

APPENDIX A

Air Quality and Greenhouse Gas Emissions Calculations

Windward School Master Plan - Phase 1 - South Coast Air Basin, Summer

Windward School Master Plan - Phase 1

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	22.63	1000sqft	0.70	22,630.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.7 acres during this phase.

Construction Phase - Based on phasing development assumptions, no paving.

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and based on a proportion of total future trips with respect to Phase 2 trips. 130 total trips would correlate with 36 trips for the phase 1 buildings.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Grading - Phase 1 would export approximately 1,000 cubic yards of soil

Demolition - Approximately 12,964 sf of existing buildings to be removed.

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	2.00	16.00
tblConstructionPhase	NumDays	100.00	263.00
tblConstructionPhase	NumDays	5.00	154.00
tblConstructionPhase	PhaseEndDate	6/21/2019	7/8/2019
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	0.52	0.70
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	SU_TR	1.79	1.61

tblVehicleTrips	WD_TR	12.89	1.61
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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	1.0689	10.9640	8.6050	0.0193	1.0081	0.5467	1.5547	0.4819	0.5216	1.0035	0.0000	1,942.4586	1,942.4586	0.3072	0.0000	1,949.2706
2020	2.3065	8.2981	8.7528	0.0139	0.1597	0.5253	0.6850	0.0429	0.4922	0.5352	0.0000	1,351.4082	1,351.4082	0.2991	0.0000	1,358.8856
Maximum	2.3065	10.9640	8.7528	0.0193	1.0081	0.5467	1.5547	0.4819	0.5216	1.0035	0.0000	1,942.4586	1,942.4586	0.3072	0.0000	1,949.2706

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	0.6002	12.7278	8.8513	0.0193	0.5446	0.4113	0.9558	0.2288	0.4108	0.6397	0.0000	1,942.4586	1,942.4586	0.3072	0.0000	1,949.2706
2020	1.9427	11.0603	8.8505	0.0139	0.1597	0.4317	0.5914	0.0429	0.4315	0.4745	0.0000	1,351.4082	1,351.4082	0.2991	0.0000	1,358.8856
Maximum	1.9427	12.7278	8.8513	0.0193	0.5446	0.4317	0.9558	0.2288	0.4315	0.6397	0.0000	1,942.4586	1,942.4586	0.3072	0.0000	1,949.2706

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	24.66	-23.50	-1.98	0.00	39.69	21.36	30.92	48.22	16.91	27.59	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Energy	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Mobile	0.0744	0.3760	1.1079	4.0500e-003	0.3307	3.1500e-003	0.3339	0.0885	2.9400e-003	0.0914		411.4194	411.4194	0.0191		411.8974
Total	0.5871	0.4392	1.1633	4.4300e-003	0.3307	7.9600e-003	0.3387	0.0885	7.7500e-003	0.0962		487.2831	487.2831	0.0206	1.3900e-003	488.2122

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Energy	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Mobile	0.0744	0.3760	1.1079	4.0500e-003	0.3307	3.1500e-003	0.3339	0.0885	2.9400e-003	0.0914		411.4194	411.4194	0.0191		411.8974
Total	0.5871	0.4392	1.1633	4.4300e-003	0.3307	7.9600e-003	0.3387	0.0885	7.7500e-003	0.0962		487.2831	487.2831	0.0206	1.3900e-003	488.2122

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/10/2019	7/8/2019	5	21	
2	Site Preparation	Site Preparation	7/9/2019	7/9/2019	5	1	
3	Grading	Grading	7/10/2019	7/31/2019	5	16	
4	Building Construction	Building Construction	8/1/2019	8/3/2020	5	263	
5	Architectural Coating	Architectural Coating	1/1/2020	8/3/2020	5	154	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 33,945; Non-Residential Outdoor: 11,315; Striped Parking Area:****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	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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Demolition	4	10.00	0.00	59.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved 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					0.6077	0.0000	0.6077	0.0920	0.0000	0.0920			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.9530	8.6039	7.6917	0.0120	0.6077	0.5371	1.1448	0.0920	0.5125	0.6045		1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0242	0.8365	0.1673	2.2100e-003	0.0491	3.1300e-003	0.0522	0.0135	2.9900e-003	0.0164		239.0623	239.0623	0.0172		239.4909

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	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
Total	0.0727	0.8705	0.6153	3.4000e-003	0.1609	4.0000e-003	0.1649	0.0431	3.8000e-003	0.0469		357.0985	357.0985	0.0209		357.6196

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					0.2370	0.0000	0.2370	0.0359	0.0000	0.0359			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.4844	10.3677	7.9381	0.0120	0.2370	0.4017	0.6387	0.0359	0.4017	0.4376	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0242	0.8365	0.1673	2.2100e-003	0.0491	3.1300e-003	0.0522	0.0135	2.9900e-003	0.0164		239.0623	239.0623	0.0172		239.4909
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	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
Total	0.0727	0.8705	0.6153	3.4000e-003	0.1609	4.0000e-003	0.1649	0.0431	3.8000e-003	0.0469		357.0985	357.0985	0.0209		357.6196

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	0.7195	8.9170	4.1407	9.7500e-003	0.5303	0.3672	0.8975	0.0573	0.3378	0.3951		965.1690	965.1690	0.3054		972.8032

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	0.0243	0.0170	0.2240	5.9000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		59.0181	59.0181	1.8500e-003		59.0643
Total	0.0243	0.0170	0.2240	5.9000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		59.0181	59.0181	1.8500e-003		59.0643

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					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000

Off-Road	0.3079	8.6185	5.8579	9.7500e-003		0.2405	0.2405		0.2405	0.2405	0.0000	965.1690	965.1690	0.3054		972.8032
Total	0.3079	8.6185	5.8579	9.7500e-003	0.2068	0.2405	0.4473	0.0223	0.2405	0.2629	0.0000	965.1690	965.1690	0.3054		972.8032

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	0.0243	0.0170	0.2240	5.9000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		59.0181	59.0181	1.8500e-003		59.0643
Total	0.0243	0.0170	0.2240	5.9000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		59.0181	59.0181	1.8500e-003		59.0643

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					0.7598	0.0000	0.7598	0.4149	0.0000	0.4149			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.9530	8.6039	7.6917	0.0120	0.7598	0.5371	1.2969	0.4149	0.5125	0.9273		1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0673	2.3261	0.4653	6.1400e-003	0.1365	8.6900e-003	0.1452	0.0374	8.3200e-003	0.0457		664.7654	664.7654	0.0477		665.9573
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	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
Total	0.1158	2.3601	0.9133	7.3300e-003	0.2482	9.5600e-003	0.2578	0.0670	9.1300e-003	0.0762		782.8016	782.8016	0.0514		784.0860

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					0.2963	0.0000	0.2963	0.1618	0.0000	0.1618			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.4844	10.3677	7.9381	0.0120	0.2963	0.4017	0.6980	0.1618	0.4017	0.5635	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0673	2.3261	0.4653	6.1400e-003	0.1365	8.6900e-003	0.1452	0.0374	8.3200e-003	0.0457		664.7654	664.7654	0.0477		665.9573

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	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
Total	0.1158	2.3601	0.9133	7.3300e-003	0.2482	9.5600e-003	0.2578	0.0670	9.1300e-003	0.0762		782.8016	782.8016	0.0514		784.0860

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	0.7055	6.8172	6.3966	8.5000e-003		0.4781	0.4781		0.4398	0.4398		842.0643	842.0643	0.2664		848.7248
Total	0.7055	6.8172	6.3966	8.5000e-003		0.4781	0.4781		0.4398	0.4398		842.0643	842.0643	0.2664		848.7248

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	0.0156	0.4592	0.1132	1.0300e-003	0.0256	3.0400e-003	0.0286	7.3700e-003	2.9100e-003	0.0103		109.8049	109.8049	7.3900e-003		109.9896
Worker	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
Total	0.0641	0.4932	0.5612	2.2200e-003	0.1374	3.9100e-003	0.1413	0.0370	3.7200e-003	0.0407		227.8410	227.8410	0.0111		228.1182

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	842.0643	842.0643	0.2664		848.7248
Total	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	842.0643	842.0643	0.2664		848.7248

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	0.0156	0.4592	0.1132	1.0300e-003	0.0256	3.0400e-003	0.0286	7.3700e-003	2.9100e-003	0.0103		109.8049	109.8049	7.3900e-003		109.9896
Worker	0.0486	0.0340	0.4479	1.1900e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		118.0362	118.0362	3.7000e-003		118.1286
Total	0.0641	0.4932	0.5612	2.2200e-003	0.1374	3.9100e-003	0.1413	0.0370	3.7200e-003	0.0407		227.8410	227.8410	0.0111		228.1182

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	0.6350	6.1566	6.3298	8.5000e-003		0.4112	0.4112		0.3783	0.3783		823.5833	823.5833	0.2664		830.2424

Total	0.6350	6.1566	6.3298	8.5000e-003		0.4112	0.4112		0.3783	0.3783		823.5833	823.5833	0.2664		830.2424
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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	0.0133	0.4213	0.1025	1.0200e-003	0.0256	2.0900e-003	0.0277	7.3700e-003	2.0000e-003	9.3600e-003		109.1165	109.1165	6.9800e-003		109.2911
Worker	0.0449	0.0303	0.4076	1.1500e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		114.3836	114.3836	3.3000e-003		114.4660
Total	0.0581	0.4516	0.5101	2.1700e-003	0.1374	2.9400e-003	0.1403	0.0370	2.7900e-003	0.0398		223.5002	223.5002	0.0103		223.7572

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.5833	823.5833	0.2664		830.2424
Total	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.5833	823.5833	0.2664		830.2424

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	0.0133	0.4213	0.1025	1.0200e-003	0.0256	2.0900e-003	0.0277	7.3700e-003	2.0000e-003	9.3600e-003		109.1165	109.1165	6.9800e-003		109.2911
Worker	0.0449	0.0303	0.4076	1.1500e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		114.3836	114.3836	3.3000e-003		114.4660
Total	0.0581	0.4516	0.5101	2.1700e-003	0.1374	2.9400e-003	0.1403	0.0370	2.7900e-003	0.0398		223.5002	223.5002	0.0103		223.7572

3.6 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	1.3622					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	1.6044	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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	8.9700e-003	6.0600e-003	0.0815	2.3000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		22.8767	22.8767	6.6000e-004		22.8932
Total	8.9700e-003	6.0600e-003	0.0815	2.3000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		22.8767	22.8767	6.6000e-004		22.8932

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	1.3622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.4761	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0218		281.9928

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	8.9700e-003	6.0600e-003	0.0815	2.3000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		22.8767	22.8767	6.6000e-004		22.8932
Total	8.9700e-003	6.0600e-003	0.0815	2.3000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		22.8767	22.8767	6.6000e-004		22.8932

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0744	0.3760	1.1079	4.0500e-003	0.3307	3.1500e-003	0.3339	0.0885	2.9400e-003	0.0914		411.4194	411.4194	0.0191		411.8974
Unmitigated	0.0744	0.3760	1.1079	4.0500e-003	0.3307	3.1500e-003	0.3339	0.0885	2.9400e-003	0.0914		411.4194	411.4194	0.0191		411.8974

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	36.43	36.43	36.43	155,603	155,603
Total	36.43	36.43	36.43	155,603	155,603

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

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	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
NaturalGas Unmitigated	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096

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 School	644.8	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Total		6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096

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 School	0.6448	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Total		6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Unmitigated	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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SubCategory	lb/day										lb/day					
Architectural Coating	0.0575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Total	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Total	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 1 - South Coast Air Basin, Winter

Windward School Master Plan - Phase 1

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	22.63	1000sqft	0.70	22,630.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.7 acres during this phase.

