0000e-005**	**4.9000e-004**	**0.0000**	**2.0306**	**2.0306**	**8.0000e-005**	**0.0000**	**2.0326**

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	5.6500e-003	0.0572	0.0699	1.0000e-004		3.2300e-003	3.2300e-003		2.9700e-003	2.9700e-003	0.0000	8.8257	8.8257	2.8500e-003	0.0000	8.8971
Paving	1.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
Total	**6.7900e-003**	**0.0572**	**0.0699**	**1.0000e-004**		**3.2300e-003**	**3.2300e-003**		**2.9700e-003**	**2.9700e-003**	**0.0000**	**8.8257**	**8.8257**	**2.8500e-003**	**0.0000**	**8.8971**

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	6.0000e-005	1.8500e-003	4.5000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.3000e-004	4.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5472	0.5472	4.0000e-005	0.0000	0.5481
Vendor	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	0.0000	0
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845

Total	**7.1000e-004**	**2.3500e-003**	**6.1200e-003**	**3.0000e-005**	**1.7700e-003**	**2.0000e-005**	**1.7900e-003**	**4.8000e-004**	**2.0000e-005**	**4.9000e-004**	**0.0000**	**2.0306**	**2.0306**	**8.0000e-005**	**0.0000**	**2.0326**

3.7 Architectural Coating - 2021

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	0.0212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	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
Total	**0.0212**	**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**

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	4.0000e-005	1.1100e-003	2.7000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3283	0.3283	2.0000e-005	0.0000	0.3289
Vendor	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	0.0000	0.0000
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
Total	**6.9000e-004**	**1.6100e-003**	**5.9400e-003**	**2.0000e-005**	**1.7200e-003**	**1.0000e-005**	**1.7400e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**0.0000**	**1.8117**	**1.8117**	**6.0000e-005**	**0.0000**	**1.8133**

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	0.0212					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
Off-Road	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
Total	**0.0212**	**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**

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	4.0000e-005	1.1100e-003	2.7000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3283	0.3283	2.0000e-005	0.0000	0.3289
Vendor	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	0.0000	0
Worker	6.5000e-004	5.0000e-004	5.6700e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4834	1.4834	4.0000e-005	0.0000	1.4845
Total	**6.9000e-004**	**1.6100e-003**	**5.9400e-003**	**2.0000e-005**	**1.7200e-003**	**1.0000e-005**	**1.7400e-003**	**4.6000e-004**	**1.0000e-005**	**4.7000e-004**	**0.0000**	**1.8117**	**1.8117**	**6.0000e-005**	**0.0000**	**1.8133**

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	tons/yr										MT/yr					
Mitigated	1.3312	6.4318	14.3878	0.0479	3.7863	0.0410	3.8273	1.0149	0.0383	1.0532	0.0000	4,429.3867	4,429.3867	0.2464	0.0000	4,435.55
Unmitigated	1.3312	6.4318	14.3878	0.0479	3.7863	0.0410	3.8273	1.0149	0.0383	1.0532	0.0000	4,429.3867	4,429.3867	0.2464	0.0000	4,435.5459

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	5.67	68.25	50.22	60,354	60,354
Fast Food Restaurant w/o Drive Thru	5,728.00	5,568.00	4000.00	9,885,194	9,885,194
Other Asphalt Surfaces	4.83	55.04	40.51	30,971	30,971
Total	5,738.50	5,691.29	4,090.73	9,976,520	9,976,520

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Fast Food Restaurant w/o Drive Thru	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Other Asphalt Surfaces	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Fast Food Restaurant w/o Drive Thru	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

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	110.4006	110.4006	3.9700e-003	5.3000e-004	110.6577
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	110.4006	110.4006	3.9700e-003	5.3000e-004	110.6577
NaturalGas Mitigated	0.0112	0.1017	0.0854	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003	0.0000	110.7064	110.7064	2.1200e-003	2.0300e-003	111.3643
NaturalGas Unmitigated	0.0112	0.1017	0.0854	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003	0.0000	110.7064	110.7064	2.1200e-003	2.0300e-003	111.3643

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					
City Park	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
Fast Food Restaurant w/o Drive Thru	2.07456e+006	0.0112	0.1017	0.0854	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003	0.0000	110.7064	110.7064	2.1200e-003	2.0300e-003	111.3643
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
Total		**0.0112**	**0.1017**	**0.0854**	**6.1000e-004**		**7.7300e-003**	**7.7300e-003**		**7.7300e-003**	**7.7300e-003**	**0.0000**	**110.7064**	**110.7064**	**2.1200e-003**	**2.0300e-003**	**111.3643**

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					
City Park	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
Fast Food Restaurant w/o Drive Thru	2.07456e+006	0.0112	0.1017	0.0854	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003	0.0000	110.7064	110.7064	2.1200e-003	2.0300e-003	111.3643
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
Total		**0.0112**	**0.1017**	**0.0854**	**6.1000e-004**		**7.7300e-003**	**7.7300e-003**		**7.7300e-003**	**7.7300e-003**	**0.0000**	**110.7064**	**110.7064**	**2.1200e-003**	**2.0300e-003**	**111.3643**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	291840	110.4006	3.9700e-003	5.3000e-004	110.6577
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**110.4006**	**3.9700e-003**	**5.3000e-004**	**110.6577**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Fast Food Restaurant w/o Drive Thru	291840	110.4006	3.9700e-003	5.3000e-004	110.6577
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**110.4006**	**3.9700e-003**	**5.3000e-004**	**110.6577**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.0348	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2200e-003	1.2200e-003	0.0000	0.0000	1.3000e-003
Unmitigated	0.0348	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2200e-003	1.2200e-003	0.0000	0.0000	1.3000e-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	tons/yr										MT/yr					
Architectural Coating	2.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2200e-003	1.2200e-003	0.0000	0.0000	1.3000e-003
Total	**0.0348**	**1.0000e-005**	**6.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**0.0000**	**1.30E-03**

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	2.1200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0326					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-005	1.0000e-005	6.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2200e-003	1.2200e-003	0.0000	0.0000	1.3000e-003
Total	**0.0348**	**1.0000e-005**	**6.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2200e-003**	**1.2200e-003**	**0.0000**	**0.0000**	**1.3000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.4056	0.0801	2.0000e-003	31.0048
Unmitigated	28.4056	0.0801	2.0000e-003	31.0048

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.57444	15.0227	5.4000e-004	7.0000e-005	15.0577
Fast Food Restaurant w/o Drive Thru	2.42827 / 0.154996	13.3828	0.0796	1.9300e-003	15.9471
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**28.4056**	**0.0801**	**2.0000e-003**	**31.0048**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.57444	15.0227	5.4000e-004	7.0000e-005	15.0577

Fast Food Restaurant w/o Drive Thru	2.42827 / 0.154996	13.3828	0.0796	1.9300e-003	15.9471
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**28.4056**	**0.0801**	**2.0000e-003**	**31.0048**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.7584	1.1086	0.0000	46.4731
Unmitigated	18.7584	1.1086	0.0000	46.4731

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.26	0.0528	3.1200e-003	0.0000	0.1308
Fast Food Restaurant w/o Drive Thru	92.15	18.7056	1.1055	0.0000	46.3424

Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**18.7584**	**1.1086**	**0.0000**	**46.4731**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.26	0.0528	3.1200e-003	0.0000	0.1308
Fast Food Restaurant w/o Drive Thru	92.15	18.7056	1.1055	0.0000	46.3424
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**18.7584**	**1.1086**	**0.0000**	**46.4731**

9.0 Operational Offroad

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

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

11.0 Vegetation

LARMP - XS/S Common Elements

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	38.05	1000sqft	0.87	38,050.00	0
City Park	3.00	Acre	3.00	130,680.00	0
Fast Food Restaurant w/o Drive Thru	8.00	1000sqft	0.18	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	833.99	**CH4 Intensity (lb/MWhr)**	0.03	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor extrapolated per Table C-1 of LADWP 2017 Power Strategic Long-Term Resource Plan and State's RPS targets. CH4 and N2O intensity factors per eGRID 2018.

Land Use - Fast food restaurant = cafe; other asphalt spaces = performing arts space; city park = overall site. Added 34,050 SF to Other Asphalt Surfaces to account for paving emissions.

Construction Phase - Demolition phase length per applicant. Other inputs CalEEMod defaults.

Off-road Equipment - trucks onsite accounted for in Trips and VMT at 5 mph speed bin * 8 hours = 40 miles a day

Off-road Equipment - trucks onsite accounted for in Trips and VMT at 5 mph speed bin * 8 hours = 40 miles a day

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Off-road Equipment - trucks onsite accounted for in Trips and VMT at 5 mph speed bin * 8 hours = 40 miles a day

Grading - Material transfer and area graded per applicant

Demolition - Converted 4,000 CY from applicant to tons per CalEEMod tons per CY conversion factor.

Trips and VMT - commute trips/day and haul trip length per applicant. Water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph speed bin * 8 hours = 40 miles a day

Architectural Coating - VOC g/L per SCAQMD Rule 1113

Vehicle Trips - Other asphalt surfaces changed from 0 to account for maintenance worker vehicle trips.

Vehicle Emission Factors - Vehicle emissions processed for SAFE Rule outside of CalEEMod

Fleet Mix - Maintenance vehicle trips (light duty trucks) entered under Other Asphalt Surfaces

Area Coating - VOC g/L per SCAQMD Rule 1113

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, watering 3 times per day reduces PM by 61%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	18.00	15.00
tblConstructionPhase	NumDays	230.00	105.00
tblConstructionPhase	NumDays	8.00	30.00
tblConstructionPhase	NumDays	18.00	15.00
tblConstructionPhase	NumDays	5.00	31.00
tblConstructionPhase	PhaseEndDate	2/23/2022	10/29/2021
tblConstructionPhase	PhaseEndDate	1/4/2022	9/17/2021
tblConstructionPhase	PhaseEndDate	2/16/2021	4/23/2021

tblConstructionPhase	PhaseEndDate	1/28/2022	10/8/2021
tblConstructionPhase	PhaseEndDate	2/4/2021	3/12/2021
tblConstructionPhase	PhaseStartDate	1/29/2022	10/9/2021
tblConstructionPhase	PhaseStartDate	2/17/2021	4/24/2021
tblConstructionPhase	PhaseStartDate	2/5/2021	3/13/2021
tblConstructionPhase	PhaseStartDate	1/5/2022	9/18/2021
tblFleetMix	HHD	0.03	0.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	1.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.1960e-003	0.00
tblFleetMix	MCY	5.1420e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	AcresOfGrading	30.00	3.00
tblGrading	MaterialExported	0.00	5,000.00
tblGrading	MaterialImported	0.00	2,000.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.74
tblOffRoadEquipment	LoadFactor	0.37	0.37

tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	1227.89	833.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00

tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	500.00	507.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	875.00	878.00
tblTripsAndVMT	HaulingTripNumber	0.00	7.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblTripsAndVMT	WorkerTripNumber	74.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	15.00	20.00
tblVehicleTrips	CC_TTP	0.00	79.50
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	1.50
tblVehicleTrips	DV_TP	0.00	37.00
tblVehicleTrips	PB_TP	0.00	12.00
tblVehicleTrips	PR_TP	0.00	51.00
tblVehicleTrips	ST_TR	0.00	1.45
tblVehicleTrips	SU_TR	0.00	1.06
tblVehicleTrips	WD_TR	0.00	0.13

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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					
2021	2.9249	39.8885	19.8561	0.0729	6.2978	1.1543	6.6808	1.0605	1.0632	1.4140	0.0000	7,438.2092	7,438.2092	1.4441	0.0000	7,474.3117
Maximum	**2.9249**	**39.8885**	**19.8561**	**0.0729**	**6.2978**	**1.1543**	**6.6808**	**1.0605**	**1.0632**	**1.4140**	**0.0000**	**7,438.2092**	**7,438.2092**	**1.4441**	**0.0000**	**7,474.3117**

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					
2021	2.9249	39.8885	19.8561	0.0729	2.9979	1.1543	3.3809	0.5609	1.0632	1.3388	0.0000	7,438.2092	7,438.2092	1.4441	0.0000	7,474.3117
Maximum	**2.9249**	**39.8885**	**19.8561**	**0.0729**	**2.9979**	**1.1543**	**3.3809**	**0.5609**	**1.0632**	**1.3388**	**0.0000**	**7,438.2092**	**7,438.2092**	**1.4441**	**0.0000**	**7,474.3117**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.40**	**0.00**	**49.39**	**47.11**	**0.00**	**5.32**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.1907	5.0000e-005	5.0200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0114
Energy	0.0613	0.5572	0.4681	3.3400e-003		0.0424	0.0424		0.0424	0.0424		668.6737	668.6737	0.0128	0.0123	672.6472
Mobile	8.0313	36.8468	83.7647	0.2769	22.6847	0.2420	22.9267	6.0703	0.2257	6.2959		28,210.8058	28,210.8058	1.6034		28,250.8908
Total	**8.2832**	**37.4041**	**84.2378**	**0.2802**	**22.6847**	**0.2844**	**22.9691**	**6.0703**	**0.2680**	**6.3383**		**28,879.4902**	**28,879.4902**	**1.6163**	**0.0123**	**28,923.5495**

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	0.1907	5.00E-05	5.02E-03	0		2.00E-05	2.00E-05		2.00E-05	2.00E-05		0.0107	0.0107	3.0000e-005		0.0114
Energy	0.0613	0.5572	0.4681	3.34E-03		0.0424	0.0424		0.0424	0.0424		668.6737	668.6737	0.0128	0.0123	672.6472
Mobile	8.0313	36.8468	83.7647	0.2769	22.6847	0.242	22.9267	6.0703	0.2257	6.2959		28,210.8058	28,210.8058	1.6034		28,250.8908
Total	**8.2832**	**37.4041**	**84.2378**	**0.2802**	**22.6847**	**0.2844**	**22.9691**	**6.0703**	**0.2680**	**6.3383**		**28,879.4902**	**28,879.4902**	**1.6163**	**0.0123**	**28,923.5495**

	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	N20	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	Demolition	Demolition	1/1/2021	1/28/2021	5	20	

2	Site Preparation	Site Preparation	1/29/2021	3/12/2021	5	31	
3	Grading	Grading	3/13/2021	4/23/2021	5	30	
4	Building Construction	Building Construction	4/24/2021	9/17/2021	5	105	
5	Paving	Paving	9/18/2021	10/8/2021	5	15	
6	Architectural Coating	Architectural Coating	10/9/2021	10/29/2021	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3

Acres of Paving: 0.87

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,000; Non-Residential Outdoor: 4,000; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	1	8.00	300	0.38
Demolition	Tractors/Loaders/Backhoes	2	8.00	250	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	2	8.00	187	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Architectural Coating	Air Compressors	1	0.00	78	0.48

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
Demolition	3	20.00	0.00	507.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	20.00	0.00	12.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT

Grading	6	20.00	0.00	878.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	20.00	29.00	7.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Paving	4	20.00	0.00	10.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	6.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

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					5.4097	0.0000	5.4097	0.8191	0.0000	0.8191			0.0000			0.0000
Off-Road	0.9694	10.3901	6.0523	0.0256		0.3500	0.3500		0.3220	0.3220		2,478.1136	2,478.1136	0.8015		2,498.1504
Total	**0.9694**	**10.3901**	**6.0523**	**0.0256**	**5.4097**	**0.3500**	**5.7597**	**0.8191**	**0.3220**	**1.1411**		**2,478.1136**	**2,478.1136**	**0.8015**		**2,498.1504**

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	0.3020	9.1888	2.3379	0.0280	0.6646	0.0312	0.6958	0.1822	0.0298	0.2120		3,036.5451	3,036.5451	0.2038		3,041.6402
Vendor	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

Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.3974**	**9.2540**	**3.0744**	**0.0301**	**0.8882**	**0.0330**	**0.9211**	**0.2415**	**0.0315**	**0.2729**		**3,250.9953**	**3,250.9953**	**0.2101**		**3,256.2482**

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					2.1098	0.0000	2.1098	0.3194	0.0000	0.3194			0.0000			0.0000
Off-Road	0.9694	10.3901	6.0523	0.0256		0.3500	0.3500		0.3220	0.3220	0.0000	2,478.1136	2,478.1136	0.8015		2,498.1504
Total	**0.9694**	**10.3901**	**6.0523**	**0.0256**	**2.1098**	**0.35**	**2.4598**	**0.3194**	**0.322**	**0.6414**	**0.0000**	**2,478.1136**	**2,478.1136**	**0.8015**		**2,498.1504**

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	0.3020	9.1888	2.3379	0.0280	0.6646	0.0312	0.6958	0.1822	0.0298	0.2120		3,036.5451	3,036.5451	0.2038		3,041.6402
Vendor	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
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.3974**	**9.254**	**3.0744**	**0.0301**	**0.8882**	**0.033**	**0.9211**	**0.2415**	**0.0315**	**0.2729**		**3,250.9953**	**3,250.9953**	**0.2101**		**3,256.2482**

3.3 Site Preparation - 2021

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	0.7461	7.5525	9.0043	0.0124		0.4453	0.4453		0.4097	0.4097		1,198.7208	1,198.7208	0.3877		1,208.4131
Total	**0.7461**	**7.5525**	**9.0043**	**0.0124**		**0.4453**	**0.4453**		**0.4097**	**0.4097**		**1,198.7208**	**1,198.7208**	**0.3877**		**1,208.4131**

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	4.6100e-003	0.1403	0.0357	4.3000e-004	0.0102	4.8000e-004	0.0106	2.7800e-003	4.6000e-004	3.2400e-003		46.3683	46.3683	3.1100e-003		46.4461
Vendor	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
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1000**	**0.2055**	**0.7722**	**2.5800e-003**	**0.2337**	**2.2900e-003**	**0.2360**	**0.0621**	**2.1200e-003**	**0.0642**		**260.8185**	**260.8185**	**9.4200e-003**		**261.0541**

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	0.7461	7.5525	9.0043	0.0124		0.4453	0.4453		0.4097	0.4097	0.0000	1,198.7208	1,198.7208	0.3877		1,208.4131
Total	**0.7461**	**7.5525**	**9.0043**	**0.0124**		**0.4453**	**0.4453**		**0.4097**	**0.4097**	**0.0000**	**1,198.7208**	**1,198.7208**	**0.3877**		**1,208.4131**

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	4.6100e-003	0.1403	0.0357	4.3000e-004	0.0102	4.8000e-004	0.0106	2.7800e-003	4.6000e-004	3.2400e-003		46.3683	46.3683	3.1100e-003		46.4461
Vendor	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
Worker	0.0954	0.0652	0.7365	2.15E-03	0.2236	1.81E-03	0.2254	0.0593	1.66E-03	0.061		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1**	**0.2055**	**0.7722**	**2.58E-03**	**0.2337**	**2.29E-03**	**0.236**	**0.0621**	**2.12E-03**	**0.0642**		**260.8185**	**260.8185**	**9.4200e-003**		**261.0541**

3.4 Grading - 2021

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					0.1324	0.0000	0.1324	0.0155	0.0000	0.0155			0.0000			0.0000
Off-Road	2.4250	29.2148	16.4205	0.0384		1.1165	1.1165		1.0271	1.0271		3,718.0567	3,718.0567	1.2025		3,748.1191

Total	**2.4250**	**29.2148**	**16.4205**	**0.0384**	**0.1324**	**1.1165**	**1.2489**	**0.0155**	**1.0271**	**1.0426**		**3,718.0567**	**3,718.0567**	**1.2025**		**3,748.1191**

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	0.3487	10.6085	2.6991	0.0323	0.7673	0.0360	0.8033	0.2103	0.0344	0.2447		3,505.7023	3,505.7023	0.2353		3,511.5847
Vendor	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
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.4441**	**10.6738**	**3.4356**	**0.0345**	**0.9909**	**0.0378**	**1.0286**	**0.2696**	**0.0361**	**0.3057**		**3,720.1525**	**3,720.1525**	**0.2416**		**3,726.1926**

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					0.0517	0.0000	0.0517	6.0200e-003	0.0000	6.0200e-003			0.0000			0.0000
Off-Road	2.425	29.2148	16.4205	0.0384		1.1165	1.1165		1.0271	1.0271	0.0000	3,718.0567	3,718.0567	1.2025		3,748.1191
Total	**2.425**	**29.2148**	**16.4205**	**0.0384**	**0.0517**	**1.1165**	**1.1681**	**6.02E-03**	**1.0271**	**1.0332**	**0.0000**	**3,718.0567**	**3,718.0567**	**1.2025**		**3,748.1191**

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	0.3487	10.6085	2.6991	0.0323	0.7673	0.0360	0.8033	0.2103	0.0344	0.2447		3,505.7023	3,505.7023	0.2353		3,511.5847
Vendor	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
Worker	0.0954	0.0652	0.7365	2.15E-03	0.2236	1.81E-03	0.2254	0.0593	1.66E-03	0.061		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.4441**	**10.6738**	**3.4356**	**0.0345**	**0.9909**	**0.0378**	**1.0286**	**0.2696**	**0.0361**	**0.3057**		**3,720.1525**	**3,720.1525**	**0.2416**		**3,726.1926**

3.5 Building Construction - 2021

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	1.0069	11.5233	6.1908	0.0146		0.5025	0.5025		0.4623	0.4623		1,409.8363	1,409.8363	0.4560		1,421.2356
Total	**1.0069**	**11.5233**	**6.1908**	**0.0146**		**0.5025**	**0.5025**		**0.4623**	**0.4623**		**1,409.8363**	**1,409.8363**	**0.4560**		**1,421.2356**

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	7.9000e-004	0.0242	6.1500e-003	7.0000e-005	1.7500e-003	8.0000e-005	1.8300e-003	4.8000e-004	8.0000e-005	5.6000e-004		7.9857	7.9857	5.4000e-004		7.9991
Vendor	0.0925	2.8098	0.8142	7.2600e-003	0.1857	5.9400e-003	0.1916	0.0535	5.6800e-003	0.0591		775.3020	775.3020	0.0501		776.5533
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1887**	**2.8992**	**1.5569**	**9.4800e-003**	**0.4110**	**7.8300e-003**	**0.4188**	**0.1132**	**7.4200e-003**	**0.1207**		**997.7379**	**997.7379**	**0.0569**		**999.1603**

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	1.0069	11.5233	6.1908	0.0146		0.5025	0.5025		0.4623	0.4623	0.0000	1,409.8363	1,409.8363	0.4560		1,421.2356
Total	**1.0069**	**11.5233**	**6.1908**	**0.0146**		**0.5025**	**0.5025**		**0.4623**	**0.4623**	**0.0000**	**1,409.8363**	**1,409.8363**	**0.4560**		**1,421.2356**

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	7.9000e-004	0.0242	6.1500e-003	7.0000e-005	1.7500e-003	8.0000e-005	1.8300e-003	4.8000e-004	8.0000e-005	5.6000e-004		7.9857	7.9857	5.4000e-004		7.9991
Vendor	0.0925	2.8098	0.8142	7.2600e-003	0.1857	5.9400e-003	0.1916	0.0535	5.6800e-003	0.0591		775.3020	775.3020	0.0501		776.5533
Worker	0.0954	0.0652	0.7365	2.15E-03	0.2236	1.81E-03	0.2254	0.0593	1.66E-03	0.061		214.4502	214.4502	6.3100e-003		214.6080

Total	**0.1887**	**2.8992**	**1.5569**	**9.48E-03**	**0.411**	**7.83E-03**	**0.4188**	**0.1132**	**7.42E-03**	**0.1207**		**997.7379**	**997.7379**	**0.0569**		**999.1603**

3.6 Paving - 2021

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	0.7539	7.6277	9.3221	0.0134		0.4311	0.4311		0.3967	0.3967		1,297.1559	1,297.1559	0.4195		1,307.6441
Paving	0.1520					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9058**	**7.6277**	**9.3221**	**0.0134**		**0.4311**	**0.4311**		**0.3967**	**0.3967**		**1,297.1559**	**1,297.1559**	**0.4195**		**1,307.6441**

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	7.9400e-003	0.2417	0.0615	7.4000e-004	0.0175	8.2000e-004	0.0183	4.7900e-003	7.8000e-004	5.5700e-003		79.8565	79.8565	5.3600e-003		79.9905
Vendor	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
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1033**	**0.3069**	**0.7980**	**2.8900e-003**	**0.2410**	**2.6300e-003**	**0.2437**	**0.0641**	**2.4400e-003**	**0.0665**		**294.3068**	**294.3068**	**0.0117**		**294.5985**

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	0.7539	7.6277	9.3221	0.0134		0.4311	0.4311		0.3967	0.3967	0.0000	1,297.1559	1,297.1559	0.4195		1,307.6441
Paving	0.152					0	0		0	0			0.0000			0.0000
Total	**0.9058**	**7.6277**	**9.3221**	**0.0134**		**0.4311**	**0.4311**		**0.3967**	**0.3967**	**0.0000**	**1,297.1559**	**1,297.1559**	**0.4195**		**1,307.6441**

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	7.9400e-003	0.2417	0.0615	7.4000e-004	0.0175	8.2000e-004	0.0183	4.7900e-003	7.8000e-004	5.5700e-003		79.8565	79.8565	5.3600e-003		79.9905
Vendor	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
Worker	0.0954	0.0652	0.7365	2.15E-03	0.2236	1.81E-03	0.2254	0.0593	1.66E-03	0.061		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1033**	**0.3069**	**0.798**	**2.89E-03**	**0.241**	**2.63E-03**	**0.2437**	**0.0641**	**2.44E-03**	**0.0665**		**294.3068**	**294.3068**	**0.0117**		**294.5985**

3.7 Architectural Coating - 2021

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	2.8247					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.8247**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	4.7700e-003	0.1450	0.0369	4.4000e-004	0.0105	4.9000e-004	0.0110	2.8700e-003	4.7000e-004	3.3400e-003		47.9139	47.9139	3.2200e-003		47.9943
Vendor	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
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1001**	**0.2102**	**0.7734**	**2.5900e-003**	**0.2340**	**2.3000e-003**	**0.2363**	**0.0622**	**2.1300e-003**	**0.0643**		**262.3642**	**262.3642**	**9.5300e-003**		**262.6023**

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	2.8247					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0	0	0	0		0	0		0	0	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**2.8247**	**0**	**0**	**0**		**0**	**0**		**0**	**0**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	4.7700e-003	0.1450	0.0369	4.4000e-004	0.0105	4.9000e-004	0.0110	2.8700e-003	4.7000e-004	3.3400e-003		47.9139	47.9139	3.2200e-003		47.9943
Vendor	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
Worker	0.0954	0.0652	0.7365	2.15E-03	0.2236	1.81E-03	0.2254	0.0593	1.66E-03	0.061		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1001**	**0.2102**	**0.7734**	**2.59E-03**	**0.234**	**2.30E-03**	**0.2363**	**0.0622**	**2.13E-03**	**0.0643**		**262.3642**	**262.3642**	**9.5300e-003**		**262.6023**

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	8.0313	36.8468	83.7647	0.2769	22.6847	0.2420	22.9267	6.0703	0.2257	6.2959		28,210.8058	28,210.8058	1.6034		28,250.8908
Unmitigated	8.0313	36.8468	83.7647	0.2769	22.6847	0.2420	22.9267	6.0703	0.2257	6.2959		28,210.8058	28,210.8058	1.6034		28,250.8908

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	5.67	68.25	50.22	60,354	60,354
Fast Food Restaurant w/o Drive Thru	5,728.00	5,568.00	4000.00	9,885,194	9,885,194
Other Asphalt Surfaces	4.83	55.04	40.51	30,971	30,971
Total	5,738.50	5,691.29	4,090.73	9,976,520	9,976,520

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Fast Food Restaurant w/o Drive Thru	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12
Other Asphalt Surfaces	16.60	8.40	6.90	1.50	79.50	19.00	51	37	12

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Fast Food Restaurant w/o Drive Thru	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

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	0.0613	0.5572	0.4681	3.3400e-003		0.0424	0.0424		0.0424	0.0424		668.6737	668.6737	0.0128	0.0123	672.6472

NaturalGas Unmitigated	0.0613	0.5572	0.4681	3.3400e-003		0.0424	0.0424		0.0424	0.0424		668.6737	668.6737	0.0128	0.0123	672.6472

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					
City Park	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
Fast Food Restaurant w/o Drive Thru	5683.73	0.0613	0.5572	0.4681	3.3400e-003		0.0424	0.0424		0.0424	0.0424		668.6737	668.6737	0.0128	0.0123	672.6472
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
Total		**0.0613**	**0.5572**	**0.4681**	**3.3400e-003**		**0.0424**	**0.0424**		**0.0424**	**0.0424**		**668.6737**	**668.6737**	**0.0128**	**0.0123**	**672.6472**

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					
City Park	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
Fast Food Restaurant w/o Drive Thru	5.68373	0.0613	0.5572	0.4681	3.3400e-003		0.0424	0.0424		0.0424	0.0424		668.6737	668.6737	0.0128	0.0123	672.6472
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
Total		**0.0613**	**0.5572**	**0.4681**	**3.3400e-003**		**0.0424**	**0.0424**		**0.0424**	**0.0424**		**668.6737**	**668.6737**	**0.0128**	**0.0123**	**672.6472**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.1907	5.0000e-005	5.0200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0114
Unmitigated	0.1907	5.0000e-005	5.0200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0114

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	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.7000e-004	5.0000e-005	5.0200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0114
Total	**0.1907**	**5.0000e-005**	**5.0200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0107**	**0.0107**	**3.0000e-005**		**0.0114**

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	0.0116					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1786					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.7000e-004	5.0000e-005	5.0200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0107	0.0107	3.0000e-005		0.0114
Total	**0.1907**	**5.0000e-005**	**5.0200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0107**	**0.0107**	**3.0000e-005**		**0.0114**

7.0 Water Detail

7.1 Mitigation Measures Water

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

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

11.0 Vegetation

LARMP - M Trails/Access Gateways

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	21.80	Acre	21.80	949,608.00	0
City Park	24.24	Acre	24.24	1,055,894.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	833.99	**CH4 Intensity (lb/MWhr)**	0.03	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor extrapolated per Table C-1 of LADWP 2017 Power Strategic Long-Term Resource Plan and State's RPS targets. CH4 and N2O intensity factors per eGRID 2018.

Land Use - city park = proxy for multi-use trail with intermittent amentities. 5-mile by 40-ft max width = 24 acres. Added other asphalt surfaces to calculating paving (90% of area).

Construction Phase - Phase length CalEEMod defaults. Architectural coating = landscaping.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Grading - Material transfer (95,000 CY of soil export and 15,000 of demo material) and area graded per applicant

Demolition - Converted 10,000 CY from applicant to tons per CalEEMod tons per CY conversion factor.

Trips and VMT - commute trips per day and one-way haul trip length per applicant. water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Architectural Coating - VOC g/L per SCAQMD Rule 1113. Parking area default coating rate is 6%. Assuming 4 in. wide painted line across 40-ft wide trail = .83%. Scaled down sq ft accordingly.

Vehicle Trips - Adjusted default of 0 trip in other asphalt surfaces to account for the maintenance vehicle trip avg vmt/day

Vehicle Emission Factors - Vehicle emissions processed for SAFE Rule outside of CalEEMod

Fleet Mix - maintenance vehicles consist of light duty trucks (LDT) and dump trucks (HHD). Adjusted fleet mix based on fleet VMT.

Area Coating - VOC g/L per SCAQMD Rule 1113. Parking area default coating rate is 6%. Assuming 4 in. wide painted line across 40-ft wide trail = .83%. Scaled down sq ft accordingly.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, watering 3 times per day reduces PM by 61%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	56,976.00	7,882.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50

tblAreaCoating	Area_Parking	56976	7882
tblConstructionPhase	NumDays	55.00	50.00
tblConstructionPhase	NumDays	740.00	100.00
tblConstructionPhase	NumDays	50.00	51.00
tblConstructionPhase	NumDays	75.00	100.00
tblConstructionPhase	NumDays	55.00	50.00
tblConstructionPhase	NumDays	30.00	100.00
tblConstructionPhase	PhaseEndDate	11/7/2024	9/23/2022
tblConstructionPhase	PhaseEndDate	6/6/2024	5/6/2022
tblConstructionPhase	PhaseEndDate	3/11/2021	3/12/2021
tblConstructionPhase	PhaseEndDate	8/5/2021	12/17/2021
tblConstructionPhase	PhaseEndDate	8/22/2024	7/15/2022
tblConstructionPhase	PhaseEndDate	4/22/2021	7/30/2021
tblConstructionPhase	PhaseStartDate	8/23/2024	7/16/2022
tblConstructionPhase	PhaseStartDate	8/6/2021	12/18/2021
tblConstructionPhase	PhaseStartDate	4/23/2021	7/31/2021
tblConstructionPhase	PhaseStartDate	6/7/2024	5/7/2022
tblConstructionPhase	PhaseStartDate	3/12/2021	3/13/2021
tblFleetMix	HHD	0.03	0.13
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.87
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.1960e-003	0.00
tblFleetMix	MCY	5.1420e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00

tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	AcresOfGrading	50.00	24.24
tblGrading	MaterialExported	0.00	110,000.00
tblOffRoadEquipment	HorsePower	221.00	75.00
tblOffRoadEquipment	HorsePower	81.00	70.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	97.00	200.00
tblOffRoadEquipment	HorsePower	187.00	150.00
tblOffRoadEquipment	HorsePower	80.00	75.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	89.00	100.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	132.00	100.00
tblOffRoadEquipment	HorsePower	80.00	75.00
tblOffRoadEquipment	HorsePower	65.00	25.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	97.00	200.00
tblOffRoadEquipment	HorsePower	97.00	150.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37

tblOffRoadEquipment	LoadFactor	0.41	0.41
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders

tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	1227.89	833.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	1,250.00	1,253.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	13,750.00	13,752.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	329.00	173.00
tblTripsAndVMT	WorkerTripNumber	15.00	5.00

tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	842.00	10.00
tblTripsAndVMT	WorkerTripNumber	168.00	5.00
tblVehicleTrips	CC_TTP	0.00	48.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	DV_TP	0.00	28.00
tblVehicleTrips	PB_TP	0.00	6.00
tblVehicleTrips	PR_TP	0.00	66.00
tblVehicleTrips	ST_TR	0.00	0.39
tblVehicleTrips	SU_TR	0.00	0.28
tblVehicleTrips	WD_TR	0.00	0.03

2.0 Emissions Summary

2.1 Overall Construction

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	tons/yr										MT/yr					
2021	0.2244	4.2069	1.7813	0.0111	0.3606	0.0716	0.4322	0.0794	0.0665	0.1460	0.0000	1,062.1410	1,062.1410	0.1212	0.0000	1,065.1706
2022	0.1189	1.2964	0.7772	3.1800e-003	0.0581	0.0272	0.0854	0.0166	0.0251	0.0417	0.0000	297.6419	297.6419	0.0437	0.0000	298.7346
Maximum	**0.2244**	**4.2069**	**1.7813**	**0.0111**	**0.3606**	**0.0716**	**0.4322**	**0.0794**	**0.0665**	**0.1460**	**0.0000**	**1,062.1410**	**1,062.1410**	**0.1212**	**0.0000**	**1,065.1706**

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	tons/yr										MT/yr					
2021	0.2244	4.2069	1.7813	0.0111	0.2664	0.0716	0.3380	0.0655	0.0665	0.1321	0.0000	1,062.1408	1,062.1408	0.1212	0.0000	1,065.1703
2022	0.1189	1.2964	0.7772	3.1800e-003	0.0581	0.0272	0.0854	0.0166	0.0251	0.0417	0.0000	297.6418	297.6418	0.0437	0.0000	298.7345
Maximum	**0.2244**	**4.2069**	**1.7813**	**0.0111**	**0.2664**	**0.0716**	**0.3380**	**0.0655**	**0.0665**	**0.1321**	**0.0000**	**1,062.1408**	**1,062.1408**	**0.1212**	**0.0000**	**1,065.17**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**22.48**	**0.00**	**18.19**	**14.49**	**0.00**	**7.41**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2021**	**3-31-2021**	0.7657	0.7657
2	**4-1-2021**	**6-30-2021**	0.3160	0.3160
3	**7-1-2021**	**9-30-2021**	1.4427	1.4427
4	**10-1-2021**	**12-31-2021**	1.8295	1.8295
5	**1-1-2022**	**3-31-2022**	0.7074	0.7074
6	**4-1-2022**	**6-30-2022**	0.4313	0.4313
7	**7-1-2022**	**9-30-2022**	0.2644	0.2644
		Highest	1.8295	1.8295

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	0.0723	1.0000e-005	5.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1400e-003	1.1400e-003	0.0000	0.0000	1.22E-03
Energy	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
Mobile	0.0495	0.2614	0.6417	2.3100e-003	0.1879	1.9400e-003	0.1899	0.0504	1.8100e-003	0.0522	0.0000	213.5851	213.5851	0.0112	0.0000	213.8643
Waste						0.0000	0.0000		0.0000	0.0000	0.4222	0.0000	0.4222	0.0250	0.0000	1.046
Water						0.0000	0.0000		0.0000	0.0000	0.0000	121.3837	121.3837	4.3700e-003	5.8000e-004	121.6664
Total	**0.1218**	**0.2614**	**0.6423**	**2.3100e-003**	**0.1879**	**1.9400e-003**	**0.1899**	**0.0504**	**1.8100e-003**	**0.0522**	**0.4222**	**334.9700**	**335.3922**	**0.0405**	**5.8000e-004**	**336.5779**

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	0.0723	1.0000e-005	5.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1400e-003	1.1400e-003	0.0000	0.0000	1.2200e-003
Energy	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
Mobile	0.0495	0.2614	0.6417	2.3100e-003	0.1879	1.9400e-003	0.1899	0.0504	1.8100e-003	0.0522	0.0000	213.5851	213.5851	0.0112	0.0000	213.8643
Waste						0.0000	0.0000		0.0000	0.0000	0.4222	0.0000	0.4222	0.0250	0.0000	1.0460
Water						0.0000	0.0000		0.0000	0.0000	0.0000	121.3837	121.3837	4.3700e-003	5.8000e-004	121.6664
Total	**0.1218**	**0.2614**	**0.6423**	**2.3100e-003**	**0.1879**	**1.9400e-003**	**0.1899**	**0.0504**	**1.8100e-003**	**0.0522**	**0.4222**	**334.9700**	**335.3922**	**0.0405**	**5.8000e-004**	**336.5779**

	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	N20	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	Demolition	Demolition	1/1/2021	3/12/2021	5	51	
2	Site Preparation	Site Preparation	3/13/2021	7/30/2021	5	100	
3	Grading	Grading	7/31/2021	12/17/2021	5	100	
4	Building Construction	Building Construction	12/18/2021	5/6/2022	5	100	
5	Paving	Paving	5/7/2022	7/15/2022	5	50	
6	Architectural Coating	Architectural Coating	7/16/2022	9/23/2022	5	50	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 24.24

Acres of Paving: 21.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 7,882

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Bore/Drill Rigs	1	8.00	75	0.50
Demolition	Concrete/Industrial Saws	1	8.00	70	0.73
Demolition	Excavators	1	8.00	300	0.38
Demolition	Tractors/Loaders/Backhoes	2	8.00	250	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	100	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	250	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	200	0.37
Grading	Graders	1	8.00	150	0.41
Grading	Rollers	1	8.00	75	0.38
Grading	Tractors/Loaders/Backhoes	1	8.00	100	0.37
Building Construction	Aerial Lifts	1	8.00	75	0.31
Building Construction	Forklifts	1	8.00	100	0.20

Building Construction	Tractors/Loaders/Backhoes	1	8.00	250	0.37
Paving	Paving Equipment	1	8.00	100	0.36
Paving	Rollers	1	8.00	75	0.38
Paving	Skid Steer Loaders	1	8.00	25	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	100	0.37
Architectural Coating	Cranes	1	8.00	150	0.29
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	200	0.37
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	150	0.37

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
Demolition	6	5.00	0.00	1,253.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	0.00	2.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Grading	3	5.00	0.00	13,752.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	10.00	173.00	0.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	2.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	5.00	0.00	3.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

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					0.1352	0.0000	0.1352	0.0205	0.0000	0.0205	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0416	0.4264	0.3487	9.5000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	83.2573	83.2573	0.0238	0.0000	83.8519
Total	**0.0416**	**0.4264**	**0.3487**	**9.5000e-004**	**0.1352**	**0.0178**	**0.1530**	**0.0205**	**0.0167**	**0.0372**	**0.0000**	**83.2573**	**83.2573**	**0.0238**	**0.0000**	**83.8519**

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	7.3900e-003	0.2314	0.0565	7.0000e-004	0.0161	7.7000e-004	0.0169	4.4300e-003	7.3000e-004	5.1700e-003	0.0000	68.5632	68.5632	4.5000e-003	0.0000	68.6758
Vendor	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	0.0000	0.0000
Worker	5.5000e-004	4.3000e-004	4.8200e-003	1.0000e-005	1.4000e-003	1.0000e-005	1.4100e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.2609	1.2609	4.0000e-005	0.0000	1.2618
Total	**7.9400e-003**	**0.2318**	**0.0613**	**7.1000e-004**	**0.0175**	**7.8000e-004**	**0.0183**	**4.8000e-003**	**7.4000e-004**	**5.5500e-003**	**0.0000**	**69.8241**	**69.8241**	**4.5400e-003**	**0.0000**	**69.9376**

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					0.0527	0.0000	0.0527	7.9900e-003	0.0000	7.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0
Off-Road	0.0416	0.4264	0.3487	9.5000e-004		0.0178	0.0178		0.0167	0.0167	0.0000	83.2572	83.2572	0.0238	0.0000	83.8518
Total	**0.0416**	**0.4264**	**0.3487**	**9.5000e-004**	**0.0527**	**0.0178**	**0.0705**	**7.9900e-003**	**0.0167**	**0.0247**	**0.0000**	**83.2572**	**83.2572**	**0.0238**	**0.0000**	**83.8518**

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	7.3900e-003	0.2314	0.0565	7.0000e-004	0.0161	7.7000e-004	0.0169	4.4300e-003	7.3000e-004	5.1700e-003	0.0000	68.5632	68.5632	4.5000e-003	0.0000	68.6758
Vendor	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	0.0000	0
Worker	5.5000e-004	4.3000e-004	4.8200e-003	1.0000e-005	1.4000e-003	1.0000e-005	1.4100e-003	3.7000e-004	1.0000e-005	3.8000e-004	0.0000	1.2609	1.2609	4.0000e-005	0.0000	1.2618
Total	**7.9400e-003**	**0.2318**	**0.0613**	**7.1000e-004**	**0.0175**	**7.8000e-004**	**0.0183**	**4.8000e-003**	**7.4000e-004**	**5.5500e-003**	**0.0000**	**69.8241**	**69.8241**	**4.5400e-003**	**0.0000**	**69.9376**

3.3 Site Preparation - 2021

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	0.0402	0.4438	0.2895	8.7000e-004		0.0174	0.0174		0.0160	0.0160	0.0000	76.4397	76.4397	0.0247	0.0000	77.0578
Total	**0.0402**	**0.4438**	**0.2895**	**8.7000e-004**		**0.0174**	**0.0174**		**0.0160**	**0.0160**	**0.0000**	**76.4397**	**76.4397**	**0.0247**	**0.0000**	**77.0578**

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	1.0000e-005	3.7000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1094	0.1094	1.0000e-005	0.0000	0.1096
Vendor	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	0.0000	0.0000
Worker	1.0800e-003	8.4000e-004	9.4500e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.4723	2.4723	7.0000e-005	0.0000	2.4741
Total	**1.0900e-003**	**1.2100e-003**	**9.5400e-003**	**3.0000e-005**	**2.7700e-003**	**2.0000e-005**	**2.7900e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.5817**	**2.5817**	**8.0000e-005**	**0.0000**	**2.5837**

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	0.0402	0.4438	0.2895	8.7000e-004		0.0174	0.0174		0.0160	0.0160	0.0000	76.4396	76.4396	0.0247	0.0000	77.0577
Total	**0.0402**	**0.4438**	**0.2895**	**8.7000e-004**		**0.0174**	**0.0174**		**0.0160**	**0.0160**	**0.0000**	**76.4396**	**76.4396**	**0.0247**	**0.0000**	**77.0577**

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	1.0000e-005	3.7000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1094	0.1094	1.0000e-005	0.0000	0.1096

Vendor	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	0.0000	0
Worker	1.0800e-003	8.4000e-004	9.4500e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.4723	2.4723	7.0000e-005	0.0000	2.4741
Total	**1.0900e-003**	**1.2100e-003**	**9.5400e-003**	**3.0000e-005**	**2.7700e-003**	**2.0000e-005**	**2.7900e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.5817**	**2.5817**	**8.0000e-005**	**0.0000**	**2.5837**

3.4 Grading - 2021

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					0.0191	0.0000	0.0191	2.3300e-003	0.0000	2.3300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0457	0.4480	0.3955	5.5000e-004		0.0258	0.0258		0.0237	0.0237	0.0000	48.1511	48.1511	0.0156	0.0000	48.5404
Total	**0.0457**	**0.4480**	**0.3955**	**5.5000e-004**	**0.0191**	**0.0258**	**0.0449**	**2.3300e-003**	**0.0237**	**0.0261**	**0.0000**	**48.1511**	**48.1511**	**0.0156**	**0.0000**	**48.5404**

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	0.0811	2.5398	0.6196	7.6400e-003	0.1772	8.4000e-003	0.1856	0.0487	8.0400e-003	0.0567	0.0000	752.4990	752.4990	0.0494	0.0000	753.7350
Vendor	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	0.0000	0.0000
Worker	1.0800e-003	8.4000e-004	9.4500e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.4723	2.4723	7.0000e-005	0.0000	2.4741
Total	**0.0822**	**2.5406**	**0.6291**	**7.6700e-003**	**0.1799**	**8.4200e-003**	**0.1884**	**0.0494**	**8.0600e-003**	**0.0574**	**0.0000**	**754.9713**	**754.9713**	**0.0495**	**0.0000**	**756.2091**

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					7.4400e-003	0.0000	7.4400e-003	9.1000e-004	0.0000	9.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0
Off-Road	0.0457	0.4480	0.3955	5.5000e-004		0.0258	0.0258		0.0237	0.0237	0.0000	48.1511	48.1511	0.0156	0.0000	48.5404
Total	**0.0457**	**0.4480**	**0.3955**	**5.5000e-004**	**7.4400e-003**	**0.0258**	**0.0332**	**9.1000e-004**	**0.0237**	**0.0246**	**0.0000**	**48.1511**	**48.1511**	**0.0156**	**0.0000**	**48.5404**

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	0.0811	2.5398	0.6196	7.6400e-003	0.1772	8.4000e-003	0.1856	0.0487	8.0400e-003	0.0567	0.0000	752.4990	752.4990	0.0494	0.0000	753.735
Vendor	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	0.0000	0
Worker	1.0800e-003	8.4000e-004	9.4500e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.4723	2.4723	7.0000e-005	0.0000	2.4741
Total	**0.0822**	**2.5406**	**0.6291**	**7.6700e-003**	**0.1799**	**8.4200e-003**	**0.1884**	**0.0494**	**8.0600e-003**	**0.0574**	**0.0000**	**754.9713**	**754.9713**	**0.0495**	**0.0000**	**756.2091**

3.5 Building Construction - 2021

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	2.6500e-003	0.0295	0.0227	6.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	5.0994	5.0994	1.6500e-003	0.0000	5.1406
Total	**2.6500e-003**	**0.0295**	**0.0227**	**6.0000e-005**		**1.1900e-003**	**1.1900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**5.0994**	**5.0994**	**1.6500e-003**	**0.0000**	**5.1406**

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	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	0.0000
Vendor	2.6900e-003	0.0854	0.0231	2.2000e-004	5.4500e-003	1.7000e-004	5.6200e-003	1.5700e-003	1.7000e-004	1.7400e-003	0.0000	21.3220	21.3220	1.3100e-003	0.0000	21.3547
Worker	2.2000e-004	1.7000e-004	1.8900e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4945	0.4945	1.0000e-005	0.0000	0.4948
Total	**2.9100e-003**	**0.0855**	**0.0250**	**2.3000e-004**	**6.0000e-003**	**1.7000e-004**	**6.1700e-003**	**1.7200e-003**	**1.7000e-004**	**1.8900e-003**	**0.0000**	**21.8164**	**21.8164**	**1.3200e-003**	**0.0000**	**21.8495**

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	2.6500e-003	0.0295	0.0227	6.0000e-005		1.1900e-003	1.1900e-003		1.0900e-003	1.0900e-003	0.0000	5.0994	5.0994	1.6500e-003	0.0000	5.1406

Total	**2.6500e-003**	**0.0295**	**0.0227**	**6.0000e-005**		**1.1900e-003**	**1.1900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**5.0994**	**5.0994**	**1.6500e-003**	**0.0000**	**5.1406**

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	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	0
Vendor	2.6900e-003	0.0854	0.0231	2.2000e-004	5.4500e-003	1.7000e-004	5.6200e-003	1.5700e-003	1.7000e-004	1.7400e-003	0.0000	21.3220	21.3220	1.3100e-003	0.0000	21.3547
Worker	2.2000e-004	1.7000e-004	1.8900e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4945	0.4945	1.0000e-005	0.0000	0.4948
Total	**2.9100e-003**	**0.0855**	**0.0250**	**2.3000e-004**	**6.0000e-003**	**1.7000e-004**	**6.1700e-003**	**1.7200e-003**	**1.7000e-004**	**1.8900e-003**	**0.0000**	**21.8164**	**21.8164**	**1.3200e-003**	**0.0000**	**21.8495**

3.5 Building Construction - 2022

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	0.0214	0.2255	0.2019	5.2000e-004		9.0100e-003	9.0100e-003		8.2800e-003	8.2800e-003	0.0000	45.8646	45.8646	0.0148	0.0000	46.2354
Total	**0.0214**	**0.2255**	**0.2019**	**5.2000e-004**		**9.0100e-003**	**9.0100e-003**		**8.2800e-003**	**8.2800e-003**	**0.0000**	**45.8646**	**45.8646**	**0.0148**	**0.0000**	**46.2354**

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	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	0.0000
Vendor	0.0227	0.7299	0.1971	1.9600e-003	0.0490	1.3700e-003	0.0504	0.0142	1.3100e-003	0.0155	0.0000	190.2121	190.2121	0.0114	0.0000	190.4961
Worker	1.8200e-003	1.3600e-003	0.0157	5.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.2937	4.2937	1.2000e-004	0.0000	4.2967
Total	**0.0245**	**0.7313**	**0.2128**	**2.0100e-003**	**0.0540**	**1.4100e-003**	**0.0554**	**0.0155**	**1.3500e-003**	**0.0168**	**0.0000**	**194.5058**	**194.5058**	**0.0115**	**0.0000**	**194.7928**

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	0.0214	0.2255	0.2019	5.2000e-004		9.0100e-003	9.0100e-003		8.2800e-003	8.2800e-003	0.0000	45.8645	45.8645	0.0148	0.0000	46.2353
Total	**0.0214**	**0.2255**	**0.2019**	**5.2000e-004**		**9.0100e-003**	**9.0100e-003**		**8.2800e-003**	**8.2800e-003**	**0.0000**	**45.8645**	**45.8645**	**0.0148**	**0.0000**	**46.2353**

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	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	0
Vendor	0.0227	0.7299	0.1971	1.9600e-003	0.0490	1.3700e-003	0.0504	0.0142	1.3100e-003	0.0155	0.0000	190.2121	190.2121	0.0114	0.0000	190.4961
Worker	1.8200e-003	1.3600e-003	0.0157	5.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.2937	4.2937	1.2000e-004	0.0000	4.2967
Total	**0.0245**	**0.7313**	**0.2128**	**2.0100e-003**	**0.0540**	**1.4100e-003**	**0.0554**	**0.0155**	**1.3500e-003**	**0.0168**	**0.0000**	**194.5058**	**194.5058**	**0.0115**	**0.0000**	**194.7928**

3.6 Paving - 2022

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	0.0142	0.1439	0.1702	2.4000e-004		7.7100e-003	7.7100e-003		7.0900e-003	7.0900e-003	0.0000	21.0171	21.0171	6.8000e-003	0.0000	21.1871
Paving	0.0286					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0428**	**0.1439**	**0.1702**	**2.4000e-004**		**7.7100e-003**	**7.7100e-003**		**7.0900e-003**	**7.0900e-003**	**0.0000**	**21.0171**	**21.0171**	**6.8000e-003**	**0.0000**	**21.1871**

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	1.0000e-005	3.4000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1081	0.1081	1.0000e-005	0.0000	0.1083
Vendor	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	0.0000	0.0000

Worker	1.0100e-003	7.6000e-004	8.7100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3854	2.3854	7.0000e-005	0.0000	2.3870
Total	**1.0200e-003**	**1.1000e-003**	**8.8000e-003**	**3.0000e-005**	**2.7700e-003**	**2.0000e-005**	**2.7900e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.4935**	**2.4935**	**8.0000e-005**	**0.0000**	**2.4953**

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	0.0142	0.1439	0.1702	2.4000e-004		7.7100e-003	7.7100e-003		7.0900e-003	7.0900e-003	0.0000	21.0171	21.0171	6.8000e-003	0.0000	21.187
Paving	0.0286					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0428**	**0.1439**	**0.1702**	**2.4000e-004**		**7.7100e-003**	**7.7100e-003**		**7.0900e-003**	**7.0900e-003**	**0.0000**	**21.0171**	**21.0171**	**6.8000e-003**	**0.0000**	**21.1870**

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	1.0000e-005	3.4000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1081	0.1081	1.0000e-005	0.0000	0.1083
Vendor	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	0.0000	0
Worker	1.0100e-003	7.6000e-004	8.7100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3854	2.3854	7.0000e-005	0.0000	2.387
Total	**1.0200e-003**	**1.1000e-003**	**8.8000e-003**	**3.0000e-005**	**2.7700e-003**	**2.0000e-005**	**2.7900e-003**	**7.4000e-004**	**2.0000e-005**	**7.6000e-004**	**0.0000**	**2.4935**	**2.4935**	**8.0000e-005**	**0.0000**	**2.4953**

3.7 Architectural Coating - 2022

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	9.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0197	0.1938	0.1791	3.7000e-004		9.0400e-003	9.0400e-003		8.3200e-003	8.3200e-003	0.0000	32.4061	32.4061	0.0105	0.0000	32.6681
Total	**0.0288**	**0.1938**	**0.1791**	**3.7000e-004**		**9.0400e-003**	**9.0400e-003**		**8.3200e-003**	**8.3200e-003**	**0.0000**	**32.4061**	**32.4061**	**0.0105**	**0.0000**	**32.6681**

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	2.0000e-005	5.1000e-004	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1622	0.1622	1.0000e-005	0.0000	0.1625
Vendor	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	0.0000	0.0000
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**5.2000e-004**	**8.9000e-004**	**4.4900e-003**	**1.0000e-005**	**1.4100e-003**	**1.0000e-005**	**1.4200e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.3549**	**1.3549**	**4.0000e-005**	**0.0000**	**1.3560**

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	9.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0
Off-Road	0.0197	0.1938	0.1791	3.7000e-004		9.0400e-003	9.0400e-003		8.3200e-003	8.3200e-003	0.0000	32.4060	32.4060	0.0105	0.0000	32.668
Total	**0.0288**	**0.1938**	**0.1791**	**3.7000e-004**		**9.0400e-003**	**9.0400e-003**		**8.3200e-003**	**8.3200e-003**	**0.0000**	**32.4060**	**32.4060**	**0.0105**	**0.0000**	**32.6680**

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	2.0000e-005	5.1000e-004	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1622	0.1622	1.0000e-005	0.0000	0.1625
Vendor	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	0.0000	0
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**5.2000e-004**	**8.9000e-004**	**4.4900e-003**	**1.0000e-005**	**1.4100e-003**	**1.0000e-005**	**1.4200e-003**	**3.7000e-004**	**1.0000e-005**	**3.8000e-004**	**0.0000**	**1.3549**	**1.3549**	**4.0000e-005**	**0.0000**	**1.3560**

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	tons/yr										MT/yr					
Mitigated	0.0495	0.2614	0.6417	2.3100e-003	0.1879	1.9400e-003	0.1899	0.0504	1.8100e-003	0.0522	0.0000	213.5851	213.5851	0.0112	0.0000	213.8643
Unmitigated	0.0495	0.2614	0.6417	2.3100e-003	0.1879	1.9400e-003	0.1899	0.0504	1.8100e-003	0.0522	0.0000	213.5851	213.5851	0.0112	0.0000	213.8643

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	45.81	551.46	405.78	487,663	487,663
Other Asphalt Surfaces	0.70	8.43	6.20	7,454	7,454
Total	46.51	559.89	411.98	495,117	495,117

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.000000	0.000000	0.870000	0.000000	0.000000	0.000000	0.000000	0.130000	0.000000	0.000000	0.000000	0.000000	0.000000

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	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
NaturalGas Unmitigated	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

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					
City Park	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
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
Total		**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**

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					

City Park	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
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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.0723	1.0000e-005	5.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1400e-003	1.1400e-003	0.0000	0.0000	1.2200e-003
Unmitigated	0.0723	1.0000e-005	5.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1400e-003	1.1400e-003	0.0000	0.0000	1.2200e-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	tons/yr										MT/yr					
Architectural Coating	9.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1400e-003	1.1400e-003	0.0000	0.0000	1.22E-03
Total	**0.0723**	**1.0000e-005**	**5.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1400e-003**	**1.1400e-003**	**0.0000**	**0.0000**	**1.2200e-003**

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	9.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0713					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	1.0000e-005	5.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1400e-003	1.1400e-003	0.0000	0.0000	1.2200e-003
Total	**0.0723**	**1.0000e-005**	**5.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1400e-003**	**1.1400e-003**	**0.0000**	**0.0000**	**1.2200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	121.3837	4.3700e-003	5.8000e-004	121.6664
Unmitigated	121.3837	4.3700e-003	5.8000e-004	121.6664

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 28.8815	121.3837	4.3700e-003	5.8000e-004	121.6664
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**121.3837**	**4.3700e-003**	**5.8000e-004**	**121.6664**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 28.8815	121.3837	4.3700e-003	5.8000e-004	121.6664
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**121.3837**	**4.3700e-003**	**5.8000e-004**	**121.6664**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	0.4222	0.0250	0.0000	1.0460
Unmitigated	0.4222	0.0250	0.0000	1.0460

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.08	0.4222	0.0250	0.0000	1.0460
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.4222**	**0.0250**	**0.0000**	**1.0460**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.08	0.4222	0.0250	0.0000	1.0460
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.4222**	**0.0250**	**0.0000**	**1.0460**

9.0 Operational Offroad

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

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

11.0 Vegetation

LARMP - M Trails/Access Gateways

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	21.80	Acre	21.80	949,608.00	0
City Park	24.24	Acre	24.24	1,055,894.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	833.99	**CH4 Intensity (lb/MWhr)**	0.03	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor extrapolated per Table C-1 of LADWP 2017 Power Strategic Long-Term Resource Plan and State's RPS targets. CH4 and N2O intensity factors per eGRID 2018.

Land Use - city park = proxy for multi-use trail with intermittent amentities. 5-mile by 40-ft max width = 24 acres. Added other asphalt surfaces to calculating paving (90% of area).

