TECHNICAL APPENDIX

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

CENTRAL KITCHEN PROJECT

MITIGATED NEGATIVE DECLARATION (MND)

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
5735 47th Avenue
Sacramento, CA 95824

January 2, 2019

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Prepared for:

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5735 47th Avenue
Sacramento, CA 95824

Prepared by:

Planning Dynamics Group (PDG)

In association with:

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K.D. Anderson, Transportation Consultants
ESA Consultants for Historic and Cultural Assessment

January 2, 2019

APPENDIX A: Air Quality Technical Memorandum

APPENDIX B: Historic Resources Evaluation Report

APPENDIX C: Noise Assessment Technical Report

APPENDIX D: Transportation Technical Memorandum

APPENDIX A: Air Quality Technical Memorandum

ENVIRONMENTAL PERMITTING SPECIALISTS
Air Quality • Permitting • OHSA • RMP/PSM

TECHNICAL MEMORANDUM

To: Trish Davey
Planning Dynamics Group

Date: December 06, 2018

From: Ray Kapahi RK
Environmental Permitting Specialists
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Subject: Summary of Air Quality and Greenhouse Gas Impacts from Proposed Central Kitchen Project, Sacramento City Unified School District

INTRODUCTION

This technical memorandum presents a summary of air quality impacts associated with the proposed Central Kitchen Project. The project is located at 3101 Redding Avenue in Sacramento. Figures 1 and 2 depict the general project location and the project site map.

The proposed project consolidates and streamlines the cooking that currently takes place at individual schools. By shifting the cooking to a centralized location, there is substantial reduction in energy usage as the Central Kitchen would employ modern, energy efficient appliances. These replace the older cooking appliances currently being used.

The project would not lead to not any increase in the number of meals that would be prepared or the amount of solid waste that would be produced. The existing refrigerated warehouse would also remain unchanged. Based on a detailed traffic analysis, there would be a small increase in daily traffic volume associated with the Central Kitchen.

The project site is currently used as the District's Transportation Center, which is being moved to another location. The existing Transportation Services Building will be demolished and a new Central Kitchen Building will be constructed. In addition, existing parking areas would be re-configured to make more efficient use of parking spaces and a new bus wash. Additional improvements include the pedestrian and bicycle facilities along San Joaquin Street and Redding Avenue and - - electric charging stations. These improvements encourage use of bicycles and electric vehicles as an option to using personal (gasoline powered) automobiles.

This Technical Memorandum describes the methodology and results of an Air Quality impact Analysis (AQIA). The AQIA consists of three components:

1. Analysis of impacts to air quality
2. Analysis of greenhouse gas emissions
3. Analysis of public health risks

The significance of impacts is determined by comparing the project emissions (both during construction and operational phases) with thresholds of significance established by the Sacramento Metropolitan Air Quality Management District (SMAQMD). A project is considered to have a significant impact if daily or annual emissions exceed the threshold or if cancer risks exceed 10 in a million.

BASIS FOR AIR QUALITY IMPACT ASSESSMENT

The basis for the air quality assessment are presented for the construction and operational (occupancy) phases separately:

Construction Phase

Construction would begin March 19, 2019 and end November 23, 2020. The main elements consist of:

- Demolition of the existing transportation center building and site clearance;
- Construction of central kitchen building
- Re-configure Parking Area
- Construct bus wash
- Sidewalk and street improvements

The specific project metrics are summarized in Table 1.

To minimize fugitive emissions, construction activities will employ best management practices. These are specified in District Rule 403. The following practices will be followed:

- Water all exposed surfaces twice daily. Exposed surfaces include soil piles, graded areas, unpaved parking areas, staging areas and any access roads.
- Cover all haul trucks transporting soil, sand or other loose materials.
- Use wet power vacuum sweepers to remove any visible trackout mud or dirt on to adjacent roads at least once per day. Dry sweepers would not be used.
- Limit vehicle speeds on unpaved roads to 15 mph.
- Minimize time between grading/site work and paving of roadways, parking lots, etc.
- Limit truck idling to 5 minutes
- Maintain all construction equipment as per manufacturer's specifications.

Operational (Occupancy) Phase

The Central Kitchen would be ready for occupancy November 23, 2020. The main sources of emissions will be mobile sources (employee trips and delivery vans). The daily traffic is estimated to be a maximum of 82 vehicles per day. Of this number, 60 vehicles will be used by employees and will be light duty vehicles. The remaining will be medium duty (diesel) delivery vans. A round trip length of 25 miles is estimated for each trip.

There would not be any change in the amount of solid waste that would be generated, the amount of energy required for meal preparation or outdoor landscaping activities. As noted previously, consolidating meal preparation to a single location would reduce energy consumption. Since modern, high efficiency cooking appliances would be employed.

SUMMARY OF EMISSIONS

Construction and operational emissions were estimated using the CalEEMod emissions model, Version 2017.3.2. This model uses recommended emission factors and provides default values for worker trips and types and number of equipment that is typically used. Since the project involves food preparation, the Land-Use designation of a restaurant was used. The main adjustments to this designation were a much smaller trip generation rate (1.83 trips/day per 1,000 sq feet or 82 trips/day total); no increase in energy and solid waste over current (baseline) operations. In addition, there are no additional landscaping activities over current use of this property.

Construction and operational emissions are summarized in Tables 2 to 5. Tables 2 and 3 provide maximum daily emissions. Tables 4 and 5 provide annual emissions. Actual annual operational emissions would be about 50% of the values shown in Table 5 since there are 180 school days per year. The annual emissions would be (180/365 = 0.49) or 49% of the values shown in Table 5.

The emissions are compared with the thresholds of significance as presented in the May 2015 Sacramento Metropolitan Air Quality Management District (SMAQMD) CEQA Guidelines. The thresholds of significance are in terms of maximum daily and annual emissions. Note that the mass emission thresholds are for NOx, ROG, PM-10, PM-2.5 and GHG only.

SIGNIFICANCE OF IMPACTS

The results of this analysis indicate that air quality impacts for would not be significant for either the construction or operational phases. The significance criteria has been established by SMAQMD and consists of daily and annual emission rates on selected criteria and greenhouse gas emissions. There are additional significance thresholds for release of toxic air contaminants. These thresholds are in terms of health risks (cancer and non-cancer). Project is considered to have a significant impact to public health if cancer risk exceeds 10 in a million or non-cancer hazard index exceeds 1.0.

SUMMARY OF PUBLIC HEALTH RISKS

Impacts to public health risks were evaluated on the basis of exposure toxic air contaminants (TACs). For the current project, the main TAC is diesel particulate matter (DPM). This is released from construction equipment and from some diesel fuelled delivery vans. The analysis using the CalEEMod model provided emission rated of particulate matter (PM-10 from equipment exhaust). Annual emission rated of PM-10 (exhaust) were used to determine the health risks. Two types of health risks were evaluated for the construction and operational phases:

1. Cancer Risk
2. Non-Cancer Risk

Due to the relatively small quantities of annual PM-10 (diesel particulate) that would be released, a formal health risk assessment is not warranted. Instead, a screening level risk analysis was completed for the construction and operational phases. This analysis provides a Risk Prioritization in terms of "High", "Medium" or "Low" for both cancer and non-cancer risks.

The results of the analysis indicate that the facility is considered 'Low' risk for both cancer and non-cancer risks. Technical details are provided in Attachments 3 and 4 for the construction and operational phases respectively.

SUMMARY OF IMPACTS TO AIR QUALITY AND PUBLIC HEALTH RISKS

The results of this analysis demonstrated that impacts to air quality and public health risk are not significant for both the construction and operational phases.

FIGURES

Figure 1

Vicinity Map

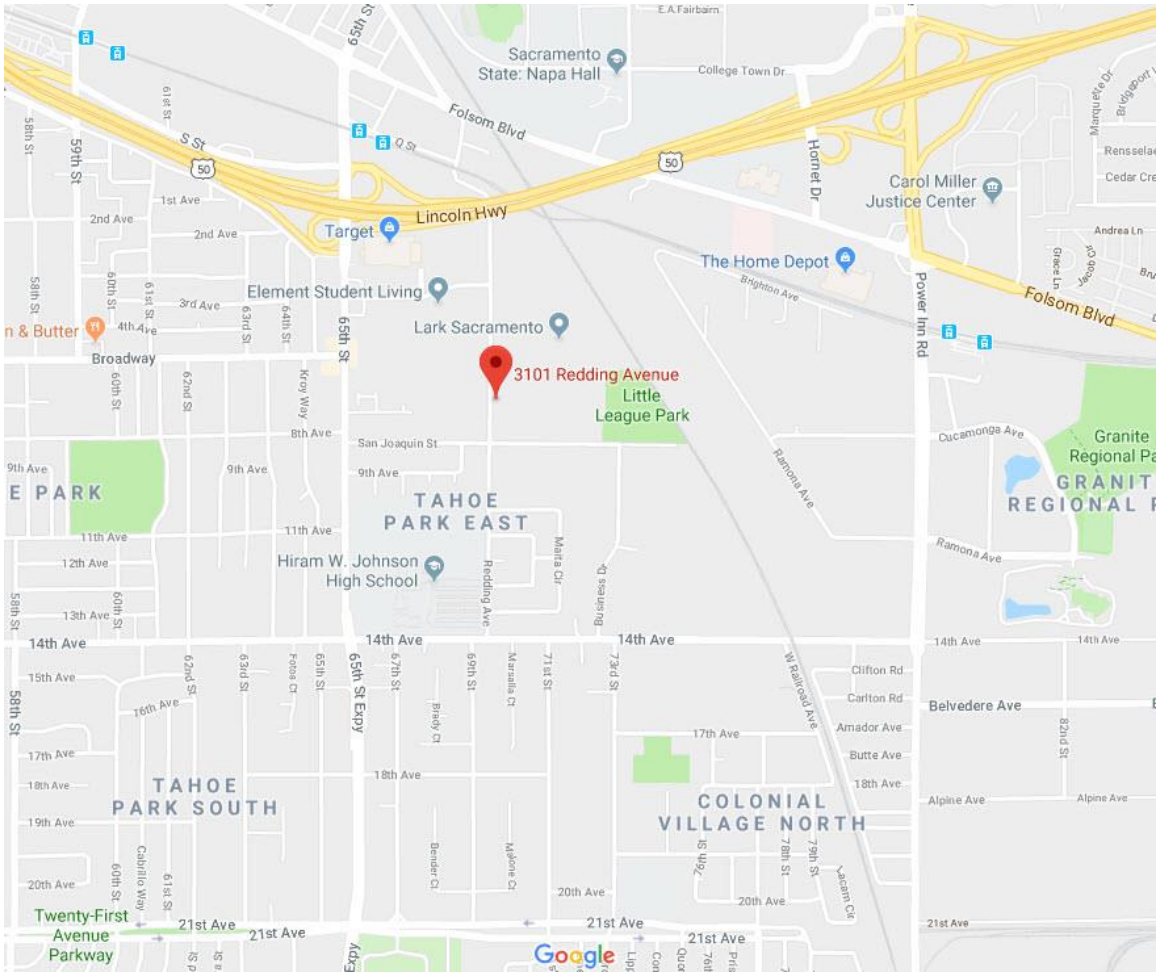
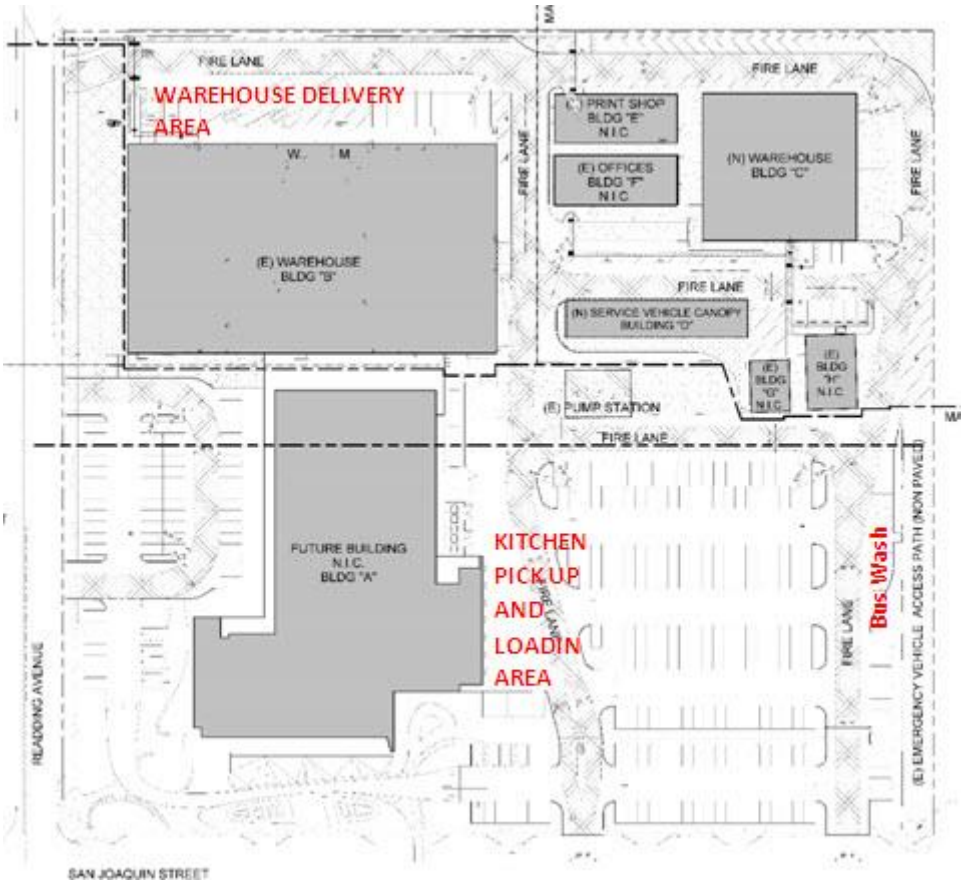


Figure 2

Site Map



TABLES

Table 1 Details of Construction Phase		
Overall Site Area	**10.6 acres**	
Site Work	**6.2 acres**	
Maximum Area to be Paved ***(including sidewalk improvements)***	**2.5 acres**	
Building Area	**44,800 square ft**	
Element	**Schedule**	**Duration**
Start Construction	***March 19, 2019***	
Demolition and Site Clearance	19 March 2019	30 days
Construction of Central Kitchen Building (49,580 sq ft)	29 May, 2019	300 days
Re-configure Parking Areas	July 11, 2019	60 days
Construction of Bus Wash		
Sidewalk and Street Improvements	23 June 2020	60 days
Construction Completed	***23 November 2020***	

Table 2 Summary of Daily Construction Emissions				
Criteria Air Pollutants	Project Emissions (lbs/day)		Threshold (lbs/day)	Significance
NOx	51.2		85	LTS
PM-10	9.43		80	LTS
PM-2.5	5.82		82	LTS
GHG as CO2(e)	5,539		No Daily Threshold	LTS

Table 3 Summary of Daily Operational Emissions				
Criteria Air Pollutants	Project Emissions (lbs/day)		Threshold (lbs/day)	Significance
NOx	0.019		65	LTS
PM-10	0.035		80	LTS
PM-2.5	0.0094		82	LTS
GHG as CO2(e)	38.89		No Daily Threshold	LTS

LTS- Less than Significant

Detailed calculations appear in Attachments 1 and 2.

Table 4 Summary of Annual Construction Emissions				
Criteria Air Pollutants	Project Emissions (tons/yr)		Threshold (tons/yr)	Significance
NOx	2.40		No Threshold	LTS
PM-10	0.24		14.6	LTS
PM-2.5	0.18		15	LTS
GHG as CO2(e)	258		1,100	LTS

Table 5 Summary of Annual Operational Emissions				
Criteria Air Pollutants	Project Emissions (tons/yr)		Threshold (tons/yr)	Significance
NOx	0.00152		No Threshold	LTS
PM-10	0.0044		14.6	LTS
PM-2.5	0.00119		15	LTS
GHG as CO2(e)	5.39		1,100	LTS

LTS- Less than Significant
Detailed calculations appear in Attachments 1 and 2.

ATTACHMENTS

1. Calculation of Maximum Daily Emission Rates

2. Calculation of Annual Emission Rates

3. Calculation of Health Risk Score (Construction Phase)

4. Calculation of Health Risk Scores (Operational Phase)

Attachment 1

Calculation of Maximum Daily Emission Rates

SCUSD Central Kitchen Project Ver 600

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	1.00	1000sqft	10.60	44.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2020
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

SCUSD Central Kitchen Project Ver 600 - Sacramento County, Summer

Project Characteristics -

Land Use - Per Project Specifications

Construction Phase - Project specification

Off-road Equipment -

Off-road Equipment - Project Specification

Off-road Equipment - Proect definition

Off-road Equipment - No Grading

Off-road Equipment - Project Specs

Off-road Equipment - Project specification

Demolition -

Grading - No grading

Vehicle Trips - Per project specs

Landscape Equipment -

Energy Use - Estimate

Water And Wastewater - Project Specs

Solid Waste - Project specification

Construction Off-road Equipment Mitigation - Per project specifications

Fleet Mix - Per project specs

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	30.00	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.55	0.73
tblFleetMix	LDT1	0.04	0.00

tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5830e-003	0.00
tblFleetMix	MCY	6.0040e-003	0.00
tblFleetMix	MDV	0.12	0.27
tblFleetMix	MH	9.7100e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.0760e-003	0.00
tblFleetMix	SBUS	6.1800e-004	0.00
tblFleetMix	UBUS	2.2800e-003	0.00
tblLandUse	LandUseSquareFeet	1,000.00	44.80
tblLandUse	LotAcreage	0.02	10.60
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblSolidWaste	LandfillCaptureGasEnergyRecovery	0.00	100.00
tblSolidWaste	SolidWasteGenerationRate	11.90	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00
tblVehicleTrips	CC_TL	5.00	25.00
tblVehicleTrips	CC_TTP	72.50	0.00
tblVehicleTrips	CNW_TL	6.50	25.00
tblVehicleTrips	CNW_TTP	19.00	27.00
tblVehicleTrips	CW_TL	10.00	25.00
tblVehicleTrips	CW_TTP	8.50	73.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	ST_TR	158.37	0.00

tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	127.15	1.83
tblWater	IndoorWaterUseRate	303,533.71	500,000.00
tblWater	OutdoorWaterUseRate	19,374.49	0.00

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					
2019	5.0621	51.1987	30.0646	0.0556	7.0192	2.5454	9.5646	3.4963	2.3603	5.8566	0.0000	5,503.0516	5,503.0516	1.4504	0.0000	5,539.3110
2020	3.8039	34.9698	33.8218	0.0539	0.1141	1.9816	2.0957	0.0303	1.8546	1.8848	0.0000	5,161.2715	5,161.2715	1.3621	0.0000	5,195.3236
Maximum	**5.0621**	**51.1987**	**33.8218**	**0.0556**	**7.0192**	**2.5454**	**9.5646**	**3.4963**	**2.3603**	**5.8566**	**0.0000**	**5,503.0516**	**5,503.0516**	**1.4504**	**0.0000**	**5,539.3110**

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					
2019	5.0621	51.1987	30.0646	0.0556	6.8899	2.5454	9.4353	3.4646	2.3603	5.8249	0.0000	5,503.0516	5,503.0516	1.4504	0.0000	5,539.3110
2020	3.8039	34.9698	33.8218	0.0539	0.0645	1.9816	2.0461	0.0181	1.8546	1.8727	0.0000	5,161.2715	5,161.2715	1.3621	0.0000	5,195.3236
Maximum	**5.0621**	**51.1987**	**33.8218**	**0.0556**	**6.8899**	**2.5454**	**9.4353**	**3.4646**	**2.3603**	**5.8249**	**0.0000**	**5,503.0516**	**5,503.0516**	**1.4504**	**0.0000**	**5,539.3110**

	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**	**2.51**	**0.00**	**1.53**	**1.25**	**0.00**	**0.57**	**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	1.0800e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	2.4000e-004	2.1400e-003	1.8000e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5660	2.5660	5.0000e-005	5.0000e-005	2.5812
Mobile	5.1400e-003	9.7300e-003	0.1308	3.8000e-004	0.0348	2.0000e-004	0.0350	9.2100e-003	1.8000e-004	9.4000e-003		38.0109	38.0109	9.5000e-004		38.0348
Total	**6.4600e-003**	**0.0119**	**0.1327**	**3.9000e-004**	**0.0348**	**3.6000e-004**	**0.0351**	**9.2100e-003**	**3.4000e-004**	**9.5600e-003**		**40.5771**	**40.5771**	**1.0000e-003**	**5.0000e-005**	**40.6162**

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	1.0800e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	2.4000e-004	2.1400e-003	1.8000e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5660	2.5660	5.0000e-005	5.0000e-005	2.5812
Mobile	5.1400e-003	9.7300e-003	0.1308	3.8000e-004	0.0348	2.0000e-004	0.0350	9.2100e-003	1.8000e-004	9.4000e-003		38.0109	38.0109	9.5000e-004		38.0348
Total	**6.4600e-003**	**0.0119**	**0.1327**	**3.9000e-004**	**0.0348**	**3.6000e-004**	**0.0351**	**9.2100e-003**	**3.4000e-004**	**9.5600e-003**		**40.5771**	**40.5771**	**1.0000e-003**	**5.0000e-005**	**40.6162**

	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	3/15/2019	4/25/2019	5	30	
2	Site Preparation	Site Preparation	3/15/2019	4/25/2019	5	30	
3	Grading	Grading	3/15/2019	3/14/2019	5	0	No Grading Required
4	Building Construction	Building Construction	5/29/2019	7/21/2020	5	300	
5	Paving	Paving	4/8/2020	6/30/2020	5	20	
6	Architectural Coating	Architectural Coating	5/6/2020	6/16/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 67; Non-Residential Outdoor: 22; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	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	6	15.00	0.00	92.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Demolition - 2019

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					0.6927	0.0000	0.6927	0.1049	0.0000	0.1049			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.6927**	**1.7949**	**2.4876**	**0.1049**	**1.6697**	**1.7746**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	0.0267	0.9189	0.2263	2.4600e-003	0.0534	3.9500e-003	0.0573	0.0146	3.7800e-003	0.0184		263.0301	263.0301	0.0153		263.4116
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	0.0703	0.0386	0.5416	1.2300e-003	0.1141	8.1000e-004	0.1149	0.0303	7.5000e-004	0.0310		122.7963	122.7963	3.8600e-003		122.8929
Total	**0.0970**	**0.9575**	**0.7678**	**3.6900e-003**	**0.1675**	**4.7600e-003**	**0.1722**	**0.0449**	**4.5300e-003**	**0.0494**		**385.8264**	**385.8264**	**0.0191**		**386.3045**

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					0.6927	0.0000	0.6927	0.1049	0.0000	0.1049			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**0.6927**	**1.7949**	**2.4876**	**0.1049**	**1.6697**	**1.7746**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	0.0267	0.9189	0.2263	2.4600e-003	0.0331	3.9500e-003	0.0371	9.6300e-003	3.7800e-003	0.0134		263.0301	263.0301	0.0153		263.4116
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	0.0703	0.0386	0.5416	1.2300e-003	0.0645	8.1000e-004	0.0653	0.0181	7.5000e-004	0.0189		122.7963	122.7963	3.8600e-003		122.8929
Total	**0.0970**	**0.9575**	**0.7678**	**3.6900e-003**	**0.0976**	**4.7600e-003**	**0.1024**	**0.0277**	**4.5300e-003**	**0.0323**		**385.8264**	**385.8264**	**0.0191**		**386.3045**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3674	14.4118	6.5868	0.0116		0.7448	0.7448		0.6852	0.6852		1,152.9703	1,152.9703	0.3648		1,162.0900
Total	**1.3674**	**14.4118**	**6.5868**	**0.0116**	**6.0221**	**0.7448**	**6.7669**	**3.3102**	**0.6852**	**3.9954**		**1,152.9703**	**1,152.9703**	**0.3648**		**1,162.0900**

3.3 Site Preparation - 2019

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	0.0000	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	0.0843	0.0463	0.6499	1.4800e-003	0.1369	9.8000e-004	0.1379	0.0363	9.0000e-004	0.0372		147.3555	147.3555	4.6400e-003		147.4714
Total	**0.0843**	**0.0463**	**0.6499**	**1.4800e-003**	**0.1369**	**9.8000e-004**	**0.1379**	**0.0363**	**9.0000e-004**	**0.0372**		**147.3555**	**147.3555**	**4.6400e-003**		**147.4714**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3674	14.4118	6.5868	0.0116		0.7448	0.7448		0.6852	0.6852	0.0000	1,152.9703	1,152.9703	0.3648		1,162.0900
Total	**1.3674**	**14.4118**	**6.5868**	**0.0116**	**6.0221**	**0.7448**	**6.7669**	**3.3102**	**0.6852**	**3.9954**	**0.0000**	**1,152.9703**	**1,152.9703**	**0.3648**		**1,162.0900**

3.3 Site Preparation - 2019

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	0.0000	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	0.0843	0.0463	0.6499	1.4800e-003	0.0774	9.8000e-004	0.0784	0.0217	9.0000e-004	0.0226		147.3555	147.3555	4.6400e-003		147.4714
Total	**0.0843**	**0.0463**	**0.6499**	**1.4800e-003**	**0.0774**	**9.8000e-004**	**0.0784**	**0.0217**	**9.0000e-004**	**0.0226**		**147.3555**	**147.3555**	**4.6400e-003**		**147.4714**

3.4 Grading - 2019

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	0.0000	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
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	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**	**0.0000**	**0.0000**

3.4 Grading - 2019

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	0.0000	0.0000
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	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
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**	**0.0000**	**0.0000**

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	0.0000	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
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	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**	**0.0000**	**0.0000**

3.4 Grading - 2019

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	0.0000	0.0000
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	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
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**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	0.0000	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	0.0000	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 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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	0.0000	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	0.0000	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**

3.5 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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	0.0000	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	0.0000	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 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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.5 Building Construction - 2020

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	0.0000	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	0.0000	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**

3.6 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.6 Paving - 2020

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	0.0000	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	0.0647	0.0343	0.4898	1.2000e-003	0.1141	7.9000e-004	0.1149	0.0303	7.3000e-004	0.0310		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0647**	**0.0343**	**0.4898**	**1.2000e-003**	**0.1141**	**7.9000e-004**	**0.1149**	**0.0303**	**7.3000e-004**	**0.0310**		**119.0269**	**119.0269**	**3.4100e-003**		**119.1122**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3566**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.6 Paving - 2020

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	0.0000	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	0.0647	0.0343	0.4898	1.2000e-003	0.0645	7.9000e-004	0.0653	0.0181	7.3000e-004	0.0188		119.0269	119.0269	3.4100e-003		119.1122
Total	**0.0647**	**0.0343**	**0.4898**	**1.2000e-003**	**0.0645**	**7.9000e-004**	**0.0653**	**0.0181**	**7.3000e-004**	**0.0188**		**119.0269**	**119.0269**	**3.4100e-003**		**119.1122**

3.7 Architectural Coating - 2020

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	0.0206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**0.2628**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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	0.0000	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	0.0000	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 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	0.0206					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**0.2628**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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	0.0000	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	0.0000	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**

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	5.1400e-003	9.7300e-003	0.1308	3.8000e-004	0.0348	2.0000e-004	0.0350	9.2100e-003	1.8000e-004	9.4000e-003		38.0109	38.0109	9.5000e-004		38.0348
Unmitigated	5.1400e-003	9.7300e-003	0.1308	3.8000e-004	0.0348	2.0000e-004	0.0350	9.2100e-003	1.8000e-004	9.4000e-003		38.0109	38.0109	9.5000e-004		38.0348

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	1.83	0.00	0.00	11,895	11,895
Total	1.83	0.00	0.00	11,895	11,895

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
High Turnover (Sit Down	25.00	25.00	25.00	73.00	0.00	27.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.730000	0.000000	0.000000	0.270000	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	2.4000e-004	2.1400e-003	1.8000e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5660	2.5660	5.0000e-005	5.0000e-005	2.5812
NaturalGas Unmitigated	2.4000e-004	2.1400e-003	1.8000e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5660	2.5660	5.0000e-005	5.0000e-005	2.5812

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					
High Turnover (Sit Down Restaurant)	21.8108	2.4000e-004	2.1400e-003	1.8000e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5660	2.5660	5.0000e-005	5.0000e-005	2.5812
Total		**2.4000e-004**	**2.1400e-003**	**1.8000e-003**	**1.0000e-005**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**2.5660**	**2.5660**	**5.0000e-005**	**5.0000e-005**	**2.5812**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	0.0218108	2.4000e-004	2.1400e-003	1.8000e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5660	2.5660	5.0000e-005	5.0000e-005	2.5812
Total		**2.4000e-004**	**2.1400e-003**	**1.8000e-003**	**1.0000e-005**		**1.6000e-004**	**1.6000e-004**		**1.6000e-004**	**1.6000e-004**		**2.5660**	**2.5660**	**5.0000e-005**	**5.0000e-005**	**2.5812**

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	1.0800e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0800e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0800e-003**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	1.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.6000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0800e-003**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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

Attachment 2

Calculation of Annual Emission Rate

SCUSD Central Kitchen Project Ver 600

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High Turnover (Sit Down Restaurant)	1.00	1000sqft	10.60	44.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2020
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Per Project Specifications