Construction Phase - Based on phasing development assumptions, no paving.

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and based on a proportion of total future trips with respect to Phase 2 trips. 130 total trips would correlate with 36 trips for the phase 1 buildings.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Grading - Phase 1 would export approximately 1,000 cubic yards of soil

Demolition - Approximately 12,964 sf of existing buildings to be removed.

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	2.00	16.00
tblConstructionPhase	NumDays	100.00	263.00
tblConstructionPhase	NumDays	5.00	154.00
tblConstructionPhase	PhaseEndDate	6/21/2019	7/8/2019
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	0.52	0.70
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	SU_TR	1.79	1.61

tblVehicleTrips	WD_TR	12.89	1.61
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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	1.0754	10.9990	8.5981	0.0191	1.0081	0.5468	1.5549	0.4819	0.5218	1.0036	0.0000	1,923.9623	1,923.9623	0.3071	0.0000	1,930.8166
2020	2.3125	8.3015	8.7183	0.0138	0.1597	0.5253	0.6851	0.0429	0.4922	0.5352	0.0000	1,339.9244	1,339.9244	0.2993	0.0000	1,347.4075
Maximum	2.3125	10.9990	8.7183	0.0191	1.0081	0.5468	1.5549	0.4819	0.5218	1.0036	0.0000	1,923.9623	1,923.9623	0.3071	0.0000	1,930.8166

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	0.6068	12.7628	8.8445	0.0191	0.5446	0.4114	0.9560	0.2288	0.4110	0.6398	0.0000	1,923.9623	1,923.9623	0.3071	0.0000	1,930.8166
2020	1.9487	11.0638	8.8160	0.0138	0.1597	0.4317	0.5914	0.0429	0.4315	0.4745	0.0000	1,339.9244	1,339.9244	0.2993	0.0000	1,347.4075
Maximum	1.9487	12.7628	8.8445	0.0191	0.5446	0.4317	0.9560	0.2288	0.4315	0.6398	0.0000	1,923.9623	1,923.9623	0.3071	0.0000	1,930.8166

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	24.57	-23.45	-1.99	0.00	39.69	21.36	30.92	48.22	16.91	27.59	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Energy	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Mobile	0.0716	0.3865	1.0328	3.8400e-003	0.3307	3.1600e-003	0.3339	0.0885	2.9500e-003	0.0914		390.6055	390.6055	0.0190		391.0797
Total	0.5843	0.4497	1.0883	4.2200e-003	0.3307	7.9700e-003	0.3387	0.0885	7.7600e-003	0.0962		466.4693	466.4693	0.0204	1.3900e-003	467.3946

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Energy	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Mobile	0.0716	0.3865	1.0328	3.8400e-003	0.3307	3.1600e-003	0.3339	0.0885	2.9500e-003	0.0914		390.6055	390.6055	0.0190		391.0797
Total	0.5843	0.4497	1.0883	4.2200e-003	0.3307	7.9700e-003	0.3387	0.0885	7.7600e-003	0.0962		466.4693	466.4693	0.0204	1.3900e-003	467.3946

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/10/2019	7/8/2019	5	21	
2	Site Preparation	Site Preparation	7/9/2019	7/9/2019	5	1	
3	Grading	Grading	7/10/2019	7/31/2019	5	16	
4	Building Construction	Building Construction	8/1/2019	8/3/2020	5	263	
5	Architectural Coating	Architectural Coating	1/1/2020	8/3/2020	5	154	

Acres of Grading (Site Preparation Phase): 0.5**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 33,945; Non-Residential Outdoor: 11,315; Striped Parking Area:****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	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
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Demolition	4	10.00	0.00	59.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved 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					0.6077	0.0000	0.6077	0.0920	0.0000	0.0920			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.9530	8.6039	7.6917	0.0120	0.6077	0.5371	1.1448	0.0920	0.5125	0.6045		1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0248	0.8479	0.1796	2.1700e-003	0.0491	3.1900e-003	0.0523	0.0135	3.0500e-003	0.0165		235.0429	235.0429	0.0178		235.4888

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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.0782	0.8852	0.5866	3.2800e-003	0.1609	4.0600e-003	0.1649	0.0431	3.8600e-003	0.0469		345.7596	345.7596	0.0213		346.2923

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					0.2370	0.0000	0.2370	0.0359	0.0000	0.0359			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.4844	10.3677	7.9381	0.0120	0.2370	0.4017	0.6387	0.0359	0.4017	0.4376	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0248	0.8479	0.1796	2.1700e-003	0.0491	3.1900e-003	0.0523	0.0135	3.0500e-003	0.0165		235.0429	235.0429	0.0178		235.4888
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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.0782	0.8852	0.5866	3.2800e-003	0.1609	4.0600e-003	0.1649	0.0431	3.8600e-003	0.0469		345.7596	345.7596	0.0213		346.2923

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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	0.7195	8.9170	4.1407	9.7500e-003	0.5303	0.3672	0.8975	0.0573	0.3378	0.3951		965.1690	965.1690	0.3054		972.8032

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	0.0267	0.0187	0.2035	5.6000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		55.3584	55.3584	1.7400e-003		55.4018
Total	0.0267	0.0187	0.2035	5.6000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		55.3584	55.3584	1.7400e-003		55.4018

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					0.2068	0.0000	0.2068	0.0223	0.0000	0.0223			0.0000			0.0000

Off-Road	0.3079	8.6185	5.8579	9.7500e-003		0.2405	0.2405		0.2405	0.2405	0.0000	965.1690	965.1690	0.3054		972.8032
Total	0.3079	8.6185	5.8579	9.7500e-003	0.2068	0.2405	0.4473	0.0223	0.2405	0.2629	0.0000	965.1690	965.1690	0.3054		972.8032

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	0.0267	0.0187	0.2035	5.6000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		55.3584	55.3584	1.7400e-003		55.4018
Total	0.0267	0.0187	0.2035	5.6000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		55.3584	55.3584	1.7400e-003		55.4018

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					0.7598	0.0000	0.7598	0.4149	0.0000	0.4149			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.9530	8.6039	7.6917	0.0120	0.7598	0.5371	1.2969	0.4149	0.5125	0.9273		1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0691	2.3578	0.4994	6.0300e-003	0.1365	8.8600e-003	0.1453	0.0374	8.4700e-003	0.0459		653.5885	653.5885	0.0496		654.8284
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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.1224	2.3951	0.9064	7.1400e-003	0.2482	9.7300e-003	0.2580	0.0670	9.2800e-003	0.0763		764.3052	764.3052	0.0531		765.6320

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					0.2963	0.0000	0.2963	0.1618	0.0000	0.1618			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	0.4844	10.3677	7.9381	0.0120	0.2963	0.4017	0.6980	0.1618	0.4017	0.5635	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847

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	0.0691	2.3578	0.4994	6.0300e-003	0.1365	8.8600e-003	0.1453	0.0374	8.4700e-003	0.0459		653.5885	653.5885	0.0496		654.8284

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	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.1224	2.3951	0.9064	7.1400e-003	0.2482	9.7300e-003	0.2580	0.0670	9.2800e-003	0.0763		764.3052	764.3052	0.0531		765.6320

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	0.7055	6.8172	6.3966	8.5000e-003		0.4781	0.4781		0.4398	0.4398		842.0643	842.0643	0.2664		848.7248
Total	0.7055	6.8172	6.3966	8.5000e-003		0.4781	0.4781		0.4398	0.4398		842.0643	842.0643	0.2664		848.7248

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	0.0163	0.4597	0.1254	1.0000e-003	0.0256	3.0900e-003	0.0287	7.3700e-003	2.9600e-003	0.0103		106.8556	106.8556	7.9000e-003		107.0531
Worker	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.0696	0.4971	0.5324	2.1100e-003	0.1374	3.9600e-003	0.1413	0.0370	3.7700e-003	0.0408		217.5723	217.5723	0.0114		217.8566

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	842.0643	842.0643	0.2664		848.7248
Total	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	842.0643	842.0643	0.2664		848.7248

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	0.0163	0.4597	0.1254	1.0000e-003	0.0256	3.0900e-003	0.0287	7.3700e-003	2.9600e-003	0.0103		106.8556	106.8556	7.9000e-003		107.0531
Worker	0.0533	0.0373	0.4070	1.1100e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		110.7167	110.7167	3.4700e-003		110.8035
Total	0.0696	0.4971	0.5324	2.1100e-003	0.1374	3.9600e-003	0.1413	0.0370	3.7700e-003	0.0408		217.5723	217.5723	0.0114		217.8566

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	0.6350	6.1566	6.3298	8.5000e-003		0.4112	0.4112		0.3783	0.3783		823.5833	823.5833	0.2664		830.2424

Total	0.6350	6.1566	6.3298	8.5000e-003		0.4112	0.4112		0.3783	0.3783		823.5833	823.5833	0.2664		830.2424
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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	0.0139	0.4211	0.1136	9.9000e-004	0.0256	2.1200e-003	0.0277	7.3700e-003	2.0300e-003	9.3900e-003		106.1510	106.1510	7.4600e-003		106.3376
Worker	0.0493	0.0333	0.3696	1.0800e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		107.2851	107.2851	3.0900e-003		107.3623
Total	0.0632	0.4544	0.4831	2.0700e-003	0.1374	2.9700e-003	0.1403	0.0370	2.8200e-003	0.0398		213.4361	213.4361	0.0106		213.6999

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.5833	823.5833	0.2664		830.2424
Total	0.3995	8.2502	6.4265	8.5000e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.5833	823.5833	0.2664		830.2424

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	0.0139	0.4211	0.1136	9.9000e-004	0.0256	2.1200e-003	0.0277	7.3700e-003	2.0300e-003	9.3900e-003		106.1510	106.1510	7.4600e-003		106.3376
Worker	0.0493	0.0333	0.3696	1.0800e-003	0.1118	8.5000e-004	0.1126	0.0296	7.9000e-004	0.0304		107.2851	107.2851	3.0900e-003		107.3623
Total	0.0632	0.4544	0.4831	2.0700e-003	0.1374	2.9700e-003	0.1403	0.0370	2.8200e-003	0.0398		213.4361	213.4361	0.0106		213.6999

3.6 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	1.3622					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	1.6044	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

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	9.8700e-003	6.6600e-003	0.0739	2.2000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		21.4570	21.4570	6.2000e-004		21.4725
Total	9.8700e-003	6.6600e-003	0.0739	2.2000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		21.4570	21.4570	6.2000e-004		21.4725

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	1.3622					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0218		281.9928
Total	1.4761	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0218		281.9928

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	9.8700e-003	6.6600e-003	0.0739	2.2000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		21.4570	21.4570	6.2000e-004		21.4725
Total	9.8700e-003	6.6600e-003	0.0739	2.2000e-004	0.0224	1.7000e-004	0.0225	5.9300e-003	1.6000e-004	6.0900e-003		21.4570	21.4570	6.2000e-004		21.4725

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0716	0.3865	1.0328	3.8400e-003	0.3307	3.1600e-003	0.3339	0.0885	2.9500e-003	0.0914		390.6055	390.6055	0.0190		391.0797
Unmitigated	0.0716	0.3865	1.0328	3.8400e-003	0.3307	3.1600e-003	0.3339	0.0885	2.9500e-003	0.0914		390.6055	390.6055	0.0190		391.0797

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	36.43	36.43	36.43	155,603	155,603
Total	36.43	36.43	36.43	155,603	155,603

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

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	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
NaturalGas Unmitigated	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096

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 School	644.8	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Total		6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096

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 School	0.6448	6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096
Total		6.9500e-003	0.0632	0.0531	3.8000e-004		4.8000e-003	4.8000e-003		4.8000e-003	4.8000e-003		75.8588	75.8588	1.4500e-003	1.3900e-003	76.3096

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Unmitigated	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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SubCategory	lb/day										lb/day					
Architectural Coating	0.0575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Total	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4481					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.2000e-004	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003
Total	0.5058	2.0000e-005	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.9500e-003	4.9500e-003	1.0000e-005		5.2800e-003

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 2 - South Coast Air Basin, Summer

Windward School Master Plan - Phase 2

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	58.19	1000sqft	0.40	58,190.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.4 acres during this phase.