Construction Phase - Phase length CalEEMod defaults. Architectural coating = landscaping.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

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Off-road Equipment - water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Grading - Material transfer (95,000 CY of soil export and 15,000 of demo material) and area graded per applicant

Demolition - Converted 10,000 CY from applicant to tons per CalEEMod tons per CY conversion factor.

Trips and VMT - commute trips per day and one-way haul trip length per applicant. water trucks, dump trucks, and/or utiltity trucks onsite accounted for in Trips and VMT at 5 mph * 8 hours = 40 miles per vehicle.

Vehicle Trips - Adjusted default of 0 trip in other asphalt surfaces to account for the maintenance vehicle trip avg vmt/day

Vehicle Emission Factors - Vehicle emissions processed for SAFE Rule outside of CalEEMod

Fleet Mix - maintenance vehicles consist of light duty trucks (LDT) and dump trucks (HHD). Adjusted fleet mix based on fleet VMT.

Area Coating - VOC g/L per SCAQMD Rule 1113. Parking area default coating rate is 6%. Assuming 4 in. wide painted line across 40-ft wide trail = .83%. Scaled down sq ft accordingly.

Energy Use -

Construction Off-road Equipment Mitigation - Per SCAQMD Rule 403, watering 3 times per day reduces PM by 61%

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	56,976.00	7,882.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblAreaCoating	Area_Parking	56976	7882
tblConstructionPhase	NumDays	55.00	50.00
tblConstructionPhase	NumDays	740.00	100.00
tblConstructionPhase	NumDays	50.00	51.00
tblConstructionPhase	NumDays	75.00	100.00
tblConstructionPhase	NumDays	55.00	50.00
tblConstructionPhase	NumDays	30.00	100.00
tblConstructionPhase	PhaseEndDate	11/7/2024	9/23/2022
tblConstructionPhase	PhaseEndDate	6/6/2024	5/6/2022

tblConstructionPhase	PhaseEndDate	3/11/2021	3/12/2021
tblConstructionPhase	PhaseEndDate	8/5/2021	12/17/2021
tblConstructionPhase	PhaseEndDate	8/22/2024	7/15/2022
tblConstructionPhase	PhaseEndDate	4/22/2021	7/30/2021
tblConstructionPhase	PhaseStartDate	8/23/2024	7/16/2022
tblConstructionPhase	PhaseStartDate	8/6/2021	12/18/2021
tblConstructionPhase	PhaseStartDate	4/23/2021	7/31/2021
tblConstructionPhase	PhaseStartDate	6/7/2024	5/7/2022
tblConstructionPhase	PhaseStartDate	3/12/2021	3/13/2021
tblFleetMix	HHD	0.03	0.13
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.20	0.87
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.1960e-003	0.00
tblFleetMix	MCY	5.1420e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	8.7600e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.5150e-003	0.00
tblFleetMix	SBUS	6.8700e-004	0.00
tblFleetMix	UBUS	2.2010e-003	0.00
tblGrading	AcresOfGrading	50.00	24.24
tblGrading	MaterialExported	0.00	110,000.00
tblOffRoadEquipment	HorsePower	221.00	75.00
tblOffRoadEquipment	HorsePower	81.00	70.00
tblOffRoadEquipment	HorsePower	158.00	300.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	97.00	250.00

tblOffRoadEquipment	HorsePower	97.00	200.00
tblOffRoadEquipment	HorsePower	187.00	150.00
tblOffRoadEquipment	HorsePower	80.00	75.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	63.00	75.00
tblOffRoadEquipment	HorsePower	89.00	100.00
tblOffRoadEquipment	HorsePower	97.00	250.00
tblOffRoadEquipment	HorsePower	132.00	100.00
tblOffRoadEquipment	HorsePower	80.00	75.00
tblOffRoadEquipment	HorsePower	65.00	25.00
tblOffRoadEquipment	HorsePower	97.00	100.00
tblOffRoadEquipment	HorsePower	231.00	150.00
tblOffRoadEquipment	HorsePower	97.00	200.00
tblOffRoadEquipment	HorsePower	97.00	150.00
tblOffRoadEquipment	LoadFactor	0.50	0.50
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
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tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.37	0.37

tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.03
tblProjectCharacteristics	CO2IntensityFactor	1227.89	833.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	1,250.00	1,253.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	13,750.00	13,752.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	329.00	173.00
tblTripsAndVMT	WorkerTripNumber	15.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	842.00	10.00
tblTripsAndVMT	WorkerTripNumber	168.00	5.00
tblVehicleTrips	CC_TTP	0.00	48.00
tblVehicleTrips	CNW_TTP	0.00	19.00
tblVehicleTrips	CW_TTP	0.00	33.00
tblVehicleTrips	DV_TP	0.00	28.00
tblVehicleTrips	PB_TP	0.00	6.00

tblVehicleTrips	PR_TP	0.00	66.00
tblVehicleTrips	ST_TR	0.00	0.39
tblVehicleTrips	SU_TR	0.00	0.28
tblVehicleTrips	WD_TR	0.00	0.03

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

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					
2021	2.5764	58.8246	20.7761	0.1633	6.0036	0.7286	6.7323	1.0496	0.6834	1.6861	0.0000	17,587.9709	17,587.9709	1.4505	0.0000	17,624.2338
2022	1.7550	20.9697	9.4234	0.0555	1.2194	0.3622	1.4514	0.3485	0.3332	0.5631	0.0000	5,810.9322	5,810.9322	0.6543	0.0000	5,827.2896
Maximum	**2.5764**	**58.8246**	**20.7761**	**0.1633**	**6.0036**	**0.7286**	**6.7323**	**1.0496**	**0.6834**	**1.6861**	**0.0000**	**17,587.9709**	**17,587.9709**	**1.4505**	**0.0000**	**17,624.2338**

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					
2021	2.5764	58.8246	20.7761	0.1633	3.8101	0.7286	4.4952	1.0212	0.6834	1.6577	0.0000	17,587.9709	17,587.9709	1.4505	0.0000	17,624.2338
2022	1.7550	20.9697	9.4234	0.0555	1.2194	0.3622	1.4514	0.3485	0.3332	0.5631	0.0000	5,810.9322	5,810.9322	0.6543	0.0000	5,827.2896
Maximum	**2.5764**	**58.8246**	**20.7761**	**0.1633**	**3.8101**	**0.7286**	**4.4952**	**1.0212**	**0.6834**	**1.6577**	**0.0000**	**17,587.9709**	**17,587.9709**	**1.4505**	**0.0000**	**17,624.2338**

	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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.37**	**0.00**	**27.34**	**2.03**	**0.00**	**1.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.3962	4.00E-05	4.71E-03	0		2.00E-05	2.00E-05		2.00E-05	2.00E-05		0.0101	0.0101	3.0000e-005		0.0107
Energy	0	0	0	0		0	0		0	0		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.9079	4.5889	11.3284	0.0407	3.426	0.0348	3.4607	0.9168	0.0325	0.9492		4,149.2259	4,149.2259	0.2214		4,154.7595
Total	**1.3041**	**4.5889**	**11.3331**	**0.0407**	**3.4260**	**0.0348**	**3.4608**	**0.9168**	**0.0325**	**0.9493**		**4,149.2360**	**4,149.2360**	**0.2214**	**0.0000**	**4,154.7703**

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	0.3962	4.0000e-005	4.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0101	0.0101	3.0000e-005		0.0107
Energy	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
Mobile	0.9079	4.5889	11.3284	0.0407	3.4260	0.0348	3.4607	0.9168	0.0325	0.9492		4,149.2259	4,149.2259	0.2214		4,154.7595
Total	**1.3041**	**4.5889**	**11.3331**	**0.0407**	**3.4260**	**0.0348**	**3.4608**	**0.9168**	**0.0325**	**0.9493**		**4,149.2360**	**4,149.2360**	**0.2214**	**0.0000**	**4,154.7703**

	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	N20	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	Demolition	Demolition	1/1/2021	3/12/2021	5	51	
2	Site Preparation	Site Preparation	3/13/2021	7/30/2021	5	100	
3	Grading	Grading	7/31/2021	12/17/2021	5	100	
4	Building Construction	Building Construction	12/18/2021	5/6/2022	5	100	
5	Paving	Paving	5/7/2022	7/15/2022	5	50	
6	Architectural Coating	Architectural Coating	7/16/2022	9/23/2022	5	50	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 24.24

Acres of Paving: 21.8

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 7,882

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Bore/Drill Rigs	1	8.00	75	0.50
Demolition	Concrete/Industrial Saws	1	8.00	70	0.73
Demolition	Excavators	1	8.00	300	0.38
Demolition	Tractors/Loaders/Backhoes	2	8.00	250	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	100	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	250	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	200	0.37

Grading	Graders	1	8.00	150	0.41
Grading	Rollers	1	8.00	75	0.38
Grading	Tractors/Loaders/Backhoes	1	8.00	100	0.37
Building Construction	Aerial Lifts	1	8.00	75	0.31
Building Construction	Forklifts	1	8.00	100	0.20
Building Construction	Tractors/Loaders/Backhoes	1	8.00	250	0.37
Paving	Paving Equipment	1	8.00	100	0.36
Paving	Rollers	1	8.00	75	0.38
Paving	Skid Steer Loaders	1	8.00	25	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	100	0.37
Architectural Coating	Cranes	1	8.00	150	0.29
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	200	0.37
Architectural Coating	Tractors/Loaders/Backhoes	1	8.00	150	0.37

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
Demolition	6	5.00	0.00	1,253.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	0.00	2.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Grading	3	5.00	0.00	13,752.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	10.00	173.00	0.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Paving	4	10.00	0.00	2.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	3	5.00	0.00	3.00	14.70	6.90	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2021

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					5.3036	0.0000	5.3036	0.8030	0.0000	0.8030			0.0000			0.0000
Off-Road	1.6327	16.7226	13.6757	0.0373		0.698	0.698		0.6541	0.6541		3,599.0374	3,599.0374	1.0281		3,624.7398
Total	**1.6327**	**16.7226**	**13.6757**	**0.0373**	**5.3036**	**0.698**	**6.0016**	**0.803**	**0.6541**	**1.4571**		**3,599.0374**	**3,599.0374**	**1.0281**		**3,624.7398**

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	0.2927	8.9056	2.2658	0.0271	0.6441	0.0302	0.6743	0.1765	0.0289	0.2054		2,942.9486	2,942.9486	0.1975		2,947.8866
Vendor	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
Worker	0.0238	0.0163	0.1841	5.40E-04	0.0559	4.50E-04	0.0563	0.0148	4.20E-04	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.3166**	**8.9219**	**2.4499**	**0.0277**	**0.7**	**0.0307**	**0.7307**	**0.1914**	**0.0293**	**0.2207**		**2,996.5611**	**2,996.5611**	**0.1991**		**3,001.5386**

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					2.0684	0.0000	2.0684	0.3132	0.0000	0.3132			0.0000			0.0000
Off-Road	1.6327	16.7226	13.6757	0.0373		0.698	0.698		0.6541	0.6541	0.0000	3,599.0374	3,599.0374	1.0281		3,624.7398
Total	**1.6327**	**16.7226**	**13.6757**	**0.0373**	**2.0684**	**0.698**	**2.7664**	**0.3132**	**0.6541**	**0.9673**	**0.0000**	**3,599.0374**	**3,599.0374**	**1.0281**		**3,624.7398**

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	0.2927	8.9056	2.2658	0.0271	0.6441	0.0302	0.6743	0.1765	0.0289	0.2054		2,942.9486	2,942.9486	0.1975		2,947.8866
Vendor	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
Worker	0.0238	0.0163	0.1841	5.40E-04	0.0559	4.50E-04	0.0563	0.0148	4.20E-04	0.0152		53.6126	53.6126	1.58E-03		53.652
Total	**0.3166**	**8.9219**	**2.4499**	**0.0277**	**0.7**	**0.0307**	**0.7307**	**0.1914**	**0.0293**	**0.2207**		**2,996.56**	**2,996.56**	**0.1991**		**3,001.54**

3.3 Site Preparation - 2021

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	0.8048	8.8757	5.7895	0.0174		0.3487	0.3487		0.3208	0.3208		1,685.2071	1,685.2071	0.5450		1,698.8328
Total	**0.8048**	**8.8757**	**5.7895**	**0.0174**		**0.3487**	**0.3487**		**0.3208**	**0.3208**		**1,685.2071**	**1,685.2071**	**0.5450**		**1,698.8328**

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	2.4000e-004	7.2500e-003	1.8400e-003	2.0000e-005	5.2000e-004	2.0000e-005	5.5000e-004	1.4000e-004	2.0000e-005	1.7000e-004		2.3957	2.3957	1.6000e-004		2.3997
Vendor	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
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0241**	**0.0236**	**0.1860**	**5.6000e-004**	**0.0564**	**4.7000e-004**	**0.0569**	**0.0150**	**4.4000e-004**	**0.0154**		**56.0083**	**56.0083**	**1.7400e-003**		**56.0517**

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	0.8048	8.8757	5.7895	0.0174		0.3487	0.3487		0.3208	0.3208	0.0000	1,685.2071	1,685.2071	0.5450		1,698.8328
Total	**0.8048**	**8.8757**	**5.7895**	**0.0174**		**0.3487**	**0.3487**		**0.3208**	**0.3208**	**0.0000**	**1,685.2071**	**1,685.2071**	**0.5450**		**1,698.8328**

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	2.4000e-004	7.2500e-003	1.8400e-003	2.0000e-005	5.2000e-004	2.0000e-005	5.5000e-004	1.4000e-004	2.0000e-005	1.7000e-004		2.3957	2.3957	1.6000e-004		2.3997
Vendor	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
Worker	0.0238	0.0163	0.1841	5.40E-04	0.0559	4.50E-04	0.0563	0.0148	4.20E-04	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0241**	**0.0236**	**0.186**	**5.60E-04**	**0.0564**	**4.70E-04**	**0.0569**	**0.015**	**4.40E-04**	**0.0154**		**56.0083**	**56.0083**	**1.7400e-003**		**56.0517**

3.4 Grading - 2021

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					0.3815	0.0000	0.3815	0.0466	0.0000	0.0466			0.0000			0.0000
Off-Road	0.9141	8.9603	7.9094	0.0110		0.5156	0.5156		0.4743	0.4743		1,061.5503	1,061.5503	0.3433		1,070.1335
Total	**0.9141**	**8.9603**	**7.9094**	**0.0110**	**0.3815**	**0.5156**	**0.8970**	**0.0466**	**0.4743**	**0.5209**		**1,061.5503**	**1,061.5503**	**0.3433**		**1,070.1335**

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	1.6385	49.8480	12.6825	0.1518	3.6054	0.1691	3.7745	0.9882	0.1618	1.1500		16,472.8081	16,472.8081	1.1056		16,500.4484

Vendor	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
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**1.6624**	**49.8643**	**12.8667**	**0.1523**	**3.6613**	**0.1695**	**3.8309**	**1.0030**	**0.1622**	**1.1652**		**16,526.4206**	**16,526.4206**	**1.1072**		**16,554.1003**

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					0.1488	0.0000	0.1488	0.0182	0.0000	0.0182			0.0000			0.0000
Off-Road	0.9141	8.9603	7.9094	0.011		0.5156	0.5156		0.4743	0.4743	0.0000	1,061.5503	1,061.5503	0.3433		1,070.1335
Total	**0.9141**	**8.9603**	**7.9094**	**0.011**	**0.1488**	**0.5156**	**0.6643**	**0.0182**	**0.4743**	**0.4925**	**0.0000**	**1,061.5503**	**1,061.5503**	**0.3433**		**1,070.1335**

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	1.6385	49.8480	12.6825	0.1518	3.6054	0.1691	3.7745	0.9882	0.1618	1.1500		16,472.8081	16,472.8081	1.1056		16,500.4484
Vendor	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
Worker	0.0238	0.0163	0.1841	5.40E-04	0.0559	4.50E-04	0.0563	0.0148	4.20E-04	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**1.6624**	**49.8643**	**12.8667**	**0.1523**	**3.6613**	**0.1695**	**3.8309**	**1.003**	**0.1622**	**1.1652**		**16,526.4206**	**16,526.4206**	**1.1072**		**16,554.1003**

3.5 Building Construction - 2021

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	0.5307	5.8919	4.5408	0.0116		0.2380	0.2380		0.2190	0.2190		1,124.2174	1,124.2174	0.3636		1,133.3072
Total	**0.5307**	**5.8919**	**4.5408**	**0.0116**		**0.2380**	**0.2380**		**0.2190**	**0.2190**		**1,124.2174**	**1,124.2174**	**0.3636**		**1,133.3072**

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	0.0000	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
Vendor	0.5520	16.7618	4.8573	0.0433	1.1076	0.0355	1.1430	0.3189	0.0339	0.3528		4,625.0776	4,625.0776	0.2986		4,632.5421
Worker	0.0477	0.0326	0.3683	1.0800e-003	0.1118	9.0000e-004	0.1127	0.0296	8.3000e-004	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	**0.5997**	**16.7944**	**5.2256**	**0.0444**	**1.2194**	**0.0364**	**1.2557**	**0.3485**	**0.0347**	**0.3833**		**4,732.3027**	**4,732.3027**	**0.3017**		**4,739.8461**

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	0.5307	5.8919	4.5408	0.0116		0.238	0.238		0.219	0.219	0.0000	1,124.2174	1,124.2174	0.3636		1,133.3072
Total	**0.5307**	**5.8919**	**4.5408**	**0.0116**		**0.238**	**0.238**		**0.219**	**0.219**	**0.0000**	**1,124.2174**	**1,124.2174**	**0.3636**		**1,133.3072**

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	0.0000	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
Vendor	0.5520	16.7618	4.8573	0.0433	1.1076	0.0355	1.1430	0.3189	0.0339	0.3528		4,625.0776	4,625.0776	0.2986		4,632.5421
Worker	0.0477	0.0326	0.3683	1.08E-03	0.1118	9.00E-04	0.1127	0.0296	8.30E-04	0.0305		107.2251	107.2251	3.1600e-003		107.3040
Total	**0.5997**	**16.7944**	**5.2256**	**0.0444**	**1.2194**	**0.0364**	**1.2557**	**0.3485**	**0.0347**	**0.3833**		**4,732.3027**	**4,732.3027**	**0.3017**		**4,739.8461**

3.5 Building Construction - 2022

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	0.4748	5.0105	4.4864	0.0116		0.2001	0.2001		0.1841	0.1841		1,123.4894	1,123.4894	0.3634		1,132.5733

Total	**0.4748**	**5.0105**	**4.4864**	**0.0116**		**0.2001**	**0.2001**		**0.1841**	**0.1841**		**1,123.4894**	**1,123.4894**	**0.3634**		**1,132.5733**

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	0.0000	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
Vendor	0.5182	15.9297	4.5978	0.0429	1.1076	0.0310	1.1386	0.3189	0.0297	0.3486		4,583.9858	4,583.9858	0.2881		4,591.1881
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.5630**	**15.9592**	**4.9370**	**0.0439**	**1.2194**	**0.0319**	**1.2513**	**0.3485**	**0.0305**	**0.3790**		**4,687.4428**	**4,687.4428**	**0.2909**		**4,694.7163**

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	0.4748	5.0105	4.4864	0.0116		0.2001	0.2001		0.1841	0.1841	0.0000	1,123.4894	1,123.4894	0.3634		1,132.5733
Total	**0.4748**	**5.0105**	**4.4864**	**0.0116**		**0.2001**	**0.2001**		**0.1841**	**0.1841**	**0.0000**	**1,123.4894**	**1,123.4894**	**0.3634**		**1,132.5733**

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	0.0000	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
Vendor	0.5182	15.9297	4.5978	0.0429	1.1076	0.0310	1.1386	0.3189	0.0297	0.3486		4,583.9858	4,583.9858	0.2881		4,591.1881
Worker	0.0448	0.0295	0.3392	1.04E-03	0.1118	8.70E-04	0.1127	0.0296	8.10E-04	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.563**	**15.9592**	**4.937**	**0.0439**	**1.2194**	**0.0319**	**1.2513**	**0.3485**	**0.0305**	**0.379**		**4,687.4428**	**4,687.4428**	**0.2909**		**4,694.7163**

3.6 Paving - 2022

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	0.5674	5.7544	6.8064	9.5700e-003		0.3085	0.3085		0.2838	0.2838		926.6965	926.6965	0.2997		934.1893
Paving	1.1423					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7098**	**5.7544**	**6.8064**	**9.5700e-003**		**0.3085**	**0.3085**		**0.2838**	**0.2838**		**926.6965**	**926.6965**	**0.2997**		**934.1893**

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	4.5000e-004	0.0134	3.6500e-003	4.0000e-005	1.0500e-003	4.0000e-005	1.0900e-003	2.9000e-004	4.0000e-005	3.3000e-004		4.7334	4.7334	3.2000e-004		4.7413
Vendor	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
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0452**	**0.0428**	**0.3428**	**1.0800e-003**	**0.1128**	**9.1000e-004**	**0.1137**	**0.0299**	**8.5000e-004**	**0.0308**		**108.1903**	**108.1903**	**3.1700e-003**		**108.2695**

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	0.5674	5.7544	6.8064	9.5700e-003		0.3085	0.3085		0.2838	0.2838	0.0000	926.6965	926.6965	0.2997		934.1893
Paving	1.1423					0	0		0	0			0.0000			0.0000
Total	**1.7098**	**5.7544**	**6.8064**	**9.57E-03**		**0.3085**	**0.3085**		**0.2838**	**0.2838**	**0.0000**	**926.6965**	**926.6965**	**0.2997**		**934.1893**

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	4.5000e-004	0.0134	3.6500e-003	4.0000e-005	1.0500e-003	4.0000e-005	1.0900e-003	2.9000e-004	4.0000e-005	3.3000e-004		4.7334	4.7334	3.2000e-004		4.7413
Vendor	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

Worker	0.0448	0.0295	0.3392	1.04E-03	0.1118	8.70E-04	0.1127	0.0296	8.10E-04	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0452**	**0.0428**	**0.3428**	**1.08E-03**	**0.1128**	**9.10E-04**	**0.1137**	**0.0299**	**8.50E-04**	**0.0308**		**108.1903**	**108.1903**	**3.1700e-003**		**108.2695**

3.7 Architectural Coating - 2022

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	0.3653					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7861	7.7526	7.1619	0.0148		0.3617	0.3617		0.3328	0.3328		1,428.8622	1,428.8622	0.4621		1,440.4153
Total	**1.1514**	**7.7526**	**7.1619**	**0.0148**		**0.3617**	**0.3617**		**0.3328**	**0.3328**		**1,428.8622**	**1,428.8622**	**0.4621**		**1,440.4153**

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	6.8000e-004	0.0201	5.4800e-003	7.0000e-005	1.5700e-003	6.0000e-005	1.6400e-003	4.3000e-004	6.0000e-005	4.9000e-004		7.1000	7.1000	4.8000e-004		7.1119
Vendor	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
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.0231**	**0.0348**	**0.1751**	**5.9000e-004**	**0.0575**	**5.0000e-004**	**0.0580**	**0.0153**	**4.6000e-004**	**0.0157**		**58.8285**	**58.8285**	**1.9000e-003**		**58.8760**

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	0.3653					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7861	7.7526	7.1619	0.0148		0.3617	0.3617		0.3328	0.3328	0.0000	1,428.8622	1,428.8622	0.4621		1,440.4153
Total	**1.1514**	**7.7526**	**7.1619**	**0.0148**		**0.3617**	**0.3617**		**0.3328**	**0.3328**	**0.0000**	**1,428.8622**	**1,428.8622**	**0.4621**		**1,440.4153**

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	6.8000e-004	0.0201	5.4800e-003	7.0000e-005	1.5700e-003	6.0000e-005	1.6400e-003	4.3000e-004	6.0000e-005	4.9000e-004		7.1000	7.1000	4.8000e-004		7.1119
Vendor	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
Worker	0.0224	0.0147	0.1696	5.20E-04	0.0559	4.40E-04	0.0563	0.0148	4.00E-04	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.0231**	**0.0348**	**0.1751**	**5.90E-04**	**0.0575**	**5.00E-04**	**0.058**	**0.0153**	**4.60E-04**	**0.0157**		**58.8285**	**58.8285**	**1.9000e-003**		**58.8760**

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	0.9079	4.5889	11.3284	0.0407	3.4260	0.0348	3.4607	0.9168	0.0325	0.9492		4,149.2259	4,149.2259	0.2214		4,154.7595
Unmitigated	0.9079	4.5889	11.3284	0.0407	3.4260	0.0348	3.4607	0.9168	0.0325	0.9492		4,149.2259	4,149.2259	0.2214		4,154.7595

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	45.81	551.46	405.78	487,663	487,663
Other Asphalt Surfaces	0.70	8.43	6.20	7,454	7,454
Total	46.51	559.89	411.98	495,117	495,117

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
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Other Asphalt Surfaces	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Other Asphalt Surfaces	0.000000	0.000000	0.870000	0.000000	0.000000	0.000000	0.000000	0.130000	0.000000	0.000000	0.000000	0.000000	0.000000

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	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
NaturalGas Unmitigated	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

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					
City Park	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
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
Total		**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**

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					
City Park	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
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
Total		**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**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.3962	4.0000e-005	4.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0101	0.0101	3.0000e-005		0.0107
Unmitigated	0.3962	4.0000e-005	4.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0101	0.0101	3.0000e-005		0.0107

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	5.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4000e-004	4.0000e-005	4.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0101	0.0101	3.0000e-005		0.0107
Total	**0.3962**	**4.0000e-005**	**4.7100e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0101**	**0.0101**	**3.0000e-005**		**0.0107**

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	5.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4000e-004	4.0000e-005	4.7100e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0101	0.0101	3.0000e-005		0.0107
Total	**0.3962**	**4.0000e-005**	**4.7100e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0101**	**0.0101**	**3.0000e-005**		**0.0107**

7.0 Water Detail

7.1 Mitigation Measures Water

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

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

11.0 Vegetation

Common Elements Typical Project - Important CalEEMod Variables for Construction and Operation

Note: Values represent a combination of assumptions from Public Works engineeers, CalEEMod defaults, and adjustments with explanations in footnotes.

1. Construction

1a. Land Uses to be Constructed

Land Use	Unit Amount	Size Metric
Café	8,000	sf
Performing arts space	38,046	sf
City park	3	acres

Note: City park land use type represents the maximum footprint of the project site.

Note: Performing arts space is only 4,000 sf. However, CalEEMod uses the square footage of all paved surfaces to determine VOC off-gassing so added other paved area sf (see table 1f).

1b. Construction Schedule

Phases	Start Date	End Date	Days/Week	Work Days
Demolition	1/1/2021	1/28/2021	5	20
Site Preparation	1/29/2021	3/12/2021	5	31
Grading	3/13/2021	4/23/2021	5	30
Building Construction	4/24/2021	9/17/2021	5	105
Paving	9/18/2021	10/8/2021	5	15
Architectural Coating	10/9/2021	10/29/2021	5	15

1c. Construction Equipment

Phases	Equipment Type	Number	Horsepower	Hours/day	VMT/day
Demolition	Excavator	1	300	8	n/a
	Water truck	1	402	8	40
	Dump Truck	2	450	8	80
	Backhoe	2	250	8	n/a
	Front-end Loader	2	97	8	n/a
	Utility trucks	2	402	8	80
	Backhoe	2	97	8	n/a
Site Preparation	Haul trucks/dump trucks	8	402	8	320
	Water truck	1	402	8	40
	Backhoe	2	97	8	n/a
	Front-end Loader	2	97	8	n/a
	Excavator	1	158	8	n/a
	Water truck	1	402	8	40

Grading	Dump trucks	1	402	8	40
	Backhoe	2	97	8	n/a
	Loaders	1	97	8	n/a
	Grader	2	187	8	n/a
Building Construction	Flatbed truck	1	402	8	40
	Water truck	1	402	8	40
	Backhoe	1	97	8	n/a
	Small crane/man lifts	2	231	8	n/a
	Utility trucks	3	402	8	120
Paving	Paving machine	1	132	8	n/a
	Water truck	1	402	8	40
	Backhoe	1	97	8	n/a
	Skip loaders	2	97	8	n/a
	Super-10's	6	402	8	240
Architectural Coating	Water truck	1	402	8	40
	Utility trucks	3	n/a	8	120

Notes: all equipment assumed to be diesel-powered.

Trucks (water, haul/dump, utility, flatbed, super-10) accounted for in CalEEMod in construction vehicle trips, assuming 5 mph idling onsite at 8 hours a day yields 40 miles per day per vehicle.

1d. Material and Debris Movement

Phases	Demolition (tons)	Material Imported (CY)	Material Exported (CY)	Acres Graded
Demolition	5,056	0	0	0
Grading	0	2,000	5,000	3

1e. Trips and VMT

Phases	Trips/day					Miles/trip		
	Worker	Vendor	Haul Default	Haul Onsite	Haul Adjusted	Worker	Vendor	Haul
Demolition	20	0	500	7	507	14.7	6.9	30
Site Preparation	20	0	0	12	12	14.7	6.9	30
Grading	20	0	875	3	878	14.7	6.9	30
Building Construction	20	23	0	7	7	14.7	6.9	30
Paving	20	0	0	10	10	14.7	6.9	30
Architectural Coating	20	0	0	6	6	14.7	6.9	30

Note: trucks (water, haul/dump, utility, flatbed, super-10) accounted for in CalEEMod in construction vehicle trips, assuming 5 mph idling onsite at 8 hours a day yields 40 miles per day per vehicle. Trips added in based on 30-mile haul trip length (see haul onsite column).

1f. Asphalt Paving

Phases	Acres Paved
Paving	2,283

Note: Asphalt paving input to determine the VOC emissions off-gassed. Asphalt surfaces consist of 0.25 miles of road paved (assumed 12-ft width) (50% asphalt) + 1.5 acres of miscellaneous area (40% asphalt) paved + 4,000 feet of performing arts space. Total asphalt paving is 38,056 sf or 0.9 acres.

2. Operation

Note: Operation assumed to begin immediately following completion of construction in 2022.

2a. Maintenance Vehicle Trips

Equipment Type	Fuel	Number	Avg Hours/day	Speed (mph)	VMT/day	Annual VMT
4x4 truck	Gasoline	1	16.97	5	84.85	30,971

Notes: maintenance vehicles would be used for trash/litter control, repairs and maintenance, restroom facilities cleaning, inspection of buildings, and landscaping.

Average Hours/day of maintenance vehicle activity based on reported frequency of various maintenance activities.

Hours of maintenance vehicle activity translated into VMT/day that was input into table 2b below.

2b. Total Vehicle Trips

	Average Daily Trip Rate			Annual VMT
Land Use	Weekday	Saturday	Sunday	
Café	5,728	5,568	4,000	9,885,194
Performing arts space	3.04	34.63	25.49	30,971
City park	5.67	68.25	50.22	60,354
Total	5,736.71	5,670.88	4,075.71	9,976,519

Notes: CalEEMod default trip rate for the performing arts space is 0. Adjusted so that the annual VMT matches that calculated in Table 2a for the maintenance vehicle trips. Fleet mix also adjusted to 100% LDT2 (light duty truck).

2c. Energy Use

Land Use	Natural Gas (kBTU/yr)	Electricity (kWh/yr)
Café	2,074,560	291,840
Performing arts space	0	0
City park	0	0
Total	2,074,560	291,840

2d. Water Consumption

Land Use	Indoor (Mgal/yr)	Outdoor (Mgal/yr)
Café	2.43	0.15
Performing arts space	0.00	0.00

City park	0.00	3.57
Total	2.43	3.73

2e. Waste Generation

Land Use	Waste Disposed (tons/yr)
Café	92.15
Performing arts space	0.00
City park	0.26
Total	92

Multiuse Trails & Access Gateways Typical Project - Important CalEEMod Variables for Construction and Operation

Note: Values represent a combination of assumptions from Public Works engineeers, CalEEMod defaults, and adjustments with explanations in footnotes.

1. Construction

1a. Land Uses to be Constructed

Land Use	Unit Amount	Size Metric
City Park	24.24	acres
Other Asphalt Surfaces	21.80	acres

Note: City park land use type represents the multi-use trail (5-miles by 40-foot max width = ~24 acres).

Note: CalEEMod uses the square footage of all paved surfaces to determine VOC off-gassing so added Other Asphalt Surfaces based on conservative assumption that 90% the project footprint would be paved with asphalt.

1b. Construction Schedule

Phases	Start Date	End Date	Days/Week	Work Days
Demolition	1/1/2021	3/12/2021	5	51
Site Preparation	3/13/2021	7/30/2021	5	100
Grading	7/31/2021	12/17/2021	5	100
Building Construction	12/18/2021	5/6/2022	5	100
Paving	5/7/2022	7/15/2022	5	50
Landscaping	7/16/2022	9/23/2022	5	50

1c. Construction Equipment

Phases	Equipment Type	Number	Horsepower	Hours/day	VMT/day
Demolition	Excavator	1	300	8	n/a
	Dump Truck	2	450	8	80
	Backhoe	2	250	8	n/a
	Hydraulic Impact Hammer	1	75	8	n/a
	Concrete Saw	1	70	8	n/a
	Hoe Ram	1	N/A	8	n/a
	Hoe for Hoe Ram	1	97	8	n/a
Site Preparation	Skip Loader	1	100	8	n/a
	Backhoe	1	250	8	n/a
	Water Truck	1	402	8	40
	Wheel Loader	1	200	8	n/a
Grading	Motor Grader	1	150	8	n/a
	Skip Loader	1	100	8	n/a
	Water Truck	1	402	8	40
	Vibratory Roller	1	75	8	n/a
	Backhoe	1	250	8	n/a

Building Construction	Telescopic Lift	1	75	8	n/a
	Fork Lift	1	100	8	n/a
Paving	Paving Machine	1	100	8	n/a
	Oil Truck	1	300	8	40
	Vibratory Roller	1	75	8	n/a
	Skip Loader	1	100	8	n/a
	Skid Steer	1	25	8	n/a
Landscaping	Wheel Loader	1	200	8	n/a
	Skip Loader	1	100	8	n/a
	Truck for mounted crane	1	402	8	40
	Water Truck	1	402	8	40
	Truck mounted crane	1	150	8	n/a

Notes: all equipment assumed to be diesel-powered.

Trucks (water, dump, oil, for mounted crane) accounted for in CalEEMod in construction vehicle trips, assuming 5 mph idling onsite at 8 hours a day yields 40 miles per day per vehicle.

1d. Material and Debris Movement

Phases	Demolition (tons)	Material Transfer (CY)	Acres Graded
Demolition	12,640	0	0
Grading	0	110,000	24.24

Notes: grading would involve 95,000 CY of material export/import and 15,000 CY of demolished material transfer.

1e. Trips and VMT

Phases	Trips/day					Miles/trip		
	Worker	Vendor	Haul Default	Haul Onsite	Haul Adjusted	Worker	Vendor	Haul
Demolition	5	0	1250	3	1,253	14.7	6.9	30
Site Preparation	5	0	0	2	2	14.7	6.9	30
Grading	5	0	13750	2	13752	14.7	6.9	30
Building Construction	10	173	0	0	0	14.7	6.9	30
Paving	105	0	0	2	2	14.7	6.9	30
Landscaping	20	0	0	3	3	14.7	6.9	30

Note: trucks (water, dump, oil, for mounted crane) accounted for in CalEEMod in construction vehicle trips, assuming 5 mph idling onsite at 8 hours a day yields 40 miles per day per vehicle. Trips added in based on 30-mile haul trip length (see haul onsite column).

1f. Asphalt Paving

Phases	Acres Paved
Paving	21.8

Note: CalEEMod uses the square footage of all paved surfaces to determine VOC off-gassing so added Other Asphalt Surfaces based on conservative assumption that 90% the project footprint would be paved with asphalt.

1g. Parking Area Coating

Phases	Coating (sf)
Landscaping	7,882

Note: CalEEMod takes SF of all paved surfaces and determines coating SF based on assumption that 6% of the project footprint paved surface area (21.8 acres) would be coated. Adjusted percentage assuming that 0.83% of surface area would be coated. Percentage calculated based on 40 foot width of trail and average 4-inch line painted down the entire length of the middle of the trail (0.33 ft/40 ft).

2. Operation

Note: Operation assumed to begin immediately following completion of construction in 2022.

2a. Maintenance Vehicle Trips

Equipment Type	Fuel	Number	Avg Hours/day	Speed (mph)	VMT/day	Annual VMT	% of VMT
4x4 truck	Gasoline	1	3.559	5	17.8	6,494	87%
Dump truck	Diesel	1	0.526	5	2.6	960	13%
Total					20.4	7,454	

Notes: Maintenance vehicles would be used for trash/litter control, repairs and maintenance, inspection of infrastructure, and landscaping.

Average Hours/day of maintenance vehicle activity based on reported frequency of various maintenance activities.

Hours of maintenance vehicle activity translated into VMT/day that was input into table 2b below.

2b. Total Vehicle Trips

	Average Daily Trip Rate			Annual VMT
Land Use	Weekday	Saturday	Sunday	
City Park	45.81	551.46	405.78	487,663
Other Asphalt Surfaces	0.70	8.43	6.20	7,454
Total	46.51	559.89	411.98	495,117

Notes: CalEEMod default Other Asphalt Surfaces trip rates were adjusted from 0 to account for maintenance worker vehicle trips. Fleet mix also adjusted to 87% LDT2 (light duty truck) and 13% HDT (heavy duty truck) based on 2a VMT breakdown.

2b. Energy Use

Land Use	Natural Gas (kBTU/yr)	Electricity (kWh/yr)
City Park	0	0
Other Asphalt Surfaces	0	0
Total	0	0

2c. Water Consumption

Land Use	Indoor (Mgal/yr)	Outdoor (Mgal/yr)
City Park	0.00	28.88
Other Asphalt Surfaces	0.00	0.00
Total	0.00	28.88

2d. Waste Generation

Land Use	Waste Disposed (tons/yr)
City Park	2.08
Other Asphalt Surfaces	0.00
Total	2

Appendix D

Biological Resources

Appendix D.1

Agency Letters

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
Phone: (805) 644-1766 Fax: (805) 644-3958

In Reply Refer To: June 23, 2020
Consultation Code: 08EVEN00-2020-SLI-0497
Event Code: 08EVEN00-2020-E-01026
Project Name: LA River Master Plan Update Program EIR

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed list identifies species listed as threatened and endangered, species proposed for listing as threatened or endangered, designated and proposed critical habitat, and species that are candidates for listing that may occur within the boundary of the area you have indicated using the U.S. Fish and Wildlife Service's (Service) Information Planning and Conservation System (IPaC). The species list fulfills the requirements under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the species list should be verified after 90 days. We recommend that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists following the same process you used to receive the enclosed list. Please include the Consultation Tracking Number in the header of this letter with any correspondence about the species list.

Due to staff shortages and excessive workload, we are unable to provide an official list more specific to your area. Numerous other sources of information are available for you to narrow the list to the habitats and conditions of the site in which you are interested. For example, we recommend conducting a biological site assessment or surveys for plants and animals that could help refine the list.

If a Federal agency is involved in the project, that agency has the responsibility to review its proposed activities and determine whether any listed species may be affected. If the project is a major construction project*, the Federal agency has the responsibility to prepare a biological assessment to make a determination of the effects of the action on the listed species or critical habitat. If the Federal agency determines that a listed species or critical habitat is likely to be adversely affected, it should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to threatened or endangered species or their critical habitat prior to a

written request for formal consultation. During this review process, the Federal agency may engage in planning efforts but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Act.

Federal agencies are required to confer with the Service, pursuant to section 7(a)(4) of the Act, when an agency action is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10(a)). A request for formal conference must be in writing and should include the same information that would be provided for a request for formal consultation. Conferences can also include discussions between the Service and the Federal agency to identify and resolve potential conflicts between an action and proposed species or proposed critical habitat early in the decision-making process. The Service recommends ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Act does not apply until the species is listed or the proposed critical habitat is designated. The conference process fulfills the need to inform Federal agencies of possible steps that an agency might take at an early stage to adjust its actions to avoid jeopardizing a proposed species.

When a proposed species or proposed critical habitat may be affected by an action, the lead Federal agency may elect to enter into formal conference with the Service even if the action is not likely to jeopardize or result in the destruction or adverse modification of proposed critical habitat. If the proposed species is listed or the proposed critical habitat is designated after completion of the conference, the Federal agency may ask the Service, in writing, to confirm the conference as a formal consultation. If the Service reviews the proposed action and finds that no significant changes in the action as planned or in the information used during the conference have occurred, the Service will confirm the conference as a formal consultation on the project and no further section 7 consultation will be necessary. Use of the formal conference process in this manner can prevent delays in the event the proposed species is listed or the proposed critical habitat is designated during project development or implementation.

Candidate species are those species presently under review by the Service for consideration for Federal listing. Candidate species should be considered in the planning process because they may become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required for candidate species. If early evaluation of your project indicates that it is likely to affect a candidate species, you may wish to request technical assistance from this office.

Only listed species receive protection under the Act. However, sensitive species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. We recommend that you review information in the California Department of Fish and Wildlife's Natural Diversity Data Base. You can contact the California Department of Fish and Wildlife at (916) 324-3812 for information on other sensitive species that may occur in this area.

[*A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.]

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08EVEN00-2020-SLI-0497

Event Code: 08EVEN00-2020-E-01026

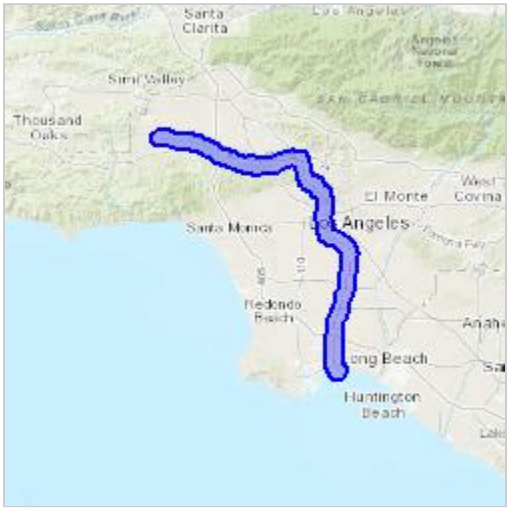
Project Name: LA River Master Plan Update Program EIR

Project Type: LAND - MANAGEMENT PLANS

Project Description: Los Angeles River Master Plan Update has nine goals: flood risk reduction; parks; ecosystems; access; arts and culture; housing affordability; education; water supply and water quality. The Program EIR (PEIR) uses a kit of parts that includes potential design strategies for locations along the LA River with each strategy associated with Master Plan goals. Each kit of part category is associated with a set of design components and these design components can be used to address a particular goal.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.9755202864726N118.16931969235998W



Counties: Los Angeles, CA

Endangered Species Act Species

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp *Streptocephalus woottoni* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8148	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Braunton's Milk-vetch *Astragalus brauntonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5674	Endangered
California Orcutt Grass *Orcuttia californica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4923	Endangered
Gambel's Watercress *Rorippa gambellii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4201	Endangered
Lyon's Pentachaeta *Pentachaeta lyonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4699	Endangered
Marsh Sandwort *Arenaria paludicola* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2229	Endangered
Spreading Navarretia *Navarretia fossalis* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1334	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
http://www.fws.gov/carlsbad/

In Reply Refer To: June 23, 2020
Consultation Code: 08ECAR00-2020-SLI-1241
Event Code: 08ECAR00-2020-E-02869
Project Name: LA River Master Plan Update Program EIR

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

This project's location is within the jurisdiction of multiple offices. Expect additional species list documents from the following office, and expect that the species and critical habitats in each document reflect only those that fall in the office's jurisdiction:

Ventura Fish And Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003-7726
(805) 644-1766

Project Summary

Consultation Code: 08ECAR00-2020-SLI-1241

Event Code: 08ECAR00-2020-E-02869

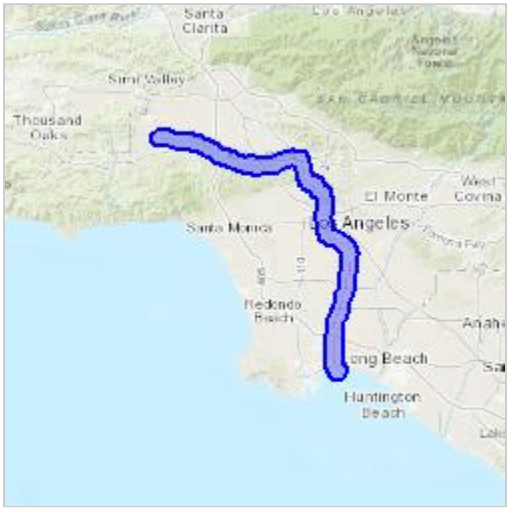
Project Name: LA River Master Plan Update Program EIR

Project Type: LAND - MANAGEMENT PLANS

Project Description: Los Angeles River Master Plan Update has nine goals: flood risk reduction; parks; ecosystems; access; arts and culture; housing affordability; education; water supply and water quality. The Program EIR (PEIR) uses a kit of parts that includes potential design strategies for locations along the LA River with each strategy associated with Master Plan goals. Each kit of part category is associated with a set of design components and these design components can be used to address a particular goal.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.9755202864726N118.16931969235998W



Counties: Los Angeles, CA

Endangered Species Act Species

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Pacific Pocket Mouse *Perognathus longimembris pacificus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8080	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
California Least Tern *Sterna antillarum browni* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered

Flowering Plants

NAME	STATUS
Gambel's Watercress *Rorippa gambellii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4201	Endangered
Nevin's Barberry *Berberis nevinii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8025	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Dayman, Shelly

From: NMFSWCRCA Specieslist - NOAA Service Account <nmfswcrca.specieslist+canned.response@noaa.gov>
Sent: Tuesday, June 23, 2020 5:43 PM
To: Dayman, Shelly
Subject: Re: LA River Master Plan Update Program EIR

Receipt of this message confirms that NMFS has received your email to nmfswcrca.specieslist@noaa.gov. If you are a federal agency (or representative) and have followed the steps outlined on the California Species List Tools web page (http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html), you have generated an official Endangered Species Act species list.

Messages sent to this email address are not responded to directly. For project specific questions, please contact your local NMFS office.

Northern California/Klamath (Arcata) 707-822-7201

North-Central Coast (Santa Rosa) 707-387-0737

Southern California (Long Beach) 562-980-4000

California Central Valley (Sacramento) 916-930-3600

Dayman, Shelly

From: Dayman, Shelly
Sent: Tuesday, June 23, 2020 5:42 PM
To: 'nmfswcrca.specieslist@noaa.gov'
Subject: LA River Master Plan Update Program EIR

Project Title: LA River Master Plan Update Program EIR

Los Angeles River Master Plan (LARMP) Update Program EIR (PEIR) has nine goals including: flood risk reduction; parks; ecosystems; access; arts and culture; housing affordability; education; water supply; and water quality. The LARMP Update PEIR uses a kit of parts that includes potential design strategies for locations along the LA River with each strategy associated with Master Plan goals. Each kit of part category is associated with a set of design components and these design components can be used to address a particular goal.

Quad Name **Long Beach (digital)**
Quad Number **33118-G2**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) - X
Range White Abalone (E) - X

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) - X

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH - X

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans - **X**
MMPA Pinnipeds - **X**

Quad Name **Long Beach OE S**
Quad Number **33118-F2**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) - X

Range White Abalone (E) - X

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X

Olive Ridley Sea Turtle (T/E) - X

Leatherback Sea Turtle (E) - X

North Pacific Loggerhead Sea Turtle (E) - X

ESA Whales

Blue Whale (E) - X

Fin Whale (E) - X

Humpback Whale (E) - X

Southern Resident Killer Whale (E) - X

North Pacific Right Whale (E) - X

Sei Whale (E) - X

Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -

Chinook Salmon EFH -

Groundfish EFH - X

Coastal Pelagics EFH - X

Highly Migratory Species EFH - X

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans - **X**

MMPA Pinnipeds - **X**

Quad Name **South Gate**

Quad Number **33118-H2**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Los Angeles**
Quad Number **34118-A2**

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Hollywood**
Quad Number **34118-A3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -

Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Pasadena**
Quad Number **34118-B2**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office
562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Burbank**
Quad Number **34118-B3**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Van Nuys**

Quad Number **34118-B4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Canoga Park**
Quad Number **34118-B5**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - X
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Beverly Hills**
Quad Number **34118-A4**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) - **X**
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) - X
Range White Abalone (E) - X

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) - X
Olive Ridley Sea Turtle (T/E) - X
Leatherback Sea Turtle (E) - X
North Pacific Loggerhead Sea Turtle (E) - X

ESA Whales

Blue Whale (E) - X
Fin Whale (E) - X
Humpback Whale (E) - X
Southern Resident Killer Whale (E) - X
North Pacific Right Whale (E) - X
Sei Whale (E) - X
Sperm Whale (E) - X

ESA Pinnipeds

Guadalupe Fur Seal (T) - X
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH -
Groundfish EFH - X
Coastal Pelagics EFH - X
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans - X
MMPA Pinnipeds - X

Non-Federal Agency Name:
County of Los Angeles, Public Works

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Appendix D.2

Special Status Species Potential to Occur Table

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Plants										
Aphanisma (*Aphanisma blitoides*)	-/-/1B.2	Annual herb found in gravelling or sandy soils within coastal bluff scrub, coastal dunes, and coastal scrub habitats; 1–305 meters (0–1,000 feet). Blooming period: February–June.	HA	HA	HA	HA	HP	HP	HP	HA
San Gabriel Manzanita (*Arctostaphylos glandulosa* ssp. *gabrielensis*)	-/-/1B.2	A perennial evergreen found in rocky chaparral habitats; 595–1,500 meters (1,950–4,920 feet). Blooming period: March.	HA	HA	HA	HA	HA	HA	HA	HA
							LA River BSA is outside of species elevation range.			
Marsh Sandwort (*Arenaria paludicola*)	E/E/1B.1	Perennial stoloniferous herb. Sandy soils and openings in marshes and swamps (freshwater or brackish); 3–170 meters (10–550 feet). Blooming period: May–August.	HP	HP	HA	HA	HP	HA	HA	HA
			Marginally suitable habitat within brackish and freshwater marsh areas. However, it is unlikely that this species would occur given the extensive							LA River BSA is outside of species elevati

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
			surrounding development and lack of extant records of occurrence.							on range.
Western Spleenwort (*Asplenium vespertinum*)	-/-/4.2	Perennial rhizomatous herb. Rocky soils in chaparral, cismontane woodland, and coastal scrub; 180–1,000 meters (600–3,300 feet). Blooming period: February–June.	HA	HA	HA	HA	HP	HP	HP	HA
Braunton's Milk-vetch (*Astragalus brauntonii*)	E/-/1B.1	Perennial herb found in recently burned or disturbed chaparral, coastal scrub, and valley and foothill grasslands; 4–640 meters (10–2,100 feet). Blooming period: January–August.	HA	HA	HA	HP	HP	HP	HP	HP
Horn's Milk-vetch (*Astragalus hornii* var. *hornii*)	-/-/1B.1	Annual herb found in lake margins and alkaline soils in meadows, seeps, and playas; 60–850 meters (195–2,790 feet). Blooming period: May–October.	HA	HA	HA	HA	HA	HA	HA	HA
Ventura Marsh Milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*)	E/E/1B.1	Perennial herb found in coastal dunes, coastal scrub, and at the edges of coastal marshes and swamps; 1–35 meters (0–	HP	HP	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		115 feet). Blooming period: (June) August–October.	Marginally suitable habitat within marsh habitats. However, it is unlikely that this species would occur given the extensive surrounding development and lack of extant records of occurrence.				LA River BSA is outside of species elevation range.			
Coastal Dunes Milk-vetch (*Astragalus tener* var. *titi*)	E/E/1B.1	Annual herb found on sandy coastal bluff scrub, coastal dunes and often vernally mesic coastal prairies; 1–50 meters (0–165 feet). Blooming period: March–May.	HA	HA	HA	HA	HA	HA	HA	HA
Coulter's Saltbrush (*Atriplex coulteri*)	-/-/1B.2	Perennial herb found in coastal bluff scrub, coastal dunes, coastal scrub, and valley and foothill grassland in open sites with low lying clay or alkaline soils; 3–460 meters (32–1,443 feet). Blooming period: March–October.	HA	HA	HA	HP	HP	HP	HP	HP
South Coast Saltscale	-/-/1B.2	Annual herb found within coastal bluff scrub, coastal	HA	HA	HA	HA	HP	HP	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Atriplex pacifica*)		dunes and playas; 0–140 meters (0–460 feet). Blooming period: March–October.							LA River BSA is outside of species elevation range.	
Parish's Brittlescale (*Atriplex parishii*)	-/-/1B.1	Annual herb found in vernal pools, chenopod scrub, and playas. It is usually found on drying alkali flats with fine soils; 25–1,900 meters (82–6,234 feet). Blooming period: June–October.	HA	HA	HA	HA	HA	HA	HA	HA
Davidson's Saltscale (*Atriplex serenana* var. *davidsonii*)	-/-/1B.2	Annual herb found in coastal bluff scrub and coastal scrub in alkaline soils; 10–200 meters (30–655 feet). Blooming period: April–October.	HA	HA	HA	HA	HP	HP	HP	HA
Malibu Baccharis (*Baccharis malibuensis*)	-/-/1B.1	Perennial deciduous shrub. Chaparral, coastal scrub, cismontane and riparian woodland; 150–305 meters (492–1,000 feet). Blooming period: August.	HA	HA	HA	HA	HP	HP	HP	HP
Nevin's Barberry (*Berberis nevinii*)	E/E/1B.1	Evergreen shrub. Sandy or gravelly soils in chaparral, cismontane woodland, coastal scrub, and riparian	HA	HA	HA	HA	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		scrub; 274–825 meters (898–2,707 feet). Blooming period: March–June.								
Brewer's Calandrinia (*Calandrinia breweri*)	-/-/4.2	Annual herb. Sandy or loamy soils, disturbed and/or burned sites in chaparral and coastal scrub; 10–1,220 meters (32–4,001 feet). Blooming period: March–June.	HA	HA	HA	HA	HP	HP	HP	HA
Catalina Mariposa-lily (*Calochortus catalinae*)	-/-/4.2	Perennial bulbiferous herb. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland; 32–700 meters (1,045–2,300 feet). Blooming period: February–June.	HA	HA	HA	HP	HP	HP	HP	HA
Slender Mariposa-lily (*Calochortus clavatus* var. *gracilis*)	-/-/1B.2	Perennial bulbiferous herb. Chaparral, coastal scrub, valley and foothill grassland; 15–1,000 meters (50–3,280 feet). Blooming period: March–June (November).	HA	HA	HA	HP	HP	HP	HP	HP
Late-flowered Mariposa-lily (*Calochortus fimbriatus*)	-/-/1B.3	Perennial bulbiferous herb. Chaparral, cismontane woodland, and riparian woodland habitats, often in serpentinite soils; 275–1,905 meters (902–6,250	HA	HA	HA	HA	HP	HP	HP	HA LA River BSA is outside