Construction Phase - Project specification

Off-road Equipment -

Off-road Equipment - Project Specification

Off-road Equipment - Proect definition

Off-road Equipment - No Grading

Off-road Equipment - Project Specs

Off-road Equipment - Project specification

Demolition -

Grading - No grading

Vehicle Trips - Per project specs

Landscape Equipment -

Energy Use - Estimate

Water And Wastewater - Project Specs

Solid Waste - Project specification

Construction Off-road Equipment Mitigation - Per project specifications

Fleet Mix - Per project specs

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	30.00	0.00
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.55	0.73
tblFleetMix	LDT1	0.04	0.00

tblFleetMix	LDT2	0.20	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.5830e-003	0.00
tblFleetMix	MCY	6.0040e-003	0.00
tblFleetMix	MDV	0.12	0.27
tblFleetMix	MH	9.7100e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.0760e-003	0.00
tblFleetMix	SBUS	6.1800e-004	0.00
tblFleetMix	UBUS	2.2800e-003	0.00
tblLandUse	LandUseSquareFeet	1,000.00	44.80
tblLandUse	LotAcreage	0.02	10.60
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblSolidWaste	LandfillCaptureGasEnergyRecovery	0.00	100.00
tblSolidWaste	SolidWasteGenerationRate	11.90	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	18.00
tblVehicleTrips	CC_TL	5.00	25.00
tblVehicleTrips	CC_TTP	72.50	0.00
tblVehicleTrips	CNW_TL	6.50	25.00
tblVehicleTrips	CNW_TTP	19.00	27.00
tblVehicleTrips	CW_TL	10.00	25.00
tblVehicleTrips	CW_TTP	8.50	73.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	ST_TR	158.37	0.00

tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	WD_TR	127.15	1.83
tblWater	IndoorWaterUseRate	303,533.71	500,000.00
tblWater	OutdoorWaterUseRate	19,374.49	0.00

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					
2019	0.2586	2.4022	1.7785	2.9200e-003	0.1051	0.1382	0.2433	0.0524	0.1294	0.1818	0.0000	256.7146	256.7146	0.0641	0.0000	258.3174
2020	0.2000	1.8394	1.7010	2.7100e-003	3.3000e-003	0.1053	0.1086	8.8000e-004	0.0986	0.0995	0.0000	234.7601	234.7601	0.0608	0.0000	236.2795
Maximum	**0.2586**	**2.4022**	**1.7785**	**2.9200e-003**	**0.1051**	**0.1382**	**0.2433**	**0.0524**	**0.1294**	**0.1818**	**0.0000**	**256.7146**	**256.7146**	**0.0641**	**0.0000**	**258.3174**

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					
2019	0.2586	2.4022	1.7785	2.9200e-003	0.1033	0.1382	0.2414	0.0520	0.1294	0.1813	0.0000	256.7143	256.7143	0.0641	0.0000	258.3171
2020	0.2000	1.8394	1.7010	2.7100e-003	1.8800e-003	0.1053	0.1071	5.3000e-004	0.0986	0.0991	0.0000	234.7598	234.7598	0.0608	0.0000	236.2793
Maximum	**0.2586**	**2.4022**	**1.7785**	**2.9200e-003**	**0.1033**	**0.1382**	**0.2414**	**0.0520**	**0.1294**	**0.1813**	**0.0000**	**256.7143**	**256.7143**	**0.0641**	**0.0000**	**258.3171**

	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**	**3.02**	**0.00**	**0.94**	**1.52**	**0.00**	**0.29**	**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)
2	2-21-2019	5-20-2019	0.8442	0.8442
3	5-21-2019	8-20-2019	0.7032	0.7032
4	8-21-2019	11-20-2019	0.7702	0.7702
5	11-21-2019	2-20-2020	0.7313	0.7313
6	2-21-2020	5-20-2020	0.9336	0.9336
7	5-21-2020	8-20-2020	0.7178	0.7178
		Highest	0.9336	0.9336

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	2.0000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.9252	0.9252	3.0000e-005	1.0000e-005	0.9298
Mobile	5.3000e-004	1.3900e-003	0.0138	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	4.0420	4.0420	1.0000e-004	0.0000	4.0445
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.1769	0.6671	0.8440	6.4000e-004	3.9000e-004	0.9767
Total	**7.7000e-004**	**1.7800e-003**	**0.0142**	**4.0000e-005**	**4.3600e-003**	**6.0000e-005**	**4.4200e-003**	**1.1600e-003**	**5.0000e-005**	**1.2100e-003**	**0.1769**	**5.6343**	**5.8112**	**7.7000e-004**	**4.0000e-004**	**5.9510**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.9252	0.9252	3.0000e-005	1.0000e-005	0.9298
Mobile	5.3000e-004	1.3900e-003	0.0138	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	4.0420	4.0420	1.0000e-004	0.0000	4.0445
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.1769	0.6671	0.8440	6.4000e-004	3.9000e-004	0.9767
Total	**7.7000e-004**	**1.7800e-003**	**0.0142**	**4.0000e-005**	**4.3600e-003**	**6.0000e-005**	**4.4200e-003**	**1.1600e-003**	**5.0000e-005**	**1.2100e-003**	**0.1769**	**5.6343**	**5.8112**	**7.7000e-004**	**4.0000e-004**	**5.9510**

	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	3/15/2019	4/25/2019	5	30	
2	Site Preparation	Site Preparation	3/15/2019	4/25/2019	5	30	
3	Grading	Grading	3/15/2019	3/14/2019	5	0	No Grading Required
4	Building Construction	Building Construction	5/29/2019	7/21/2020	5	300	
5	Paving	Paving	4/8/2020	6/30/2020	5	20	
6	Architectural Coating	Architectural Coating	5/6/2020	6/16/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 67; Non-Residential Outdoor: 22; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	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	6	15.00	0.00	92.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Demolition - 2019

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					0.0104	0.0000	0.0104	1.5700e-003	0.0000	1.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0527	0.5367	0.3309	5.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	51.9395	51.9395	0.0145	0.0000	52.3007
Total	**0.0527**	**0.5367**	**0.3309**	**5.8000e-004**	**0.0104**	**0.0269**	**0.0373**	**1.5700e-003**	**0.0250**	**0.0266**	**0.0000**	**51.9395**	**51.9395**	**0.0145**	**0.0000**	**52.3007**

3.2 Demolition - 2019

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	4.1000e-004	0.0143	3.4600e-003	4.0000e-005	7.8000e-004	6.0000e-005	8.4000e-004	2.1000e-004	6.0000e-005	2.7000e-004	0.0000	3.5567	3.5567	2.1000e-004	0.0000	3.5620
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	9.1000e-004	6.4000e-004	6.9000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5106	1.5106	5.0000e-005	0.0000	1.5118
Total	**1.3200e-003**	**0.0149**	**0.0104**	**6.0000e-005**	**2.4300e-003**	**7.0000e-005**	**2.5000e-003**	**6.5000e-004**	**7.0000e-005**	**7.2000e-004**	**0.0000**	**5.0673**	**5.0673**	**2.6000e-004**	**0.0000**	**5.0737**

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					0.0104	0.0000	0.0104	1.5700e-003	0.0000	1.5700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0527	0.5367	0.3309	5.8000e-004		0.0269	0.0269		0.0250	0.0250	0.0000	51.9394	51.9394	0.0145	0.0000	52.3007
Total	**0.0527**	**0.5367**	**0.3309**	**5.8000e-004**	**0.0104**	**0.0269**	**0.0373**	**1.5700e-003**	**0.0250**	**0.0266**	**0.0000**	**51.9394**	**51.9394**	**0.0145**	**0.0000**	**52.3007**

3.2 Demolition - 2019

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	4.1000e-004	0.0143	3.4600e-003	4.0000e-005	4.8000e-004	6.0000e-005	5.4000e-004	1.4000e-004	6.0000e-005	2.0000e-004	0.0000	3.5567	3.5567	2.1000e-004	0.0000	3.5620
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	9.1000e-004	6.4000e-004	6.9000e-003	2.0000e-005	9.4000e-004	1.0000e-005	9.5000e-004	2.6000e-004	1.0000e-005	2.8000e-004	0.0000	1.5106	1.5106	5.0000e-005	0.0000	1.5118
Total	**1.3200e-003**	**0.0149**	**0.0104**	**6.0000e-005**	**1.4200e-003**	**7.0000e-005**	**1.4900e-003**	**4.0000e-004**	**7.0000e-005**	**4.8000e-004**	**0.0000**	**5.0673**	**5.0673**	**2.6000e-004**	**0.0000**	**5.0737**

3.3 Site Preparation - 2019

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.2162	0.0988	1.7000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	15.6894	15.6894	4.9600e-003	0.0000	15.8135
Total	**0.0205**	**0.2162**	**0.0988**	**1.7000e-004**	**0.0903**	**0.0112**	**0.1015**	**0.0497**	**0.0103**	**0.0599**	**0.0000**	**15.6894**	**15.6894**	**4.9600e-003**	**0.0000**	**15.8135**

3.3 Site Preparation - 2019

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	0.0000	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	1.0900e-003	7.7000e-004	8.2800e-003	2.0000e-005	1.9800e-003	1.0000e-005	2.0000e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.8127	1.8127	6.0000e-005	0.0000	1.8141
Total	**1.0900e-003**	**7.7000e-004**	**8.2800e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**2.0000e-003**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.8127**	**1.8127**	**6.0000e-005**	**0.0000**	**1.8141**

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0205	0.2162	0.0988	1.7000e-004		0.0112	0.0112		0.0103	0.0103	0.0000	15.6893	15.6893	4.9600e-003	0.0000	15.8134
Total	**0.0205**	**0.2162**	**0.0988**	**1.7000e-004**	**0.0903**	**0.0112**	**0.1015**	**0.0497**	**0.0103**	**0.0599**	**0.0000**	**15.6893**	**15.6893**	**4.9600e-003**	**0.0000**	**15.8134**

3.3 Site Preparation - 2019

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	0.0000
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	1.0900e-003	7.7000e-004	8.2800e-003	2.0000e-005	1.1300e-003	1.0000e-005	1.1400e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.8127	1.8127	6.0000e-005	0.0000	1.8141
Total	**1.0900e-003**	**7.7000e-004**	**8.2800e-003**	**2.0000e-005**	**1.1300e-003**	**1.0000e-005**	**1.1400e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.8127**	**1.8127**	**6.0000e-005**	**0.0000**	**1.8141**

3.4 Grading - 2019

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	0.0000	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
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	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**	**0.0000**	**0.0000**

3.4 Grading - 2019

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	0.0000	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	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
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**	**0.0000**	**0.0000**

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	0.0000	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
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	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**	**0.0000**	**0.0000**

3.4 Grading - 2019

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	0.0000
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	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
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**	**0.0000**	**0.0000**

3.5 Building Construction - 2019

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	0.1830	1.6336	1.3302	2.0900e-003		0.1000	0.1000		0.0940	0.0940	0.0000	182.2058	182.2058	0.0444	0.0000	183.3154
Total	**0.1830**	**1.6336**	**1.3302**	**2.0900e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**182.2058**	**182.2058**	**0.0444**	**0.0000**	**183.3154**

3.5 Building Construction - 2019

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	0.0000	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	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
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**	**0.0000**	**0.0000**

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	0.1830	1.6336	1.3302	2.0900e-003		0.1000	0.1000		0.0940	0.0940	0.0000	182.2055	182.2055	0.0444	0.0000	183.3152
Total	**0.1830**	**1.6336**	**1.3302**	**2.0900e-003**		**0.1000**	**0.1000**		**0.0940**	**0.0940**	**0.0000**	**182.2055**	**182.2055**	**0.0444**	**0.0000**	**183.3152**

3.5 Building Construction - 2019

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	0.0000
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	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
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**	**0.0000**	**0.0000**

3.5 Building Construction - 2020

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	0.1537	1.3910	1.2215	1.9500e-003		0.0810	0.0810		0.0762	0.0762	0.0000	167.9172	167.9172	0.0410	0.0000	168.9414
Total	**0.1537**	**1.3910**	**1.2215**	**1.9500e-003**		**0.0810**	**0.0810**		**0.0762**	**0.0762**	**0.0000**	**167.9172**	**167.9172**	**0.0410**	**0.0000**	**168.9414**

3.5 Building Construction - 2020

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	0.0000	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	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
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**	**0.0000**	**0.0000**

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	0.1537	1.3910	1.2215	1.9500e-003		0.0810	0.0810		0.0762	0.0762	0.0000	167.9170	167.9170	0.0410	0.0000	168.9412
Total	**0.1537**	**1.3910**	**1.2215**	**1.9500e-003**		**0.0810**	**0.0810**		**0.0762**	**0.0762**	**0.0000**	**167.9170**	**167.9170**	**0.0410**	**0.0000**	**168.9412**

3.5 Building Construction - 2020

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	0.0000
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	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
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**	**0.0000**	**0.0000**

3.6 Paving - 2020

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	0.0407	0.4220	0.4396	6.8000e-004		0.0226	0.0226		0.0208	0.0208	0.0000	60.0847	60.0847	0.0194	0.0000	60.5705
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0407**	**0.4220**	**0.4396**	**6.8000e-004**		**0.0226**	**0.0226**		**0.0208**	**0.0208**	**0.0000**	**60.0847**	**60.0847**	**0.0194**	**0.0000**	**60.5705**

3.6 Paving - 2020

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	0.0000	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	1.6800e-003	1.1400e-003	0.0125	3.0000e-005	3.3000e-003	2.0000e-005	3.3300e-003	8.8000e-004	2.0000e-005	9.0000e-004	0.0000	2.9283	2.9283	8.0000e-005	0.0000	2.9304
Total	**1.6800e-003**	**1.1400e-003**	**0.0125**	**3.0000e-005**	**3.3000e-003**	**2.0000e-005**	**3.3300e-003**	**8.8000e-004**	**2.0000e-005**	**9.0000e-004**	**0.0000**	**2.9283**	**2.9283**	**8.0000e-005**	**0.0000**	**2.9304**

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	0.0407	0.4220	0.4396	6.8000e-004		0.0226	0.0226		0.0208	0.0208	0.0000	60.0846	60.0846	0.0194	0.0000	60.5704
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0407**	**0.4220**	**0.4396**	**6.8000e-004**		**0.0226**	**0.0226**		**0.0208**	**0.0208**	**0.0000**	**60.0846**	**60.0846**	**0.0194**	**0.0000**	**60.5704**

3.6 Paving - 2020

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	0.0000
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	1.6800e-003	1.1400e-003	0.0125	3.0000e-005	1.8800e-003	2.0000e-005	1.9000e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	2.9283	2.9283	8.0000e-005	0.0000	2.9304
Total	**1.6800e-003**	**1.1400e-003**	**0.0125**	**3.0000e-005**	**1.8800e-003**	**2.0000e-005**	**1.9000e-003**	**5.3000e-004**	**2.0000e-005**	**5.5000e-004**	**0.0000**	**2.9283**	**2.9283**	**8.0000e-005**	**0.0000**	**2.9304**

3.7 Architectural Coating - 2020

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	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0253	0.0275	4.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	3.8299	3.8299	3.0000e-004	0.0000	3.8373
Total	**3.9400e-003**	**0.0253**	**0.0275**	**4.0000e-005**		**1.6600e-003**	**1.6600e-003**		**1.6600e-003**	**1.6600e-003**	**0.0000**	**3.8299**	**3.8299**	**3.0000e-004**	**0.0000**	**3.8373**

3.7 Architectural Coating - 2020

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	0.0000	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	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
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**	**0.0000**	**0.0000**

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	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6300e-003	0.0253	0.0275	4.0000e-005		1.6600e-003	1.6600e-003		1.6600e-003	1.6600e-003	0.0000	3.8299	3.8299	3.0000e-004	0.0000	3.8373
Total	**3.9400e-003**	**0.0253**	**0.0275**	**4.0000e-005**		**1.6600e-003**	**1.6600e-003**		**1.6600e-003**	**1.6600e-003**	**0.0000**	**3.8299**	**3.8299**	**3.0000e-004**	**0.0000**	**3.8373**

3.7 Architectural Coating - 2020

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	0.0000
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	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
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**	**0.0000**	**0.0000**

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	5.3000e-004	1.3900e-003	0.0138	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	4.0420	4.0420	1.0000e-004	0.0000	4.0445
Unmitigated	5.3000e-004	1.3900e-003	0.0138	4.0000e-005	4.3600e-003	3.0000e-005	4.3900e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	4.0420	4.0420	1.0000e-004	0.0000	4.0445

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	1.83	0.00	0.00	11,895	11,895
Total	1.83	0.00	0.00	11,895	11,895

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
High Turnover (Sit Down	25.00	25.00	25.00	73.00	0.00	27.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.730000	0.000000	0.000000	0.270000	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	0.5003	0.5003	2.0000e-005	1.0000e-005	0.5025
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.5003	0.5003	2.0000e-005	1.0000e-005	0.5025
NaturalGas Mitigated	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4248	0.4248	1.0000e-005	1.0000e-005	0.4274
NaturalGas Unmitigated	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4248	0.4248	1.0000e-005	1.0000e-005	0.4274

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					
High Turnover (Sit Down Restaurant)	7960.96	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4248	0.4248	1.0000e-005	1.0000e-005	0.4274
Total		**4.0000e-005**	**3.9000e-004**	**3.3000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.4248**	**0.4248**	**1.0000e-005**	**1.0000e-005**	**0.4274**

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					
High Turnover (Sit Down Restaurant)	7960.96	4.0000e-005	3.9000e-004	3.3000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4248	0.4248	1.0000e-005	1.0000e-005	0.4274
Total		**4.0000e-005**	**3.9000e-004**	**3.3000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.4248**	**0.4248**	**1.0000e-005**	**1.0000e-005**	**0.4274**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1868.61	0.5003	2.0000e-005	1.0000e-005	0.5025
Total		**0.5003**	**2.0000e-005**	**1.0000e-005**	**0.5025**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High Turnover (Sit Down Restaurant)	1868.61	0.5003	2.0000e-005	1.0000e-005	0.5025
Total		**0.5003**	**2.0000e-005**	**1.0000e-005**	**0.5025**

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	2.0000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	2.0000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**1.9000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**1.9000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.8440	6.4000e-004	3.9000e-004	0.9767
Unmitigated	0.8440	6.4000e-004	3.9000e-004	0.9767

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.5 / 0	0.8440	6.4000e-004	3.9000e-004	0.9767
Total		**0.8440**	**6.4000e-004**	**3.9000e-004**	**0.9767**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High Turnover (Sit Down Restaurant)	0.5 / 0	0.8440	6.4000e-004	3.9000e-004	0.9767
Total		**0.8440**	**6.4000e-004**	**3.9000e-004**	**0.9767**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Attachment 3

Calculation of Risk Score

Construction Phase

Air Toxics "Hot Spots" Information and Assessment Act of 1987 Facility Prioritization Scores Prioritization 2.0 SJVAPCD

Name

Applicability	Use this spreadsheet to generate a Prioritization when emission rates of HAPs are known. Entries required in yellow areas, output in grey areas.
Author or updater	Matthew Cegielski
Last Update	January 21, 2011

Facility: SCUSD Central Kitchen Construction Phase
ID#: 19-Nov-18
Project #:
Data Entered by: Based on 0.1382 tons/yr of PM-10 Exhaust (276.4 lbs/yr)
Data Reviewed by: Ray Kapahi
Location

From CalEEMod Annual Emissions for Construction (Page 5)

Inputs	Operating Hours hr/yr	Stack Height m
	300	1

	Receptor Proximity & Proximity Factors (Meters)			Emissions Potency Method			Dispersion Adjustment Method		
				Carc Scores	Non-Carc Scores	Facility Ranking	Carc Scores	Non-Carc Scores	Facility Ranking
	0< R<100	**1.000**		141.46	28.79	**High Priority**	139.79280	28.79385	**High Priority**
	100 R<250	0.250		35.36	7.20	**High Priority**	34.94820	7.19846	**High Priority**
	250 R<500	0.040		5.66	1.15	**Medium Priority**	5.59171	1.15175	**Medium Priority**
	500 R<1000	0.011		1.56	0.32	**Medium Priority**	1.53772	0.31673	**Medium Priority**
	1000 R<1500	0.003		0.42	0.09	**Low Priority**	0.41938	0.08638	**Low Priority**
	1500 R<2000	0.002		0.28	0.06	**Low Priority**	0.27959	0.05759	**Low Priority**

	2000<R 0.001	0.14	0.03	**Low Priority**	0.13979	0.02879	**Low Priority**
Height Adjustment		<100m	<250m	<500m	<1000m	<1500m	<2000m
<20m	60	1	0.25	0.04	0.011	0.003	0.002
20m<= <45m	9	1	0.85	0.22	0.064	0.018	0.009
=>45m	1	1	1	0.9	0.4	0.13	0.066
CAS#	**Substance**	**Annual Emissions**	**Maximum Hourly**	**Average Hourly**	**Disp Adj Method Carc**	**EP Method Carc**	**EP Method Chronic**
79345	1,1,2,2-Tetrachloroethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
79005	1,1,2-Trichloroethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
75343	1,1-Dichloroethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	1,2,3,4,5,6,78-OctaD			0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	1,2,3,4,5,6,78-OctaF			0.00E+00	0.00E+00	0.00E+00	0.00E+00
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
39227286	1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57653857	1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00

72918219	1,2,3,7,8,9-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
19408743	1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57117416	1,2,3,7,8-Pentachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
40321764	1,2,3,7,8-Pentachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00
96128	1,2-Dibromo-3-chloropropane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
78875	1,2-Dichloropropane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
122667	1,2-Diphenylhydrazine			0.00E+00	0.00E+00	0.00E+00	0.00E+00
106887	1,2-Epoxybutane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
106990	1,3-Butadiene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
542756	1,3-Dichloropropene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
1120714	1,3-Propane sultone			0.00E+00	0.00E+00	0.00E+00	0.00E+00
123911	1,4-Dioxane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
42397648	1,6-Dinitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
42397659	1,8-Dinitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
5522430	1-Nitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
39635319	2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
38380084	2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
69782907	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
32598144	2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}			0.00E+00	0.00E+00	0.00E+00	0.00E+00
52663726	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
74472370	2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)			0.00E+00	0.00E+00	0.00E+00	0.00E+00

31508006	2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
65510443	2,3',4,4',5'-PENTACHOROBIPHENYL (PCB 123)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57117314	2,3,4,7,8-Pentachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
51207319	2,3,7,8-Tetrachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00
1746016	2,3,7,8-Tetrachlorodibenzo-P-Dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00
88062	2,4,6-Trichlorophenol			0.00E+00	0.00E+00	0.00E+00	0.00E+00
615054	2,4-Diaminoanisole			0.00E+00	0.00E+00	0.00E+00	0.00E+00
95807	2,4-Diaminotoluene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
121142	2,4-Dinitrotoluene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
53963	2-Acetylaminofluorene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
117793	2-Aminoanthraquinone			0.00E+00	0.00E+00	0.00E+00	0.00E+00
607578	2-Nitrofluorene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
32774166	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57465288	3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
32598133	3,3',4,4'-TETRACHLORBIPHENYL (PCB77)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
91941	3,3'-Dichlorobenzidine			0.00E+00	0.00E+00	0.00E+00	0.00E+00
70362504	3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
56495	3-Methylcholanthrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00

101144	4,4'-Methylene bis(2 Chloroaniline) (MOCA)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
101779	4,4'-Methylenedianiline			0.00E+00	0.00E+00	0.00E+00	0.00E+00
92671	4-Aminobiphenyl			0.00E+00	0.00E+00	0.00E+00	0.00E+00
95830	4-Chloro-o-phenylenediamine			0.00E+00	0.00E+00	0.00E+00	0.00E+00
60117	4-Dimethylaminoazobenzene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57835924	4-Nitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
3697243	5-Methylchrysene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
602879	5-Nitroacenaphthene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
7496028	6-Nitrochrysene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
57976	7,12-Dimethylbenz[a]anthracene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
194592	7H-Dibenzo[c,g]carbazole			0.00E+00	0.00E+00	0.00E+00	0.00E+00
75070	Acetaldehyde			0.00E+00	0.00E+00	0.00E+00	0.00E+00
60355	Acetamide			0.00E+00	0.00E+00	0.00E+00	0.00E+00
107028	Acrolein			0.00E+00	0.00E+00	0.00E+00	0.00E+00
79061	Acrylamide			0.00E+00	0.00E+00	0.00E+00	0.00E+00
79107	Acrylic acid			0.00E+00	0.00E+00	0.00E+00	0.00E+00
107131	Acrylonitrile			0.00E+00	0.00E+00	0.00E+00	0.00E+00
107051	Allyl chloride			0.00E+00	0.00E+00	0.00E+00	0.00E+00
319846	alpha-Hexachlorocyclohexane			0.00E+00	0.00E+00	0.00E+00	0.00E+00
61825	Amitrole			0.00E+00	0.00E+00	0.00E+00	0.00E+00
7664417	Ammonia			0.00E+00	0.00E+00	0.00E+00	0.00E+00
62533	Aniline			0.00E+00	0.00E+00	0.00E+00	0.00E+00
7440382	Arsenic			0.00E+00	0.00E+00	0.00E+00	0.00E+00
1016	Arsenic compounds (inorganic)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
7784421	Arsine			0.00E+00	0.00E+00	0.00E+00	0.00E+00
1332214	Asbestos			0.00E+00	0.00E+00	0.00E+00	0.00E+00
10294403	Barium chromate			0.00E+00	0.00E+00	0.00E+00	0.00E+00
56553	Benz[a]anthracene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
71432	Benzene	1.00E+01	1.00E+00	3.33E-02	8.12E-03	4.93E-01	8.33E-02
92875	Benzidine (and its salts)			0.00E+00	0.00E+00	0.00E+00	0.00E+00
1020	Benzidine-based dyes			0.00E+00	0.00E+00	0.00E+00	0.00E+00
50328	Benzo[a]pyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00
205992	Benzo[b]fluoranthene			0.00E+00	0.00E+00	0.00E+00	0.00E+00

Attachment 4

Calculation of Risk Score

Operational Phase

Name

Air Toxics "Hot Spots" Information and Assessment Act of 1987 Facility Prioritization Scores Prioritization 2.0 SJVAPCD

Applicability	Use this spreadsheet to generate a Prioritization when emission rates of HAPs are known. Entries required in yellow areas, output in grey areas.
Author or updater	Matthew Cegielski
Last Update	January 21, 2011
Facility:	SCUSD Central Kitch Operation Phase
ID#:	10-Dec-18
Project #:	Based on 6.00 E-05 tons/yr (0.12 lbs/yr) PM-10 Exhaust
Data Entered by:	Ray Kapahi
Data Reviewed by:	
Location	

Inputs	Operating Hours hr/yr	Stack Height m
	200	1

0.12

	Receptor Proximity & Proximity Factors (Meters)		Emissions Potency Method			Dispersion Adjustment Method				
			Carc Scores	Non-Carc Scores	Facility Ranking	Carc Scores	Non-Carc Scores	Facility Ranking		
	0< R<100	**1.000**	0.06	0.02	**Low Priority**	0.06048	0.01800	**Low Priority**		**Low Priority**
	100 R<250	0.250	0.02	0.00	**Low Priority**	0.01512	0.00450	**Low Priority**		**Low Priority**
	250 R<500	0.040	0.00	0.00	**Low Priority**	0.00242	0.00072	**Low Priority**		**Low Priority**
	500 R<1000	0.011	0.00	0.00	**Low Priority**	0.00067	0.00020	**Low Priority**		**Low Priority**
	1000 R<1500	0.003	0.00	0.00	**Low Priority**	0.00018	0.00005	**Low Priority**		**Low Priority**
	1500 R<2000	0.002	0.00	0.00	**Low Priority**	0.00012	0.00004	**Low Priority**		**Low Priority**
	2000<R	0.001	0.00	0.00	**Low Priority**	0.00006	0.00002	**Low Priority**		**Low Priority**
Height Adjustment			<100m	<250m	<500m	<1000m	<1500m	<2000m	>=2000m	
<20m	60		1	0.25	0.04	0.011	0.003	0.002	0.001	

20m<= <45m	9	1	0.85	0.22	0.064	0.018	0.009	0.006	
=>45m	1	1	1	0.9	0.4	0.13	0.066	0.042	
CAS#	Substance	Annual Emissions	Maximum Hourly	Average Hourly	Disp Adj Method Carc	EP Method Carc	EP Method Chronic	EP Method Acute	EP Max of Chronic and Acute
79345	1,1,2,2-Tetrachloroethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79005	1,1,2-Trichloroethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75343	1,1-Dichloroethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	1,2,3,4,5,6,78-OctaD			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	1,2,3,4,5,6,78-OctaF			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39001020	1,2,3,4,6,7,8,9-Octachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3268879	1,2,3,4,6,7,8,9-Octachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70648269	1,2,3,4,7,8-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39227286	1,2,3,4,7,8-Hexachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57117449	1,2,3,6,7,8-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57653857	1,2,3,6,7,8-Hexachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19408743	1,2,3,7,8,9-Hexachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57117416	1,2,3,7,8-Pentachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40321764	1,2,3,7,8-Pentachlorodibenzo-P-dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
96128	1,2-Dibromo-3-chloropropane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78875	1,2-Dichloropropane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
122667	1,2-Diphenylhydrazine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
106887	1,2-Epoxybutane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
106990	1,3-Butadiene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
542756	1,3-Dichloropropene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1120714	1,3-Propane sultone			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
123911	1,4-Dioxane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42397648	1,6-Dinitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42397659	1,8-Dinitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5522430	1-Nitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
39635319	2,3,3',4,4',5,5'-HEPTACHLORBIPHENYL (PCB 189)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38380084	2,3,3',4,4',5-HEXACHLOROBIPHENYL (PCB 156)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
69782907	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (PCB 157)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32598144	2,3,3',4,4'-Pentachlorobiphenyl {PCB 105}			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52663726	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 167)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
74472370	2,3,4,4',5-PENTACHLOBIPHENYL (PCB114)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31508006	2,3',4,4',5-PENTACHLOROBIPHENYL (PCB 118)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
65510443	2,3',4,4',5'-PENTACHORORIBIPHENYL (PCB 123)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57117314	2,3,4,7,8-Pentachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51207319	2,3,7,8-Tetrachlorodibenzofuran			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1746016	2,3,7,8-Tetrachlorodibenzo-P-Dioxin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
88062	2,4,6-Trichlorophenol			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
615054	2,4-Diaminoanisole			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
95807	2,4-Diaminotoluene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
121142	2,4-Dinitrotoluene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53963	2-Acetylaminofluorene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

117793	2-Aminoanthraquinone			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
607578	2-Nitrofluorene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32774166	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (PCB 169)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57465288	3,3',4,4',5-PENTACHLOROBIPHENYL (PCB 126)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32598133	3,3',4,4'-TETRACHLORBIPHENYL (PCB77)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
91941	3,3'-Dichlorobenzidine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
70362504	3,4,4',5-TETRACHLOROBIPHENYL (PCB 81)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56495	3-Methylcholanthrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
101144	4,4'-Methylene bis(2 Chloroaniline) (MOCA)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
101779	4,4'-Methylenedianiline			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
92671	4-Aminobiphenyl			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
95830	4-Chloro-o-phenylenediamine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60117	4-Dimethylaminoazobenzene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57835924	4-Nitropyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3697243	5-Methylchrysene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
602879	5-Nitroacenaphthene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7496028	6-Nitrochrysene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57976	7,12-Dimethylbenz[a]anthracene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
194592	7H-Dibenzo[c,g]carbazole			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75070	Acetaldehyde			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60355	Acetamide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
107028	Acrolein			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79061	Acrylamide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79107	Acrylic acid			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
107131	Acrylonitrile			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
107051	Allyl chloride			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
319846	alpha-Hexachlorocyclohexane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
61825	Amitrole			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7664417	Ammonia			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62533	Aniline			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7440382	Arsenic			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1016	Arsenic compounds (inorganic)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7784421	Arsine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1332214	Asbestos			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10294403	Barium chromate			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56553	Benz[a]anthracene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71432	Benzene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
92875	Benzidine (and its salts)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1020	Benzidine-based dyes			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50328	Benzo[a]pyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
205992	Benzo[b]fluoranthene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
205823	Benzo[j]fluoranthene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
207089	Benzo[k]fluoranthene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
100447	Benzyl chloride			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7440417	Beryllium			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
319857	beta-Hexachlorocyclohexane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57578	beta-Propiolactone			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
111444	Bis(2-chloroethyl) ether {DCEE}			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
542881	Bis(chloromethyl) ether			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7440439	Cadmium			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13765190	Calcium chromate			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2425061	Captafol			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
133062	Captan			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75150	Carbon disulfide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
630080	Carbon monoxide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
56235	Carbon tetrachloride			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57749	Chlordane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
108171262	Chlorinated paraffin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7782505	Chlorine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10049044	Chlorine dioxide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
108907	Chlorobenzene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
510156	Chlorobenzilate			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	Chlorodifluoromethane			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
67663	Chloroform			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
107302	Chloromethyl methyl			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76062	Chloropicrin			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1333820	Chromium trioxide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18540299	Chromium, hexavalent			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
218019	Chrysene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1066	Coke oven emissions			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7440508	Copper			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

1319773	Cresols (mixtures of) {Cresylic acid}			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
135206	Cupferron			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1073	Cyanide compounds			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
57125	CYANIDE COMPOUNDS [Inorganic)			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
117817	Di(2-ethylhexyl) phthalate			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
226368	Dibenz[a,h]acridine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2263680	Dibenz[a,h]acridine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
53703	Dibenz[a,h]anthracene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
224420	Dibenz[a,j]acridine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
192645	Dibenzo[a,e]pyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
189640	Dibenzo[a,h]pyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
189559	Dibenzo[a,i]pyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
191300	Dibenzo[a,l]pyrene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1080	Dibenzofurans (chlorinated) {PCDFs} [Treated as 2378TCDD for HRA]			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	Dichlorodifluoromethene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
72559	Dichlorodiphenyldichloroethylene {DDE}			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
73354	Dichloroethylene			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62737	Dichlorovos {DDVP}			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9901	Diesel engine exhaust, particulate matter (Diesel PM)	1.20E-01		6.00E-04	1.01E-03	6.12E-02	1.80E-02	0.00E+00	1.80E-02
111422	Diethanolamine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79447	Dimethyl carbamoyl chloride			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68122	Dimethyl formamide			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
124403	Dimethylamine			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

APPENDIX B: Historic Resources Evaluation Report

FINAL

3101 REDDING AVENUE
SACRAMENTO, CALIFORNIA

Historic Resource Evaluation Report

Prepared for
Sacramento City Unified School District
5735 47th Avenue
Sacramento, CA 95824

December 2018

ESA

FINAL

3101 REDDING AVENUE SACRAMENTO, CALIFORNIA

Historic Resource Evaluation Report

Prepared for:
Sacramento City Unified School District

December 2018

Prepared by:
ESA
Johanna Kahn, M.Ar.H.
Amber Grady, M.A.