Construction Phase - Based on phasing development assumptions, no paving.

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment - Operational only

Off-road Equipment -

Off-road Equipment -

Demolition - Approximately 13,596 sf of existing buildings to be removed.

Grading - Phase 2 would export approximately 4,000 cubic yards of soil

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and based on a proportion of total future trips with respect to Phase 1 trips. 130 total trips would correlate with 94 trips for the phase 2 buildings.

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	5.00	176.00
tblConstructionPhase	NumDays	100.00	439.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	NumDays	1.00	22.00
tblConstructionPhase	PhaseEndDate	11/11/2021	5/8/2023
tblConstructionPhase	PhaseEndDate	11/4/2021	5/8/2023
tblConstructionPhase	PhaseEndDate	6/14/2021	6/30/2021

tblConstructionPhase	PhaseEndDate	6/17/2021	8/31/2021
tblConstructionPhase	PhaseEndDate	6/15/2021	7/31/2021
tblConstructionPhase	PhaseStartDate	11/5/2021	9/5/2022
tblConstructionPhase	PhaseStartDate	6/18/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	6/16/2021	8/1/2021
tblConstructionPhase	PhaseStartDate	6/15/2021	7/1/2021
tblGrading	AcresOfGrading	11.00	0.50
tblGrading	MaterialExported	0.00	4,000.00
tblLandUse	LotAcreage	1.34	0.40
tblVehicleTrips	ST_TR	4.37	1.62
tblVehicleTrips	SU_TR	1.79	1.62
tblVehicleTrips	WD_TR	12.89	1.62

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.0111	13.1731	9.2463	0.0305	1.2821	0.4265	1.7086	0.5553	0.4069	0.9623	0.0000	3,151.9044	3,151.9044	0.3503	0.0000	3,160.6616
2022	3.9095	7.3233	9.2472	0.0171	0.3881	0.3708	0.7590	0.1044	0.3477	0.4521	0.0000	1,683.8487	1,683.8487	0.3090	0.0000	1,691.5732
2023	3.8397	6.5643	9.1196	0.0169	0.3881	0.3145	0.7026	0.1044	0.2950	0.3994	0.0000	1,664.6616	1,664.6616	0.3051	0.0000	1,672.2884
Maximum	3.9095	13.1731	9.2472	0.0305	1.2821	0.4265	1.7086	0.5553	0.4069	0.9623	0.0000	3,151.9044	3,151.9044	0.3503	0.0000	3,160.6616

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.6990	16.2877	9.6152	0.0305	0.8103	0.4209	1.2312	0.3010	0.4200	0.7211	0.0000	3,151.9044	3,151.9044	0.3503	0.0000	3,160.6616
2022	3.7185	11.5838	9.4860	0.0171	0.3881	0.4326	0.8207	0.1044	0.4323	0.5367	0.0000	1,683.8487	1,683.8487	0.3090	0.0000	1,691.5732
2023	3.7049	11.3531	9.3875	0.0169	0.3881	0.4316	0.8198	0.1044	0.4314	0.5358	0.0000	1,664.6616	1,664.6616	0.3051	0.0000	1,672.2884
Maximum	3.7185	16.2877	9.6152	0.0305	0.8103	0.4326	1.2312	0.3010	0.4323	0.7211	0.0000	3,151.9044	3,151.9044	0.3503	0.0000	3,160.6616

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	7.28	-44.95	-3.17	0.00	22.92	-15.59	9.41	33.28	-22.30	1.11	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	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Energy	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Mobile	0.1555	0.6882	2.3222	9.5700e-003	0.8556	6.6100e-003	0.8622	0.2289	6.1500e-003	0.2350		975.5556	975.5556	0.0409		976.5775
Total	1.4739	0.8508	2.4647	0.0106	0.8556	0.0190	0.8746	0.2289	0.0185	0.2474		1,170.6291	1,170.6291	0.0447	3.5800e-003	1,172.8110

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
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Category	lb/day										lb/day					
Area	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Energy	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Mobile	0.1555	0.6882	2.3222	9.5700e-003	0.8556	6.6100e-003	0.8622	0.2289	6.1500e-003	0.2350		975.5556	975.5556	0.0409		976.5775
Total	1.4739	0.8508	2.4647	0.0106	0.8556	0.0190	0.8746	0.2289	0.0185	0.2474		1,170.6291	1,170.6291	0.0447	3.5800e-003	1,172.8110

	ROG	NOx	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	6/1/2021	6/30/2021	5	22	
2	Site Preparation	Site Preparation	7/1/2021	7/31/2021	5	22	
3	Grading	Grading	8/1/2021	8/31/2021	5	22	
4	Building Construction	Building Construction	9/1/2021	5/8/2023	5	439	
5	Architectural Coating	Architectural Coating	9/5/2022	5/8/2023	5	176	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 87,285; Non-Residential Outdoor: 29,095; Striped Parking Area:

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	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	24.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6083	0.0000	0.6083	0.0921	0.0000	0.0921			0.0000			0.0000

Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.433 8	1,147.433 8	0.2138		1,152.779 7
Total	0.7965	7.2530	7.5691	0.0120	0.6083	0.4073	1.0157	0.0921	0.3886	0.4807		1,147.433 8	1,147.433 8	0.2138		1,152.779 7

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	0.0214	0.7307	0.1614	2.1600e-003	0.0492	2.2800e-003	0.0515	0.0135	2.1800e-003	0.0157		234.8288	234.8288	0.0166		235.2426
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	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644
Total	0.0633	0.7580	0.5369	3.2700e-003	0.1610	3.1100e-003	0.1641	0.0431	2.9400e-003	0.0461		345.5187	345.5187	0.0195		346.0070

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					0.2373	0.0000	0.2373	0.0359	0.0000	0.0359			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,147.433 8	1,147.433 8	0.2138		1,152.779 7
Total	0.4844	10.3677	7.9381	0.0120	0.2373	0.4017	0.6390	0.0359	0.4017	0.4376	0.0000	1,147.433 8	1,147.433 8	0.2138		1,152.779 7

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	0.0214	0.7307	0.1614	2.1600e-003	0.0492	2.2800e-003	0.0515	0.0135	2.1800e-003	0.0157		234.8288	234.8288	0.0166		235.2426
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	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644
Total	0.0633	0.7580	0.5369	3.2700e-003	0.1610	3.1100e-003	0.1641	0.0431	2.9400e-003	0.0461		345.5187	345.5187	0.0195		346.0070

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0241	0.0000	0.0241	2.6000e-003	0.0000	2.6000e-003			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.0241	0.2995	0.3236	2.6000e-003	0.2755	0.2781		942.5842	942.5842	0.3049		950.2055

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	0.0209	0.0137	0.1877	5.6000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		55.3449	55.3449	1.4900e-003		55.3822
Total	0.0209	0.0137	0.1877	5.6000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		55.3449	55.3449	1.4900e-003		55.3822

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					9.4000e-003	0.0000	9.4000e-003	1.0100e-003	0.0000	1.0100e-003			0.0000			0.0000
Off-Road	0.3079	8.6185	5.8579	9.7300e-003		0.2405	0.2405		0.2405	0.2405	0.0000	942.5842	942.5842	0.3049		950.2055
Total	0.3079	8.6185	5.8579	9.7300e-003	9.4000e-003	0.2405	0.2499	1.0100e-003	0.2405	0.2415	0.0000	942.5842	942.5842	0.3049		950.2055

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	0.0209	0.0137	0.1877	5.6000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		55.3449	55.3449	1.4900e-003		55.3822
Total	0.0209	0.0137	0.1877	5.6000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		55.3449	55.3449	1.4900e-003		55.3822

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7733	0.0000	0.7733	0.4169	0.0000	0.4169			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7733	0.4073	1.1807	0.4169	0.3886	0.8055		1,147.4338	1,147.4338	0.2138		1,152.7797

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	0.1727	5.8928	1.3017	0.0174	0.3970	0.0184	0.4153	0.1088	0.0176	0.1264		1,893.7808	1,893.7808	0.1335		1,897.1175
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	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644
Total	0.2146	5.9201	1.6771	0.0185	0.5087	0.0192	0.5279	0.1384	0.0183	0.1568		2,004.4706	2,004.4706	0.1365		2,007.8819

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					0.3016	0.0000	0.3016	0.1626	0.0000	0.1626			0.0000			0.0000

Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.4844	10.3677	7.9381	0.0120	0.3016	0.4017	0.7033	0.1626	0.4017	0.5643	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

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	0.1727	5.8928	1.3017	0.0174	0.3970	0.0184	0.4153	0.1088	0.0176	0.1264		1,893.7808	1,893.7808	0.1335		1,897.1175
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	0.0419	0.0273	0.3755	1.1100e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		110.6898	110.6898	2.9800e-003		110.7644
Total	0.2146	5.9201	1.6771	0.0185	0.5087	0.0192	0.5279	0.1384	0.0183	0.1568		2,004.4706	2,004.4706	0.1365		2,007.8819

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076
Total	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076

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	0.0281	0.9577	0.2325	2.5300e-003	0.0640	1.9600e-003	0.0659	0.0184	1.8700e-003	0.0203		270.7438	270.7438	0.0167		271.1623
Worker	0.1004	0.0655	0.9011	2.6700e-003	0.2683	1.9900e-003	0.2703	0.0711	1.8300e-003	0.0730		265.6556	265.6556	7.1600e-003		265.8346
Total	0.1286	1.0232	1.1337	5.2000e-003	0.3323	3.9500e-003	0.3362	0.0896	3.7000e-003	0.0933		536.3993	536.3993	0.0239		536.9969

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.8464	823.8464	0.2665		830.5076
Total	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.8464	823.8464	0.2665		830.5076

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	0.0281	0.9577	0.2325	2.5300e-003	0.0640	1.9600e-003	0.0659	0.0184	1.8700e-003	0.0203		270.7438	270.7438	0.0167		271.1623
Worker	0.1004	0.0655	0.9011	2.6700e-003	0.2683	1.9900e-003	0.2703	0.0711	1.8300e-003	0.0730		265.6556	265.6556	7.1600e-003		265.8346
Total	0.1286	1.0232	1.1337	5.2000e-003	0.3323	3.9500e-003	0.3362	0.0896	3.7000e-003	0.0933		536.3993	536.3993	0.0239		536.9969

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667		831.1908
Total	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667		831.1908

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	0.0264	0.9096	0.2202	2.5100e-003	0.0640	1.7000e-003	0.0657	0.0184	1.6300e-003	0.0201		268.3702	268.3702	0.0162		268.7744
Worker	0.0942	0.0592	0.8333	2.5700e-003	0.2683	1.9300e-003	0.2702	0.0711	1.7800e-003	0.0729		256.1432	256.1432	6.4700e-003		256.3050
Total	0.1206	0.9688	1.0535	5.0800e-003	0.3323	3.6300e-003	0.3359	0.0896	3.4100e-003	0.0930		524.5134	524.5134	0.0226		525.0794