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		feet). Blooming period: June–August.								of species elevation range.
Palmer's Mariposa-lily (*Calochortus palmeri* var. *palmeri*)	-/-/1B.2	Perennial bulbiferous herb. Mesic areas in chaparral, lower montane coniferous forest, and meadows and seeps; 710–2,390 meters (2,329–7,841 feet). Blooming period: April–June.	HA	HA	HA	HA	HP	HP	HP	HP
Plummer's Mariposa-lily (*Calochortus plummerae*)	-/-/4.2	Perennial bulbiferous herb. Granitic and rocky areas in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and valley and foothill grassland; 100–1,700 meters (328–5,576 feet). Blooming period: May–July.	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Intermediate Mariposa-lily (*Calochortus weedii* var. *intermedius*)	-/-/1B.2	Perennial bulbiferous herb. Dry chaparral, valley grassland, and coastal sage scrub habitats, often on sandstone outcrops. Soil affinities include sandy or clay soils; 105–855 meters (590–2,805 feet). Blooming period: May–July.	HA	HA	HA	HP	HP	HP	HP	HP
Lucky Morning-glory (*Calystegia felix*)	-/-/1B.1	Annual rhizomatous herb found in meadows, seeps, stream banks, and riparian scrub. Associated with somewhat poorly drained alkali silt loam substrate; 30–215 meters (98–705 feet). Blooming period: March–September.	HP	HP	HA	HA	HP	HA	HP	HP
Pierson's Morning-glory (*Calystegia peirsonii*)	-/-/4.2	Perennial rhizomatous herb found in chaparral, chenopod scrub, cismontane woodland, lower montane coniferous forest, valley and foothill grassland and coastal scrub; 30–1,500 meters (95–4,920 feet). Blooming period: April–June.	HA	HA	HA	HP	HP	HP	HP	HP
Lewis' Evening-primrose (*Camissoniopsis lewisii*)	-/-/3	Annual herb found within coastal bluff scrub, cismontane woodlands, coastal dunes, coastal	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		scrub, and valley and foothill grasslands with sandy or clay soils; 0–300 meters (0–985 feet). Blooming period: March–May (June).								
White Pygmy-poppy (*Canbya candida*)	-/-/4.2	Annual herb found in Joshua tree woodland, Mojavean desert scrub and pinyon and juniper woodland with gravelly, sandy or granitic soils; 600–1,460 meters (1,965–4,790 feet). Blooming period: March–June.	HA	HA	HA	HA	HA	HA	HA	HA
Mt. Gleason Paintbrush (*Castilleja gleasoni*)	-/R/1B.2	Perennial herb found in chaparral, lower montane coniferous forests, and pinyon and juniper woodlands with granitic soils; 1,160–2,170 meters (3,805–7,120 feet). Blooming period: May–September.	HA	HA	HA	HA	HA	HA	HA	HA
							LA River BSA is outside of species elevation range.			
Southern Tarplant (*Centromadia parryi* ssp. *australis*)	-/-/1B.1	Annual herb found in vernally wet areas along the edges of marshes and vernal pools, often in association with valley and foothill grasslands where	HP	HP	HA	HA	HP	HA	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		competition from other plants is limited by alkalinity, seasonal soil saturation, or the effects of human disturbance; 0–480 meters (0–1,378 feet). Blooming period: May–November.								
Smooth Tarplant (*Centromadia pungens* ssp. *laevis*)	-/-/1B.1	Annual herb. Alkaline soils in open, poorly drained flats, depressions, waterway banks and beds, grassland, disturbed sites; 0–640 meters (0–2,100 feet). Blooming period: April–September.	HP	HP	HP	HP	HP	HP	HP	HP
			Suitable habitat within annual grasslands and disturbed, ruderal open areas throughout the LA River BSAs.							
Island Mountain-mahogany (*Cercocarpus betuloides* var. *blancheae*)	-/-/4.3	Perennial evergreen found in closed coniferous forests and chaparral; 30–600 meters (95–1,970 feet). Blooming period: February–May.	HA	HA	HA	HA	HP	HP	HP	HA
Salt Marsh Bird's-beak (*Chloropyron maritimum* ssp. *maritimum*)	E/E/1B.2	Hemiparasitic annual herb. Coastal dunes and coastal salt marshes and swamps; 0–30 meters (0–90 feet). Blooming period: May–October.	HP	HP	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
			Marginally suitable habitat within marsh areas. However, it is unlikely that this species would occur given the extensive surrounding development and lack of extant records of occurrence.							
San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*)	PT/E/1B.1	Annual herb found in coastal scrub and valley and foothill grasslands; 150–1,220 meters (490–4,005 feet). Blooming period: April–July.	HA	HA	HA	HP	HP	HP	HP	HP
			No suitable habitat. All annual grasslands within the LA River BSAs are isolated patches that are surrounded by extensive development.			Potentially suitable habitat within the California sagebrush and grassland vegetation communities associated with the Glendale Narrows, Santa Monica Mountains, and Sepulveda Basin portions of the LA River BSAs.				
Parry's Spineflower (*Chorizanthe parryi* var. *parryi*)	-/-/1B.1	Annual herb. Sandy or rocky openings in in chaparral, coastal scrub, cismontane woodland, and valley and foothill grassland; 275–1,220 meters (902–4,001 feet). Blooming period: April–June.	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Seaside Cistanthe (*Cistanthe maritima*)	-/-/4.2	Annual herb found within coastal bluff scrub, coastal scrub and valley and foothill grasslands with sandy soils; 5–300 meters (15–985 feet). Blooming period: February–August.	HA	HA	HA	HP	HP	HP	HP	HP
Monkey-flower Savory (*Clinipodium mimuloides*)	-/-/4.2	Perennial herb found in chaparral and north coast coniferous forests with streambanks or mesic soil; 305–1,800 meters (1,000–5,905 feet). Blooming period: June–October.	HA	HA	HA	HA	HP	HP	HP	HA
Small-flowered Morning-glory (*Convolvulus simulans*)	-/-/4.2	Annual herb. Friable clay soils or serpentine seeps in chaparral openings, coastal scrub, and valley and foothill grassland; 30–700 meters (98–2,297 feet). Blooming period: March–July.	HA	HA	HA	HP	HP	HP	HP	HP
Catalina Crossosoma (*Crossosoma californicum*)	-/-/1B.2	Perennial deciduous shrub found in chaparral and coastal scrub with rocky soils; 0–500 meters (0–1,640 feet). Blooming period: February–May.	HA	HA	HA	HA	HP	HP	HP	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*)	-/-/2B.2	Annual parasitic vine. Freshwater marshes and swamps; 15– 280 meters (49–918 feet). Blooming period: July–October.	HP	HP	HA	HA	HP	HA	HA	HP
Santa Susana Tarplant (*Deinandra minthornii*)	-/R/1B.2	Perennial deciduous shrub found in chaparral and coastal scrub with rocky soils; 280–760 meters (915–2,495 feet). Blooming period: July–November.	HA	HA	HA	HA	HP	HP	HP	HA
Johnston's Monkeyflower (*Diplacus johnstonii*)	-/-/4.2	Annual herb found in lower montane coniferous forests with disturbed or rocky soils; 975–2,920 meters (3,195–9,580 feet). Blooming period: May–August.	HA	HA	HA	HA	HA	HA	HA	HA
Beach Spectaclepod (*Dithyrea maritima*)	-/T/1B.1	Perennial rhizomatous herb found in coastal dunes and coastal scrub in sandy soils; 3–50 meters (5–165 feet). Blooming period: March–May.	HA	HA	HA	HA	HP	HP	HP	HA
Slender-horned Spineflower (*Dodecahema leptoceras*)	E/E/1B.1	Annual herb. Sandy soils in chaparral, cismontane woodland, and alluvial fan coastal scrub; 200–760 meters (656–2,493 feet). Blooming period: April–June.	HA	HA	HA	HA	HP	HP	HP	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Blochman's Dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*)	-/-/1B.1	Perennial herb found in coastal bluff scrub, chaparral, valley and foothill grasslands with often clay or serpentine soils; 5–450 meters (15–1,475 feet). Blooming period: April–June.	HA	HA	HA	HP	HP	HP	HP	HP
Agoura Hills Dudleya *(Dudleya cymosa* ssp. *agourensis*)	-/-/1B.2	Perennial herb found in chaparral and cismontane woodland with rocky or volcanic soils; 200–500 meters (655–1,640 feet). Blooming period: May–June.	HA	HA	HA	HA	HP	HP	HP	HA
Marcescent Dudleya (*Dudleya cymosa* ssp. *marcescens*)	T/R/1B.2	Perennial herb. Rocky and volcanic soils in chaparral; 150–520 meters (492–1,706 feet). Blooming period: April– July.	HA	HA	HA	HA	HP	HP	HP	HA
Santa Monica Dudleya (*Dudleya cymosa* ssp. *ovatifolia*)	T/-/1B.1	Perennial herb found in chaparral and coastal scrub with rocky soils sometimes volcanic or sedimentary; 150–1,675 meters (490–5,495 feet). Blooming period: March–June.	HA	HA	HA	HA	HP	HP	HP	HA
Many-stemmed Dudleya (*Dudleya multicaulis*)	-/-/1B.2	Perennial herb found in chaparral, coastal scrub, and valley and foothill grassland. This species is often associated with heavy	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		clay soils in barrens, dry stony places, or thinly vegetated openings; 15–790 meters (49–2,592 feet). Blooming period: April–July.								
Island Green Dudleya (*Dudleya virens* ssp. *insularis*)	-/-/1B.2	Perennial herb found in chaparral and coastal scrub with rocky soils; 5–300 meters (15–985 feet). Blooming period: April–June.	HA	HA	HA	HA	HP	HP	HP	HA
San Diego Button-celery (*Eryngium aristulatum* var. *parishii*)	E/E/1B.1	Annual or perennial herb found in coastal scrub and valley and foothill grassland habitats with mesic soils; 20–620 meters (65–2,035 feet). Blooming period: April–June.	HA	HP	HA	HP	HP	HP	HP	HA
Johnston's Bedstraw (*Galium johnstonii*)	-/-/4.3	Perennial herb. Chaparral, lower montane coniferous forest, pinyon and juniper woodland, riparian woodland; 1,220–2,300 meters (4,001–7,544 feet). Blooming period: June–July.	HA	HA	HA	HA	HP	HP	HP	HP
Palmer's Grapplinghook (*Harpagonella palmeri*)	-/-/4.2	Annual herb associated with clay soils in open grassy areas within chaparral, coastal scrub, and valley and foothill	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		grassland habitat; 20–955 meters (66–3,133 feet). Blooming period: March–May.								
Los Angeles Sunflower (*Helianthus nuttallii* ssp. *parishii*)	-/-/1A	Perennial rhizomatous herb. Marshes and swamps (coastal salt and freshwater); 10–1,675 meters (30–5,500 feet). Blooming Period: August–October.	HP	HP	HA	HA	HP	HA	HA	HP
Urn-flowered Alumroot (*Heuchera caespitosa*)	-/-/4.3	Perennial rhizomatous herb. Rocky soils in cismontane woodland, lower montane coniferous forest, riparian forest (montane), upper montane coniferous forest; 1,155–2,650 meters (3,800–8,700 feet). Blooming Period: May–August.	HA	HA	HA	HA	HA	HA	HA	HA
Vernal Barley (*Hordeum intercedens*)	-/-/3.2	Annual herb found coastal dunes, coastal scrub, valley and foothill grasslands and vernal pools; 5– 1,000 meters (15 to 3,281 feet). Blooming period: March–June.	HA	HA	HA	HP	HP	HP	HP	HP
Mesa Horkelia (*Horkelia cuneata* var. *puberula*)	-/-/1B.1	Perennial herb. Sandy and gravelly soils within maritime chaparral, cismontane woodland, and	HA	HA	HA	HA	HP	HP	HP	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		coastal scrub; 70–810 meters (229–2,657 feet). Blooming period: February–September.								
San Gabriel Mountains Sunflower (*Hulsea vestita* ssp. *gabrielensis*)	-/-/4.3	Perennial herb found in lower montane coniferous forests with rocky soils; 1,500–2,500 meters (4,920–8,200 feet). Blooming period: May–July.	HA	HA	HA	HA	HA	HA	HA	HA
California Satintail (*Imperata brevifolia*)	-/-/2B.1	Perennial rhizomatous herb. Mesic soils in chaparral, coastal scrub, Mojavean desert scrub, riparian scrub, meadows and seeps (often alkali); 0–1,215 meters (0–3,985 feet). Blooming period: September–May.	HA	HP	HA	HA	HP	HP	HP	HP
Decumbent Goldenbush (*Isocoma menziesii* var. *decumbens*)	-/-/1B.2	Perennial shrub found in the South Coast, Southern Channel Islands, and Peninsular Ranges in disturbed chaparral and coastal scrub habitats; 10–135 meters (32–443 feet). Blooming period: April–November.	HA	HA	HA	HA	HP	HP	HP	HA
Southern California Black Walnut	-/-/4.2	Perennial deciduous tree found in chaparral, cismontane woodland, coastal scrub, and riparian	HA	HA	HA	HA	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Juglans californica*)		woodland on slopes, and in canyons and alluvial habitats; 50–900 meters (164–2,952 feet). Blooming period: March–August.								
Coulter's Goldfields (*Lasthenia glabrata* ssp. *coulteri*)	-/-/1B.1	Annual herb. Coastal salt marsh, coastal salt swamps, playas, vernal pools; 1–1,220 meters (3–4,001 feet). Blooming period: February–June.	HP	HP	HA	HA	HA	HA	HA	HA
Fragrant Pitcher Sage (*Lepechinia fragrans*)	-/-/4.2	Perennial shrub found in chaparral; 20–1,310 meters (65–4,300 feet) Blooming period: March–October.	HA	HA	HA	HA	HP	HP	HP	HA
Robinson's Pepper-grass (*Lepidium virginicum* var. *robinsonii*)	-/-/4.3	Annual herb. Openings in chaparral and sage scrub; below 885 meters (2,900 feet). Blooming Period: January–July.	HA	HA	HA	HA	HP	HP	HP	HA
Sea Dahlia (*Leptosyne maritima*)	-/-/2B.2	Perennial herb found in coastal bluff scrub and coastal scrub habitats; 5–150 meters (15–490 feet). Blooming period: March–May.	HA	HA	HA	HA	HP	HP	HP	HA
Ocellated Humboldt Lily (*Lilium humboldtii* ssp. *ocellatum*)	-/-/4.2	Perennial bulbiferous herb. Openings in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest,	HA	HA	HA	HA	HP	HP	HP	HP

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			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		and riparian woodland; 30–1,800 meters (98–5,904 feet). Blooming period: March–August.								
San Gabriel Linanthus (*Linanthus concinnus*)	-/-/1B.2	Annual herb found in chaparral, lower and upper montane coniferous forests with rocky soils; 1,520–2,800 meters (4,985–9,185 feet). Blooming period: April–July.	HA	HA	HA	HA	HP	HP	HP	HA
Payne's Bush Lupine (*Lupinus paynei*)	-/-/1B.1	Perennial shrub found in coastal scrub, riparian scrub and valley and foothill grasslands with sandy soils; 220–420 meters (722–1,378 feet). Blooming period: March–July.	HA	HA	HA	HP	HP	HP	HP	HP
Santa Catalina Island Desert-thorn (*Lycium brevipes* var. *hassei*)	-/-/3.1	Perennial deciduous shrub found in coastal bluff scrub and coastal scrub habitats; 65–300 meters (210–985 feet). Blooming period: June–August.	HA	HA	HA	HA	HP	HP	HP	HA
California Box-thorn (*Lycium californicum*)	-/-/4.2	Perennial shrub found in coastal bluff scrub and coastal scrub habitats; 5–150 meters (15–490 feet). Blooming period: March–August.	HA	HA	HA	HA	HP	HA	HA	HA

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			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
								LA River BSA is outside of species elevation range.		
Davidson's Bush-mallow (*Malacothamnus davidsonii*)	-/-/1B.2	Perennial deciduous shrub found in chaparral, cismontane woodland, coastal scrub, riparian woodland; 185–1,140 meters (605–3,740 feet). Blooming period: June–January.	HA	HA	HA	HA	HP	HP	HP	HP
White-veined Monardella (*Monardella hypoleuca* ssp. *hypoleuca*)	-/-/1B.3	Perennial herb found in chaparral and cismontane woodland; 50–1,525 meters (160–5,005 feet). Blooming period April–August.	HA	HA	HA	HA	HP	HP	HP	HA
California Muhly (*Muhlenbergia californica*)	-/-/4.3	Perennial rhizomatous herb. Mesic soils in seeps, streambeds, and meadows within chaparral, yellow pine forest, coastal sage scrub, and wetland-riparian habitats; 100–2,000 meters (328–6,560 feet). Blooming period: June–September.	HP	HP	HA	HA	HP	HP	HP	HP
Mud Nama (*Nama stenocarpa*)	-/-/2B.2	Annual or perennial herb found in marshes and swamps and on edges of waterways; 5–500 meters	HP	HP	HA	HA	HP	HA	HA	HP

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			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		(15–1,640 feet). Blooming period: January–July.								
Gambel's Water Cress (*Nasturtium gambelii*)	E/T/1B.1	Perennial rhizomatous herb. Freshwater to brackish marshes and swamps; 5–330 meters (15–1,200 feet). Blooming period: April–October.	HP	HP	HA	HA	HP	HA	HA	HP
Spreading Navarretia (*Navarretia fossalis*)	T/-/1B.1	Annual herb. Associated with vernal pools and depressions and ditches in areas that once supported vernal pools; 30–655 meters (95–2,150 feet). Blooming period: April–June.	HA	HA	HA	HA	HA	HA	HA	HA
Ojai Navarretia (*Navarretia ojaiensis*)	-/-/1B.1	Annual herb found in chaparral openings, coastal scrub openings, and valley and foothill grasslands; 275–620 meters (900–2,035 feet). Blooming period: May–July.	HA	HA	HA	HP	HP	HP	HP	HP
Prostrate Vernal Pool Navarretia (*Navarretia prostrata*)	-/-/1B.2	Annual herb. Occurs in wetlands and vernal pools with alkaline soils within coastal scrub, meadows and seeps, and valley and foothill grassland habitats; 3–1,210 meters (9–3,970 feet). Blooming period: April–July.	HP	HP	HA	HA	HP	HA	HA	HP

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			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Coast Woolly-heads (*Nemacaulis denudata* var. *denudata*)	-/-/1B.2	Annual herb found in coastal dunes; 0–100 meters (0–328 feet). Blooming period: April–September.	HA	HA	HA	HA	HA	HA	HA	HA
Chaparral Nolina (*Nolina cismontana*)	-/-/1B.2	Perennial evergreen shrub. Inhabits mountainous areas with sandstone or gabbro soils in chaparral and coastal scrub habitats along the coast; 140–1,275 meters (459–4182 feet). Blooming period: March–July.	HA	HA	HA	HA	HP	HP	HP	HA
California Orcutt Grass (*Orcuttia californica*)	E/E/1B.1	Annual herb found in vernal pools; 15–660 meters (49–2,165 feet). Blooming period: April–August.	HA	HA	HA	HA	HA	HA	HA	HA
Lyon's Pentachaeta (*Pentachaeta lyonii*)	E/E/1B.1	Annual herb. Occurs only in the Santa Monica Mountains in eastern Ventura and western Los Angeles counties and in the western Simi Hills in Ventura County. Found on exposed, compact, clay soils of volcanic origin that exhibit a microbiotic crust. Prefers areas with little disturbance; 30–690 meters (98 to 2,263 feet).	HA	HA	HA	HA	HP	HP	HP	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		Blooming period: February–August.								
Hubby's Phacelia (*Phacelia hubbyi*)	-/-/4.2	Annual herb found in chaparral, coastal scrub, and valley and foothill grassland in gravelly or rocky slopes, and talus slopes, mostly away from the immediate coast; 0–1,000 meters (0–3,280 feet). Blooming period: April–July.	HA	HA	HA	HA	HP	HP	HP	HA
Brand's Star Phacelia (*Phacelia stellaris*)	/-/1B.1	Annual herb. Coastal dunes and coastal scrub habitats; 1–400 meters (3–1,312 feet). Blooming period: March–June.	HA	HA	HA	HA	HP	HP	HP	HA
Woolly Chaparral-pea (*Pickeringia montana* var. *tomentosa*)	-/-/4.3	Evergreen shrub. Gabbroic, granitic, or clay soils in chaparral; 0–1,700 meters (0–5,577 feet). Blooming period: May–August.	HA	HA	HA	HA	HP	HP	HP	HA
White Rabbit-tobacco (*Pseudognaphalium leucocephalum*)	-/-/2B.2	Perennial herb found in riparian woodland, cismontane woodland, coastal scrub and chaparral. Occurs in sandy, gravelly benches, dry stream bottoms, canyon bottoms, and arroyos in areas of oak-sycamore, oak-pine to pine	HA	HA	HA	HA	HP	HP	HP	HP

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			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		woodlands, and commonly in riparian vegetation; 0–2,100 meters (0–6,890 feet). Blooming period: July–December.								
Nuttal's Scrub Oak (*Quercus dumosa*)	-/-/1B.1	Perennial evergreen shrub found in closed coniferous forest, chaparral, and coastal scrub with sandy, clay, or loam soils; 15–400 meters (45–1,310 feet). Blooming period: February–May.	HA	HA	HA	HA	HP	HP	HP	HA
San Gabriel Oak (*Quercus durata* var. *gabrielensis*)	-/-/4.2	Perennial evergreen shrub found in chaparral and cismontane/foothill woodland; 450–1,000 meters (1,475–3,280 feet). Blooming period: April–May.	HA	HA	HA	HP	HP	HP	HP	HP
Engelmann Oak (*Quercus engelmannii*)	-/-/4.2	Perennial deciduous tree that is found in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland habitats; 50–1,300 meters (164–4,265 feet). Blooming period: March–June.	HA	HA	HA	HP	HP	HP	HP	HP
Parish's Gooseberry (*Ribes*	-/-/1A	Perennial deciduous shrub. Riparian woodland; 65–300 meters (200–1,000	HA	HA	HA	HA	HP	HP	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
divaricatum var. *parishii*)		feet). Blooming Period: February–April.								
Coulter's Matilija Poppy (*Romneya coulteri*)	-/-/4.2	Perennial rhizomatous herb. Chaparral and coastal scrub; often in burned areas; 20–1,200 meters (65–3,936 feet). Blooming period: March–July.	HA	HA	HA	HA	HP	HP	HP	HA
Gambel's Watercress (*Rorippa gambellii*)	E/T/1B.1	Perennial rhizomatous herb. Freshwater to brackish marshes and swamps; 5–330 meters (15–1,200 feet). Blooming period: April–October.	HP	HP	HA	HA	HP	HA	HA	HP
Parish's Rupertia (*Rupertia rigida*)	-/-/4.3	Perennial herb found in chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, pebble plain, and valley and foothill grasslands; 700–2,500 meters (2,295–8,200 feet). Blooming period: June–August.	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Southern Mountains Skullcap (*Scutellaria bolanderi* ssp. *austromontana*)	-/-/1B.2	Perennial rhizomatous herb. Moist embankments of montane creeks, mesic chaparral, mesic cismontane woodland, and mesic lower montane coniferous forest; 425–2000 meters (1394–6,562 feet). Blooming period: June–August.	HA	HA	HA	HA	HP	HP	HP	HP
San Gabriel Ragwort (*Senecio astephanus*)	-/-/4.3	Perennial herb. Rocky slopes in coastal bluff scrub and chaparral; 400–1,500 meters (1,300–5,000 feet). Blooming Period: May–July.	HA	HA	HA	HA	HP	HP	HA LA River BSA is outside of species elevation range.	HA
Salt Spring Checkerbloom (*Sidalcea neomexicana*)	-/-/2B.2	Perennial herb. Alkaline and mesic soils within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, and playas; 15–1,530 meters (49–5,020 feet). Blooming period: March–June.	HA	HA	HA	HA	HP	HP	HP	HA
Western Bristly Scaleseed	-/-/2A	Annual herb found in Sonoran desert scrub with rocky or sandy soils; 365–670 meters (1,195–2,200	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Spermolepis laterfolia*)		feet). Blooming period: May–April.								
Estuary Sealblite (*Suaeda esteroa*)	-/-/1B.2	Perennial herb found in marshes and swamps along the coast; 0–5 meters (0–15 feet). Blooming period: July–October.	HP	HP	HA	HA	HA	HA	HA	HA
Woolly Sealblite (*Suaeda taxifolia*)	-/-/4.2	Perennial evergreen shrub found in coastal bluff scrub, coastal dunes, marshes and swamps near the coast; 0–50 meters (0–165 feet). Blooming period: January–December.	HP	HP	HA	HA	HA	HA	HA	HA
							LA River BSA is outside of species elevation range.			
San Bernardino Aster (*Symphyotrichum defoliatum*)	-/-/1B.2	Perennial rhizomatous herb. Near ditches, streams, and springs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and vernally mesic valley and foothill grassland; 2–2,040 meters (7–6,693 feet). Blooming period: July–November.	HP	HP	HA	HA	HP	HP	HP	HP
Greata's Aster (*Symphyotrichum greatae*)	-/-/1B.3	Perennial rhizomatous herb found in broadleafed upland forest, chaparral,	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		cismontane woodland, lower montane coniferous forest and riparian woodland; 300–2,010 meters (980–6,595 feet). Blooming period: June–October.								
Sonoran Maiden Fern (*Thelypteris puberula* var. *sonorensis*)	-/-/2B.2	Perennial rhizomatous herb. Meadows, seeps, and streams within wetlands; 50–610 meters (164–2,001 feet). Blooming period: January–September.	HA	HA	HA	HA	HP	HP	HA	HP
			LA River BSA is below species elevation range.							
Invertebrates										
Crotch Bumble Bee (*Bombus crotchii*)	–/SC/–	Nests underground. Coastal California east to the Sierra–Cascade crest and south into Mexico. Food plant genera include *Antirrhinum*, *Phacelia*, *Clarkia*, *Dendromecon*, *Eschscholzia*, and *Eriogonum*.	HA	HP	HA	HA	HP	HP	HP	HP
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	T/-/-	Endemic to Oregon and California. Found in vernal pools and ephemeral wetlands during the wet season, more commonly in	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		pools with mud bottoms or grass filled.								
Quino Checkerspot Butterfly (*Euphydryas editha quino*)	E/-/-	Restricted to Riverside and San Diego Counties in California and Northern Baja, Mexico. Inhabits scrublands such as coastal sage scrub and chaparral with grasslands or open areas (1-2 meters square) between patches of woody shrubs that provide high solar exposure. Primary host plant is California plantain (*Plantago erecta*).	HA	HA	HA	HA	HA	HA	HA	HA
			The LA River BSAs are outside of this species current known range.							
Palos Verdes Blue Butterfly (*Glaucopsyche lygdamus palosverdesensis*)	E/-/-	Restricted to the cool, fog-shrouded, seaward side of Palos Verdes Hills, Los Angeles County. Larval host Southern California milkvetch (*Astragalus trichopodus* ssp. *locnhus*), which is typically found on clay soils on rocky slopes. Butterflies feed on milkvetch and deerweed.	HA	HA	HA	HA	HA	HA	HA	HA
			The LA River BSAs are outside of this species current known range.							
White Abalone (*Haliotis sorenseni*)	E/-/-	Marine coastal waters. Rocky substrates alongside sand channels, which tend	HP	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		to accumulate the algae they eat. They are usually found at depths of 50 to 180 feet, making them the deepest living abalone species.								
Black Abalone (*Haliotis cracherodii*)	E/-/-	Marine coastal waters. Rocky substrates in intertidal and shallow subtidal reefs (to about 18 feet deep) along the coast. They typically occur in habitats with complex surfaces and deep crevices that provide shelter for juveniles and adults. Critical habitat located off the coast of San Pedro.	HP	HA	HA	HA	HA	HA	HA	HA
Riverside Fairy Shrimp (*Streptocephalus woottoni*)	E/-/-	Restricted to deep seasonal vernal pools, vernal pool–like ephemeral ponds, and stock ponds as well as other human-modified depressions. Species prefers warm water pools that have low to moderate dissolved solids, are less predictable, and remain filled for extended periods of time. Basins that support Riverside fairy shrimp are typically dry a portion of	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		the year but usually filled by late fall, winter, or the spring rains. All known habitat lies within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation.								
Fish										
Green Sturgeon (*Acipenser medirostris*)	T/-/-	Green Sturgeon are anadromous fish that can be found along the coastal region from Alaska to Mexico. Although, they are most commonly found north of Point Conception. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, and Trinity Rivers. Once adults have migrated upstream, spawning occurs in April–June. Spawns at temps between 8 and 14°C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	HA	HA	HA	HA	HA	HA	HA	HA
Santa Ana Sucker (*Catostomus santaanae*)	T/-/-	Occurs in stream channels with a mosaic of loose sand, gravel, cobble, and boulder	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		substrates in riffles, runs, pools, and shallow sandy stream margins with cool, running water. Historical range included the Los Angeles, San Gabriel, and Santa Ana river drainage systems in southern California. An introduced population also occurs in the Santa Clara River drainage system.								
			LA River BSAs are not within the range of this species. The nearest known occupied watercourse is Big Tujunga Creek to the east of the Los Angeles River.							
Tidewater Goby (*Eucyclogobius newberryi*)	E/CSC/-	Inhabits cool brackish water in lagoons that are ideals shallow and open water with emergent vegetation. They feed on small benthic organisms and aquatic insects.	HP	HA	HA	HA	HA	HA	HA	HA
Arroyo Chub (*Gila orcuttii*)	-/CSC/-	Occurs within warm, fluctuating streams and slow-moving sections of streams containing sandy or muddy bottoms. Scarce but present in the Sepulveda Flood Control Basin and upper LA River tributaries. Usually confined to back water	HA	HA	HA	HA	HA	HA	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		pooling and in low gradient areas which are scarce.								
Southern California Steelhead, Southern California Distinct Population Segment (*Oncorhynchus mykiss irideus* pop. *10*)	E/-/-	Migrate into fresh water streams when sandbars breach during winter and spring rains. Occur in coastal streams with water temperatures <15°C. Need cool, clear water with in-stream cover. Spawn in tributaries to large rivers or streams directly connected to the ocean. Spawning habitat consists of gravel substrates free of excessive silt. Thrive when dissolved oxygen concentration is at least 7 parts per million. In streams, deep low-velocity pools are important wintering habitats. They have been extirpated from at least 11 Southern California streams: San Luis Rey River, San Mateo Creek, Santa Margarita River, Rincon Creek, Maria Ygnacio River, Los Angeles River, San Gabriel River, Santa Ana River, San Onofre Creek, San Juan	HA	HA	HA	HA	HA	HA	HA	HA

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			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		Creek, San Diego River, and Sweetwater River.								
			There is widespread habitat degradation to the coastal and mainstems of the watersheds in this area for this species. However, native, non-anadromous populations still persist upstream of the dams in this region, with small numbers of anadromous individuals attempting to enter and spawn in each of the watersheds when flow conditions are suitable. However, habitat impairments here are severe, including dams and surface water diversions.							
Santa Ana Speckled Dace (*Rhinichthys osculus* ssp. *3*)	-/CSC/-	Formerly widespread in mountain portions of the Santa Ana, San Gabriel, and Los Angeles watersheds. Populations were scattered in foothill areas and rare in lowlands.	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
			Found in shallow, gravel-cobble dominated riffles with overhanging riparian vegetation, in low gradient streams, with sand to boulder substrates in slow-moving water or along stream edges in fast moving water. Historically inhabited streams in the upland areas of the Santa Ana, San Gabriel and Los Angeles River systems. They have since disappeared from most of their range, including most of the Los Angeles River. Their current distribution is restricted to the headwaters of the Santa Ana and San Gabriel rivers and in Big Tujunga Creek (Los Angeles River drainage).							
Mohave Tui Chub (*Siphateles bicolor mohavensis*)	E/E, CFP/-	Deep pools or shallow outflow streams of mineralized, alkaline waters. Formerly in mainstream Mohave River; now in lakes and mineral spring pools. Dominant plants in habitat include ditchgrass, bulrush, cattail, rush, and saltgrass). Capable of surviving low oxygen (1 milligram oxygen/liter) and high alkaline (pH 9–10) environments.	HA	HA	HA	HA	HA	HA	HA	HA
			The LA River BSAs are outside of this species range.							
Reptiles and Amphibians										
Arroyo Toad (*Anaxyrus californicus*)	E/CSC/-	Inhabits washes, arroyos, sandy river banks, riparian areas with willows, sycamores, oaks, cottonwoods. Requires exposed sandy stream sides with stable terraces for burrowing with	HA	HA	HA	HA	HP	HP	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		scattered vegetation for shelter, and areas of quiet water or pools free of predatory fishes with sandy or gravel bottoms without silt for breeding. Young toads require moderately vegetated sandbars.								
Southern California Legless Lizard (*Anniella stebbinsi*)	-/CSC/-	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation in broadleaved upland forest, chaparral, coastal dunes, and coastal scrub. Distinct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil.	HA	HP	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
California glossy snake (*Arizona elegans occidentalis*)	-/CSC/-	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils. Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	HA	HP	HA	HP	HP	HP	HP	HP
Coastal Whiptail (*Aspidoscelis tigris stejnegeri*)	-/CSC/-	Habitats include a disturbed coastal sage scrub-chaparral mix and cleared areas of chaparral with a sandy/rocky substrate.	HA	HP	HA	HP	HP	HP	HP	HP
Loggerhead Sea Turtle *(Caretta caretta*)	E/-/-	Found throughout the world's marine ecosystems in the temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans. They are the most common species of sea turtle found in U.S. coastal waters. Adult loggerheads are carnivorous and primarily feed on hard-shelled prey, like conch and whelks.	HP	HA	HA	HA	HA	HA	HA	HA
Green Turtle (*Chelonia mydas*)	T/-/-	Occur throughout the world's oceans, primarily	HP	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		nearshore in coastal marine communities. Migrate between nearshore foraging grounds and nesting beaches in the tropics and sub-tropics. Breeding takes place in spring-summer. They are herbivorous and need an adequate supply of seagrasses and algae.								
Leatherback Sea Turtle (*Dermochelys coriacea*)	E/-/-	Found in the Atlantic, Pacific, and Indian Oceans. Within U.S. waters, they are found in the West Pacific, East Pacific, and Northwest Atlantic. Highly migratory turtle species. Documented as traveling 3,700 miles between foraging grounds and nesting sites in tropical regions. Feed on soft ocean species, such as jellyfish, salps, and other gelatinous prey.	HP	HA	HA	HA	HA	HA	HA	HA
Western Pond Turtle (*Emys marmorata*)	-/CSC/-	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet. Needs basking sites and suitable (e.g.,	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg laying.								
			Suitable habitat is present within the soft bottom portions of the channel that support freshwater marsh and riparian habitat, as well as other bodies of water within the LA River BSAs that contain aquatic vegetation. Although there is no live-in habitat present within the concrete-lined portions of the channel, this species could occur as a transient moving between areas of suitable habitat.							
Olive Ridley Sea Turtle (*Lepidochelys olivacea*)	T/-/-	Most abundant sea turtle in the world. Found in the southern Atlantic, Pacific, and Indian Oceans. Prefers the oceans' warmer waters. Nest grounds are beaches found in tropical and sub-tropical regions throughout the world. Nesting season occurs in June through December. Females come ashore and nest all at once in an event called "arribada." Primarily carnivorous, feeding on hard-shelled animals, crustaceans, and gelatinous prey.	HP	HA	HA	HA	HA	HA	HA	HA
Coast Horned Lizard (*Phrynosoma blainvillii*)	-/CSC/-	Found in arid and semi-arid climates in chaparral and coastal sage scrub, primarily below 2,000 feet in elevation. Critical factors	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		are loose soils with a high percentage of sand; an abundance of native ants or other insects, especially harvester ants (*Pogonomyrmex* spp.); and the availability of both sunny basking spots and dense cover for refuge.								
California Red-legged Frog (*Rana draytonii*)	T/CSC/-	Inhabits the quiet pools of streams, marshes, and ponds up to about 4,920 feet in elevation. Adults feed on aquatic and terrestrial insects, snails, and a wide variety of other aquatic prey. Will also move up to 1 mile through riparian communities under wet conditions, such as rainfall. Prefers shorelines with extensive vegetation, and is probably very vulnerable to the introduction of exotic competitors such as bullfrogs (*Rana catesbeiana*), crayfish, and a variety of nonnative fish.	HA	HA	HA	HA	HP	HP	HA	HP
							Potentially suitable habitat within the Santa Monica			Potentially suitabl

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
							Mountains and Sennett Canyon and Creek portions of the LA River BSAs.			e habitat within Sepulveda Basin and the soft bottom portion of the LA River channel.
Southern Mountain Yellow-legged Frog (*Rana muscosa*)	E/E/-	Southern California population persists as remnants in small streams in the San Gabriel, San Bernardino, and San Jacinto Mountains. Species' historical elevation range was about 1,200–7,500 feet, with remaining populations only toward the upper end of that range. Inhabits varied lakes and streams but avoids the smallest streams. Shows a tendency toward open stream and lakeshores that slope gently for the first 2 to 3 inches of depth. Rarely	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		found far from water, though data on movement and ability to recolonize sites are lacking.								
			The LA River BSAs are outside of this species current known range.							
Western Spadefoot (*Spea hammondii)*	-/CSC/-	Found primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools and seasonal ponds are essential for breeding and egg laying. It is found at sea level to 4,500 feet in elevation.	HA	HA	HA	HP	HP	HP	HP	HP
Coastal Range Newt (*Taricha torosa*)	-/CSC/-	The coast range newt is found in coastal drainages from Mendocino County to San Diego County. This species nests along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, and mesquite in wet forests, oak forests, chaparral, and grasslands.	HA	HA	HA	HA	HP	HP	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		Breeding takes place in ponds, reservoirs, and streams. Terrestrial individuals will migrate up to 0.25 mile to upland habitat.								
Two-striped Garter Snake (*Thamnophis hammondii*)	-/CSC/-	Often in water and rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. Will also inhabit large riverbeds if riparian vegetation is available and even occur in artificial impoundments if both aquatic vegetation and suitable prey (small amphibians and fish) are present (Jennings and Hayes 1994).	HA	HP	HA	HA	HP	HP	HA	HP
Birds										
Tricolored Blackbird (*Agelaius tricolor*)	-/T,CSC/-	Occurs in open country in western Oregon, California, and northwestern Baja California. Breeds near freshwater, preferably in emergent wetland with tall, dense cattails or tules, but also in thickets of willow	HA	HP	HA	HA	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		(*Salix* spp.), blackberry (*Rubus* spp.), wild rose (*Rosa* spp.), tall herbs and forages in grassland and cropland habitats. Seeks cover for roosting in emergent wetland vegetation, especially cattails (*Typha* spp.) and tules (*Scirpus* spp.), and also in trees and shrubs.								
Bald Eagle (*Haliaeetus leucocephalus)*	D/E, CFP/- /BGEPA	Occurs primarily at or near seacoasts, rivers, swamps, and large lakes (large bodies of open water with an abundant supply of fish). Requires suitable perching structures consisting of large trees or snags with heavy limbs. Wintering bald eagles may be found closer to human disturbance and may spend more time in upland habitats, sometimes quite far away from large water bodies. "Hacking" on Santa Catalina Island has led to nesting at sites that have been abandoned for decades.	HP	HP	HP	HP	HP	HP	HP	HP
			Due to the large home range of this species and known nesting sites on both ends of the project, this species could occur within any of the frames.							

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Golden Eagle (*Aquila chrysaetos*)	-/CFP/-/BGEPA	Found in broadleaved upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, and pinon and juniper woodlands upper montane coniferous forest, valley and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas. Closely tied to abundant jackrabbit populations	HA	HA	HA	HP	HP	HP	HP	HP
						Foraging and wintering only; no suitable nesting habitat is present within the LA River BSAs.				
Burrowing Owl (*Athene cunicularia*)	-/CSC/-	Inhabits open, dry, nearly or quite level, grassland, prairie, desert floor, and shrubland with relatively low cover. In coastal southern California, a substantial fraction of birds are found in microhabitats highly altered by man, including flood control and irrigation basins, dikes, and	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		banks, abandoned fields surrounded by agriculture, and road cuts and margins. Strong association with burrowing mammals, especially ground squirrels (*Spermophilus* spp.); however they will also occupy man-made niches such as banks and ditches, piles of broken concrete, and even abandoned structures.								
Swainson's Hawk (*Buteo swainsoni*)	-/T/-	Suitable breeding habitat consists of areas containing Joshua trees, Fremont cottonwoods, or other large trees located adjacent to open fields, including agricultural fields. Forages in open desert, grasslands, agricultural fields, or livestock pastures. In most of southern California, this species is now limited to a spring and fall transient, with known breeding populations currently isolated to the Antelope Valley in Los Angeles and Kern counties.	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Western Snowy Plover (*Charadrius alexandrines nivosus)*	T/CSC/-	Breeds primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. In winter, found on beaches used for nesting and other beaches, in human-made salt ponds, and on estuarine sand and mud flats.	HP	HP	HA	HA	HA	HA	HA	HA
Western Yellow-billed Cuckoo (*Coccyzus americanas occidentalis*)	T/E/-	Only a handful of tiny populations remain in all of California today. Losses are tied to the obvious loss of nearly all suitable habitat, but other factors may also be involved. Breeds and nests in extensive stands of dense, mature cottonwood/willow riparian forest along broad, lower flood bottoms of larger river systems at scattered locales in western North America. Requires large stands of riparian woodland for nesting sites, typically in	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		excess of 300 ft. in width and 25 acres in area.								
Yellow Rail (*Coturnicops noveboracensis*)	-/CSC/-	Nests along the edge of large marsh habitats. Typically found in shallow fresh or brackish water in dense grasses and sedges.	HP	HP	HA	HA	HP	HA	HA	HP
Southwestern Willow Flycatcher (*Empidonax traillii extimus*)	E/E/-	Highly restricted distribution in Southern California as a breeder. It occupies extensive riparian forests, wet meadows, and lower montane riparian habitats, primarily below 4,000 feet. Occurs in riparian habitats along rivers, streams, or other wetlands where dense growths of willows (*Salix* spp.), *Baccharis* spp., Arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.) Russian olive (*Eleagnus* spp.), or other plants are present, often with a scattered overstory of cottonwood (*Populus* spp.).	HA	HP	HA	HA	HP	HP	HP	HP
American Peregrine Falcon	D/D,CFP/-	The American peregrine falcon breeds in open habitats from tundra and	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Falco peregrinus anatum*)		seacoasts to high mountains and open forested regions, where there are rocky cliffs with ledges overlooking rivers, lakes, or coastal bays that have abundant birds, including rock pigeons in urban areas. Will also nest on electricity transmission towers, quarries, silos, skyscrapers, churches, and bridges.								
California Condor (*Gymnogyps californianus*)	E/-/-	California condor ranges from central California to parts of Southern California, from the coast to the border of Nevada. This large species is a scavenger for carrion and nests in caves on cliff faces.	HA	HA	HA	HA	HA	HA	HA	HA
			The LA River BSAs are outside of the species current known range.							
Yellow-breasted Chat (nest) (*Icteria virens*)	-/CSC/-	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	HA	HP	HA	HA	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*)	-/E/-	The Belding's savannah sparrow is endemic to the upper littoral region of salt marshes and is associated with dense pickleweed, particularly *Salicornia virginica*, within which most nests are found.	HP	HA	HA	HA	HA	HA	HA	HA
California Brown Pelican (*Pelecanus occidentalis californicus*)	D/D,CFP/-	The California brown pelican is found in marine areas near piers and jetties with offshore rocks and islands important for nesting. This species forages in estuarine and inshore waters.	HP	HA	HA	HA	HA	HA	HA	HA
Coastal California Gnatcatcher (*Polioptila californica californica*)	T/CSC/-	Generally prefers open sage scrub with California sagebrush (*Artemisia californica*) as a dominant or co-dominant species. Nest placement typically in areas with less than 40% slope gradient. Monogamous pairs tend to stay in the same locale.	HA	HA	HA	HA	HP	HP	HP	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Light-footed Ridgway's Rail (*Rallus obsoletus levipes*)	E/E, CFP/-	Resides in southern California coastal salt marshes, lagoons, and their maritime environs dominated by cordgrass (*Spartina* spp.) with some pickleweed (*Salicornia* spp.). Some freshwater use.	HP	HP	HA	HA	HA	HA	HA	HA
Bank Swallow (*Ripara ripara*)	-/T/-	Historically, species bred interruptedly along the entire coast of California as well as in the Central Valley and Great Basin portions of the state. Currently, the species breeds only in Northern California, primarily in the Sacramento Valley and far northeastern portions of the state, with a few colonies in coastal counties from Monterey through Del Norte County. This species is uncommon to fairly common migrants in spring and fall at the Salton Sea in Riverside and Imperial Counties and at other large lakes and wetlands in desert regions. They are rare migrants elsewhere in California.	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
			No suitable breeding habitat is present; extirpated from the region.							
Black Skimmer (*Rynchops niger*)	-/CSC/-	Forages for small fish and possibly crustaceans in calm shallows of harbors, lagoons, bays, estuaries, ponds, and river channels. In winter, flocks commonly roost on urban beaches well above the tide line or on mud flats in estuaries. Beach sites that are habitually used by skimmers are often associated with estuaries or protected harbors and are near the mouths of rivers or other drainage channels.	HP	HP	HA	HA	HA	HA	HA	HA
Yellow Warbler (nest) (*Setophaga petechia*)	-/CSC/-	Inhabits riparian forest, riparian scrub, and riparian woodland Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including	HA	HP	HA	HA	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		cottonwoods, sycamores, ash, and alders.								
California Least Tern (*Sterna antillarun browni*)	E/E, CFP/-	Found within seacoasts, beaches, bays, estuaries, lagoons, lakes and rivers. Prey consists of small fish and some invertebrates. Nesting occurs on the ground is sandy or pebble areas along the coast.	HP	HP	HA	HA	HA	HA	HA	HA
Least Bell's Vireo (*Vireo bellii pusillus*)	E/E/-	Found as a summer resident of Southern California where it inhabits low riparian growth in the vicinity of water or dry river bottoms below 2,000 feet. Species selects dense vegetation low in riparian zones for nesting, most frequently in riparian stands between 5 and 10 years old. When mature riparian woodland is selected, vireos nest in areas with a substantial robust understory of willows as well as other plant species (Goldwasser 1981).	HA	HP	HA	HA	HP	HP	HP	HP
Mammals										
Pallid Bat	-/CSC/-	Throughout Southern California, from coast to	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Antrozous pallidus*)		mixed conifer forest, grassland, shrubland, woodland, and forest habitats. Most common in open, dry habitats with rocky areas for roosting; year-long resident in most of range. The species is not thought to migrate; therefore, maternity colonies and winter roosts are expected to occur in the vicinity of each other. Roost sites are rock crevices, old buildings, bridges, caves, mines, and hollow trees.								
			Likely foraging only, although may roost within old buildings and bridges.				Foraging and roosting habitat present.			
Guadalupe Fur Seal (*Arctocephalus townsendii*)	T/CFP/- MMPA: D/P	Found in marine intertidal zones, splash zone communities, and protected deepwater coastal communities. Breeds on Isla de Guadalupe off of Mexico, occasionally found on San Miguel, San Nicolas, and San Clemente Islands. Prefers shallow, nearshore island water, with cool and sheltered rocky areas for haul-outs.	HP	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Sei Whale (*Balaenoptera borealis*)	E/-/- MMPA: D/P	Found in subtropical, temperate, and subpolar waters throughout the world. Prefer temperate waters. Feeding usually takes place at dawn, and typical prey includes plankton, small fish, and cephalopods. Breeding grounds are unknown, but breeding behavior generally occurs in winter at lower altitudes.	HA	HA	HA	HA	HA	HA	HA	HA
Blue Whale (*Balaenoptera musculus*)	E/-/- MMPA: D/P	Occur in all of the world's oceans except the Arctic. Filter feeders that feed almost entirely on krill. Largest of all the whales, Blue whales migrate long distances spending winters towards the equator and summers foraging in the polar waters. Reproductive behavior occurs during the winter months.	HA	HA	HA	HA	HA	HA	HA	HA
Fin Whale (*Balaenoptera physalus*)	E/-/- MMPA: D/P	Found throughout the world's major oceans, primarily in waters that are deep and offshore. They mostly range from temperate to polar latitudes and are less	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		abundant in tropical regions. Spend summers feeding in the Arctic and Antarctic waters, then heading towards more tropical waters in the winters for breeding (specific breeding grounds unknown). Diet includes krill, schooling fish, and squid.								
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	-/CSC/-	Found in a variety of habitats, this species is sedentary and prefers large crevices and caves for roosting and hibernation. The species forages late and prefers to forage along the edge of vegetation for moths and other insects. Maternity colonies range in size from a few dozen to hundreds that form between March and June with pups being born in June.	HP	HP	HP	HP	HP	HP	HP	HP
			Foraging only.				Foraging habitat present. Potential roosting habitat within the Santa Monica Mountains.			Foraging only.

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
North Pacific Right Whale *(Eubalaena japonica)*	E/-/- MMPA: D/P	Rarest of whale species. Found mostly in the North Pacific and Bering Sea. Migratory patterns and specific breeding grounds are unknown, but nursery areas have been observed in shallow coastal waters. Primarily feeds in Spring–Fall, filter feeding on zooplankton and small fish.	HA	HA	HA	HA	HA	HA	HA	HA
Spotted Bat (*Euderma maculatum*)	-/CSC/-	Found in a small number of locations in the foothills, mountains, and desert regions of southern California. Prefers to roost in rock crevices, occasionally found in caves. Forages over water and washes. Known occurrences are below 3,000 meters (9,840 feet) elevation.	HP	HP	HP	HP	HP	HP	HP	HP
			Foraging only.				Foraging habitat present. Potential roosting habitat within the Santa Monica Mountains.			Foraging only.
Western Mastiff Bat	-/CSC/-	Occurs in many open, semi-arid to arid habitats, including conifer and	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Eumops perotis californicus*)		deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in the crevices in vertical cliff faces, high buildings, and tunnels and travels widely when foraging. Roosts may be communal (up to 100 individuals) or solitary. This species appears to not migrate, but performs seasonal movements.								
			Likely foraging only, although may roost within tall buildings.				Foraging and roosting habitat present.			
Western Red Bat (*Lasiurus blossevillii*)	-/CSC/-	Typically a solitary bat. Roosts primarily in trees with dense canopies, often in edge habitats adjacent to streams or open fields, and in orchards in the Central Valley. Strongly associated with intact mature riparian forest.	HP	HP	HP	HP	HP	HP	HP	HP
			Foraging only.				Foraging and roosting habitat present.			
Western Yellow Bat (*Lasiurus xanthinus*)	-/CSC/-	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms (native and non-native).	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
			Suitable roosting habitat within palm trees throughout the LA River BSAs, as well as within riparian woodland habitat and mature trees along the river channel in Frames 6-9.							
San Diego Black-tailed Jackrabbit (*Lepus californicus bennettii*)	-/CSC/-	Common throughout state, except at high elevations in herbaceous and desert shrub areas, sage scrub, grasslands, open chaparral, and woodland/forest areas; relatively disturbance tolerant.	HA	HP	HA	HP	HP	HP	HP	HP
California Leaf-nosed Bat (*Macrotus californicus*)	-/CSC/-	Found in desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub, and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.	HA	HA	HA	HA	HA	HA	HA	HA
Humpback Whale (*Megaptera novaengliae*)	E/-/- MMPA: D/P	Found in oceans throughout the world. Heavily migratory whale species, sometimes swimming 5,000 miles between feeding and breeding grounds. Winter breeding grounds are found in more tropical regions, while summer feeding occurs in colder areas. Commonly prefer waters close to shore. Primarily filter feed on zooplankton and small fish.	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
South Coast Marsh Vole (*Microtus californicus stephensii*)	-/CSC/-	Occurs in the area of tidal marshes in Los Angeles, Orange, and southern Ventura Counties. Spends most of life underground.	HA	HA	HA	HA	HA	HA	HA	HA
San Diego Desert Woodrat (*Neotoma lepida intermedia*)	-/CSC/-	Dry and/or sunny shrublands, especially areas with cacti and abundant rocks and crevices (but not required). Does not require a source of drinking water. Sage scrub communities are frequently occupied.	HA	HA	HA	HP	HP	HP	HP	HP
Pocketed Free-tailed Bat (*Nyctinomops femorosaccus*)	-/CSC/-	Rarely found in southwestern California. Found in southeastern deserts of California, with portions of western Riverside County apparently on the periphery of its range. Species roosts in high rock crevices and on bridges, roofs, buildings, and cliffs. Forages primarily on large moths, especially over water. Habitats are arid.	HA	HA	HA	HA	HA	HA	HA	HA
			The LA River BSAs are outside of this species range.							
Big Free-tailed Bat	-/CSC/-	Occurs within low-lying arid areas of Southern	HP	HP	HP	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
(*Nyctinomops macrotis*)		California. Requires high crevices in cliffs/rock outcrops for roosting. Prefers rugged, rocky terrain. Associated with desert, arroyo, and woodland habitats. Roosts in buildings, caves, and holes in trees. Does not likely breed in California.								
			Likely foraging only, although may roost within bridges and buildings.				Roosting and foraging habitat present.			
Southern Grasshopper Mouse (*Onychomys torridus ramona*)	-/CSC/-	Wide variety of dry to moderately dry scrub, grassland, and woodland habitats across Southern California, exclusive of the more mesic coastal areas from Ventura County north.	HA	HA	HA	HP	HP	HP	HP	HP
Southern Resident Killer Whale (*Orcinus orca*)	E/-/- MMPA: D/P	Top marine predator found in all of the world's oceans. The Southern Resident occurs most often in the Pacific Northwest, but has been documented from central California to Southeast Alaska. Spring–Fall is known to be spent in/near inland waterways of Washington. Hunt in social groups called pods. Carnivores with a varied	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		diet depending on local food availability and learned hunting tactics. No distinct breeding season.								
Los Angeles Pocket Mouse (*Perognathus longimembris brevinasus*)	-/CSC/-	Habitat requirements for this subspecies are poorly known. It inhabits areas of open ground but prefers fine sandy soils (for burrowing). Is also found commonly on gravel washes and stony soils, within brush and woodland habitats. It is rarely found on sites with a high cover of rocks.	HA	HA	HA	HP	HP	HP	HP	HP
Pacific Pocket Mouse (*Perognathus longimembris pacificus*)	E/CSC/-	The Pacific pocket mouse is found in fine, sandy soils within about 2 to 4 miles of the Pacific coast of Southern California. Historically, this species was found from the Mexican border to El Segundo in Los Angeles County. Currently, the only known populations are in Dana Point and on the Camp Pendleton Marine Base.	HA	HA	HA	HA	HA	HA	HA	HA
			The LA River BSAs are outside of the current known range of this species.							

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Sperm Whale (*Physeter microcephalus*)	E/-/- MMPA: D/P	Found in all oceans throughout the world, but prefer deeper areas for foraging. Population's location depends on food availability and conditions that support breeding. Migratory patterns and breeding/feeding ground sites are variable and not well understood. Feeding consists of deep dives to prey on squid, sharks, skates, and other fish.	HA	HA	HA	HA	HA	HA	HA	HA
Southern California Saltmarsh Shrew (*Sorex ornatus salicornicus*)	-/CSC/-	Occurs in coastal marshes in Los Angeles, Orange, and Ventura Counties. Based on other studies of shrews, may require dense ground cover, and nesting sites above mean high tide and free from inundation.	HA	HA	HA	HA	HA	HA	HA	HA
American Badger (*Taxidea taxus*)	-/CSC/-	Associated with large grassland and sparse sage scrub habitats. Occupies large dens/burrows and forages on small mammals (e.g., ground squirrels, rabbits), snakes, birds, and insects.	HA	HA	HA	HP	HP	HP	HP	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
CDFW Sensitive Natural Communities										
California Walnut Woodland	CNDDB	California Walnut Woodlands are composed of open tree canopies locally dominated by the California black walnut (*Juglans californica*).	HA	HA	HA	HA	HA	HA	HA	HA
Chamise Chaparral	CNDDB	Tall chaparral community at low to mid-elevations. Dominated by chamise (*Adenostoma fasciculatum*) with little herbaceous understory. Characteristic species include *Ceanothus cuneatus*, *C. papillosus*, *Eriogonum fasciculatum*, and *Lotus scoparius*.	HA	HA	HA	HA	HP	HP	HP	HA
Cismontane Alkali Marsh	CNDDB	Wetland habitats that are permanently flooded, irregularly flooded, or seasonally flooded. Dominant species can included bulrush, cattail, and ditch-grass.	HP (equivalent to CalVeg pickleweed-cordgrass)	HA	HA	HA	HA	HA	HA	HA
Coastal and Valley Freshwater Marsh	CNDDB	Riparian habitat dominated by perennial, emergent monocots, often *Scirpus* and *Typha*. *Carex*, *Cyperus*, and *Verbena* also common.	HA	HP	HA	HA	HP	HA	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Riversidian Alluvial Fan Sage Scrub	CNDDB	Riversidian Alluvial Fan Sage Scrub communities are found in washes and on gently sloping alluvial fans. This community is made up of predominantly drought-tolerant, soft-leaved shrubs, but includes a significant number of larger perennial species typically found in chaparral in its mature phases.	HA	HA	HA	HA	HA	HA	HA	HA
Southern California Arroyo Chub/Santa Ana Sucker Stream	CNDDB	A perennial stream in coastal Southern California with suitable habitat for Santa Ana sucker and arroyo chub. This stream community is within or connected to the Santa Ana River or Santa Margarita River.	HA	HA	HA	HA	HA	HA	HA	HA
Southern California Coastal Lagoon	CNDDB	Coastal lagoons form along gently sloping coasts and are separated from the ocean by an island, reef, or sand back. Most of the time, coastal lagoons are connected to the ocean by an inlet.	HA	HA	HA	HA	HA	HA	HA	HA
Southern California Steelhead Stream	CNDDB	Coastal rivers that support southern California steelhead DPS, including all	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		naturally spawned anadromous *O. mykiss* populations below natural and human-made barriers in streams from the Santa Maria River, San Luis Obispo County, California (inclusive) to the Tijuana River on the U.S. – Mexico border. Steelhead are most abundant in the four largest watersheds (Santa Maria, Santa Ynez, Ventura, and Santa Clara rivers) in the northern portion of the DPS. Steelhead are sporadically present in the southernmost watersheds (Orange and San Diego counties). The Mojave Rim Biogeographic Population Group includes the Los Angeles River, San Gabriel River, and Santa Ana River.								
			There is widespread habitat degradation to the coastal and mainstems of the watersheds in this area for this species. However, native, non-anadromous populations still persist upstream of the dams in this region, with small numbers of anadromous individuals attempting to enter and spawn in each of the watersheds when flow conditions are suitable. However, habitat impairments here are severe, including dams and surface water diversions.							
Southern Coastal Bluff Scrub	CNDDB	Often considered part of coastal scrub but differ in	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		height species that dominate in composition include sage, buckwheat, Encelia, and prickly-pear.								
Southern Coastal Salt Marsh	CNDDB	Southern coastal salt marsh communities are found in bays, lagoons, and estuaries along the coast from Point Conception to the Mexican border. Southern coastal salt marsh communities consist of highly productive, herbaceous, and salt-tolerant hydrophytes that form moderate to dense cover. Characteristic species include *Atriplex watsonii*, *Batis maritima*, *Lycium californicum*, *Monanthochloe littoralis*, *Sueda californica*, and *Salicornica subterminalis*.	HP (equivalent to CalVeg pickleweed-cordgrass)	HA	HA	HA	HA	HA	HA	HA
Southern Coast Live Oak Riparian Forest	CNDDB	An open to locally dense everygreen sclerophyllous riparian woodland dominated by coast live oak (*Quercus agrifolia*). Typically very little in shrub understory, but rich in herbs.	HA	HA	HA	HA	HA	HA	HA	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
Southern Cottonwood Willow Riparian Forest	CNDDB	A tall, open, broadleafed winter-deciduous forest. Community is dominated by Fremont's cottonwood (*Populus fremontii*) and willow (*Salix* spp.) species. The understory typically consists of shrubby willows, such as arroyo willow (*S. lasiolepis*).	HA	HA	HA	HA	HA	HA	HA	HP
Southern Dune Scrub	CNDDB	By nature a dynamic system found on inland dunes characterized by densely packed shrubs with scattered grasses, wildflowers, and open sand. Some species found in this community include bush lupine, coyote bush, spineflower, and mock heather.	HA	HA	HA	HA	HA	HA	HA	HA
Southern Foredunes	CNDDB	Areas of sand accumulation along the coast. Dominated by suffrutescent plants, with *Abronia maritima*, *Ambrosia*, and *Cakile* in exposed sites and *Abronia umbellata*, *Calystegia*, and *Camissonia* in less exposed sites.	HA	HA	HA	HA	HA	HA	HA	HA
Southern Mixed Riparian Forest	CNDDB	Contains some large but mainly medium sized and	HA	HA	HA	HA	HP	HP	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		saplings of willow, and cottonwood are more common than large trees. A denser understory of shrubs, mugwort, and vines are more common in this community								
Southern Sycamore Alder Riparian Woodland	CNDDB	A tall, open, broadleafed, winter-deciduous streamside woodland dominated by western sycamore alder (*Alnus rhombifolia*). These stands seldom form closed canopy forests, and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. Lianas include California blackberry (*Rubus ursinus*) and poison oak (*Toxicodendron diversilobum*).	HA	HA	HA	HA	HA	HA	HA	HA
Southern Willow Scrub	CNDDB	A dense community, dominated by several willow species (*Salix* ssp.). Occasionally scattered emergent Fremont's cottonwood or western sycamore (*Platanus racemosa*). Rarely would an	HA	HA	HA	HA	HA	HA	HA	HP

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
		understory be present based on density of thickets.								
Valley Needlegrass Grassland	CNDDB	Medium height grassland dominated by perennial needle grass such as *Stipa pulchra* by at least 20%. Native and nonnative annuals occur between perennials. Soils often consist of fines with high amounts of clay that remain wet for long periods but are very dry in the summer.	HA	HA	HA	HA	HA	HA	HA	HA
Valley Oak Woodland	CNDDB	Canopies are almost exclusively dominated by valley oaks, but other types of oaks are associated with the community as well as box elder and poison oak. Various grasses such as wild oats, barley, and needlegrass dominate the ground cover.	HA	HA	HA	HA	HA	HA	HA	HA
Walnut Forest	CNDDB	Walnut forests are cold-deciduous woodlands dominated by California walnut. The understories are composed of coastal scrub, chaparral, and nonnative grass species.	HA	HA	HA	HA	HP	HP	HP	HA

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]

[a] Status Codes

Federal Endangered Species Act (ESA)

E	=	Federally listed; Endangered
PE	=	Proposed Endangered
T	=	Federally listed; Threatened
PT	=	Proposed Threatened
FC	=	Federal Candidate for Listing
FSC	=	Federal Species of Concern
D	=	Delisted

State ESA

E	=	State listed; Endangered
T	=	State listed; Threatened
SC	=	State Candidate for Listing

Other State

R	=	Rare (Native Plant Protection Act)
CSC	=	California Species of Special Concern
SA	=	California Special Animal
CFP	=	California Fully Protected Species
WL	=	Watch List
CNDDB	=	California Natural Diversity Database

Marine Mammal Protection Act (MMPA)

D	=	Depleted
P	=	Protected

California Department of Fish and Wildlife Sensitive Natural Communities = communities classified as rare or threatened.