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SUMMARY OF FINDINGS

This Historic Resource Evaluation Report (HRER) documents the historic resource survey and evaluation completed by Environmental Science Associates (ESA) for the buildings located at 3101 Redding Avenue in Sacramento, California (also recorded as 3051 Redding Avenue). The subject property includes the entire 10.7-acre assessor parcel number (APN) 015-0101-009-0000.

On December 5, 2018, an ESA architectural historian conducted a survey of the project site using intensive survey methods. Four historic-age buildings occupy the subject property, only three of which are associated with the former H.C. Muddox Elementary School and would be demolished under the proposed project. These buildings were documented as a single potential resource on the attached California Department of Parks and Recreation (DPR) 523 forms. Archival review identified no previously identified architectural historic resources on the subject property or in the immediate vicinity. The buildings do not appear to be eligible for listing on the California Register of Historical Resources (California Register) or the Sacramento Register of Historic and Cultural Resources (Sacramento Register) under any criteria, and the property is therefore not considered to be a historical resource for the purposes of the California Environmental Quality Act (CEQA).

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CHAPTER 1
Introduction

ESA has prepared this HRER, which documents the methods and results of the historic resource survey and evaluation completed for the subject property located at 3101 Redding Avenue (APN 015-0101-009-0000, also recorded as 3051 Redding Avenue) within the City of Sacramento, California (**Figures 1** and **2**). The subject property includes four historic-age buildings that require evaluation.

This HRER documents the existing conditions of the subject property with regard to historic resources for use in CEQA analysis. The work performed for this HRER consists of background and archival research, including a records search of the California Historical Resources Information System at the North Central Information Center (NCIC) at California State University, Sacramento; the Sacramento City Unified School District's (SCUSD) records and various online archives; and an intensive-level built resource survey of the project site.

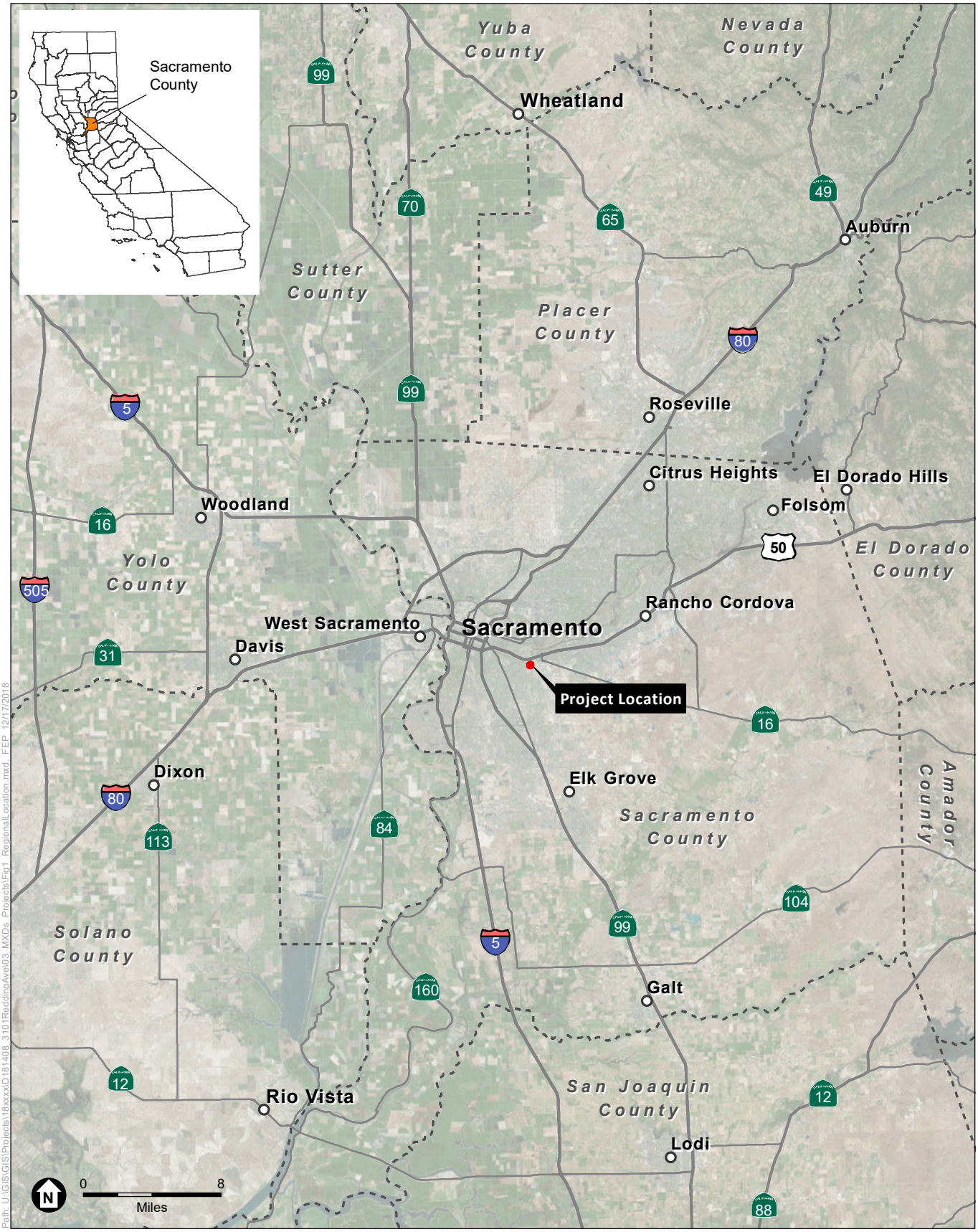
This cultural resources study was conducted in order to:

- preliminarily evaluate historic resources according to the criteria set forth by the California Register; and
- preliminarily evaluate historic resources according to the Sacramento Register criteria.

Appendix A includes resumes for key staff involved in the study. Johanna Kahn, M.Ar.H., is the author if this HRER. She exceeds the Secretary of the Interior's Professional Qualification Standards for Architectural History, Architecture, and Historic Architecture. Amber Grady, M.A., conducted the field survey and provided technical review and quality assurance. Ms. Grady exceeds the Secretary of the Interior's Professional Qualification Standards for Architectural History.

1.1 Subject Property

The project site is in Sacramento, California, approximately 80 miles east of San Francisco and 85 miles west of Lake Tahoe. Figure 1 shows the location of the project site in the Sacramento region. The subject property is at the northeast corner of Redding Avenue and San Joaquin Street. Figure 2 illustrates the proposed project's location on the United States Geological Survey (USGS) Sacramento East, California 7.5-minute quadrangle, within in the California State University, Sacramento, neighborhood. Four historic-age buildings occupy the subject property.



SOURCE: Esri, 2015; ESA, 2018

3101 Redding Avenue Project

Figure 1
Regional Location

ESA

SOURCE: USDA, 2016; Sacramento County, 2018; ESA, 2018

3101 Redding Avenue Project

Figure 2
Project Location

ESA

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CHAPTER 2
Regulatory Framework

2.1 State Regulations

The project is subject to review under CEQA, with the District as lead reviewing agency for CEQA purposes. The State implements provisions in CEQA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, oversees adherence to CEQA regulations. The OHP also maintains the California Historic Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State's jurisdiction. Typically, a resource must be more than 50 years old to be considered as a potential historical resource. The OHP advises recordation of any resource 45 years or older, since "there is commonly a five-year lag between resource identification and the date that planning decisions are made."[1]

California Environmental Quality Act

CEQA (*codified at Public Resources Code [PRC]* § *21000 et seq.)* is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources (TCR[s]).

Historical Resources

CEQA Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources [California Register]; (2) a resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

1 State of California Office of Historic Preservation (OHP). *Instructions for Recording Historical Resources*. Available: http://scic.org/docs/OHP/manual95.pdf. Accessed March 1995.

California Register of Historical Resources

The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC § 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (PRC § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

2.2 Local Regulations

Since 1996, the City of Sacramento has been a Certified Local Government (CLG); that is, a direct participant in the identification, evaluation, registration, and preservation of historic properties within its jurisdiction, to promote the integration of local preservation interests and concerns into local planning and decision-making processes. The CLG program is a partnership between local governments, the State of California OHP, and the National Park Service, which is responsible for administering the National Historic Preservation Program.

City of Sacramento Historic Preservation Program

The City of Sacramento's historic preservation program began in 1975 with the enactment of the City's first historic preservation ordinance. Current amendments to the preservation ordinance were enacted in September 2013. The amendment completely revised Title 17, which includes various sections and chapters relating to Historic Preservation (Chapter 17.604, and others) in the Sacramento City Code.

The City Code provides for the compilation of the ordinances adopting designations and deletions of Landmarks, Contributing Resources and Historic Districts into the Sacramento Register of Historic & Cultural Resources.

Landmark Eligibility Criteria (17.604.210 (A))

A property is eligible for listing in the Sacramento Register if the city council finds, after holding the hearing, that all of the requirements set forth below are satisfied:

1. Requirements.

a. The nominated resource meets one or more of the following criteria:

   i. It is associated with events that have made a significant contribution to the broad patterns of the history of the city, the region, the state or the nation;

   ii. It is associated with the lives of persons significant in the city's past;

   iii. It embodies the distinctive characteristics of a type, period or method of construction;

   iv. It represents the work of an important creative individual or master;

   v. It possesses high artistic values; or

   vi. It has yielded, or may be likely to yield, information important in the prehistory or history of the city, the region, the state or the nation;

b. The nominated resource has integrity of location, design, setting, materials, workmanship and association. Integrity shall be judged with reference to the particular criterion or criteria specified in subsection A.1.a of this section;

c. The nominated resource has significant historic or architectural worth, and its designation as a landmark is reasonable, appropriate and necessary to promote, protect and further the goals and purposes of this chapter.

5. Factors to be considered. In determining whether to list a nominated resource on the Sacramento register as a landmark, the factors below shall be considered.

a. A structure removed from its original location is eligible if it is significant primarily for its architectural value or it is the most important surviving structure associated with a historic person or event.

a. A birthplace or grave is eligible if it is that of a historical figure of outstanding importance and there is no other appropriate site or structure directly associated with his or her productive life.

b. A reconstructed building is eligible if the reconstruction is historically accurate, if the structure is presented in a dignified manner as part of a restoration master plan, and if no other original structure survives that has the same association.

c. Properties that are primarily commemorative in intent are eligible if design, age, tradition, or symbolic value invests such properties with their own historical significance.

d. Properties achieving significance within the past 50 years are eligible if such properties are of exceptional importance.

CHAPTER 3
Background

3.1 Historic-Period Setting

Europeans entered the Sacramento area in 1808, when Gabriel Moraga's expedition reached the junction of the Sacramento and American rivers. By the late 1820s, English, American, and French fur trappers, attracted by the valley's abundance of animal life, began operations throughout the Sacramento Valley. Native Americans still predominantly occupied the region, with only the occasional Spanish expedition into the interior to search for mission sites or escaped neophytes (Native Americans who had entered the mission system).[2]

Permanent non-native settlement in the Sacramento Valley began in the 1830s when Spanish and Mexican governors issued large land grants to individuals, often in return for military or other services rendered to the government. Upon receipt of a land grant from Mexican Governor Juan Alvarado, Swiss immigrant John Augustus Sutter, Jr., first settled the Sacramento area in 1839. Sutter established a fort away from the low-lying rivers area, and Sutter's Fort served as an agricultural station and destination for immigrants into California until January 1848.[3,4,5,6]

City of Sacramento

Sutter's small riverside settlement quickly took on the role of bustling port as ocean going ships and riverboats used the Sacramento River to transport goods and gold-seeking passengers to the mine fields in the slopes of the Sierra Nevada mountain range after the discovery of gold in 1848. Sutter laid out a grid of streets extending from the waterfront and named the new town Sacramento, establishing numbered streets running north to south and lettered streets, east of Front Street along the Sacramento River, running east to west, with each block divided into eight 80-foot by 150-foot lots with four lots on either side of an east/west oriented central alley.

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2 Mildred Brooke Hoover, Hero Eugene Rensch, Ethel Rensch, and William N. Abeloe, *Historic Spots in California,* 4th edition, revised by Douglas E. Kyle, Stanford University Press, Stanford, CA, 2002, pp. 302-304.

3 W. Turrentine Jackson, Rand F. Herbert, Stephen R. Wee, *The Old Courthouse Block: H-I-6-7 Streets, Sacramento, 1848-1983,* November 1983, p. 1.

4 Mildred Brooke Hoover, Hero Eugene Rensch, and Ethel Rensch, *Historic Spots in California,* Stanford University Press, Stanford, CA, 1966, pp. 298-302.

5 Walton Bean, *California, an Interpretive History,* McGraw Hill, New York, NY, 1978, pp. 67-68.

6 John W. Reps, *Cities of the American West: A History of Frontier Urban Planning*. Princeton University Press, Princeton, NJ, 1975, p. 195.

The new town was centered on the embarcadero, or Front Street, and continued inland to the east along J Street.[7,8] Downtown Sacramento developed rapidly after 1850. The blocks fronting on J Street were heavily developed, owing to the street's use as the main road leading east out of the city, with slightly less development on the parallel I and K streets. By 1851, J Street was substantially occupied from Front Street eastward beyond 10th Street with stores, saloons, hotels, grocery stores, stables, and other concerns vying for the business of visitors and residents.

During the mid-1800s, the City faced severe flooding issues. The majority of flooding stemmed from the American River, where, during heavy rains, segments of the river north of I Street would experience severe flooding. The flood of 1861–1862 left portions of the City under 20 feet of water. To address this problem, the City dug a new mouth for the American River, rerouting it north to better regulate flow, and elevated the city streets between I and L streets, from Front Street to 12th Street, approximately four to 15 feet. The City completed this enormous undertaking in 1873, and this action has shaped the current downtown grid since that time.[9] The 13-year process resulted in vertical gaps between the street and the business fronts. These were covered with new sidewalks leaving "hollow sidewalks" below the new street grade.

With the reduction of flood risk, downtown businesses grew steadily; for the first 60 years of its existence the City of Sacramento consisted of the 4.5 square mile grid encompassing the modern neighborhoods of Midtown and Downtown. Between 1895 and 1915, the City underwent rapid development thanks to the introduction of a street car line. Pacific Gas and Electric Company operated a streetcar line in Sacramento from 1906 to 1943, which supported expanded residential development as outlying areas became more easily accessible. The earliest annexation efforts in the late 19th and early 20th centuries pulled in the suburbs of south and east of the grid. The subject property was included in the 1911 annexation. These new suburbs provided housing for residents commuting downtown, and were developed in phases spanning the first half of the 20th century. As private automobiles overtook streetcars as the primary form of transportation, the suburbs surrounding Sacramento expanded further away from downtown and the streetcar lines, which eventually fell out of use and were removed by the mid-century. Sacramento's downtown had fallen into economic and physical decline by the 1930s, as the suburban growth pulled residents out of downtown. Declining tax revenue and property values led to the redevelopment/urban renewal efforts in downtown Sacramento in the post-war period.

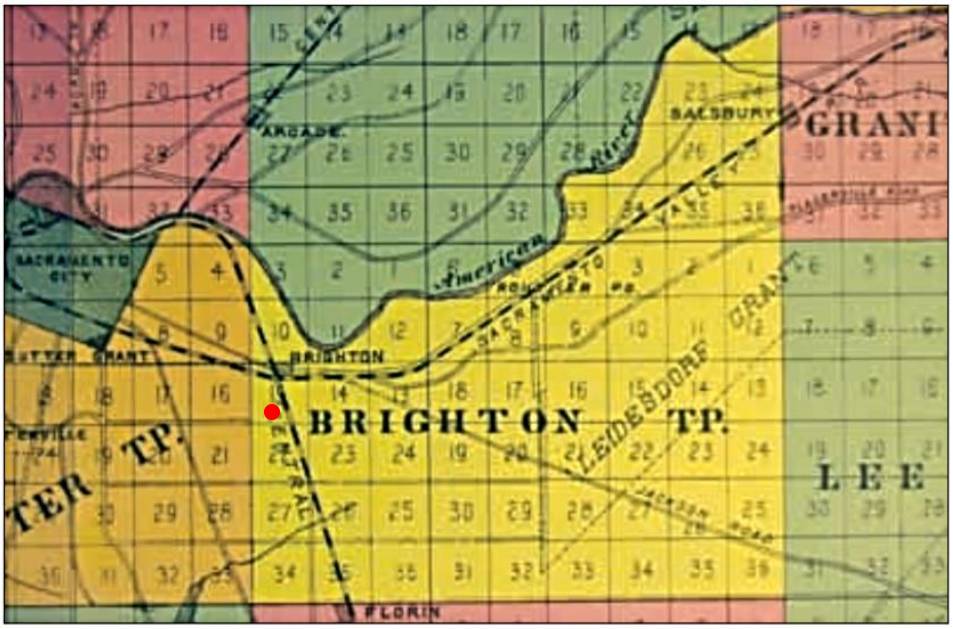
Brighton Township

The subject property is located in a part of East Sacramento that was historically in the Brighton Township (**Figure 3**).

7 W.H. Warner, *Map of Sacramento, Plan of Sacramento City, 1848*, Historic Urban Plans, Ithaca, NY, reproduced 1969.

8 M.G. Brienes, J. West, and P.D. Schulz, *Overview of Cultural Resources in the Central Business District, Sacramento, California*, prepared for the Sacramento Museum and History Department, 1981, pp. 46-47.

9 City of Sacramento, *City of Sacramento 2030 General Plan Master Environmental Impact Report*, certified March 3, 2009, p. 6.4-9.



A red dot marks the approximate location of the project site.

3101 Redding Avenue / 181408

SOURCE: Thompson & West, 1880

Figure 3
Detail from the 1880 township map of Sacramento County.

According to a 1923 history of Sacramento County, "The town of Brighton was started in 1849 by a party of Sacramento speculators, the town plat made, lots staked off, a race track and the Pavilion Hotel built by the originators of the enterprise. It was located on the [south] bank of the American River…In 1849-1851 it was a lively place."[10]

The following condensed history of Brighton Township since the California Gold Rush is from Paula J. Peper's *Sacramento's Brighton Township: Stories of the Land*:

> John Sutter harbored a dream of creating an agricultural empire in the west and might have succeeded if gold hadn't been discovered. As it was, his settlement established Sacramento and nearly half of Brighton Township. The other half belonged to William Leidesdorff, the pioneer of African descent who came to San Francisco and, subsequently, Brighton. Both men were the first to run herds of cattle and raise agricultural crops on their properties. The Gold Rush brought the need for food and supplies for the thousands heading to the goldfields and Brighton became home to the first farmers and ranchers. Manlove, Perkins, Mayhew, Routier — the roads we pass by without thought to their origins — honor a few of those who pioneered agriculture in the region, developing new fruit cultivars and planting practices that helped California begin feeding the nation and the world. Theodore Judah engineered the first railroad in the State's history through Brighton Township where the Light Rail runs today. Local shippers invented refrigerated rail cars and a Brighton plum picked one day would be purchased in a London market 12 days later. Japanese families added more to Brighton's

10 Walter G. Reed. *History of Sacramento County, California, with Biographical Sketches of the Leading Men and Women of the County Who Have Been Identified with its Growth and Development from the Early Days to the Present.* Los Angeles, CA: Historic Record Co., 1923, p. 115.

> agricultural history. Seeking better lives like so many of America's immigrants, they transformed Brighton into the Strawberry Capital of the World through years of hard work and dedication. And, ultimately, the very soil of the township became the stuff of cities, supplying the sand, gravel, and concrete to build airports, bridges, highways, roads, and buildings.[11]

Junction School District

When the H.C. Muddox Elementary School was constructed in 1942 at 3101 Redding Avenue, it was part of the Junction School District. The following description of the district is from a 1953 master's thesis written by Robert D. Manley:

> The Junction School District, located approximately five miles from the heart of Sacramento, lies to the East of the city and at one point is adjacent to the Sacramento city limits. The district is bounded on the North by the American River, on the East by a highway known as Power Inn Road, on the South in part by Marin Avenue and in part by Fourteenth Avenue and on the West by Sixty-fifth Street.
>
> The district was first established, March 11, 1887, at which time it was considerably larger than at present [in 1953]. In recent years, parts of the district were annexed to other school districts. Though large in area, the residential nucleus of the school district consists of an area of about one-half mile square, bordering the railroad tracks.
>
> Most of the families of the district are people who have recently come to California from the midwestern section of the United States. […]
>
> A great number of the working population of the district are employed by the box factories, lumber mills, gravel companies and cement plants that lie within the district. Still others find employment at the military bases that are nearby. […]
>
> The Junction [School] District is recognized as a rather poor district inasmuch as its total assessed valuation in 1953 is only $1,112,170.00.[12]

Sacramento City Unified School District: 1958 to Present

In 1958, the Junction School District and several other small school districts were annexed by the SCUSD. The following history of the SCUSD since 1958 is from the SCUSD website:

> Building continued at a constant pace throughout the 1950s and 60s. New legislation in 1958 gave the district its most sudden jolt. The Sacramento City Unified School District had to absorb all the surrounding small school districts. A total of 14 schools were annexed from unincorporated areas of the city.
>
> As the 1970's approached, school integration was a major concern. Although all schools were open to students in their neighborhood, the city itself was becoming more segregated. To keep court-ordered integration at bay, the district began efforts to balance

[11] Paula J. Peper. *Sacramento's Brighton Township: Stories of the Land*. Sacramento, CA: Stonebridge Properties, LLC, 2009, p. 121. http://www.stonebridgeproperties.com/pdf/History_chapter8.pdf, accessed April 9, 2018.

[12] Robert D. Manley. "A Proposed Summer Recreation Program for a Rural Elementary School District" (unpublished master's thesis), 1953. Sacramento State College, Sacramento California, 7-8.

school ethnicity by busing students to neighboring areas. Later, as district enrollment declined, magnet and alternative schools were established offering innovative programs to attract diverse student bodies. Today, Sacramento is one of the most ethnically diverse cities in the United States, and the schools reflect the community.

Major Construction

By the early 1970s, enrollment stabilized, and in some areas declined, but new housing was making its way farther east towards Rancho Cordova. Schools in the Rosemont area opened, but a high school, though needed, wasn't constructed during that period. Rosemont High opened for freshmen at the start of the 2003-04 school year and [was] completed by [the] next fall.

The oldest of the district schools faced the wrecking ball as the Field Act legislation was enforced. Schools built prior to 1937 had to be retrofitted to meet earthquake standards, torn down or designated for other use. Some of the buildings, including Donner, Newton Booth, Coloma, El Dorado, Lincoln, Marshall, Fremont and Sierra elementary schools were spared. Though most are still standing, they are not used for K-12 education. Some are no longer district property.

The district had no choice, however, in replacing many others. In 1976, large scale building began. In most instances, schools did not close. Students attended classes in the old facilities while new structures were built on same site in vacant areas and playgrounds. Though Crocker school was never rebuilt, the attendance area merged with Riverside School; the new structure was renamed Crocker/Riverside. The outdated Washington, William Land, David Lubin, American Legion, Bret Harte, California, Kit Carson and Sacramento High buildings were demolished once the replacement schools were complete.

Development of the rich Pocket-area farm land during the 1980s brought the last of the large scale housing areas into reality. While houses were selling quickly, no schools existed. Area parents mobilized and began the arduous task of creating a special tax district. Eventually, three schools opened to take care of neighborhood children.

In Oak Park, parents also campaigned for a school in their area. For more than 20 years, students in this urban area of town were bused to schools. With the opening of Father Keith B. Kenny Elementary School in 1993, neighborhood schools were centered in the heart of every community.

Growth and decline have been a part of the district's rich and long history. Responding to declining test scores and run-down facilities, Mayor Joe Serna Jr. rallied widespread city support behind a movement for reform of Sac City Schools. After a new school board was elected, student performance improved and Sac City has become a national model for reform. With more than 80 schools and 50,000 students, plus approximately 20,000 adult students, today Sac City Unified is one of the 10 largest districts in California. But the city itself has very little room for growth. Most neighborhoods are well established and vacant lots are a rare sight.

District Headquarters

In the early 1980s, when enrollment was dropping, some campuses were closed and used as administrative offices. The district headquarters in the old Jefferson School at 16th and

> N Streets was filled to capacity. Even closets were converted to office space. Administrative offices were spread out to 11 different sites. Eventually the headquarters moved to Capitol Mall, but once again the building wasn't adequate to meet district needs and parking was inconvenient, at best.
>
> Looking for a central location in the heart of the district, a large parcel was purchased on 47th Avenue. In 2002, the new Mayor Joe Serna Jr. and Isabel Hernandez Serna Community Education Center opened its doors.[13]

Charles F. Dean, Architect

Charles Francis Dean (1884-1956) was the architect of the former H.C. Muddox School at 3101 Redding Avenue. A native of Texas, Dean was educated at the Texas A&M College of Architecture and relocated to San Francisco to practice architecture during the building boom that followed the 1906 earthquake and fires. In 1914, Dean moved to Sacramento, where he was employed by the State. From 1922 to 1932, he partnered with his brother, James S. Dean, to form the prominent Sacramento-based architecture firm Dean & Dean. From 1939 to 1945, Charles Dean was the principal of his own architectural practice. Dean's was one of only nine architecture firms listed in the 1939 Sacramento City Directory. He continued to practice into the 1950s, supported by at least two associate architects: Ivan C. Satterlee and Nicholas A. Tomich.