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	824.5241	824.5241	0.2667		831.1908
Total	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	824.5241	824.5241	0.2667		831.1908

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	0.0264	0.9096	0.2202	2.5100e-003	0.0640	1.7000e-003	0.0657	0.0184	1.6300e-003	0.0201		268.3702	268.3702	0.0162		268.7744
Worker	0.0942	0.0592	0.8333	2.5700e-003	0.2683	1.9300e-003	0.2702	0.0711	1.7800e-003	0.0729		256.1432	256.1432	6.4700e-003		256.3050
Total	0.1206	0.9688	1.0535	5.0800e-003	0.3323	3.6300e-003	0.3359	0.0896	3.4100e-003	0.0930		524.5134	524.5134	0.0226		525.0794

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4565	4.5109	6.1798	8.5200e-003		0.2406	0.2406		0.2213	0.2213		825.1992	825.1992	0.2669		831.8714

Total	0.4565	4.5109	6.1798	8.5200e-003		0.2406	0.2406		0.2213	0.2213		825.1992	825.1992	0.2669		831.8714
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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	0.0196	0.6858	0.1987	2.4200e-003	0.0640	7.9000e-004	0.0648	0.0184	7.5000e-004	0.0192		260.0365	260.0365	0.0143		260.3938
Worker	0.0886	0.0536	0.7695	2.4700e-003	0.2683	1.8800e-003	0.2701	0.0711	1.7300e-003	0.0729		246.6024	246.6024	5.8400e-003		246.7484
Total	0.1082	0.7393	0.9683	4.8900e-003	0.3323	2.6700e-003	0.3349	0.0896	2.4800e-003	0.0920		506.6389	506.6389	0.0201		507.1421

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5200e-003		0.3335	0.3335		0.3335	0.3335	0.0000	825.1992	825.1992	0.2669		831.8714
Total	0.3995	8.2502	6.4265	8.5200e-003		0.3335	0.3335		0.3335	0.3335	0.0000	825.1992	825.1992	0.2669		831.8714

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	0.0196	0.6858	0.1987	2.4200e-003	0.0640	7.9000e-004	0.0648	0.0184	7.5000e-004	0.0192		260.0365	260.0365	0.0143		260.3938
Worker	0.0886	0.0536	0.7695	2.4700e-003	0.2683	1.8800e-003	0.2701	0.0711	1.7300e-003	0.0729		246.6024	246.6024	5.8400e-003		246.7484
Total	0.1082	0.7393	0.9683	4.8900e-003	0.3323	2.6700e-003	0.3349	0.0896	2.4800e-003	0.0920		506.6389	506.6389	0.0201		507.1421

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	3.2694	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.0196	0.0123	0.1736	5.4000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		53.3632	53.3632	1.3500e-003		53.3969
Total	0.0196	0.0123	0.1736	5.4000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		53.3632	53.3632	1.3500e-003		53.3969

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	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0183		281.9062
Total	3.1788	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.0196	0.0123	0.1736	5.4000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		53.3632	53.3632	1.3500e-003		53.3969
Total	0.0196	0.0123	0.1736	5.4000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		53.3632	53.3632	1.3500e-003		53.3969

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	3.2566	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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	0.0185	0.0112	0.1603	5.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		51.3755	51.3755	1.2200e-003		51.4059
Total	0.0185	0.0112	0.1603	5.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		51.3755	51.3755	1.2200e-003		51.4059

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	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
Total	3.1788	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690

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	0.0185	0.0112	0.1603	5.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		51.3755	51.3755	1.2200e-003		51.4059
Total	0.0185	0.0112	0.1603	5.2000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		51.3755	51.3755	1.2200e-003		51.4059

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1555	0.6882	2.3222	9.5700e-003	0.8556	6.6100e-003	0.8622	0.2289	6.1500e-003	0.2350		975.5556	975.5556	0.0409		976.5775
Unmitigated	0.1555	0.6882	2.3222	9.5700e-003	0.8556	6.6100e-003	0.8622	0.2289	6.1500e-003	0.2350		975.5556	975.5556	0.0409		976.5775

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	94.27	94.27	94.27	402,597	402,597
Total	94.27	94.27	94.27	402,597	402,597

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.553363	0.042540	0.203692	0.115607	0.014606	0.005830	0.021800	0.032323	0.002120	0.001725	0.004837	0.000711	0.000846

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
NaturalGas Unmitigated	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199

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 School	1658.02	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Total		0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199

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 School	1.65802	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Total		0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Unmitigated	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1522					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Total	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136

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
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SubCategory	lb/day										lb/day					
Architectural Coating	0.1478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1522					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Total	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 2 - South Coast Air Basin, Winter

Windward School Master Plan - Phase 2

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	58.19	1000sqft	0.40	58,190.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.4 acres during this phase.

Construction Phase - Based on phasing development assumptions, no paving.

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment - Operational only

Off-road Equipment -

Off-road Equipment -

Demolition - Approximately 13,596 sf of existing buildings to be removed.

Grading - Phase 2 would export approximately 4,000 cubic yards of soil

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and based on a proportion of total future trips with respect to Phase 1 trips. 130 total trips would correlate with 94 trips for the phase 2 buildings.

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	5.00	176.00
tblConstructionPhase	NumDays	100.00	439.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	NumDays	1.00	22.00
tblConstructionPhase	PhaseEndDate	11/11/2021	5/8/2023
tblConstructionPhase	PhaseEndDate	11/4/2021	5/8/2023
tblConstructionPhase	PhaseEndDate	6/14/2021	6/30/2021

tblConstructionPhase	PhaseEndDate	6/17/2021	8/31/2021
tblConstructionPhase	PhaseEndDate	6/15/2021	7/31/2021
tblConstructionPhase	PhaseStartDate	11/5/2021	9/5/2022
tblConstructionPhase	PhaseStartDate	6/18/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	6/16/2021	8/1/2021
tblConstructionPhase	PhaseStartDate	6/15/2021	7/1/2021
tblGrading	AcresOfGrading	11.00	0.50
tblGrading	MaterialExported	0.00	4,000.00
tblLandUse	LotAcreage	1.34	0.40
tblVehicleTrips	ST_TR	4.37	1.62
tblVehicleTrips	SU_TR	1.79	1.62
tblVehicleTrips	WD_TR	12.89	1.62

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.0198	13.2484	9.2958	0.0302	1.2821	0.4268	1.7089	0.5553	0.4072	0.9625	0.0000	3,112.5137	3,112.5137	0.3551	0.0000	3,121.3909
2022	3.9228	7.3275	9.1748	0.0168	0.3881	0.3709	0.7590	0.1044	0.3478	0.4522	0.0000	1,657.2782	1,657.2782	0.3096	0.0000	1,665.0174
2023	3.8523	6.5670	9.0467	0.0167	0.3881	0.3145	0.7026	0.1044	0.2950	0.3994	0.0000	1,639.1482	1,639.1482	0.3055	0.0000	1,646.7851
Maximum	3.9228	13.2484	9.2958	0.0302	1.2821	0.4268	1.7089	0.5553	0.4072	0.9625	0.0000	3,112.5137	3,112.5137	0.3551	0.0000	3,121.3909

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.7077	16.3631	9.6647	0.0302	0.8103	0.4212	1.2315	0.3010	0.4203	0.7213	0.0000	3,112.5137	3,112.5137	0.3551	0.0000	3,121.3909
2022	3.7318	11.5880	9.4136	0.0168	0.3881	0.4327	0.8208	0.1044	0.4324	0.5368	0.0000	1,657.2782	1,657.2782	0.3096	0.0000	1,665.0174
2023	3.7175	11.3557	9.3146	0.0167	0.3881	0.4317	0.8198	0.1044	0.4315	0.5358	0.0000	1,639.1482	1,639.1482	0.3055	0.0000	1,646.7851
Maximum	3.7318	16.3631	9.6647	0.0302	0.8103	0.4327	1.2315	0.3010	0.4324	0.7213	0.0000	3,112.5137	3,112.5137	0.3551	0.0000	3,121.3909

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	7.25	-44.81	-3.18	0.00	22.92	-15.59	9.41	33.28	-22.30	1.11	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	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Energy	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Mobile	0.1491	0.7057	2.1565	9.0900e-003	0.8556	6.6400e-003	0.8622	0.2289	6.1700e-003	0.2350		927.0265	927.0265	0.0406		928.0412
Total	1.4675	0.8683	2.2990	0.0101	0.8556	0.0190	0.8746	0.2289	0.0185	0.2474		1,122.1000	1,122.1000	0.0444	3.5800e-003	1,124.2747

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
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Category	lb/day										lb/day					
Area	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Energy	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Mobile	0.1491	0.7057	2.1565	9.0900e-003	0.8556	6.6400e-003	0.8622	0.2289	6.1700e-003	0.2350		927.0265	927.0265	0.0406		928.0412
Total	1.4675	0.8683	2.2990	0.0101	0.8556	0.0190	0.8746	0.2289	0.0185	0.2474		1,122.1000	1,122.1000	0.0444	3.5800e-003	1,124.2747

	ROG	NOx	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	6/1/2021	6/30/2021	5	22	
2	Site Preparation	Site Preparation	7/1/2021	7/31/2021	5	22	
3	Grading	Grading	8/1/2021	8/31/2021	5	22	
4	Building Construction	Building Construction	9/1/2021	5/8/2023	5	439	
5	Architectural Coating	Architectural Coating	9/5/2022	5/8/2023	5	176	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 87,285; Non-Residential Outdoor: 29,095; Striped Parking Area:

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	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	24.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6083	0.0000	0.6083	0.0921	0.0000	0.0921			0.0000			0.0000

Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.433 8	1,147.433 8	0.2138		1,152.779 7
Total	0.7965	7.2530	7.5691	0.0120	0.6083	0.4073	1.0157	0.0921	0.3886	0.4807		1,147.433 8	1,147.433 8	0.2138		1,152.779 7

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	0.0220	0.7397	0.1720	2.1200e-003	0.0492	2.3100e-003	0.0515	0.0135	2.2100e-003	0.0157		230.7968	230.7968	0.0172		231.2261
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	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849
Total	0.0681	0.7697	0.5118	3.1600e-003	0.1610	3.1400e-003	0.1641	0.0431	2.9700e-003	0.0461		334.6120	334.6120	0.0200		335.1110

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					0.2373	0.0000	0.2373	0.0359	0.0000	0.0359			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,147.433 8	1,147.433 8	0.2138		1,152.779 7
Total	0.4844	10.3677	7.9381	0.0120	0.2373	0.4017	0.6390	0.0359	0.4017	0.4376	0.0000	1,147.433 8	1,147.433 8	0.2138		1,152.779 7

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	0.0220	0.7397	0.1720	2.1200e-003	0.0492	2.3100e-003	0.0515	0.0135	2.2100e-003	0.0157		230.7968	230.7968	0.0172		231.2261
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	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849
Total	0.0681	0.7697	0.5118	3.1600e-003	0.1610	3.1400e-003	0.1641	0.0431	2.9700e-003	0.0461		334.6120	334.6120	0.0200		335.1110

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0241	0.0000	0.0241	2.6000e-003	0.0000	2.6000e-003			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	0.6403	7.8204	4.0274	9.7300e-003	0.0241	0.2995	0.3236	2.6000e-003	0.2755	0.2781		942.5842	942.5842	0.3049		950.2055

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	0.0231	0.0150	0.1699	5.2000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		51.9076	51.9076	1.4000e-003		51.9425
Total	0.0231	0.0150	0.1699	5.2000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		51.9076	51.9076	1.4000e-003		51.9425