CRPR

1A	=	Plants that are presumed extinct in California
1B	=	Plants that are rare, threatened, or endangered in California and elsewhere
2	=	Plants that are rare, threatened, or endangered in California but more common elsewhere
3	=	Plants about which more information is needed
4	=	Limited distribution (Watch List)
0.1	=	Seriously endangered in California
0.2	=	Fairly endangered in California
0.3	=	Not very endangered in California

[b] Specific Habitat Present/Absent

The assessments in this table are a high-level, qualitative analysis, not a final determination. Each individual project will be required to perform site-specific field reviews and analyses to conclusively determine if suitable habitat is present or absent for all special-status species potentially occurring within the Master Plan Area.

[c] Frame 5 Note

The California Sagebrush habitat in Frame 5, based on USFS CalVeg mapping (USFS 2014), occurs within an area that is currently developed. As such, it was not considered in this assessment when determining potentially suitable habitat for special-status species within Frame 5.

[d] Frames 5 and 9 Note

Grassland habitat considered potentially suitable to support special-status plant species only includes those areas associated with the Glendale Narrows (Frame 5) and Sepulveda Basin (Frame 9) portions of the frames. The remainder of the annual grassland habitats in Frames 5 and 9 were considered unsuitable as they are isolated patches of non-native grasslands that are

Common Name (Scientific Name)	Status[a] Federal/ State/ California Rare Plant Rank (CRPR)	Species Description	Specific Habitat Present (HP)/Absent (HA)[b]							
			Frame 1	Frame 2	Frames 3 & 4	Frame 5[c, d]	Frame 6	Frame 7	Frame 8	Frame 9[d]
			surrounded by extensive development, with the exception of habitat for species that tolerate disturbance (e.g., tarplant [*Centromadia* spp.]).							

Appendix E

Cultural Resources

Appendix E
Cultural Resources Impacts Summary Tables

Table CR-1. Summary of Potential Impacts from KOP 1: Trails and Gateways

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
River Gateway	Ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Pedestrian Trail	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Bike Trail	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Equestrian Trail	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Equestrian Facility	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Multiuse Trail	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Light Tower/ Water Tower	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Lookout	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Boardwalk	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Channel Access	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Vehicular Access	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Underpass and Overpass	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact
Vegetated Buffer	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	Potential for significant impact

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Habitat Corridor	New Construction: ground disturbance, demolition, setting changes	Potential for significant impact	No impact

Table CR-2. Summary of Potential Impacts from KOP 2: Channel Modifications

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Terraced Bank	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Check Dam	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Deployable Barrier	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Levee	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Armored Channel	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Storm Drain Daylighting	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Vertical Wall	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Reshape Water Flow	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Channel Smoothing	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Texturing or Grooving	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Soft Bottom/Concrete Removal	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Sediment Removal	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Bridge Pier Modifications	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Access Ramp	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact

Table CR-3. Summary of Potential Impacts from KOP 3: Crossings and Platforms

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Pedestrian Bridge	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Bike Bridge	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Equestrian Bridge	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Multiuse Bridge	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Cantilever	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Platform	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Habitat/Wildlife Bridge	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact

Table CR-4. Summary of Potential Impacts from KOP 4: Diversions

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Pump	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Diversion Pipe/ Tunnel	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Diversion Channel	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Overflow Weir	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Underground Gallery	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Side Channel	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Storm Drain Interceptors	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Wetland	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	No impact

Table CR-5. Summary of Potential Impacts from KOP 5: Floodplain Reclamation

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Wetland	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Naturalized Bank	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Braided Channel	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Field	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Recreation Field	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Storage (Surface)	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Side Channel	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact

Table CR-6. Summary of Potential Impacts from KOP 6:Off-Channel Land Assets

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Urban Agriculture	Setting changes	Potential for significant impact	Potential for significant impact

KOP Components	Impacts on Cultural Resources	Impact Summary	
		Construction	Operations
Solar Power	Ground disturbance, physical alteration, demolition, setting changes, visual impacts (light/glare)	Potential for significant impact	Potential for significant impact
Composting	Setting changes	Potential for significant impact	Potential for significant impact
Natural Treatment System	Setting changes	Potential for significant impact	Potential for significant impact
Wetland	Setting changes	Potential for significant impact	Potential for significant impact
Recreation Field	Setting changes	Potential for significant impact	Potential for significant impact
Surface Storage	Ground disturbance, setting changes	Potential for significant impact	Potential for significant impact
Subsurface Storage	Ground disturbance, setting changes	Potential for significant impact	Potential for significant impact
Injection Well	Ground disturbance	Potential for significant impact	No impact
Water Treatment Facility	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Purple Pipe Connection	Unknown	Potential for significant impact	Potential for significant impact
Dry Well	Ground disturbance, setting changes	Potential for significant impact	Potential for significant impact
Spreading Ground	Ground disturbance, setting changes	Potential for significant impact	Potential for significant impact
Storm Drain Daylighting	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact
Affordable Housing • New Construction • Rehab	• New Construction: ground disturbance, demolition, setting changes • Rehab: Demolition, alteration not keeping with SOIS, setting changes	Potential for significant impact	Potential for significant impact
Art and Culture Facility	Ground disturbance, physical alteration, demolition, setting changes	Potential for significant impact	Potential for significant impact

Appendix F

Energy Calculations

XS/S Common	MT CO2e	kg CO2e	gallons
Diesel	292.6713	292671.3	33,334
Gasoline	21.3764	21376.4	2,094

	Project Elements	MT CO2e
	XS/S Common	
	Demolition	
Diesel	Off-Road	42.78
Diesel	Hauling	27.79
Diesel	Vendor	0.00
Gasoline	Worker	1.98
	Site Preparation	
Diesel	Off-Road	17.06
Diesel	Hauling	0.66
Diesel	Vendor	0.00
Gasoline	Worker	3.07
	Grading	
Diesel	Off-Road	48.20
Diesel	Hauling	48.12
Diesel	Vendor	0.00
Gasoline	Worker	2.97
	Building Construction	
Diesel	Off-Road	68.10
Diesel	Hauling	0.38
Diesel	Vendor	29.81
Gasoline	Worker	10.39
	Paving	
Diesel	Off-Road	8.90
Diesel	Hauling	0.55
Diesel	Vendor	0.00
Gasoline	Worker	1.48
	Architectural Coatings	
Diesel	Off-Road	0.00
Diesel	Hauling	0.33
Diesel	Vendor	0.00
Gasoline	Worker	1.48

Conversion Factors (kg CO2/gallon)		Source
Diesel (kg co2/gallon)	8.78	Source: Climate Registry. 2019. Table 2.1. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf
Gasoline (kg co2/gallon	10.21	Source: Climate Registry. 2019. Table 2.1. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf
MT to KG	1000	

M Trails/Gateways	MT CO2e	kg CO2e	gallons
Diesel	1366.8925	1366892.5	155,683
Gasoline	14.582	14582	1,428

	Project Elements	MT CO2e
	M Trails/Gateways	
	Demolition	
Diesel	Off-Road	83.88
Diesel	Hauling	68.68
Diesel	Vendor	0.00
Gasoline	Worker	1.26
	Site Preparation	
Diesel	Off-Road	77.37
Diesel	Hauling	753.74
Diesel	Vendor	0.00
Gasoline	Worker	2.47
	Grading	
Diesel	Off-Road	48.81
Diesel	Hauling	0.11
Diesel	Vendor	0.00
Gasoline	Worker	2.47
	Building Construction - 2021	
Diesel	Off-Road	6.38
Diesel	Hauling	0.00
Diesel	Vendor	21.35
Gasoline	Worker	0.49
	Building Construction - 2022	
Diesel	Off-Road	57.43
Diesel	Hauling	0.00
Diesel	Vendor	190.50
Gasoline	Worker	4.30
	Paving	
Diesel	Off-Road	21.39
Diesel	Hauling	0.11
Diesel	Vendor	0.00
Gasoline	Worker	2.39
	Architectural Coatings	
Diesel	Off-Road	36.99
Diesel	Hauling	0.16
Diesel	Vendor	0.00
Gasoline	Worker	1.19

Conversion Factors (kg CO2/gallon)		Source
Diesel (kg co2/gallon)	8.78	Source: Climate Registry. 2019. Table 2.1. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf
Gasoline (kg co2/gallon	10.21	Source: Climate Registry. 2019. Table 2.1. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf
MT to KG	1000	

Summary

Source	Consumed per Year
Natural Gas (MMbtu)	2,075
Electricity (mWh)	318
Gasoline Fuel (gallons)	433,226

Natural Gas (MMbtu)

		kBTU	MMBtu
	Natural Gas	2074560	2075

Conversion Factors

kBTU to MMBtu	0.001

Electricity (mWh)

Indoor Water	13
Outdoor Water	13
Building Electricity	292
Total	318

	kWh/yr
Building Energy	291840

Activities	**kwh/million gallons**	mwh/million gallons
Supply	2117	2.12
Treat	111	0.11
Distribution	1272	1.27
Wastewater Treatment	1911	1.91
Indoor		5.41
Outdoor		3.50

Source: CalEEMod Appendix

Water Use	**million gallons/yr**
Indoor	2.43
Outdoor	3.73

Conversion Factors

kwh to mwh	0.001

Fuel

		MT CO2e/year	kg CO2e	gallons
Gasoline	Mobile	4423.2396	4423240	433226.2
Gasoline	Area	4.00E-04	0.4	0.0004

	MT CO2e/year	kg CO2e	gallons
Gasoline	4423.24	4423240	433,226

Conversion Factors		**Source**
Gasoline (kg co2/gallon)	10.21	Source: Climate Registry. 2019. Table 2.1. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf
MT to KG	1000	

Summary

Source	Consumed per Year
Natural Gas (MMbtu)	-
Electricity (mWh)	101
Gasoline Fuel (gallons)	20,486

Natural Gas (MMbtu)

	kBTU	MMBtu
Natural Gas	0	0

Conversion Factors

kBTU to MMBtu	0.001

Electricity (mWh)

Indoor Water	0
Outdoor Water	101
Building Electricity	0
Total	101

	kWh/yr
Building Energy	0

Activities	**kwh/million gallons**	mwh/million gallons
Supply	2117	2.12
Treat	111	0.11
Distribution	1272	1.27
Wastewater Treatment	1911	1.91
Indoor		5.41
Outdoor		3.50

Source: CalEEMod Appendix

Water Use	**million gallons/yr**
Indoor	0.00
Outdoor	28.88

Conversion Factors

kwh to mwh	0.001

Fuel

		MT CO2e/year	kg CO2e	gallons
Gasoline	Mobile	209.158	209158	20485.6
Gasoline	Area	1.22E-03	1.22	0.00122

	MT CO2e/year	kg CO2e	gallons
Gasoline	209.15922	209159.2	20,486

Conversion Factors		**Source**
Gasoline (kg co2/gallon)	10.21	Source: Climate Registry. 2019. Table 2.1. https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf
MT to KG	1000	

Appendix G

Noise Measurements

FIELD NOISE MEASUREMENT DATA

PROJECT: LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: LT 1 OBSERVER(S): JCR
ADDRESS: Near bike path at Columbus Ave and Valleyheart Dr.
START DATE / TIME: 5/13/20 - 8:23 AM END DATE / TIME: 5/15/20 - 8:40 AM

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo D TYPE: 1 (2) SERIAL #: 2602
CALIBRATOR: LDCAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 94 AFTER 93.8 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	50	90	99	min

L

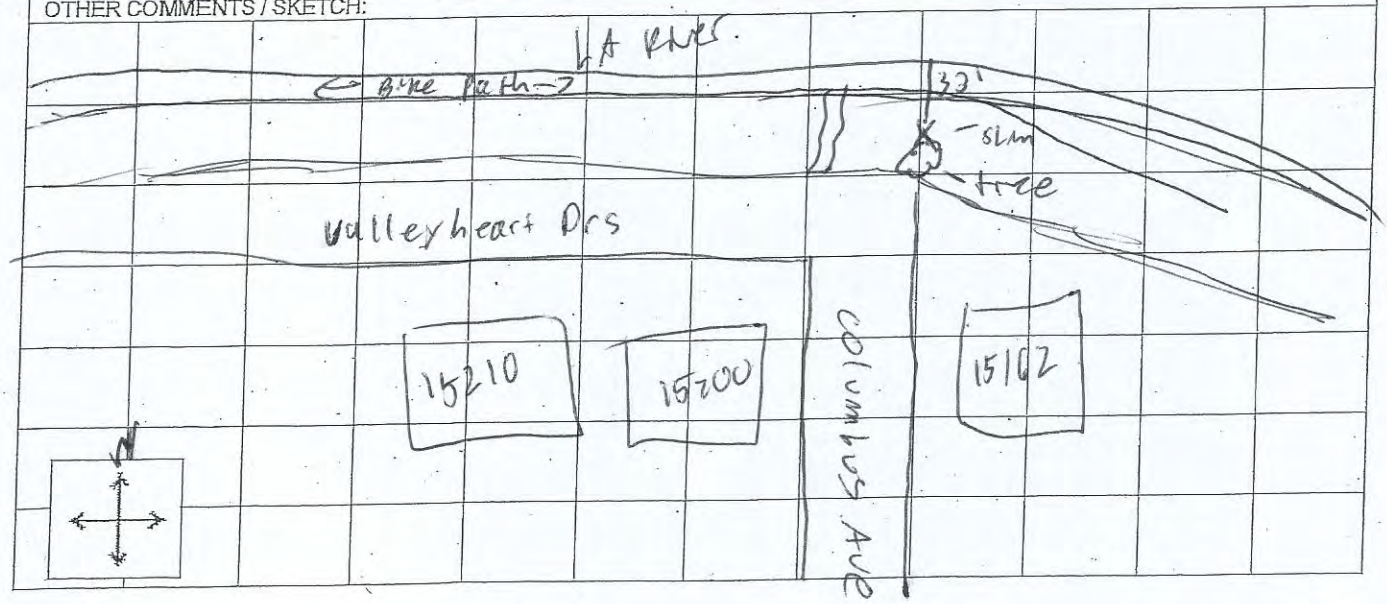
COMMENTS: - Cleared site @ 8:40 AM 5/13/20)
- Arrived for pickup @ 8:35 AM (5/15/20)

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____
ROADWAY TYPE: ____
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: LT-2 OBSERVER(S): JCK

ADDRESS: Bike path Entrance off Riverdale Ave

START DATE / TIME: 5/13/20 - 4:10 Am END DATE / TIME: 5/15/20 - ~~9:20~~ 9:23 Am

METEROLOGICAL CONDITIONS:

TEMP: _____ °F HUMIDITY: _____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: _____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo E TYPE: 1 (2) SERIAL #: 2502

CALIBRATOR: LD CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94. AFTER 93.7 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: _____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L_{50}	90	99	min

COMMENTS: cleared site @ 4:40 Am (5/13/20)

- Arrived for pickup @ 9:20 Am (5/15/20)

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: _____

ROADWAY TYPE: _____

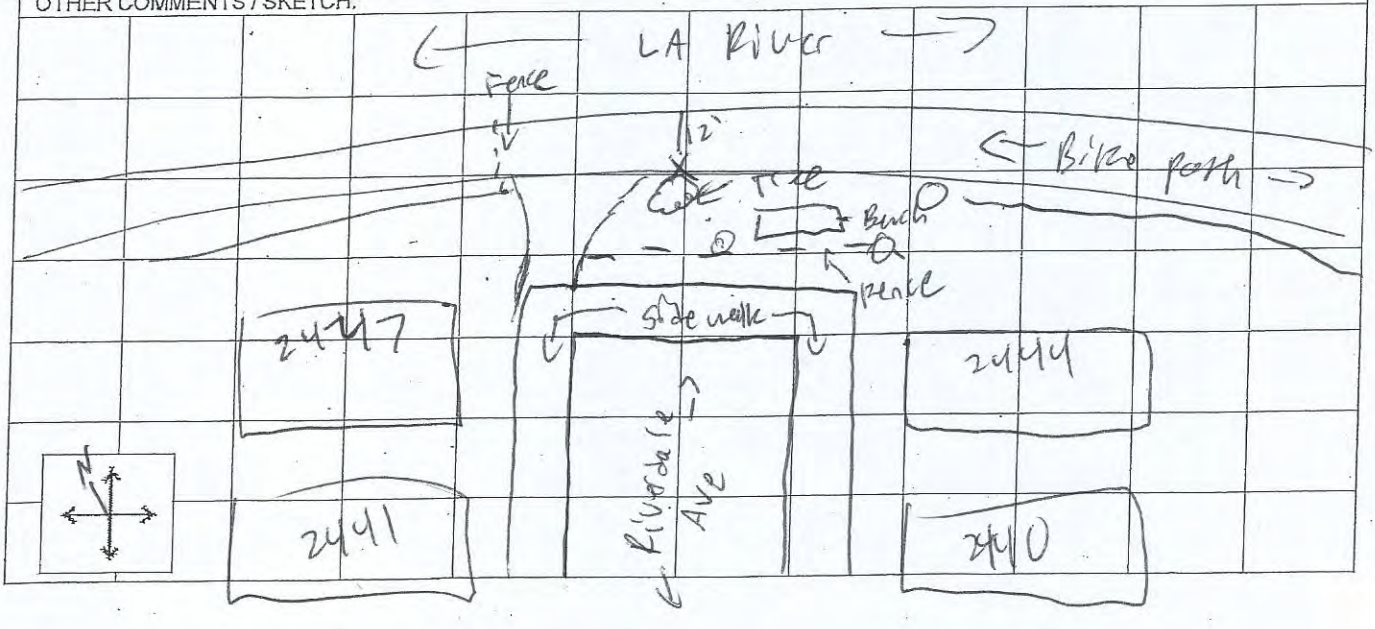
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: (HARD) SOFT MIXED FLAT OTHER: _____

PHOTOS: _____

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: LT-3 OBSERVER(S): JCR

ADDRESS: River Front park

START DATE / TIME: 5/13/20 - 10:13 Am END DATE / TIME: 5/15/20 - 10:00 Am

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo H TYPE: 1 (2) SERIAL #: 0903

CALIBRATOR: LR CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94 AFTER 93.7 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min

COMMENTS: Cleared site @ 10:26 Am (5/13/20)

- Arrive for pick-up @ 9:55 Am (5/15/20)

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

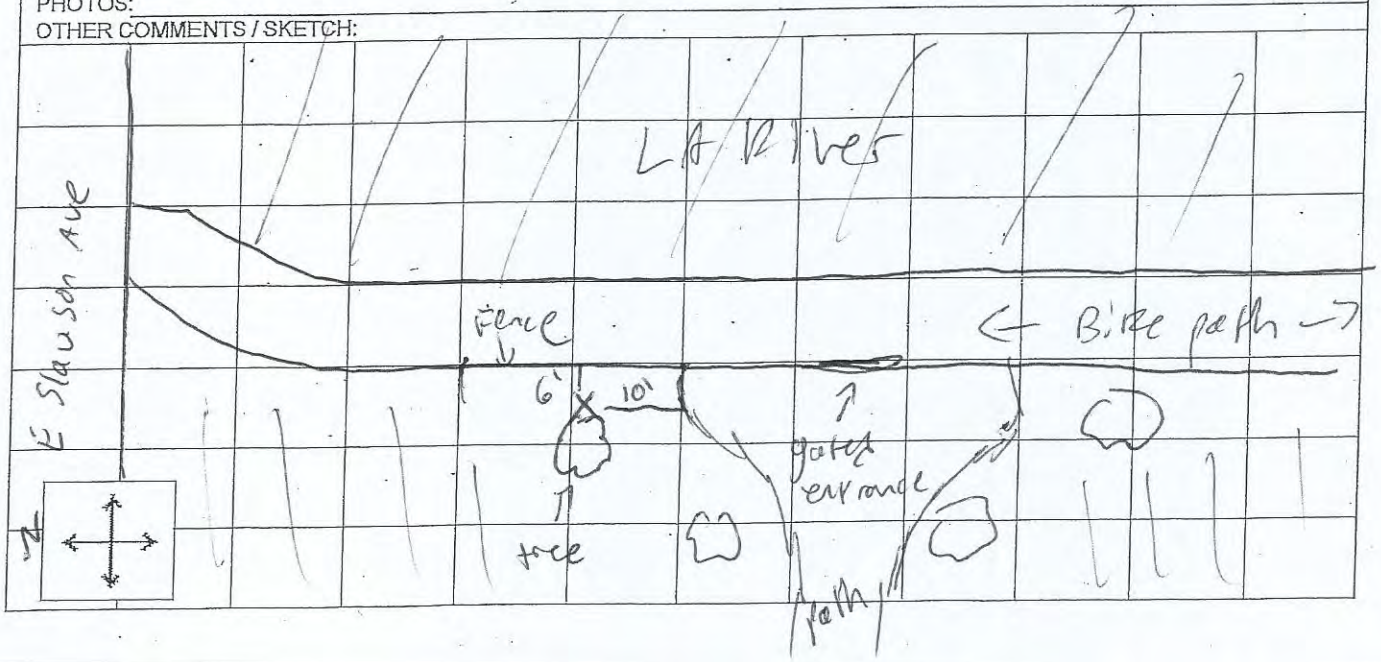
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS: ____

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: LT-4 OBSERVER(S): SCR

ADDRESS: Hollydale Regional park

START DATE / TIME: 5/13/20 10:49 Am END DATE / TIME: 5/15/20 11:58 AM

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: PICCOLO F TYPE: 1 (2) SERIAL #: 0901

CALIBRATOR: LP CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94 AFTER 93.7 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min

COMMENTS: Cleared site @ 11:10 Am (5/13/20)

Arrived for pick-up @ 11:47 Am (5/15/20)

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

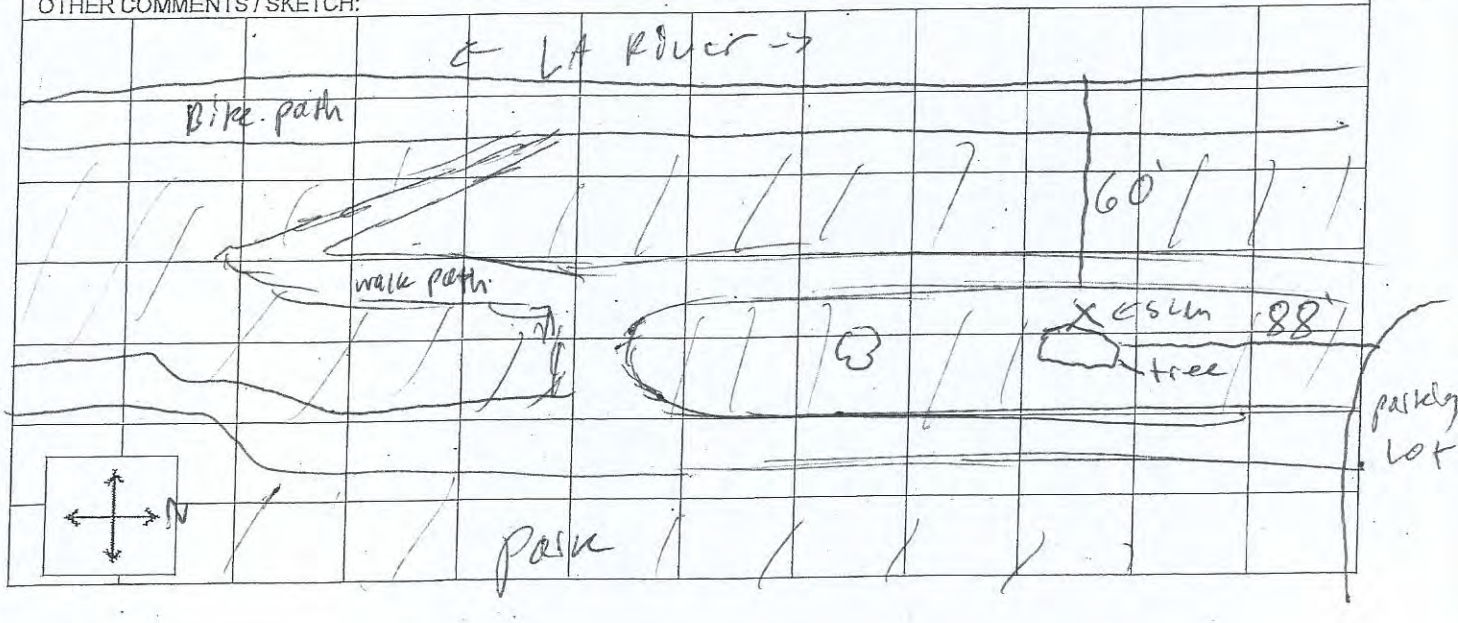
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS: ____

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: LT-5 OBSERVER(S): JCK

ADDRESS: Bike path North of W Ocean Blvd

START DATE / TIME: 5/13/20 - 11:51 Am END DATE / TIME: 5/15/20 - 3:24 Pm

METEROLOGICAL CONDITIONS:

TEMP: ____ °F HUMIDITY: ____ %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: ____ MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: Piccolo G TYPE: 1 (2) SERIAL #: 0407

CALIBRATOR: 1DCAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 94 AFTER ~~94~~ 93.7 WINDSCREEN X

SETTINGS: A-WEIGHTED (SLOW) FAST FRONTAL ~~RANDOM~~ (ANSI) OTHER: ____

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min

COMMENTS: Arrived Site @ 12:11 pm (5/13/20)

Arrived for pickup @ 3:15 pm (5/15/20)

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER: ____

ROADWAY TYPE: ____

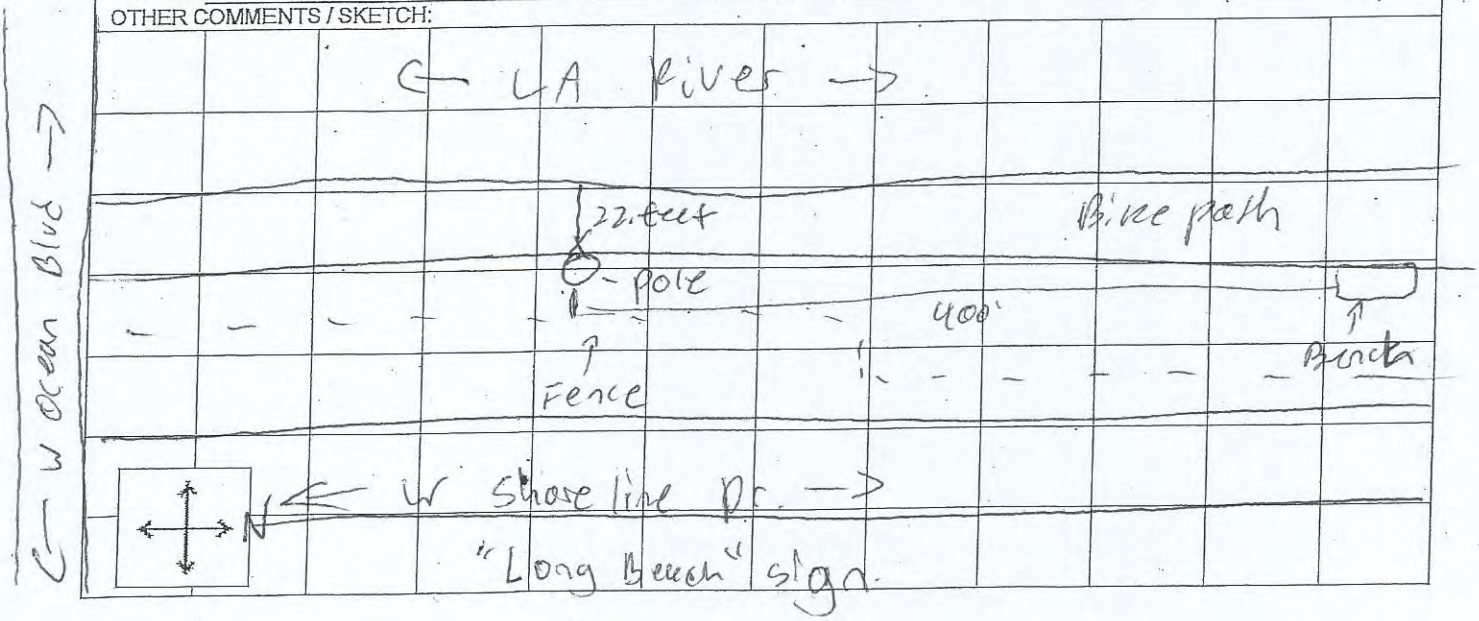
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER: ____

PHOTOS: ____

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: [redacted] LARM PEAK PROJ. # 00054.20

SITE IDENTIFICATION: ST 1 OBSERVER(S): JCR
ADDRESS: Near 6801 Delco Ave, Winnetka
START DATE / TIME: 5/14/20 8:43 AM END DATE / TIME: 5/14/20 - 9:03 AM

METEROLOGICAL CONDITIONS:
TEMP: 67 °F HUMIDITY: 66 %R.H. WIND: (CALM) LIGHT MODERATE VARIABLE
WINDSPEED: 0-0 MPH DIR: N (NE) (E) SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

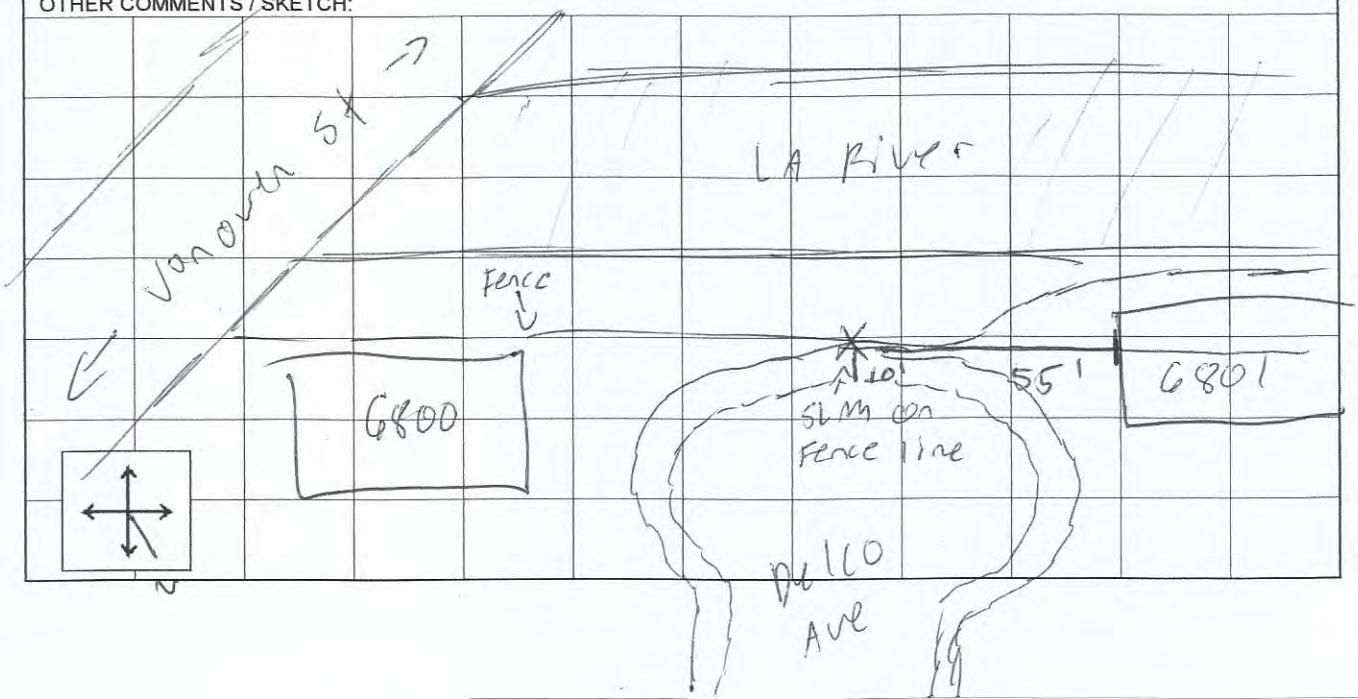
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: (1) 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114 AFTER 114.1 WINDSCREEN X
SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
.821	8:43	9:03	57.9	68.8	64.6	62.0	59.1	55.8	46.2	41.4	39.8

COMMENTS: - Active traffic on Vanowen
- paused out cars starting near SLM.
- paused out ambulance siren.

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL (AMBIENT) OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
- Frequent airplane flyovers

DESCRIPTION / SKETCH:
TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: 2020 LARMP - PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST2 OBSERVER(S): JCK
ADDRESS: Near VCAA Baseball Fields
START DATE / TIME: 5/14/20 - 9:31 END DATE / TIME: 5/14/20 - 9:51 Am

METEROLOGICAL CONDITIONS:
TEMP: 71 °F HUMIDITY: 54 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

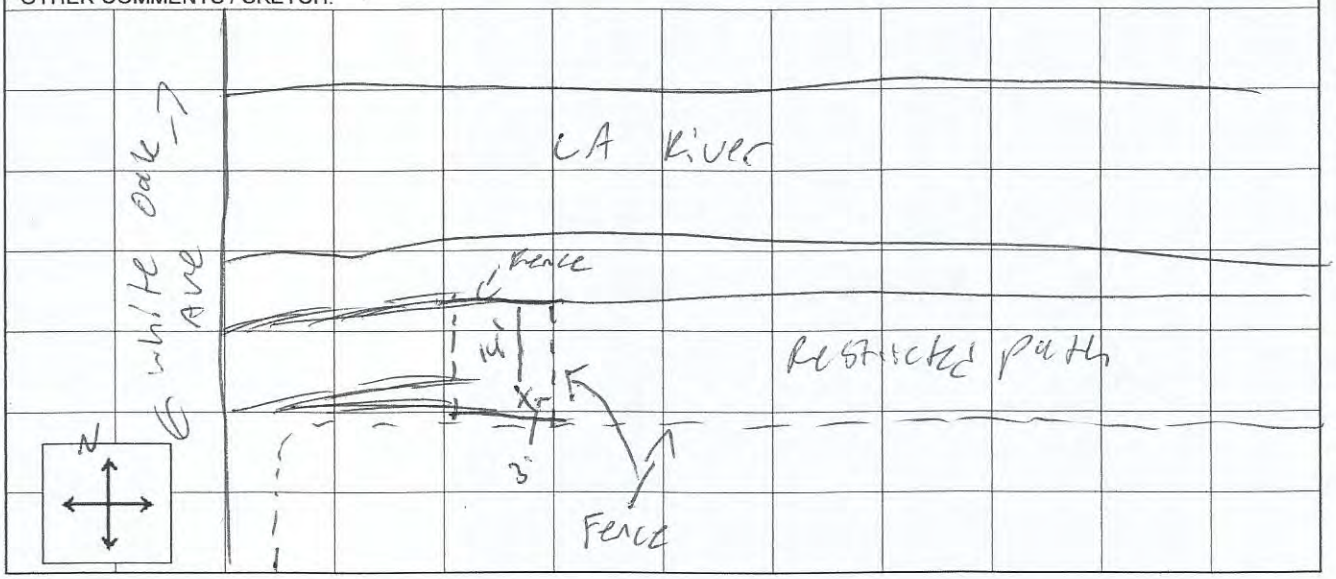
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: LD CAL200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.82 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
822	9:31	9:51	58.0	64.0	64.0	61.5	59.4	56.6	50.3	47.1	45.4

COMMENTS: pauses out [redacted] commercial jet flyover

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST 3 OBSERVER(S): JCR
ADDRESS: NEAR 4700 Tyrone Ave
START DATE / TIME: 5/14/20 - 10:15 Am END DATE / TIME: 5/14/20 - 10:35 Am

METEROLOGICAL CONDITIONS:
TEMP: 72 °F HUMIDITY: 49.0 %R.H. WIND: **CALM LIGHT MODERATE VARIABLE**
WINDSPEED: 0-1 MPH DIR: **N NE E SE S SW W NW STEADY GUSTY**
SKY: **SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:**

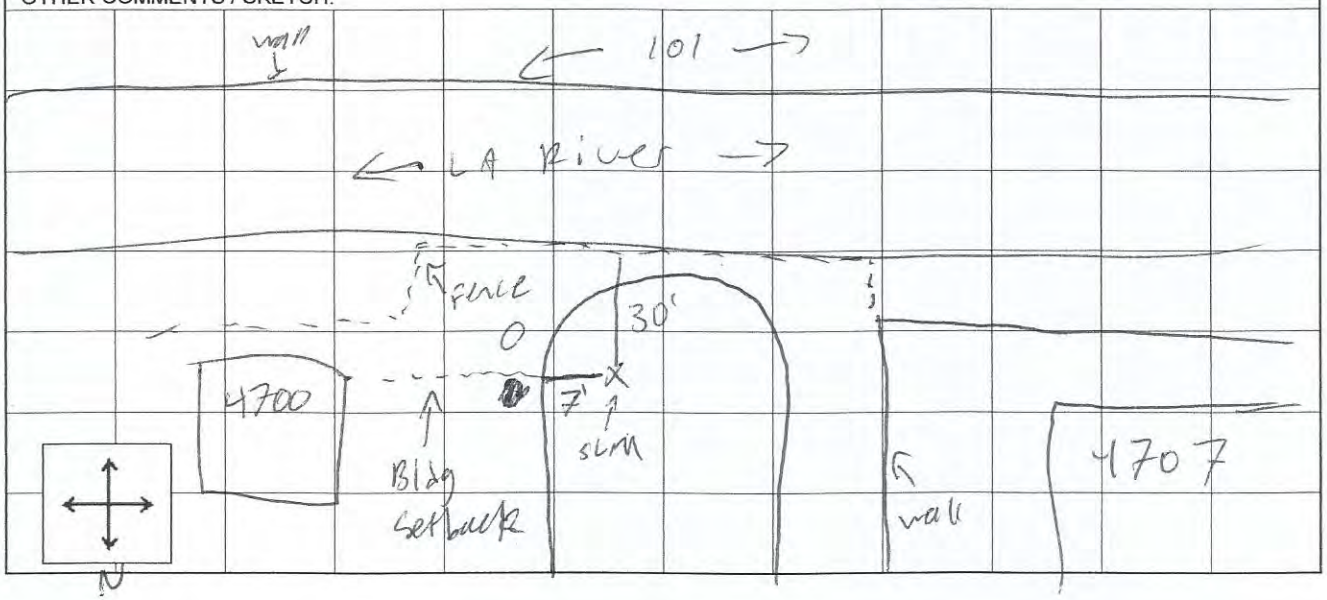
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.85 WINDSCREEN X
SETTINGS: **A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:**

FILE / MEAS #	START TIME	END TIME	L_{eq}	L max	L 1.67	L 8.33	L 25	L 50	L 90	L 99	L min
.823	10:16	10:35	60.7	69.5	63.9	62.3	61.2	60.4	58.9	57.7	57.4

COMMENTS: - Some aircraft fly overs
- Traffic noise dominates

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: **TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:**
ROADWAY TYPE:
OTHER SOURCES: **DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:**

DESCRIPTION / SKETCH:
TERRAIN: **HARD SOFT MIXED FLAT OTHER:**
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: 2020 LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST 4 OBSERVER(S): JcR

ADDRESS: trail entrance near 13236 valleyheart Dr

START DATE / TIME: 5/14/20 - 10:58 AM END DATE / TIME: 5/14/20 - 11:16 AM

METEROLOGICAL CONDITIONS:

TEMP: 72 °F HUMIDITY: 43 %R.H. WIND: CALM (LIGHT) MODERATE (VARIABLE)

WINDSPEED: 0-2 MPH DIR: N NE E SE S SW (W) NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: (1) 2 SERIAL #: 4005

CALIBRATOR: LD CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.03 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL (RANDOM) ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
.824	10:58	11:16	47.4	58.1	53.0	49.8	47.7	46.4	44.6	43.3	42.5

COMMENTS: light traffic on valleyheart Dr. / stopped measurement @ 18 min. landscaping activity started near SLM.
- paused out pedestrian activity.
- paused out children playing near by.

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL (AMBIENT) OTHER:

ROADWAY TYPE:

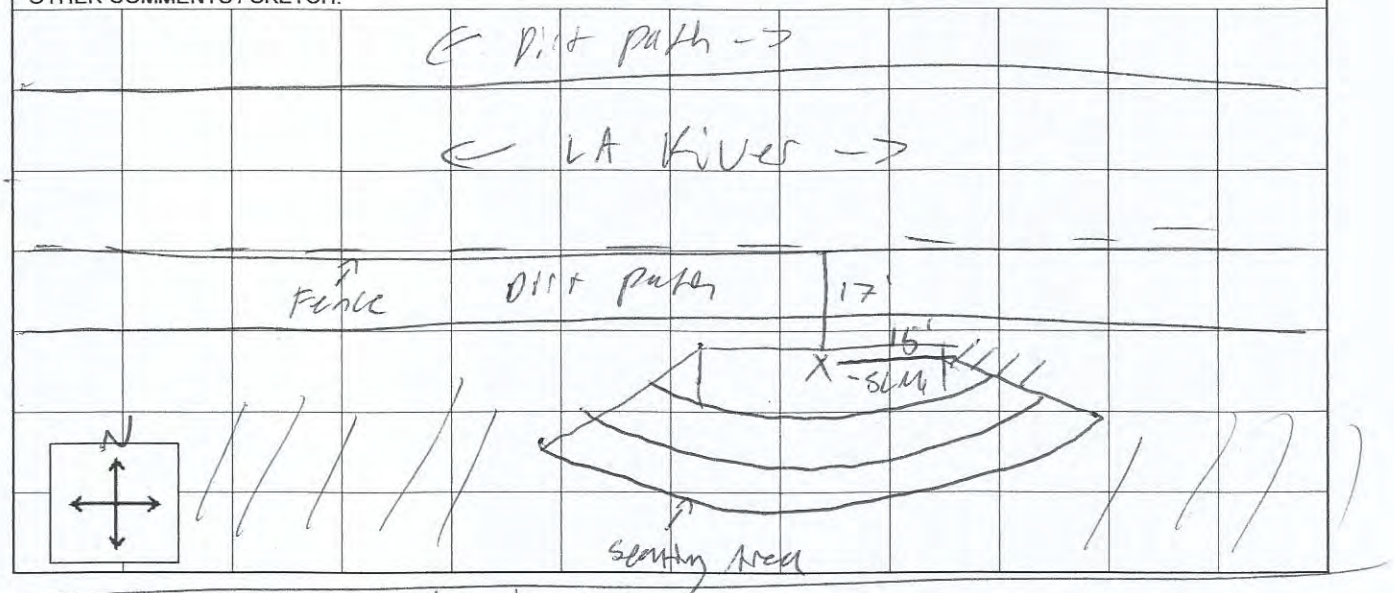
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. (TRAFFIC) / DIST. (LANDSCAPING) ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT (MIXED) FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 06054.20

SITE IDENTIFICATION: ST5 OBSERVER(S): JCK
ADDRESS: Path near 12067 Guerin St.
START DATE / TIME: 5/14/20 - 11:51 Am END DATE / TIME: 5/14/20 - 12:11 pm

METEROLOGICAL CONDITIONS:

TEMP: 79 °F HUMIDITY: 39 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-2 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: LD CAL200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.99 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
825	11:51	12:11	54.7	70.7	64.9	58.4	51.8	48.9	46.1	44.2	43.4

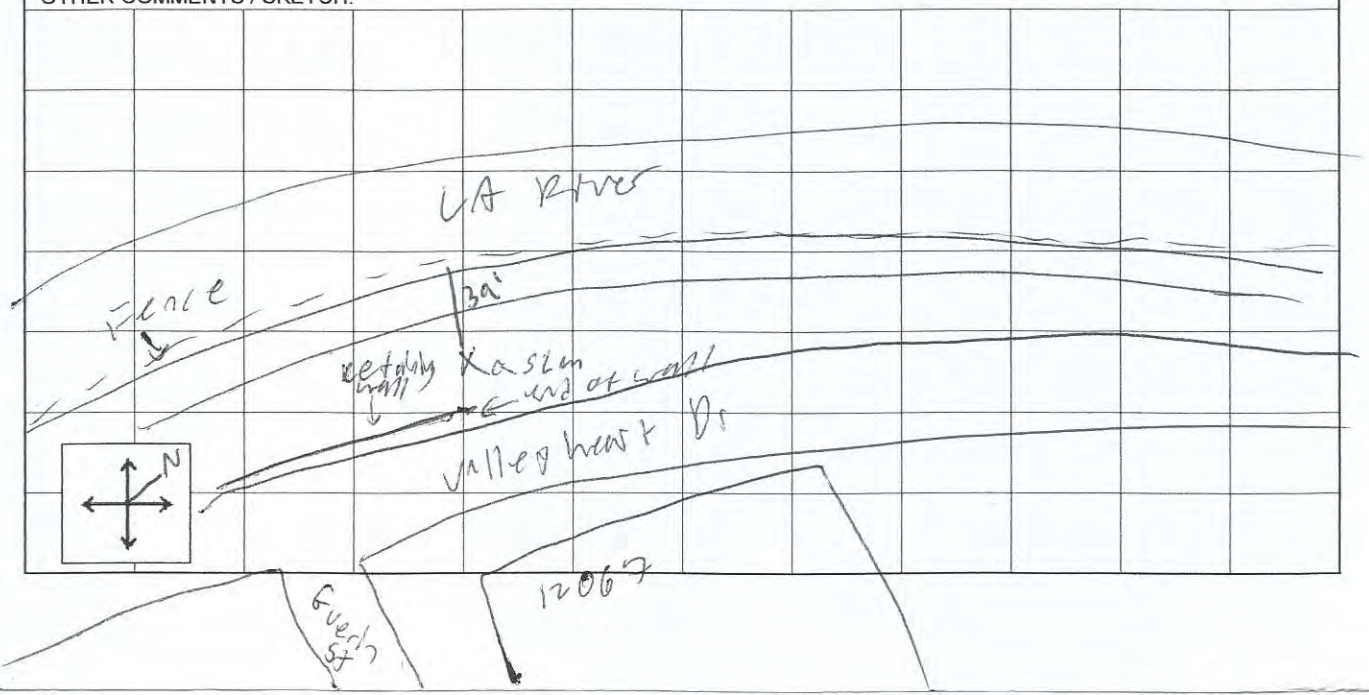
COMMENTS: Moved ST location due to active construction
- Frequent aircraft flyover
- passed out low flying helicopter (flyovers very common, left in primary flyovers)

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: Dist. const.

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST 6 OBSERVER(S): JCK

ADDRESS: smoke house pastely lot

START DATE / TIME: 5/14/20 - 12:42 pm END DATE / TIME: 5/14/20 - 1:02pm

METEROLOGICAL CONDITIONS:

TEMP: 80 °F HUMIDITY: 39 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 2 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: 6D LXT TYPE: 1 2 SERIAL #: 4005

CALIBRATOR: CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.86 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
.826	12:42	1:02	54.3	67.4	59.2	56.4	54.8	53.3	51.0	50.1	49.6

COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

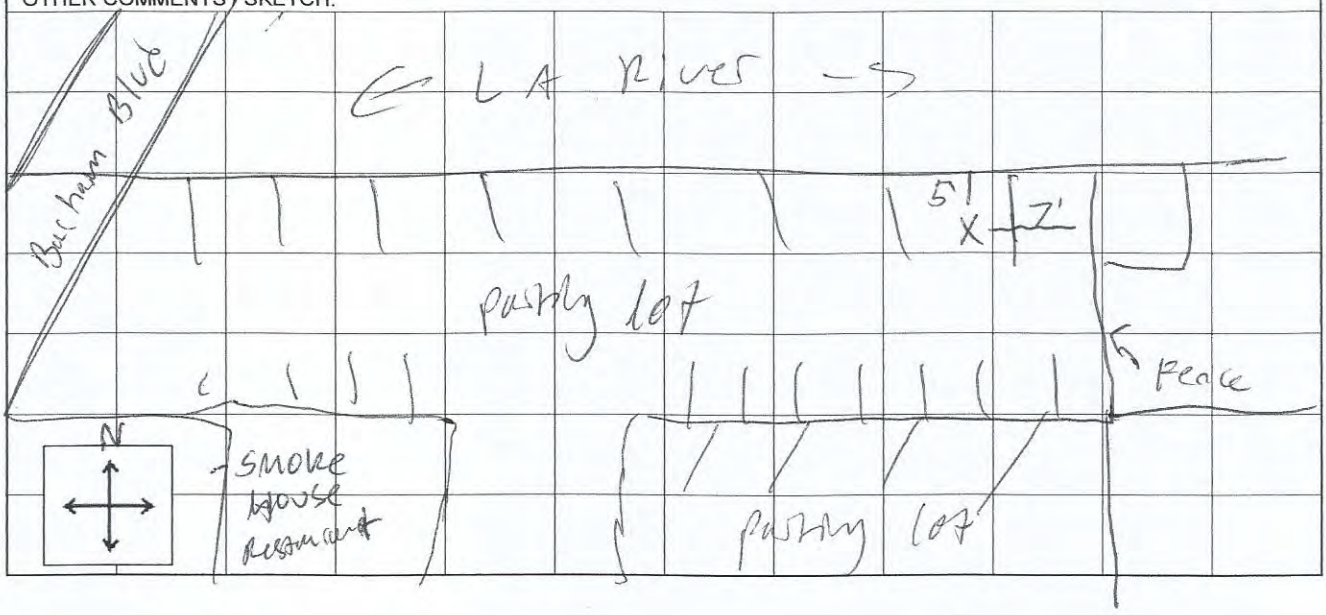
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS: 5x7

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA Kmp. PEIR PROJ. # 000 54.20

SITE IDENTIFICATION: ST-7 OBSERVER(S): JCR
ADDRESS: Bette Davis Picnic Area
START DATE / TIME: 5/14/20 - 1:24 pm END DATE / TIME: 5/14/20 - 1:44 pm

METEROLOGICAL CONDITIONS:
TEMP: 81 °F HUMIDITY: 34 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 2-4 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

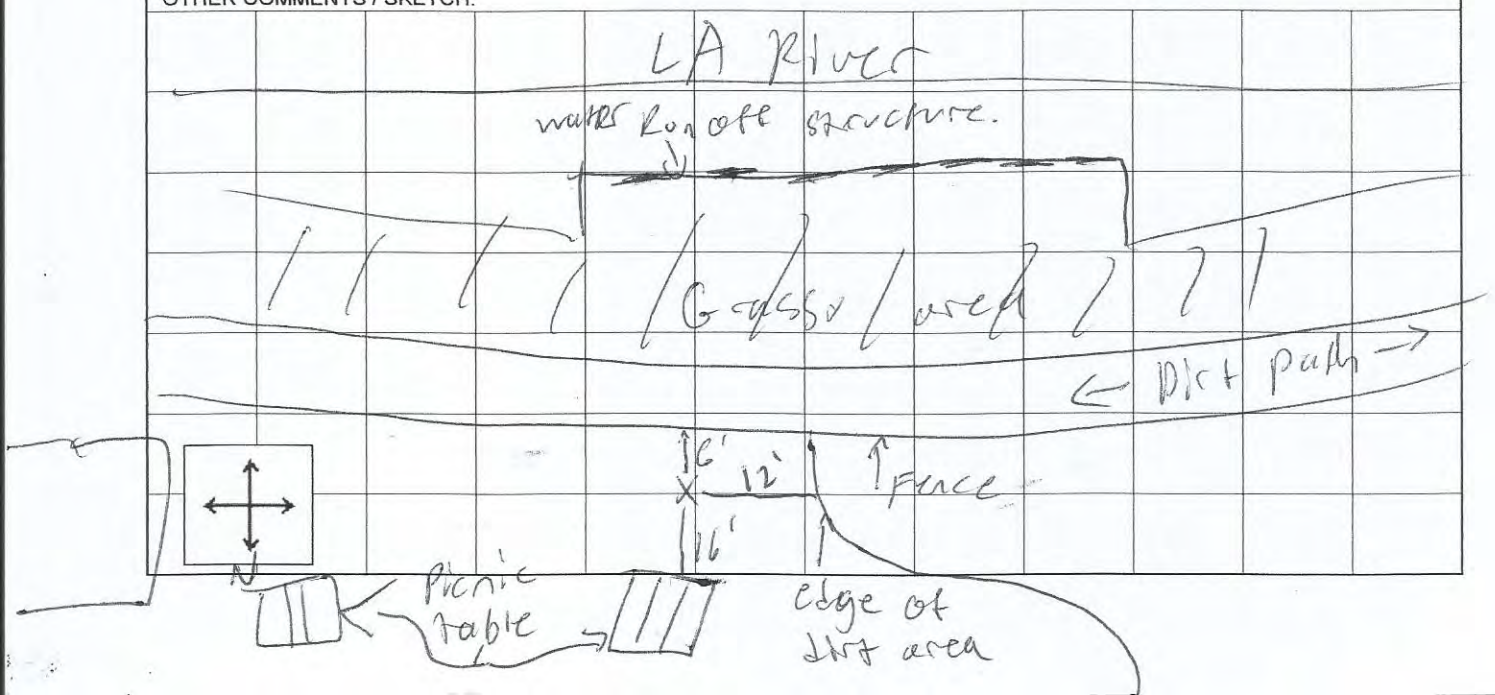
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: LD CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.73 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	L max	1.67	8.33	25	50	90	99	min
827	1:24	1:44	64.1	68.8	66.7	66.0	66.0	63.8	61.9	61.1	60.4

COMMENTS:

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LAVMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-8 OBSERVER(S): SCK

ADDRESS: path near Los Peliz Golf course

START DATE / TIME: 5/14/20 - 2:30 pm END DATE / TIME: 5/14/20-2:50 pm

METEROLOGICAL CONDITIONS:

TEMP: 77 °F HUMIDITY: 47 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 3-8 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005

CALIBRATOR: LD CAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114 AFTER 113.9 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
1828	2:30	2:50	64.3	73.3	68.2	65.9	64.7	63.8	62.4	61.5	61.0

COMMENTS: Traffic noise on I-5 is the dominant noise source

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

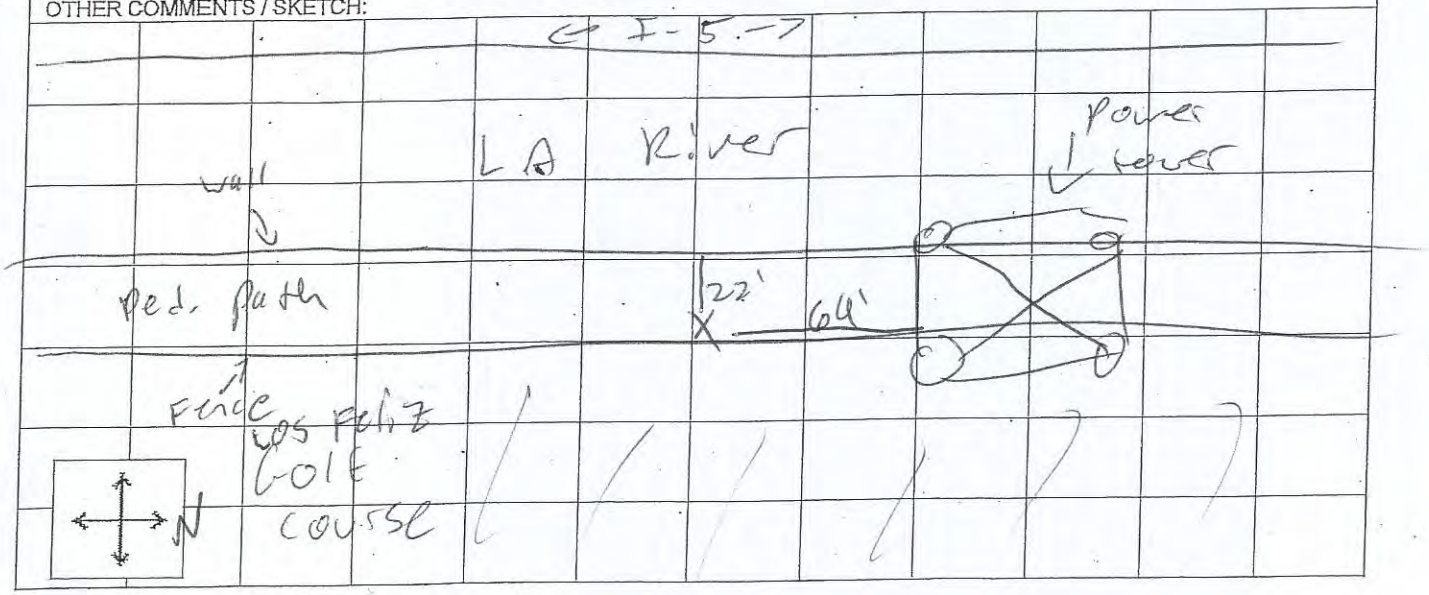
- Intermittent vocal noise from nearby golfers

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST 9 OBSERVER(S): JCK
ADDRESS: Buena Vista Wtlnd · Elysian Park
START DATE / TIME: 5/14/20 - 3:25 pm END DATE / TIME: 5/14/20 - 3:45 pm

METEROLOGICAL CONDITIONS:

TEMP: 79 °F HUMIDITY: 38 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-2 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: LD CAL200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114 AFTER 113.86 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	50	90	99	min
							L				
1829	3:25	3:45	58.6	71.8	69.3	63.0	55.5	52.5	50.9	50.1	49.6

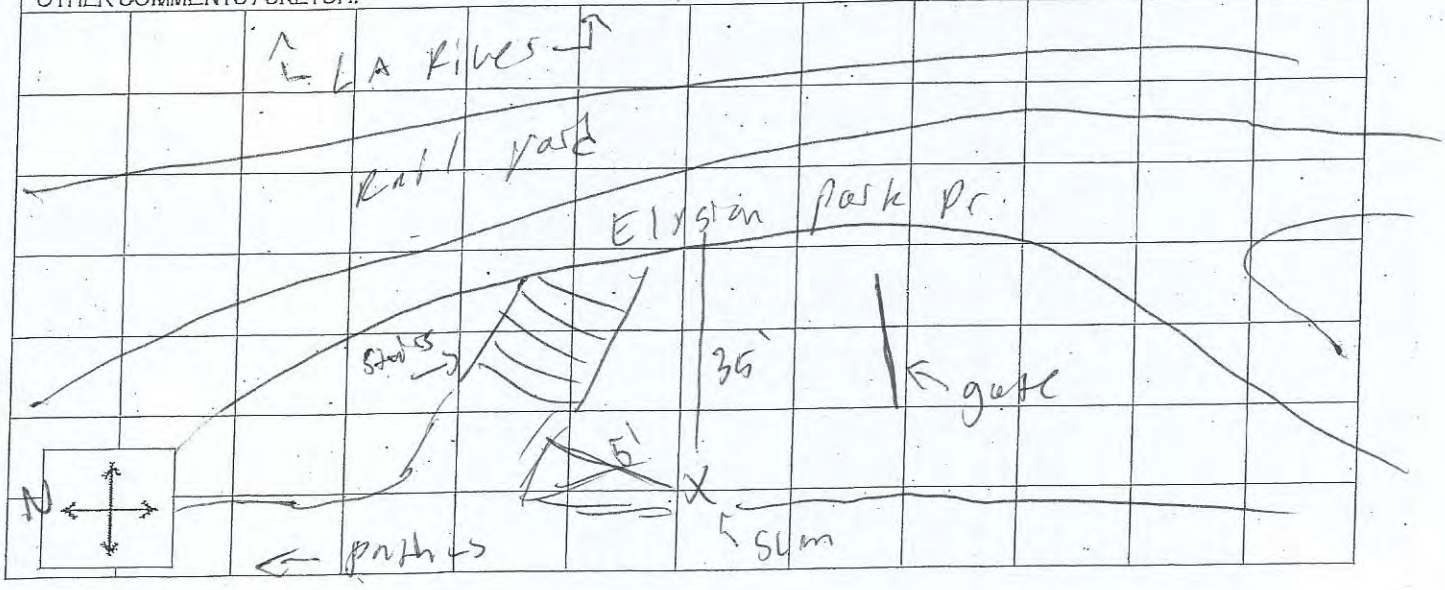
COMMENTS: Semi-frequent passing rail train + rail horn.
- frequent Heli-flyovers