Research identified the following extant buildings in Sacramento that were designed either by Charles F. Dean or by the firm of Dean & Dean:

- Fremont School at 2420 N Street (1921)
- Elmhurst School at 4623 T Street (1921)
- Newton Booth School at 2600 V Street (ca. 1922)
- Bret Harte School at 2751 Ninth Avenue (ca. 1922)
- Highland Park School at 2791 24th Street (1922-1929)
- Jefferson School at 1619 N Street (1923)
- Sierra School at 2791 24th Street (1923)
- Westminster Presbyterian Church at 1300 N Street (1927); listed on the National Register of Historic Places in 2003
- Hughes Stadium (Sacramento City College) at 3835 Freeport Boulevard (1928)
- Sutter Club at 1220 9th Street (1930)
- Firehouse No. 4 at 3145 Granada Way (1933)
- Theodore Judah School at 3919 McKinley Boulevard (1938-39); listed on the National Register of Historic Places in 1997
- Trinity Episcopal Cathedral at 2620 Capitol Avenue (1955)

[13] "SCUSD: Part of Sacramento History." *Sacramento City Unified School District,* October 1, 2014. Accessed December 10, 2018, at https://www.scusd.edu/e-connections-post/scusd-part-sacramento-history.

Earl John Taylor, Architect

Earl John Taylor (1922-2011) was the architect of the warehouse at 3051 Redding Avenue. He received his undergraduate degree in civil engineering from the University of Utah in 1943, and he completed post-graduate studies in architecture at the University of Michigan and the U.S. Naval Academy. He was a licensed architect in California, Oregon, Wyoming, and Nevada and a licensed civil engineer in California and Utah.[14]

Taylor was identified as an "outstanding local modern master architect" in the 2017 *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*.[15] His projects include:

- Proposed Orangevale Grange Clubhouse in Orangevale, California (1953)[16]
- Proposed office building at 21st and K streets in Sacramento (1953)[17]
- Office building for Archibald D. McDougall at 818 19th Street in Sacramento (1953-54)[18]
- Proposed warehouse for the Lancaster Wholesale Grocery Co. at Front and T streets in Sacramento (1953)[19]
- Office of Earl John Taylor at 2401 C Street in Sacramento (1959)[20]
- Nicoletti Funeral Home at 5401 Folsom Boulevard in Sacramento (1960)[21]
- Anaheim Stake of the Church of Jesus Christ of Latter-Day Saints at Loaroa Street and Westmont Drive in Anaheim, California (1965)[22]
- Chapel of the Reorganized Church of Jesus Christ of Latter-Day Saints, Arden Branch at 4044 Pasadena Avenue in Sacramento (1970)[23]
- Rancho Cordova Public Library in Rancho Cordova, California (1976)[24]

14 "Earl John Taylor (1922-2011)." *Find a Grave.* Accessed December 17, 2018, at https://www.findagrave.com/memorial/65203559/earl-john-taylor.

15 GEI Consultants, Inc. and Mead & Hunt, Inc. *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results.* September 30, 2017, B-4.

16 "Orangevale Will Get New Grange Unit." *Sacramento Bee,* August 1, 1953, F19.

17 "Office Building Is Started at 21st and K Streets." *Sacramento Bee,* November 28, 1953, F19.

18 SacMod. "SacMod's List of Notable MCM Places in the City of Sacramento" (draft), September 28, 2017, 9. Accessed December 17, 2018, at http://sacramento.granicus.com/MetaViewer.php?view_id=21&clip_id=4068&meta_id=504879.

19 "Grocery Firm Plans New Warehouse." *Sacramento Bee,* December 5, 1953, F20.

20 SacMod. "SacMod's List of Notable MCM Places in the City of Sacramento" (draft), September 28, 2017, 4. Accessed December 17, 2018, at http://sacramento.granicus.com/MetaViewer.php?view_id=21&clip_id=4068&meta_id=504879.

21 SacMod. "SacMod's List of Notable MCM Places in the City of Sacramento" (draft), September 28, 2017, 13. Accessed December 17, 2018, at http://sacramento.granicus.com/MetaViewer.php?view_id=21&clip_id=4068&meta_id=504879.

22 "Anaheim's First Sacred Arts Festival - 3." *Anaheim Arts Council.* Accessed December 17, 2018, at https://www.anaheimartscouncil.com/three-col-report3.php.

23 No title (photograph and caption only). *Sacramento Bee,* April 25, 1970, A12.

24 "Six Library Branches Provide a Touch of Class." *Sacramento Bee,* February 13, 1977, C1.

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CHAPTER 4
Methods and Results

4.1 Archival Research and Field Survey

For the subject property located at 3101 Redding Avenue, ESA conducted a review of building permits and historical maps and photographs to establish the construction chronology and performed archival research to establish the occupation history. As-built drawings were provided by SCUSD. An ESA architectural historian conducted research at the NCIC to determine if the property had been previously inventories and/or evaluated.

On December 5, 2018, ESA architectural historian Amber Grady conducted a pedestrian field survey of the project site. Staff took field notes and digital photographs to document the building on the subject property and the surrounding neighborhood.

4.2 Results and Evaluations

An ESA architectural historian identified four historic-age buildings on the subject property at 3101 Redding Avenue and documented them using digital photography and field notes. Archival research did not reveal that the subject property had been previously evaluated for historic significance. An architectural description and eligibility recommendations of 3101 Redding Avenue are provided below. **Appendix B** provides the California Department of Parks and Recreation (DPR) 523 forms detailing the findings.

Architectural Description

The subject property at 3101 Redding Avenue is a former elementary school campus located on a rectangular 10.7-acre parcel at the northeast corner of Redding Avenue and San Joaquin Street (see Figure 2). Four historic-age buildings occupy the property: a school building, multi-use building, and kindergarten building that together formed the former H.C. Muddox Elementary School, and a warehouse constructed in 1962 after the school closed.

Building 1 (Former Main School Building)

The former school building is roughly L-shaped in plan, the result of at least four phases of construction during the 1940s and 1950s. The one-story building is clad in stucco and vertical wood siding, and it is capped by a series of gabled roofs covered with asphalt shingles. Flat roofs cover portions of the east-west ell of the building.

The primary (west) façade is composed of three parts: a stucco wall with several decorative vents that terminates in a gable at the north end; a long horizontal wall that is clad in vertical wood

siding and is punctuated at regular intervals by aluminum-sash windows; and a covered porch with steel posts at the south end (**Figure 4**). The primary entrance is marked by a covered porch with carved timber posts and a single flush door, which replaced the original pair of partially-glazed paneled wood doors. The porch is accessed by concrete steps from Redding Avenue.

The north façade features most of its original fenestration, including banks of single-hung, two-over-two, wood-sash windows, each with a hopper window below (**Figure 5**). Windows have been variously covered with metal security grates, partially boarded, or replaced with aluminum-sash windows. This façade also includes at least one original partially-glazed paneled wood door, a flush metal pedestrian door, a roll-up vehicular door, and a large flush metal door at the east end.

The east and south façades are not visible from the public right-of-way. They are generally characterized by stucco walls, aluminum-sash windows, and partially-glazed flush metal doors.

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 4
West (Primary) and South Façades of Building 1, Facing Northeast

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 5
North Façade of the Building 1, Facing West

Building 2 (Former Multi-Use Building)

The former multi-use building is T-shaped in plan. The one-story building is clad in stucco and is capped by a combination of gabled and flat roofs.

The primary (west) façade is composed of a gabled mass containing an entrance porch (**Figure 6**). A horizontal awning is supported by metal posts, covering an entrance composed of a pair of partially-glazed, paneled wood doors with fixed, multi-light sidelights and transoms. The porch is contained by brick planters and accessed by concrete steps from Redding Avenue. Below the gable is a large louvered vent. The double-height volume of the former multi-use space is visible behind the gabled roof.

On the north façade, a single flush pedestrian door replaced the original pair of doors leading to the foyer, and the original pair of doors near the east end of the façade have been filled in. The original wood-sash clerestory windows remain, two of which have been altered (**Figure 7**).

The double-height portion of the east (rear) façade features two roll-up vehicular doors in an otherwise blank stucco wall (**Figure 8**). The southern portion of the façade features a flush metal door, a multi-light steel-sash window, and louvered metal panel behind a metal grate.

On the south façade, a single flush pedestrian door replaced the original pair of doors leading to the foyer. A pair of flush doors beneath a metal awning at the east end of the façade. The original

wood-sash clerestory windows have all been replaced with aluminum-sash windows, and the easternmost window has been covered with an opaque panel.

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 6
West (Primary) and South Façades of Building 2, Facing Northeast

It appears that an awning has been removed above the large yellowish area in the right foreground.

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 7
North Façade of Building 2, Facing Southeast

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 8
East (Rear) and North Façades of Building 2, Facing Southwest

Building 3 (Former Kindergarten Building)

The former kindergarten building is rectangular in plan. The one-story building is clad in stucco and is capped by a gabled roof covered with asphalt shingles.

The primary (west) façade is a blank stucco wall with several louvered vents. The south façade, which originally comprised a covered porch with fenestration, has been enclosed and clad with stucco (**Figure 9**).

The north façade features a continuous bank of multi-light steel-sash windows with one flush pedestrian door. The east façade features a large vehicular door in an otherwise blank stucco wall (**Figure 10**).

The former multi-use building is visible in the left background.

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 9
West (Primary) and South Façades of Building 3,
Facing Northeast

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 10
East (Rear) and North Façades of Building 3,
Facing Southwest

Building 4 (Warehouse)

The one-story warehouse is rectangular in plan and is capped by a low-pitched gabled roof. The primary façade faces west and features five segments of stucco-clad walls with bas reliefs separated by segments of blank walls clad in pebble dash (**Figure 11**). The north façade features a

loading dock. The east façade features a roll-up vehicular door accessed by a concrete ramp. The south façade is separated from the former school building by a narrow passage.

3101 Redding Avenue / 181408

SOURCE: ESA, 2018

Figure 11
West (Primary) Façade of Building 4, Facing Northeast

Construction Chronology and Occupation History

Architectural drawings were prepared by Charles F. Dean in 1942 for a "four[-classroom] elementary school for the Junction School [District]." The one-story school included four classrooms (two of which could be joined via a folding door to become an auditorium with a raised stage at one end), a kitchen, an office, a storeroom, a heater room, and separate restrooms for boys, girls, and female teachers.[25] The school property had been donated by the widow of Harry C. Muddox, after whom the school was named. A dedication ceremony for the school took place on August 30, 1942.[26] **Figure 12** shows the Redding Avenue façade of the school the year after it was constructed.

In 1945, Dean designed a one-classroom addition at the northeast corner of the school building.[27] In November 1947, residents of the Junction School District voted in favor of a $16,000 school bond to build additional classrooms at the H.C. Muddox School.[28] As a result, a second addition was constructed in 1948 on the east side of the 1945 addition.[29] Although it is likely that Dean designed this addition, archival research did not confirm this.

25 Architectural drawings for "Four Rm. Elementary School for the Junction School District." Prepared by Charles F. Dean, Architect, 1942 (exact date illegible). On file at Sacramento City Unified School District.

26 "Masons Will Dedicate Muddox School Sunday." *Sacramento Bee,* August 27, 1942, 13.

27 Architectural drawings for "One Room Addition to the H.C. Muddox School for the Junction Elementary School District." Prepared by Charles F. Dean, Architect, July 30, 1945. On file at SCUSD.

28 "Muddox School Bond Issue Wins Approval." *Sacramento Bee,* November 22, 1947, 3.

29 As-built drawings for the 1948 addition were not provided to ESA. However, as-built drawings for the 1950 additions note that an extant addition was "approved by [the State of California Department of Public Works Division of Architecture per application] #6187-1948."

3101 Redding Avenue / 181408

SOURCE: Center for Sacramento History, Michael T. Benning Collection, 1983/232/06917.

Figure 12
H.C. Muddox Elementary School, 1943.

In September 1950, Dean prepared drawings for a "two[-classroom], general purpose, and kindergarten addition." This addition was comprised of two adjacent classrooms inserted between two extant buildings as well as new multi-use and kindergarten buildings located south of the main school building. The multi-use building included a foyer with separate restrooms for boys and girls, a large multi-use room, a kitchen, a boiler room, and three storage rooms.[30] The kindergarten included one classroom, a play alcove, a cloakroom, two toilet stalls, and a janitor's closet. A covered porch ran the length of the building on its south side. The building permit for this phase of construction, which was estimated to cost more than $140,000, was approved in February 1951.[31] Contractors Guth & Schmidt began construction the following month.[32] The newly expanded school is visible in a 1952 aerial photograph (**Figure 13**).

30 Architectural drawings for "Two Classroom, General Purpose, & Kindergarten Addition to the H.C. Muddox School for the Junction Elementary School District." Prepared by Charles F. Dean, Architect, September 7, 1950. On file at SCUSD.

31 "Addition to Muddox School Is Authorized." *Sacramento Bee*, February 14, 1951, 3.

32 "Addition to Muddox School Is Started." *Sacramento Bee*, March 9, 1951, 20.

The H.C. Muddox Elementary School campus is shown at the center of the photograph.

3101 Redding Avenue / 181408

SOURCE: USGS

Figure 13
1952 Aerial Photograph

In 1953, more than 300 students were enrolled at H.C. Muddox Elementary School. There were 15 school staff members including nine teachers. A contemporary account described the layout and function of the school: "The buildings are modern in structure and consist of a separate kindergarten room with a patio and play area, eight classrooms and an all-purpose [*sic*] room that doubles for an auditorium and cafeteria. There are about six acres of play area available for all of the students."[33]

In 1958, the Junction School District and other small school districts were annexed by the SCUSD.[34] On February 15, 1961, it was reported that the Sacramento Board of Education was considering closing two of the annexed elementary schools (Muddox and Strawberry Lane) to save $86,000 annually.[35] By September 1961, it was reported that, "The [Sacramento Board of Education had] closed the Muddox School as an economy move."[36]

In 1962, a warehouse for the SCUSD was constructed immediately north of the main school building at 3051 Redding Avenue. At that time, the site was described as "the old H.C. Muddox School," providing confirmation that it no longer functioned as a school at that time.[37] The

33 Robert D. Manley. "A Proposed Summer Recreation Program for a Rural Elementary School District" (unpublished master's thesis), 1953. Sacramento State College, Sacramento California, 8.

34 "SCUSD: Part of Sacramento History." *Sacramento City Unified School District,* October 1, 2014. Accessed December 10, 2018, at https://www.scusd.edu/e-connections-post/scusd-part-sacramento-history.

35 "School Tax Vote Question Will Be Decided Monday." *Sacramento Bee,* February 15, 1961, C1.

36 "Parents Warn of Boycott over New Monthly Bus Charge for Students." *Sacramento Bee,* September 6, 1961, C2.

37 "School System Administrative Study is Okehed." *Sacramento Bee,* February 20, 1962, 22.

architect of the 51,000-square-foot warehouse was Earl John Taylor, and the contractor was Campbell Construction, and it was estimated to cost more than $264,800.[38]

In 1979, the City of Sacramento appropriated nearly $500,000 to purchase three surplus school parcels from the SCUSD, including the former Muddox School site, to be used for public open space. It was believed that the purchase "[would remove] a political problem for the [SCUSD] since they have allowed community youth sports groups to occupy the parcels in their entirety."[39] In 1980, the 9.4-acre former Muddox School site was designated as San Joaquin Open Space.[40]

In 2001, a building permit was issued to construct a 966-square-foot addition to the warehouse. The contractor was Dual-Cal Builders Inc.; no architect was identified.[41] Another building permit was issued to install a 2,000-gallon fuel tank on the former school property.[42]

Unpermitted Alterations

ESA staff observed the following unpermitted alterations that were made at unknown times, unless otherwise noted:

- The original horizontal redwood siding on school building was replaced with vertical siding
- The original wood-sash windows on school and multi-use buildings were replaced with aluminum-sash windows
- Large openings were created in the east façades of the multi-use and kindergarten buildings and the north façade of the school building
- A covered walkway connecting the school and multi-use buildings was removed in 2018
- The two buildings containing the multi-purpose room and kindergarten were converted for use as vehicle maintenance shops.

As part of its 2006 Facilities Master Plan, SCUSD published a *School Data and Summary* report for all of its properties, including the Transportation and Grounds Complex (the former Muddox School). The physical condition of the complex and as well as other unpermitted alterations and repairs (identified in **bold font** by ESA) were summarized as follows:

> The Redding [Avenue] Complex houses the following district programs: warehouse/purchasing, print shop, nutrition services, most of the grounds shop from maintenance and operations, and bus transportation hub and shops. This part of the site work concerns itself with programs impacted by being in parts of the old H.C. Muddox [Elementary School] and associated site areas (3/4 of the Redding [Avenue] site). The transportation complex is only in old school facilities. The grounds shop is in part of the old building, but also has **two newer metal shop/storage buildings with associated site**

38 Building Permit No. E-739, March 6, 1962.

39 "Resolution Authorizing the City Manager to Acquire the Glenbrook and Redding Avenue Surplus School Sites (Resolution No. 80-311)." Adopted by the Sacramento City Council in May 1980.

40 "Resolution Designating the Official Names of Various Park Sites (Resolution No. 80-755)." Adopted by the Sacramento City Council on November 12, 1980.

41 3051 Redding Avenue, Building Permit No. 0011315. Issued July 28, 2001.

42 3101 Redding Avenue, Building Permit No. 0012940. Issued February 15, 2001.

storage areas and parking on the northeast quadrant of the site. Transportation has offices, shops and storage yards for buses in line for repair, as well as, parking for the district bus fleet of 187 buses. 80% of students for special education programs and 20% for students outside their home school walk radius. There is no planning for vendor supported transportation. The Redding [Avenue] site is a good centrally located site with easy access to Highways 50, 99, and 80. […]

School Site:

The main area of the site is used by these two groups, transportation services and grounds shop. Only the large truck activity by the warehouse and around the nutritional services building is the site as negatively impacted as by the bus traffic. The old Muddox school facility sits adjacent to the street as expected for school use. But, as a vehicle maintenance facility, the uses across the street from R-1 housing is not appropriate. When the shops/offices are replaced consider the relocation of the functions further away from the housing area. The main drive areas of the paved bus yard need replacement due to the crumbling of the asphalt by buses turning. The general parking lanes have fair to good condition asphalt needing some repair and overlay to match new areas. Consider the re-striping of the lot to maximize the parking of bus drivers on site. The dirt lots by nutritional services will need to be paved, but these spaces are often filled by nutritional services. The fueling station was recently reconstructed to meet new EPA requirements so no work in this area is required. The perimeter fencing, south side drainage ditch, and south wash rack area all need upgrading to portray a friendlier image to the neighborhood.

School Plant:

The H.C. Muddox School facility is in poor condition and qualifies for removal due to: not meeting fire code construction type for garage occupancy, for severe termite and ant problems, for poor energy efficiency, for **structural changes to the shops** that compromise the resistance of the frames to seismic events, for having hazardous shop occupancy near office occupancy areas without fire separation, for non-compliance to ADA and restroom fixture requirements, and general poor environment when compared to Serna Center, Skills Center, and Operations quality of construction [*sic*].

The grounds and transportation operations should be rehoused in separate areas of the site to centralize the functions: grounds in the northeast quadrant where there are two shops for grounds already, and transportation in the main southern 2/3rds of the site. In the fall [of 2006], the **restrooms for the drivers are to be renovated**. There are still limited areas with hot water to wash greasy hands, and all drivers are required to do safety and fluids check.

Adequacy and Environment for Education:

The spaces are in a "make do" mode with extreme constraints of space. The old cafeteria and kindergarten rooms have been retrofitted into bus shop areas. Classroom wings have been cut up into office and small shop uses. The distribution of support spaces to the user shop areas is distant and is better consolidated. There are areas with small gas engine, fertilizers, and chemicals that impact neighboring office area air quality. The facilities

need replacement to meet operational, health, and functional requirements of the two organizations.[43]

Evaluation

The subject property includes four historic-age buildings. The proposed project would demolish the three buildings associated with the former H.C. Muddox Elementary School. Building 4 (the warehouse at 3051 Redding Avenue) is not part of the proposed project, and its evaluation is outside the scope of this HRER.

Archival review does not indicate that there are any significant associations between 3101 Redding Avenue and important events or patterns in history (Criterion 1/i). While the property functioned as the H.C. Muddox Elementary school that was associated with the Junction School District and later the SCUSD, 3101 Redding Avenue does not appear to rise above typical associations with either school district or associated events. For these reasons, 3101 Redding Avenue does not appear to be eligible under Criterion 1/i.

Archival review also does not indicate that there are any significant associations between 3101 Redding Avenue and significant persons (Criterion 2/ii). H.C. Muddox Elementary School was not directly associated with its namesake, Harry C. Muddox (1866-1932), a notable figure in Sacramento history who died a decade before the school was built. The school was headed by several principals during its brief 19-year existence including Ernest G. Oliver from at least 1948 until 1958 and Lawrence D. Casner from 1959 to 1961, both of whom continued their careers as educators at other schools. Research does not indicate that 3101 Redding Avenue is significantly associated with the productive life of any significant person, and it therefore does not appear to be eligible under Criterion 2/ii.

The buildings at 3101 Redding Avenue are not significant for their design or engineering (Criterion 3/iii-v). Three of the historic-age buildings on the subject property comprise the former H.C. Muddox Elementary School, which is a work of master Sacramento architect Charles F. Dean. Within Dean's oeuvre are numerous extant schools in Sacramento, many of which are architecturally distinctive and possess high artistic value. However, the school is not architecturally distinctive or a significant example of the work produced by Charles Dean's practice or the office of Dean and Dean. Therefore, the buildings at 3101 Redding Avenue do not appear to meet Criterion 3/iii-v.

Lastly, 3101 Redding Avenue does not appear to have the potential to yield more information and therefore, does not appear to be eligible under Criterion 4/vi.

[43] Sacramento City Unified School District. *SCUSD Facilities Master Plan,* 2006. "Transportation and Grounds Complex," 2-3. Accessed December 12, 2018, at http://www.scusd.edu/sites/main/files/file-attachments/scusd_fmp_section_7_binder5_v1part2.pdf.

Integrity

In addition to being eligible for listing under one or more of the above criteria, a property must retain sufficient integrity to convey its historical significance in order to be considered a historical resource. The California Register defines integrity as the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics that existed during the resource's period of significance. Because 3101 Redding Avenue does not appear to be individually significant under any state or local criteria, a discussion of integrity is inapplicable.

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CHAPTER 5
Conclusions and Recommendations

5.1 Conclusions

ESA evaluated three historic-age buildings at 3101 Redding Avenue for potential historic significance and recommends the property ineligible for listing on the California or Sacramento registers. It is therefore not considered to be a historical resource for the purposes of CEQA.

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CHAPTER 6
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"Resolution Designating the Official Names of Various Park Sites (Resolution No. 80-755)." Adopted by the Sacramento City Council on November 12, 1980.

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Appendix A
Personnel Qualifications

EDUCATION

M.A., Historic Preservation, Savannah College of Art & Design, Savannah, GA

B.A., Interior Design with a minor in Art History, California State University, Chico

16 YEARS EXPERIENCE

PROFESSIONAL AFFILIATIONS

California Preservation Foundation

Society of Architectural Historians

Amber L. Grady

Senior Architectural Historian

Amber Grady is an expert in NEPA, CEQA, and Section 106 of the NHPA compliance with over 16 years of experience in cultural resources management. Amber has extensive experience in California architectural history. Her cultural resources management experience includes archival research, historic building and structure surveys and evaluations, and cultural resources documentation for NEPA and CEQA projects ranging from single building evaluations to district-wide surveys. Previously, Amber served as the Cultural Resources Manager for the State of California for the California Army National Guard (CA ARNG). At the CA ARNG Amber managed the cultural resources program, which included the management of over 100 archaeological sites as well as the State's historic armories and supervising three full time archaeologists. Prior to joining the CA ARNG Amber worked for the California Energy Commission as an Architectural Historian where she worked on a variety of energy project including one of the largest solar projects in California as the Cultural Resources lead. Prior to that Amber worked as an Architectural Historian and Project Manager foranother employer on a variety of projects throughout California and Nevada completing project for City's, school districts, and private sector clients. Amber began her career in the public sector working as a planner for both the County of Santa Clara and the City and County of San Francisco. Amber's expertise includes all phases of environmental compliance from documentation to compliance during construction.

Relevant Experience

Los Angeles Unified School District (LAUSD) President Elementary School Historic Resources Evaluation, Harbor City, CA. *Senior Architectural Historian*. This is one of many historic resources evaluations that ESA has done for LAUSD. Amber assisted in the completion of the Historic Resources Evaluation report, which will be used in support of the Environmental Compliance documents.

LAUSD 6th Avenue Elementary School, Los Angeles, CA. *Senior Architectural Historian*. This is one of many historic resources evaluations that ESA has done for LAUSD. Amber assisted in the completion of the Historic Resources Evaluation report, which will be used in support of the Environmental Compliance documents.

LAUSD Thomas Jefferson High School Comprehensive Modernization Project, Los Angeles, CA. *Senior Architectural Historian.* ESA is in the process of preparing an IS/MND for this project. Thomas Jefferson High School is eligible for the National Register of Historic Places. In addition to writing the Cultural Resources portion of the IS/MND Amber is consulting with LAUSD and their architectural/ construction team to design their project to avoid impacts to the character-defining features of the campus.

Mayor's Office of Housing and Community Development On-Call, San Francisco, CA. *Senior Architectural Historian.* Under the on-call, ESA prepares

cultural and architectural historical documents, under NHPA regulations, and has recently implemented resource evaluation for more than 15 locales. Amber serves as principal investigator for completion of DPR 523 Primary forms, historic resource evaluations (such as the 730 Stanyan project), Memoranda of Agreement, and assistance with implementation and revision of the Programmatic Agreement (PA) by and among the City and County of San Francisco, the California State Historic Preservation Officer, and the Advisory Council On Historic Preservation Regarding Historic Properties Affected by Use of Revenue from the Department Of Housing And Urban Development Part 58 Programs.

Central City Specific Plan (CCSP), Sacramento, CA. For the City of Sacramento, ESA is preparing a Specific Plan, associated technical reports, an environmental impact report, and an update to an existing historic district. Amber and her staff prepared a cultural resources technical background report, updated the R Street Historic District evaluation, and prepared the Cultural Resources section of the EIR. The historic resources survey for the technical background report and historic district report included surveying and documenting hundreds of parcels as well as archival research and evaluation of resources. The project is ongoing and expected to extend through 2017.

Oroville Spillway Emergency Repair Project, Oroville Dam, CA. *Senior Architectural Historian.* Amber and her staff have been assisting the Department of Water Resources (DWR) with Section 106 compliance for built environment resources for the emergency spillway repair project. She routinely advises DWR staff on portions of the project that affect contributing elements of the National Register eligible Oroville Division Historic District, and preparing Finding of Effect documents to ensure construction is not delayed. The project is ongoing.

City of Long Beach, Local Landmark Evaluations, Long Beach, CA. For the City of Long Beach, ESA evaluated properties at 260 E San Antonio Road, the VIP Records Sign, and Fly DC Jets Sign for Local Landmark status. As Senior Architectural Historian, Amber was responsible for the research, survey, evaluation, and report completion.

1100 Broadway, Oakland, CA. As part of an addendum to the CEQA analysis for a proposed project located at 1100 Broadway in Downtown Oakland, ESA staff evaluated the design for the rehabilitation of the historic Key System Building and adjacent high-rise commercial tower for consistency with the Secretary of the Interior's Standards for Rehabilitation. The Key System Building, which was constructed in 1911 and has stood vacant since 1989, is individually listed in the National Register of Historic Places and the City of Oakland Local Register. The proposed project was analyzed for potential effects on the significance of the Key System Building as well as the locally designated Downtown Oakland Historic District, to which the historic building is a contributor. As part of this evaluation, character-defining features of the Key System Building were also identified.

National Register of Historic Places Nomination for Titlow Lodge, Tacoma, WA. ESA assisted in the preparation of documentation to nominate Titlow Lodge for listing in the National Register of Historic Places. Titlow Lodge is a Swiss Chalet-style building that was constructed in 1911 near the shore of Puget Sound. ESA provided a detailed architectural description of the building's exterior as well as interior spaces, a construction chronology, and a statement of significance under Criterion C (Design/Construction). As a senior architectural historian Amber provided QA/QC for this effort.

Johanna Kahn

Architectural Historian

EDUCATION

Master of Architectural History + Certificate in Historic Preservation, University of Virginia

Bachelor of Architecture, California Polytechnic State University, San Luis Obispo

International Program in Florence, Italy, Art & Architectural History, California State University

9 YEARS EXPERIENCE

PROFESSIONAL AFFILIATIONS

California Preservation Foundation

San Francisco Heritage

Preservation Sacramento

Johanna is an architectural historian in ESA's Cultural Resources Group. Her role entails conducting field surveys and archival research at local repositories in order to document and evaluate historic resources for eligibility for the National and California Registers. Additionally, she writes technical reports that meet federal, state, and local requirements and has completed evaluations for historic buildings, structures, and districts across the San Francisco Bay Area and Central California. Johanna meets the Secretary of the Interior's Professional Qualification Standards for architectural history, architecture, and historic architecture. She is also experienced in museum operations, grant writing, and fundraising for non-profits.

Relevant Experience

San Francisco International Airport (SFO), Recommended Airport Development Plan EIR, San Francisco, CA. *Architectural Historian.* Johanna prepared the Historic Resource Evaluation in support of the EIR for SFO's next long-term master plan—the Recommended Airport Development Plan—that will support the strategic development of the airport over the next two decades. Johanna surveyed, researched, and evaluated historic-age buildings located on the airport campus, developing an in-depth context of the airport's history and development since the beginning of the Jet Age.

Kilroy Realty, Interim Flower Mart Project, San Francisco, CA. *Architectural Historian.* While a new permanent location for the San Francisco Flower Mart is being constructed in the South of Market neighborhood, the operation would temporarily relocate to Piers 19, 19 ½, and 23 on The Embarcadero. In support of the EIR addendum, Johanna analyzed the proposed project for consistency with the Secretary of the Interior's Standards for Rehabilitation. Piers 19 and 23 are contributors to the Port of San Francisco Embarcadero Historic District, which is listed on the National Register of Historic Places. A Part 2 Historic Resource Evaluation was prepared.