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					9.4000e-003	0.0000	9.4000e-003	1.0100e-003	0.0000	1.0100e-003			0.0000			0.0000
Off-Road	0.3079	8.6185	5.8579	9.7300e-003		0.2405	0.2405		0.2405	0.2405	0.0000	942.5842	942.5842	0.3049		950.2055
Total	0.3079	8.6185	5.8579	9.7300e-003	9.4000e-003	0.2405	0.2499	1.0100e-003	0.2405	0.2415	0.0000	942.5842	942.5842	0.3049		950.2055

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	0.0231	0.0150	0.1699	5.2000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		51.9076	51.9076	1.4000e-003		51.9425
Total	0.0231	0.0150	0.1699	5.2000e-004	0.0559	4.1000e-004	0.0563	0.0148	3.8000e-004	0.0152		51.9076	51.9076	1.4000e-003		51.9425

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7733	0.0000	0.7733	0.4169	0.0000	0.4169			0.0000			0.0000
Off-Road	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.7965	7.2530	7.5691	0.0120	0.7733	0.4073	1.1807	0.4169	0.3886	0.8055		1,147.4338	1,147.4338	0.2138		1,152.7797

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	0.1772	5.9654	1.3868	0.0171	0.3970	0.0186	0.4156	0.1088	0.0178	0.1266		1,861.2648	1,861.2648	0.1385		1,864.7263
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	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849
Total	0.2233	5.9954	1.7267	0.0182	0.5087	0.0195	0.5282	0.1384	0.0186	0.1570		1,965.0799	1,965.0799	0.1413		1,968.6112

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					0.3016	0.0000	0.3016	0.1626	0.0000	0.1626			0.0000			0.0000

Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	0.4844	10.3677	7.9381	0.0120	0.3016	0.4017	0.7033	0.1626	0.4017	0.5643	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797

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	0.1772	5.9654	1.3868	0.0171	0.3970	0.0186	0.4156	0.1088	0.0178	0.1266		1,861.2648	1,861.2648	0.1385		1,864.7263
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	0.0461	0.0300	0.3399	1.0400e-003	0.1118	8.3000e-004	0.1126	0.0296	7.6000e-004	0.0304		103.8151	103.8151	2.7900e-003		103.8849
Total	0.2233	5.9954	1.7267	0.0182	0.5087	0.0195	0.5282	0.1384	0.0186	0.1570		1,965.0799	1,965.0799	0.1413		1,968.6112

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076
Total	0.5685	5.5603	6.2723	8.5100e-003		0.3491	0.3491		0.3212	0.3212		823.8464	823.8464	0.2665		830.5076

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	0.0296	0.9554	0.2585	2.4600e-003	0.0640	2.0200e-003	0.0660	0.0184	1.9300e-003	0.0204		263.3738	263.3738	0.0179		263.8211
Worker	0.1107	0.0720	0.8157	2.5000e-003	0.2683	1.9900e-003	0.2703	0.0711	1.8300e-003	0.0730		249.1563	249.1563	6.7000e-003		249.3238
Total	0.1402	1.0274	1.0742	4.9600e-003	0.3323	4.0100e-003	0.3363	0.0896	3.7600e-003	0.0933		512.5301	512.5301	0.0246		513.1449

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.8464	823.8464	0.2665		830.5076
Total	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	823.8464	823.8464	0.2665		830.5076

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	0.0296	0.9554	0.2585	2.4600e-003	0.0640	2.0200e-003	0.0660	0.0184	1.9300e-003	0.0204		263.3738	263.3738	0.0179		263.8211
Worker	0.1107	0.0720	0.8157	2.5000e-003	0.2683	1.9900e-003	0.2703	0.0711	1.8300e-003	0.0730		249.1563	249.1563	6.7000e-003		249.3238
Total	0.1402	1.0274	1.0742	4.9600e-003	0.3323	4.0100e-003	0.3363	0.0896	3.7600e-003	0.0933		512.5301	512.5301	0.0246		513.1449

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667		831.1908
Total	0.4998	4.9336	6.2065	8.5100e-003		0.2851	0.2851		0.2623	0.2623		824.5241	824.5241	0.2667		831.1908

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	0.0278	0.9068	0.2448	2.4400e-003	0.0640	1.7600e-003	0.0657	0.0184	1.6800e-003	0.0201		261.0221	261.0221	0.0173		261.4537
Worker	0.1041	0.0650	0.7530	2.4100e-003	0.2683	1.9300e-003	0.2702	0.0711	1.7800e-003	0.0729		240.2349	240.2349	6.0500e-003		240.3862
Total	0.1319	0.9718	0.9978	4.8500e-003	0.3323	3.6900e-003	0.3359	0.0896	3.4600e-003	0.0930		501.2570	501.2570	0.0233		501.8400

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	824.5241	824.5241	0.2667		831.1908
Total	0.3995	8.2502	6.4265	8.5100e-003		0.3335	0.3335		0.3335	0.3335	0.0000	824.5241	824.5241	0.2667		831.1908

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	0.0278	0.9068	0.2448	2.4400e-003	0.0640	1.7600e-003	0.0657	0.0184	1.6800e-003	0.0201		261.0221	261.0221	0.0173		261.4537
Worker	0.1041	0.0650	0.7530	2.4100e-003	0.2683	1.9300e-003	0.2702	0.0711	1.7800e-003	0.0729		240.2349	240.2349	6.0500e-003		240.3862
Total	0.1319	0.9718	0.9978	4.8500e-003	0.3323	3.6900e-003	0.3359	0.0896	3.4600e-003	0.0930		501.2570	501.2570	0.0233		501.8400

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4565	4.5109	6.1798	8.5200e-003		0.2406	0.2406		0.2213	0.2213		825.1992	825.1992	0.2669		831.8714

Total	0.4565	4.5109	6.1798	8.5200e-003		0.2406	0.2406		0.2213	0.2213		825.1992	825.1992	0.2669		831.8714
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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	0.0206	0.6821	0.2171	2.3600e-003	0.0640	8.3000e-004	0.0648	0.0184	7.9000e-004	0.0192		253.0301	253.0301	0.0152		253.4091
Worker	0.0982	0.0588	0.6940	2.3200e-003	0.2683	1.8800e-003	0.2701	0.0711	1.7300e-003	0.0729		231.2862	231.2862	5.4500e-003		231.4226
Total	0.1188	0.7408	0.9111	4.6800e-003	0.3323	2.7100e-003	0.3350	0.0896	2.5200e-003	0.0921		484.3163	484.3163	0.0206		484.8317

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5200e-003		0.3335	0.3335		0.3335	0.3335	0.0000	825.1992	825.1992	0.2669		831.8714
Total	0.3995	8.2502	6.4265	8.5200e-003		0.3335	0.3335		0.3335	0.3335	0.0000	825.1992	825.1992	0.2669		831.8714

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	0.0206	0.6821	0.2171	2.3600e-003	0.0640	8.3000e-004	0.0648	0.0184	7.9000e-004	0.0192		253.0301	253.0301	0.0152		253.4091
Worker	0.0982	0.0588	0.6940	2.3200e-003	0.2683	1.8800e-003	0.2701	0.0711	1.7300e-003	0.0729		231.2862	231.2862	5.4500e-003		231.4226
Total	0.1188	0.7408	0.9111	4.6800e-003	0.3323	2.7100e-003	0.3350	0.0896	2.5200e-003	0.0921		484.3163	484.3163	0.0206		484.8317

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	3.2694	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

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	0.0217	0.0135	0.1569	5.0000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		50.0489	50.0489	1.2600e-003		50.0805
Total	0.0217	0.0135	0.1569	5.0000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		50.0489	50.0489	1.2600e-003		50.0805

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	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0183		281.9062
Total	3.1788	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0183		281.9062

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	0.0217	0.0135	0.1569	5.0000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		50.0489	50.0489	1.2600e-003		50.0805
Total	0.0217	0.0135	0.1569	5.0000e-004	0.0559	4.0000e-004	0.0563	0.0148	3.7000e-004	0.0152		50.0489	50.0489	1.2600e-003		50.0805

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	3.2566	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

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	0.0205	0.0123	0.1446	4.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		48.1846	48.1846	1.1400e-003		48.2130
Total	0.0205	0.0123	0.1446	4.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		48.1846	48.1846	1.1400e-003		48.2130

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	3.0649					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690
Total	3.1788	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0168		281.8690

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	0.0205	0.0123	0.1446	4.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		48.1846	48.1846	1.1400e-003		48.2130
Total	0.0205	0.0123	0.1446	4.8000e-004	0.0559	3.9000e-004	0.0563	0.0148	3.6000e-004	0.0152		48.1846	48.1846	1.1400e-003		48.2130

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1491	0.7057	2.1565	9.0900e-003	0.8556	6.6400e-003	0.8622	0.2289	6.1700e-003	0.2350		927.0265	927.0265	0.0406		928.0412
Unmitigated	0.1491	0.7057	2.1565	9.0900e-003	0.8556	6.6400e-003	0.8622	0.2289	6.1700e-003	0.2350		927.0265	927.0265	0.0406		928.0412

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	94.27	94.27	94.27	402,597	402,597
Total	94.27	94.27	94.27	402,597	402,597

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.553363	0.042540	0.203692	0.115607	0.014606	0.005830	0.021800	0.032323	0.002120	0.001725	0.004837	0.000711	0.000846

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
NaturalGas Unmitigated	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199

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 School	1658.02	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Total		0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199

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 School	1.65802	0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199
Total		0.0179	0.1626	0.1365	9.8000e-004		0.0124	0.0124		0.0124	0.0124		195.0608	195.0608	3.7400e-003	3.5800e-003	196.2199

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Unmitigated	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1522					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Total	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136

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
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SubCategory	lb/day										lb/day					
Architectural Coating	0.1478					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1522					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136
Total	1.3005	5.0000e-005	5.9300e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0127	0.0127	3.0000e-005		0.0136

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 3 - South Coast Air Basin, Summer

Windward School Master Plan - Phase 3

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.20	Acre	0.20	4,065.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.2 acres during this phase to include the student plaza and bridges.

Construction Phase - Based on phasing development assumptions, no paving or architectural coating.