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: Dist. Rail

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-10 OBSERVER(S): JCR

ADDRESS: Near 837 E commercial st

START DATE / TIME: 5/14/20 - 4:06 pm END DATE / TIME: 5/14/20 - 4:26 pm

METEROLOGICAL CONDITIONS:

TEMP: 73 °F HUMIDITY: 53 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 1-7 MPH DIR: N NE E SE (S) SW W NW STEADY GUSTY

SKY: (SUNNY) CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: (1) 2 SERIAL #: 4005

CALIBRATOR: CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114 AFTER 113.9 WINDSCREEN X

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L 25	50	90	99	min
-830	4:06	4:26	56.3	71.4	60.9	58.0	56.3	55.3	54.1	53.5	53.2

COMMENTS: paused out track recently
- paused out commercial jet flyover

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL (INDUSTRIAL) (AMBIENT) OTHER:

ROADWAY TYPE:

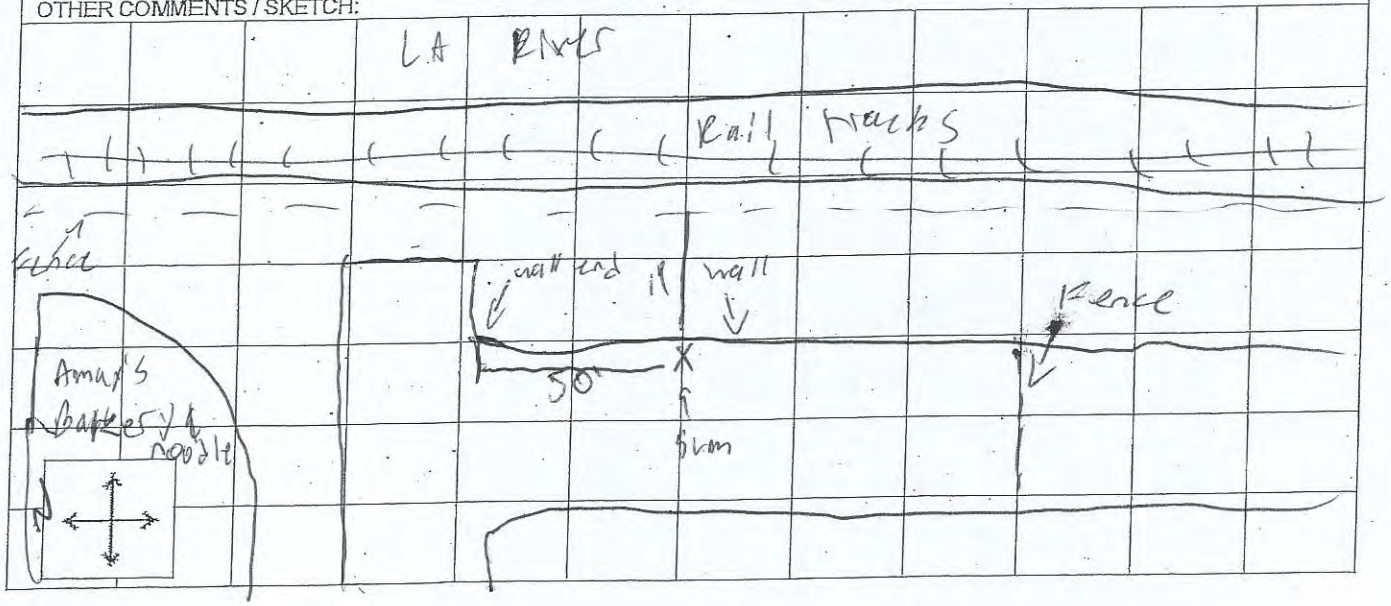
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. (INDUSTRIAL)
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-11 OBSERVER(S): JCK

ADDRESS: Near Amazon Fresh Warehouse

START DATE / TIME: 5/14/20 - 4:52 pm END DATE / TIME: 5/14/20 - 5:14

METEROLOGICAL CONDITIONS:

TEMP: 77 °F HUMIDITY: 68 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 2 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: Ø 2 SERIAL #: 4005

CALIBRATOR: LD CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114 AFTER 113.9 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L 25	50	90	99	min
.831	4:52	5:14	63.6	72.5	70.7	67.3	64.2	61.6	57.6	54.7	53.9

16:58

COMMENTS: - Heavy traffic on District Blvd & Atlantic Blvd
- ended measurement early due to ped. activity

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

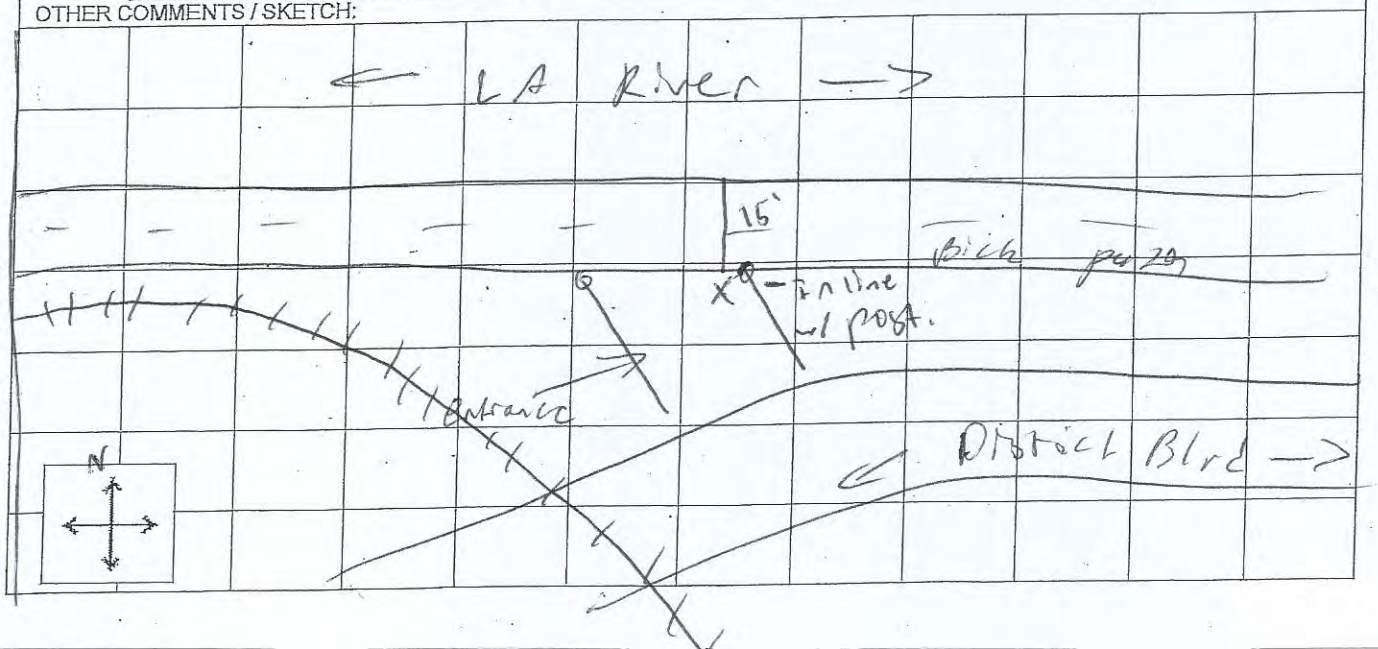
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-12 OBSERVER(S): JCK
ADDRESS: Near 6303 River Dr
START DATE / TIME: 5/15/20 - 10:14 Am END DATE / TIME: 5/15/20 - 10:34

METEROLOGICAL CONDITIONS:

TEMP: 72 °F HUMIDITY: 54 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: LD CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114. AFTER 114.08 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L 25	50	90	99	min
.832	10:14	10:34	58.2	73.3	68.7	61.5	55.2	52.6	50.1	48.7	48.1

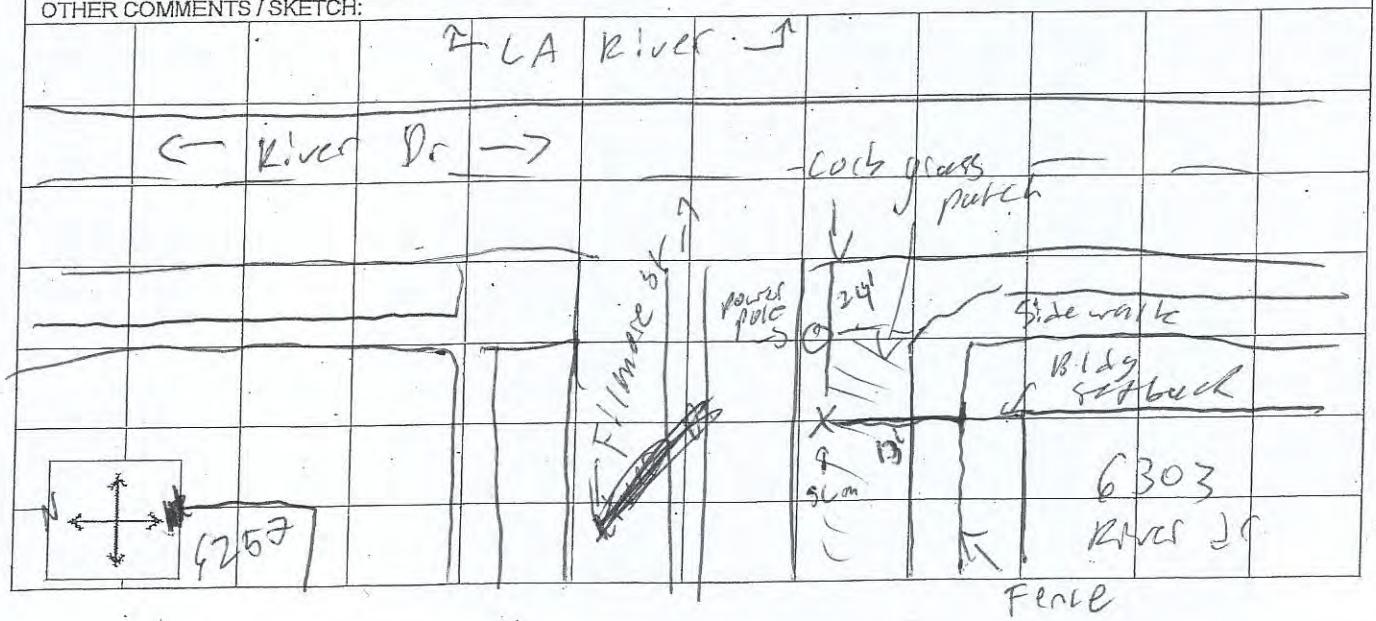
COMMENTS: - paused out commercial Jct Flyover (left in remainder over 6 hrs, flex were frequent)
- paused out. Vehicle on Fillmore ST

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: Dist. Rail

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-13 OBSERVER(S): JCK

ADDRESS: NW corner of Thunderbird Villa Mobile Home

START DATE / TIME: 5/15/26 - 11:05 END DATE / TIME: 5/15/20 - 11:25

METEROLOGICAL CONDITIONS:

TEMP: 75 °F HUMIDITY: 61 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 1-2 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4006

CALIBRATOR: LD CAL200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114 AFTER 113.9 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
1833	11:05	11:25	53.7	69.5	60.8	56.6	53.4	52.1	49.9	48.4	47.8

COMMENTS: Frequent jet flyovers. (commercial

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

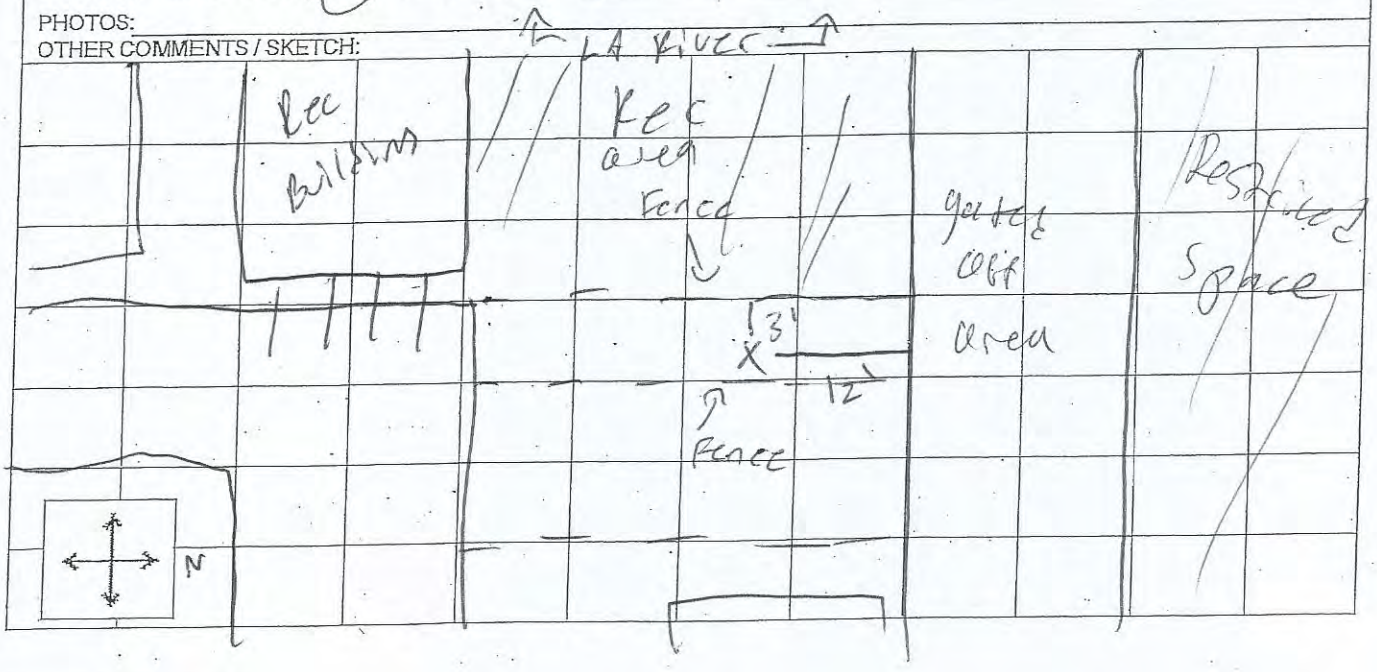
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 06064.20

SITE IDENTIFICATION: ST 14 OBSERVER(S): JCK
ADDRESS: Ralph C Dills Park
START DATE / TIME: 5/15/20 - 12:24 END DATE / TIME: 5/15/20 - 12:44

METEROLOGICAL CONDITIONS:

TEMP: 75 °F HUMIDITY: 59 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 2 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4006
CALIBRATOR: LD CAL200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114 AFTER 113.9 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	50	90	99	min
							L				
834	12:24	12:44	51.4	60.3	56.8	53.3	51.7	50.9	49.2	48.4	47.4

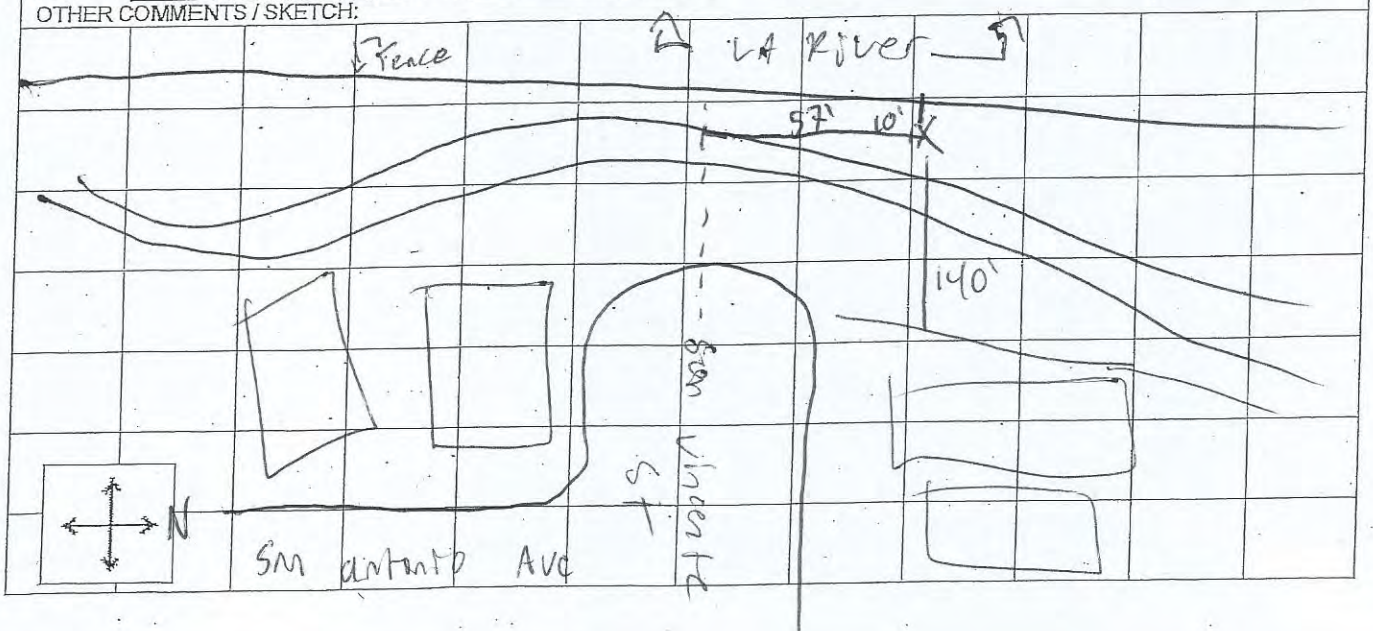
COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:
- light pedestrian activity on trail
- some noise from 710 Freeway

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-15 OBSERVER(S): JCK
ADDRESS: E 72nd St parking Lot / trail entrance
START DATE / TIME: 5/15/20 - 1:13 END DATE / TIME: 5/15/20 - 1:33

METEROLOGICAL CONDITIONS:

TEMP: 75 °F HUMIDITY: 59 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 2-3 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: LD CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.95 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
835	1:13	1:33	52.2	58.6	54.9	53.8	52.7	51.9	50.4	49.5	49.0

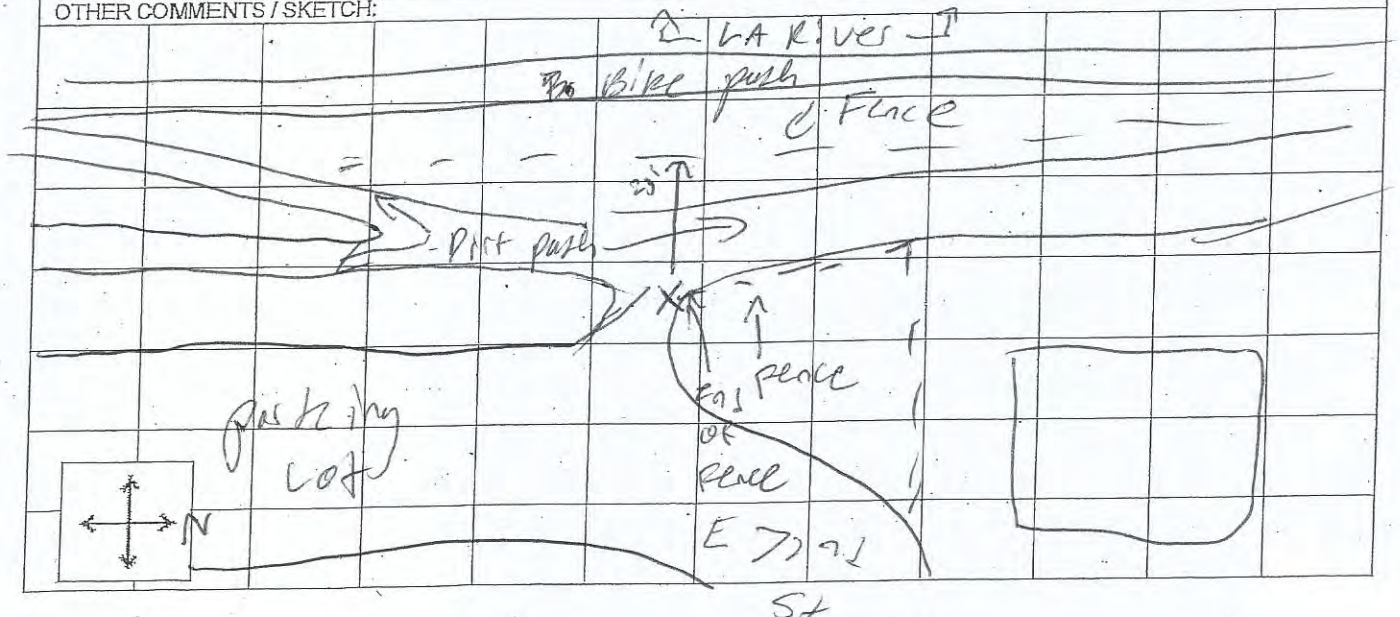
COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA RMP PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-16 OBSERVER(S): JCK
ADDRESS: Trail off Deforest Ave
START DATE / TIME: 5/13/20 - 4:05 END DATE / TIME: 5/13/20 - 4:25

METEROLOGICAL CONDITIONS:
TEMP: 74 °F HUMIDITY: 57 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 3 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

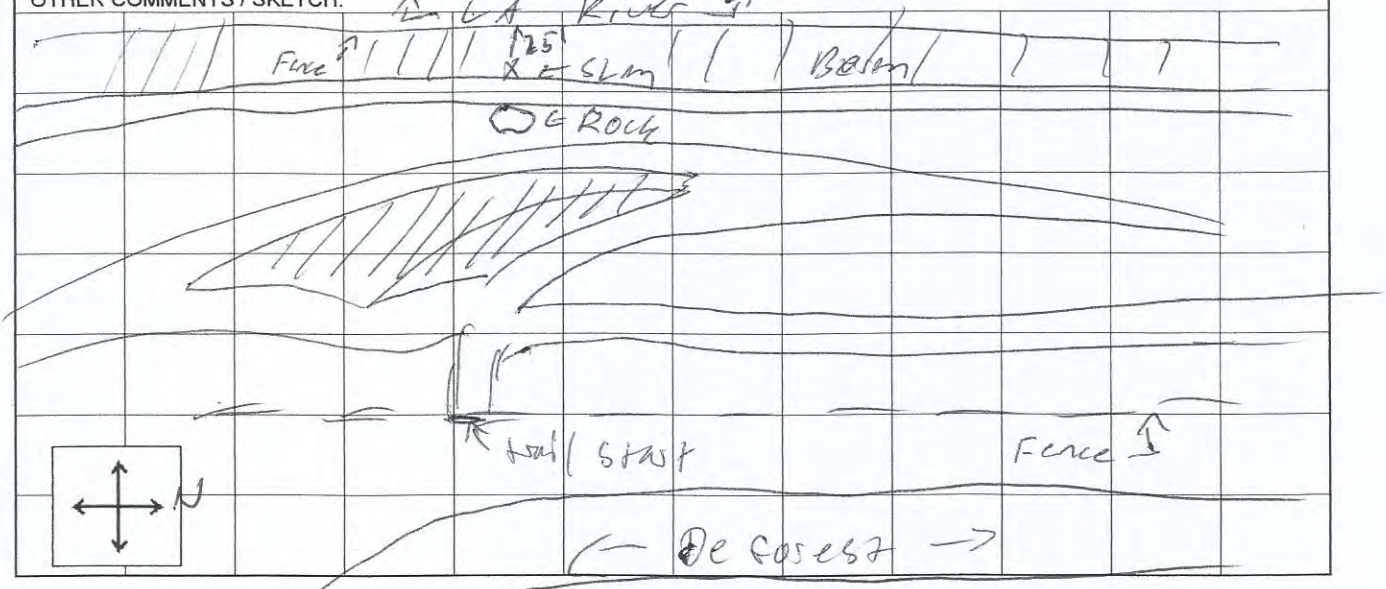
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.8 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	L max	1.67	8.33	25	50	90	99	min
.820	4:05	4:25	51.1	59.4	54.1	52.6	51.7	51.0	49.3	47.8	47.1

COMMENTS:

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LA R M P. PEIR. PROJ. # 00054.20

SITE IDENTIFICATION: ST-17 OBSERVER(S): JCK

ADDRESS: Bike Path, near 48th St

START DATE / TIME: 5/16/20 - 2:15 END DATE / TIME:

METEROLOGICAL CONDITIONS:

TEMP: 75 °F HUMIDITY: 60 %R.H. WIND: CALM LIGHT MODERATE VARIABLE

WINDSPEED: 3-5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY

SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: CDLXT TYPE: 1 2 SERIAL #: 4005

CALIBRATOR: LDCAL 200 SERIAL #: 2916

CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.92 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	L 25	50	90	99	min
836	2:15	2:35	58.8	68.4	62.6	61.0	59.6	58.1	56.6	55.7	55.0

COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:

ROADWAY TYPE:

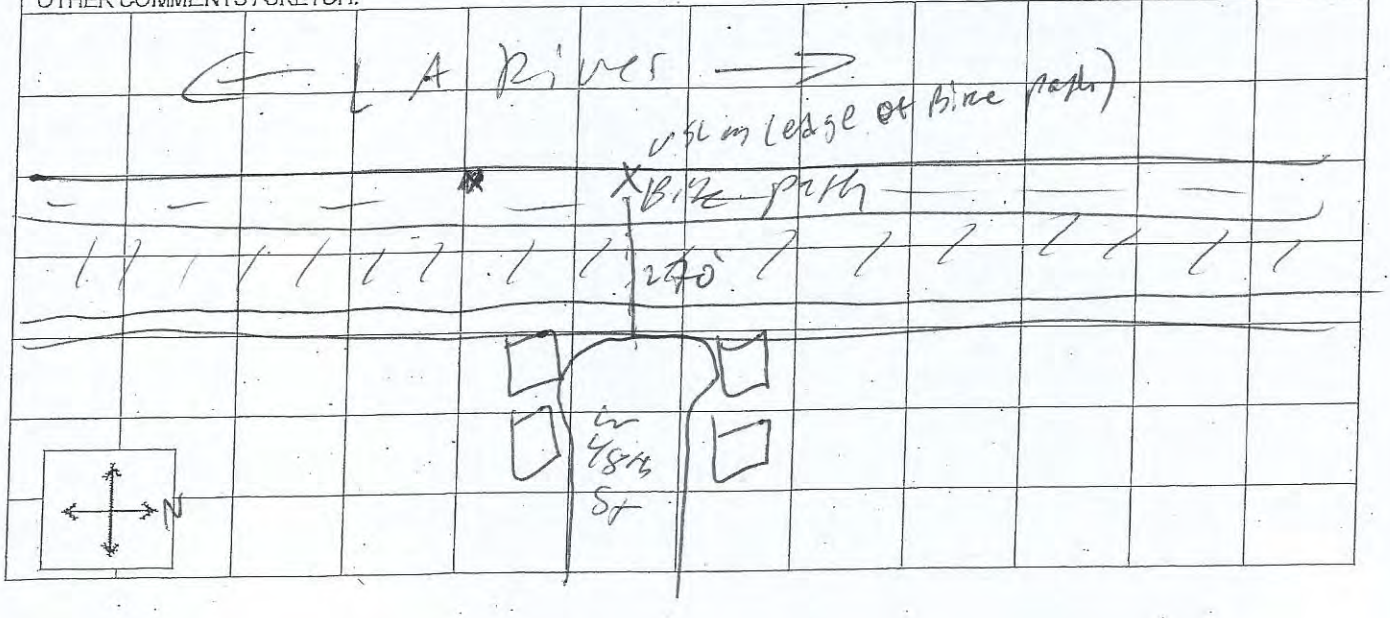
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER: Dist. Rail

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:

PHOTOS:

OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PEIR PROJ. # 00054.70

SITE IDENTIFICATION: ST-18 OBSERVER(S): JCK
ADDRESS: Bike path near Wrigley Green belt
START DATE / TIME: 5/13/20 - 2:44 pm END DATE / TIME: 5/13/20 - 3:04 pm

METEROLOGICAL CONDITIONS:
TEMP: 70 °F HUMIDITY: 60 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 7-8 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

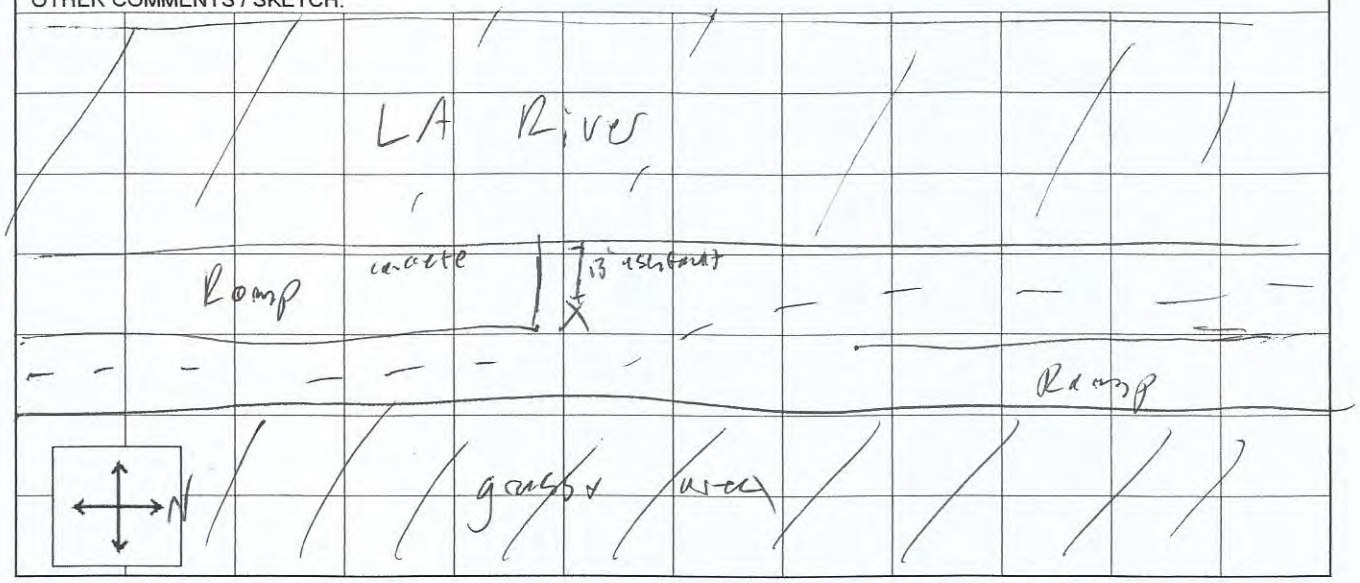
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.82 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
819	2:44	3:04	60.6	66.4	63.1	62.2	61.2	60.4	58.4	57.5	56.8

COMMENTS:

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



← De Forest Ave →

FIELD NOISE MEASUREMENT DATA

PROJECT: LA Kmp PEIR PROJ. # 00054.20

SITE IDENTIFICATION: ST-19 OBSERVER(S): JCK
ADDRESS: Bike path near Delaware Ave and W 27th St
START DATE / TIME: 5/13/20 1:40 pm END DATE / TIME: 5/13/20 - 2:00 pm

METEROLOGICAL CONDITIONS:
TEMP: 76 °F HUMIDITY: 47 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 4.5 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

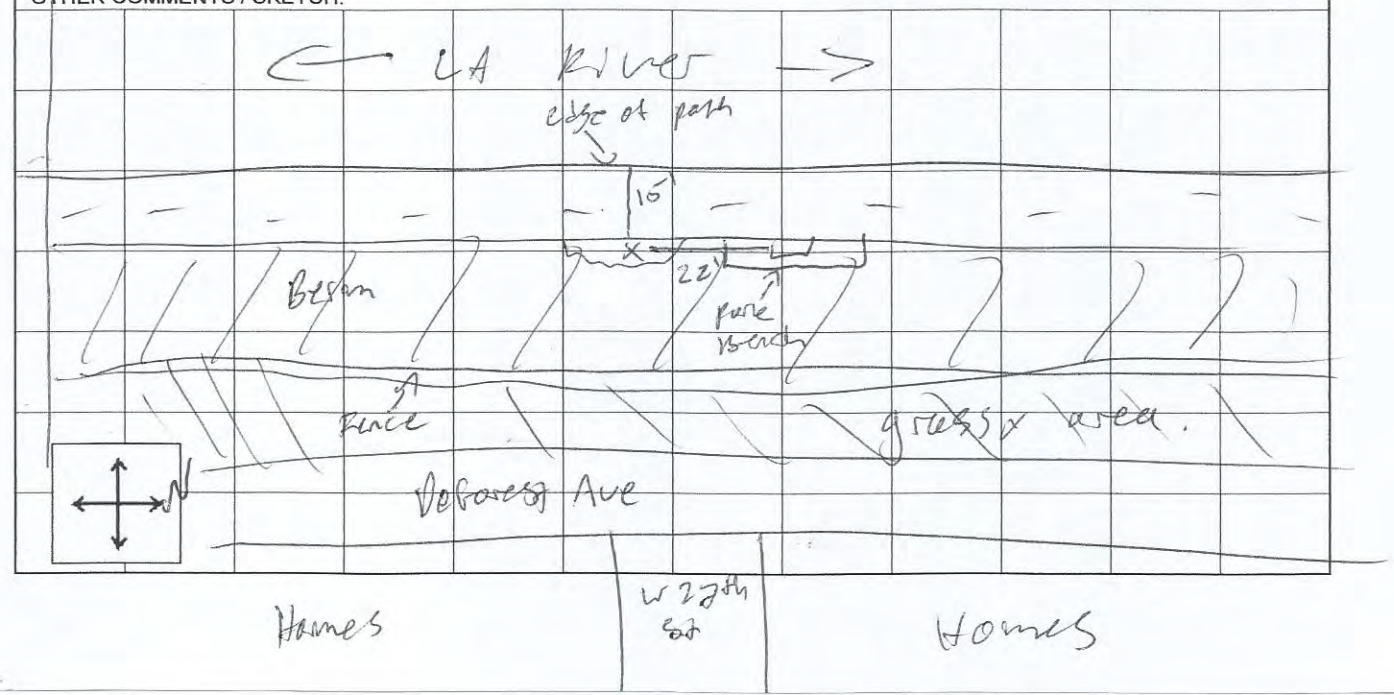
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.9 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	L max	1.67	8.33	25	50	90	99	min
1818	1:40	2:00	60.3	69.3	66.5	62.1	60.4	59.5	57.7	56.4	55.6

COMMENTS: - Frequent aircraft flyover

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PETK PROJ. # 060 54.20

SITE IDENTIFICATION: ST 20 OBSERVER(S): JCR
ADDRESS: End of road near 930w 20th ST
START DATE / TIME: 5/13/20 - 12:46 pm END DATE / TIME: 5/13/20 - 1:06 pm

METEROLOGICAL CONDITIONS:
TEMP: 72 °F HUMIDITY: 59 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 6-7 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

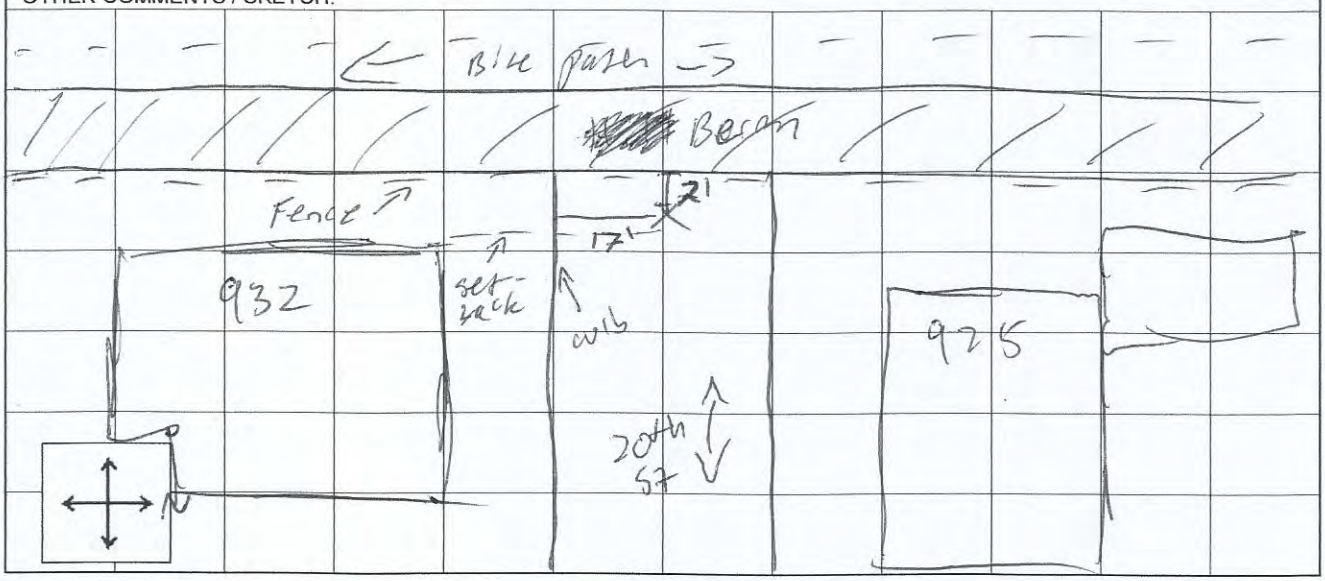
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 7916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.92 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
.817	12:46	1:06	52.2	66.5	63.5	54.0	49.5	48.1	46.5	45.3	44.9

COMMENTS: Passed out motor bike on Bike path.
- Frequent air plane flyovers.
-

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PROJ. # 00054.20

SITE IDENTIFICATION: ST2 OBSERVER(S): JCK
ADDRESS: Near Dominguez Park
START DATE / TIME: 6/10/20 - 10:15 AM END DATE / TIME: 6/10/20 - 10:35

METEROLOGICAL CONDITIONS:

TEMP: 95 °F HUMIDITY: 19 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.0 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
840	10:15	10:35	53.2	70.1	57.3	54.7	53.0	52.1	50.6	49.6	49.2

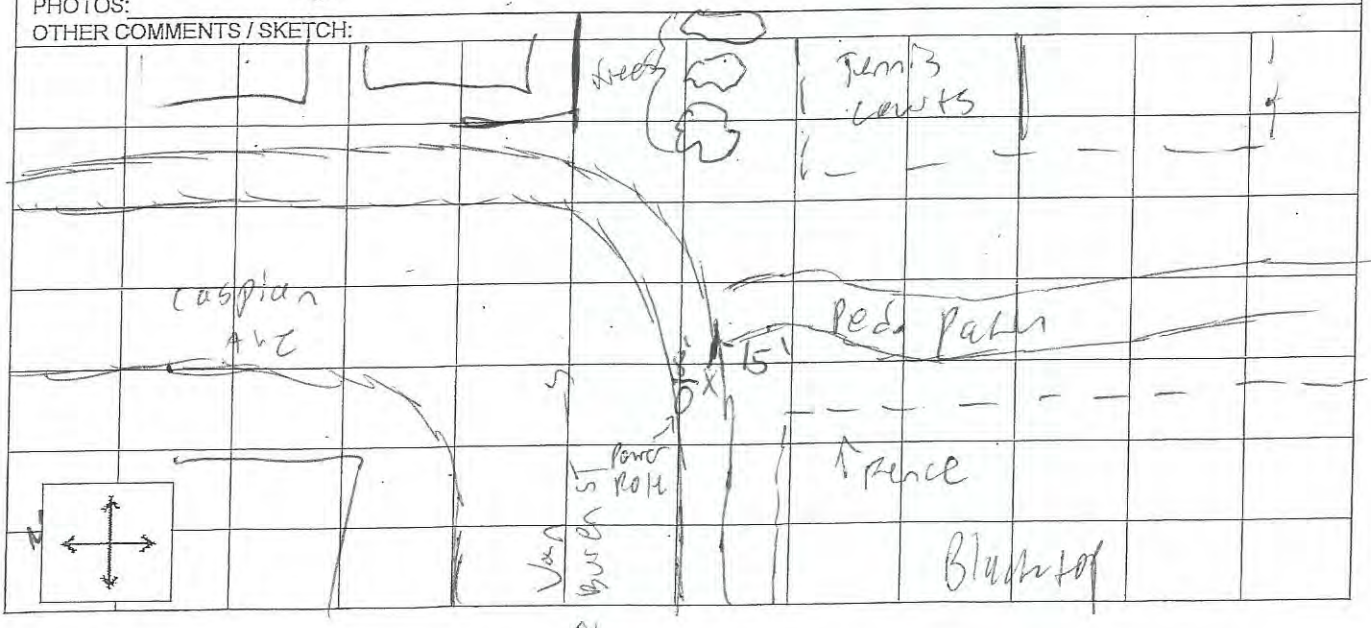
COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



D

FIELD NOISE MEASUREMENT DATA

PROJECT: CARMP PROJ. # 00054.20

SITE IDENTIFICATION: ST22 OBSERVER(S): JLK
ADDRESS: ~~[illegible]~~ near 4827 E. Rose St
START DATE / TIME: 6/10/20 - 9:33 END DATE / TIME: 6/10/20 - 9:53

METEROLOGICAL CONDITIONS:

TEMP: 86 °F HUMIDITY: 13 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 113.94 WINDSCREEN X

SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	1.67	8.33	25	L 50	90	99	min
.839	9:33	9:53	64.6	70.8	68.0	66.7	66.2	64.3	62.4	61.0	60.2

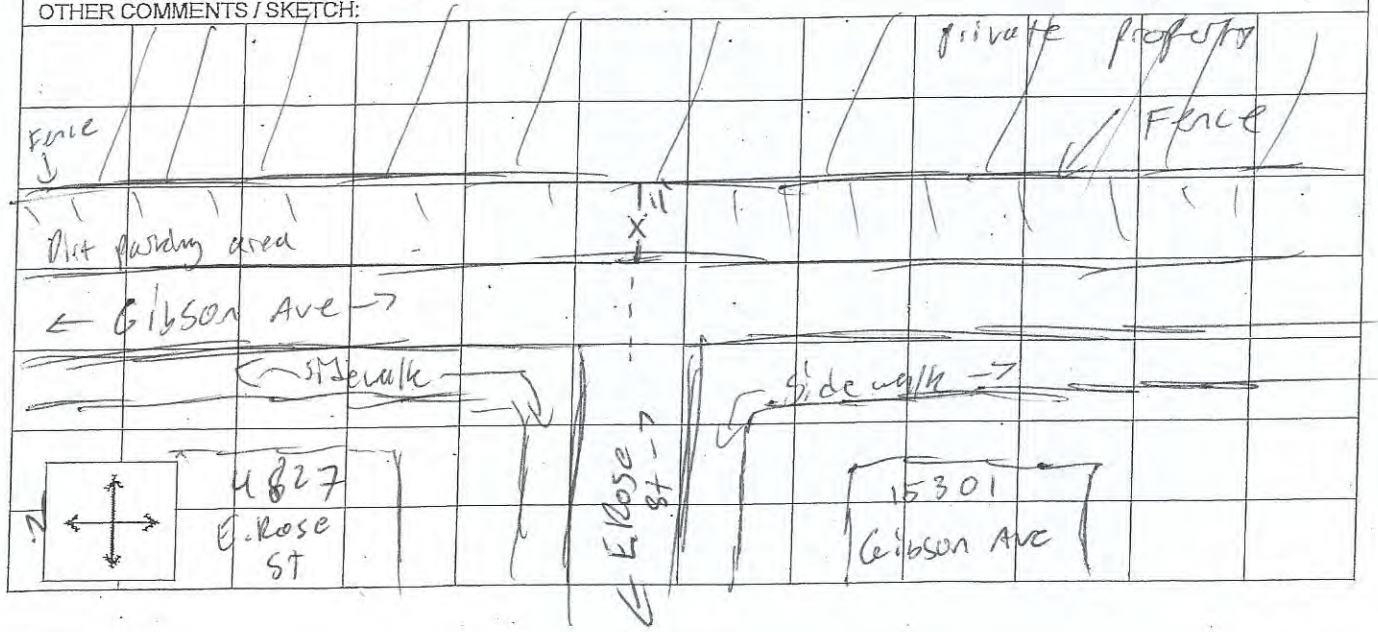
COMMENTS:

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: CARMP PROJ. # 00054.20

SITE IDENTIFICATION: ST23 OBSERVER(S): JCK
ADDRESS: Var 5532 Olanda St
START DATE / TIME: 6/10/20 - 9:00 AM END DATE / TIME:

METEROLOGICAL CONDITIONS:
TEMP: 84 °F HUMIDITY: 15 %R.H. WIND: CALM LIGHT MODERATE VARIABLE
WINDSPEED: 0-1 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: SUNNY CLEAR OVRCST PRTLY CLOUDY FOG RAIN OTHER:

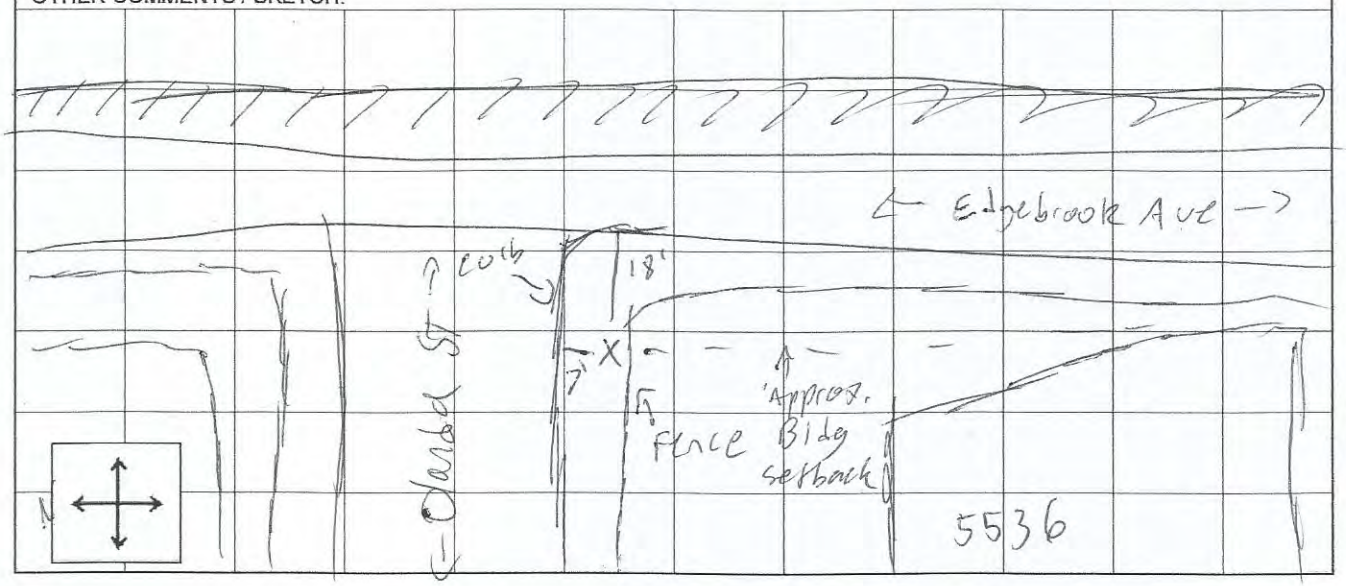
ACOUSTIC MEASUREMENTS:
INSTRUMENT: LD LXT TYPE: 1 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.04 WINDSCREEN X
SETTINGS: A-WEIGHTED SLOW FAST FRONTAL RANDOM ANSI OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	L 8.33	L 25	L 50	L 90	L 99	min
.838	9:00 AM	9:20	65.2	75.2	69.1	67.0	65.8	64.7	62.7	60.9	59.2

COMMENTS:

NOISE SOURCE INFO:
PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:
TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



FIELD NOISE MEASUREMENT DATA

PROJECT: LARMP PROJ. # 00054.20

SITE IDENTIFICATION: ST24 OBSERVER(S): JCK
ADDRESS: Near 10975 Wright Rd
START DATE / TIME: 6/10/20 - 8:25 END DATE / TIME: 6/10/20 -

METEROLOGICAL CONDITIONS:

TEMP: 82 °F HUMIDITY: 16 %R.H. WIND: (CALM) LIGHT MODERATE VARIABLE
WINDSPEED: 0-0 MPH DIR: N NE E SE S SW W NW STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCST PRTLY CLOUDY FOG RAIN OTHER:

ACOUSTIC MEASUREMENTS:

INSTRUMENT: LD LXT TYPE: (1) 2 SERIAL #: 4005
CALIBRATOR: CAL 200 SERIAL #: 2916
CALIBRATION CHECK, BEFORE: 114.0 AFTER 114.08 WINDSCREEN X

SETTINGS: (A-WEIGHTED) (SLOW) FAST FRONTAL (RANDOM) (ANSI) OTHER:

FILE / MEAS #	START TIME	END TIME	L_{eq}	max	L 1.67	8.33	25	50	90	99	min
.837	8:25	8:45	68.9	81.7	74.1	71.0	69.2	67.9	66.1	64.4	63.5

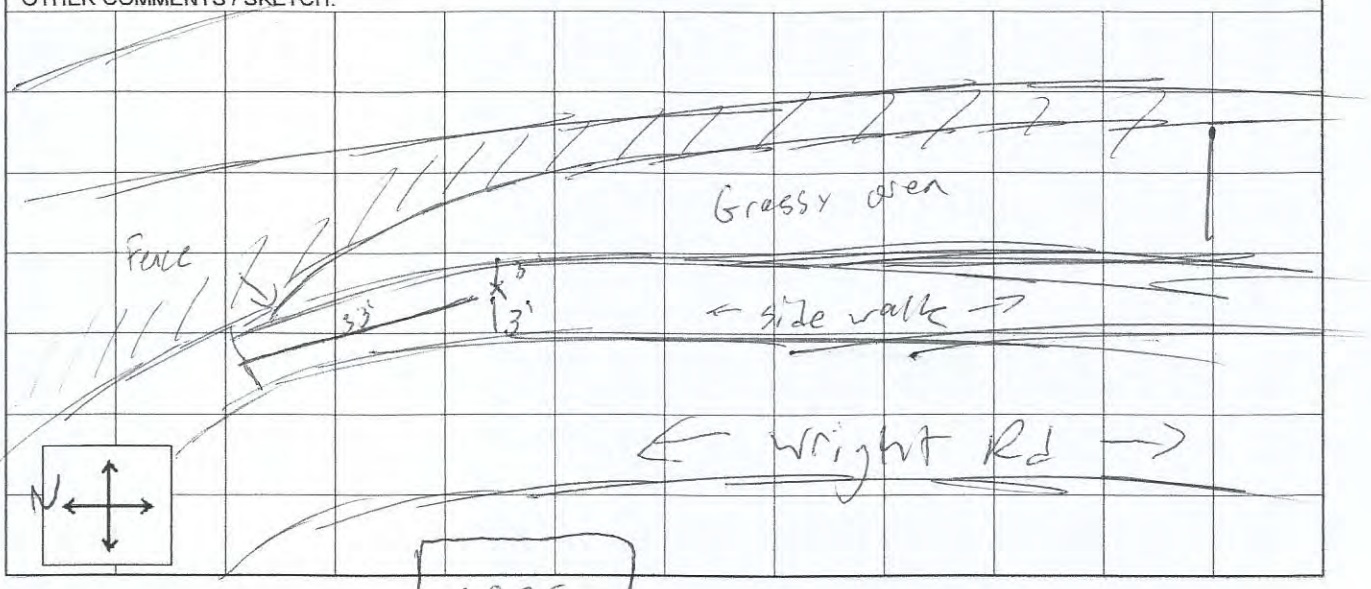
COMMENTS: - paused out landscaping activity
- landscaping activity began closer to meter

NOISE SOURCE INFO:

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL AMBIENT OTHER:
ROADWAY TYPE:
OTHER SOURCES: DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / (BIRDS) / DIST. INDUSTRIAL
DIST. CHILDREN PLAYING / DIST. TRAFFIC / DIST. LANDSCAPING ACTIVITIES / OTHER:

DESCRIPTION / SKETCH:

TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS:
OTHER COMMENTS / SKETCH:



Appendix H

Transportation Impact Assessment

2020 LA River Master Plan Program EIR

Draft Transportation Impact Analysis Report

Prepared for:
ICF

January 2021

LA20-3180.00 / BOA 20SABO0003 TO 01

FEHR PEERS

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1. Chapter 1 – Introduction

1.1 Introduction

This report documents the assumptions, methodologies, and findings of a study conducted by Fehr & Peers to evaluate the potential transportation impacts of the proposed *2020 Los Angeles (LA) River Master Plan* (Project).

1.2 Project Description

The *2020 LA River Master Plan* is intended to serve as a visionary and guiding framework for the creation of 51 miles of open space with equitable access throughout to access points, gateways, and trails for the one million Los Angeles County (County) residents who live within the study area (defined in Section 1.3) and the nine million residents who live within the 834-square-mile LA River watershed. The *2020 LA River Master Plan* aims to connect to other trails and paths along the length of the river to create a mobility network across Los Angeles County for cyclists, pedestrians, and equestrians, and intends to accommodate as many user types as safely possible. Rather than requiring a one-size-fits-all approach, the *2020 LA River Master Plan* establishes a context-sensitive, flexible but consistent approach. The scale of the improvements would be sized for the surrounding neighborhoods, and the ecology, habitat, and art would reflect the physiography and culture of the area. Other elements, such as signage, access points, and lighting would be consistent along the entire stretch.

The *2020 LA River Master Plan* has nine objectives, as listed below. Achievement of the objectives presented in italics may lead to increased human activity, and therefore has the potential to affect transportation:

- Reduce flood risk and improve resiliency.
- *Provide equitable, inclusive, and safe parks, open space, and trails.*
- Support healthy, connected ecosystems.
- *Enhance opportunities for equitable access to the river corridor.*
- *Embrace and enhance opportunities for arts and culture.*
- *Address potential adverse impacts on housing affordability and people experiencing homelessness.*
- *Foster opportunities for continued community engagement, development, and education.*
- Improve local water supply reliability.
- Promote healthy, safe, clean water.

To achieve the nine objectives, the *2020 LA River Master Plan* proposes six flexible categories of improvements, or "kit of parts" (KOP categories), consisting of infrastructure and urban river design typologies. The six KOP categories cover:

- Trails and Access Gateways

- Crossings and Platforms
- Channel Modifications
- Diversions
- Floodplain Reclamation
- Off-Channel Land Assets

Each of these six KOP categories includes a recommended collection of design components that would help to achieve one or more project objectives. They can be implemented individually or in any combination as subsequent projects, driven by local jurisdictions' needs, funding, and policies. The wide-ranging possibilities for kit implementation, including the current lack of specific project sites, creates analytical challenges. Accordingly, the six KOP categories are analyzed qualitatively at a high level in this study. Once site-specific and project-specific details are available for the subsequent projects brought forth under the *2020 LA River Master Plan*, they will be examined in light of the Program Environmental Impact Report (PEIR) prepared for the *2020 LA River Master Plan* and this transportation impact analysis report to determine whether subsequent or new documentation pursuant to the California Environmental Quality Act (CEQA) must be prepared (State CEQA Guidelines Section 15168 (c)(2)).

In addition to the KOP, the *2020 LA River Master Plan* includes a suite of smaller "Common Elements," including site furnishings, amenities, and facilities such as lighting, drinking fountains, seating, pavilions, and cafés intended to provide amenities designed to support a wide range of uses within the river environs, promote safety and accessibility, and build a cohesive identity for the river corridor.

The *2020 LA River Master Plan* includes up to 107 potential types of projects on sites that range in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles). These potential projects include the common elements as a Typical Project that would be constructed at a specified spacing along the river to ensure equitable distribution of facilities and improve access and safety. These elements together comprise the entirety of the *2020 LA River Master Plan*. It is expected that most projects (85) would be developed on sites that are extra-small or small (up to 3 acres/1 mile) in size. Among the remaining 22 projects, 10 would be on medium sites (3–40 acres/5 miles), 11 would be large sites (40–150 acres/ 10 miles), and 1 would be an extra-large project site (150+ acres/10+ miles).

This study includes qualitative, program-level analysis of the potential environmental impacts from implementation of the *2020 LA River Master Plan* based on the following groupings:

- Two Typical Projects that include construction and operations scenario assumptions developed by the Los Angeles County Public Works (Public Works). These projects, listed below, include relatively detailed design concepts.
    - Common Elements Typical Project
    - Multi-Use Trails and Access Gateways Typical Project
- Six KOP categories, each one a category of actions and infrastructure

- Overall *2020 LA River Master Plan* implementation, which examines implementation of the entirety of the *2020 LA River Master Plan*

The two Typical Projects analyzed are the Common Elements Typical Project and the Multi-Use Trails and Access Gateways Typical Project. These projects would be sited between the top of the River levee and the fence line (edge of Los Angeles County Flood Control District [LACFCD] property) and could be accommodated at almost any location within the overall study area, which is described in Section 1.3.

The Common Elements Typical Project includes all 17 common elements, as follows: pavilions, cafés, hygiene facilities, restrooms, benches, emergency call boxes, water fountains, trash and recycling, bike racks, environmental graphics, lighting, planting, stairs/ramps, guardrails, fences and gates, stormwater best management practices (BMPs), and art/performance spaces. These elements could be implemented individually or in any combination at a given site of up to 3 acres/1 mile in size (extra small/small project site). For purposes of CEQA, this analysis assumes that the Common Elements Typical Project includes implementation of all 17 elements at a given location and could attract up to 500 daily visitors.

The Multi-Use Trails and Access Gateways Typical Project would include easy to find and welcoming access gateways to the river and a continuous path for multiple modes, such as bicyclists, horseback riders, and pedestrians. It is anticipated that access gateways would be placed along the river at the intersection of major access points, adjacent programming, and LA River communities. As analyzed in this study, the Multi-Use Trails and Access Gateways Typical Project consists of an approximately 5-mile-long and 40-foot-wide multi-use trail composed of a 6-foot pedestrian trail with 2-foot-wide buffers on either side, an 8-foot, two-way bicycle path with a 2-foot buffer, an 8-foot vegetated buffer, and a 12-foot equestrian trail. Actual trail widths would be dictated by their expected usage and informed by the site conditions. Additionally, design standards may change based on the latest standards applicable when projects are approved. For purposes of CEQA, this analysis assumes that the Multi-Use Trails and Access Gateways Typical Project would be implemented with the Common Elements Typical Project and could attract up to 1,000 daily visitors.