San Francisco Mayor's Office of Housing and Community Development, Section 106 Studies, San Francisco, CA. *Architectural Historian.* Johanna has surveyed, researched, and evaluated buildings identified as proposed sites for federally funded, high-density residential development in the City and County of San Francisco as well as buildings within the areas of potential effect.

Ellis Partners, LLC, 1100 Broadway, Oakland, CA. *Architectural Historian.* As part of an addendum to the CEQA analysis for a proposed project located at 1100 Broadway in Downtown Oakland, Johanna evaluated the design for the rehabilitation of the historic Key System Building and adjacent high-rise commercial tower for consistency with the Secretary of the Interior's Standards for Rehabilitation. The Key System Building is individually listed in the National Register of Historic Places and the City of Oakland Local Register. The proposed project was analyzed for potential effects on the significance of the Key System Building as well as the locally designated Downtown Oakland Historic District, to which the historic building is a contributor.

Metro Parks Tacoma, National Register of Historic Places Nomination for Titlow Lodge, Tacoma, WA. *Architectural Historian.* Johanna prepared documentation to nominate Titlow Lodge for listing in the National Register of Historic Places. Originally known as Hotel Hesperides and constructed in 1911 as a 3-½-story building near the shore of Puget Sound, the lodge was reduced to 1 ½ stories in 1937 as a project of the Works Progress Administration. ESA provided a detailed architectural description of the building's exterior as well as interior spaces, a construction chronology, and a statement of significance under Criterion C (Design/Construction).

City of Union City, Masonic Homes Skilled Nursing Facility, Union City, CA. *Architectural Historian.* Johanna surveyed the Masonic Home at Union City campus to confirm the continued existence of contributing features. She prepared an Updated Historic Resources Evaluation Memo that in turn informed the Initial Study.

LeLand Properties, LLC, 2200 Stockton Boulevard, Sacramento CA. *Architectural Historian.* In support of a historic resource evaluation previously prepared by ESA of the 1930s Coca Cola bottling factory at 2200 Stockton Boulevard, Johanna surveyed, researched, and evaluated adjacent properties for potential historic significance.

City of Sacramento, Central City Specific Plan, Sacramento, CA. For the City of Sacramento, ESA is preparing a Specific Plan, associated technical reports, an environmental impact report, and an update to an existing historic district. Cultural resources staff prepared a technical background report, updated the R Street Historic District evaluation, and prepared the Cultural Resources section of the EIR. The historic resources survey for the technical background report and historic district report included surveying and documenting hundreds of parcels as well as archival research and evaluation of resources. The project is ongoing and expected to extend through 2017.

Brown & Caldwell, North Bay Water Reuse Program, San Francisco Bay Area, CA. *Architectural Historian.* As part of a feasibility study comprising a dozen sanitary districts, cities, and counties in the North San Pablo Bay region, Johanna surveyed, researched, and evaluated two wastewater treatment plants in Novato and Napa for potential historic significance.

City of Fremont, Niles Gateway Mixed-Use Project, Fremont, CA. *Architectural Historian.* Johanna analyzed the proposed project, which is located within the Niles Historic Overlay District, for conformance with the Niles Design Guidelines and Regulations. A Design Review Report was prepared in support of the EIR.

City of Burlingame, SFO@Technology Center, Burlingame, CA. *Architectural Historian.* As part of the Initial Study/Mitigated Negative Declaration for the proposed SFO@Technology Center located at 1300 Bayshore Highway, Johanna surveyed, researched, and evaluated a collection of mid-20th-century buildings for potential historic significance.

Soquel Creek Water District, Advanced Purified Groundwater Replenishment Project, Soquel and Santa Cruz, CA. *Architectural Historian.* The proposed advanced purified groundwater replenishment project – Pure Water Soquel – is intended to supplement natural recharge of the Santa Cruz Mid-County Groundwater Basin with purified water. Johanna researched and evaluated residential properties and a wastewater treatment plant for potential historic significance. A cultural resources report was prepared in support of the EIR.

Appendix B
DPR Forms

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 11 ***Resource Name or #:** (Assigned by recorder) 3101 Redding Avenue
P1. Other Identifier: _____

*__P2. Location:__ ☐ **Not for Publication** ☐ **Unrestricted**

***a. County** Sacramento **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** _____ **Date** _____ **T** __; **R** __; __ ☐ **of** __ ☐ **of Sec** __; ____**B.M.**

c. Address 3101 and 3051 Redding Avenue City Sacramento Zip 95820

d. UTM: (Give more than one for large and/or linear resources) Zone __, _____ mE/ _____ mN

e. Other Locational Data: APN 015-0101-009-0000

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The subject property at 3101 Redding Avenue is a former elementary school campus located on a rectangular 10.7-acre parcel at the northeast corner of Redding Avenue and San Joaquin Street. Four historic-age buildings occupy the property: a school building (Building 1), a multi-use building (Building 2), and a kindergarten building (Building 3) that together formed the former H.C. Muddox Elementary School, and a warehouse constructed in 1962 after the school closed (Building 4).

Building 1 (Former Main School Building)
The former school building is roughly L-shaped in plan, the result of at least four phases of construction during the 1940s and 1950s. The one-story building is clad in stucco and vertical wood siding, and it is capped by a series of gabled roofs covered with asphalt shingles. Flat roofs cover portions of the east-west ell of the building. (Continued on page 3)

***P3b. Resource Attributes:** HP14. Government building, HP15. Educational building

***P4. Resources Present:** ☒ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing

P5b. Description of Photo: (view, date, accession #) Aerial view of the subject property with labels of the four historic-age buildings. Source: USDA, 2016; ESA, 2018.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
Building 1: 1942-52; Buildings 2 and 3: 1952; Building 4: 1962. Source: SCUSD and building permits.

***P7. Owner and Address:**
Sacramento City Unified School District
5735 47th Avenue
Sacramento, CA 95824

***P8. Recorded by:** (Name, affiliation, and address)
Amber Grady/ESA
2600 Capitol Avenue, Suite 200
Sacramento, CA 95816

***P9. Date Recorded:**
December 5, 2018

***P10. Survey Type:** Intensive

***P11. Report Citation**: ESA. *Historic Resource Evaluation Report for 3101 Redding Avenue, Sacramento, California.* Prepared for Sacramento City Unified School District, December 2018.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) 3101 Redding Avenue ***NRHP Status Code** 6Z
Page 2 **of** 11

B1. Historic Name: H.C. Muddox Elementary School
B2. Common Name: SCUSD Transportation Services
B3. Original Use: Public elementary school B4. Present Use: Storage, training, and vehicle maintenance facility
***B5. Architectural Style:** Minimal traditional
***B6. Construction History:** Building 1 was constructed in 1942 as the H.C. Muddox Elementary School, and it was designed by architect Charles F. Dean. Classroom additions to Building 1 were constructed in 1945 and 1948. In 1952, Building 1 was enlarged with another classroom addition, and a multi-use building (Building 2) and a kindergarten building (Building 3) were also constructed at this time. The new buildings were also designed by Dean, and the contractor was Guth & Schmidt. A warehouse (Building 4) was constructed immediately north of Building 1 in 1962. It was designed by architect Earl John Taylor, and the contractor was Campbell Construction (building permit no. E-739, March 6, 1962). In 2001, a building permit was issued to construct a 966-square-foot addition to the warehouse. The contractor was Dual-Cal Builders Inc.; no architect was identified (building permit no. 0011315, July 28, 2001). Another building permit was issued to install a 2,000-gallon fuel tank on the former school property (building permit no. 0012940, February 15, 2001). Various unpermitted alterations have been made at unknown times, including replacement of horizontal redwood siding with vertical siding on Building 1; replacement of original wood-sash windows with aluminum-sash windows on Buildings 1 and 2; creation of large openings for roll-up doors on Buildings 1, 2 and 3; removal of a covered walkway between Buildings 1 and 2; and conversion of Buildings 1, 2, and 3 from school uses to office and repair uses.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** None

B9a. Architect: Charles F. Dean (Buildings1, 2, and 3) and Earl John Taylor (Building 4)
b. Builder: Guth & Schmidt (Buildings 2 and 3 and part of Building 1) and Campbell Construction (Building 4)
***B10. Significance: Theme** N/A **Area** Sacramento
Period of Significance N/A **Property Type** School **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

Junction School District

When the H.C. Muddox Elementary School was constructed in 1942 at 3101 Redding Avenue, it was part of the Junction School District. The following description of the district is from a 1953 master's thesis written by Robert D. Manley:

> The Junction School District, located approximately five miles from the heart of Sacramento, lies to the East of the city and at one point is adjacent to the Sacramento city limits. The district is bounded on the North by the American River, on the East by a highway known as Power Inn Road, on the South in part by Marin Avenue and in part by Fourteenth Avenue and on the West by Sixty-fifth Street.
>
> The district was first established, March 11, 1887, at which time it was considerably larger than at present [in 1953]. In recent years, parts of the district were annexed to other school districts. Though large in area, the residential nucleus of the school district consists of an area of about one-half mile square, bordering the railroad tracks.
>
> Most of the families of the district are people who have recently come to California from the midwestern section of the United States. […] (Continued on page 7)

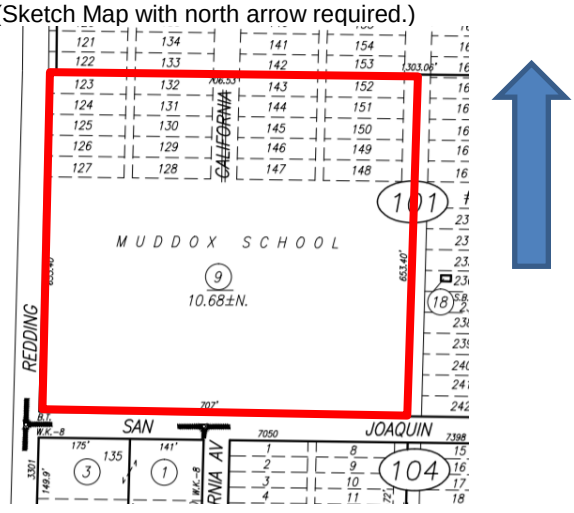
B11. Additional Resource Attributes: None
***B12. References:** See page 10

B13. Remarks: None

***B14. Evaluator:** Johanna Kahn/ESA
***Date of Evaluation:** December 2018

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



Source: Sacramento County Assessor, edited by author.

P3a. Description (continued):

The primary (west) façade is composed of three parts: a stucco wall with several decorative vents that terminates in a gable at the north end; a long horizontal wall that is clad in vertical wood siding and is punctuated at regular intervals by aluminum-sash windows; and a covered porch with steel posts at the south end. The primary entrance is marked by a covered porch with carved timber posts and a single flush door, which replaced the original pair of partially-glazed paneled wood doors. The porch is accessed by concrete steps from Redding Avenue.

The north façade features most of its original fenestration, including banks of single-hung, two-over-two, wood-sash windows, each with a hopper window below. Windows have been variously covered with metal security grates, partially boarded, or replaced with aluminum-sash windows. This façade also includes at least one original partially-glazed paneled wood door, a flush metal pedestrian door, a roll-up vehicular door, and a large flush metal door at the east end.

The east and south façades are not visible from the public right-of-way. They are generally characterized by stucco walls, aluminum-sash windows, and partially-glazed flush metal doors.

West (Primary) and South Façades of Building 1, Facing Northeast.

North Façade of the Building 1, Facing West.

Building 2 (Former Multi-Use Building)
The former multi-use building is T-shaped in plan. The one-story building is clad in stucco and is capped by a combination of gabled and flat roofs.

The primary (west) façade is composed of a gabled mass containing an entrance porch. A horizontal awning is supported by metal posts, covering an entrance composed of a pair of partially-glazed, paneled wood doors with fixed, multi-light sidelights and transoms. The porch is contained by brick planters and accessed by concrete steps from Redding Avenue. Below the gable is a large louvered vent. The double-height volume of the former multi-use space is visible behind the gabled roof.

On the north façade, a single flush pedestrian door replaced the original pair of doors leading to the foyer, and the original pair of doors near the east end of the façade have been filled in. The original wood-sash clerestory windows remain, two of which have been altered.

The double-height portion of the east (rear) façade features two roll-up vehicular doors in an otherwise blank stucco wall. The southern portion of the façade features a flush metal door, a multi-light steel-sash window, and louvered metal panel behind a metal grate.

On the south façade, a single flush pedestrian door replaced the original pair of doors leading to the foyer. A pair of flush doors beneath a metal awning at the east end of the façade. The original wood-sash clerestory windows have all been replaced with aluminum-sash windows, and the easternmost window has been covered with an opaque panel.

West (Primary) and South Façades of Building 2, Facing Northeast.

North Façade of Building 2, Facing Southeast.
It appears that an awning has been removed above the large yellowish area in the right foreground.

East (Rear) and North Façades of Building 2, Facing Southwest.

Building 3 (Former Kindergarten Building)
The former kindergarten building is rectangular in plan. The one-story building is clad in stucco and is capped by a gabled roof covered with asphalt shingles.

The primary (west) façade is a blank stucco wall with several louvered vents. The south façade, which originally comprised a covered porch with fenestration, has been enclosed and clad with stucco.

The north façade features a continuous bank of multi-light steel-sash windows with one flush pedestrian door. The east façade features a large vehicular door in an otherwise blank stucco wall.

West (Primary) and South Façades of Building 3, Facing Northeast.
The former multi-use building is visible in the left background.

East (Rear) and North Façades of Building 3, Facing Southwest.

Building 4 (Warehouse)
The one-story warehouse is rectangular in plan and is capped by a low-pitched gabled roof. The primary façade faces west and features five segments of stucco-clad walls with bas reliefs separated by segments of blank walls clad in pebble dash. The north façade features a loading dock. The east façade features a roll-up vehicular door accessed by a concrete ramp. The south façade is separated from the former school building by a narrow passage.

West (Primary) Façade of Building 4, Facing Northeast.

B10. Significance (continued):

> A great number of the working population of the district are employed by the box factories, lumber mills, gravel companies and cement plants that lie within the district. Still others find employment at the military bases that are nearby. […]
>
> The Junction [School] District is recognized as a rather poor district inasmuch as its total assessed valuation in 1953 is only $1,112,170.00.

Sacramento City Unified School District: 1958 to Present
In 1958, the Junction School District and several other small school districts were annexed by the SCUSD. The following history of the SCUSD since 1958 is from the SCUSD website:

Building continued at a constant pace throughout the 1950s and 60s. New legislation in 1958 gave the district its most sudden jolt. The Sacramento City Unified School District had to absorb all the surrounding small school districts. A total of 14 schools were annexed from unincorporated areas of the city.

As the 1970's approached, school integration was a major concern. Although all schools were open to students in their neighborhood, the city itself was becoming more segregated. To keep court-ordered integration at bay, the district began efforts to balance school ethnicity by busing students to neighboring areas. Later, as district enrollment declined, magnet and alternative schools were established offering innovative programs to attract diverse student bodies. Today, Sacramento is one of the most ethnically diverse cities in the United States, and the schools reflect the community.

Major Construction
By the early 1970s, enrollment stabilized, and in some areas declined, but new housing was making its way farther east towards Rancho Cordova. Schools in the Rosemont area opened, but a high school, though needed, wasn't constructed during that period. Rosemont High opened for freshmen at the start of the 2003-04 school year and [was] completed by [the] next fall.

The oldest of the district schools faced the wrecking ball as the Field Act legislation was enforced. Schools built prior to 1937 had to be retrofitted to meet earthquake standards, torn down or designated for other use. Some of the buildings, including Donner, Newton Booth, Coloma, El Dorado, Lincoln, Marshall, Fremont and Sierra elementary schools were spared. Though most are still standing, they are not used for K-12 education. Some are no longer district property.

The district had no choice, however, in replacing many others. In 1976, large scale building began. In most instances, schools did not close. Students attended classes in the old facilities while new structures were built on same site in vacant areas and playgrounds. Though Crocker school was never rebuilt, the attendance area merged with Riverside School; the new structure was renamed Crocker/Riverside. The outdated Washington, William Land, David Lubin, American Legion, Bret Harte, California, Kit Carson and Sacramento High buildings were demolished once the replacement schools were complete.

Development of the rich Pocket-area farm land during the 1980s brought the last of the large scale housing areas into reality. While houses were selling quickly, no schools existed. Area parents mobilized and began the arduous task of creating a special tax district. Eventually, three schools opened to take care of neighborhood children.

In Oak Park, parents also campaigned for a school in their area. For more than 20 years, students in this urban area of town were bused to schools. With the opening of Father Keith B. Kenny Elementary School in 1993, neighborhood schools were centered in the heart of every community.

Growth and decline have been a part of the district's rich and long history. Responding to declining test scores and run-down facilities, Mayor Joe Serna Jr. rallied widespread city support behind a movement for reform of Sac City Schools. After a new school board was elected, student performance improved and Sac City has become a national model for reform. With more than 80 schools and 50,000 students, plus approximately 20,000 adult students, today Sac City Unified is one of the 10 largest districts in California. But the city itself has very little room for growth. Most neighborhoods are well established and vacant lots are a rare sight.

District Headquarters
In the early 1980s, when enrollment was dropping, some campuses were closed and used as administrative offices. The district headquarters in the old Jefferson School at 16th and N Streets was filled to capacity. Even closets were converted to office space. Administrative offices were spread out to 11 different sites. Eventually the headquarters moved to Capitol Mall, but once again the building wasn't adequate to meet district needs and parking was inconvenient, at best.

Looking for a central location in the heart of the district, a large parcel was purchased on 47th Avenue. In 2002, the new Mayor Joe Serna Jr. and Isabel Hernandez Serna Community Education Center opened its doors.

Charles F. Dean, Architect

Charles Francis Dean (1884-1956) was the architect of the former H.C. Muddox School at 3101 Redding Avenue. A native of Texas, Dean was educated at the Texas A&M College of Architecture and relocated to San Francisco to practice architecture during the building boom that followed the 1906 earthquake and fires. In 1914, Dean moved to Sacramento, where he was employed by the State. From 1922 to 1932, he partnered with his brother, James S. Dean, to form the prominent Sacramento-based architecture firm Dean & Dean. From 1939 to 1945, Charles Dean was the principal of his own architectural practice. Dean's was one of only nine architecture firms listed in the 1939 Sacramento City Directory. He continued to practice into the 1950s, supported by at least two associate architects: Ivan C. Satterlee and Nicholas A. Tomich.

Research identified the following extant buildings in Sacramento that were designed either by Charles F. Dean or by the firm of Dean & Dean:

- Fremont School at 2420 N Street (1921)
- Elmhurst School at 4623 T Street (1921)
- Newton Booth School at 2600 V Street (ca. 1922)
- Bret Harte School at 2751 Ninth Avenue (ca. 1922)
- Highland Park School at 2791 24th Street (1922-1929)
- Jefferson School at 1619 N Street (1923)
- Sierra School at 2791 24th Street (1923)
- Westminster Presbyterian Church at 1300 N Street (1927); listed on the National Register of Historic Places in 2003
- Hughes Stadium (Sacramento City College) at 3835 Freeport Boulevard (1928)
- Sutter Club at 1220 9th Street (1930)
- Firehouse No. 4 at 3145 Granada Way (1933)
- Theodore Judah School at 3919 McKinley Boulevard (1938-39); listed on the National Register of Historic Places in 1997
- Trinity Episcopal Cathedral at 2620 Capitol Avenue (1955)

Earl John Taylor, Architect

Earl John Taylor (1922-2011) was the architect of the warehouse at 3051 Redding Avenue. He received his undergraduate degree in civil engineering from the University of Utah in 1943, and he completed post-graduate studies in architecture at the University of Michigan and the U.S. Naval Academy. He was a licensed architect in California, Oregon, Wyoming, and Nevada and a licensed civil engineer in California and Utah.

Taylor was identified as an "outstanding local modern master architect" in the 2017 *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*. His projects include:

- Proposed Orangevale Grange Clubhouse in Orangevale, California (1953)
- Proposed office building at 21st and K streets in Sacramento (1953)
- Office building for Archibald D. McDougall at 818 19th Street in Sacramento (1953-54)
- Proposed warehouse for the Lancaster Wholesale Grocery Co. at Front and T streets in Sacramento (1953)
- Office of Earl John Taylor at 2401 C Street in Sacramento (1959)
- Nicoletti Funeral Home at 5401 Folsom Boulevard in Sacramento (1960)
- Anaheim Stake of the Church of Jesus Christ of Latter-Day Saints at Loaroa Street and Westmont Drive in Anaheim, California (1965)
- Chapel of the Reorganized Church of Jesus Christ of Latter-Day Saints, Arden Branch at 4044 Pasadena Avenue in Sacramento (1970)
- Rancho Cordova Public Library in Rancho Cordova, California (1976)

Evaluation

The subject property includes four historic-age buildings. The proposed project would demolish the three buildings formerly associated with the H.C. Muddox Elementary School. Building 4 (Warehouse, 3051 Redding Avenue) is not part of the proposed project and its evaluation is outside the scope of this HRER. Buildings 1, 2, and 3 were evaluated under California Register of Historical Resources criteria 1 through 4 and Sacramento Register of Historic and Cultural Resources criteria i through vi.

Archival review does not indicate that there are any significant associations between 3101 Redding Avenue and important events or patterns in history (Criterion 1/i). While the property functioned as the H.C. Muddox Elementary school that was associated with the Junction School District and later the SCUSD, 3101 Redding Avenue does not appear to rise above typical associations with either school district or associated events. For these reasons, 3101 Redding Avenue does not appear to be eligible under Criterion 1/i.

Archival review also does not indicate that there are any significant associations between 3101 Redding Avenue and significant persons (Criterion 2/ii). H.C. Muddox Elementary School was not directly associated with its namesake, Harry C. Muddox (1866-1932), a notable figure in Sacramento history who died a decade before the school was built. The school was headed by several principals during its brief 19-year existence including Ernest G. Oliver from at least 1948 until 1958 and Lawrence D. Casner from 1959 to 1961, both of whom continued their careers as educators at other schools. Research does not indicate that 3101 Redding Avenue is significantly associated with the productive life of any significant person, and it therefore does not appear to be eligible under Criterion 2/ii.

The buildings at 3101 Redding Avenue are not significant for their design or engineering (Criterion 3/iii-v). Three of the historic-age buildings on the subject property comprise the former H.C. Muddox Elementary School, which is a work of master Sacramento architect Charles F. Dean. Within Dean's oeuvre are numerous extant schools in Sacramento, many of which are architecturally distinctive and possess high artistic value. However, the school is not architecturally distinctive or a significant example of the work produced by Charles Dean's practice or the office of Dean and Dean. Therefore, the buildings at 3101 Redding Avenue do not appear to meet Criterion 3/iii-v.

Lastly, 3101 Redding Avenue does not appear to have the potential to yield more information and therefore, does not appear to be eligible under Criterion 4/vi.

Integrity
In addition to being eligible for listing under one or more of the above criteria, a property must retain sufficient integrity to convey its historical significance in order to be considered a historical resource. The California Register defines integrity as the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics that existed during the resource's period of significance. Because 3101 Redding Avenue does not appear to be individually significant under any state or local criteria, a discussion of integrity is inapplicable

Conclusion
ESA evaluated Buildings 1, 2 and 3 at 3101 Redding Avenue for potential historic significance and recommends the property ineligible for listing on the California or Sacramento registers. It is therefore not considered to be a historical resource for the purposes of CEQA.

B12. References (continued):

"Addition to Muddox School Is Authorized." *Sacramento Bee,* February 14, 1951, 3.

"Addition to Muddox School Is Started." *Sacramento Bee,* March 9, 1951, 20.

"Anaheim's First Sacred Arts Festival - 3." *Anaheim Arts Council.* Accessed December 17, 2018, at https://www.anaheimartscouncil.com/three-col-report3.php.

"Earl John Taylor (1922-2011)." *Find a Grave.* Accessed December 17, 2018, at https://www.findagrave.com/memorial/65203559/earl-john-taylor.

GEI Consultants, Inc. and Mead & Hunt, Inc. *Mid-Century Modern in the City of Sacramento Historic Context Statement and Survey Results*. September 30, 2017.

"Grocery Firm Plans New Warehouse." *Sacramento Bee,* December 5, 1953, F20.

Manley, Robert D. "A Proposed Summer Recreation Program for a Rural Elementary School District" (unpublished master's thesis), 1953. Sacramento State College, Sacramento California.

"Masons Will Dedicate Muddox School Sunday." *Sacramento Bee,* August 27, 1942, 13.

"Muddox School Bond Issue Wins Approval." *Sacramento Bee,* November 22, 1947, 3.

No title (photograph and caption only). *Sacramento Bee,* April 25, 1970, A12.

"Office Building Is Started at 21st and K Streets." *Sacramento Bee,* November 28, 1953, F19.

"Orangevale Will Get New Grange Unit." *Sacramento Bee,* August 1, 1953, F19.

"Parents Warn of Boycott over New Monthly Bus Charge for Students." *Sacramento Bee,* September 6, 1961, C2.

SacMod. "SacMod's List of Notable MCM Places in the City of Sacramento" (draft), September 28, 2017. Accessed December 17, 2018, at http://sacramento.granicus.com/MetaViewer.php?view_id=21&clip_id=4068&meta_id=504879.

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"School System Administrative Study is Okehed." *Sacramento Bee,* February 20, 1962, 22.

"School Tax Vote Question Will Be Decided Monday." *Sacramento Bee,* February 15, 1961, C1.

"SCUSD: Part of Sacramento History." *Sacramento City Unified School District,* October 1, 2014. Accessed December 10, 2018, at https://www.scusd.edu/e-connections-post/scusd-part-sacramento-history.

"Six Library Branches Provide a Touch of Class." *Sacramento Bee,* February 13, 1977, C1.

Drawings

Architectural drawings for "Four Rm. Elementary School for the Junction School District." Prepared by Charles F. Dean, Architect, 1942 (exact date illegible). On file at Sacramento City Unified School District.

Architectural drawings for "One Room Addition to the H.C. Muddox School for the Junction Elementary School District." Prepared by Charles F. Dean, Architect, July 30, 1945. On file at SCUSD.

Architectural drawings for "Two Classroom, General Purpose, & Kindergarten Addition to the H.C. Muddox School for the Junction Elementary School District." Prepared by Charles F. Dean, Architect, September 7, 1950. On file at SCUSD.

Maps

Sanborn Fire Insurance Maps, 1895-1964. *Sacramento, California*.

USGS, 1949-1980. *Sacramento East*, California 7.5" USGS Topographic Quadrangle Map.

USGS, 1952. Historical Aerial Photograph of 3101 Redding Avenue, Sacramento California. Available: www.historicaerials.net. December 11, 2018.

City Records

City Building Permit Records Files for 3101 and 3051 Redding Avenue.

"Resolution Authorizing the City Manager to Acquire the Glenbrook and Redding Avenue Surplus School Sites (Resolution No. 80-311)." Adopted by the Sacramento City Council in May 1980.

"Resolution Designating the Official Names of Various Park Sites (Resolution No. 80-755)." Adopted by the Sacramento City Council on November 12, 1980.

APPENDIX C: Noise Assessment Technical Report

Environmental Noise Assessment

SCUSD Central Kitchen

City of Sacramento, California

November 9, 2018

Project # 180501

Prepared for:

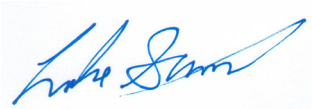
Sacramento City Unified School District

5735 47th Avenue

Sacramento, CA 95824

Prepared by:

Saxelby Acoustics



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INTRODUCTION

The Sacramento City Unified School District (SCUSD) Central Kitchen includes the development of a new Central Kitchen adjacent to the existing refrigerated warehouse, and reconfiguration of the parking areas at the 3051 Redding Avenue site owned by the District. **Figure 1** shows the project site plan. **Figure 2** shows an aerial photo of the project site.

PROJECT OVERVIEW

Key components of the project include:

1. Demolition and Site Clearance. In order to create space for the proposed Central Kitchen, the existing Transportation Services Building would be demolished. As previously noted, the Transportation Department is currently in the process of moving to the new Transportation Facility located on San Joaquin Street to the south of the project site. In addition, the existing parking area located along the Redding Street frontage would be reconfigured to allow more efficient parking and to accommodate frontage improvements in accordance with the South 65th Street South Transit Village Plan. These improvements include pedestrian and bicycle facilities along both the San Joaquin Street and the Redding Avenue frontage of the site. Additionally, the existing bus parking area would be reconfigured for vehicle and food delivery truck parking as described below.

2. Central Kitchen Building. The proposed Central Kitchen building would be approximately 44,892 sq. ft. in size. The Kitchen itself comprises the majority of the building area and would be 33,270 sq. ft. of the building. Other uses include 7,234 sq. ft. committed to office space for the Nutrition staff and a 1,640 sq. ft. training area. A smaller loading dock for loading and distribution of prepared meals is proposed on the east side of the Central Kitchen building.

3. Reconfigured Parking Areas. Along Redding Avenue there is currently a small on-site parking area which will be reconfigured and expanded to include 59 parking spaces. A large parking area currently exists off San Joaquin Street. This area has historically been used for both staff and school bus parking. As previously noted, the school buses are being relocated to the south side of San Joaquin Street to the new Transportation Services Facility. This larger lot will be reconfigured to provide approximately 200 parking spaces. These spaces will accommodate parking for existing staff on site, bus driver cars, visitors and the estimated additional 19 to 20 employees required for the Central Kitchen site.

4. Bus Wash Area. As part of the reconfiguration of the parking area, it is planned to construct a bus wash near the existing bus fueling area.

5. Sidewalk and Street Improvements. Currently both sides of San Joaquin Street (which is the southern boundary of the site) are in the project vicinity are unimproved (i.e. no sidewalks, curb or gutter). Redding Avenue on the western boundary of the site has limited and discontinuous street improvement. The project includes the installation of

sidewalks and bikeways consistent with the South 65th Street Transit Village Plan, a component of the City of Sacramento's General Plan for the Fruitridge and Broadway Community Plan. After consultation with the Sacramento Municipal Utility District (SMUD), the District will also be undergrounding and upgrading electrical utilities in the area.