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading - Phase 3 would export approximately 500 cubic yards of soil

Vehicle Trips - Trips are generated for the proposed buildings in Phase 1 and Phase 2

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	112.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	1.00	21.00
tblConstructionPhase	PhaseEndDate	11/5/2025	12/31/2025
tblConstructionPhase	PhaseEndDate	6/18/2025	7/28/2025
tblConstructionPhase	PhaseEndDate	6/16/2025	6/30/2025
tblConstructionPhase	PhaseStartDate	6/19/2025	7/29/2025
tblConstructionPhase	PhaseStartDate	6/17/2025	7/1/2025
tblConstructionPhase	PhaseStartDate	6/14/2025	6/2/2025
tblGrading	AcresOfGrading	10.50	0.50
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	8,712.00	4,065.00

tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	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					
2025	0.6222	5.5887	7.8060	0.0152	0.9215	0.2119	1.1334	0.4587	0.2024	0.6611	0.0000	1,487.0083	1,487.0083	0.3058	0.0000	1,492.6251
Maximum	0.6222	5.5887	7.8060	0.0152	0.9215	0.2119	1.1334	0.4587	0.2024	0.6611	0.0000	1,487.0083	1,487.0083	0.3058	0.0000	1,492.6251

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					
2025	0.5323	10.8556	8.3800	0.0152	0.4606	0.4033	0.8639	0.2060	0.4032	0.6093	0.0000	1,487.0083	1,487.0083	0.3058	0.0000	1,492.6251
Maximum	0.5323	10.8556	8.3800	0.0152	0.4606	0.4033	0.8639	0.2060	0.4032	0.6093	0.0000	1,487.0083	1,487.0083	0.3058	0.0000	1,492.6251

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/2/2025	6/30/2025	5	21	
2	Grading	Grading	7/1/2025	7/28/2025	5	20	
3	Building Construction	Building Construction	7/29/2025	12/31/2025	5	112	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	2.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2025

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					0.0253	0.0000	0.0253	2.7300e-003	0.0000	2.7300e-003			0.0000			0.0000
Off-Road	0.4432	4.7918	3.8238	9.7300e-003		0.1654	0.1654		0.1521	0.1521		942.2955	942.2955	0.3048		949.9144
Total	0.4432	4.7918	3.8238	9.7300e-003	0.0253	0.1654	0.1906	2.7300e-003	0.1521	0.1549		942.2955	942.2955	0.3048		949.9144

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	0.0166	9.3000e-003	0.1391	4.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		47.7279	47.7279	1.0200e-003		47.7533
Total	0.0166	9.3000e-003	0.1391	4.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		47.7279	47.7279	1.0200e-003		47.7533

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					9.8500e-003	0.0000	9.8500e-003	1.0600e-003	0.0000	1.0600e-003			0.0000			0.0000
Off-Road	0.3079	8.6185	5.8579	9.7300e-003		0.2405	0.2405		0.2405	0.2405	0.0000	942.2955	942.2955	0.3048		949.9144
Total	0.3079	8.6185	5.8579	9.7300e-003	9.8500e-003	0.2405	0.2504	1.0600e-003	0.2405	0.2416	0.0000	942.2955	942.2955	0.3048		949.9144

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	0.0166	9.3000e-003	0.1391	4.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		47.7279	47.7279	1.0200e-003		47.7533
Total	0.0166	9.3000e-003	0.1391	4.8000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		47.7279	47.7279	1.0200e-003		47.7533

3.3 Grading - 2025

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					0.7556	0.0000	0.7556	0.4142	0.0000	0.4142			0.0000			0.0000
Off-Road	0.5743	5.1008	7.3641	0.0120		0.2102	0.2102		0.2008	0.2008		1,149.1195	1,149.1195	0.2060		1,154.2705
Total	0.5743	5.1008	7.3641	0.0120	0.7556	0.2102	0.9658	0.4142	0.2008	0.6151		1,149.1195	1,149.1195	0.2060		1,154.2705

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	0.0147	0.4693	0.1637	2.2200e-003	0.0542	8.7000e-004	0.0550	0.0148	8.3000e-004	0.0157		242.4331	242.4331	0.0166		242.8481
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	0.0332	0.0186	0.2783	9.6000e-004	0.1118	7.6000e-004	0.1125	0.0296	7.0000e-004	0.0303		95.4558	95.4558	2.0300e-003		95.5066
Total	0.0479	0.4879	0.4420	3.1800e-003	0.1659	1.6300e-003	0.1676	0.0445	1.5300e-003	0.0460		337.8888	337.8888	0.0186		338.3546

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					0.2947	0.0000	0.2947	0.1615	0.0000	0.1615			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,149.1195	1,149.1195	0.2060		1,154.2705
Total	0.4844	10.3677	7.9381	0.0120	0.2947	0.4017	0.6964	0.1615	0.4017	0.5632	0.0000	1,149.1195	1,149.1195	0.2060		1,154.2705

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	0.0147	0.4693	0.1637	2.2200e-003	0.0542	8.7000e-004	0.0550	0.0148	8.3000e-004	0.0157		242.4331	242.4331	0.0166		242.8481
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	0.0332	0.0186	0.2783	9.6000e-004	0.1118	7.6000e-004	0.1125	0.0296	7.0000e-004	0.0303		95.4558	95.4558	2.0300e-003		95.5066
Total	0.0479	0.4879	0.4420	3.1800e-003	0.1659	1.6300e-003	0.1676	0.0445	1.5300e-003	0.0460		337.8888	337.8888	0.0186		338.3546

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3946	3.8980	6.1600	8.5300e-003		0.1739	0.1739		0.1600	0.1600		826.1580	826.1580	0.2672		832.8379
Total	0.3946	3.8980	6.1600	8.5300e-003		0.1739	0.1739		0.1600	0.1600		826.1580	826.1580	0.2672		832.8379

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	1.8700e-003	0.0678	0.0188	2.4000e-004	6.4000e-003	8.0000e-005	6.4800e-003	1.8400e-003	7.0000e-005	1.9200e-003		25.7644	25.7644	1.3900e-003		25.7991
Worker	6.6400e-003	3.7200e-003	0.0557	1.9000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		19.0912	19.0912	4.1000e-004		19.1013
Total	8.5100e-003	0.0715	0.0745	4.3000e-004	0.0288	2.3000e-004	0.0290	7.7700e-003	2.1000e-004	7.9900e-003		44.8556	44.8556	1.8000e-003		44.9004

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5300e-003		0.3335	0.3335		0.3335	0.3335	0.0000	826.1580	826.1580	0.2672		832.8379
Total	0.3995	8.2502	6.4265	8.5300e-003		0.3335	0.3335		0.3335	0.3335	0.0000	826.1580	826.1580	0.2672		832.8379

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	1.8700e-003	0.0678	0.0188	2.4000e-004	6.4000e-003	8.0000e-005	6.4800e-003	1.8400e-003	7.0000e-005	1.9200e-003		25.7644	25.7644	1.3900e-003		25.7991
Worker	6.6400e-003	3.7200e-003	0.0557	1.9000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		19.0912	19.0912	4.1000e-004		19.1013
Total	8.5100e-003	0.0715	0.0745	4.3000e-004	0.0288	2.3000e-004	0.0290	7.7700e-003	2.1000e-004	7.9900e-003		44.8556	44.8556	1.8000e-003		44.9004

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005
Unmitigated	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005
Total	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005
Total	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 3 - South Coast Air Basin, Winter

Windward School Master Plan - Phase 3

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.20	Acre	0.20	4,065.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - the lot area would be approximately 0.2 acres during this phase to include the student plaza and bridges.

Construction Phase - Based on phasing development assumptions, no paving or architectural coating.

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading - Phase 3 would export approximately 500 cubic yards of soil

Vehicle Trips - Trips are generated for the proposed buildings in Phase 1 and Phase 2

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	112.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	1.00	21.00
tblConstructionPhase	PhaseEndDate	11/5/2025	12/31/2025
tblConstructionPhase	PhaseEndDate	6/18/2025	7/28/2025
tblConstructionPhase	PhaseEndDate	6/16/2025	6/30/2025
tblConstructionPhase	PhaseStartDate	6/19/2025	7/29/2025
tblConstructionPhase	PhaseStartDate	6/17/2025	7/1/2025
tblConstructionPhase	PhaseStartDate	6/14/2025	6/2/2025
tblGrading	AcresOfGrading	10.50	0.50
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	8,712.00	4,065.00

tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	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					
2025	0.6264	5.5935	7.7852	0.0151	0.9215	0.2119	1.1334	0.4587	0.2024	0.6611	0.0000	1,476.9574	1,476.9574	0.3057	0.0000	1,482.5826
Maximum	0.6264	5.5935	7.7852	0.0151	0.9215	0.2119	1.1334	0.4587	0.2024	0.6611	0.0000	1,476.9574	1,476.9574	0.3057	0.0000	1,482.5826

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					
2025	0.5365	10.8603	8.3592	0.0151	0.4606	0.4034	0.8640	0.2060	0.4033	0.6093	0.0000	1,476.9574	1,476.9574	0.3057	0.0000	1,482.5826
Maximum	0.5365	10.8603	8.3592	0.0151	0.4606	0.4034	0.8640	0.2060	0.4033	0.6093	0.0000	1,476.9574	1,476.9574	0.3057	0.0000	1,482.5826

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/2/2025	6/30/2025	5	21	
2	Grading	Grading	7/1/2025	7/28/2025	5	20	
3	Building Construction	Building Construction	7/29/2025	12/31/2025	5	112	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	2.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2025

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					0.0253	0.0000	0.0253	2.7300e-003	0.0000	2.7300e-003			0.0000			0.0000
Off-Road	0.4432	4.7918	3.8238	9.7300e-003		0.1654	0.1654		0.1521	0.1521		942.2955	942.2955	0.3048		949.9144
Total	0.4432	4.7918	3.8238	9.7300e-003	0.0253	0.1654	0.1906	2.7300e-003	0.1521	0.1549		942.2955	942.2955	0.3048		949.9144

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	0.0185	0.0102	0.1251	4.5000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		44.7588	44.7588	9.5000e-004		44.7825
Total	0.0185	0.0102	0.1251	4.5000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		44.7588	44.7588	9.5000e-004		44.7825

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					9.8500e-003	0.0000	9.8500e-003	1.0600e-003	0.0000	1.0600e-003			0.0000			0.0000
Off-Road	0.3079	8.6185	5.8579	9.7300e-003		0.2405	0.2405		0.2405	0.2405	0.0000	942.2955	942.2955	0.3048		949.9144
Total	0.3079	8.6185	5.8579	9.7300e-003	9.8500e-003	0.2405	0.2504	1.0600e-003	0.2405	0.2416	0.0000	942.2955	942.2955	0.3048		949.9144

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	0.0185	0.0102	0.1251	4.5000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		44.7588	44.7588	9.5000e-004		44.7825
Total	0.0185	0.0102	0.1251	4.5000e-004	0.0559	3.8000e-004	0.0563	0.0148	3.5000e-004	0.0152		44.7588	44.7588	9.5000e-004		44.7825

3.3 Grading - 2025

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					0.7556	0.0000	0.7556	0.4142	0.0000	0.4142			0.0000			0.0000
Off-Road	0.5743	5.1008	7.3641	0.0120		0.2102	0.2102		0.2008	0.2008		1,149.1195	1,149.1195	0.2060		1,154.2705
Total	0.5743	5.1008	7.3641	0.0120	0.7556	0.2102	0.9658	0.4142	0.2008	0.6151		1,149.1195	1,149.1195	0.2060		1,154.2705

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	0.0151	0.4722	0.1708	2.1800e-003	0.0542	8.9000e-004	0.0550	0.0148	8.5000e-004	0.0157		238.3203	238.3203	0.0171		238.7471
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	0.0370	0.0204	0.2503	9.0000e-004	0.1118	7.6000e-004	0.1125	0.0296	7.0000e-004	0.0303		89.5176	89.5176	1.9000e-003		89.5650
Total	0.0521	0.4926	0.4211	3.0800e-003	0.1659	1.6500e-003	0.1676	0.0445	1.5500e-003	0.0460		327.8379	327.8379	0.0190		328.3121

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					0.2947	0.0000	0.2947	0.1615	0.0000	0.1615			0.0000			0.0000
Off-Road	0.4844	10.3677	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,149.1195	1,149.1195	0.2060		1,154.2705
Total	0.4844	10.3677	7.9381	0.0120	0.2947	0.4017	0.6964	0.1615	0.4017	0.5632	0.0000	1,149.1195	1,149.1195	0.2060		1,154.2705

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	0.0151	0.4722	0.1708	2.1800e-003	0.0542	8.9000e-004	0.0550	0.0148	8.5000e-004	0.0157		238.3203	238.3203	0.0171		238.7471
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	0.0370	0.0204	0.2503	9.0000e-004	0.1118	7.6000e-004	0.1125	0.0296	7.0000e-004	0.0303		89.5176	89.5176	1.9000e-003		89.5650
Total	0.0521	0.4926	0.4211	3.0800e-003	0.1659	1.6500e-003	0.1676	0.0445	1.5500e-003	0.0460		327.8379	327.8379	0.0190		328.3121