Following *2020 LA River Master Plan* approval, subsequent project-specific activities identified in the *2020 LA River Master Plan* would be designed and implemented over time by any one of the 18 jurisdictions (17 cities and the unincorporated County) that lie along the LA River Trail, tiering from the PEIR. These subsequent projects could be located anywhere in the 2-mile-wide study area corridor, including outside the river right-of-way (ROW). Implementation of the *2020 LA River Master Plan* is envisioned over a 25-year horizon period, with completion expected around 2045.

1.3 Study Area

The LA River originates in the Santa Susana Mountains in the far western San Fernando Valley and flows 51 miles east and then south, changing direction along the eastern side of Griffith Park, before terminating in the Pacific Ocean in Long Beach. On its route to the ocean, the river passes through 18 jurisdictions, including unincorporated areas of Los Angeles County. These 18 jurisdictions include:

- Bell
- Bell Gardens
- Burbank
- Carson
- Commerce
- Compton
- Cudahy
- Downey
- Glendale
- Huntington Park
- Long Beach
- Los Angeles City
- Unincorporated Los Angeles County
- Lynwood
- Maywood
- Paramount
- South Gate
- Vernon

Ownership of the ROW varies, but a majority is owned by the LACFCD. Flood management structures, such as the channel itself, as well as levees and access roads, are primarily maintained by LACFCD and the United States Army Corps of Engineers (USACE). The study area for the Project is defined as a 2-mile-wide corridor, 1 mile on each side of the centerline of the river for its entire 51-mile length. Extending the *2020 LA River Master Plan* study area beyond the river ROW, demarcated by the fence line, and channel banks provides local context for the issues impacting communities and impeding river access, and allows areas of higher need or opportunity to be identified. To support context-sensitive planning that accounts for local needs, the study area has been subdivided into nine distinct geographical sections, or planning frames. Frames are numbered 1 – 9, beginning in Long Beach with Frame 1 and ending in Canoga Park with Frame 9. Some planning frames include just one jurisdiction, while others include multiple local jurisdictions.

1.4 Study Scope

The scope of work for this study is consistent with CEQA and Senate Bill (SB) 743, and was determined in consultation with Public Works as part of the PEIR for the *2020 LA River Master Plan*.

Authorized in September 2013, SB 743 directed the Office of Planning and Research (OPR) to revise the State CEQA Guidelines (Title 14 of the California Code of Regulations) to establish new criteria for determining the significance of transportation impacts. In developing the criteria, OPR proposed, and the California Natural Resources Agency has certified and adopted, changes to the State CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. With the changes to the State CEQA Guidelines, automobile delay, as measured by level of service (LOS) and other similar metrics, no longer constitutes a significant environmental effect under CEQA (Public Resources Code, Section 21099, subdivision (b)(3)). These updated criteria for transportation impact assessment better align transportation analysis with State of California (State) greenhouse gas (GHG) reduction goals set by SB 375 to encourage infill development and improve public health through increased active transportation. VMT, which had previously only been an input to other traffic-related analyses, such as air quality, energy, GHG, and noise, is now the primary metric for measuring transportation impacts. VMT completely replaces LOS as the CEQA metric of analysis of roadway capacity-based or automobile delay-based LOS, which measures a project's impact on the driving experience of other vehicle drivers (e.g., congestion, delay) and favors development in exurban areas where existing

roadway traffic is light, often leading to longer vehicle trips, or resulting in road-widening projects, which result in adverse environmental and public health impacts through induced vehicle demand and degradation of the biking or walking experience. Conversely, evaluation of a project's impact on VMT evaluates the effect on the environment of project-generated vehicle trips, such as more and/or longer vehicle trips, or projects that generate fewer vehicle trips or shorten existing trips, such as development of an infill site or facilities that improve bicycle access or walkability.

Other transportation impact criteria include (1) conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; (2) whether a project substantially increases hazards due to a geometric design feature; and (3) whether a project will result in inadequate emergency access. Pursuant to SB 743, OPR released draft State CEQA Guidelines in November 2017, and adopted final guidelines in December 2018. SB 743 went into full effect as of July 1, 2020.

In response to SB 743, Public Works has developed new Transportation Impact Analysis Guidelines (County Guidelines) that include a comprehensive systematic approach to the assessment of transportation impacts. The County Guidelines are based on OPR technical guidance but also reflect local conditions. These new County Guidelines, methods, and impact criteria for CEQA analyses focus on VMT, roadway and intersection geometric hazards, and policy conflicts. They include guidance on VMT-based thresholds of significance and a process to screen out projects that would not require VMT analysis (due to their size, location, proximity to transit, or other factors).

The County Guidelines have been internally approved by Public Works. Board approval is expected in 2021 following an extensive public outreach effort. This study was prepared utilizing an approach consistent with the Los Angeles County Guidelines and Thresholds and uniform for all jurisdictions within the study area, which is appropriate given that the County is the lead agency for the PEIR. The decision to apply a uniform approach was based on the following considerations:

> At the time this study was prepared, among the 17 cities through whose jurisdiction the study area extends, only the City of Los Angeles has already adopted local VMT thresholds. All the other cities are at some stage in the process of transitioning from LOS to VMT and therefore do not yet have separate CEQA-compliant transportation analysis methodologies in place.
> The schedule within which the *2020 LA River Master Plan* PEIR is being prepared requires a streamlined approach to analysis. Rather than consult individually with each of the 17 individual cities within the study area to obtain formal concurrence with the methodology described above, the methodological approach has been disclosed to those agencies and to the general public in the PEIR Notice of Preparation (NOP) that was published on July 6, 2020, to seek their input.
> The VMT threshold of significance per the County Guidelines for new development projects are based on a project's land use as described in the County Guidelines. Note that the County Guidelines are subject to change prior to adoption and/or may not ultimately be adopted.

The screening criteria utilized by the County are aligned with the OPR Technical Advisory on Evaluating Transportation Impacts (December 2018) and were used to identify those design components that, under the six KOP categories, when implemented as part of a subsequent project, would not require subsequent VMT analysis and those that either may or definitely would. Because the locations where specific projects

would be developed under the *2020 LA River Master Plan* are not known, the screening criteria were also used to determine which design components under the six KOP categories may require VMT analysis or would be screened out. The following types of projects are exempt from completing VMT analysis:

- Land use projects generating fewer than 110 daily trips.
- Retail uses that exceed a net 50,000 square feet of gross floor area.
- Land use projects located within one half-mile of a major transit stop or high-quality transit corridor that also meet other design and policy-consistency characteristics.
- Residential uses composed of 100 percent affordable housing.
- Transportation projects not in conflict or inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(2) – that is, transportation projects that reduce or have no impact on VMT, such as an active transportation project.
- Transportation projects that do not include the addition of new through lanes on existing or new highways.

Design components under the six KOP categories that are not exempt from VMT analysis were qualitatively evaluated to identify those that have the potential to result in a significant VMT impact and those that were unlikely to. Where necessary, potential mitigation strategies are identified. Design components under the six KOP categories that need VMT analysis will require additional quantitative analysis in the future once details and specific sites are known. Project alternatives and construction period impacts were also evaluated qualitatively.

Project analysis scenarios analyzed in this study include the "with Project" scenario and the "Cumulative with Project" scenario. The Planning Horizon Year for the *2020 LA River Master Plan* is 2045. The Project VMT baseline for the Existing and Cumulative scenarios uses the current analytical framework developed by the County for analyzing transportation impacts.

Preparation of trip generation estimates and distribution of trips for individual design components under the six KOP categories and intersection operational analysis is not included in this report due to the lack of detail on design components under the six KOP categories and their locations. More detailed analysis, where necessary, of the transportation impacts of subsequent projects as proposed under the *2020 LA River Master Plan* will occur once specific project details and sites have been identified.

1.5 Organization of Report

This report is divided into five chapters, including this Introduction. Chapter 2 describes the Existing Environmental and Regulatory Settings. Chapter 3 includes the Transportation Impact Analysis for the Project. Chapter 5 discusses the Project Alternatives. Section 2.16 presents the Cumulative Impact Analysis for transportation impacts.

2. Chapter 2 – Existing Setting

This chapter describes the existing environmental setting, including a discussion of existing river access points, trails, parks, and recreation areas; the streets, freeway systems, public transit providers, and bicycle facilities that provide access to the river; as well as areas identified by the County as having VMT per service population, residential VMT per capita, or employment VMT per employee that is lower than baseline. The existing regulatory setting is also described, including a discussion of SB 743, which established VMT as the primary metric for assessing transportation impacts, as well as other applicable plans and policies.

2.1 Environmental Setting

The *2020 LA River Master Plan* project area is located within the LA River watershed, an 834-square-mile area that stretches from the far eastern border of Ventura County in the west, across the San Fernando Valley, from the San Gabriel Mountains and Angeles National Forest in the northeast, and south through Central Los Angeles down to Long Beach and the Pacific Ocean. This area includes much of urbanized South Los Angeles County, but excludes West Los Angeles and the coastal cities in the South Bay area of the County. The transportation system serving this area is a complex, built-out, multimodal network designed to carry both people and goods. It consists of major freeways, roadways, bicycle facilities, sidewalks, public transit, freight railways, airports, seaports, and intermodal terminals. There is also a network of trails through the extensive open areas and mountains that lie between the urbanized areas. Major components of the transportation network within the study area are presented in Figures 1–15. Each figure presents three river frames for visualization purposes so that information for the entire study area of nine river frames is presented in three figures for each subject area. Table 1 (at the end of this chapter) presents a comparison of transportation facilities and amenities by river frame.

2.1.1 Existing and Proposed Bicycle Facilities

Figures 1–3 present the existing and proposed bicycle facilities within the study area. Proposed facilities include all known facilities proposed by any jurisdiction within the study area. There are almost 195 miles of existing bicycle facilities within the study area, including just over 75 miles of Class I bicycle paths that run primarily along the LA River; almost 77 miles of Class II bicycle lanes; 40 miles of Class III sharrowed or signed bicycle facilities; and just over 2 miles of Class IV bicycle tracks. Class II bicycle lanes represent a plurality of the bicycle facility typologies within the study area despite the presence of bicycle paths along both sides of the river in many locations. Class I bikeways are defined as off-street bicycle paths, Class II bikeways are defined as striped lanes within streets, Class III bikeways are defined as signed or sharrowed bicycle routes, and Class IV bikeways are defined as bicycle facilities on roadways that provide a physical vertical barrier between bicyclists and vehicular traffic.

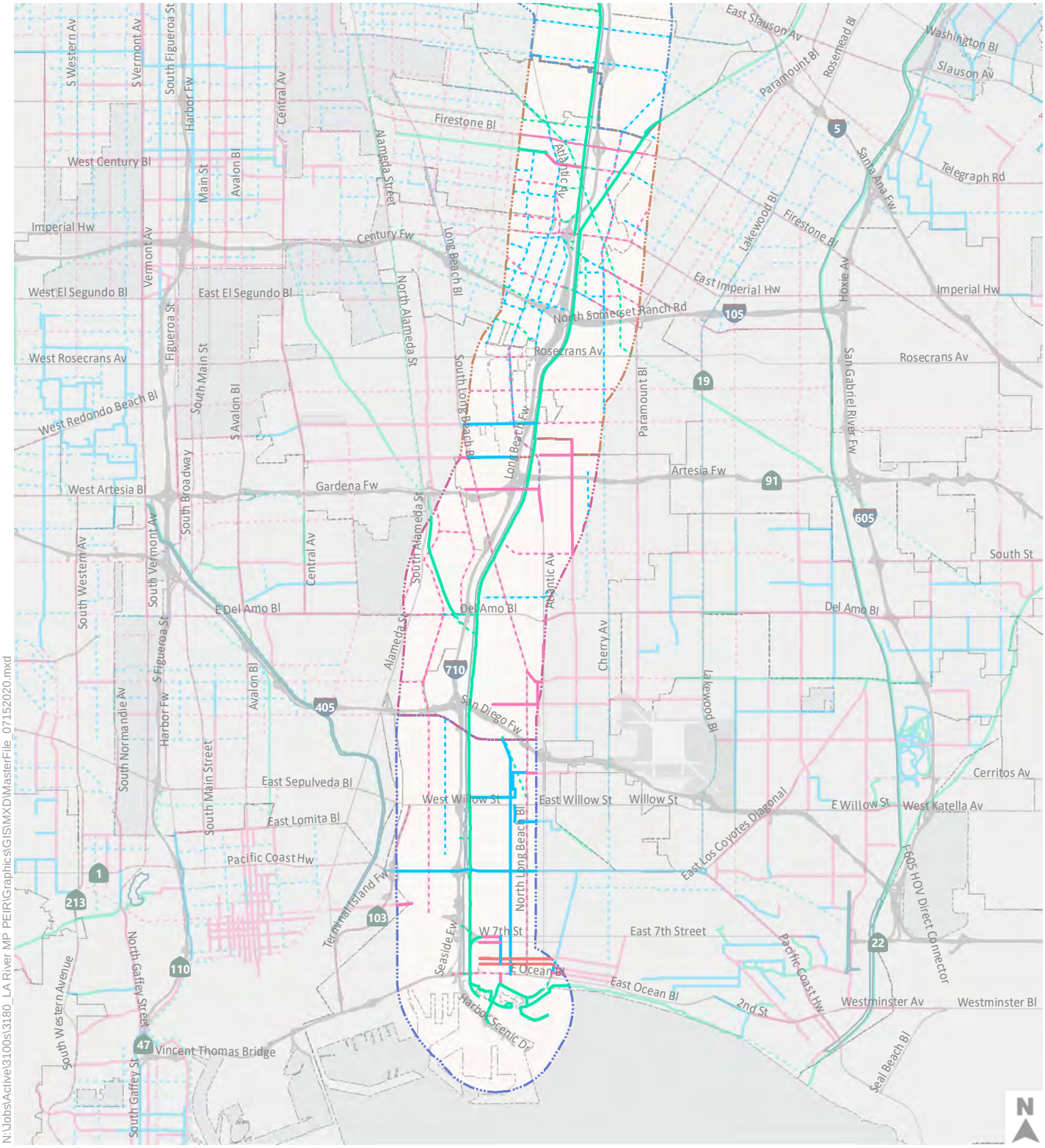
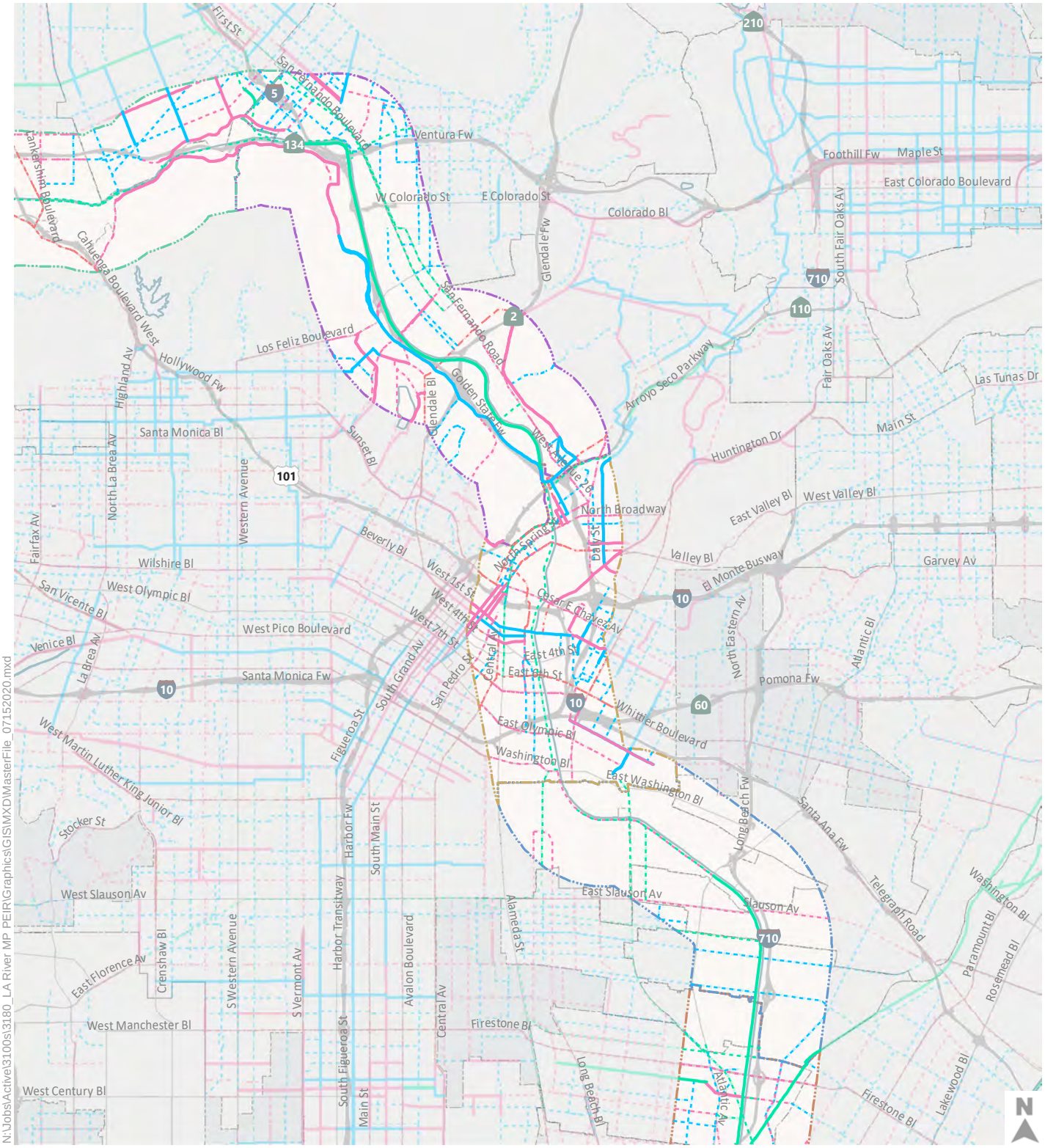


Figure 1

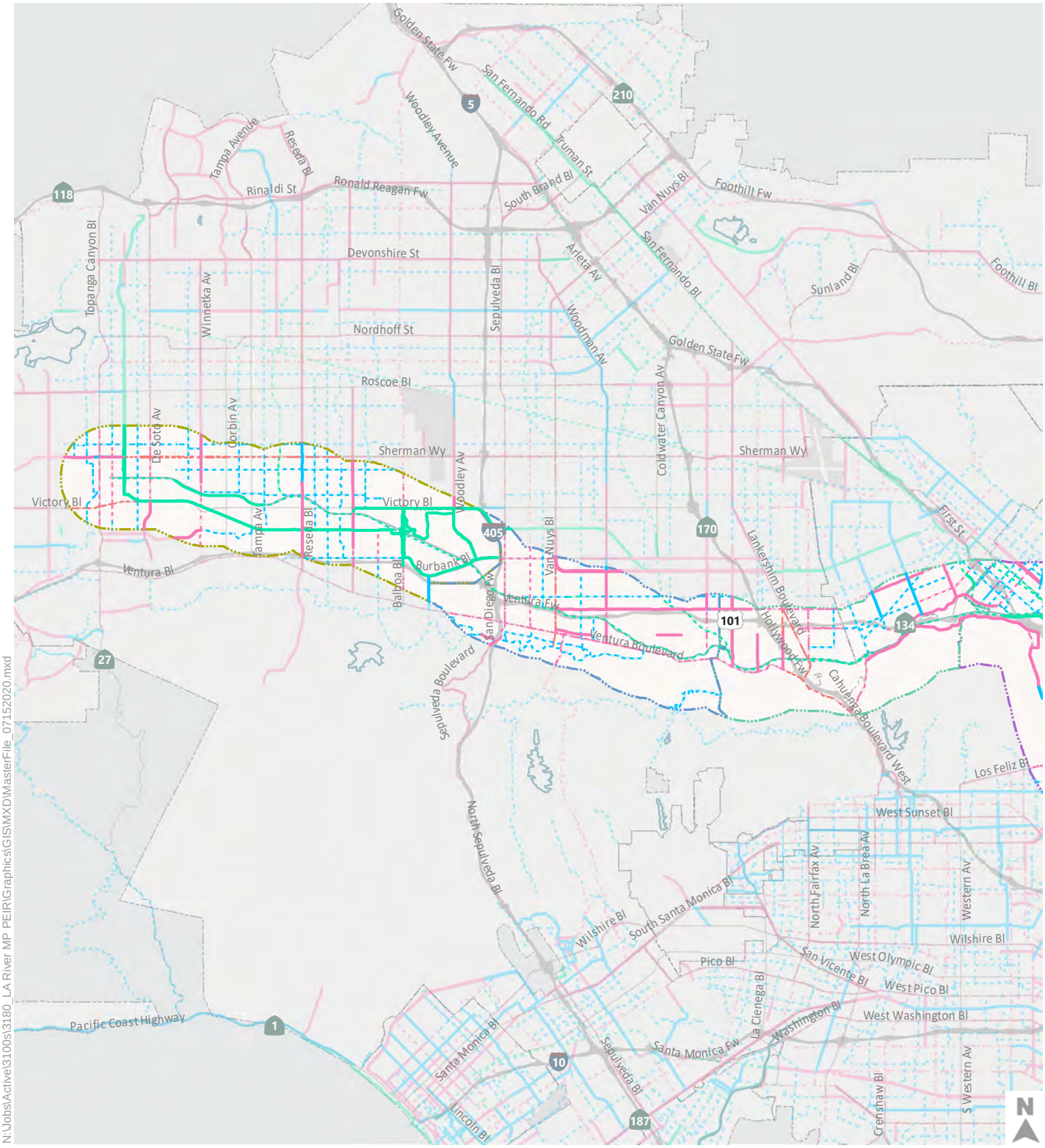
Existing and Planned Bicycle Facilities



Bicycle Path (Class I)
Bicycle Lane (Class II)
Bicycle Route (Class III)
Protected Bicycle Lane (Class IV)
Proposed Bicycle Path (Class I)
Proposed Bicycle Lane (Class II)
Proposed Bicycle Route (Class III)
Proposed Protected Bicycle Lane (Class IV)
City Boundaries
LA River Frames
3 - Central Plain
4 - North Plain
5 - Heights
6 - Narrows
7 - East Valley

Figure 2

Existing and Planned Bicycle Facilities



Bicycle Path (Class I)
Bicycle Lane (Class II)
Bicycle Route (Class III)
Protected Bicycle Lane (Class IV)
Proposed Bicycle Path (Class I)
Proposed Bicycle Lane (Class II)
Proposed Bicycle Route (Class III)
Proposed Protected Bicycle Lane (Class IV)
City Boundaries
LA River Frames
6 - Narrows
7 - East Valley
8 - Mid Valley
9 - West Valley

Figure 3

Existing and Planned Bicycle Facilities

The bicycle network within the study area is not fully built out. Almost 365 miles of the planned bikeways in the study area are yet to be built, almost double the number of miles already on the ground. Of the planned miles of bicycle facilities, Class III sharrowed facilities represent a plurality (just over 130 miles), with Class II bicycle lanes representing an almost equal share (just under 125 miles). Planned Class I and Class IV mileage is equal to almost 110 miles.

In addition to these dedicated bicycle facilities, numerous multi-modal bridges over the LA River for exclusive use of bicyclists and pedestrians (and sometimes also for equestrians) have recently or will soon open, including the Riverwalk Bridge in Glendale, the Garden Bridge connecting to Zoo Drive, the North Atwater La Kretz Bridge, the Sunnynook Bridge, the Red Car Bridge, and the Taylor Yard Bridge farther to the south. These bridges will cross the river and connect communities on the north or east side of the river to existing segments of the LA River Bike Path.

2.1.2 Existing Public Transit Service and Freight Rail Service

The regional public transit system includes heavy rail transit operations, regional commuter rail services, regional and municipal bus operations, and local shuttles. The Los Angeles County Metropolitan Transportation Authority (Metro) is the largest provider of public transit service in the study area, and its service is supplemented by numerous municipal transit lines and local shuttle services.

Figures 4–6 present the existing transit routes within the study area. The study area is served by eight transit providers on 188 routes, including Metro, DASH (Los Angeles Department of Transportation), Antelope Valley Transit Authority, Santa Clarita Transit, Big Blue Bus (Santa Monica), Foothill Transit, Torrance Transit, and Long Beach Transit. Metro rail and bus rapid transit service within the study area includes the A Line (formerly, the Blue Line) within the Long Beach area, the C Line (formerly, the Green Line) in South Los Angeles, and the G Line (formerly, the Orange Line) in the San Fernando Valley.

National and regional passenger rail service in the study area is operated by Amtrak and Metrolink. The two services, in some places, share use of tracks with the Union Pacific Railroad (UPRR), which operates a vast rail network that extends throughout the State and the nation. Planning is underway for development of a high-speed rail line that will link Southern California with Central California and the Bay Area, and portions of the alignments under study include segments that lie adjacent to the LA River.

2.1.3 Existing Streets and Freeways

Figures 7–9 present the existing roadway network within the study area, including freeways, arterials, secondary streets, and local roads. The network of freeways and state highways supports high-capacity limited-access travel, whereas the arterial network provides high levels of signalized street capacity and serves as a feeder system for the regional freeways and local street system. The freeway and highway system is the primary means of regional person and goods movement, providing for direct vehicular access to river access points, and to employment, services, and goods.

In many locations, arterial streets provide the only local access crossing points over the river, with many secondary and especially local roads dead-ending at the river fence line.

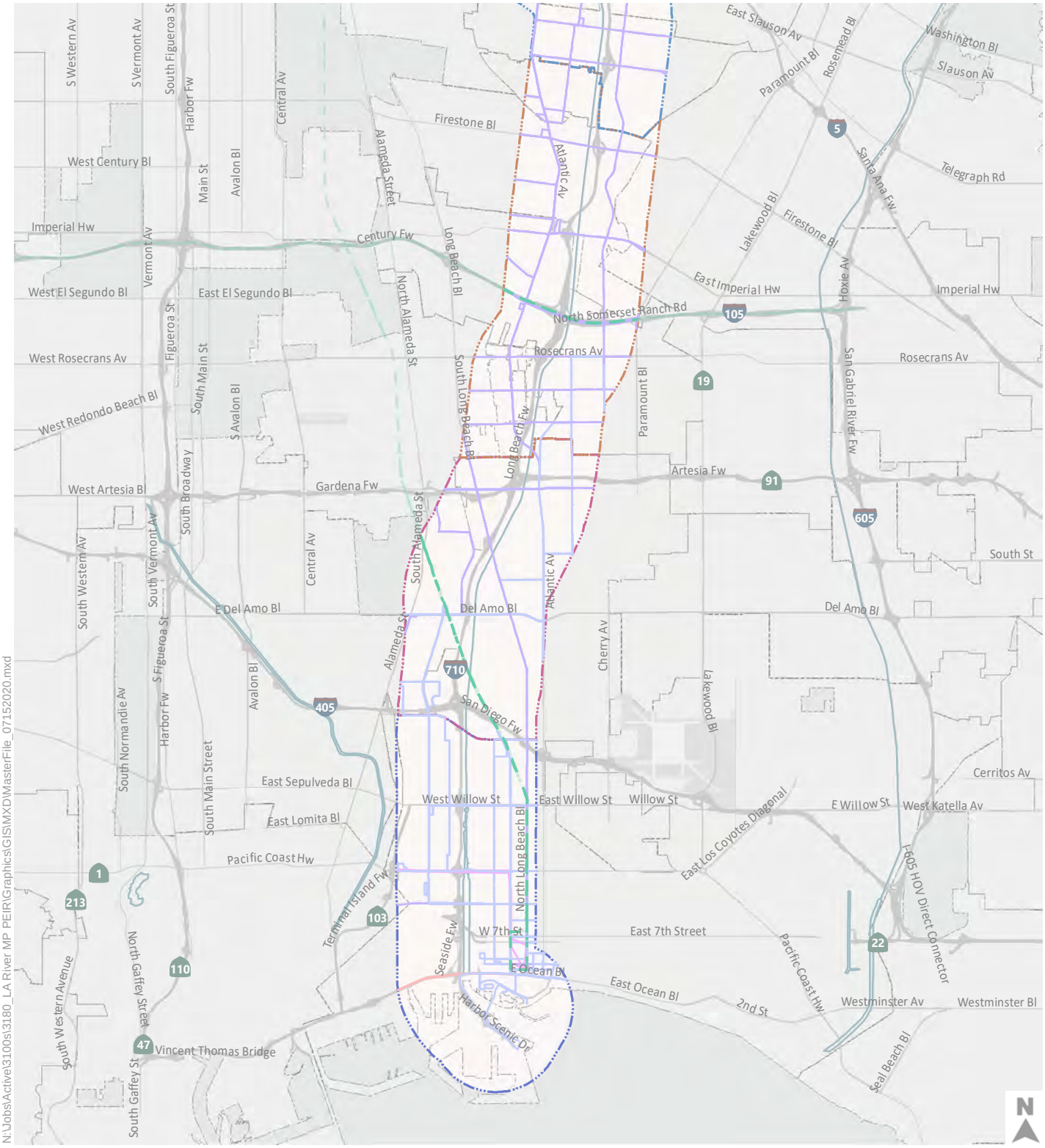
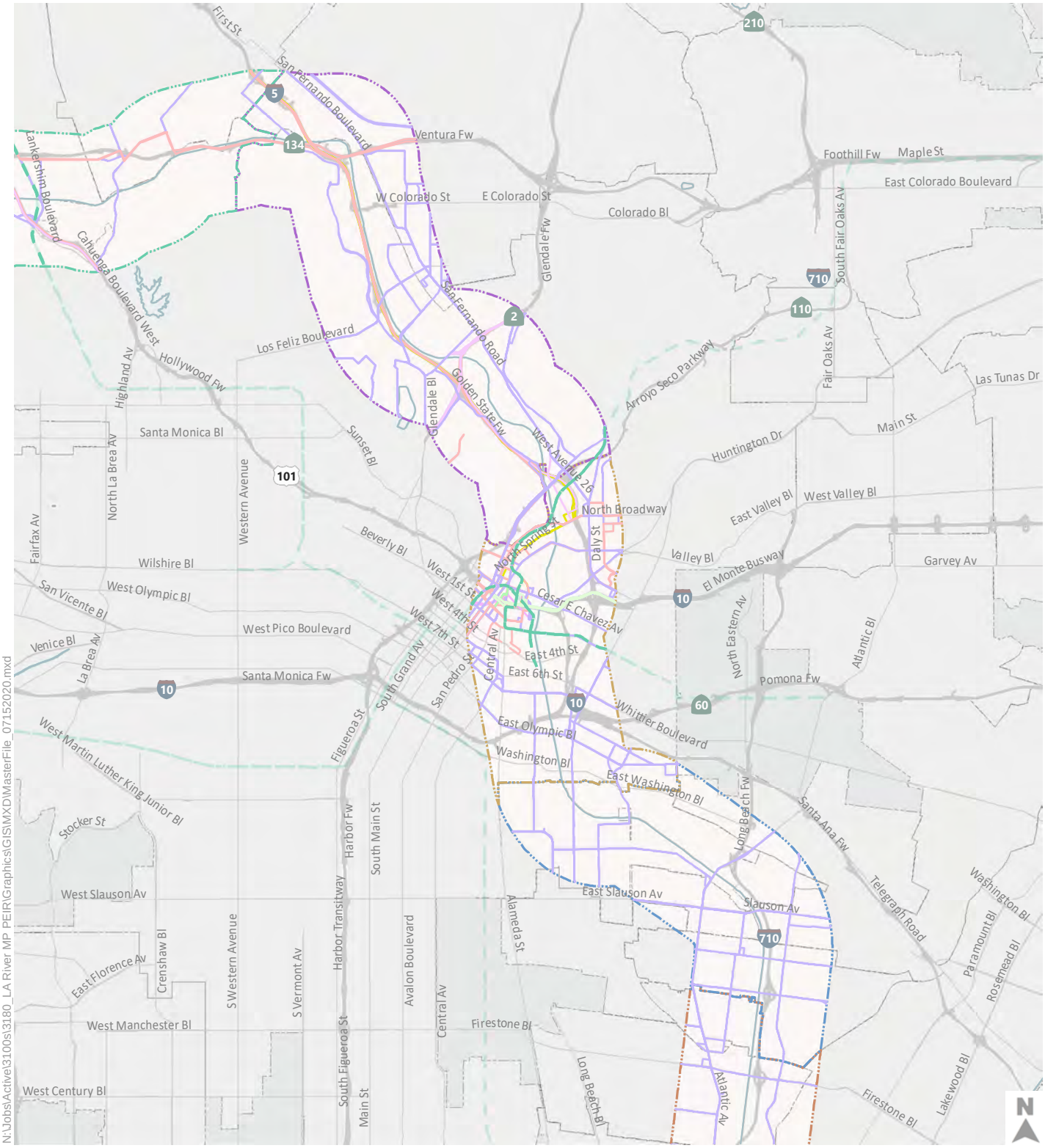


Figure 4

Existing Public Transit Routes



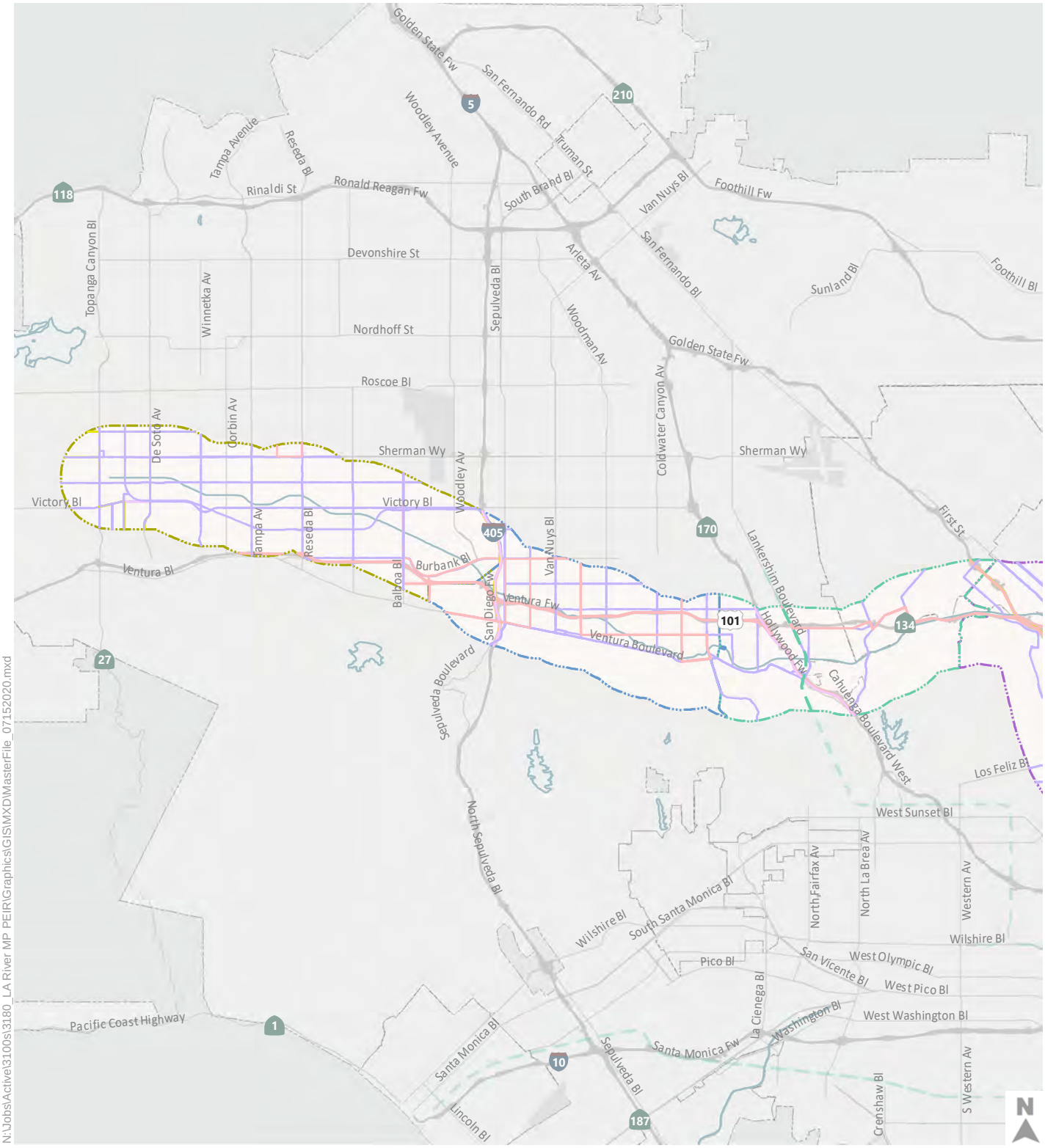
Transit Routes
- AVTA
- BBB
- Foothill
- LADOT
- Metro
- SantaClarita
- Torrance
- Metro Rail Lines

City Boundaries

LA River Frames
- 3 - Central Plain
- 4 - North Plain
- 5 - Heights
- 6 - Narrows
- 7 - East Valley

Figure 5

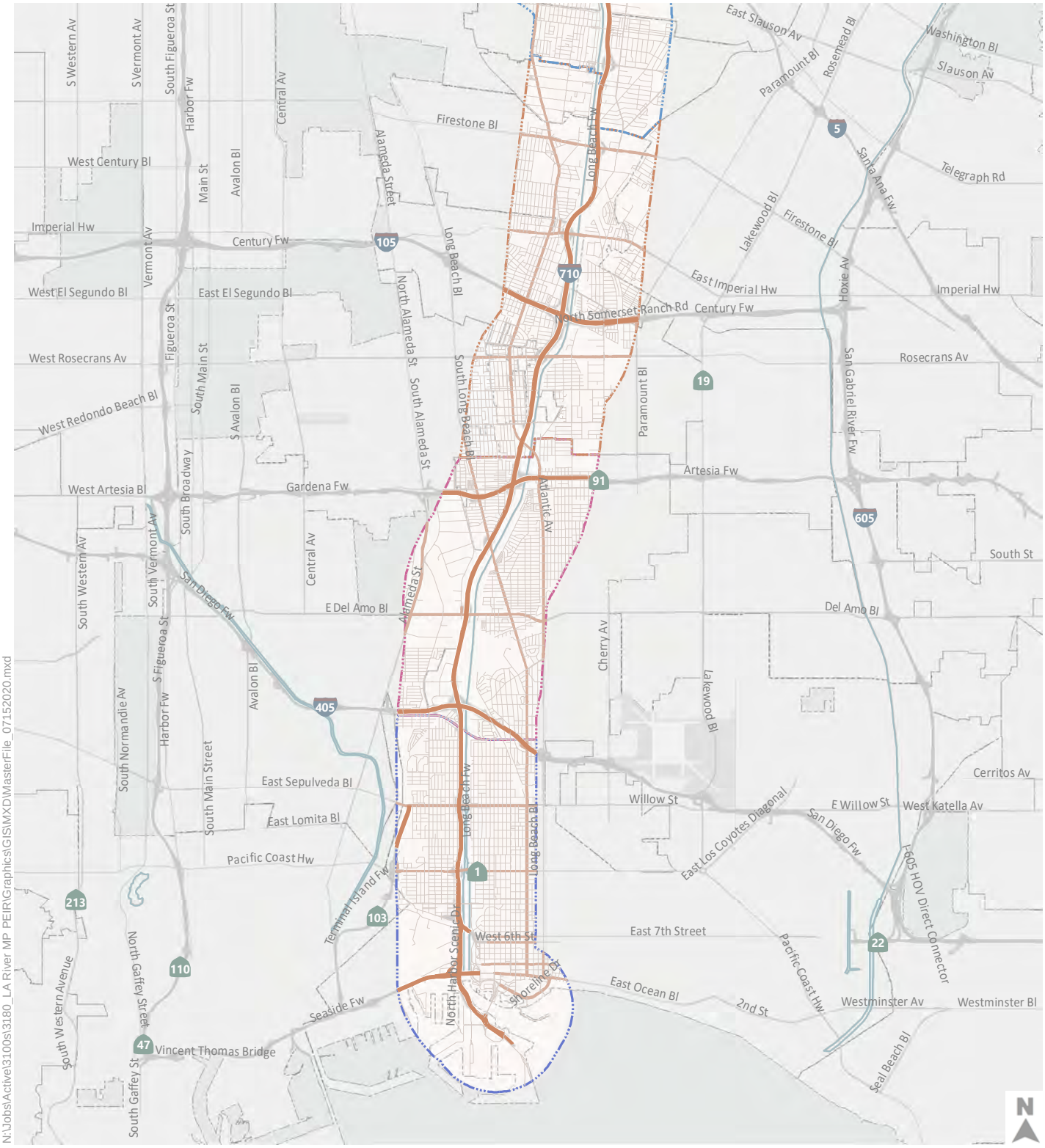
Existing Public Transit Routes



Transit Routes
AVTA
LADOT
Metro
SantaClarita
Metro Rail Lines
City Boundaries
LA River Frames
6 - Narrows
7 - East Valley
8 - Mid Valley
9 - West Valley

Figure 6

Existing Public Transit Routes



Roads & Freeways

Freeways

Primary Streets

Secondary, Tertiary Streets

City Boundaries

LA River Frames

1 - Estuary

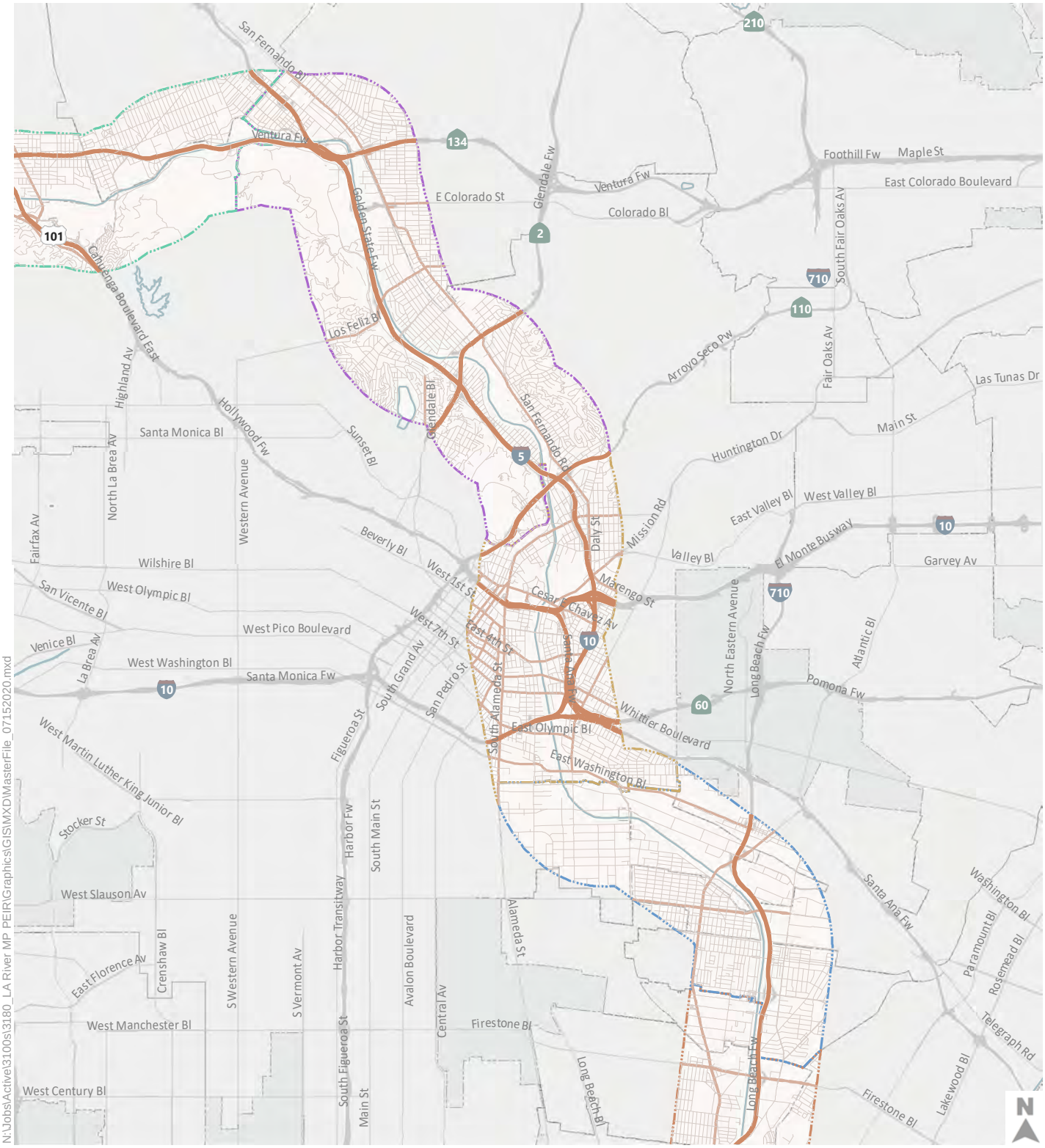
2 - South Plain

3 - Central Plain

4 - North Plain

Figure 7

Roads and Freeways



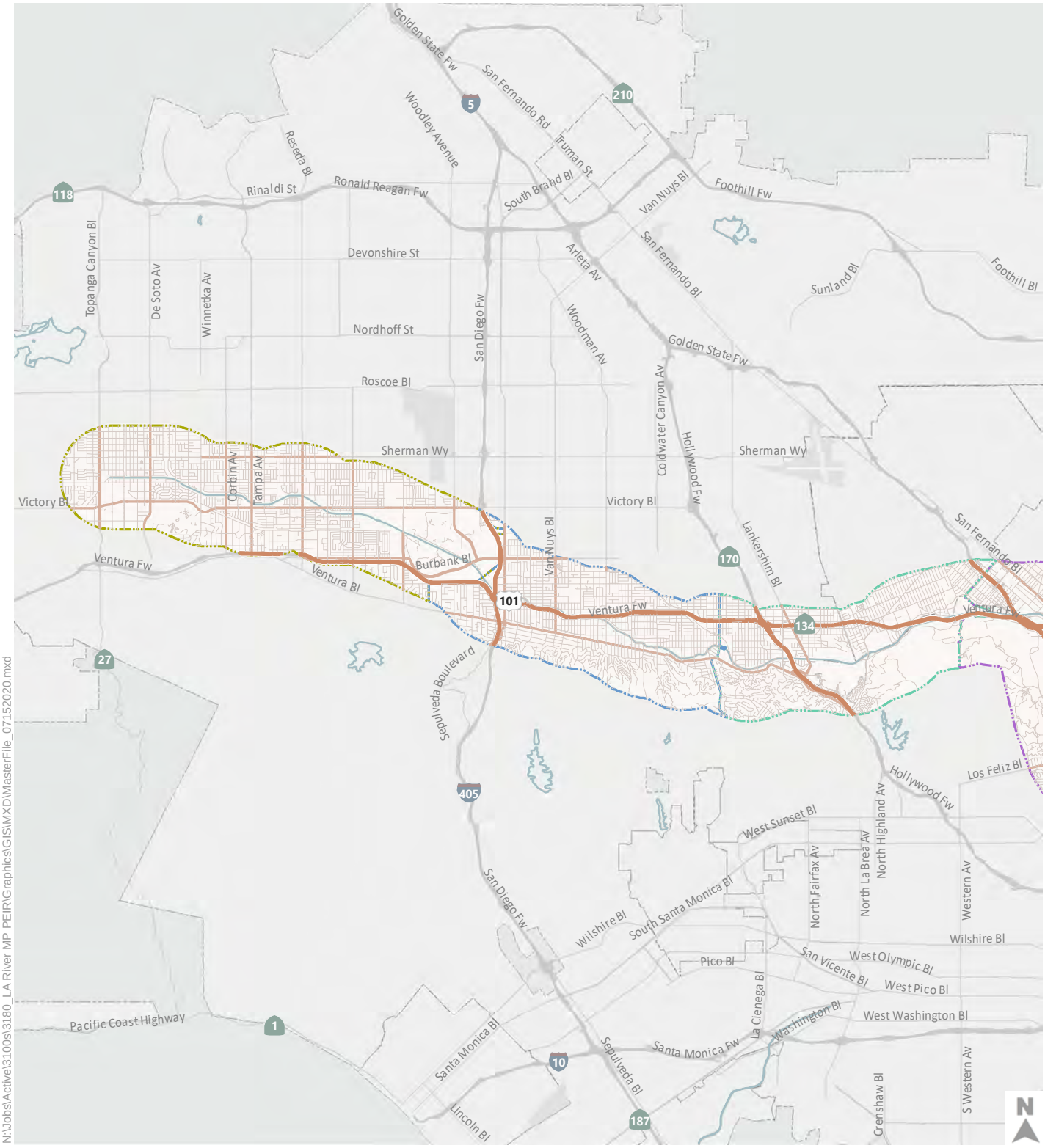
Roads & Freeways
- Freeways
- Primary Streets
- Secondary, Tertiary Streets

City Boundaries

LA River Frames
- 3 - Central Plain
- 4 - North Plain
- 5 - Heights
- 6 - Narrows
- 7 - East Valley

Figure 8

Roads and Freeways



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Roads & Freeways
- Freeways
- Primary Streets
- Secondary, Tertiary Streets

City Boundaries

LA River Frames
- 6 - Narrows
- 7 - East Valley
- 8 - Mid Valley
- 9 - West Valley

Figure 9

Roads and Freeways

Los Angeles County and the City of Los Angeles both have Vision Zero plans, which aim to reduce traffic fatalities and/or injuries to zero. Each agency has identified specific roadway corridors that experience higher than average collisions, injuries, and fatalities. Within the study area, in Frame 3, Los Angeles County has identified Rosecrans Avenue and Compton Boulevard, located in the East Rancho Dominguez unincorporated area, and Santa Fe Avenue, located in the Rancho Dominguez unincorporated area, as Collision Concentration Corridors. Similarly, the City of Los Angeles has identified the following streets within the study area as being part of a High Injury Network:

- East Olympic Boulevard
- South Alameda Street
- East 7th Street
- East 6th Street
- North Broadway
- North Figueroa Street
- San Fernando Road
- Cahuenga Boulevard
- Ventura Boulevard
- Riverside Drive
- Balboa Boulevard
- Victory Boulevard
- Reseda Boulevard
- Vanowen Street
- Tampa Boulevard
- De Soto Avenue
- Sherman Avenue
- Fallbrook Avenue

Major freeways serving the study area include Interstate (I-) 710, I-105, State Route (SR) 91, SR-1, SR-60, I-10, SR-2, SR-110, I-5, SR-2, SR-134, Unites States Route (US) 101, SR-170, I-405, and SR-27. I-710 forms a spine along the river's southern reach in River Frames 1–4, while I-5 does the same in River Frame 6. US-101 runs east-west through much of the study area in Frames 6–9, but does not run as nearly parallel to or as close to the river as I-710 and I-5 do.

2.1.4 Existing River Access Points, Trails, and Park Lands

Figures 10–12 present the existing river access points, existing and planned trails, and park lands within the study area. There are 97 existing river access points along the LA River, and more than 26 miles of existing trails within the study area, with an additional almost 23 miles planned. Major existing trails in the study area include the Los Angeles County River Bike Path in the Long Beach area in Frame 1, the LA River Trail and the LA River Trail Extension in South Los Angeles in Frames 2–4, the Arroyo Seco Trail north of Downtown Los Angeles in Frame 6, and the Rim of the Valley Trail, which runs through Griffith Park, also in Frame 6.

Almost 10 square miles, or approximately 9 percent of the study area, is existing park land. Frame 6, the Narrows, where the river bends around Griffith Park, and Frame 9, the West Valley, which includes Balboa Park, have the highest percentage of land area devoted to parks, at 26 and 14 percent, respectively.

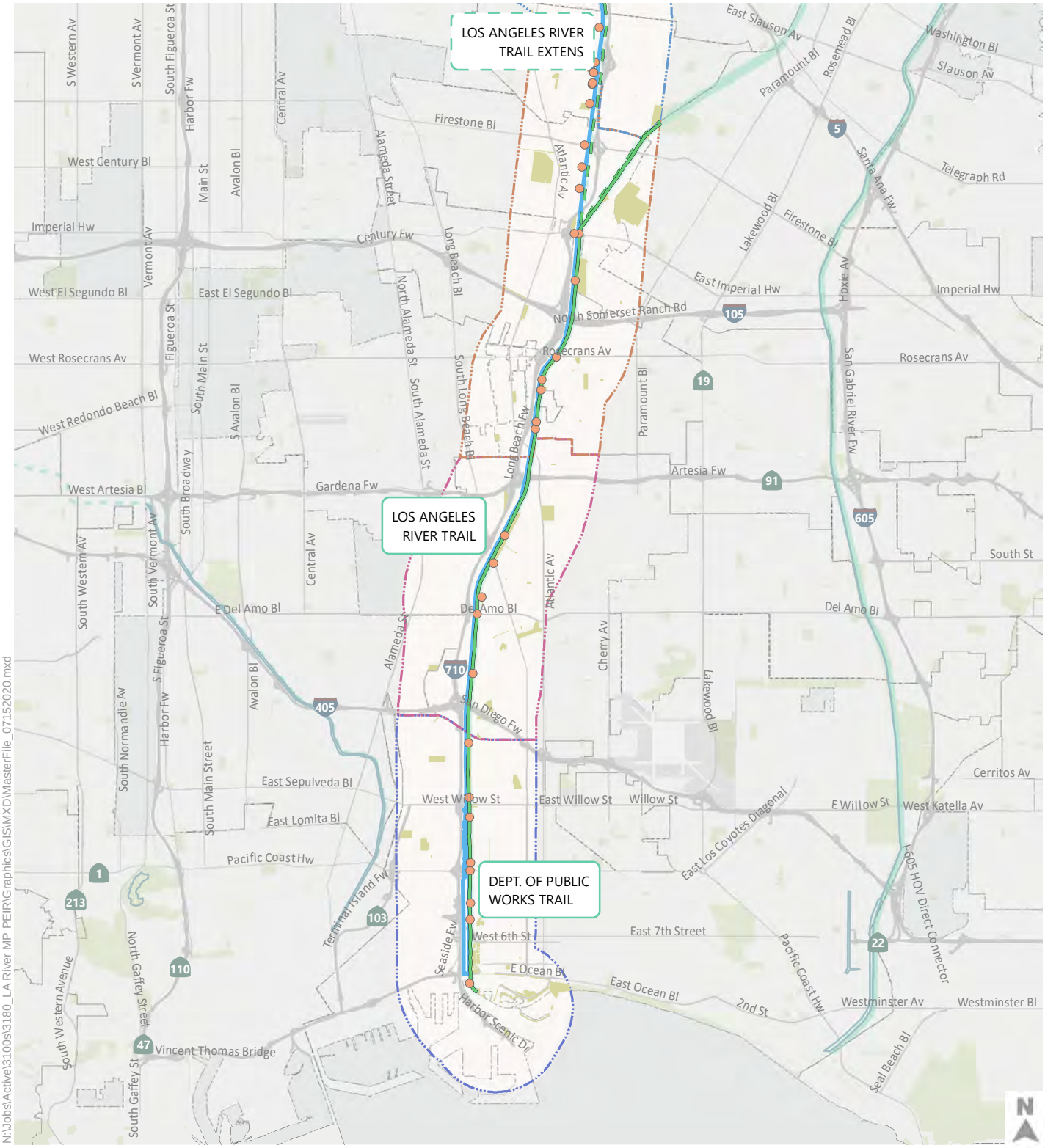


Figure 10

Trails, Parks and Trail Access Locations

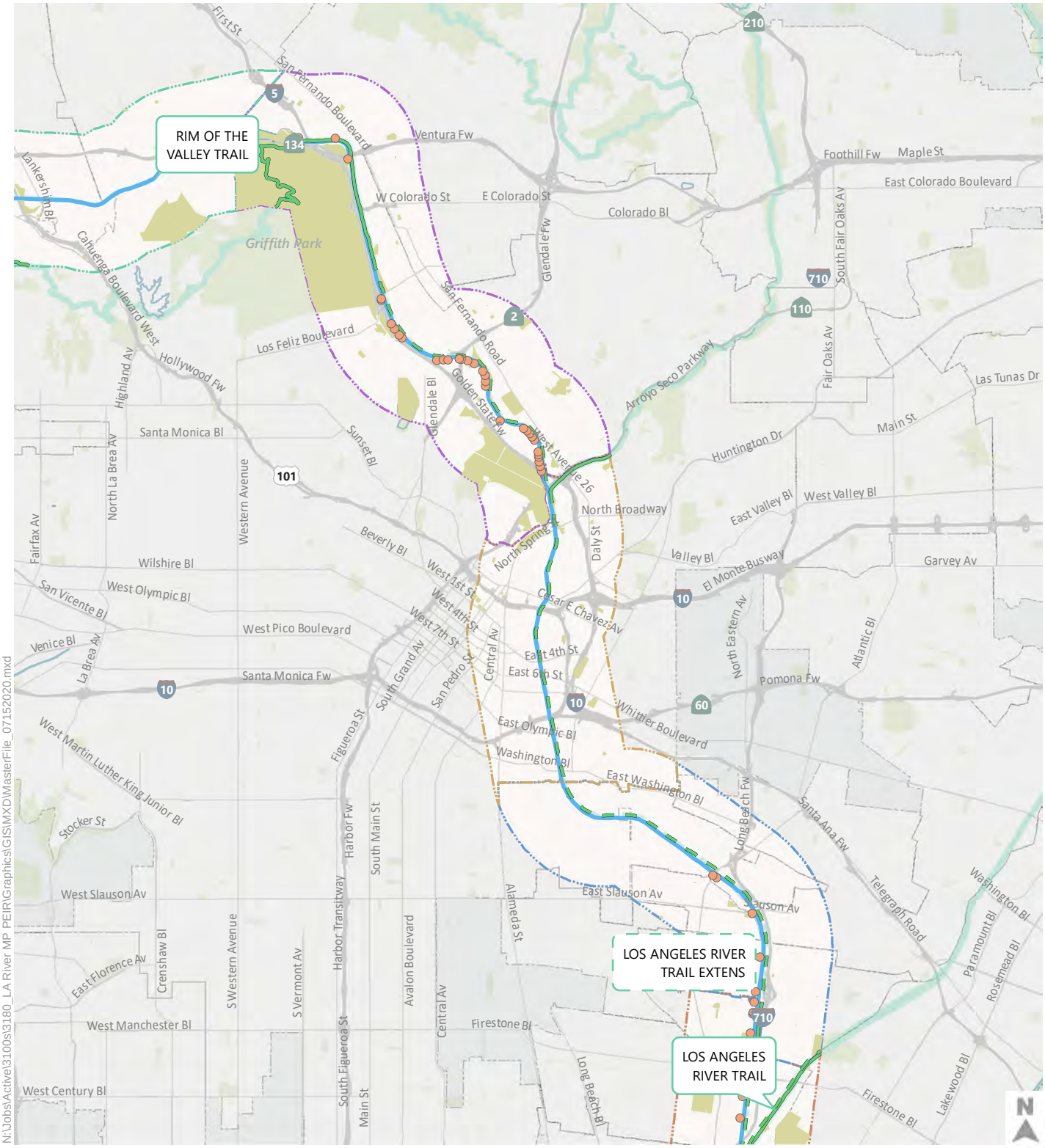


Figure 11

Trails, Parks and Trail Access Locations

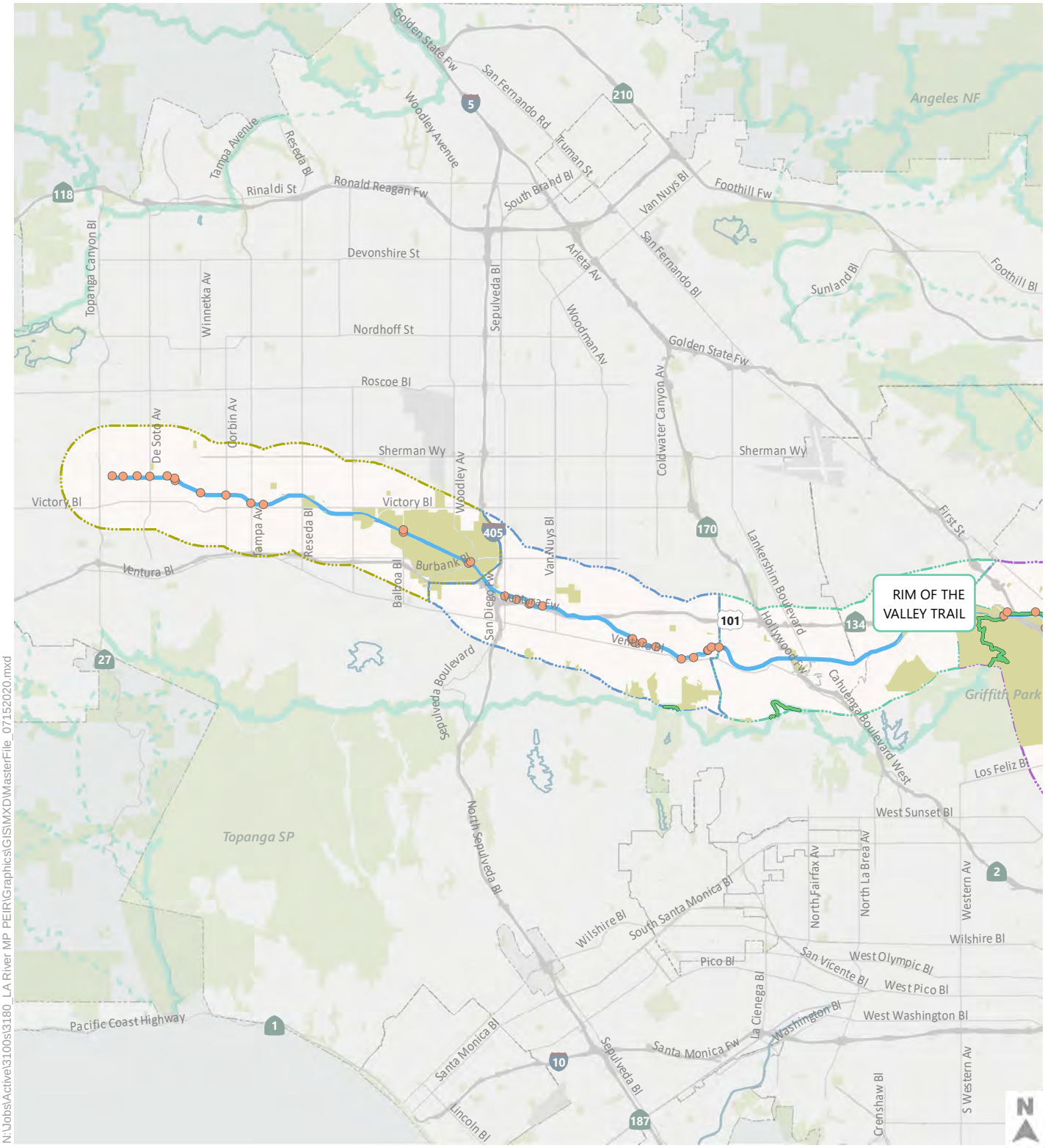


Figure 12

Trails, Parks and Trail Access Locations

TABLE 1
2020 LOS ANGELES RIVER MASTER PLAN
TRANSPORTATION AMENITIES BY FRAME

River Frame		Bicycle Facilities (Miles) Existing / *Proposed*				Trails Length (Miles)		Trail Access	Transit Routes	Parks
ID	Name	Class I	Class II	Class III	Class IV	Existing	Proposed	Points	Counts	% Land Area
1	Estuary	8.2 *1.8*	1.7 *8.5*	8.2 *2.1*	2.2 *0.2*	4.0	0.0	8	40	2%
2	South Plain	6.0 *1.1*	5.6 *15.5*	0.7 *2.7*	0.0 *0.0*	4.4	0.0	5	16	2%
3	Central Plain	8.2 *9.5*	0.7 *23.9*	1.1 *23.2*	0.0 *0.0*	5.6	4.0	15	18	5%
4	North Plain	2.5 *7.7*	0.0 *7.2*	0.0 *5.8*	0.0 *0.0*	0.0	5.5	5	18	1%
5	Heights	0.1 *9.6*	12.8 *19.8*	10.3 *18.9*	0.0 *18.1*	1.1	5.0	2	81	1%
6	Narrows	14.1 *12.3*	17.5 *19.6*	15.8 *22.1*	0.0 *7.1*	5.4	4.5	31	28	37%
7	East Valley	0.3 *7.8*	13.1 *8.5*	1.4 *10.2*	0.0 *6.2*	1.0	0.0	0	18	7%
8	Mid Valley	1.3 *7.1*	13.9 *13.2*	1.0 *15.3*	0.0 *1.8*	0.3	0.0	16	27	5%
9	West Valley	34.3 *7.1*	11.4 *8.6*	1.5 *30.0*	0.0 *10.4*	0.0	0.0	15	31	20%
	Total	**75.1**	**76.7**	**40.0**	**2.2**	**21.7**	**19.0**	**97.0**	**277.0**	**9%**

2.2 Regulatory Setting

2.2.1 State Plans and Policies

2.2.1.1 California Environmental Quality Act

State CEQA Guidelines Section 15064.3(a) establishes increases in VMT as the most appropriate measure of transportation impacts, and states that other considerations may include effects on transit and non-motorized travel. VMT as a metric for impacts is consistent with a broad range of State legislation, regional, and local programs, and plans and policies, and, as such, the State CEQA Guidelines also require consideration of whether a project may conflict either directly or indirectly with plans, policies, programs, or ordinances addressing circulation, particularly related to increases in VMT and associated reductions in GHG generation. The State has set ambitious targets for reductions in GHG generation, which in turn relates to transportation and required reductions in VMT, as transportation is the largest generator of GHGs by sector in the State (41 percent). Thus, legislation, programs, plans, and policies that target GHG generation and climate change relate directly to transportation and the need to reduce VMT.