ENVIRONMENTAL SETTING

BACKGROUND INFORMATION ON NOISE

Fundamentals of Acoustics

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

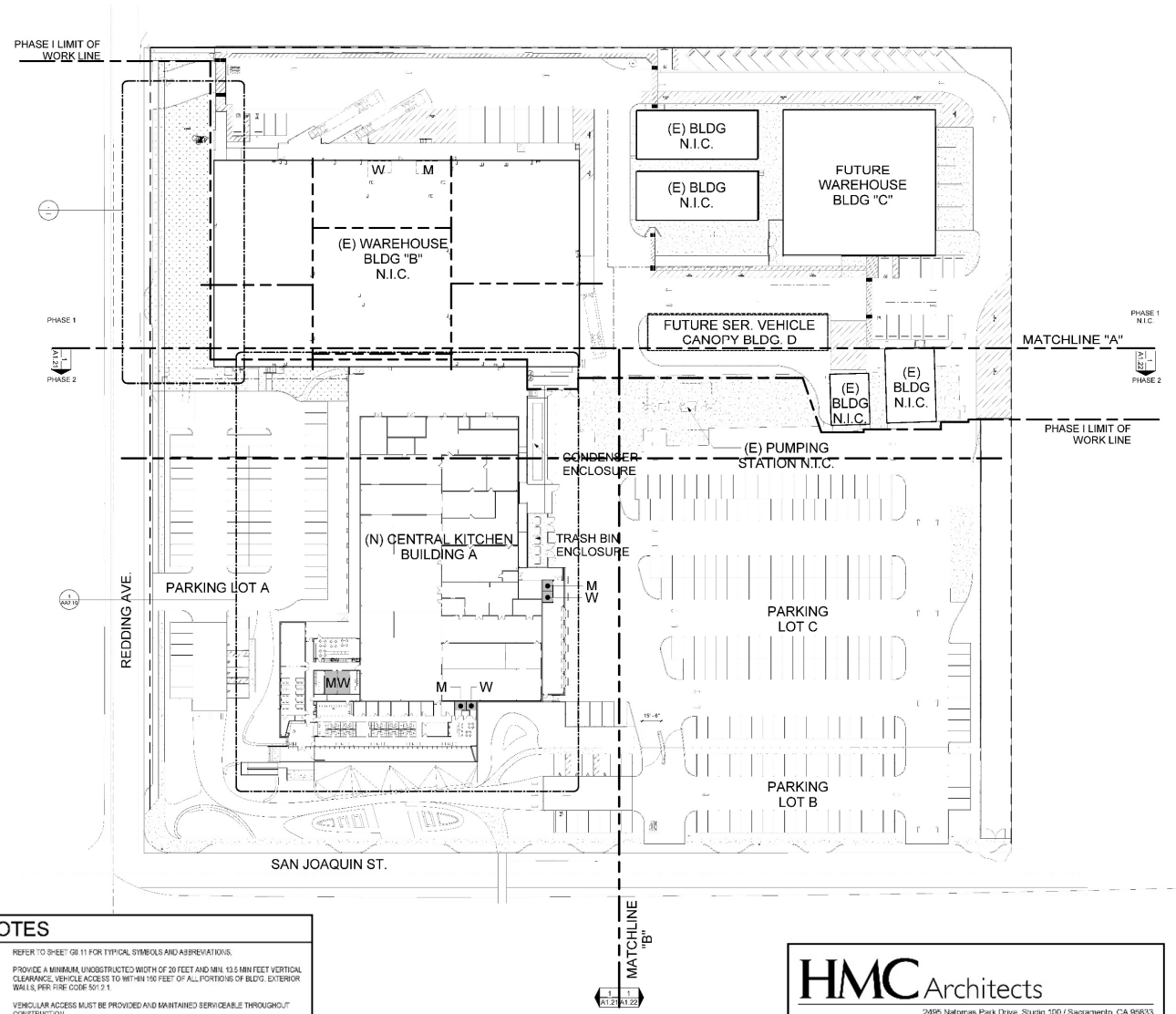
The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.

SCUSD Central Kitchen

City of Sacramento, California

Figure 1

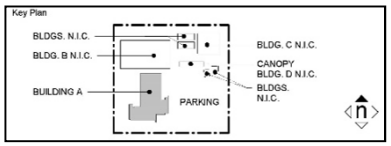
Project Site Plan



NOTES

1. REFER TO SHEET G0.11 FOR TYPICAL SYMBOLS AND ABBREVIATIONS.
2. PROVIDE A MINIMUM, UNOBSTRUCTED WIDTH OF 20 FEET AND MIN. 13.5 MIN FEET VERTICAL CLEARANCE. VEHICLE ACCESS TO WITHIN 150 FEET OF ALL PORTIONS OF BLD'G. EXTERIOR WALLS, PER FIRE CODE 501.2.1.
3. VEHICULAR ACCESS MUST BE PROVIDED AND MAINTAINED SERVICEABLE THROUGHOUT CONSTRUCTION.

- VEHICLE DIRECTION ARROW
- PROPERTY LINE
- PATH OF TRAVEL TO PUBLIC WAY
- ACCESSIBLE ROUTE PATH OF TRAVEL
- CONCRETE DRIVEWAYS
- ASPHALT CONRETE PAVING
- LANDSCAPE - REFERENCE LANDSCAPE DRAWINGS
- CONCRETE WALKWAYS



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T 916 325 1100 / www.hmcarchitects.com

SAXELBY ACOUSTICS
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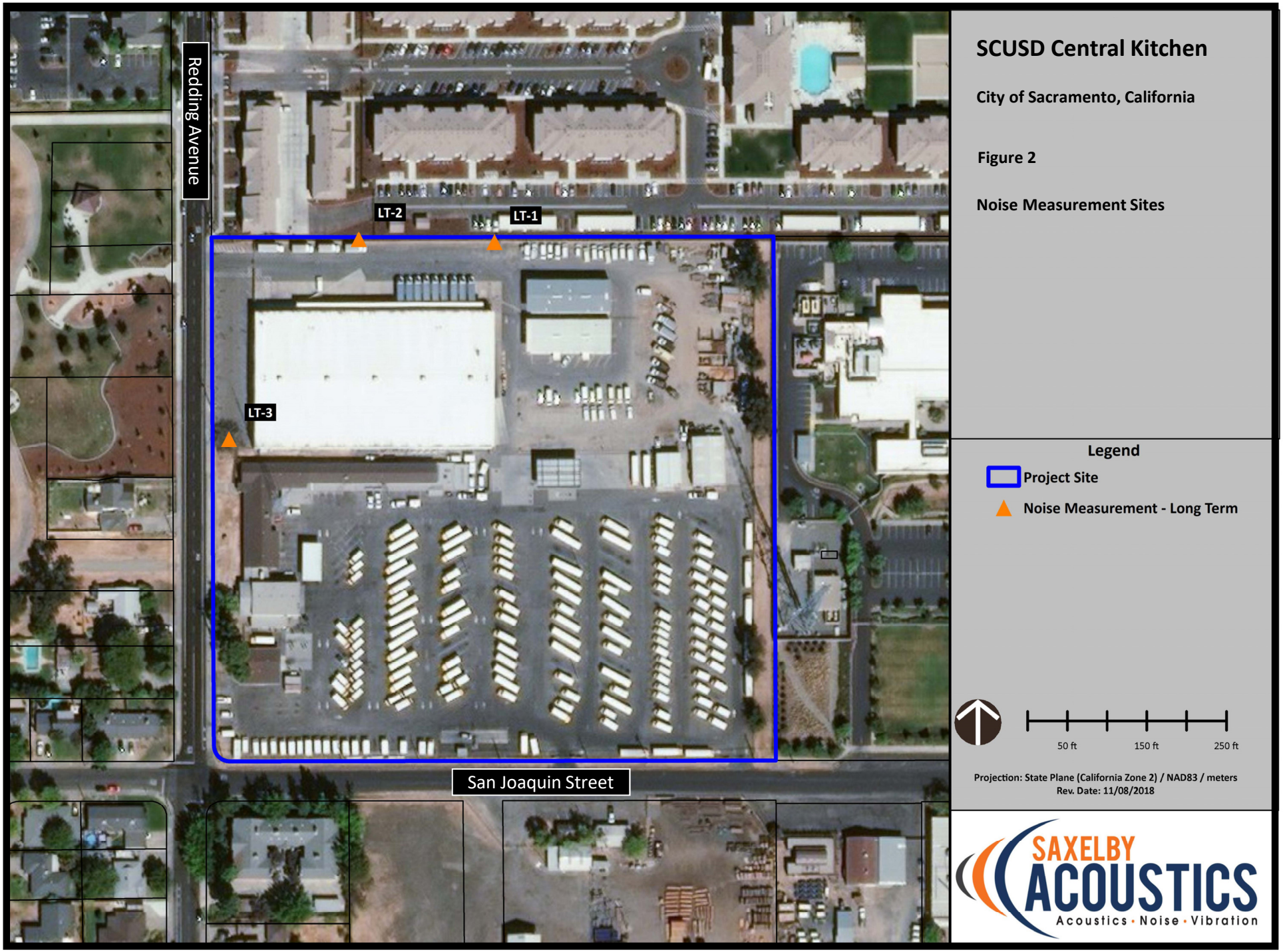

SCUSD Central Kitchen

City of Sacramento, California

Figure 2

Noise Measurement Sites

Legend

- Project Site
- Noise Measurement - Long Term

50 ft 150 ft 250 ft

Projection: State Plane (California Zone 2) / NAD83 / meters
Rev. Date: 11/08/2018

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The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (DNL or L_{dn}) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

Table 1 lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

TABLE 1: TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, Technical Noise Supplement, Traffic Noise Analysis Protocol. September, 2013.

Effects of Noise on People

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING AND FUTURE NOISE AND VIBRATION ENVIRONMENTS

EXISTING NOISE RECEPTORS

Some land uses are considered more sensitive to noise than others. Land uses often associated with sensitive receptors generally include residences, schools, libraries, hospitals, and passive recreational areas. Sensitive noise receptors may also include threatened or endangered noise sensitive biological species, although many jurisdictions have not adopted noise standards for wildlife areas. Noise sensitive land uses are typically given special attention in order to achieve protection from excessive noise.

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the project site, sensitive land uses include existing multi-family and single-family residential uses located along the west side of Redding Avenue and existing multi-family uses to the north.

EXISTING GENERAL AMBIENT NOISE LEVELS

The existing noise environment in the project area is defined primarily by existing SCUSD transportation facilities, existing industrial uses in the project vicinity, and traffic noise from U.S. Highway 50 located approximately ½ mile to the north. Existing freight train activity is also audible at times from the existing rail line located approximately 900 feet to the east of the project site.

To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted continuous (24-hr.) noise level measurements at three locations on the existing site.

Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results are provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted L_{max}, represents the highest noise level measured. The average value, denoted L_{eq}, represents the energy average of all the noise received by the sound level meter microphone during the monitoring period. The median value, denoted L_{50}, represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) Model 812 and 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a B&K Model 4230 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

Site	Date	Average Measured Hourly Noise Levels, dBA						
			Daytime (7:00 am - 10:00 pm)			Nighttime (10:00 pm – 7:00 am)		
		L_{dn}	L_{eq}	L_{50}	L_{max}	L_{eq}	L_{50}	L_{max}
LT-1 215-ft from Redding Ave. North of loading dock.	Sept. 12, 2018	64	63	54	79	56	46	68
LT-2 385-ft. from Redding Ave. North of loading dock.	Sept. 12, 2018	67	66	57	82	57	48	70
LT-3 50-ft. from Redding Ave. Adjacent to offices.	Sept. 12, 2018	64	62	55	81	56	50	76
Source: Saxelby Acoustics – 2018								

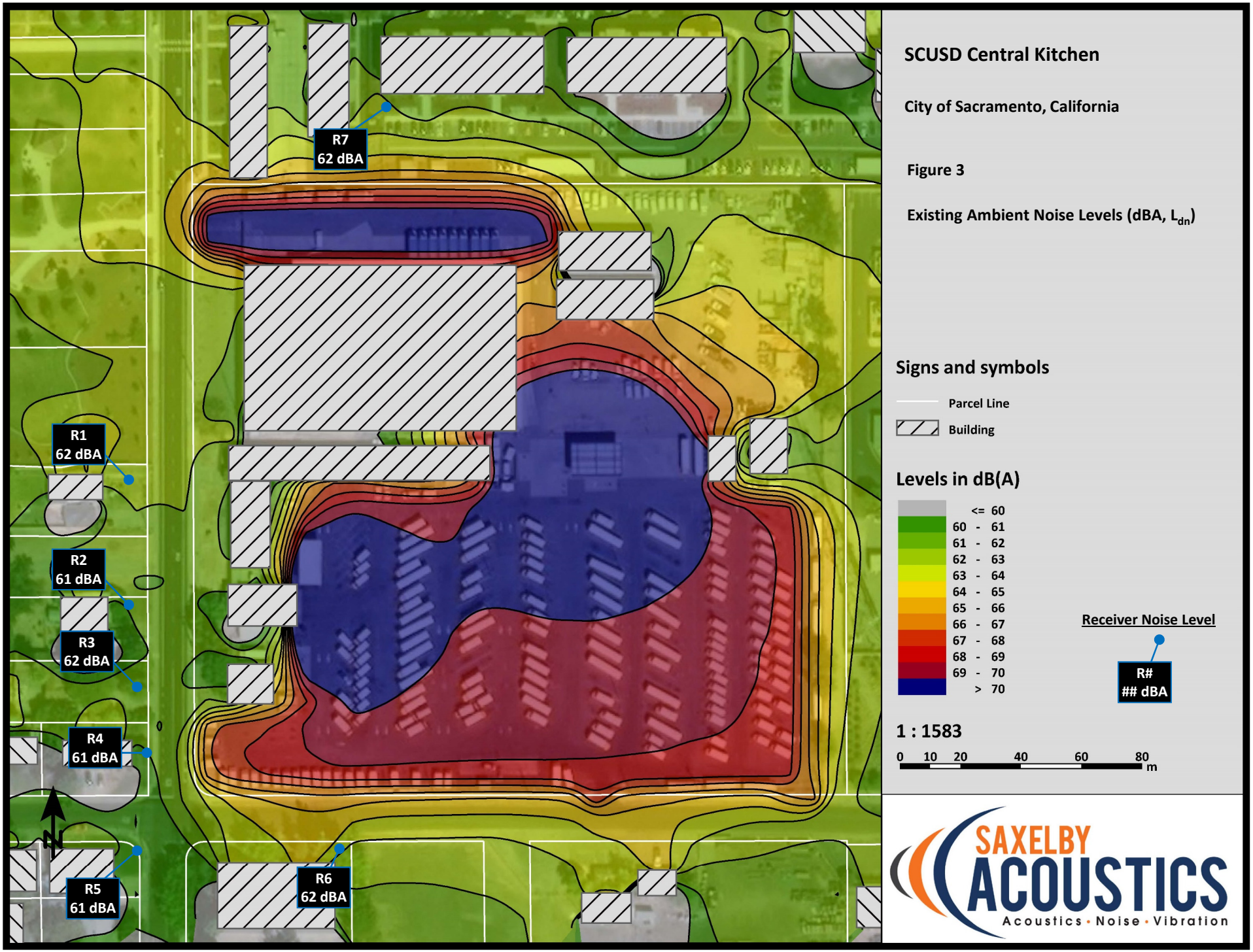
EVALUATION OF EXISTING AMBIENT NOISE

On-Site Noise Prediction Methodology

The existing noise levels measured at sites LT-1, LT-2, and LT3 along with existing traffic counts for U.S. Highway 50 were used to calculate existing ambient noise levels at each of the nearby residential receptors. This was done using the SoundPLAN noise prediction model with existing buildings, existing SCUSD facility locations, and other existing site features as input data. The SoundPLAN model was found to accurately predict noise levels to within 1 dBA of measured levels at all measurement sites.

It should be noted that the existing bus repair facilities were measured to generate noise levels of 68 dBA L_{eq}, 58 dBA L_{50}, and 76 dBA L_{max} at a distance of 120 feet from the open shop doors during a busy period of normal operations. This data was also input into the SoundPLAN model.

Existing ambient noise levels are shown on **Figure 3**.


R7
62 dBA
R1
62 dBA
R2
61 dBA
R3
62 dBA
R4
61 dBA
R5
61 dBA
R6
62 dBA
N
SCUSD Central Kitchen
City of Sacramento, California
Figure 3
Existing Ambient Noise Levels (dBA, L_{dn})
Signs and symbols
Parcel Line
Building
Levels in dB(A)
<= 60
60 - 61
61 - 62
62 - 63
63 - 64
64 - 65
65 - 66
66 - 67
67 - 68
68 - 69
69 - 70
> 70
Receiver Noise Level
R#
dBA
1 : 1583
0 10 20 40 60 80
m
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EVALUATION OF EXISTING PLUS PROJECT NOISE LEVELS

In order to evaluate the existing plus project exterior noise levels around the project site, Saxelby Acoustics re-ran the SoundPLAN model to include the new locations of the existing transportation facilities (as-previously approved and currently under construction), addition of the central kitchen building, new loading dock, modified parking lots, and proposed condenser enclosure. The existing fuel canopy was assumed to remain in its current location.

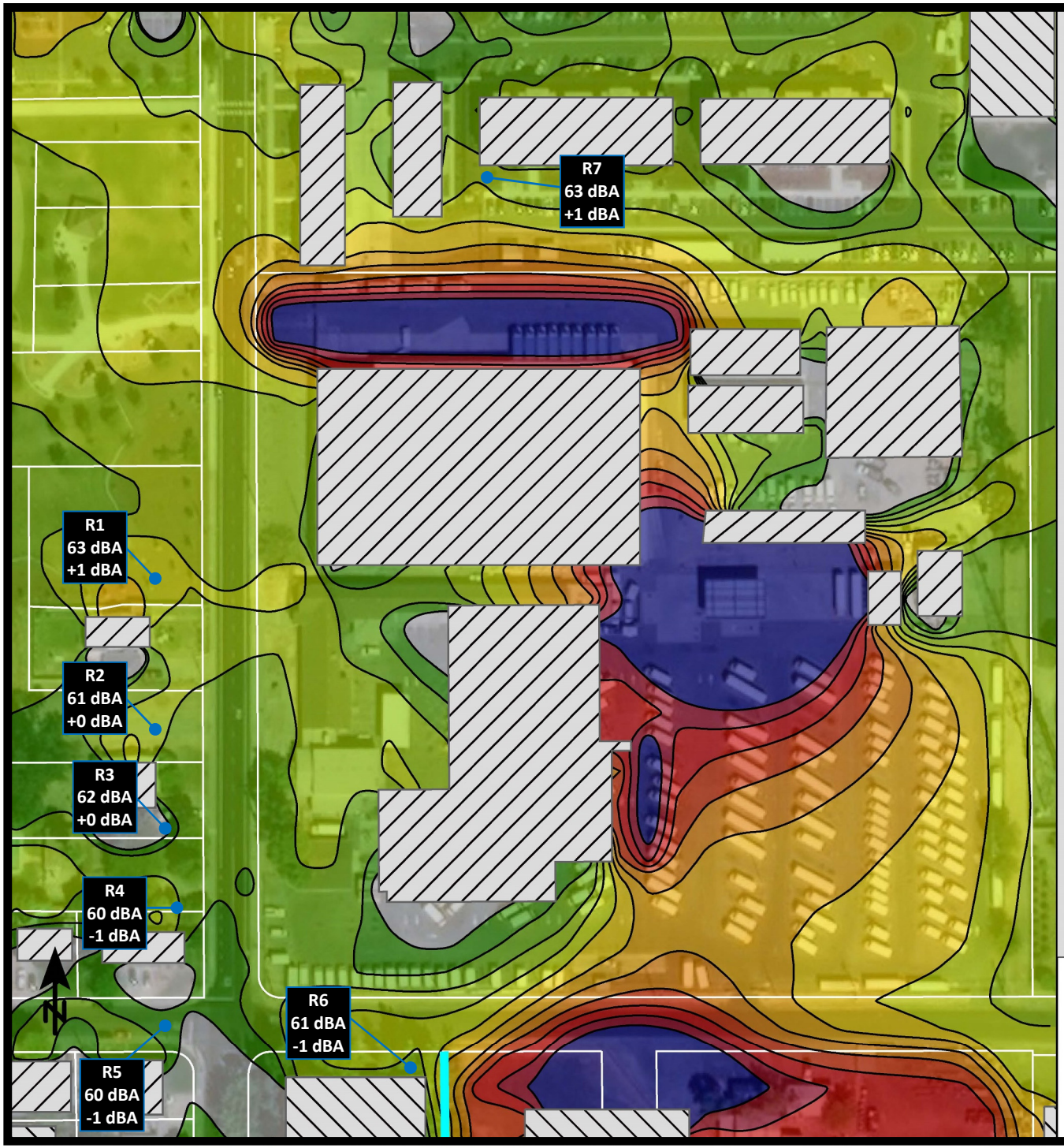
The results of this analysis are shown graphically on **Figure 4**.

Table 3 shows the predicted noise levels at the existing residential receptors versus the City of Sacramento General Plan Noise Standards.

TABLE 3: PREDICTED NOISE LEVELS AT SENSITIVE RECEPTORS AROUND PROJECT SITE

Receiver [1]	Existing Ambient Noise, dBA L_{dn}	Existing + Project Noise, dBA L_{dn}	Change	Existing Ambient Noise, dBA L_{50}	Existing + Project Noise, dBA L_{50}	Change	Existing Ambient Noise, dBA L_{max}	Existing + Project Noise, dBA L_{max}	Change
R1	62	63	1	56	57	1	71	71	-1
R2	61	61	0	56	56	0	70	69	-1
R3	62	62	0	56	56	0	71	70	-1
R4	61	61	0	57	56	-1	72	68	-4
R5	61	60	-1	56	54	-3	70	68	-2
R6	62	61	-1	58	57	-1	73	70	-3
R7	62	63	1	56	56	1	74	74	1

As shown in **Table 3,** the proposed project is predicted to result in noise level increases of up to 1 dBA versus existing ambient noise levels and noise reductions of up to 4 dBA. **Figure 4** shows the predicted existing plus project noise levels in terms of the day/night average (L_{dn}) metric.



SCUSD Central Kitchen

City of Sacramento, California

Figure 4

Existing Plus Project Noise Levels (dBA, L_{dn})

Signs and symbols

Parcel Line

Wall

Levels in dB(A)

<=	60
60 -	61
61 -	62
62 -	63
63 -	64
64 -	65
65 -	66
66 -	67
67 -	68
68 -	69
69 -	70
>	70

Receiver Noise Level

R#
dBA
+/- dBA Change

1 : 1614

0 10 20 40 60 80 m

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Construction Noise Environment

During the construction of the proposed project, noise from construction activities would temporarily add to the noise environment in the project vicinity. As shown in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 4: CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dBA at 50 feet
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Paver	77
Pneumatic Tools	85

Source: *Roadway Construction Noise Model User's Guide*. Federal Highway Administration. FHWA-HEP-05-054. January 2006.

Construction Vibration Environment

The primary vibration-generating activities associated with the proposed project would occur during construction when activities such as grading, utilities placement, and parking lot construction occur. **Table 5** shows the typical vibration levels produced by construction equipment.

TABLE 5: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

Type of Equipment	Peak Particle Velocity at 25 feet (inches/second)	Peak Particle Velocity at 50 feet (inches/second)	Peak Particle Velocity at 100 feet (inches/second)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

Source: *Transit Noise and Vibration Impact Assessment Guidelines.* Federal Transit Administration. May 2006.

REGULATORY CONTEXT

FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

STATE

There are no state regulations related to noise that apply to the Proposed Project.

LOCAL

City of Sacramento General Plan

The Noise Element of the City's General Plan identifies noise and land use compatibility standards for various land uses. The City's goal is to "minimize noise impacts on human activity to ensure the health and safety of the community."

Noise and vibration policy EC-3.1.1 establishes exterior noise level standards for multi-family and single-family residences. Table EC-1 (**Figure 5**) shows the City's land use compatibility standards.

Table EC 1 Exterior Noise Compatibility Standards for Various Land Uses

Land Use Type	*Highest Level of Noise Exposure That Is Regarded as "Normally Acceptable"[a] (L_{dn}[b] or CNEL[c])*
Residential—Low Density Single Family, Duplex, Mobile Homes	60 dBA[d,e]
Residential—Multi-family	65 dBA
Urban Residential Infill[f] and Mixed-Use Projects[g]	70 dBA
Transient Lodging—Motels, Hotels	65 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes	70 dBA
Auditoriums, Concert Halls, Amphitheaters	Mitigation based on site-specific study
Sports Arena, Outdoor Spectator Sports	Mitigation based on site-specific study
Playgrounds, Neighborhood Parks	70 dBA
Golf Courses, Riding Stables, Water Recreation, Cemeteries	75 dBA
Office Buildings—Business, Commercial and Professional	70 dBA
Industrial, Manufacturing, Utilities, Agriculture	75 dBA

SOURCE: Governor's Office of Planning and Research, *State of California General Plan Guidelines 2003*, October 2003

a. As defined in the *Guidelines*, "Normally Acceptable" means that the "specified land use is satisfactory, based upon the assumption that any building involved is of normal conventional construction, without any special noise insulation requirements."
b. L_{dn} or Day Night Average Level is an average 24-hour noise measurement that factors in day and night noise levels.
c. CNEL or Community Noise Equivalent Level measurements are a weighted average of sound levels gathered throughout a 24-hour period.
d. dBA or A-weighted decibel scale is a measurement of noise levels.
e. The exterior noise standard for the residential area west of McClellan Airport known as McClellan Heights/Parker Homes is 65 dBA.
f. With land use designations of Central Business District, Urban Neighborhood (Low, Medium, or High) Urban Center (Low or High), Urban Corridor (Low or High).
g. All mixed-use projects located anywhere in the City of Sacramento.

Figure 5: City of Sacramento General Plan Table EC-1

City of Sacramento Municipal Code

The City of Sacramento Municipal Code, Section 8.68.060 establishes and allowable exterior noise level limit of 55 dBA L_{50} and 75 dBA L_{max} during daytime (7:00 a.m. to 10:00 p.m.) hours and 50 dBA L_{50} and 70 dBA L_{max} during nighttime (10:00 p.m. to 7:00 a.m.) for sources of noise which occur for more than 30 minutes per hour (L_{50}).

If the existing ambient noise level exceeds the 50/55 dBA L_{50} standard the allowable limit is increased in five dBA increments to encompass the ambient noise level. If the existing ambient noise level exceeds the 70/75 dBA L_{max} noise standard, the limit becomes the measured L_{max} existing ambient noise level. For example, if measured existing ambient daytime noise levels are 57 dBA L_{50} and 77 dBA L_{max}, the noise ordinance limits would be 60 dBA L_{50} and 77 dBA L_{max}.

Section 8.68.080.D, Exemptions, exempts from the Noise Ordinance standards those noise sources due to the erection (including excavation), demolition, alteration, or repair of any building or structure between the hours of 7 a.m. and 6 p.m., on Monday through Saturday, and between 9 a.m. and 6 p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order.

Criteria for Acceptable Vibration

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. **Table 6**, which was developed by Caltrans, shows the vibration levels which would normally be required to result in damage to structures. The vibration levels are presented in terms of peak particle velocity in inches per second.

Table 6 indicates that the threshold for architectural damage to structures is 0.20 in/sec p.p.v. A threshold of 0.2 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 6: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

Peak Particle Velocity		Human Reaction	Effect on Buildings
mm/second	in/second		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: *Transportation Related Earthborne Vibrations.* Caltrans. TAV-02-01-R9601. February 20, 2002.

IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-f]).

Would the project:

a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

b. Expose persons to, or generate, excessive groundborne vibration or groundborne noise levels;

c. Cause a substantial permanent increase in ambient noise levels in the project vicinity above existing levels without the project;

d. Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels without the project;

e. Expose persons residing or working in the project area to excessive noise levels if located within an airport land use plan or where such a plan has not been adopted within 2 miles of a public airport or public use airport; or

f. Expose persons residing or working in the project area to excessive noise levels if located within the vicinity of a private airstrip.

ISSUES NOT EVALUATED FURTHER

According to the traffic report[1] for the project, the proposed project is not predicted to cause substantial changes in project-related off-site traffic patterns or substantial increase in vehicle trips. Therefore, assessment of off-site traffic has not been evaluated further as there would be no impact associated with this item.

PROJECT-SPECIFIC IMPACTS AND MITIGATION MEASURES

IMPACT 1: WOULD THE PROJECT RESULT IN EXPOSURE OF PERSONS TO OR GENERATION OF NOISE LEVELS IN EXCESS OF STANDARDS ESTABLISHED IN THE LOCAL GENERAL PLAN OR NOISE ORDINANCE, OR APPLICABLE STANDARDS OF OTHER AGENCIES?

As shown in Table 3, the proposed project would not cause new exceedances of the City of Sacramento General Plan Noise Element or Noise Ordinance standards. Most locations are predicted to see a reduction in noise levels ranging between 1 to 4 dBA. The maximum increase in noise levels is predicted to be 1 dBA. This would not be a perceptible change.

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 2: WOULD THE PROJECT RESULT IN EXPOSURE OF PERSONS TO OR GENERATION OF EXCESSIVE GROUNDBORNE VIBRATION OR GROUNDBORNE NOISE LEVELS?

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural.

The **Table 6** data indicate that construction vibration levels anticipated for the project are less than the 0.2 in/sec threshold at distances of 26 feet. Sensitive receptors which could be impacted by construction related vibrations, especially vibratory compactors/rollers, are located approximately 100 feet, or further, from typical construction activities. At these distances construction vibrations are not predicted to exceed acceptable levels. Additionally, construction activities would be temporary in nature and would likely occur during normal daytime working hours.