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3946	3.8980	6.1600	8.5300e-003		0.1739	0.1739		0.1600	0.1600		826.1580	826.1580	0.2672		832.8379
Total	0.3946	3.8980	6.1600	8.5300e-003		0.1739	0.1739		0.1600	0.1600		826.1580	826.1580	0.2672		832.8379

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	1.9600e-003	0.0675	0.0206	2.3000e-004	6.4000e-003	8.0000e-005	6.4800e-003	1.8400e-003	8.0000e-005	1.9200e-003		25.0790	25.0790	1.4700e-003		25.1157
Worker	7.4000e-003	4.0800e-003	0.0501	1.8000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		17.9035	17.9035	3.8000e-004		17.9130
Total	9.3600e-003	0.0715	0.0706	4.1000e-004	0.0288	2.3000e-004	0.0290	7.7700e-003	2.2000e-004	7.9900e-003		42.9825	42.9825	1.8500e-003		43.0287

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3995	8.2502	6.4265	8.5300e-003		0.3335	0.3335		0.3335	0.3335	0.0000	826.1580	826.1580	0.2672		832.8379
Total	0.3995	8.2502	6.4265	8.5300e-003		0.3335	0.3335		0.3335	0.3335	0.0000	826.1580	826.1580	0.2672		832.8379

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	1.9600e-003	0.0675	0.0206	2.3000e-004	6.4000e-003	8.0000e-005	6.4800e-003	1.8400e-003	8.0000e-005	1.9200e-003		25.0790	25.0790	1.4700e-003		25.1157
Worker	7.4000e-003	4.0800e-003	0.0501	1.8000e-004	0.0224	1.5000e-004	0.0225	5.9300e-003	1.4000e-004	6.0700e-003		17.9035	17.9035	3.8000e-004		17.9130
Total	9.3600e-003	0.0715	0.0706	4.1000e-004	0.0288	2.3000e-004	0.0290	7.7700e-003	2.2000e-004	7.9900e-003		42.9825	42.9825	1.8500e-003		43.0287

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005
Unmitigated	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005
Total	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005
Total	2.1000e-004	0.0000	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		4.0000e-005	4.0000e-005	0.0000		5.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Windward School Master Plan - Existing - South Coast Air Basin, Summer

Windward School Master Plan - Existing South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	90.15	1000sqft	2.07	90,150.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 114 total trips for the existing school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.26
tblVehicleTrips	SU_TR	1.79	1.26
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.26
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050
Energy	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296
Mobile	0.6546	3.1185	9.3117	0.0278	2.0916	0.0323	2.1239	0.5597	0.0305	0.5901		2,817.8958	2,817.8958	0.1520		2,821.6949
Total	3.0823	3.7429	11.3446	0.0317	2.0916	0.0891	2.1807	0.5597	0.0873	0.6469	0.0000	3,574.0796	3,574.0796	0.1694	0.0138	3,582.4296

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	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050
Energy	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296
Mobile	0.6546	3.1185	9.3117	0.0278	2.0916	0.0323	2.1239	0.5597	0.0305	0.5901		2,817.8958	2,817.8958	0.1520		2,821.6949
Total	3.0823	3.7429	11.3446	0.0317	2.0916	0.0891	2.1807	0.5597	0.0873	0.6469	0.0000	3,574.0796	3,574.0796	0.1694	0.0138	3,582.4296

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	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 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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6546	3.1185	9.3117	0.0278	2.0916	0.0323	2.1239	0.5597	0.0305	0.5901		2,817.8958	2,817.8958	0.1520		2,821.6949
Unmitigated	0.6546	3.1185	9.3117	0.0278	2.0916	0.0323	2.1239	0.5597	0.0305	0.5901		2,817.8958	2,817.8958	0.1520		2,821.6949

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	113.59	113.59	113.59	485,114	485,114
Total	259.59	259.59	234.99	972,009	972,009

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296
NaturalGas Unmitigated	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	2568.66	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191		302.1950	302.1950	5.7900e-003	5.5400e-003	303.9908
Total		0.0360	0.3231	0.2419	1.9600e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5300e-003	7.2100e-003	395.5296

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					

Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	2.56866	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191		302.1950	302.1950	5.7900e-003	5.5400e-003	303.9908
Total		0.0360	0.3231	0.2419	1.9600e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5300e-003	7.2100e-003	395.5296

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	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050
Unmitigated	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393

Landscaping	0.0521	0.0194	1.6710	9.0000e-005		9.1000e-003	9.1000e-003		9.1000e-003	9.1000e-003		2.9908	2.9908	3.0000e-003		3.0657
Total	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0521	0.0194	1.6710	9.0000e-005		9.1000e-003	9.1000e-003		9.1000e-003	9.1000e-003		2.9908	2.9908	3.0000e-003		3.0657
Total	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing - South Coast Air Basin, Winter

Windward School Master Plan - Existing South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	90.15	1000sqft	2.07	90,150.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 114 total trips for the existing school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.26
tblVehicleTrips	SU_TR	1.79	1.26
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.26
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050
Energy	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296
Mobile	0.6335	3.2160	8.7492	0.0264	2.0916	0.0325	2.1241	0.5597	0.0307	0.5903		2,672.8007	2,672.8007	0.1506		2,676.5645
Total	3.0612	3.8405	10.7821	0.0302	2.0916	0.0893	2.1809	0.5597	0.0875	0.6471	0.0000	3,428.9845	3,428.9845	0.1680	0.0138	3,437.2991

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	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050
Energy	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296
Mobile	0.6335	3.2160	8.7492	0.0264	2.0916	0.0325	2.1241	0.5597	0.0307	0.5903		2,672.8007	2,672.8007	0.1506		2,676.5645
Total	3.0612	3.8405	10.7821	0.0302	2.0916	0.0893	2.1809	0.5597	0.0875	0.6471	0.0000	3,428.9845	3,428.9845	0.1680	0.0138	3,437.2991

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	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 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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6335	3.2160	8.7492	0.0264	2.0916	0.0325	2.1241	0.5597	0.0307	0.5903		2,672.8007	2,672.8007	0.1506		2,676.5645
Unmitigated	0.6335	3.2160	8.7492	0.0264	2.0916	0.0325	2.1241	0.5597	0.0307	0.5903		2,672.8007	2,672.8007	0.1506		2,676.5645

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	113.59	113.59	113.59	485,114	485,114
Total	259.59	259.59	234.99	972,009	972,009

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296
NaturalGas Unmitigated	0.0360	0.3231	0.2419	1.9700e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5400e-003	7.2100e-003	395.5296

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	2568.66	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191		302.1950	302.1950	5.7900e-003	5.5400e-003	303.9908
Total		0.0360	0.3231	0.2419	1.9600e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5300e-003	7.2100e-003	395.5296

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					

Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	2.56866	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191		302.1950	302.1950	5.7900e-003	5.5400e-003	303.9908
Total		0.0360	0.3231	0.2419	1.9600e-003		0.0249	0.0249		0.0249	0.0249		393.1930	393.1930	7.5300e-003	7.2100e-003	395.5296

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	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050
Unmitigated	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393

Landscaping	0.0521	0.0194	1.6710	9.0000e-005		9.1000e-003	9.1000e-003		9.1000e-003	9.1000e-003		2.9908	2.9908	3.0000e-003		3.0657
Total	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0543					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0521	0.0194	1.6710	9.0000e-005		9.1000e-003	9.1000e-003		9.1000e-003	9.1000e-003		2.9908	2.9908	3.0000e-003		3.0657
Total	2.3916	0.3014	1.7910	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9908	362.9908	9.9000e-003	6.6000e-003	365.2050

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1 - South Coast Air Basin, Summer

Windward School Master Plan - Existing+Phase 1

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	112.78	1000sqft	2.59	112,780.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 buildings and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.26
tblVehicleTrips	SU_TR	1.79	1.26
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.26
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103
Energy	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
Mobile	0.7308	3.4905	10.4462	0.0312	2.3504	0.0363	2.3867	0.6289	0.0342	0.6631		3,164.8928	3,164.8928	0.1705		3,169.1542
Total	3.6712	4.1782	12.5345	0.0355	2.3504	0.0979	2.4483	0.6289	0.0958	0.7248	0.0000	3,996.9403	3,996.9403	0.1894	0.0152	4,006.2037

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	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103
Energy	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
Mobile	0.7308	3.4905	10.4462	0.0312	2.3504	0.0363	2.3867	0.6289	0.0342	0.6631		3,164.8928	3,164.8928	0.1705		3,169.1542
Total	3.6712	4.1782	12.5345	0.0355	2.3504	0.0979	2.4483	0.6289	0.0958	0.7248	0.0000	3,996.9403	3,996.9403	0.1894	0.0152	4,006.2037

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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
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Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
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3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	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

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					
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

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7308	3.4905	10.4462	0.0312	2.3504	0.0363	2.3867	0.6289	0.0342	0.6631		3,164.8928	3,164.8928	0.1705		3,169.1542
Unmitigated	0.7308	3.4905	10.4462	0.0312	2.3504	0.0363	2.3867	0.6289	0.0342	0.6631		3,164.8928	3,164.8928	0.1705		3,169.1542

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	142.10	142.10	142.10	606,890	606,890
Total	288.10	288.10	263.50	1,093,785	1,093,785

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
NaturalGas Unmitigated	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	3213.46	0.0347	0.3150	0.2646	1.8900e-003		0.0239	0.0239		0.0239	0.0239		378.0538	378.0538	7.2500e-003	6.9300e-003	380.3004
Total		0.0430	0.3863	0.2950	2.3400e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392

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					
Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	3.21346	0.0347	0.3150	0.2646	1.8900e-003		0.0239	0.0239		0.0239	0.0239		378.0538	378.0538	7.2500e-003	6.9300e-003	380.3004

Total		0.0430	0.3863	0.2950	2.3400e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
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6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103
Unmitigated	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	2.5023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0523	0.0194	1.6734	9.0000e-005		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003		2.9957	2.9957	3.0100e-003		3.0710
Total	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0523	0.0194	1.6734	9.0000e-005		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003		2.9957	2.9957	3.0100e-003		3.0710
Total	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1 - South Coast Air Basin, Winter

Windward School Master Plan - Existing+Phase 1

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	112.78	1000sqft	2.59	112,780.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 buildings and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
------------	-------------	---------------	-----------

tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.26
tblVehicleTrips	SU_TR	1.79	1.26
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.26
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103
Energy	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
Mobile	0.7072	3.6003	9.8106	0.0296	2.3504	0.0365	2.3869	0.6289	0.0344	0.6634		3,001.9908	3,001.9908	0.1688		3,006.2116
Total	3.6476	4.2881	11.8989	0.0338	2.3504	0.0982	2.4485	0.6289	0.0960	0.7250	0.0000	3,834.0384	3,834.0384	0.1877	0.0152	3,843.2611

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	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103
Energy	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
Mobile	0.7072	3.6003	9.8106	0.0296	2.3504	0.0365	2.3869	0.6289	0.0344	0.6634		3,001.9908	3,001.9908	0.1688		3,006.2116
Total	3.6476	4.2881	11.8989	0.0338	2.3504	0.0982	2.4485	0.6289	0.0960	0.7250	0.0000	3,834.0384	3,834.0384	0.1877	0.0152	3,843.2611

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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
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Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
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3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	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

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					
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

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7072	3.6003	9.8106	0.0296	2.3504	0.0365	2.3869	0.6289	0.0344	0.6634		3,001.9908	3,001.9908	0.1688		3,006.2116
Unmitigated	0.7072	3.6003	9.8106	0.0296	2.3504	0.0365	2.3869	0.6289	0.0344	0.6634		3,001.9908	3,001.9908	0.1688		3,006.2116