2.2.1.2 Statewide Transportation Improvement Program

The California Transportation Commission (CTC) administers transportation programming. Transportation programming is the public decision-making process, which sets priorities and funds projects envisioned in long-range transportation plans. It commits expected revenues over a multi-year period to transportation projects. The Statewide Transportation Improvement Program (STIP) is a multi-year Capital Improvement Program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The California Department of Transportation (Caltrans) manages the operation of State Highways, including the freeways passing through Los Angeles County.

2.2.1.3 Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006

The California Global Warming Solutions Act of 2006 recognizes that California is a major contributor to U.S. GHG emissions. AB 32 acknowledges that such emissions cause significant adverse impacts on human health and the environment, and therefore must be identified and mitigated where appropriate. AB 32 also establishes a State goal of reducing GHG emissions to 1990 levels by 2020 – a reduction of approximately 30 percent from projected State emission levels and 15 percent from current State levels, with even more substantial reductions required in the future (ARB 2014). Pursuant to AB 32, the California Air Resources Board (ARB) must adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. As the largest single sector of the economy that generates GHGs, changes in transportation is a focus of these efforts.

2.2.1.4 SB 32/Executive Order B-30-15

This executive order sets in place a new statewide policy goal to reduce GHG emissions 40 percent below their 1990 levels by 2030. This order acts as an intermediate goal to achieving 80 percent reductions by 2050. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by Executive Order S-3-05 of reducing emissions 80 percent under 1990 levels by 2050. Such reductions will require major changes in the transportation sector.

This intermediate target was codified into law by SB 32, which was signed into law by Governor Jerry Brown on September 8, 2016.

2.2.1.5 SB 375

The adoption of SB 375 on September 30, 2008, created a process whereby local governments and other stakeholders must work together within their region to achieve the GHG reductions specified in AB 32 through integrated development patterns, improved transportation planning, and other transportation measures and policies. Under SB 375, ARB is required to set regional vehicular GHG reduction targets for 2020 and 2035. Additionally, SB 375 required that those targets be incorporated within a Sustainable Communities Strategy (SCS), a newly required element within the Metropolitan Planning Organization's (MPO's) Regional Transportation Plan (RTP). On September 23, 2010, ARB adopted the vehicular GHG emissions reduction targets that require a 7–8 percent reduction by 2020 and a 13–16 percent reduction by 2035 relative to emissions in 2005 for each MPO. The Southern California Association of Governments (SCAG) is the MPO for the Southern California region and is required to work with local jurisdictions, including the City. ARB has determined SCAG's reduction target for per capita vehicular emissions to be 8 percent by 2020 and 13 percent by 2035. Achieving such reductions will require major changes in the transportation sector, travel behavior, and mobility choices.

2.2.1.6 SB 743

To further the State's commitment to the goals of SB 375, AB 32, and AB 1358, Governor Brown signed SB 743 on September 27, 2013. SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Division 13 (Section 21099) of the Public Resources Code. Key provisions of SB 743 include eliminating the measurement of vehicle delay, or LOS, as a metric that can be used for measuring traffic impacts. Under SB 743, the focus of transportation analysis shifts from LOS to the reduction of VMT through the creation of multimodal transportation networks and promotion of a mix of land uses to reduce VMT. SB 743 required the OPR to amend the State CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Particularly for areas served by transit (i.e., transit priority areas [TPAs]), those alternative criteria must "promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses" (New Public Resources Code Section 21099[b][1]). Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." OPR also has discretion to develop alternative criteria for areas that are not served by transit, if appropriate.

Pursuant to the mandate in SB 743, OPR adopted the revised State CEQA Guidelines in December 2018, recommending the use of VMT for analyzing transportation impacts under CEQA. In turn, Section 15064.3 was added to the State CEQA Guidelines, which states "generally, vehicle miles traveled is the most appropriate measure of transportation impacts." The revised guidelines require that lead agencies remove automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, as a criterion for determining a significant impact on the environment pursuant to CEQA, except in locations specifically identified in the revised guidelines, if any. In accordance with this requirement, State CEQA Guidelines Section 15064.3(a), adopted in December 2018, states "a project's effect on automobile delay does not constitute a significant environmental impact." The requirements of SB 743 went into full effect as

of July 1, 2020. Los Angeles County has developed Transportation Impact Analysis Guidelines consistent with SB 743, which have been internally approved by Public Works; adoption is expected in 2021.

2.2.1.7 Caltrans Vehicle Miles Traveled-Focused Transportation Impact Study Guide

In May 2020, Caltrans published a VMT-based *Transportation Impact Study Guide* (TISG) consistent with SB 743. The TISG replaces the *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002). A key change is that CEQA documents will now consider different types of transportation impacts than previously examined. When analyzing the impact of VMT on the State Highway System resulting from local land use projects, the focus will no longer be on traffic at intersections and roadways immediately around project sites. Instead, the focus will be on how projects are likely to influence the overall amount of automobile use. The TISG is intended for use in analyzing land use projects or plans that may impact the State Highway System. It includes screening criteria to identify projects presumed to have a less-than-significant impact on VMT. For projects without a presumption of less-than-significant impact, Caltrans suggests use of OPR's 15 percent below existing city or regional VMT per capita recommended threshold of significance for land use projects and may request mitigation from projects and plans that do not meet those thresholds.

2.2.1.8 Caltrans Interim Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioner's Guide

In July 2020, Caltrans published the *LDIGR Safety Review Practitioner's Guide*. This landmark document establishes project effects on roadway safety as a potential transportation impact area under CEQA. The guidance is interim and does not establish thresholds of significance. It applies to proposed land use projects and plans affecting the State Highway System. Local agencies may also utilize the interim guidance as a model for review of local facilities. District traffic safety staff should use Caltrans' latest *Highway Safety Improvement Program Guidelines* to identify safety impacts based on traffic safety investigations generated by network screening, or initiated by the district, that may be affected by the proposed project or plan, and should assess safety improvements to mitigate potential conflicts or adverse impacts on potential or programmed remedial measures. Instructions on conducting an intergovernmental traffic safety review are provided in the interim guidance.

2.2.2 Regional Plans and Policies

2.2.2.1 *Regional Transportation Plan/Sustainable Communities Strategy*

SCAG is the designated MPO for six Southern California counties (Los Angeles, Ventura, Orange, San Bernardino, Riverside, and Imperial), and is federally mandated to develop plans for regional transportation, land use and growth management, and air quality. The County is one of many local and regional jurisdictions comprising SCAG.

SCAG updates its long-range (i.e., minimum 20 years) RTP/SCS every 4 years, per federal law (23 U.S. Code 134 et seq.) and State law (SB 375). SCAG's 2020–2045 RTP/SCS "Connect SoCal" was adopted in May 2020 for federal transportation conformity purposes and was adopted on September 3, 2020.

The SCS is a required element of the RTP that provides a plan for meeting GHG emissions reduction targets set forth by ARB. It provides growth forecasts that are used in the development of air quality–related land use and transportation control strategies by the South Coast Air Quality Management District (SCAQMD).

ARB has determined SCAG's reduction target for per capita vehicular emissions to be 8 percent by 2020 and 19 percent by 2035 relative to the 2005 baseline. Successfully meeting these targets will require substantial effort to reduce VMT. The 2020–2045 RTP/SCS calls for investing $638 billion over the 25-year term of the plan toward over 4,000 transportation projects, all of which collectively are expected to result in a 5 percent reduction in daily VMT per capita and a more than 25 percent decrease in traffic delay per capita. Investments will focus on maintaining and better managing the existing transportation network, expanding mobility choices, and increasing investment in transit and complete streets.

Of the 10 goals presented in the 2020–2045 RTP/SCS, 5 are applicable to transportation:

- Goal 2: Improve mobility, accessibility, reliability, and travel safety for people and goods.
- Goal 3: Enhance the preservation, security, and resilience of the regional transportation system.
- Goal 4: Increase person and goods movement and travel choices within the transportation system.
- Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.
- Goal 8: Leverage new transportation technologies and data-driven solutions that result in more efficient travel.

2.2.2.2 Metro Long Range Transportation Plan (2009) and Congestion Management Program

Metro's 2009 Long Range Transportation Plan (LRTP) provides a 30-year vision for Los Angeles County's transportation system to the year 2040. The LRTP identifies public transportation and highway projects, funding forecasts over a 30-year timeframe, multi-modal funding availability, sub-regional needs, and project performance measures. The Los Angeles County Congestion Management Program (CMP) is State-mandated and serves as the monitoring and analytical basis for transportation funding decisions made through the Federal Transportation Improvement Plan (FTIP) and Statewide Transportation Improvement Plan (STIP). The framework for the CMP is linked to the idea that congestion can be mitigated by continuing to add capacity to roadways because the primary metric that drives the program is LOS. Over the last several years, the CMP has become increasingly outdated in relation to the direction of regional, State, and federal transportation planning requirements. In 2018, the Metro Board of Directors acted to initiate the process to opt-out of the State-mandated program. The County is now exempt from the CMP.

2.2.2.3 Metro Our Next LA Long Range Transportation Plan (Draft, 2020)

Metro's draft 2020 Long Range Transportation Plan, titled Our Next LA, is the first update to the LRTP since 2009, and provides a vision for transportation in Los Angeles County through 2047—Our Next LA was adopted by the Metro Board of Directors on September 24, 2020. The plan aims to address population growth, changing mobility needs and preferences, technological advances, equitable access to opportunity, and adaptation to a changing environment. The plan details construction of an additional 100 miles of fixed-guideway transit, investments in arterial and freeway projects to reduce congestion, and construction of regional-scale bicycle and pedestrian projects to increase active transportation, including the Rail to Rail Active Transportation Corridor and the LA River Trail. Other efforts detailed in the plan include traffic management practices for congested roadways (e.g., ExpressLanes toll lanes), maintaining and upgrading the existing transportation system for all modes, and partnering with local, State, and federal agencies, and the

private sector. Our Next LA includes transit and highway improvements funded by Measure M, as well as expansion of off-peak transit service, of the active transportation network, and of programs such as ExpressLanes, partnerships to provide bus only lanes and freight management policies, and bold policy proposals, including free transit, faster bus trips, and subregional congestion pricing.

2.2.3 Local Plans and Policies

2.2.3.1 Los Angeles County SB 743

In response to SB 743, Public Works has developed new Transportation Impact Analysis Guidelines that include a comprehensive methodological approach to the assessment of transportation impacts. The County Guidelines are based upon OPR technical guidance, but also reflect local conditions. The updated set of guidelines, methods, and impact criteria for CEQA analyses focus on VMT, roadway and intersection geometric hazards, and policy conflicts. They include guidance on VMT-based thresholds of significance and a process to screen out projects that will not require VMT analysis (due to their size, location, proximity to transit, or other factors). The County Guidelines provide guidance on thresholds for new development projects that should be determined based on a project's land use.

2.2.3.2 Los Angeles County Bicycle Master Plan

In 2012, Los Angeles County updated it's Bicycle Master Plan. It includes a vision for a diverse regional bicycle system of interconnected bicycle corridors, support facilities, and programs to make bicycling more practical and desirable. It focused on expanding the existing network, connecting gaps, addressing constrained areas, providing greater connectivity at both the local and regional level, and encouraging more residents to bicycle more often. The plan proposed 831 miles of new bikeways over 20 years, including more than 70 miles of Class I bicycle facilities, almost 275 miles of Class II bicycle facilities, almost 465 miles of Class III sharrowed facilities, and more than 20 miles of bicycle boulevards. It also outlines a range of recommendations to increase bicycling, including development of complete streets, improving safety, increasing public awareness, and supporting bicycling.

The County maintains a 16.7-mile portion of the LA River Bike Path extending from the Shoreline Bikeway in Long Beach to Atlantic Boulevard in the City of Vernon. The communities of Rancho Dominguez and East Rancho Dominguez are the only unincorporated communities adjacent to the LA River Bike Path. South of Imperial Highway, the LA River Bike Path runs along the east bank of the river. At Imperial Highway in South Gate, at the confluence of the LA River and Rio Hondo, the path splits into two directions. The LA River Bike Path continues north, although the path switches over to the west bank where it continues along the river until its terminus at Atlantic Boulevard. The path along the east bank becomes Rio Hondo Path north of Imperial Highway and continues northeasterly along the Rio Hondo. Relevant goals, policies, and implementation actions include:

- Goal 1 – Bikeway System – Expanded, improved, and interconnected system of county bikeways and bikeway support facilities to provide a viable transportation alternative for all levels of bicycling abilities, particularly for trips of less than five miles.
    - Policy 1.1 – Construct the bikeways proposed in 2012 County of Los Angeles Bicycle Master Plan over the next 20 years.

        - IA 1.1.1 – Propose and prioritize bikeways that connect to transit stations, commercial centers, schools, libraries, cultural centers, parks, and other important activity centers within each unincorporated area and promote bicycling to these destinations.
        - IA 1.1.2 – Coordinate with adjacent jurisdictions and Metro to implement bicycle facilities that promote connectivity.
    - Policy 1.4 – Support the development of bicycle facilities that encourage new riders.
        - IA 1.4.2 – Provide landscaping along bikeways where appropriate.
        - IA 1.4.4 – Allow the use of and promote new and/or innovative bicycle facility designs and standards on County bicycle facilities.
    - Policy 1.6 – Develop a bicycle parking policy.
        - IA 1.6.1 – Identify where bicycle parking facilities are needed and identify the appropriate type.
- Goal 2 – Safety – Increased safety of roadways for all users.
    - Policy 2.2 – Encourage alternative street standards that improve safety such as lane reconfigurations and traffic calming.
        - IA 2.2.3 – Investigate the use of reflective striping alternatives on Class I bike paths that would address concerns with slippery conditions that generally result from traditional reflective striping.
    - Policy 2.3 – Support traffic enforcement activities that increase bicyclists' safety.
        - Encourage enforcement agencies to conduct traffic enforcement on Class I Bikeways.
    - Policy 2.4 – Evaluate impacts on bicyclists when designing new or reconfiguring streets.
        - IA 2.4.2 – Conduct biennial counts of bicyclists on key bikeways to gauge the effectiveness of the county's bicycle facilities in increasing bicycle activity.
        - IA 2.4.3 – Use alternative Level of Service standards that account for bicycles and pedestrians.
- Goal 4 – Encouragement Programs
    - Policy 4.2 – Encourage non-automobile commuting.
    - Policy 4.3 – Develop maps and wayfinding signage and striping to assist navigating the regional bikeways.

2.2.3.3 Los Angeles County Vision Zero Action Plan

The Vision Zero Action plan, published in 2019, focuses County efforts for the years 2020–2025 to achieve the goal of eliminating traffic-related fatalities and severe injuries on unincorporated County roadways by 2035. The plan includes a vision for the future, objectives, and actions to enhance traffic safety. It is guided

by principles of health equity, data driven processes, and transparency. It identifies Collision Concentration Corridors throughout the unincorporated County areas: any half-mile roadway segment on which three or more fatal or severe injury collisions occurred over a 5-year period. Strategies to improve roadway safety and reduce collisions include a wide range of roadway enhancements, such as lighting, curb extensions, and pedestrian signal timing, and a commitment to collaborate on data analysis and develop partnerships across jurisdictions. The plan is structured around five objectives: enhancing County processes and collaboration; addressing health inequities and protecting vulnerable users; collaborating with communities to enhance roadway safety; fostering a culture of traffic safety; and transparency, responsiveness, and accountability.

2.2.3.4 Municipal General Plans, Bicycle Master Plans, and Climate Actions Plans

The 18 jurisdictions (17 cities and unincorporated area) within the study area set transportation policy through the circulation or mobility element of their general plans, and through other policy documents such as bicycle master plans or climate action plans. While it is good practice for these documents to be updated regularly, there is no regulatory timeframe governing their update, and some cities have not revised their general plans or circulation elements since the early 1990s. Additionally, while almost all of the cities identify specific policy goals surrounding transportation along the LA River, not all do, and in most cases, there is little framework in place for interjurisdictional coordination between river cities toward LA River development.

The relevant policies from each city's regulatory documents are provided below.

City of Bell

The City of Bell is located in River Frame 4.

City of Bell 2030 General Plan (2018)

- No river-specific transportation policies

Bicycle Master Plan (2016)

- Goal 3 – Promote community health
    - Create connectivity to community assets (parks, schools, riverbed)

City of Bell Gardens

The City of Bell Gardens is located in River Frame 4.

City of Bell Gardens General Plan 2010 (1995)

- No river-specific transportation policies

City of Burbank

The City of Burbank is located in River Frame 7.

Burbank Bicycle Master Plan (2009)

- Objective B – Identify and implement a network of bikeways that is feasible, fundable, and that serves all bicyclists' needs, especially for travel to employment centers, schools, commercial and retail districts, transit stations, and institutions, while not excluding the needs of recreational cyclists.
    - Objective B Policy Action 8 – Create strong connections between the regional Class I bike paths (Los Angeles River, Chandler, and San Fernando), as well as Metrolink Stations.

Burbank Mobility Element 2035 (2013)

- Goal 2 – Sustainability
    - Policy 2.1 – Improve Burbank's alternative transportation access to local and regional destinations through land use decisions that support multimodal transportation.
    - Policy 2.3 Prioritize investments in transportation projects and programs that support viable alternatives to automobile use.
- Goal 5 – Bicycle and Pedestrian Mobility
    - Policy 5.2 – Implement the Bicycle Master Plan by maintaining and expanding the bicycle network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer.
        - LA River bike bridge is a funded project

Burbank 2035 Greenhouse Gas Reduction Plan (2013)

- Measure T-1.4 – Bicycle Infrastructure Expansion
    - The Bicycle Master Plan identifies an additional 12.0 miles of Class I and Class II facilities as top priority projects. Approximately 5.0 miles of these top priority projects have already received funding and are currently in various stages of development, including the South Channel Bikeway, the San Fernando Bikeway, extension of the Verdugo bike lanes, the Keystone Bicycle Boulevard project, and the LA River Bike Bridge project. Future bicycle lane expansion should focus on connecting high-visitation sites (e.g., dense residential areas, commercial and employment centers, transit hubs, parks and recreation areas) with Class I and II facilities to encourage a travel mode shift from cars to bicycles, especially for non-commute trips.

City of Carson

The City of Carson is located in River Frame 2.

Carson General Plan – Transportation and Infrastructure Element (2004)

- Goal TI-4 – Increase the use of alternate forms of transportation generated in, and traveling through, the City of Carson.

- Policy TI-4.3 – Provide appropriate bicycle access throughout the City by implementing the Bicycle Plan.
  - TI-IM-4.10 – Complete an approve Bicycle Plan (as defined by the MTA) and implement it as availability arises through private development, private grants, public grants (particularly the MTA call for projects) signing of shared routes, and cooperation with other agencies such as the County of Los Angeles for bicycle routes along channels.
    - Master Plan of Bikeways completed in 2013, includes a proposed facility on Del Amo Boulevard which would connect to the LA River.
  - TI-IM-4.13 – Continue coordination of bicycle route planning and implementation with adjacent jurisdictions and regional agencies.

City of Commerce

The City of Commerce is located in River Frame 4.

City of Commerce 2020 General Plan (2008)

- No river-specific transportation policies

City of Compton

The City of Compton is located in River Frames 2 and 3.

Draft Compton General Plan 2030 (2011)

- No river-specific transportation policies

City of Compton Bicycle Master Plan (2015)

- Plan Goals – Improve the health of all Compton residents by making the healthy choice the easy choice.
  - Create a comprehensive system of bikeways that connects key destinations.
- Includes a number of facilities connecting to the LA River, including a new path on the west bank, as well as participation in Metro Bike, with a station along the River.

City of Cudahy

The City of Cudahy is located in River Frame 3.

Cudahy 2040 General Plan – Circulation Element (2017)

- Goal CE-2 Improved mobility and safety through roadway, bicycle, and pedestrian facilities enhancements and increased public transit connectivity.
  - Policy CE-2.1 – Create, adopt, and implement a Bicycle Master plan.

- LA River access – increasing access points and enhancing connections to the River is a priority. Planned connections on Clara, Elizabeth, and Cecilia Streets.
- River Road repurposing – River Road will be closed to vehicular traffic and redesigned as a place for people to engage in active transportation and recreation. The River Road Green will also allow for direct pedestrian and bike connections to the LA River. The River Road Green streetscape elements include landscaping (including shade trees), pedestrian-scale lighting, and wayfinding signs.

Cudahy 2040 General Plan – Open Space and Conservation Element (2017)

- Policy OSCE-2.12 – Consider ways to improve access to the LA River Trail from Cudahy by addressing differences in grade and increasing the number of points of access.

City of Downey

The City of Downey is located in River Frame 3.

Downey Vision 2025 General Plan – Circulation Element (2005)

- Goal 2.2.2.2 – Establish a bikeway master plan to link employment centers, recreational facilities, and bikeways along the Rio Hondo River, the San Gabriel River, UPRR, and those of neighboring communities via a network of bike routes, lanes, and paths.

City of Glendale

The City of Glendale is located in River Frame 6.

City of Glendale General Plan – Circulation Element (1996)

- Goal 2 – Construct the complete bikeway system as identified in the Bikeway Master Plan.

Greener Glendale (2012)

- Urban Nature Objective UN4 – Ensure there is accessible park and recreational open space to serve residents.
    - Urban Nature Strategy UN4-C – Continue to maintain and develop recreational trails.
        - Glendale is committed to using 100% of its LA Riverfront as a recreational amenity. The riverfront will provide nearly a mile of multi-use trail, several small riverfront parks, and an equestrian facility.

Bicycle Transportation Plan (2012)

- Policy 1 – The City will develop a complete bikeway network throughout Glendale
    - Action – Implement planned citywide network of bikeway improvements.
        - Planned bikeways – Class I and Multipurpose – Glendale Narrows Riverwalk

        - Plan to build a bridge over the LA River to connect Glendale to the LA River bicycle path and Griffith Park.
        - Doran Street potential river access

City of Huntington Park

The City of Huntington Park is located in River Frame 4.

City of Huntington Park 2030 General Plan – Mobility Element (2017)

- Mobility & Circulation Element Policy 18 – The City of Huntington Park shall work with adjacent jurisdictions and Metro to develop a network of on-street bike lanes or off-street bike paths.

City of Long Beach

The City of Long Beach is located in River Frames 1 and 2.

Mobility Element of the City's General Plan (2013)

- Strategy No. 1 – Establish a network of complete streets that complements the related street type.
    - MOP Policy 1-9 – Increase mode shift of transit, pedestrians, and bicycles.
- Strategy No. 2 – Reconfigure streets to emphasize their modal priorities.
    - MOP Policy 2-16 – Close gaps in the existing bikeway system.
        - The Mobility Element planned seven bike/ped bridges across the LA River.
- Strategy No. 5 – Reduce the environmental impacts of the transportation system.
    - MOP Policy 5-2 – Reduce VMT and vehicle trips through the use of alternative modes of transportation and TDM.

Bicycle Master Plan 2040 (2017)

- Strategy 1 – Develop a comprehensive bikeway network.
    - 1.1 – Expand, improve, and connect the bikeway network to provide a viable transportation option for all levels of bicycling abilities.
    - 1.4 – Upgrade bridges, intersections, freeway ramps, tunnels, and any other obstacles that impede safe and convenient bicycle passage.

City of Los Angeles

The City of Los Angeles is located in River Frames 1, 2, 5, 6, 7, 8, and 9.

Mobility Plan 2035 (2016)

- Chapter 1 – Safety First

- Policy 1.9 – Recreational Trail Safety – Balance user needs on the city's public recreational trails.

- Chapter 2 – World Class Infrastructure
  - Policy 2.3 – Pedestrian Infrastructure – Recognize walking as a component of every trip and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.
  - Policy 2.6 – Bicycle Networks – Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities.
  - Policy 2.12 – Walkway and Bikeway Accommodations – Design for pedestrian and bicycle travel when rehabilitating or installing a new bridge, tunnel, or exclusive transit right-of-way.

- Chapter 3 – Access for All Angelenos
  - Policy 3.2 – People with Disabilities – Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.
  - Policy 3.11 – Open Streets – Facilitate regular "open street" events and repurposing of the public right-of-way.

- Chapter 4 – Collaboration, Communication & Informed Choices
  - Policy 4.11 – Cohesive Regional Mobility – Communicate and partner with the Southern California Association of Governments, Metro, and adjacent cities and local transit operators to plan and operate a cohesive regional mobility system.
  - Policy 4.14 – Wayfinding – Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels and including traditional signage and digital platforms.

- Chapter 5 – Clean Environments & Healthy Communities
  - Policy 5.1 – Sustainable Transportation – Encourage the development of a sustainable transportation system that promotes environmental and public health.
  - Policy 5.2 – Vehicle Miles Traveled – Support ways to reduce vehicle miles traveled per capita.
  - ENG.16 – Los Angeles River – Implement Greenway 2020 (a locally led effort to complete the bicycle path along the entire 32-mile stretch of the Los Angeles River by 2020) and Los Angeles River Greenway Trail to provide a multi-generational trail and provide active transportation options to disadvantaged communities.

County of Los Angeles

Unincorporated County areas are located in River Frames 2, 3, 4, and 7.

Mobility Plan 2035: An Element of the General Plan (2015)

- Goal M2 – Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths, and trails that promote active transportation and transit use.

- Policy M2.5 – Ensure a comfortable bicycling environment by implementing the following, whenever appropriate and feasible:
  - Appropriate lighting on all bikeways, including those in rural areas.
- Policy M2.7 – Require sidewalks, trails, and bikeways to accommodate the existing and projected volume of pedestrian, equestrian, and bicycle activity, consider both the paved width and the unobstructed width available for walking.
- Policy M2.8 – Connect trails and pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.

- Goal M4 – An efficient multimodal transportation system that serves the needs of all residents.
  - Policy M4.1 – Expand transportation options that reduce automobile dependence.
  - Policy M4.10 – Support the linkage of regional and community-level transportation systems, including multimodal networks.
  - Policy M4.12 – Work with adjacent jurisdictions to ensure connectivity and the creation of an integrated regional network.
- Goal M7 – Transportation networks that minimize negative impacts to the environment and communities.
  - Policy M7.1 – Minimize roadway runoff through the use of permeable surface materials, and other low impact designs, wherever feasible.

Community Climate Action Plan (2015)

- LUT-1 – Bicycle Programs and Supporting Facilities – Construct and improve bicycle infrastructure to increase bicycling and bicyclist access to transit and transit stations/hubs. Increase bicycle parking and "end-of-trip" facilities.
- LUT-11 – Sustainable Pavements Program – Reduce energy consumption and waste generation associated with pavement maintenance and rehabilitation.

City of Lynwood

The City of Lynwood is located in River Frame 3.

City of Lynwood General Plan (2003)

- Policy CIRC-2.2 – Lane and Trails Policy – Provide a circulation network that accommodates the safe and efficient movement of cyclists on bike lanes and bike trails.
  - CIRC Implementation Measure 25.0 – Off-street bicycle trails should use open space corridors, flood control, and utility easements where possible. Such trails shall minimize automobile cross traffic within the City.

City of Maywood

The City of Maywood is located in River Frame 4.

City of Maywood General Plan – Mobility Element (1993)

- Policy 4.3 – Support efforts to link the bicycle path system to the LA River Bicycle Trail. Coordinate with organizations such as the Northeast Trees to create regional bicycle path system.
    - Action C-12 – Coordinate with the County and Metro to improve City bicycle route connections to the Los Angeles County bicycle route system. Encourage links to transit stations and the LA River Bicycle Trail.

City of Paramount

The City of Paramount is located in River Frame 3.

Paramount General Plan – Mobility Element (2007)

- Land Use Element Policy 17 – The City of Paramount will develop new open space areas in utility rights-of-way, along the LA River, and as part of future park development.

City of South Gate

The City of South Gate is located in River Frame 3.

Bicycle Transportation Plan (2012)

- Policy 1 – The City will develop a complete bikeway network throughout South Gate.
    - The proposed bikeway network includes several new bicycle and pedestrian bridges over the I-710 and the LA River, and several access improvements to the bicycle path on the LA River.

South Gate General Plan 2035 – Mobility Element (2014)

- Policy ME 1.2 P.1 – The City should improve the street system by adding to the street grid in the north-east part of the City to relieve the Firestone/Atlantic intersection, including providing additional overcrossings of the LA River and the I-710 freeway, and an additional north-south collector street between Atlantic Avenue and the LA river.
- Policy ME 2.1 P.1 – The City should develop and maintain a citywide bicycle network of off-street bike paths, on-street bike lanes, and bike streets.
- Implementation Action ME 1.4 – Area Bounded by I-710, Tweedy Boulevard, Atlantic Avenue, UP Railroad Corridor (east-west): Conduct studies to explore/implement improvements to the currently lacking street grid in this area in order to relieve pressure on the intersection of Firestone Boulevard and Atlantic Avenue.
- Implementation Action ME 1.9 – Independence Avenue/Ardmore Avenue: Extend eastwards as a Collector Street to Atlantic Avenue, then easterly across the LA River and I-710 Freeway (with possible ramp connection) to Garfield Avenue. The cross-section should include bike lanes.

- Implementation Action ME 1.11 – Southern Avenue: Extend east, as an Avenue (four lanes), across the LA River and the I-710 Freeway to connect to Garfield Avenue.
- Action ME 21 – Improve bicycle access to the regional bike paths on the LA River and the Rio Hondo Channel.

South Gate General Plan 2035 – Green City Element (2014)

- GC 2.1 P.1 – New trails should contribute to increased connectivity across the City by reducing pedestrian and cycle travel times, integrating with existing sidewalks, bike lanes, and other bicycle/pedestrian infrastructure, and providing an alternative mode of access to goods services, and other desirable destinations.
- GC 2.1 P.3 – Whenever possible, trails should be multi-use, accommodating both cyclists and pedestrians.
- GC 2.1 P.5 – The City should enhance the existing Class I bicycle facilities that run along the east side of the Rio Hondo Channel and the west side of the LA River, transforming them from underutilized pathways to beautified, connected pedestrian and bicycle thoroughfares with amenities such as benches, tables, and lighting.
- GC 2.1 P.6 – The City will pursue a Class I trail along the LADWP right-of-way that connects the west side of the City to the LA River.
- GC 2.1 P.7 – The City will pursue a Class I trail along the railroad right-of-way between Ardmore and Independence Avenues. This trail should connect the College District with the potential Gateway Transit Village and the LA River.
- GC 2.2 P.1 – The City will plan for the continuation of equestrian facilities along the LA River and Rio Hondo Channel.

City of Vernon

The City of Vernon is located in River Frame 4.

City of Vernon General Plan – Circulation Element (2015)

- Policy CI-1.1 – Continue to improve the street system to meet the minimum standards contained in this Element.
    - Atlantic Boulevard Bridge Widening – The City of Vernon is planning to widen the Atlantic Boulevard Bridge over the LA River. The project plans to widen bridge to six lanes.
- Policy CI-1.12 – Cooperate with the Metropolitan Transportation Authority and other local agencies in their efforts to complete a bicycle path along the levee of the LA River connecting to adjacent jurisdictions.

City of Vernon General Plan – Resources Element (2015)

- Policy R-3.2 – Cooperate with regional efforts to upgrade the appearance and open space value of the LA River Channel.

Bicycle Master Plan (2017)

- Objective 1.B – Eliminate barriers and gaps in the bikeway network.
- Strategy 1.B.1 – Pursue construction of a Class I bicycle path along the LA River between the current path terminus at Atlantic Boulevard and the northern city boundary.
- Strategy 1.B.2 – Identify connections to and from the existing and planned LA River bicycle path.
- Strategy 1.B.3 – Identify opportunities to improve bicycle connectivity across the LA River and I-710.
- Strategy 1.B.4 – Coordinate with neighboring jurisdictions to construct bikeways that provide continuous connections across jurisdictional boundaries.

2.2.3.5 1996 Los Angeles River Revitalization Master Plan

The *1996 Los Angles River Revitalization Master Plan* was adopted by Los Angeles County in 1996. Its overarching goal was to improve the aesthetic, recreational, and environmental condition of the LA River and its tributary, the Tujunga Wash, while still recognizing the primary need for flood management. The plan envisioned a continuous bikeway along both the LA River and the Tujunga Wash. It included strategies to improve conditions for bicyclists using the river path for both transportation and recreational cycling, for example planting a continuous greenway of trees along the river to provide shade and visual relief along the corridor and implementation of zoning requirements and development incentives for properties along the river to potentially increase access to destinations. Plan design guidelines provided a framework for bike path landscaping, access improvements, signage, fencing, and maintenance. Plan projects fell into six groupings:

1. Aesthetic improvements
2. Economic development
3. Environmental enhancements
4. Flood management and water conservation
5. Jurisdiction and public involvement
6. Recreation

Given the primary need for flood management, all projects were to be designed in accordance with USACE and Los Angeles County flood management standards. It was assumed that impacts on the transportation system would be less than significant.

2.2.3.6 Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment

In 2016, the Los Angeles County Department of Parks and Recreation published the *Comprehensive Parks and Recreation Needs Assessment*. The assessment was designed to quantify the need for parks and recreation resources and the potential costs of meeting that need. The assessment identified parks as key urban infrastructure and utilized five metrics to identify overall park need: park condition, park access, park amenities, park land, and park pressure. Park pressure examines the effect on parks of population density by capturing the potential demand if each resident of the County were to use the park closest to them. If population density surrounding a park is high and/or park acreage is low, there is likely to be a park need that would otherwise escape detection using only park land and access metrics. Parks with a small number of acres per 1,000 nearby residents are likely to be more heavily used than parks with a larger number of acres

per 1,000 residents. Areas surrounding the LA River's east-west stretch through the San Fernando Valley were identified as being park-rich, whereas almost all the areas surrounding the river's north-south stretch through Downtown Los Angeles and South Los Angeles were identified as having a high or very high park need.

2.2.3.7 Lower Los Angeles River Revitalization Plan

The *Lower Los Angeles River Revitalization Plan* seeks to achieve the LA River's potential value as a place for relaxation, discovery, recreation, tourism, and economic development. It is organized around three overarching themes: interconnectedness of the people, the culture, the river, and the watershed; nontraditional education pathways and place-based learning, engaging a wide audience; and multiple benefit thinking, leveraging education and connectedness. The *Lower Los Angeles River Revitalization Plan* describes opportunities for improving the environment and quality of life along the river. Along with specific project opportunities, the plan includes four project templates designed to enable rapid revitalization, connectivity, and consistency between new projects. It also provides tools to help prevent the displacement of residents and local businesses as revitalization-induced investments occur throughout the corridor. A Community Stabilization Toolkit (the Toolkit) was developed to highlight policies and programs that can be used to protect the existing river-adjacent communities.

3. Chapter 3 – CEQA Analysis

This chapter assess the impacts of the proposed Project in accordance with Appendix G to the State CEQA Guidelines. Transportation impacts would be considered significant if the Project were found to:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
2. Conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b).
    - State CEQA Guidelines Section 15064.3, subdivision (b) includes the criteria for analyzing transportation impacts, as follows:
        - **Land Use Projects.** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less-than-significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less-than-significant transportation impact.
        - **Transportation Projects.** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less-than-significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
4. Result in inadequate emergency access.

As described in Chapter 1, *Introduction,* this study includes program-level analysis for the *2020 LA River Master Plan*. The two Typical Projects, the six KOP categories and related design components, and the overall *2020 LA River Master Plan* implementation in its entirety are analyzed qualitatively at a program level.

3.1 Programs, Plans, Ordinances, or Policies Conflict Review

State CEQA Guidelines Section 15064.3(a) establishes increases in VMT as the most appropriate measure of transportation impacts, and states that other considerations may include effects on transit and non-motorized travel. VMT as a metric for impacts is consistent with a broad range of State legislation, regional, and local programs, and plans and policies, and as such, the State CEQA Guidelines also require consideration of whether a project may conflict either directly or indirectly with plans, policies, programs, or ordinances addressing the circulation system, particularly related to increases in VMT and associated reductions in GHG generation, including transit, roadway, bicycle, and pedestrian facilities. The State has set ambitious targets for reductions in GHG generation, which in turn relates to transportation and required

reductions in VMT, as transportation is the largest generator of GHGs by sector in the State (41 percent). Thus, legislation, programs, plans, and policies that target GHG generation and climate change relate directly to transportation and the need to reduce VMT. The *2020 LA River Master Plan*'s objectives to provide 51 continuous miles of equitable, inclusive, and safe multi-use trails, and to enhance opportunities for equitable access to the river corridor directly support State VMT reduction goals. Its consistency with applicable legislation, plans, and policies is discussed below.

3.1.1 Assessment of Consistency with Programs, Plans, Ordinances, and Policies

Los Angeles County published a draft of the *2020 LA River Master Plan*, an update to the *1996 Los Angeles River Revitalization Master Plan*. The *2020 LA River Master Plan* was guided by three co-equal themes of water, people, and environment. It recognizes the need for resilient systems that address the most complex issues facing the Los Angeles region in order to create 51 miles of connected open space that includes clean water, native habitat, parks, recreation, multiuse trails, art, cultural resources, equity, access, mobility, and economic opportunity, while providing flood risk management. The *2020 LA River Master Plan* builds on over two decades of planning and implementation efforts for the LA River, yet offers a unique approach from previous work in that analysis work was conducted for the entire 834-square-mile watershed.

The *2020 LA River Master Plan* would guide all Los Angeles County departments in decision-making for *2020 LA River Master Plan* projects, likely over the next 25 years needed to complete implementation. Other agencies and municipalities are encouraged to adopt the *2020 LA River Master Plan* for their jurisdictions and partner with Los Angeles County in making the *2020 LA River Master Plan* a reality.

The transportation elements of the *2020 LA River Master Plan* are only one component of a much broader project with a focus on flood management, habitat restoration, biological resource preservation, and community engagement. The *2020 LA River Master Plan* Actions that directly relate to transportation include:

1. Action 2.1 Create 51 miles of connected spaces along the river.
2. Action 2.2 Complete the LA River Trail so that there is a continuous route along the entire river and encourage future routes on both sides where feasible.
3. Action 2.2.1 In places where the right of way is too narrow for a river trail, pursue easements on adjacent property to complete the trail or utilize bridges, platforms, or cantilevers.
4. Action 2.2.2 Increase the extent of multi-use trails parallel to the river with separate paths for active transport, pedestrians, and equestrians, especially in areas of high traffic.
5. Action 2.2.3 Provide bicycle parking and encourage bicycle rental facilities and bike share along the river.
6. Action 4.1 Create welcoming access points and gateways to the LA River and LA River Trail to optimize physical access along its length, on both sides.
7. Action 4.1.1. Make the river trail and gateways universally accessible and inclusive.
8. Action 4.1.2 Prioritize access for areas with limited access or areas that need improvements to existing access points.
9. Action 4.1.3 Prioritize access near major destinations, including schools, libraries, parks, transit stops, and job centers.
10. Action 4.1.4 Encourage the development of safe routes to the river.
11. Action 4.1.5 Obtain easements adjacent to the river to create access.

12. Action 4.2 Increase safe transportation routes to the river.
13. Action 4.2.1 Coordinate with Los Angeles County transportation plans, including Vision Zero, the Bicycle Master Plan, Metro plans, municipally adopted transportation plans, and the Step by Step Pedestrian Plan.
14. Action 4.2.2 Provide pedestrian and bicycle connections across the river every half mile.
15. Action 4.2.3 Encourage all new pedestrian or road bridges over the river to provide pedestrian and bicycle access to the river trail.
16. Action 4.2.4 Provide continuous pathways between the river and nearby recreation spaces.
17. Action 4.2.5 Encourage cities to adopt complete streets policies to better connect neighborhoods to the river.
18. Action 4.2.6 Increase the extent of multiuse trails that connect to the river with separate paths for active transport, pedestrians, and equestrians.
19. Action 4.2.7 Coordinate with transportation agencies to enhance public transit to and along the river.
20. Action 4.2.8 Coordinate with transportation planning to encourage transit lines that cross the river to have stops that provide access to the river trail.
21. Action 4.2.9 Promote the use of public transportation to get to and from the river trail.
22. Action 4.2.10 Develop information materials and signage that highlight the river trail as a transportation route to major job centers and destinations.
23. Action 7.5.2 Encourage existing river-adjacent development to orient its "front door" toward the river and public transportation.

These transportation-related actions can be grouped into three high-level categories:

1. The creation of a continuous trail along both riverbanks for the entirety of the LA River's 51 miles.
2. Provision of equitable, inclusive, and safe parks, open spaces, and trails.
3. Enhancement of opportunities for equitable access to the River Corridor.

For more than the last decade, transportation plans and policies at the State level have been focused on reducing GHG emissions in order to meet State climate goals, particularly by reducing VMT. Local plans and policies have focused on building and expanding bicycle and pedestrian networks, improving roadway safety and reducing collisions, expanding access to open spaces, and improving regional and local transit connectivity.

Implementation of the *2020 LA River Master Plan* would create a continuous 51-mile trail, providing a comfortable off-road backbone facility through Los Angeles County, free of conflicts with vehicles, for long-distance commuting via active transportation modes such as bicycles, scooters, and walking or running. New vehicular, bicycle, pedestrian, and equestrian bridges would increase connectivity between neighborhoods on opposite sides of the river and would reduce the distance required to travel in order to make a crossing using the more limited number of existing, mostly vehicularly focused arterial bridges. Access points would be provided every half mile along the path, increasing neighborhood connectivity to the trails and open spaces developed within the River Corridor, creating new neighborhood parks, and reducing or eliminating the need to travel extended distances via private vehicle to reach a neighborhood park for the tens of thousands of people who live adjacent to the LA River. Pedestrians, bicyclists, and other

micromobility mode users and equestrians would find space for travel and recreation along the River Corridor on multi-use trails designed to equally accommodate them.

Implementation of the *2020 LA River Master Plan* would allow for an increased share of trips to be completed via active transportation instead of by private vehicle. Of importance in a county without many long-distance Class I bicycle trails in developed areas, development of the *2020 LA River Master Plan* would allow for cross-county commuting via active transportation. Increasing the active transportation mode share and the ability to replace long-distance vehicle commute trips with an active transportation trip would reduce VMT, consistent with State and regional policy initiatives, including SB 743 and SCAG's RTP. It is also consistent with RTP Goal 6, which seeks to protect the environment and health of SCAG region residents by improving air quality and encouraging active transportation.

Locally, the Los Angeles County Bicycle Master Plan sets forth a vision for a regional bicycle system of interconnected corridors with support facilities to encourage and make bicycling more comfortable. The robust suite of Common Elements – including pavilions and benches for rest and shade, bicycle racks to lock up a bicycle, bathrooms to meet bodily needs, and cafes for refreshment – intended to be placed frequently along the path would support bicycle trips in general, particularly longer-distance ones, and encourage hesitant bicyclists to hit the trail. Implementation of the *2020 LA River Master Plan* particularly addresses Los Angeles County Bicycle Master Plan Policy 1.4, which supports the development of bicycle facilities that encourage new riders, Implementation Action 1.4.2 to provide landscaping along bikeways where appropriate, and Implementation Action 1.4.4 to allow the use of and promote new and/or innovative bicycle facility designs and standards on County bicycle facilities.

Los Angeles County's Vision Zero Action Plan seeks to achieve the goal of eliminating traffic-related fatalities and severe injuries on unincorporated County roadways by 2035. By providing a framework for construction of a 51-mile continuous off-street path for active transportation trips, implementation of the *2020 LA River Master Plan* would provide Los Angeles County residents with a safe corridor for active transportation trips free of risk from injury or death by collision with a motor vehicle.

Implementation of the *2020 LA River Master Plan* would allow the County to realize many of the goals and policies from its *Mobility Plan 2035*. Goals and policies supported by *2020 LA River Master Plan* implementation include Goal M2, Policies M2.5 and M2.7, Goal M4, Policies M4.1, M4.10, M4.12, and Goal M7 and Policy M7.1, all of which relate to active transportation and reducing automobile dependence.

Similarly, implementation of the *2020 LA River Master Plan* is consistent with active transportation-related goals, policies, and actions in the policies of the other 17 jurisdictions through which the river flows, as detailed in Chapter 2, *Existing Setting*. As such, the *2020 LA River Master Plan* would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, impacts would be less than significant.

3.2 CEQA Guidelines Section 15064.3, subdivision (b) Conflict Review (VMT Analysis)

3.2.1 Background

Authorized in September 2013, SB 743 tasked OPR with developing new guidelines for evaluating transportation impacts under CEQA using methods that no longer focus on measuring automobile delay and LOS. SB 743 directed lead agencies to revise transportation assessment guidelines to include a transportation performance metric that promotes the reduction of greenhouse gas emissions, the development of multimodal networks, and access to diverse land uses. OPR's proposed updates to the State CEQA Guidelines in support of these goals establish VMT as the primary metric for evaluating a project's impacts on the environment and transportation system. The California Natural Resources Agency certified and adopted the State CEQA Guidelines in December 2018; they are now in effect. Los Angeles County approved VMT-based guidelines in July 2020 – the County Guidelines.

SB 743 eliminated vehicle delay and LOS as a CEQA significance criterion. According to the legislative intent contained in SB 743, using VMT as the primary metric of transportation impact analysis will "[m]ore appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

3.2.2 VMT Analysis

The potential impacts on VMT associated with implementation of the *2020 LA River Master Plan* are assessed in the context of CEQA Section 15064.3 and CEQA Appendix G, as implemented in the County's Transportation Impact Analysis Guidelines.

As discussed in Chapter 1, *Introduction,* for the purposes of CEQA, greater construction and operations scenario information, along with detailed design concepts, are provided for the Common Elements Typical Project and the Multi-Use Trails and Access Gateways Typical Project. However, for the purposes of the transportation analysis, two critical pieces of detail regarding the Typical Projects are still unknown: specific project location and capacity details for some of the land use elements of the Common Elements Typical Project (for example, the performance space). Without these pieces of information, trip generation estimates and user vehicle trip lengths for the Typical Projects cannot be developed and therefore cannot be evaluated quantitatively. The Typical Projects have been evaluated qualitatively in this analysis instead, as is allowed by CEQA Section 15064.3, subdivision (b)(3). Similarly, the KOP categories and the overall *2020 LA River Master Plan* implementation have been evaluated qualitatively utilizing the same approach developed to analyze the Typical Projects. The qualitative analysis allows for the identification of the *potential* to result in a significant impact, but not for the identification of a significant impact itself, which can only be determined when subsequent projects' site specifics are known and after quantitative analysis has been done. Given the wide range of individual design components under the six KOP categories, including land use, transportation, and other infrastructure elements that are neither land use nor transportation elements, such as trail lighting or a check dam, that together form the *2020 LA River Master Plan*, each design component under the six KOP categories was evaluated individually for its *potential* to generate VMT and to result in a significant transportation impact. The two Typical Projects were evaluated for their collective *potential* as

a grouping of a specific set of elements to generate VMT and to result in a significant transportation impact, based on whether any of their individual elements were identified as having that potential.

The following screening checklist from the County Guidelines, developed by the County aligned with the OPR Technical Advisory on Evaluating Transportation Impacts (December 2018) for use in transportation impact analysis, was reviewed to help evaluate whether the *2020 LA River Master Plan* would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(1) by causing substantial increases in vehicle miles traveled.

For development projects:

- **Non-Retail Project Trip Generation:** Would the land use project generate a net increase of 110 or more daily trips?
- **Retail Project Site Plan:** Would the project contain retail uses that exceed a net 50,000 square feet of gross floor area?
- **Location-based:** Would the project be located within one-half mile of a major transit stop or high-quality transit corridor?
    - This screening criteria has not been considered in this VMT impact evaluation. Locations of major transit stops or high-quality transit corridors may change over the 25-year buildout timeframe for the *2020 LA River Master Plan*. When specific locations for subsequent projects have been selected, applicability of this screening criteria should be considered based on adjacency to transit stops and corridors existing at that time. Transit accessibility is recommended as a specific criterion in site selection to ensure maximum accessibility via non-private vehicle modes.
- **Residential Land Use:** Would the project consist of 100% affordable housing?

For transportation projects:

- Would the project conflict or be inconsistent with State CEQA Guidelines Section 15064.3, subdivision (b)(2)?; AND
- Would the project include the addition of through-traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges (except managed lanes, transit lanes, and auxiliary lanes of less than one mile in length designed to improve roadway safety)?

Depending on the answer to each of the screening checklist questions above for each individual design component individually and the two Typical Projects, a no impact/less-than-significant impact on VMT determination could be made. For design components under the six KOP categories determined to have no impact or less-than-significant impact on VMT based upon the screening criteria, no further transportation impact analysis, including VMT analysis, is required when they are implemented as individual subsequent projects in the future. For those design components or Typical Projects for which the screening criteria do not automatically identify a no impact or less-than-significant impact on VMT, all that can be known at this time is that that design component or Typical Project has the *potential* to result in a significant VMT impact,

not that it definitively does. Quantitative VMT impact analysis will be required for projects that include those elements in the future when the specific locations of subsequent projects, and their configuration, size, and other project details are developed.

3.2.2.1 Impact Criteria

The County's VMT impact criteria were developed based on guidance from OPR and the California Air Resources Board.

Per the criteria, project VMT impact thresholds as described in the County Guidelines vary depending on the project type, as follows:

- For residential development land use projects, the project would generate residential VMT[1] per capita exceeding 16.8% below the existing[2] residential VMT per capita for the Baseline Area in which the project is located.
- For office land use projects, the project would generate employment VMT[3] per employee exceeding 16.8% below the existing[2] (employment VMT per employee for the Baseline Area in which the project is located.
- For regional serving retail land use projects, entertainment projects, and/or event center land uses, the project would result in a net increase in existing Total VMT.[4] Trips associated with these land uses are typically discretionary trips, which may be either substitute trips to other, closer destinations, or new trips entirely. A project-specific customized approach will be required to estimate VMT for such projects. The methodology should be developed in consultation with and approved by Public Works staff at the outset of the study.
- For unique land uses in which a land use project does not fit into any of the above categories, a project-specific customized approach may be required to estimate daily trips and VMT, but may be based on the existing employment trip element using an approach similar to that for office projects, above. The methodology and thresholds to be used in such cases should be developed in consultation with and approved by Public Works staff at the outset of the study.
- For transportation projects, a VMT impact will be found if the project would increase the project area VMT, as measurable by the SCAG RTP/SCS base year Travel Demand Forecasting model plus an induced travel elasticity factor per lane mile. Transit and active transportation projects and projects that reduce roadway capacity generally also reduce VMT and are therefore presumed to a cause a less-than-significant impact.

The impact criteria are not applicable at a qualitative level of evaluation, but are presented here for informational purposes as they will be applicable for any quantitative transportation impact evaluation required in the future for subsequent projects not screened from VMT analysis, as described above, when

[1] Residential VMT is the VMT generated by Home-Based Work and Home-Based Other trip productions.
[2] As referenced by the VMT reduction goals discussed in the California Air Resources Board, *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Goals*, January 2019, Figure 3.
[3] Employment VMT is the VMT generated by Home-Based Work trip attractions.
[4] As referenced by the VMT reduction goals discussed in the Governor's Office of Planning and Research (OPR), *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018.

subsequent project-specific locations and other relevant information about them is known. Depending on the location of subsequent projects, some project sites will be wholly under County control, while others will be wholly or partly under the control of other local agencies which may choose to utilize their own local transportation impact analysis criteria to evaluate the potential for project impacts.

3.2.2.2 Impact Evaluation

The results of the *2020 LA River Master Plan* VMT impact evaluation are presented in Table 2 for the Typical Projects and Table 3 for the design components under the six KOP categories. As shown, most design components under the six KOP categories that comprise the *2020 LA River Master Plan* are screened from VMT analysis and automatically assumed to result in no impact or a less-than-significant impact. Individual design components under the six KOP categories that are not screened out and which have the potential to result in a significant VMT impact include the following:

- Tier III Pavilions *(Common Element)*
    - Tier III Pavilions are anticipated to accommodate up to 500 visitors per day. Maximum visitation is based on a conservative assumption that each visitor drove to the site alone, which would result in 1,000 daily vehicle trips, exceeding the screening criteria of 110 net daily trips. In reality, many pavilion visitors would arrive to the site via foot or bicycle, and many would be pass-by visitors stopping on their way along the LA River Trail. Once specific sites have been determined, an appropriate mode split can be identified to determine what percentage of visitors would arrive via vehicle, bicycle, foot, or transit. Local transportation characteristics and other databases can be utilized to determine an appropriate average vehicle occupancy to further refine estimates as to the number of daily vehicle trips to the site.
- Art/Performance Spaces *(Common Element)*
    - The scale of performances programmed for the Common Element Art/Performance Spaces is estimated to be small and local. However, maximum daily visitation could reach 500 visitors. Without greater detail as to programming, the potential to result in a VMT impact is unknown at this time.
- Common Elements Typical Project
    - The Common Elements Typical Project is assumed to be inclusive of all 17 Common Elements. Therefore, as two land use elements of the Common Elements Typical Project (pavilions and art/ performance spaces) have the potential to result in a significant VMT impact, the Common Elements Typical Project also has the potential to result in a significant VMT impact. For any future project configuration including one of the above project elements, quantitative VMT analysis will be required once a specific project location has been identified.
- Equestrian Facilities (*Trails and Access Gateways KOP*)
    - Programming and size of facility details will be required to determine the potential for significant VMT impacts. For example, a small equestrian facility to serve neighborhood residents and/or equestrians already on the trail would generate fewer trips than a top regional facility.