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 3: WOULD THE PROJECT RESULT IN A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN THE PROJECT VICINITY ABOVE LEVELS EXISTING WITHOUT THE PROJECT?

As shown in **Table3,** the project would not cause any increase in noise levels beyond 1 dBA. Therefore, the project would comply with the City's allowable increase standards outlined in Table EC-2 (**Figure 5**) of the General Plan Noise Element. In fact, reductions in daily noise levels of -1 to -4 dBA L_{dn} are predicted.

This is a **less-than-significant** impact and no additional mitigation is required.

[1] Traffic Impact Assessment for SCUSD's Central Kitchen / Warehouse Project. KD Anderson & Associates, Inc. October 23, 2018.

IMPACT 4: WOULD THE PROJECT RESULT IN ASUBSTANTIAL TEMPORARY OR PERIODIC INCREASE IN AMBIENT NOISE LEVELS IN THE PROJECT VICINITY ABOVE LEVELS EXISTING WITHOUT THE PROJECT?

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. As indicated in **Table 4**, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dBA L_{max} at a distance of 50 feet. Most of the building construction would occur at distances of 100 feet or greater from the nearest residences. Construction noise associated with parking lot paving would be similar to noise that would be associated with public works projects, such as a roadway widening or street paving projects.

Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur primarily during daytime hours.

The City of Sacramento exempts construction noise from the Noise Ordinance provisions if construction activity is limited to daytime hours. These exemptions are typical of City and County noise ordinances and reflect the recognition that construction-related noise is temporary in character, is generally acceptable when limited to daylight hours, and is part of what residents of urban areas expect as part of a typical urban noise environment (along with sirens, etc.)

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 5: FOR A PROJECT LOCATED WITHIN AN AIRPORT LAND USE PLAN OR, WHERE SUCH A PLAN HAS NOT BEEN ADOPTED, WITHIN TWO MILES OF A PUBLIC AIRPORT OR PUBLIC USE AIRPORT, WOULD THE PROJECT EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS?

There are no public airports in the project vicinity. Therefore, this impact is not applicable to the proposed project.

This is a **less-than-significant** impact and no mitigation is required.

IMPACT 6: FOR A PROJECT WITHIN THE VICINITY OF A PRIVATE AIRSTRIP, WOULD THE PROJECT EXPOSE PEOPLE RESIDING OR WORKING IN THE PROJECT AREA TO EXCESSIVE NOISE LEVELS?

There are no private airstrips in the project vicinity. Therefore, this impact is not applicable to the proposed project.

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B1 : Continuous Noise Monitoring Results

Site: LT-1

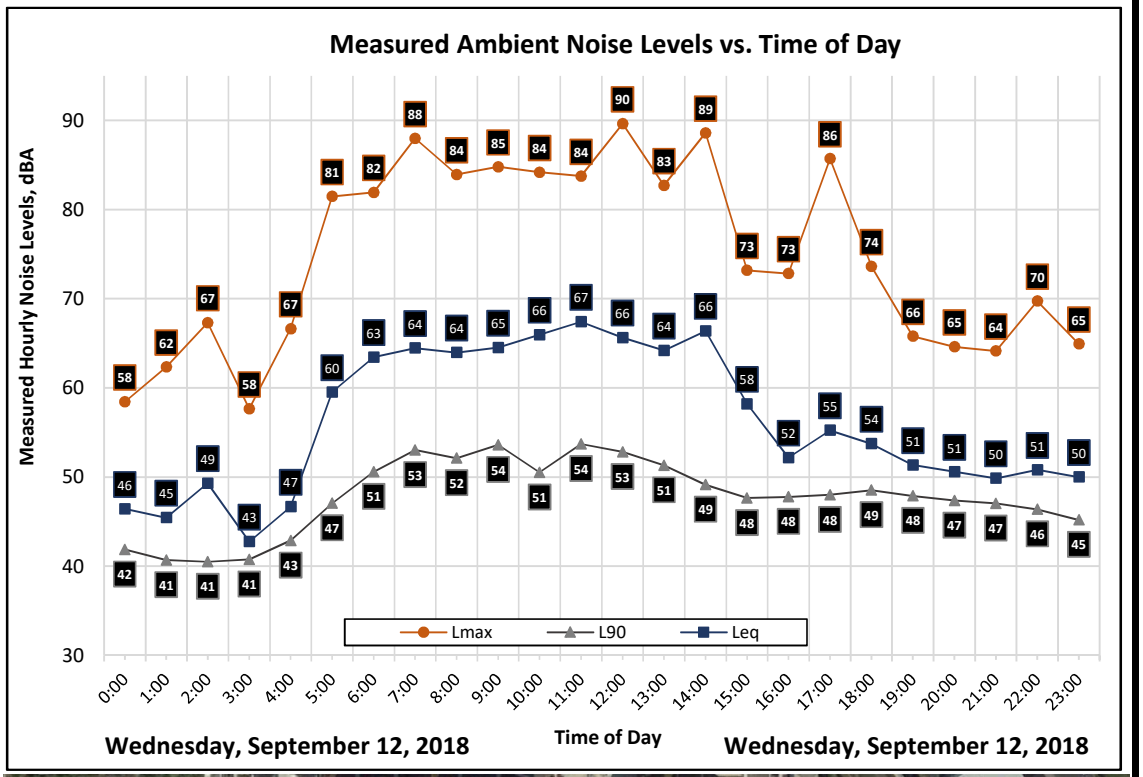
Project: SCUSD Central Kitchen **Meter:** LDL 820-1

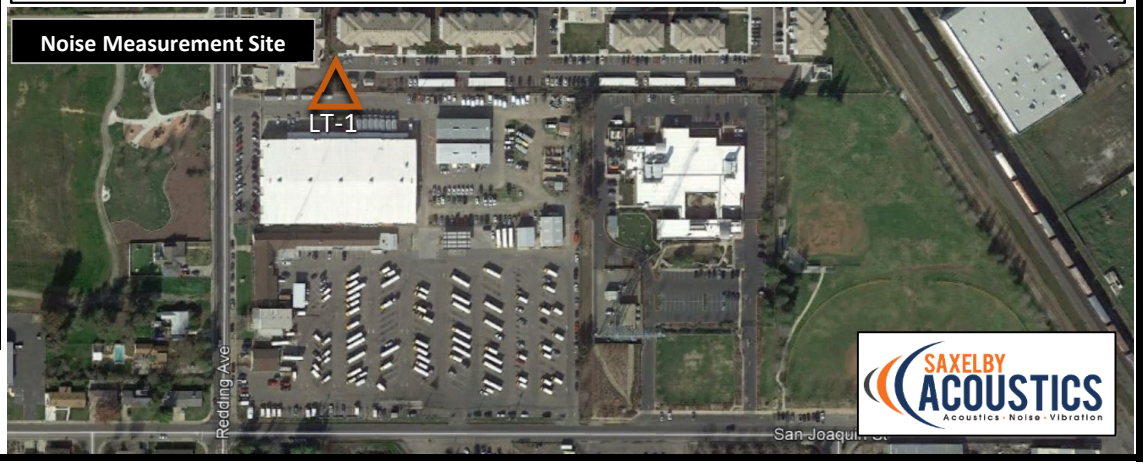
Location: Northern Boundary of Project Site **Calibrator:** B&K 4230

Coordinates: 38.54649°, -121.42235°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, September 12, 2018	0:00	46	58	43	42
Wednesday, September 12, 2018	1:00	45	62	42	41
Wednesday, September 12, 2018	2:00	49	67	42	41
Wednesday, September 12, 2018	3:00	43	58	42	41
Wednesday, September 12, 2018	4:00	47	67	44	43
Wednesday, September 12, 2018	5:00	60	81	51	47
Wednesday, September 12, 2018	6:00	63	82	55	51
Wednesday, September 12, 2018	7:00	64	88	58	53
Wednesday, September 12, 2018	8:00	64	84	58	52
Wednesday, September 12, 2018	9:00	65	85	58	54
Wednesday, September 12, 2018	10:00	66	84	55	51
Wednesday, September 12, 2018	11:00	67	84	63	54
Wednesday, September 12, 2018	12:00	66	90	59	53
Wednesday, September 12, 2018	13:00	64	83	58	51
Wednesday, September 12, 2018	14:00	66	89	58	49
Wednesday, September 12, 2018	15:00	58	73	51	48
Wednesday, September 12, 2018	16:00	52	73	50	48
Wednesday, September 12, 2018	17:00	55	86	50	48
Wednesday, September 12, 2018	18:00	54	74	51	49
Wednesday, September 12, 2018	19:00	51	66	50	48
Wednesday, September 12, 2018	20:00	51	65	49	47
Wednesday, September 12, 2018	21:00	50	64	48	47
Wednesday, September 12, 2018	22:00	51	70	48	46
Wednesday, September 12, 2018	23:00	50	65	46	45

Statistics	Leq	Lmax	L50	L90
Day Average	63	79	54	50
Night Average	56	68	46	44
Day Low	50	64	48	47
Day High	67	90	63	54
Night Low	43	58	42	41
Night High	63	82	55	51
Ldn	64	Day %		89
CNEL	64	Night %		11



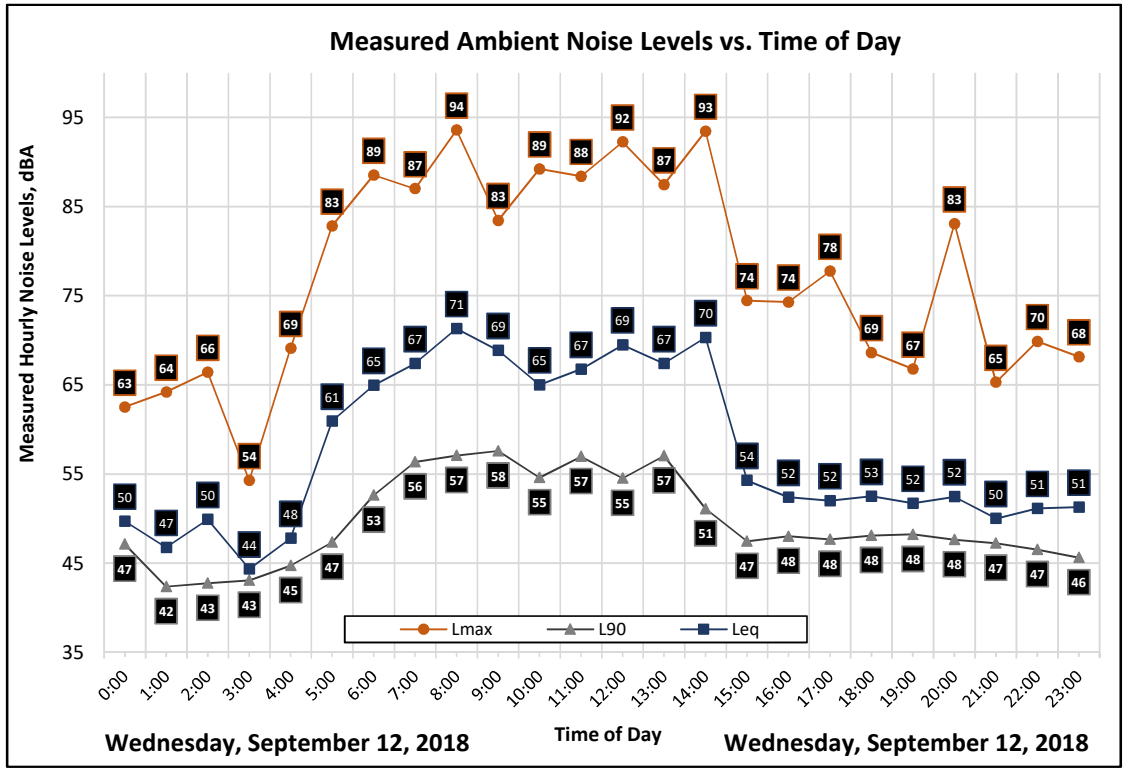


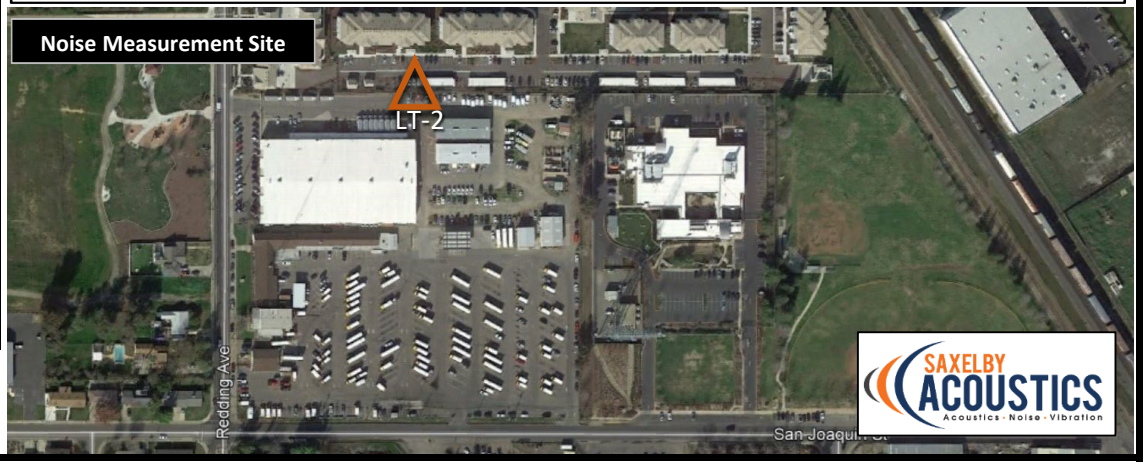
Appendix B2 : Continuous Noise Monitoring Results

Site: LT-2
Project: SCUSD Central Kitchen
Meter: LDL 812-1
Location: Northern Boundary of Project Site
Calibrator: B&K 4230
Coordinates: 38.54648°, -121.42175°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, September 12, 2018	0:00	50	63	48	47
Wednesday, September 12, 2018	1:00	47	64	44	42
Wednesday, September 12, 2018	2:00	50	66	45	43
Wednesday, September 12, 2018	3:00	44	54	44	43
Wednesday, September 12, 2018	4:00	48	69	46	45
Wednesday, September 12, 2018	5:00	61	83	52	47
Wednesday, September 12, 2018	6:00	65	89	56	53
Wednesday, September 12, 2018	7:00	67	87	63	56
Wednesday, September 12, 2018	8:00	71	94	66	57
Wednesday, September 12, 2018	9:00	69	83	67	58
Wednesday, September 12, 2018	10:00	65	89	60	55
Wednesday, September 12, 2018	11:00	67	88	63	57
Wednesday, September 12, 2018	12:00	69	92	64	55
Wednesday, September 12, 2018	13:00	67	87	62	57
Wednesday, September 12, 2018	14:00	70	93	63	51
Wednesday, September 12, 2018	15:00	54	74	50	47
Wednesday, September 12, 2018	16:00	52	74	50	48
Wednesday, September 12, 2018	17:00	52	78	50	48
Wednesday, September 12, 2018	18:00	53	69	50	48
Wednesday, September 12, 2018	19:00	52	67	50	48
Wednesday, September 12, 2018	20:00	52	83	49	48
Wednesday, September 12, 2018	21:00	50	65	49	47
Wednesday, September 12, 2018	22:00	51	70	48	47
Wednesday, September 12, 2018	23:00	51	68	47	46

Statistics	Leq	Lmax	L50	L90
Day Average	66	82	57	52
Night Average	57	70	48	46
Day Low	50	65	49	47
Day High	71	94	67	58
Night Low	44	54	44	42
Night High	65	89	56	53
Ldn	67	Day %		92
CNEL	67	Night %		8



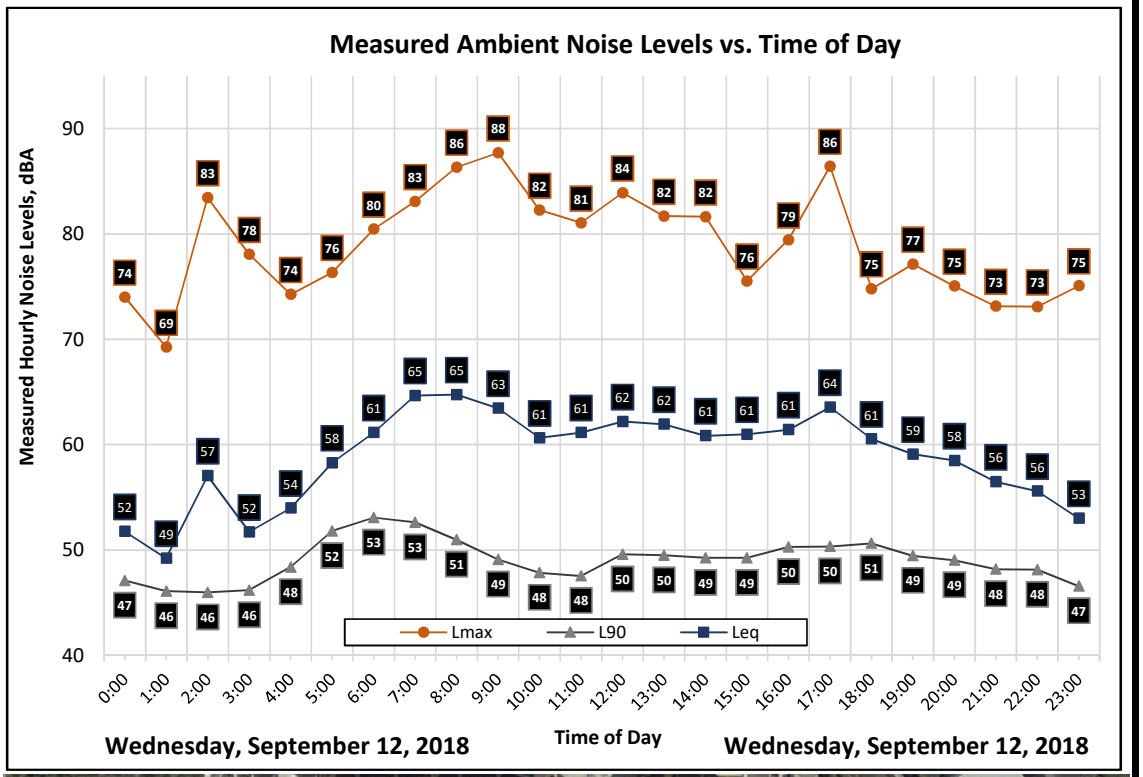


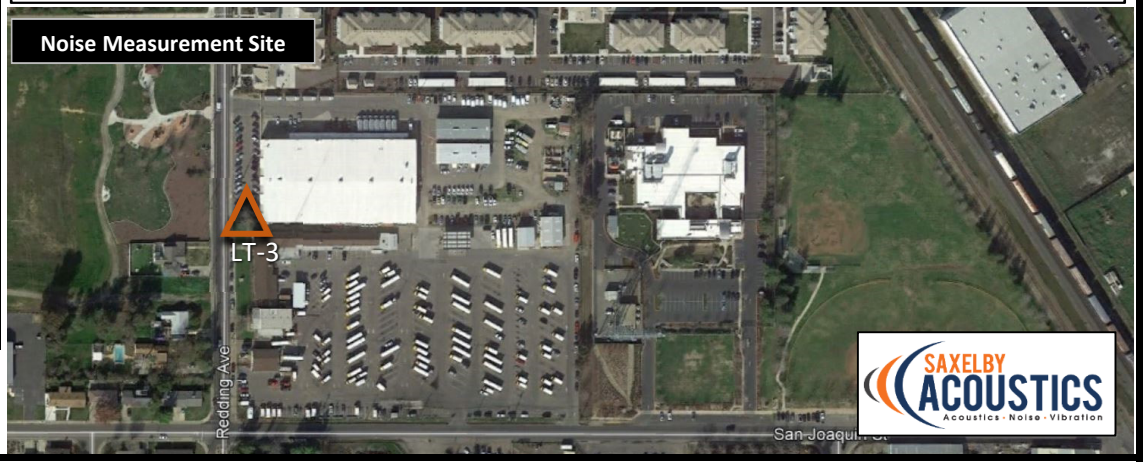
Appendix B3 : Continuous Noise Monitoring Results

Site: LT-3
Project: SCUSD Central Kitchen
Meter: LDL 812-2
Location: Southern Boundary of Project Site
Calibrator: B&K 4230
Coordinates: 38.54580°, -121.42293°

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Wednesday, September 12, 2018	0:00	52	74	48	47
Wednesday, September 12, 2018	1:00	49	69	47	46
Wednesday, September 12, 2018	2:00	57	83	48	46
Wednesday, September 12, 2018	3:00	52	78	47	46
Wednesday, September 12, 2018	4:00	54	74	50	48
Wednesday, September 12, 2018	5:00	58	76	55	52
Wednesday, September 12, 2018	6:00	61	80	56	53
Wednesday, September 12, 2018	7:00	65	83	61	53
Wednesday, September 12, 2018	8:00	65	86	57	51
Wednesday, September 12, 2018	9:00	63	88	54	49
Wednesday, September 12, 2018	10:00	61	82	52	48
Wednesday, September 12, 2018	11:00	61	81	52	48
Wednesday, September 12, 2018	12:00	62	84	55	50
Wednesday, September 12, 2018	13:00	62	82	54	50
Wednesday, September 12, 2018	14:00	61	82	54	49
Wednesday, September 12, 2018	15:00	61	76	56	49
Wednesday, September 12, 2018	16:00	61	79	57	50
Wednesday, September 12, 2018	17:00	64	86	59	50
Wednesday, September 12, 2018	18:00	61	75	56	51
Wednesday, September 12, 2018	19:00	59	77	52	49
Wednesday, September 12, 2018	20:00	58	75	51	49
Wednesday, September 12, 2018	21:00	56	73	50	48
Wednesday, September 12, 2018	22:00	56	73	49	48
Wednesday, September 12, 2018	23:00	53	75	48	47

Statistics	Leq	Lmax	L50	L90
Day Average	62	81	55	50
Night Average	56	76	50	48
Day Low	56	73	50	48
Day High	65	88	61	53
Night Low	49	69	47	46
Night High	61	83	56	53
Ldn	64	Day %		86
CNEL	64	Night %		14





APPENDIX D: Transportation Technical Memorandum

KD Anderson & Associates, Inc.
Transportation Engineers

October 23, 2018

Ms. Amna Javed
Sacramento City Unified School District
5735 47th Avenue
Sacramento, CA 95824

RE: TRAFFIC IMPACT ASSESSMENT FOR SCUSD'S CENTRAL KITCHEN / WAREHOUSE PROJECT, SACRAMENTO, CA.

Dear Ms. Javed:

Thank you for selecting our firm for services relating to the SCUSD's Central Kitchen / Warehouse project's CEQA review. As we have discussed SCUSD proposes improvements to the existing facilities on Redding Avenue, including construction of new buildings and parking to improve operations for a variety of functions, including the Central Kitchen. Cumulatively, the project supports previously approved work that relocates bus transportation facilities to an adjoining site across San Joaquin Street. SCUSD is preparing the project's review under CEQA, and this letter summarizes our investigation of project impacts to support an IS/MND.

EXISTING SETTING

Circulation System

The Central Kitchen / Warehouse project lies on the northeast corner of the intersection of San Joaquin Street and Redding Avenue in the area south of US 50 and east of 65th Street. The City of Sacramento General Plan Mobility Element indicates that this area is served by three arterial streets (i.e., Folsom Blvd, 65th Street and 14th Avenue) which connect the area to US 50. San Joaquin Street and Redding Avenue are themselves two-lane mixed use local streets.

Major streets are described as follows:

- **Highway 50 (US 50)** is a major regional highway extending from Interstate 80 (I-80) in West Sacramento through the Sacramento metropolitan area into the Sierra Nevada Mountains and the State of Nevada. Within the project area, US 50 is an eight-lane freeway at the 65th Street interchange with four mixed-flow lanes in both the eastbound and westbound directions.

- **Folsom Boulevard** is an east-west arterial roadway that extends from Alhambra Boulevard in midtown Sacramento, through Sacramento County, the City of Rancho Cordova, and into the City of Folsom. It provides two to four travel lanes in each direction within the project area and serves mainly commercial and industrial uses.

- **65th Street** is a north-south arterial roadway that extends from Elvas Avenue in the City of Sacramento to Florin Road in Sacramento County. South of 14th Avenue, it becomes the 65th Street Expressway. It provides two travel lanes in each direction with a short section under the US 50 overcrossing that provides three travel lanes in each direction.

- **59th Street** is a north-south arterial roadway that extends from 14th Avenue to J Street within the project area and provides one travel lane in each direction. It also provides a direct connection to westbound US 50 (with ramp metering) and an eastbound US 50 off-ramp at the S Street/59th Street intersection. It serves mainly residential uses south of S Street and north of Folsom Boulevard. Between S Street and Folsom Boulevard, it serves office, industrial, and some commercial uses including a significant amount of trucks related to the adjacent SMUD corporate yard.

- **Broadway** is an east-west arterial roadway that extends from I-5 in downtown Sacramento to 65th Street in the City of Sacramento. Within the project area, Broadway provides one travel lane in each direction, has a posted speed limit of 30 mph, and mainly serves residential uses.

- **14th Avenue** is an east-west collector roadway that extends from east of Power Inn Road to Martin Luther King Boulevard in the City of Sacramento, where it merges with 12th Avenue. 14th Avenue provides one travel lane in each direction and mainly serves residential uses at the west end of the project area and industrial uses at the east end.

Local roadways serving the site include:

- **San Joaquin Street** is an east-west road that extends from 65th Street east to the Union Pacific railroad (UPRR). It serves residential, recreational, office, and industrial uses.

- **Redding Avenue** is a north-south road that extends from Folsom Boulevard to East 14th Avenue.

- **4th Avenue** is an east-west road that extends from 65th Street to Redding Avenue in the area north of the project.

- **Q Street** is an east-west road located immediately adjacent to the 65th Street / University light rail station. Q Street runs from 65th Street to Redding Avenue**.**

Public Transit Service

The Sacramento Regional Transit District manages local light rail and bus systems serving the greater Sacramento area. Light Rail stations are located 65th Street and Power Inn Road near the project site. The site is also served by bus route 65.

Bicycle Facilities

Bike lanes are located along Redding Avenue south to San Joaquin Street and 4th Avenue in the project vicinity. The Draft City of Sacramento Bicycle Master Plan Implementation Plan (2018) shows the

proposed extension of bike lanes along Redding Avenue between San Joaquin Street and 14th Avenue and along San Joaquin Street.

Existing Traffic Operating Conditions

Intersection Operations. *Level of Service* (LOS) analysis provides a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts. Level of Service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions. The characteristics associated with the various LOS for intersections are presented in Table 1. Level of Service was calculated for this traffic impact study using the methodology contained in the latest edition of the *Highway Capacity Manual*, which is the *Highway Capacity Manual, 6th Edition* (Transportation Research Board 2017). The LOS for intersections is based on the average length of delays for all motorists at both signalized and un-signalized intersections controlled by all-way stops.

TABLE 1
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Un-signalized Intersection
A	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/vehicle
B	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/vehicle and ≤ 15 sec/vehicle
C	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/vehicle and ≤ 25 sec/ vehicle
D	Significant congestion of critical approaches, but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/vehicle and ≤ 35 sec/vehicle
E	Severe congestion with some long-standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/vehicle and ≤ 50 sec/vehicle
F	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/vehicle

Source: Transportation Research Board, 6th Edition.

KDA

Intersections in the study area currently function at acceptable levels of service, as noted in Table 2. New peak hour traffic counts were conducted at the Redding Avenue / San Joaquin Street intersection to supplement data availed for other study area intersections (refer to Figure 1). The current Level of Service at this location adjoining the project site is LOS B.

TABLE 2
EXISTING INTERSECTION LEVELS OF SERVICE IN THE VICINITY OF THE PROJECT

Intersection	Control	Level of Service	
		AM Peak Hour	PM Peak Hour
Redding Avenue and San Joaquin Street	All-Way Stop	A	A
4th Avenue and Redding Avenue[1]	Stop Sign	A	A
65th Street and Broadway[1]	Signal	D	E

[1]Source: 65th Street Station EIR, Table 4.3-7 Intersection Operations- Existing Conditions

Roadway Segments. In the City of Sacramento, LOS D is generally considered to be the minimum acceptable LOS. However, the General Plan permits exceptions at a variety of locations. Within the *65th Street Priority Investment Area* where the site is located, LOS F is generally considered an acceptable LOS. This is based on the 2035 General Plan determination that expansion (or widening) of the roadways would cause undesirable impacts or conflict with other community values. LOS and volumes for roadway segments in the area are summarized in Table 3 below:

TABLE 3
AVERAGE DAILY TRAFFIC VOLUMES AND LOS IN THE VICINITY OF THE PROJECT

Segment	Number of Lanes	Average Daily Traffic Volume (ADT)	Level of Service
San Joaquin Street East of Redding Avenue	2	2,600	n.a.
Redding Avenue – 4th Avenue to San Joaquin Street[1]	2	4,800	E
65th Street between San Joaquin Street and 14th Avenue[1]	4	22,500	B

[1] Source: 65th Street Station Area EIR, Table 4.3-6, ADT Volumes- Existing Conditions
n.a. is not applicable as road ends

KDA

BACKGROUND CUMULATIVE CONDITIONS

Conditions forecast for the Year 2035 represent a long-term future background condition. Development of land uses and roadway improvements associated with the development under the City of Sacramento 2035 General Plan are assumed in this condition. Tables 4 and 5 summarize the expected future conditions with build-out of the General Plan, as indicated in the 65th Street Station Area EIR.

Future background conditions at the Redding Avenue / San Joaquin Street intersection have been estimated based on the background growth rates implied from the 65th Street Area Station EIR daily volume forecasts. That document suggested that San Joaquin Avenue would carry 6,800 vehicles per day over the railroad east of the intersection, while Redding Avenue will carry 6,400 ADT. Assuming intersection turning movement volumes increase in proportion to the projected change in daily volumes (i.e., 33% increase on Redding Avenue and 160% increase on San Joaquin Street) the peak hour traffic volumes shown in Figure 2 will result, and the intersection will operate at LOS C.

TABLE 4
FUTURE (2035) CUMULATIVE INTERSECTION LEVELS OF SERVICE IN THE PROJECT AREA

Intersection	Control	Level of Service	
		AM Peak Hour	PM Peak Hour
Redding Avenue/ San Joaquin Street	All-Way Stop	C	C
4th Avenue and Redding Avenue[1]	Stop Sign	n.a.	A
65th and Broadway[1]	Signal	n.a.	F

[1] Source: 65th Street Station Area EIR, Table 4.3-24, Cumulative Plus Scenario B conditions
n.a. is not available in 65th Street Area Plan EIR.

TABLE 5
FUTURE (2035) CUMULATIVE CONDITIONS LEVELS OF SERVICE IN THE PROJECT AREA

Intersection/ Street Segment	Number of Lanes	Average Daily Traffic Volume	Level of Service
San Joaquin Avenue / Redding Avenue to Ramona	2	6,800	C
Redding Avenue / 4th Avenue to San Joaquin Street	2	6,400	C
65th Street / San Joaquin Street to 14th Avenue	4	25,400	C

Source: 65th Street Station Area EIR, Table 4.3-25, Cumulative Plus Scenario B Daily Volumes

Under cumulative conditions, the LOS on Redding Avenue near San Joaquin Street improves as a result of planned improvements included in the 2035 General Plan. These improvements include a long-range plan to extend Broadway east to Redding Avenue.

KDA

STANDARDS OF SIGNIFICANCE

Impacts resulting from changes in transportation or circulation may be considered significant if construction and/or implementation of the proposed project would result in the following impacts that remain significant after implementation of General Plan policies or mitigation from the General Plan Master EIR:

Roadway Segments

- The traffic generated by a project degrades peak period Level of Service (LOS) from A, B, C, or D (without the project) to E or F (with the project), or
- The LOS (without the project) is E or F, and project generated traffic increases the Volume to Capacity Ratio (V/C ratio) by 0.02 or more.

Intersections

- The traffic generated by a project degrades peak period Level of Service from A, B, C or D (without project) to E or F (with project), or
- The LOS (without project) is E or F, and project generated traffic increases the peak period average vehicle delay by five seconds or more.

Transit

- Adversely affect public transit operations, or
- Fail to adequately provide for access to public transit.

Bicycle Facilities

- Adversely affect bicycle travel, bicycle paths, or
- Fail to adequately provide for access by bicycle.

PROJECT IMPACTS

Project Characteristics

Approach. As noted in the project description, the project will include changes to on-site employment and to truck deliveries both of which will affect the volume of traffic on adjoining streets to a minor extent. Current district bus facilities are also being moved to the approved transportation facility south of San Joaquin Street.

The approach taken to estimate the change in site automobile and truck trip generation is based on the net change in employment and in the number of truck deliveries. Current baseline conditions were reviewed to identify the characteristics of truck travel with regards to time of day.

Employee Trip Generation. Implementation of the project will result in additional employees working on site. Under worst case conditions each employee might drive alone and cause two daily vehicle trips. Currently the Nutrition program houses 19 staff at the Redding Avenue site. Under proposed future operations, it is estimated that the number of staff may increase to 49 employees, or a net increase of 30 staff persons on site. Thus a total of 60 additional daily automobile trips may result. The schedule for employee commute activity will likely follow current patterns, and will result in a very minor increase in peak hour traffic.

Truck Trip Generation. The project would result in a change to the nature of truck activity at the site. Currently, the Nutrition program receives approximately 3 dock deliveries a day (mostly large diesel or semi-trucks) and deploys approximately 10 box trucks and 18 vans to make daily deliveries from warehouse dock to individual school sites. Under future proposed conditions, large truck deliveries to the warehouse would remain the same, however, deliveries from the school site would change slightly. Under future conditions it is estimated that the number of box trucks required would increase from 10 to 12 trucks and the number of vans needed would decrease from the current 18 vans to 10 vans or less. Additionally, box trucks would deploy from a new warehouse located on the eastern side of the Central Kitchen. Truck activity would remain primarily during non-commute hours. Overall, the net reduction in truck trips accessing the site would be minor and would not appreciably change current volumes.

Access. The proposed project will change the access to current parking areas and truck facilities. The two driveways on San Joaquin Street now used to reach the bus storage area will be modified and used to access the new main parking lot. A secondary parking lot with two driveways will be constructed midway along the site's Redding Avenue frontage. The warehouse delivery access will remain on Redding Avenue at the north end of the site, but the driveway will be improved with the project.

Impact Assessment

Traffic Operations. The volume of traffic added to local streets and regional highways by the proposed project is very small and would not have a tangible effect of the flow of traffic in this area of Sacramento. Because the current Levels of Service would not change and would satisfy minimum City requirements the project's impact is not significant.

Cumulative Traffic. The background traffic volumes on study area streets will increase in the future with the creation of improvements included in the 65th Street Area Plan. However, projected background condition will satisfy the City's minimum LOS standards. Because the incremental change in traffic caused by the project is small, Levels of Service will not change, and the project's cumulative impact is not significant.

Impacts to Alternative Transportation Modes. The project will construct frontage improvements that are consistent with the 65th Street Area plan, which primarily include sidewalks where not existing today. The project does not conflict with any adopted plan for alternative transportation modes, nor create any hazard for alternative transportation modes due to the proposed changes to site automobile and truck access. As a result, the projects impact is not significant.

Vehicle Miles Traveled (VMT). The project will cause a limited increase in regional VMT as a result of additional employees traveling to the site although that travel will be accompanied by a reduction in truck VMT. Assuming the average commute VMT per employee contained in the 2016 MTP/ SCS[1] occurs (i.e., 20.8 VMT per employee), then the thirty additional employees could contribute 624 daily VMT.

The change in site truck deliveries resulting from the project will affect project VMT. As noted earlier, SCUSD deploys approximately 10 box trucks and 18 vans to make daily deliveries to individual school sites, causing 56 daily trips. With the project, large truck deliveries to the warehouse would remain the same, however, the number of box trucks required would increase from 10 to 12 trucks and the number of vans needed would decrease from the current 18 vans to 10 vans or less. Thus, a total of twelve fewer daily trips by box truck or van would result. Applying the average distance from the site to SCUSD schools (i.e., 5.7 miles) a total of 68 daily VMT may be eliminated. Altogether, the project could result in a net increase of 556 daily VMT as a result of employee trips and reduced truck activity.

Site Access. The quality of site access is dependent on the volume of background traffic on Redding Avenue and San Joaquin Street and the configuration of site driveways. As noted in the cumulative analysis the daily volume on Redding Avenue is projected to increase from 4,800 to 6,400 ADT in the future, and the volume on San Joaquin Street adjoining the site could reach 6,800 ADT. These volumes reach roughly 50% of the capacity of each road. At that background traffic level, delays for motorists exiting the site would remain moderate, and the Level of Service would remain with the City's minimum LOS standard. The throat depths available at each driveway would be adequate to prevent outbound traffic from queueing to the point that arriving traffic might be delayed. The layout to the modified warehouse access on Redding Avenue will be adequate for the large trucks using that driveway.

Thank you for selecting our firm for this assignment. Please feel free to call me if you have any questions.

Sincerely Yours,

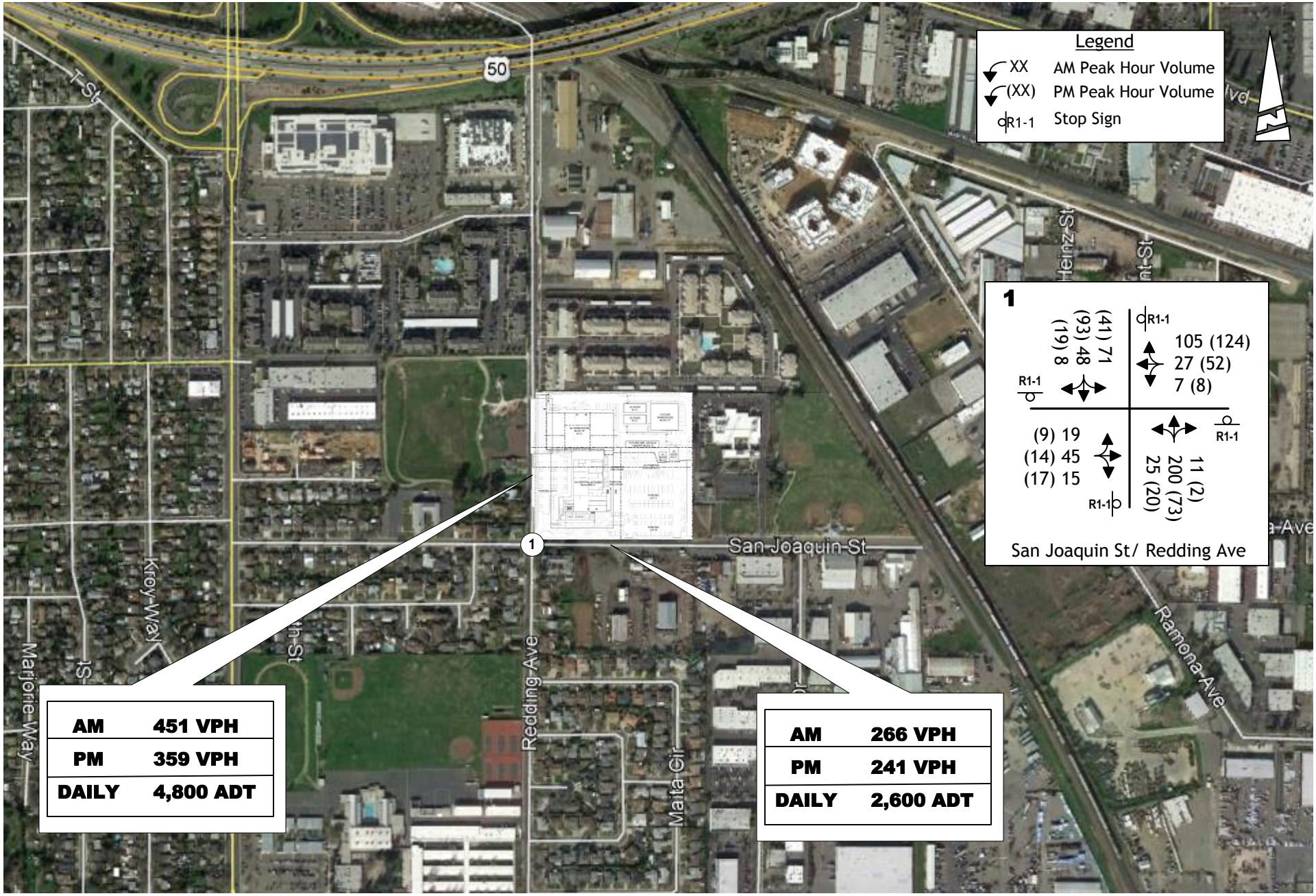
KD Anderson & Associates, Inc.

Kenneth D. Anderson, P.E.
President

CC: Trish Davies

Attachment: Figures 1 & 2; LOS Calculations; Traffic Counts

[1] 2016 Metropolitan Transportation Plan / Sustainable Communities Strategy, Table 5B.4

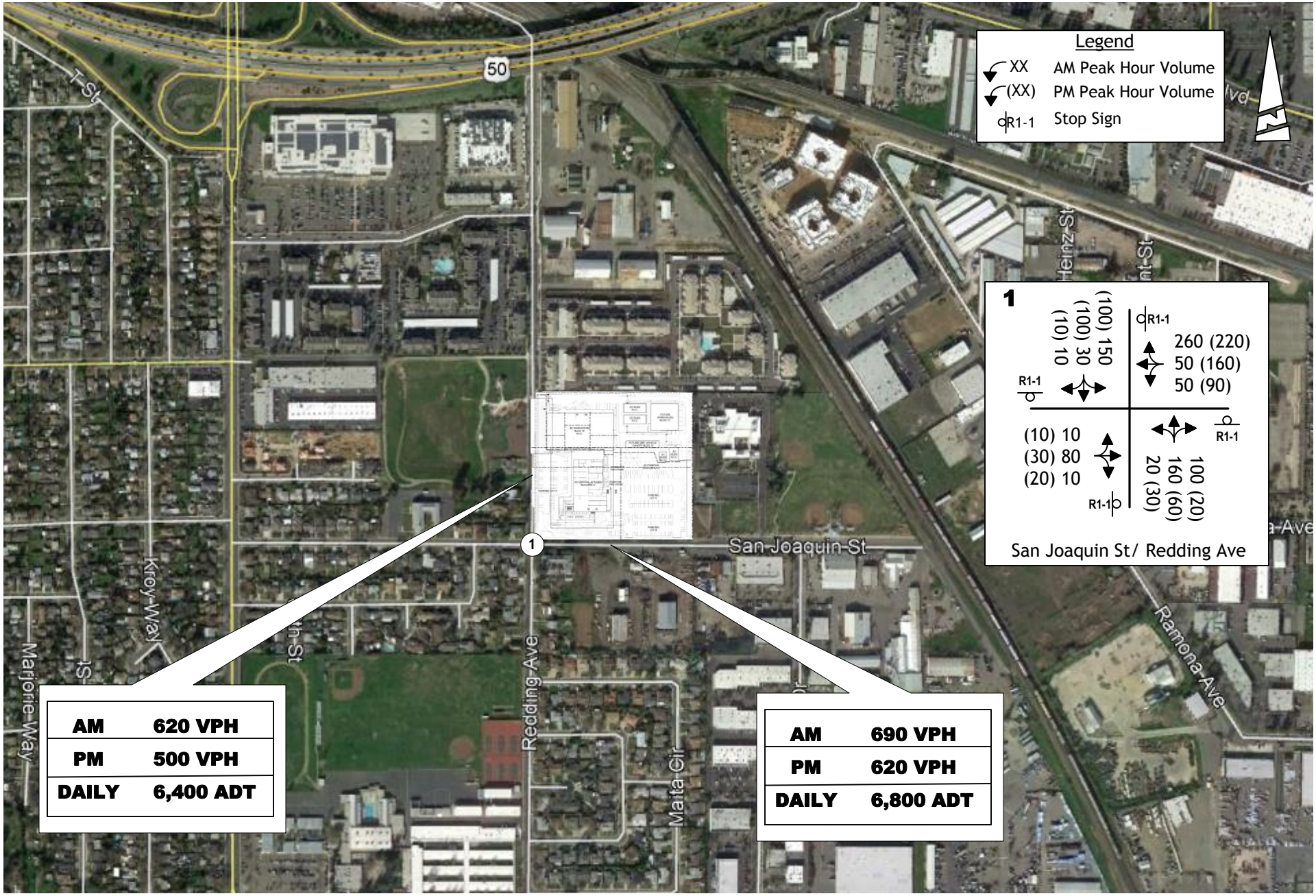


EXISTING TRAFFIC VOLUMES

KD Anderson & Associates, Inc.
Transportation Engineers

6420-11 RA 10/15/2018

figure 1



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6420-11 RA 10/15/2018

CUMULATIVE TRAFFIC VOLUMES

figure 2

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	45	15	7	27	105	25	200	11	71	48	8
Future Vol, veh/h	19	45	15	7	27	105	25	200	11	71	48	8
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	56	19	9	34	131	31	250	14	89	60	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	9.2	11	9.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	24%	5%	56%
Vol Thru, %	85%	57%	19%	38%
Vol Right, %	5%	19%	76%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	236	79	139	127
LT Vol	25	19	7	71
Through Vol	200	45	27	48
RT Vol	11	15	105	8
Lane Flow Rate	295	99	174	159
Geometry Grp	1	1	1	1
Degree of Util (X)	0.392	0.142	0.228	0.222
Departure Headway (Hd)	4.786	5.193	4.72	5.032
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	746	683	752	706
Service Time	2.858	3.281	2.797	3.114
HCM Lane V/C Ratio	0.395	0.145	0.231	0.225
HCM Control Delay	11	9.2	9.2	9.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.9	0.5	0.9	0.8

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	14	17	8	52	124	20	73	2	41	93	19
Future Vol, veh/h	9	14	17	8	52	124	20	73	2	41	93	19
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	17	20	10	63	149	24	88	2	49	112	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	8.9	8.7	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	23%	4%	27%
Vol Thru, %	77%	35%	28%	61%
Vol Right, %	2%	42%	67%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	40	184	153
LT Vol	20	9	8	41
Through Vol	73	14	52	93
RT Vol	2	17	124	19
Lane Flow Rate	114	48	222	184
Geometry Grp	1	1	1	1
Degree of Util (X)	0.152	0.063	0.265	0.238
Departure Headway (Hd)	4.788	4.693	4.308	4.656
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	747	760	834	769
Service Time	2.831	2.737	2.34	2.695
HCM Lane V/C Ratio	0.153	0.063	0.266	0.239
HCM Control Delay	8.7	8.1	8.9	9.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.2	1.1	0.9

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	80	10	50	50	260	20	160	100	150	30	10
Future Vol, veh/h	10	80	10	50	50	260	20	160	100	150	30	10
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	100	13	63	63	325	25	200	125	188	38	13
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.8	21.2	17.2	14.5
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	10%	14%	79%
Vol Thru, %	57%	80%	14%	16%
Vol Right, %	36%	10%	72%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	100	360	190
LT Vol	20	10	50	150
Through Vol	160	80	50	30
RT Vol	100	10	260	10
Lane Flow Rate	350	125	450	238
Geometry Grp	1	1	1	1
Degree of Util (X)	0.584	0.233	0.706	0.432
Departure Headway (Hd)	6.012	6.719	5.65	6.552
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	599	533	639	549
Service Time	4.062	4.783	3.692	4.609
HCM Lane V/C Ratio	0.584	0.235	0.704	0.434
HCM Control Delay	17.2	11.8	21.2	14.5
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	3.8	0.9	5.8	2.2

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	30	20	90	160	220	30	60	20	100	100	10
Future Vol, veh/h	10	30	20	90	160	220	30	60	20	100	100	10
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	36	24	108	193	265	36	72	24	120	120	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	23.6	10.9	13.2
HCM LOS	A	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	17%	19%	48%
Vol Thru, %	55%	50%	34%	48%
Vol Right, %	18%	33%	47%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	60	470	210
LT Vol	30	10	90	100
Through Vol	60	30	160	100
RT Vol	20	20	220	10
Lane Flow Rate	133	72	566	253
Geometry Grp	1	1	1	1
Degree of Util (X)	0.223	0.117	0.783	0.417
Departure Headway (Hd)	6.061	5.823	4.976	5.939
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	590	612	725	605
Service Time	4.128	3.895	3.02	3.996
HCM Lane V/C Ratio	0.225	0.118	0.781	0.418
HCM Control Delay	10.9	9.7	23.6	13.2
HCM Lane LOS	B	A	C	B
HCM 95th-tile Q	0.8	0.4	7.7	2

KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

6420-11

Sacramento
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : Redding Ave & San Joaquin St
Date : 9/13/2018 & 10/4/18

Unshifted Count = All Vehicles & Uturns

	Redding Ave Southbound					San Joaquin St Westbound					Redding Ave Northbound					San Joaquin St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	14	7	0	0	21	1	5	12	0	18	6	24	1	0	31	6	14	2	0	22	92	0
7:15	16	7	2	0	25	1	4	12	0	17	3	48	2	0	53	4	7	4	0	15	110	0
7:30	21	12	1	0	34	0	8	21	0	29	3	69	0	0	72	5	11	3	0	19	154	0
7:45	23	17	2	0	42	1	7	30	0	38	6	60	2	0	68	8	18	6	0	32	180	0
Total	74	43	5	0	122	3	24	75	0	102	18	201	5	0	224	23	50	15	0	88	536	0
8:00	14	11	3	0	28	2	3	33	0	38	4	32	5	0	41	3	6	2	0	11	118	0
8:15	13	8	2	0	23	4	9	21	0	34	12	39	4	0	55	3	10	4	0	17	129	0
8:30	7	7	1	0	15	1	4	26	0	31	1	35	1	0	37	2	10	2	0	14	97	0
8:45	4	9	2	0	15	3	7	16	0	26	4	29	2	0	35	6	5	2	0	13	89	0
Total	38	35	8	0	81	10	23	96	0	129	21	135	12	0	168	14	31	10	0	55	433	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	16	20	4	0	40	0	10	43	0	53	3	24	1	0	28	1	6	6	0	13	134	0
16:15	5	19	8	0	32	4	8	31	0	43	3	10	0	0	13	2	4	7	0	13	101	0
16:30	14	30	4	0	48	2	13	29	0	44	5	19	1	0	25	2	2	1	0	5	122	0
16:45	12	16	2	0	30	1	18	18	0	37	6	19	1	0	26	3	5	5	0	13	106	0
Total	47	85	18	0	150	7	49	121	0	177	17	72	3	0	92	8	17	19	0	44	463	0
17:00	10	28	5	0	43	1	13	46	0	60	6	25	0	0	31	2	3	4	0	9	143	0
17:15	10	18	3	0	31	3	9	23	0	35	2	20	2	0	24	3	3	4	0	10	100	0
17:30	10	31	7	0	48	0	8	17	0	25	3	24	1	0	28	5	9	1	0	15	116	0
17:45	8	28	2	0	38	1	6	13	0	20	0	20	0	0	20	3	7	3	0	13	91	0
Total	38	105	17	0	160	5	36	99	0	140	11	89	3	0	103	13	22	12	0	47	450	0
Grand Total	197	268	48	0	513	25	132	391	0	548	67	497	23	0	587	58	120	56	0	234	1882	0
Apprch %	38.4%	52.2%	9.4%	0.0%		4.6%	24.1%	71.4%	0.0%		11.4%	84.7%	3.9%	0.0%		24.8%	51.3%	23.9%	0.0%			
Total %	10.5%	14.2%	2.6%	0.0%	27.3%	1.3%	7.0%	20.8%	0.0%	29.1%	3.6%	26.4%	1.2%	0.0%	31.2%	3.1%	6.4%	3.0%	0.0%	12.4%	100.0%	

AM PEAK HOUR	Redding Ave Southbound					San Joaquin St Westbound					Redding Ave Northbound					San Joaquin St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	21	12	1	0	34	0	8	21	0	29	3	69	0	0	72	5	11	3	0	19	154
7:45	23	17	2	0	42	1	7	30	0	38	6	60	2	0	68	8	18	6	0	32	180
8:00	14	11	3	0	28	2	3	33	0	38	4	32	5	0	41	3	6	2	0	11	118
8:15	13	8	2	0	23	4	9	21	0	34	12	39	4	0	55	3	10	4	0	17	129
Total Volume	71	48	8	0	127	7	27	105	0	139	25	200	11	0	236	19	45	15	0	79	581
% App Total	55.9%	37.8%	6.3%	0.0%		5.0%	19.4%	75.5%	0.0%		10.6%	84.7%	4.7%	0.0%		24.1%	57.0%	19.0%	0.0%		
PHF	.772	.706	.667	.000	.756	.438	.750	.795	.000	.914	.521	.725	.550	.000	.819	.594	.625	.625	.000	.617	.807

NOON PEAK	Redding Ave Southbound					San Joaquin St Westbound					Redding Ave Northbound					San Joaquin St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Redding Ave Southbound					San Joaquin St Westbound					Redding Ave Northbound					San Joaquin St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	5	19	8	0	32	4	8	31	0	43	3	10	0	0	13	2	4	7	0	13	101
16:30	14	30	4	0	48	2	13	29	0	44	5	19	1	0	25	2	2	1	0	5	122
16:45	12	16	2	0	30	1	18	18	0	37	6	19	1	0	26	3	5	5	0	13	106
17:00	10	28	5	0	43	1	13	46	0	60	6	25	0	0	31	2	3	4	0	9	143
Total Volume	41	93	19	0	153	8	52	124	0	184	20	73	2	0	95	9	14	17	0	40	472
% App Total	26.8%	60.8%	12.4%	0.0%		4.3%	28.3%	67.4%	0.0%		21.1%	76.8%	2.1%	0.0%		22.5%	35.0%	42.5%	0.0%		
PHF	.732	.775	.594	.000	.797	.500	.722	.674	.000	.767	.833	.730	.500	.000	.766	.750	.700	.607	.000	.769	.825

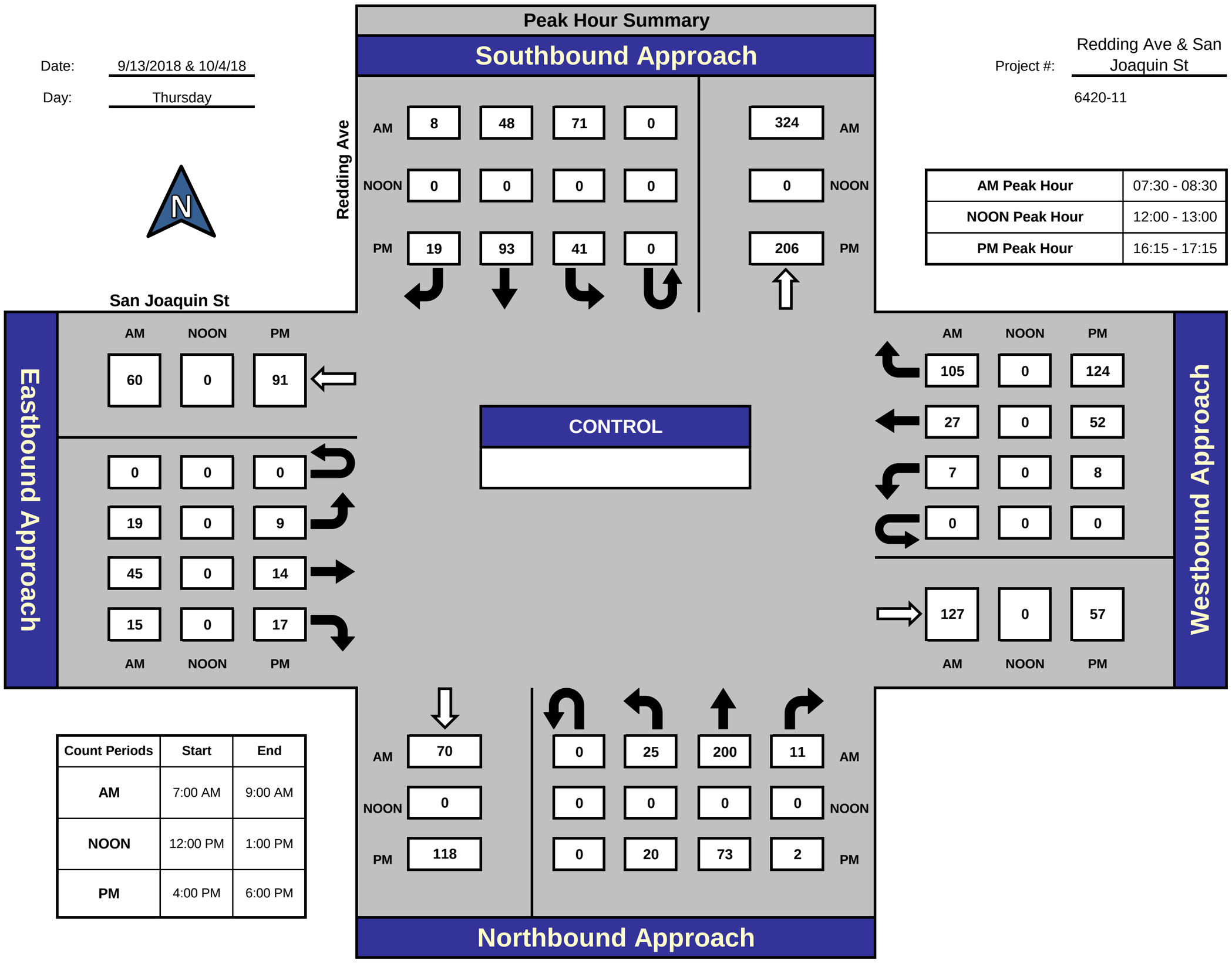
Redding Ave & San Joaquin St

Date: 9/13/2018 & 10/4/18

Day: Thursday

Project #: Redding Ave & San Joaquin St

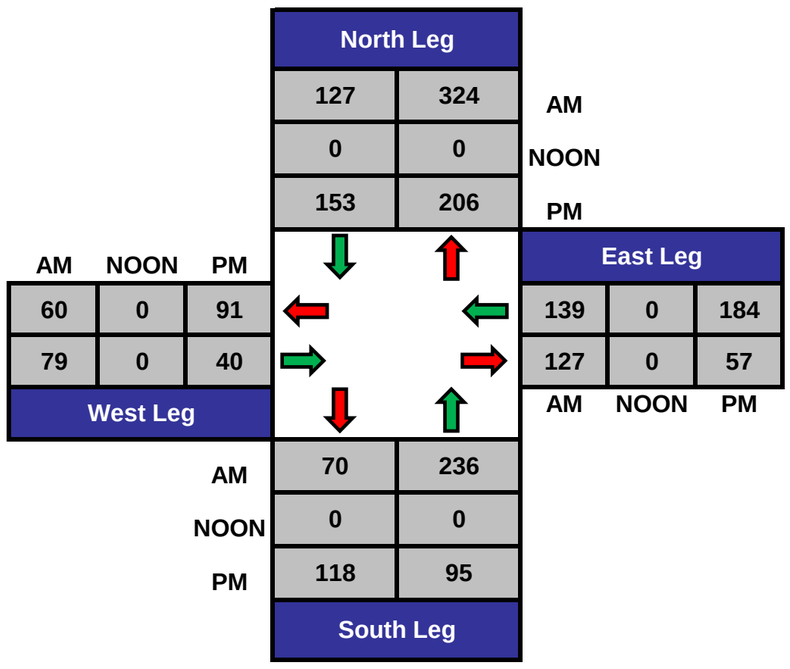
6420-11



Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

AM Peak Hour	07:30 - 08:30
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:15 - 17:15

Total Ins & Outs



Total Volume Per Leg