Not only would a local-serving facility attract fewer equestrians, but many may walk to a facility within their own neighborhood as opposed to driving to one farther away.

- Terraced Bank (*Channel Modifications KOP*)
    - Terraced banks could serve a variety of flood control or ecological uses, none of which would result in a significant transportation impact. They could also be used to develop amphitheaters for public performances or parks. Site-specific details regarding site programming and acreage will be required to determine the potential for these public serving uses to be eligible for screening or to result in a VMT impact.
- Platform (*Crossings and Platforms KOP*)
    - While crossings typically would provide for transport across the river for pedestrians, bicyclists, and equestrians, platforms are envisioned as wider facilities providing space for parks, recreation, and wildlife habitats. Platforms could host a range of habitat typologies and would allow for wildlife migration. Such habitat-focused uses would not generate VMT beyond incidental maintenance trips, and their impact would automatically be assumed to be less than significant. For the public-serving uses, including parks and recreation spaces, site-specific details regarding site programming and acreage will be required to determine the potential for these uses to be eligible for screening or to result in a VMT impact.
- Side Channel *(Diversions KOP)*
    - Diversions are primarily flood control measures intended to address storm event high water flows, by creating a side channel for additional water flow. During the dry season when water flows are reduced, side channels may also provide the setting for education programs, for example those focused on ecosystem function. Programming and location specifics for the educational uses will need to be provided for screening eligibility or the potential to result in a significant impact to be determined.
- Fields (*Floodplain Reclamation KOP*)
    - Fields may include play fields, farmers markets, or other uses. When more refined programmatic and acreage information is available based on a site-specific project configuration, daily trip generation estimates can be developed to determine the potential for VMT screening or impacts.

TABLE 2
2020 LA RIVER MASTER PLAN VMT IMPACT EVALUATION MATRIX
TYPICAL PROJECTS AND RELATED ELEMENTS

Project Element	Element Location *1 – In LA River Channel 2 – Between Top of Levee and Fenceline 3 – Beyond Fenceline*	Common Element or Kit of Parts Category	Project Type *Transportation / Land Use / Other*	Screened Out?		Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transportation Impact Analysis Required?
				Yes/No	Applicable Screening Criteria[1]			Yes/No
Pavilion	2	Common Element	Land Use	No	Not Screened Out	Yes	Yes	Yes
Café	2	Common Element	Land Use	Yes	Land Use	Yes	No	No
Art/Performance Space	2	Common Element	Land Use	No	Not Screened Out	Yes	Yes	Yes
Access Stairs	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Ramps	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Benches	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Hygiene Facilities and Restrooms	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Trash and Recycling	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Drinking Fountains	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Guard Rail	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Emergency Call Box	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Bike Rack	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Environmental Graphics	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Lighting	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Plantings	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Site Furnishings – Fences and Gates	2	Common Element	Other (infrastructure)	Yes	Not Applicable	No	No	No
Stormwater Best Management Practices	2	Common Element	Other (water management)	Yes	Not Applicable	No	No	No
Common Elements Typical Project (inclusive of all Common Elements)	*2*	*Common Element*		*No*	Not Screened Out	*Yes*	*Yes*	*Yes*
River Gateway	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Pedestrian Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Bike Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Equestrian Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Multi-Use Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Multi-Use Trails and Access Gateways Typical Project (inclusive of all Trails and Access Gateways Elements)	*2*	*Trails and Access Gateways*		*Yes*	*Transportation*	*Yes*	*No*	*No*

Notes

1: Screening criteria are as follows:

LU 3.1.2.1 – Generation of 110 or more net daily trips.

LU 3.1.2.2 – Retail uses with gross floor area > 50,000 sf.

LU 3.1.2.3 – Adjacency to transit.

LU 3.1.2.4 – 100% affordable housing.

TRANS 3.2.1 – Conflict with CEQA Guidelines Section 15064.3, subdivision (b)(2)

TRANS 3.2.2 – Addition of through-traffic lanes.

TABLE 3
2020 LA RIVER MASTER PLAN
VMT IMPACT EVALUATION MATRIX
COMMON ELEMENTS AND KIT OF PARTS

Project Element	Element Location *1 – In LA River Channel* *2 – Between Top of Levee and Fenceline* *3 – Beyond Fenceline*	Common Element or Kit of Parts Category	Project Type *Transportation /Land Use / Other*	Screened Out?		Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transportation Impact Analysis Required?
				Yes/No	Applicable Screening Criteria[1]			Yes/No
River Gateway	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Pedestrian Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Bike Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Equestrian Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Equestrian Facility	2	Trails and Access Gateways	Transportation	No	Not Screened Out	Yes	Yes	Yes
Multi-Use Trail	2	Trails and Access Gateways	Transportation	Yes	Transportation	Yes	No	No
Light Tower/Water Tower	2	Trails and Access Gateways	Other (infrastructure)	Yes	Not Applicable	No	No	No
Lookout	2	Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Boardwalk	2	Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Channel Access	2	Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Vehicular Access[a]	2	Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Underpass/Overpass	2	Trails and Access Gateways	Transportation	Yes	Transportation	No	No	No
Vegetated Buffer	2	Trails and Access Gateways	Other (water management)	Yes	Not Applicable	No	No	No
Habitat Corridor	2	Trails and Access Gateways	Other (water management)	Yes	Not Applicable	No	No	No
Terraced Bank	1	Channel Modifications	Other (water management)	No	Not Screened Out	Yes	Yes	Yes
Check Dam	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Levee	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Armored Channel	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Storm Drain Daylighting	1	Channel Modifications Off-Channel Land Assets	Other (water management)	Yes	Not Applicable	No	No	No
Vertical Wall	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Channel Smoothing	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Texturizing or Grooving	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Concrete Bottom	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Soft Bottom/Concrete Removal	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Sediment Removal	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Bridge Pier Modification	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Access Ramp	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Reshape Low Flow	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Deployable Barrier	1	Channel Modifications	Other (water management)	Yes	Not Applicable	No	No	No
Pedestrian Bridge	1	Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Bike Bridge	1	Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Equestrian Bridge	1	Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Multi-Use Bridge	1	Crossings and Platforms	Transportation	Yes	Transportation	Yes	No	No
Cantilever	1	Crossings and Platforms	Transportation	Yes	Transportation	No	No	No
Platform	1	Crossings and Platforms	Other (infrastructure)	No	Not Screened Out	Yes	Yes	Yes
Diversion Pipe	1	Diversions	Other (water management)	Yes	Not applicable	No	No	No
Side Channel	1	Diversions Floodplain Reclamation	Other (water management)	No	Not Screened Out	Yes	Yes	Yes

Project Element	Element Location *1 – In LA River Channel 2 – Between Top of Levee and Fenceline 3 – Beyond Fenceline*	Common Element or Kit of Parts Category	Project Type *Transportation /Land Use / Other*	Screened Out?		Potentially VMT Generating?	Potential to Result in a Significant VMT Impact?	Further Transportation Impact Analysis Required?
				Yes/No	Applicable Screening Criteria[1]			Yes/No
Diversion Channel	1	Diversions	Other (water management)	Yes	Not applicable	No	No	No
Pump	1	Diversions	Other (water management)	Yes	Not applicable	No	No	No
Diversion Tunnel	1	Diversions	Other (water management)	Yes	Not applicable	No	No	No
Overflow Weir	1	Diversions	Other (water management)	Yes	Not applicable	No	No	No
Underground Gallery	1	Diversions	Other (water management)	Yes	Not applicable	No	No	No
Wetland (In-Channel)	1	Floodplain Reclamation Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Wetland (Off-Channel)	3	Floodplain Reclamation Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Naturalized Bank	1	Floodplain Reclamation	Other (water management)	Yes	Not applicable	No	No	No
Braided Channel	1	Floodplain Reclamation	Other (water management)	Yes	Not applicable	No	No	No
Field	3	Floodplain Reclamation	Land Use	No	Not Screened Out	Yes	Yes	Yes
Recreation Field	3	Floodplain Reclamation Off-Channel Land Assets	Land Use	No	Not Screened Out	Yes	Yes	Yes
Urban Agriculture/Composting	3	Off-Channel Land Assets	Land Use	No	Not Screened Out	Yes	Yes	Yes
Solar Power	3	Off-Channel Land Assets	Other (infrastructure)	Yes	Not applicable	No	No	No
Natural Treatment System	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Surface Storage	3	Floodplain Reclamation Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Subsurface Storage	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Injection Well	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Water Treatment Facility	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Purple Pipe Connection	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Dry Well	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Spreading Ground	3	Off-Channel Land Assets	Other (water management)	Yes	Not applicable	No	No	No
Affordable Housing	3	Off-Channel Land Assets	Land Use	Yes	Land Use	No	No	No
Art and Culture Facility	3	Off-Channel Land Assets	Land Use	No	Not Screened Out	Yes	Yes	Yes

Notes

[a] Vehicular access is for maintenance vehicles.

1: Screening criteria are as follows:

LU 3.1.2.1 – Generation of 110 or more net daily trips.

LU 3.1.2.2 – Retail uses with gross floor area > 50,000 sf.

LU 3.1.2.3 – Adjacency to transit.

LU 3.1.2.4 – 100% affordable housing.

TRANS 3.2.1 – Conflict with CEQA Guidelines Section 15064.3, subdivision (b)(2)

TRANS 3.2.2 – Addition of through-traffic lanes.

- Recreation Fields (*Floodplain Reclamation KOP, Off-Channel Land Assets KOP*)
    - Programming and size of facility details will be required to determine the potential for significant VMT impacts. For example, recreation fields with four individual soccer fields supporting regional tournaments will have a very different trip generation, mode split, and trip length profile from a neighborhood park with one softball diamond.
- Urban Agriculture/Composting (*Off-Channel Land Assets KOP*)
    - Urban agriculture may include community gardens and compost facilities or plant nurseries. More refined programmatic, size, and location information will be required to determine the potential to result in a VMT impact.
- Art and Culture Facilities (*Off-Channel Land Assets KOP*)
    - Arts and culture facilities could include museums, galleries, libraries, or other public facilities. More refined programmatic and size information will be required to determine the potential to result in a VMT impact.

3.2.2.3 Construction Period Impact Evaluation

Development of subsequent projects under the *2020 LA River Master Plan* may result in short-term increases in VMT. Construction impacts, if they occur, can be discussed on a qualitative basis.

3.2.2.4 Overall 2020 LA River Master Plan Implementation

As described in the *2020 LA River Master Plan*, it is anticipated that approximately 107 projects ranging in size from extra-small (less than 1 acre) to extra-large (150+ acres/10+ miles) would be implemented under the *2020 LA River Master Plan* over the 25-year period to meet the *2020 LA River Master Plan*'s nine objectives. These would include the Typical Projects that would be implemented along the river and subsequent projects composed of the KOP categories' multi-benefit design components. These elements together comprise the entirety of the *2020 LA River Master Plan*.

Tables 2 and 3 identified that the Common Elements Typical Project, including individual Common Elements such as pavilions and art/performance spaces, have the potential to result in a significant impact on VMT, as do some design components under the six KOP categories. Given the expected cadence of Common Elements as well as the overall number of projects that could be developed under the *2020 LA River Master Plan*, the potential exists for the implementation of the entirety of the *2020 LA River Master Plan* to incrementally result in a significant impact on VMT. As noted above, each individual project's potential to result in a significant transportation impact will need to be evaluated by the project proponent when the project's exact location, configuration, and scale are known, and cannot be determined based on the current level of project specificity.

Recent County modeling efforts completed during the County process to develop SB 743 compliant CEQA thresholds and guidelines utilized the SCAG transportation demand forecasting model to identify unique average or baseline per capita and per employee VMT for the north and south areas of the County for residential vehicle trips that start within the County or employment trips that end there, and to forecast

2040 conditions. While the horizon year of the County's modeling efforts for that project are 5 years before the 2045 horizon year for the *2020 LA River Master Plan,* it is likely that the long-term VMT trends identified in that effort would continue in the years between 2040 and 2045. In general, VMT on a per capita basis is projected to go down throughout the SCAG region due to increasing population and job density, infill development, and greater active transportation and transit usage. Within the *2020 LA River Master Plan* study area, areas with residential VMT per capita lower than the baseline established in the County's SB 743 modeling efforts increase to almost a quarter of all land area from 10 percent today. Similarly, areas with employee VMT below County baseline are forecast to increase from 10 percent today to almost 20 percent by 2040. This trend of decreasing VMT in general and specifically within the study area also decreases the likelihood of finding a significant impact on VMT resulting from implementation of the full *2020 LA River Master Plan* as projects are brought forth over time.

Despite the VMT trend, 11 project elements were not screened from requiring VMT analysis and were determined to be potentially VMT generating. These elements include Tier III Pavilions; Art/Performance Spaces; Equestrian Facilities, Terraced Banks, Platforms, Side Channels, Fields; Recreation Fields; Urban Agriculture/Composting; and Art and Culture Facilities. The exact location or extent of the 107 projects that could be proposed is currently unknown, as are the Common Elements Typical Projects, which may include any of the 11 non-screened elements. Further CEQA analysis will continue to be required for any project containing one of these potentially impactful project elements. Therefore, while the likelihood of an impact arising from implementation of the full *2020 LA River Master Plan* decreases over time, its impact on VMT is determined to be potentially significant.

3.2.3 Mitigation Program

As noted in the discussion on impacts above, at the current level of analysis, it cannot be determined that implementation of the *2020 LA River Master Plan* would result in any significant impacts on VMT, only that certain design components under the six KOP categories have the *potential* to result in a VMT impact. The Project Element VMT Evaluation Matrix, presented in Tables 2 and 3, identifies those design components under the six KOP categories which are potentially significant and will require further, quantitative CEQA analysis to determine significance once specific details such as location, capacity, and operations uses are available for subsequent projects. Development of these subsequent projects could result in potentially significant impacts. Therefore, mitigation will be necessary to reduce impacts to less-than-significant levels.

3.2.3.1 Impact Determination

Impacts would be potentially significant for any projects including Pavilions, Art/Performance Spaces, Equestrian Facilities, Terraced Banks, Platforms, Diversions, Fields, Recreation Fields, Urban Agriculture/Composting, and Arts and Culture Facilities.

3.2.3.2 Mitigation Measures

Mitigation Measure TRA-1. Implement TDM Strategies and/or Enhancements to Reduce VMT.

The implementing agency (County or other jurisdictional agency) will implement a subsequent project-specific program focused on transportation demand management (TDM) strategies and neighborhood or

site enhancements to reduce VMT, and any other appropriate strategies to address identified impacts and reduce VMT to the River Corridor.

The program to reduce VMT will be based on the suite of eligible TDM strategies included in the County Guidelines, other measures with substantial evidence, or, if the subsequent project is located in an incorporated city, based on that city's list of qualifying VMT mitigation strategies.

3.2.3.3 Significance After Required Mitigation

Implementation of a site-specific TDM and/or site/neighborhood enhancement program would reduce VMT impacts. However, given the range in the possible size and programmatic intensity of the potentially significant design components under the six KOP categories, significant VMT impacts may not be fully mitigable. As such, impacts would remain significant and unavoidable.

3.2.4 Geometric Hazards and Emergency Access

This section discusses impacts regarding the potential increase of hazards due to a geometric design feature and/or provision of inadequate emergency access that generally relates to the design of access points and/or roadway modifications to and from *2020 LA River Master Plan* facilities, and may include safety, operational, or capacity impacts.

LA River access points would be placed approximately every half mile. The specific locations of *2020 LA River Master Plan* river access points are unknown at this time, and therefore it is also unknown whether any existing geometric design hazards exist that will need to be remediated, or whether design of specific access points may require modifications to existing roadway geometries. As such, the *2020 LA River Master Plan* would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

All access points will be required to be designed according to criteria of the County applicable at the time of subsequent project development and, where applicable, of the local agency in which they are located. Among the requirements for river access points is that they must be well-lit and provide clear lines of sight. Development of some access points may require site acquisition or easements in order to provide appropriate, safe access including clear lines of sight.

Alteration to existing or design of new service roads providing access for maintenance and emergency vehicles must meet with County approval or the relevant local agency. Service road access from arterial streets must allow for 20-foot setback of vehicular access gates where feasible and must provide a 40-foot centerline turning radius for truck ingress and egress. To ensure safety along the river during both regular use and in periodic flood events, *2020 LA River Master Plan* Design Guidelines require that the entirety of the 51 miles of the LA River maintain emergency access for first responders and emergency personnel and vehicles, including through the provision of minimum 12-foot paved or unpaved service roads along the top of the channel in a limited landscape zone. The limited landscape zone is designed to extend 17 feet from the channel wall and prohibits any structures or obstructions. Plantings in this area are restricted to low-growing species, not to exceed 5 feet in height, to provide clear lines of site and allow for emergency vehicle access, and will be pruned to maintain emergency access. Existing Los Angeles County Flood

Control District Maintenance Standards for emergency vehicle ingress and egress apply to both existing trails and future *2020 LA River Master Plan* projects.

Some existing conditions along the river do not provide the level of access required by the *2020 LA River Master Plan*. Requests for variances due to right-of-way constraints shall be reviewed and approved by the appropriate jurisdiction(s).

Mile markers would be placed every half mile along the landside of the trail, facing both directions of travel. Mile markers allow people to easily locate themselves along the river for emergency responders.

Given the access point design standards and emergency vehicle access requirements described above, implementation of the *2020 LA River Master Plan* would not substantially increase hazards or conflicts or result in inadequate emergency access. Furthermore, implementation of the *2020 LA River Master Plan* would remediate or improve existing substandard conditions and would therefore contribute to overall safety improvements along the entire river corridor.

3.2.4.1 Construction Period Impacts on Geometric Design and Emergency Access

Construction of *2020 LA River Master Plan* projects may result in short-term roadway operational effects, for example localized increases in delay and traffic queuing that stems from lane closures. Subsequent project-generated roadway operational adverse effects would not be considered an impact under CEQA but are addressed in the County Guidelines under "Section 4 – Additional Non-CEQA Transportation Analysis."

Construction period operational adverse effects would be addressed through development of a construction TMP or worksite traffic control plan for each subsequent project. All *2020 LA River Master Plan* construction traffic management/control plans would be required to account for impacts on geometric design (for example, reduced sight lines due to temporary obstructions such as construction equipment parked in the roadway) and emergency access, both along the river (for example, due to closed access ramps) and to adjacent land uses (for example, due to driveways impacted by lane closures).

Appendix I

Tribal Consultation Letters

Appendix I.1

Gabrieleño Band of Mission Indians - Kizh Nation

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

MARK PESTRELLA, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

January 13, 2021

IN REPLY PLEASE
REFER TO FILE: SWQ-2

Mr. Andrew Salas
Gabrieleño Band of Mission Indians - Kizh Nation
P.O. Box 393
Covina, CA 91723

Dear Mr. Salas:

CONCLUSION OF ASSEMBLY BILL 52 CONSULTATION FOR THE PROPOSED 2020 LA RIVER MASTER PLAN PROJECT LOS ANGELES COUNTY

Thank you for the opportunity to consult with the Gabrieleño Band of Mission Indians - Kizh Nation (Kizh Nation) regarding potential impacts to Tribal Cultural Resources for the 2020 LA River Master Plan (Project). The purpose of this letter is to summarize and conclude the Assembly Bill (AB) 52 consultation between the lead agency, the County of Los Angeles (County), acting through Los Angeles County Public Works (Public Works) and the Kizh Nation (PRC § 21080.3.2(d)).

Pursuant to California Public Resources Code (PRC) Section 21082.3(d), the County intends to certify a Programmatic Environmental Impact Report (PEIR) prepared under the California Environmental Quality Act (CEQA) for the proposed Project and approve the Project.

Public Works sent the formal notification letter to Native American tribes on May 20, 2020. Kizh Nation is one of the Tribes that requested to be informed of projects in its geographic area pursuant to pursuant to PRC Section 21080.3.1. On June 22, 2020, Chairman Salas of the Kizh Nation responded via e-mail requesting consultation because the project area is within Kizh Nation ancestral tribal territory, within a sensitive area, and has potential to cause a substantial adverse change in the significance of Tribal Cultural Resources.

A consultation meeting was held virtually on August 19, 2020, with Chairman Salas and Mr. Matthew Teutimez of the Kizh Nation; Ms. Ariana Villanueva, Ms. Grace Komjakraphan-Tek, and Ms. Christine Wartman from Public Works; and Ms. Tanvi Lal and Ms. Karen Crawford of ICF, the consulting firm to Public Works, with a follow-up virtual consultation meeting held on August 26, 2020. As part of the consultation the Kizh

Nation provided Public Works with territory maps and recommended mitigation language for Cultural and Tribal Cultural Resources in an e-mail dated October 5, 2020. All materials received from the Kizh Nation will be kept confidential in administrative files for reference but not distribution (PRC § 21080.3.2(c)(1)). On October 22, 2020, Public Works shared the draft Cultural and Tribal Cultural Resources mitigation measures, which incorporated the Tribe's input, with Kizh Nation Tribal representatives via e-mail for review and comment. Between November 6, 2020, and December 1, 2020, the Kizh Nation and Public Works discussed over e-mail how the Kizh Nation input is incorporated into the mitigation measures reflected in the draft PEIR and will be included in the Mitigation Monitoring and Reporting Plan to be recommended for adoption as part of the EIR certification process.

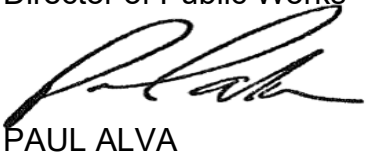
On December 16, 2020, the Kizh Nation agreed to conclude the Native American consultation for the Project via e-mail to Public Works from the Kizh Administrative Specialist. As a result of the consultation, the Tribe's comments regarding mitigation measures on the enclosed have been incorporated into the 2020 LA River Master Plan PEIR. This concludes consultation pursuant to PRC Section 21080.3.2(b).

Public Works greatly appreciates the opportunity to discuss the Project with the Kizh Nation through the collaborative consultation process. Thank you for your valuable input during our consultation.

If you have any questions, please contact me at (626) 458-4325 or at palva@pw.lacounty.gov or Ms. Ariana Villanueva at (626) 458-7146 or AVillanueva@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA
Director of Public Works



PAUL ALVA
Assistant Deputy Director
Stormwater Quality Division

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Enc.

CUL Mitigation Measures

Mitigation Measure CR-1a. Conduct Cultural Resources Assessment for Historical/Built Archaeological, and Tribal Cultural Resources to Determine Presence of Resources.

For later activities under the 2020 LA River Master Plan, during design and prior to construction, the implementing agency will conduct a cultural resources assessment to determine the potential for presence of historical/built, archaeological, and tribal cultural resources.

As part of this assessment, the implementing agency will identify sensitive historical resources, which may be physically outside the construction area, but could be impacted by changes in noise levels or alterations to visual continuity, if these features are important to the significance of the historical resources. During the design phase of the project, the implementing agency will conduct a records search/literature review. The records search will be conducted at the South Coastal Central Information Center and will cover ¼-mile around the location-specific project study area. The records search will provide background information on cultural surveys and site identification and will be supplemented by reviewing the maps/tables of identified historical resources. For the literature review, additional background research conducted online and in person will be conducted.

Required information sources will include, at a minimum:

- NRHP National Park Service online website (https://www.nps.gov/subjects/nationalregister/database-research.htm and https://www.nps.gov/subjects/nationalregister/database-research.htm)
- Office of Historic Preservation (https://ohp.parks.ca.gov/?page_id=30338)
    - California Historical Landmarks
    - California Points of Historical Interest
    - California Historical Resource Inventory System
    - California Register of Historical Resources (CRHR)
- Local historical societies
- Local registers and general plans
- Sacred Land File Search at Native American Heritage Commission

Supplemental information sources that could be consulted include:

- Sanborn maps (available at the Los Angeles Public Library)
- Historic U.S. Geological Survey quadrangles
- Historic aerial maps
- Ethnographic data
- Surface geological data

In addition to conducting literature review and searches, the implementing agency tiering from the PEIR will coordinate with the applicable California Native American Tribe, to verify the presence/absence of TCRs in the area of potential impact. The California Native American Tribe will identify TCRs and provide substantial documentation of the TCR per PRC Section 5024.1. All TCR documentation and information obtained during consultation will be confidential and not included in public documents.

If, following the records search, literature review, sacred land file search, and coordination with the tribe, it is determined that there are no historical/built, archaeological, and tribal cultural resources present in the area of potential impact, then the impact would be less than significant and no further action is required.

If, following the records search, literature review, sacred land file search, and coordination with the tribe it is determined that historical/built, archaeological, or tribal cultural resources are present in the area of potential impact, then the following Mitigation Measures would be implemented.

Mitigation Measure CR-1b. Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources and Implement Findings

- **Conduct Field Survey of API:** The implementing agency will hire qualified architectural historians and/or historians and archaeologists to physically inspect the API, to verify the presence or absence of known historical resources and to document potentially historical resources. This will be accomplished through intensive pedestrian surveys, photo-documentation, and written notes, at a minimum.
- **Record and Identify Cultural Resources:** Each historical resource and archaeological site that has been previously identified will be recorded with an updated California Natural Resources Agency – Department of Parks and Recreation DPR form (Continuation Sheet, DPR 523-L). Newly identified historical resources and archaeological sites will be recorded on DPR 523A (Primary Record), DPR 523B (Building, Structure, Object Record), and DPR 523J (Location Map), with recordation on DPR 523D (District Record), DPR523E (Linear Feature Record) and DPR 523L (Continuation Sheet) completed as appropriate. DPR forms will be completed by a qualified architectural historian, historian or archaeologist.
- Prepare Technical Report and Evaluate Identified Resources: The report will include the background, research, methods, results and evaluation of any identified cultural resources. All cultural resources identified in the project area will be evaluated for their inclusion in the CRHR and, if determined to be historical resources (eligible), then a determination of impacts would occur. Each technical report, which includes proposed subsurface work elements, will need to include a buried site sensitivity analysis which assesses the potential for the location-specific subsequent project study area to contain buried cultural deposits. For areas determined to be sensitive for buried deposits, archaeological monitoring will be required.

If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would not* cause an adverse change in the significance of a significant historical resource, then the impact would be less than significant and no further action is required.

If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would* cause an adverse change in the significance of a significant historical

resource, then the impact would be significant and the following Mitigation Measures will be implemented:

Mitigation Measure CR-2a: **Avoid or Relocate Historical/Built Resources.**

If significant impacts are identified for historical/built resources after completing Mitigation Measure CR-1 above, the implementing agency will implement one of the following measures:

- **Avoidance/Redesign:** Avoid historical resource impacts during the design process and require redesign of the project to avoid impacts, or
- **Relocation**: If a historical resource cannot be avoided but can be relocated (if location, setting, and association are not important aspects of its integrity or support the significance of the resource), then the following actions are required:
    - Contact local historical societies, community resource groups, and/or local groups with an interest in the type and/or style of the historical resource who may have a suitable site for relocation
    - Contact specialized movers of historical resources to develop a plan for preparing of and moving of the resource from its original location, and groundwork necessary for the transplanting of the resource to the new location.
    - Conduct photo documentation of the resource in the original and new locations.

Mitigation Measure CR-2b: Prepare and Implement Historical Resources Mitigation Plan during Construction.

If historical resources are present in the API and cannot be avoided in the design stages nor relocated, then the implementing agency will prepare a Historical Resources Mitigation Plan for Construction. The following actions are required in the preparation of the HRMP:

- Survey or photographic documentation of the historical resource before construction begins as a baseline condition for assessing damage.
- Preparation of protocols for the documentation of inadvertent damage, should it occur, as well as notification to the appropriate owner and/or jurisdiction.
- Strategy for repair of historical resource in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historical Properties (Standards).

Mitigation Measure CR-2c: Prepare Noise and Vibration Plan for Construction.

If noise and/or vibration are considered a potential significant impact of construction, then instrumentation that will capture those impacts will be installed at a suitable location as necessary, i.e. noise and/or vibration monitors and the feedback from those instruments will be reviewed on a regular basis by qualified preservation architects and/or historic preservation specialists. These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, or inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A pre-construction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include

general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially impacted features. Instrumentation may be physically attached to building/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, pre-construction noise surveys will establish base levels of noise if a quiet setting is a character-defining features of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds would be determined on a case-by-case basis. If impacts are discovered due to noise and vibration, then a strategy for repair in accordance with the Standards would be required. See CR-2b.

Mitigation Measure CR-3a: Avoid Impacts on Historical/Built Resources During Operations.

If historical resources are identified within a project API during design of subsequent projects, indirect effects during operations shall be avoided, including redesigning project elements. Specific steps to be taken during operations include but are not limited to the following:

- Secure resource from accessibility or visitation.
- Prepare operations and maintenance/restoration plan to avoid degradation of resource. Identify a baseline of conditions (photo-documentation, written documentation) that is stored with the appropriate jurisdiction (Los Angeles County, or other implementing agency) in the plan, with a requirement that the implementing agency or project proponent conduct visual inspection of the historical resource at least twice a year. The baseline condition report must be supplemented with yearly photographs, yearly updates on condition, and any additional reports related to vandalism, accidental damage due to humans or animals, and damage due to weather or earthquakes.

Mitigation Measure CR-3b: Prepare and Implement Historical Resources Mitigation Plan for Operations.

If historical resources are present in the API and potential effects cannot be avoided in the design stages or the resource cannot be relocated, then the implementing agency will prepare an Historical Resources Mitigation Plan for operations. The following actions will be implemented for the HRMP:

- Survey or photographic documentation of the historical resource will be completed before construction begins as a baseline condition for assessing damage.
- Preparation of protocols for the documentation of inadvertent damage, should it occur, as well as notification to the appropriate owner and/or jurisdiction.
- Strategy for repair of historical resource in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historical Properties (Standards).

Mitigation Measure CR-3c: Prepare Noise and Vibration Plan for Operations.

If determined that noise and/or vibration are considered a potential significant impact of operations, then instrumentation that will capture those impacts will be installed, i.e. noise and/or vibration monitors and the feedback from those instruments will be reviewed on a regular basis by qualified preservation architects and/or historic preservation specialists.

These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A pre-construction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially impacted features. Instrumentation may be physically attached to building/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, pre-construction noise surveys will establish base levels of noise, if a quiet setting is a character-defining features of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds would be determined on a case-to-case basis. If impacts are discovered, then a strategy for repair in accordance with the Standards would be required. See CR-2b.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

The implementing agency will retain a qualified archaeologist defined as an archaeologist who meets the Secretary of the Interior's Standards for professional archaeology to carry out all mitigation measures related to prehistoric and historic period archaeological resources. The qualified archaeologist will be the subsequent project's Principal Investigator and will oversee and direct all archaeologists working on the subsequent project. For TCRs, a Native American Monitor, as determined by the appropriate Native American Tribe(s) during consultation will coordinate with the Qualified Archaeologist as needed for Mitigation Measure Implementation.

Mitigation Measure CR-4b: Avoid Significant Archaeological Sites or TCRs through Establishment of Environmentally Sensitive Areas (ESAs).

If significant archeological sites or TCRs are identified in the API, where feasible, avoidance is the preferred method of treatment. Impacts on significant archaeological resources can be avoided through establishing fencing around the known boundaries of these resources and delineating these locations as Environmentally Sensitive Areas (ESAs). Preservation in place of archaeological materials maintains the critical relationship between archaeological artifacts and their archaeological context. Additionally, should sacred objects or objects of religious importance to Native American groups be identified, preservation in place avoids conflicts with traditional values of groups who ascribe meaning to these resources.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

If avoidance is not feasible, and if the subsequent project-related ground disturbance is anticipated to occur at archaeological sites identified as a result of the archaeological fieldwork and inventory efforts, an archaeologist will be present to monitor the ground-disturbing activity. If ground-disturbing activities are to proceed at archaeological sites, which contain Native American cultural materials, a Native American monitor will be retained in addition to an archaeological monitor. Prior to the commencement of fieldwork, an Archaeological Monitoring Plan (AMP) will be developed to guide archaeological monitoring work during ground-disturbing activities.

The AMP will be prepared and the Native American Consulting Tribes will be provided the opportunity to review and provide comments. The AMP will outline the requirement to conduct Cultural and Tribal Cultural Resource Awareness Training for construction workers and qualifications necessary for archaeological monitors. The plan must also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP must include roles and responsibilities for cultural resources staff and contact information for the Archaeological Principal Investigator, archaeological and Native American monitors, and appropriate management staff.

The AMP must detail monitoring procedures, discovery protocols, and general procedures for documenting and recovering archaeological materials, artifact identification, repository institution identification, associated repository fees, guidelines for preparing the archaeological monitoring, and mitigation final report. The AMP must also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present.

The AMP must require attendance by construction personnel at a preconstruction meeting led by a Qualified Principal Investigator/Project Archaeologist. The Principal Investigator/Project Archaeologist will explain the likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (who to call, construction diversion away from the find, etc.). The AMP must include an example proposed letter regarding transfer of salvaged materials to an appropriate museum curation facility, an example daily monitoring report form, and all other pertinent archaeological resources recordation and analysis forms.

The Native American monitor should be affiliated with a local Native American tribe. At a minimum, the archaeological monitor will meet the Society for California Archaeology professional qualification standards for an archaeological crew leader and will work under the direction of an individual that meets the Secretary of the Interior's Standards and Guidelines for Archaeology.

If unanticipated discoveries are made during archaeological monitoring, then the unanticipated discoveries protocol described in CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consultation with the lead agency and Native American representatives (if the find is Native American in origin), development of a mitigation plan, and potentially development and implementation of a data recovery plan. In the event of an unanticipated discovery of human remains, the archaeological monitor will follow the HSC 7050.5, (CR-7), described in Section 3.4.2.2 of the PEIR.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan (AETP) to Evaluate Potentially Significant Archaeological Discoveries.

If an existing archaeological resource cannot be avoided and has not been evaluated for the CRHR, then evaluation, testing excavations, recovery and treatment will be needed to reduce the impacts to the resource. An Archaeological Evaluation and Treatment Plan (AETP) will be developed that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. Implementation of such a plan may include mechanical and/or manual excavations to provide data on the cultural constituents at the site and the depositional context of such materials (if found to exist). These data can be used to determine the integrity of the site and to make a formal evaluation based on

the eligibility criteria set forth in CEQA and Section 106 of the National Historic Preservation Act for inclusion in the CRHR and NRHP. The AETP should define the parameters of archaeological testing at the site, and the extent of excavation and analysis of any materials recovered. The AETP must also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the AETP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment will be completed. The AETP will be approved by the lead agency and should involve consultation and review by interested Native American groups, if applicable.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

If buried cultural resources of potential significance are discovered inadvertently during ground-disturbing activities, work will be temporarily halted in the area and within 50 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the implementing agency. If the find is prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest and concern regarding the proposed Project will be undertaken.

The Implementing agency's Principal Investigator will notify the lead agency to discuss the significance determination and will also submit a letter indicating next steps required. If the discovery is determined to be not significant in consultation with the lead agency, work will be permitted to continue in the area. If, in consultation with the lead agency, a discovery is determined to be significant, the implementing agency will prepare a mitigation plan to be carried out in accordance with state guidelines. If the resource cannot be avoided, the implementing agency will develop a data recovery plan to ensure collection of sufficient information to address archaeological and historical-period research questions, with results presented in a technical report describing field methods, materials collected, and conclusions. The qualified archaeologist will treat recovered items in accordance with current professional standards by properly proveniencing (establishing the in-situ location at the time of archaeological discovery), cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards as promulgated in 36 CFR 79.

Mitigation Measure CR-6. Avoid Archeological Resources by Establishing Environmentally Sensitive Areas (ESAs) During Operations.

The implementing agency will avoid significant archaeological resources through establishment of ESAs specific to Typical Projects' operations. If physical portions of previously identified archaeological resources are left in place after construction, then ESAs will be established to protect any remaining physical portions of the resource from further direct or indirect affects which may result as part of operations of Typical Projects. The implementing agency will conduct the establishment of ESAs in coordination and consultation with Native American Tribes as necessary. As part of the operational avoidance activities, the implementing agency shall:

- Prepare an operations and maintenance plan to minimize degradation of archaeological resources still extant in the API.

- Design and develop interpretive exhibits to provide education and understanding of the importance to avoid the resource.

Mitigation Measure CR-7: Avoid or Minimize Impacts to Human Remains and Associated or Unassociated Funerary Objects.

If human remains are found, no further disturbance will occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98 (State of California Health and Safety Code Section 7050.5). In the event of an unanticipated discovery of human remains, all work within 50 feet of the find will be halted until the remains have been evaluated by the county coroner, and appropriate action taken in coordination with the NAHC, in accordance with Section 7050.5 of the California Health and Safety Code or, if the remains are Native American, Section 5097.98 of the PRC. If the human remains are determined to be prehistoric, the county coroner will notify the NAHC, which will determine and notify a most likely descendant. The most likely descendant will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Mitigation Measure TCR-1: Conduct Native American Monitoring.

If determined necessary via consultation, in addition to MM CR-4c Native American monitoring requirements, Native American monitoring will be conducted by the tribe that identified the TCR through AB52 consultation. Native American monitors will be present during construction activities in native sediments and will observe all ground-disturbing activities conducted within 100 feet of the TCR. Should unanticipated discoveries be made during Native American monitoring, then the unanticipated discoveries protocol described in MM CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consulting with the lead agency and Native American representatives (if the find is Native American in origin), developing a mitigation plan, and potentially developing and implementing a data recovery plan. In the event of an unanticipated discovery of human remains, the monitor will follow the Section 7050.5 of the Health and Safety Code, (MM CR-7), described in Section 3.4.2.2 of the PEIR.

Appendix I.2

Fernandeño Tataviam Band of Mission Indians

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

MARK PESTRELLA, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

January 13, 2021

IN REPLY PLEASE
REFER TO FILE: SWQ-2

Mr. Jairo Avila
Fernandeño Tataviam Band of Mission Indians
1019 Second Street, Suite 1
San Fernando, CA 91340

Dear Mr. Avila:

CONCLUSION OF ASSEMBLY BILL 52 CONSULTATION FOR THE PROPOSED 2020 LA RIVER MASTER PLAN PROJECT LOS ANGELES COUNTY

Thank you for the opportunity to consult with the Fernandeño Tataviam Band of Mission Indians (FTBMI) regarding potential impacts to Tribal Cultural Resources for the 2020 LA River Master Plan (Project). The purpose of this letter is to summarize and conclude the Assembly Bill (AB) 52 consultation between the lead agency, the County of Los Angeles (County), acting through Los Angeles County Public Works (Public Works) and the FTBMI (PRC § 21080.3.2(d)).

Pursuant to California Public Resources Code (PRC) Section 21082.3(d), the County intends to certify a Programmatic Environmental Impact Report (PEIR) prepared under the California Environmental Quality Act (CEQA) for the Project and approve the Project.

Public Works sent the formal notification letter to Native American tribes on May 20, 2020. The FTBMI is one of the Tribes that requested to be informed of projects in its geographic area pursuant to pursuant to PRC Section 21080.3.1. On June 22, 2020, Mr. Jairo Avila of the FTBMI responded via e-mail requesting consultation because the project area is within FTBMI ancestral tribal territory, within a sensitive area, and has potential to cause a substantial adverse change in the significance of Tribal Cultural Resources.

A consultation meeting was held virtually on July 8, 2020, with Mr. Jairo Avila and Ms. Kimia Fatehi of the FTBMI; Ms. Ariana Villanueva, Ms. Grace Komjakraphan-Tek, and Ms. Christine Wartman from Public Works; and Ms. Tanvi Lal and Ms. Karen Crawford of ICF, the consulting firm to Public Works. As part of the consultation, the FTBMI provided Public Works with territory maps and recommended mitigation language for Cultural and Tribal Cultural Resources in an e-mail dated August 3, 2020. All materials

received from the FTBMI will be kept confidential in administrative files for reference but not distribution (PRC § 21080.3.2(c)(1)). On October 23, 2020, Public Works shared the draft Cultural and Tribal Cultural Resources mitigation measures, which incorporated the Tribe's input, with FTBMI Tribal representatives via e-mail for review and comment. On November 6, 2020, the FTBMI provided additional comments and edits to the mitigation language via e-mail. On November 30, 2020, Public Works responded to the FTBMI comments and incorporated requested edits via e-mail.

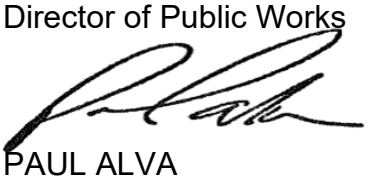
On December 1, 2020, the FTBMI agreed to conclude the Native American consultation for the Project via e-mail to Public Works from Mr. Jairo Avila. As a result of the consultation, the Tribe's comments regarding mitigation measures on the enclosed have been incorporated into the 2020 LA River Master Plan PEIR. This concludes consultation pursuant to PRC Section 21080.3.2(b).

Public Works greatly appreciates the opportunity to discuss the Project with the FTBMI through the collaborative consultation process. Thank you for your input during our consultation.

If you have any questions, please contact me at (626) 458-4325 or at palva@pw.lacounty.gov or Ms. Ariana Villanueva at (626) 458-7146 or AVillanueva@pw.lacounty.gov.

Very truly yours,

MARK PESTRELLA
Director of Public Works



PAUL ALVA
Assistant Deputy Director
Stormwater Quality Division

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Enc.

CUL Mitigation Measures

Mitigation Measure CR-1a. Conduct Cultural Resources Assessment for Historical/Built Archaeological, and Tribal Cultural Resources to Determine Presence of Resources.

For later activities under the 2020 LA River Master Plan, during design and prior to construction, the implementing agency will conduct a cultural resources assessment to determine the potential for presence of historical/built, archaeological, and tribal cultural resources.

As part of this assessment, the implementing agency will identify sensitive historical resources, which may be physically outside the construction area, but could be impacted by changes in noise levels or alterations to visual continuity, if these features are important to the significance of the historical resources. During the design phase of the project, the implementing agency will conduct a records search/literature review. The records search will be conducted at the South Coastal Central Information Center and will cover ¼-mile around the location-specific project study area. The records search will provide background information on cultural surveys and site identification and will be supplemented by reviewing the maps/tables of identified historical resources. For the literature review, additional background research conducted online and in person will be conducted.

Required information sources will include, at a minimum:

- NRHP National Park Service online website (https://www.nps.gov/subjects/nationalregister/database-research.htm and https://www.nps.gov/subjects/nationalregister/database-research.htm)
- Office of Historic Preservation (https://ohp.parks.ca.gov/?page_id=30338)
    - California Historical Landmarks
    - California Points of Historical Interest
    - California Historical Resource Inventory System
    - California Register of Historical Resources (CRHR)
- Local historical societies
- Local registers and general plans
- Sacred Land File Search at Native American Heritage Commission

Supplemental information sources that could be consulted include:

- Sanborn maps (available at the Los Angeles Public Library)
- Historic U.S. Geological Survey quadrangles
- Historic aerial maps
- Ethnographic data
- Surface geological data

In addition to conducting literature review and searches, the implementing agency tiering from the PEIR will coordinate with the applicable California Native American Tribe, to verify the presence/absence of TCRs in the area of potential impact. The California Native American Tribe will identify TCRs and provide substantial documentation of the TCR per PRC Section 5024.1. All TCR documentation and information obtained during consultation will be confidential and not included in public documents.

If, following the records search, literature review, sacred land file search, and coordination with the tribe, it is determined that there are no historical/built, archaeological, and tribal cultural resources present in the area of potential impact, then the impact would be less than significant and no further action is required.

If, following the records search, literature review, sacred land file search, and coordination with the tribe it is determined that historical/built, archaeological, or tribal cultural resources are present in the area of potential impact, then the following Mitigation Measures would be implemented.

Mitigation Measure CR-1b. Conduct Cultural Resources Investigations for Historical/Built Archaeological, and Tribal Cultural Resources and Implement Findings

- **Conduct Field Survey of API:** The implementing agency will hire qualified architectural historians and/or historians and archaeologists to physically inspect the API, to verify the presence or absence of known historical resources and to document potentially historical resources. This will be accomplished through intensive pedestrian surveys, photo-documentation, and written notes, at a minimum.
- **Record and Identify Cultural Resources:** Each historical resource and archaeological site that has been previously identified will be recorded with an updated California Natural Resources Agency – Department of Parks and Recreation DPR form (Continuation Sheet, DPR 523-L). Newly identified historical resources and archaeological sites will be recorded on DPR 523A (Primary Record), DPR 523B (Building, Structure, Object Record), and DPR 523J (Location Map), with recordation on DPR 523D (District Record), DPR523E (Linear Feature Record) and DPR 523L (Continuation Sheet) completed as appropriate. DPR forms will be completed by a qualified architectural historian, historian or archaeologist.
- Prepare Technical Report and Evaluate Identified Resources: The report will include the background, research, methods, results and evaluation of any identified cultural resources. All cultural resources identified in the project area will be evaluated for their inclusion in the CRHR and, if determined to be historical resources (eligible), then a determination of impacts would occur. Each technical report, which includes proposed subsurface work elements, will need to include a buried site sensitivity analysis which assesses the potential for the location-specific subsequent project study area to contain buried cultural deposits. For areas determined to be sensitive for buried deposits, archaeological monitoring will be required.

If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would not* cause an adverse change in the significance of a significant historical resource, then the impact would be less than significant and no further action is required.

If, following the physical survey of the API, and eligibility determination, it is determined that the later activity *would* cause an adverse change in the significance of a significant historical

resource, then the impact would be significant and the following Mitigation Measures will be implemented:

Mitigation Measure CR-2a: **Avoid or Relocate Historical/Built Resources.**

If significant impacts are identified for historical/built resources after completing Mitigation Measure CR-1 above, the implementing agency will implement one of the following measures:

- **Avoidance/Redesign:** Avoid historical resource impacts during the design process and require redesign of the project to avoid impacts, or
- **Relocation**: If a historical resource cannot be avoided but can be relocated (if location, setting, and association are not important aspects of its integrity or support the significance of the resource), then the following actions are required:
    - Contact local historical societies, community resource groups, and/or local groups with an interest in the type and/or style of the historical resource who may have a suitable site for relocation
    - Contact specialized movers of historical resources to develop a plan for preparing of and moving of the resource from its original location, and groundwork necessary for the transplanting of the resource to the new location.
    - Conduct photo documentation of the resource in the original and new locations.

Mitigation Measure CR-2b: Prepare and Implement Historical Resources Mitigation Plan during Construction.

If historical resources are present in the API and cannot be avoided in the design stages nor relocated, then the implementing agency will prepare a Historical Resources Mitigation Plan for Construction. The following actions are required in the preparation of the HRMP:

- Survey or photographic documentation of the historical resource before construction begins as a baseline condition for assessing damage.
- Preparation of protocols for the documentation of inadvertent damage, should it occur, as well as notification to the appropriate owner and/or jurisdiction.
- Strategy for repair of historical resource in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historical Properties (Standards).

Mitigation Measure CR-2c: Prepare Noise and Vibration Plan for Construction.

If noise and/or vibration are considered a potential significant impact of construction, then instrumentation that will capture those impacts will be installed at a suitable location as necessary, i.e. noise and/or vibration monitors and the feedback from those instruments will be reviewed on a regular basis by qualified preservation architects and/or historic preservation specialists. These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, or inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A pre-construction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include

general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially impacted features. Instrumentation may be physically attached to building/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, pre-construction noise surveys will establish base levels of noise if a quiet setting is a character-defining features of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds would be determined on a case-by-case basis. If impacts are discovered due to noise and vibration, then a strategy for repair in accordance with the Standards would be required. See CR-2b.

Mitigation Measure CR-3a: Avoid Impacts on Historical/Built Resources During Operations.

If historical resources are identified within a project API during design of subsequent projects, indirect effects during operations shall be avoided, including redesigning project elements. Specific steps to be taken during operations include but are not limited to the following:

- Secure resource from accessibility or visitation.
- Prepare operations and maintenance/restoration plan to avoid degradation of resource. Identify a baseline of conditions (photo-documentation, written documentation) that is stored with the appropriate jurisdiction (Los Angeles County, or other implementing agency) in the plan, with a requirement that the implementing agency or project proponent conduct visual inspection of the historical resource at least twice a year. The baseline condition report must be supplemented with yearly photographs, yearly updates on condition, and any additional reports related to vandalism, accidental damage due to humans or animals, and damage due to weather or earthquakes.

Mitigation Measure CR-3b: Prepare and Implement Historical Resources Mitigation Plan for Operations.

If historical resources are present in the API and potential effects cannot be avoided in the design stages or the resource cannot be relocated, then the implementing agency will prepare an Historical Resources Mitigation Plan for operations. The following actions will be implemented for the HRMP:

- Survey or photographic documentation of the historical resource will be completed before construction begins as a baseline condition for assessing damage.
- Preparation of protocols for the documentation of inadvertent damage, should it occur, as well as notification to the appropriate owner and/or jurisdiction.
- Strategy for repair of historical resource in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historical Properties (Standards).

Mitigation Measure CR-3c: Prepare Noise and Vibration Plan for Operations.

If determined that noise and/or vibration are considered a potential significant impact of operations, then instrumentation that will capture those impacts will be installed, i.e. noise and/or vibration monitors and the feedback from those instruments will be reviewed on a regular basis by qualified preservation architects and/or historic preservation specialists.

These instruments will monitor the historical resource for physical changes, such as cracks in the exterior material, inadvertent changes to a historical resource, such as character-defining features falling from a structure, due to increased vibration. A pre-construction survey must be prepared for each individual historical resource to identify existing issues, such as cracks, or other damage, which must include general photos of the historical resource, detailed photos of existing damage, and detailed photos of potentially impacted features. Instrumentation may be physically attached to building/structures or placed in close vicinity if damage would occur from the installation of the measuring instruments. Similarly, pre-construction noise surveys will establish base levels of noise, if a quiet setting is a character-defining features of the historic setting. During and post-construction noise measurements must be taken to determine if ambient or specific noise occurrences are present. Thresholds would be determined on a case-to-case basis. If impacts are discovered, then a strategy for repair in accordance with the Standards would be required. See CR-2b.

Mitigation Measure CR-4a: Retain a Qualified Archaeologist.

The implementing agency will retain a qualified archaeologist defined as an archaeologist who meets the Secretary of the Interior's Standards for professional archaeology to carry out all mitigation measures related to prehistoric and historic period archaeological resources. The qualified archaeologist will be the subsequent project's Principal Investigator and will oversee and direct all archaeologists working on the subsequent project. For TCRs, a Native American Monitor, as determined by the appropriate Native American Tribe(s) during consultation will coordinate with the Qualified Archaeologist as needed for Mitigation Measure Implementation.

Mitigation Measure CR-4b: Avoid Significant Archaeological Sites or TCRs through Establishment of Environmentally Sensitive Areas (ESAs).

If significant archeological sites or TCRs are identified in the API, where feasible, avoidance is the preferred method of treatment. Impacts on significant archaeological resources can be avoided through establishing fencing around the known boundaries of these resources and delineating these locations as Environmentally Sensitive Areas (ESAs). Preservation in place of archaeological materials maintains the critical relationship between archaeological artifacts and their archaeological context. Additionally, should sacred objects or objects of religious importance to Native American groups be identified, preservation in place avoids conflicts with traditional values of groups who ascribe meaning to these resources.

Mitigation Measure CR-4c: Provide Archaeological and Native American Monitoring and Establish Archaeological Monitoring Plan.

If avoidance is not feasible, and if the subsequent project-related ground disturbance is anticipated to occur at archaeological sites identified as a result of the archaeological fieldwork and inventory efforts, an archaeologist will be present to monitor the ground-disturbing activity. If ground-disturbing activities are to proceed at archaeological sites, which contain Native American cultural materials, a Native American monitor will be retained in addition to an archaeological monitor. Prior to the commencement of fieldwork, an Archaeological Monitoring Plan (AMP) will be developed to guide archaeological monitoring work during ground-disturbing activities.

The AMP will be prepared and the Native American Consulting Tribes will be provided the opportunity to review and provide comments. The AMP will outline the requirement to conduct Cultural and Tribal Cultural Resource Awareness Training for construction workers and qualifications necessary for archaeological monitors. The plan must also detail the locations where archaeological monitoring will take place and the depths of excavation that will require monitoring. The AMP must include roles and responsibilities for cultural resources staff and contact information for the Archaeological Principal Investigator, archaeological and Native American monitors, and appropriate management staff.

The AMP must detail monitoring procedures, discovery protocols, and general procedures for documenting and recovering archaeological materials, artifact identification, repository institution identification, associated repository fees, guidelines for preparing the archaeological monitoring, and mitigation final report. The AMP must also include protocols for communication and response should an unanticipated discovery be made at times that archaeological monitors are not present.

The AMP must require attendance by construction personnel at a preconstruction meeting led by a Qualified Principal Investigator/Project Archaeologist. The Principal Investigator/Project Archaeologist will explain the likelihood for encountering archaeological resources, what resources may be discovered, and the methods that will be employed if anything is discovered (who to call, construction diversion away from the find, etc.). The AMP must include an example proposed letter regarding transfer of salvaged materials to an appropriate museum curation facility, an example daily monitoring report form, and all other pertinent archaeological resources recordation and analysis forms.

The Native American monitor should be affiliated with a local Native American tribe. At a minimum, the archaeological monitor will meet the Society for California Archaeology professional qualification standards for an archaeological crew leader and will work under the direction of an individual that meets the Secretary of the Interior's Standards and Guidelines for Archaeology.

If unanticipated discoveries are made during archaeological monitoring, then the unanticipated discoveries protocol described in CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consultation with the lead agency and Native American representatives (if the find is Native American in origin), development of a mitigation plan, and potentially development and implementation of a data recovery plan. In the event of an unanticipated discovery of human remains, the archaeological monitor will follow the HSC 7050.5, (CR-7), described in Section 3.4.2.2 of the PEIR.

Mitigation Measure CR-4d: Develop and Implement an Archaeological Evaluation and Treatment Plan (AETP) to Evaluate Potentially Significant Archaeological Discoveries.

If an existing archaeological resource cannot be avoided and has not been evaluated for the CRHR, then evaluation, testing excavations, recovery and treatment will be needed to reduce the impacts to the resource. An Archaeological Evaluation and Treatment Plan (AETP) will be developed that describes methods and procedures for conducting subsurface excavations to determine the vertical and horizontal extents of an archaeological site. Implementation of such a plan may include mechanical and/or manual excavations to provide data on the cultural constituents at the site and the depositional context of such materials (if found to exist). These data can be used to determine the integrity of the site and to make a formal evaluation based on

the eligibility criteria set forth in CEQA and Section 106 of the National Historic Preservation Act for inclusion in the CRHR and NRHP. The AETP should define the parameters of archaeological testing at the site, and the extent of excavation and analysis of any materials recovered. The AETP must also include guidelines for treatment and curation of any materials recovered during the testing process. Subsequent to implementation of the AETP, a technical report describing the methods and results of archaeological testing and formal evaluations of the archaeological sites and recommendations for further treatment will be completed. The AETP will be approved by the lead agency and should involve consultation and review by interested Native American groups, if applicable.

Mitigation Measure CR-5: Temporarily Halt Ground Disturbance for Unanticipated Discoveries per SOI Standards.

If buried cultural resources of potential significance are discovered inadvertently during ground-disturbing activities, work will be temporarily halted in the area and within 50 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the implementing agency. If the find is prehistoric or Native American in origin, consultation with local Native American tribes who have expressed interest and concern regarding the proposed Project will be undertaken.

The Implementing agency's Principal Investigator will notify the lead agency to discuss the significance determination and will also submit a letter indicating next steps required. If the discovery is determined to be not significant in consultation with the lead agency, work will be permitted to continue in the area. If, in consultation with the lead agency, a discovery is determined to be significant, the implementing agency will prepare a mitigation plan to be carried out in accordance with state guidelines. If the resource cannot be avoided, the implementing agency will develop a data recovery plan to ensure collection of sufficient information to address archaeological and historical-period research questions, with results presented in a technical report describing field methods, materials collected, and conclusions. The qualified archaeologist will treat recovered items in accordance with current professional standards by properly proveniencing (establishing the in-situ location at the time of archaeological discovery), cleaning, analyzing, researching, reporting, and curating them in a collection facility meeting the Secretary of the Interior's Standards as promulgated in 36 CFR 79.

Mitigation Measure CR-6. Avoid Archeological Resources by Establishing Environmentally Sensitive Areas (ESAs) During Operations.

The implementing agency will avoid significant archaeological resources through establishment of ESAs specific to Typical Projects' operations. If physical portions of previously identified archaeological resources are left in place after construction, then ESAs will be established to protect any remaining physical portions of the resource from further direct or indirect affects which may result as part of operations of Typical Projects. The implementing agency will conduct the establishment of ESAs in coordination and consultation with Native American Tribes as necessary. As part of the operational avoidance activities, the implementing agency shall:

- Prepare an operations and maintenance plan to minimize degradation of archaeological resources still extant in the API.

- Design and develop interpretive exhibits to provide education and understanding of the importance to avoid the resource.

Mitigation Measure CR-7: Avoid or Minimize Impacts to Human Remains and Associated or Unassociated Funerary Objects.

If human remains are found, no further disturbance will occur until the county coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98 (State of California Health and Safety Code Section 7050.5). In the event of an unanticipated discovery of human remains, all work within 50 feet of the find will be halted until the remains have been evaluated by the county coroner, and appropriate action taken in coordination with the NAHC, in accordance with Section 7050.5 of the California Health and Safety Code or, if the remains are Native American, Section 5097.98 of the PRC. If the human remains are determined to be prehistoric, the county coroner will notify the NAHC, which will determine and notify a most likely descendant. The most likely descendant will complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

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If determined necessary via consultation, in addition to MM CR-4c Native American monitoring requirements, Native American monitoring will be conducted by the tribe that identified the TCR through AB52 consultation. Native American monitors will be present during construction activities in native sediments and will observe all ground-disturbing activities conducted within 100 feet of the TCR. Should unanticipated discoveries be made during Native American monitoring, then the unanticipated discoveries protocol described in MM CR-5 will be enacted. This includes halting ground-disturbing activities for a reasonable period of time, consulting with the lead agency and Native American representatives (if the find is Native American in origin), developing a mitigation plan, and potentially developing and implementing a data recovery plan. In the event of an unanticipated discovery of human remains, the monitor will follow the Section 7050.5 of the Health and Safety Code, (MM CR-7), described in Section 3.4.2.2 of the PEIR.