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	142.10	142.10	142.10	606,890	606,890
Total	288.10	288.10	263.50	1,093,785	1,093,785

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
NaturalGas Unmitigated	0.0430	0.3863	0.2950	2.3500e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	3213.46	0.0347	0.3150	0.2646	1.8900e-003		0.0239	0.0239		0.0239	0.0239		378.0538	378.0538	7.2500e-003	6.9300e-003	380.3004
Total		0.0430	0.3863	0.2950	2.3400e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392

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					
Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	3.21346	0.0347	0.3150	0.2646	1.8900e-003		0.0239	0.0239		0.0239	0.0239		378.0538	378.0538	7.2500e-003	6.9300e-003	380.3004

Total		0.0430	0.3863	0.2950	2.3400e-003		0.0297	0.0297		0.0297	0.0297		469.0519	469.0519	8.9900e-003	8.6000e-003	471.8392
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6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103
Unmitigated	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	2.5023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0523	0.0194	1.6734	9.0000e-005		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003		2.9957	2.9957	3.0100e-003		3.0710
Total	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5023					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0523	0.0194	1.6734	9.0000e-005		9.1100e-003	9.1100e-003		9.1100e-003	9.1100e-003		2.9957	2.9957	3.0100e-003		3.0710
Total	2.8974	0.3014	1.7934	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	362.9957	362.9957	9.9100e-003	6.6000e-003	365.2103

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1+Phase 2 - South Coast Air Basin, Summer

Windward School Master Plan - Existing+Phase 1+Phase 2

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	170.97	1000sqft	3.92	170,970.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 and 2 buildings and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	SU_TR	1.79	1.61
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.61
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.1 Overall Construction (Maximum Daily Emission)

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825
Total	5.3451	6.0780	17.9752	0.0524	3.5592	0.1289	3.6880	0.9524	0.1257	1.0781	0.0000	5,812.4829	5,812.4829	0.2795	0.0188	5,825.0655

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	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825
Total	5.3451	6.0780	17.9752	0.0524	3.5592	0.1289	3.6880	0.9524	0.1257	1.0781	0.0000	5,812.4829	5,812.4829	0.2795	0.0188	5,825.0655

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

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
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	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 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

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	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825
Unmitigated	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	275.26	275.26	275.26	1,175,583	1,175,583
Total	421.26	421.26	396.66	1,662,478	1,662,478

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
NaturalGas Unmitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	4871.47	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					

Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	4.87147	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239
Unmitigated	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239

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
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SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0846
Total	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0846
Total	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1+Phase 2 - South Coast Air Basin, Winter

Windward School Master Plan - Existing+Phase 1+Phase 2

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	170.97	1000sqft	3.92	170,970.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11	Operational Year	2018		
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 and 2 buildings and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	SU_TR	1.79	1.61
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.61
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.1 Overall Construction (Maximum Daily Emission)

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	1.6716	0.0000	0.0000	1.5379	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575
Total	5.3102	6.2457	16.9981	0.0500	3.5592	0.1292	3.6884	0.9524	0.1260	1.0784	0.0000	5,566.4237	5,566.4237	0.2769	0.0188	5,578.9406

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	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575
Total	5.3102	6.2457	16.9981	0.0500	3.5592	0.1292	3.6884	0.9524	0.1260	1.0784	0.0000	5,566.4237	5,566.4237	0.2769	0.0188	5,578.9406

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

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
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Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0000	0.0000	0.0000	0.0000	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 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

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	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575
Unmitigated	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	275.26	275.26	275.26	1,175,583	1,175,583
Total	421.26	421.26	396.66	1,662,478	1,662,478

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
NaturalGas Unmitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	4871.47	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					

Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
High School	4.87147	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239
Unmitigated	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239

6.2 Area by SubCategory

Unmitigated

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

SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0846
Total	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0846
Total	4.1979	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2239

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1+Phase 2+Phase 3 - South Coast Air Basin, Summer

Windward School Master Plan - Existing+Phase 1+Phase 2+Phase 3

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	170.97	1000sqft	3.92	170,970.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57
City Park	0.20	Acre	0.20	4,056.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 and 2 buildings, student plaza, and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblLandUse	LandUseSquareFeet	8,712.00	4,056.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	1.79	1.61
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.61
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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					

2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	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

	ROG	NOx	CO	SO2	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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825

Total	5.3453	6.0780	17.9752	0.0524	3.5592	0.1289	3.6880	0.9524	0.1257	1.0781	0.0000	5,812.4829	5,812.4829	0.2795	0.0188	5,825.0656
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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	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825
Total	5.3453	6.0780	17.9752	0.0524	3.5592	0.1289	3.6880	0.9524	0.1257	1.0781	0.0000	5,812.4829	5,812.4829	0.2795	0.0188	5,825.0656

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

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					
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

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

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	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825
Unmitigated	1.0863	5.2277	15.7443	0.0472	3.5592	0.0549	3.6140	0.9524	0.0517	1.0041		4,785.3618	4,785.3618	0.2568		4,791.7825

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	275.26	275.26	275.26	1,175,583	1,175,583
City Park	0.00	0.00	0.00		
Total	421.26	421.26	396.66	1,662,478	1,662,478

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
City Park	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
NaturalGas Unmitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	4871.47	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					
Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	4.87147	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240
Unmitigated	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6547					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0847
Total	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6547					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0847
Total	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1+Phase 2+Phase 3 - South Coast Air Basin, Winter

Windward School Master Plan - Existing+Phase 1+Phase 2+Phase 3

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	170.97	1000sqft	3.92	170,970.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57
City Park	0.20	Acre	0.20	4,056.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 and 2 buildings, student plaza, and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblLandUse	LandUseSquareFeet	8,712.00	4,056.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	1.79	1.61
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.61
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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					

2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	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

	ROG	NOx	CO	SO2	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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

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	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575

Total	5.3104	6.2457	16.9981	0.0500	3.5592	0.1292	3.6884	0.9524	0.1260	1.0784	0.0000	5,566.4237	5,566.4237	0.2769	0.0188	5,578.9406
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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	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240
Energy	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
Mobile	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575
Total	5.3104	6.2457	16.9981	0.0500	3.5592	0.1292	3.6884	0.9524	0.1260	1.0784	0.0000	5,566.4237	5,566.4237	0.2769	0.0188	5,578.9406

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

Unmitigated Construction Off-Site

[illegible]

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					
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

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

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	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575
Unmitigated	1.0514	5.3954	14.7672	0.0448	3.5592	0.0552	3.6144	0.9524	0.0520	1.0044		4,539.3026	4,539.3026	0.2542		4,545.6575

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	275.26	275.26	275.26	1,175,583	1,175,583
City Park	0.00	0.00	0.00		
Total	421.26	421.26	396.66	1,662,478	1,662,478

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
City Park	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591
NaturalGas Unmitigated	0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					
Apartments Low Rise	773.483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	4871.47	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

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					
Apartments Low Rise	0.773483	8.3400e-003	0.0713	0.0303	4.5000e-004		5.7600e-003	5.7600e-003		5.7600e-003	5.7600e-003		90.9980	90.9980	1.7400e-003	1.6700e-003	91.5388
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	4.87147	0.0525	0.4776	0.4012	2.8700e-003		0.0363	0.0363		0.0363	0.0363		573.1146	573.1146	0.0110	0.0105	576.5203
Total		0.0609	0.5489	0.4315	3.3200e-003		0.0421	0.0421		0.0421	0.0421		664.1126	664.1126	0.0127	0.0122	668.0591

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240
Unmitigated	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6547					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0847
Total	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4575					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.6547					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0330	0.2820	0.1200	1.8000e-003		0.0228	0.0228		0.0228	0.0228	0.0000	360.0000	360.0000	6.9000e-003	6.6000e-003	362.1393
Landscaping	0.0529	0.0195	1.6794	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003		3.0085	3.0085	3.0500e-003		3.0847
Total	4.1981	0.3015	1.7994	1.8900e-003		0.0319	0.0319		0.0319	0.0319	0.0000	363.0085	363.0085	9.9500e-003	6.6000e-003	365.2240

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 1 - South Coast Air Basin, Annual

Windward School Master Plan - Phase 1

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	22.63	1000sqft	0.70	22,630.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.7 acres during this phase.

Construction Phase - Based on phasing development assumptions, no paving.

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and based on a proportion of total future trips with respect to Phase 2 trips. 130 total trips would correlate with 36 trips for the phase 1 buildings.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Grading - Phase 1 would export approximately 1,000 cubic yards of soil

Demolition - Approximately 12,964 sf of existing buildings to be removed.

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	2.00	16.00
tblConstructionPhase	NumDays	100.00	263.00
tblConstructionPhase	NumDays	5.00	154.00
tblConstructionPhase	PhaseEndDate	6/21/2019	7/8/2019
tblGrading	MaterialExported	0.00	1,000.00
tblLandUse	LotAcreage	0.52	0.70
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	SU_TR	1.79	1.61

tblVehicleTrips	WD_TR	12.89	1.61
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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	0.0616	0.5918	0.5357	9.0000e-004	0.0237	0.0365	0.0602	7.2800e-003	0.0339	0.0412	0.0000	81.4258	81.4258	0.0182	0.0000	81.8795
2020	0.1776	0.6399	0.6718	1.0600e-003	0.0121	0.0405	0.0525	3.2500e-003	0.0379	0.0412	0.0000	93.8601	93.8601	0.0209	0.0000	94.3824
Maximum	0.1776	0.6399	0.6718	1.0600e-003	0.0237	0.0405	0.0602	7.2800e-003	0.0379	0.0412	0.0000	93.8601	93.8601	0.0209	0.0000	94.3824

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	0.0361	0.7024	0.5428	9.0000e-004	0.0160	0.0261	0.0420	4.6500e-003	0.0260	0.0307	0.0000	81.4257	81.4257	0.0182	0.0000	81.8795
2020	0.1496	0.8526	0.6793	1.0600e-003	0.0121	0.0332	0.0453	3.2500e-003	0.0332	0.0365	0.0000	93.8600	93.8600	0.0209	0.0000	94.3823
Maximum	0.1496	0.8526	0.6793	1.0600e-003	0.0160	0.0332	0.0453	4.6500e-003	0.0332	0.0365	0.0000	93.8600	93.8600	0.0209	0.0000	94.3823

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	22.39	-26.25	-1.21	0.00	21.70	22.95	22.55	24.98	17.50	18.44	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)
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1	6-10-2019	9-9-2019	0.3222	0.3616
2	9-10-2019	12-9-2019	0.2628	0.2995
3	12-10-2019	3-9-2020	0.3251	0.3931
4	3-10-2020	6-9-2020	0.3485	0.4273
5	6-10-2020	9-9-2020	0.2083	0.2554
		Highest	0.3485	0.4273

2.2 Overall Operational
 Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0923	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004
Energy	1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	87.1752	87.1752	2.0000e-003	5.9000e-004	87.4025
Mobile	0.0128	0.0717	0.1912	7.1000e-004	0.0591	5.7000e-004	0.0597	0.0158	5.4000e-004	0.0164	0.0000	65.3213	65.3213	3.1200e-003	0.0000	65.3993
Waste						0.0000	0.0000		0.0000	0.0000	5.9720	0.0000	5.9720	0.3529	0.0000	14.7954
Water						0.0000	0.0000		0.0000	0.0000	0.2384	17.4058	17.6442	0.0249	6.6000e-004	18.4642
Total	0.1063	0.0832	0.2012	7.8000e-004	0.0591	1.4500e-003	0.0606	0.0158	1.4200e-003	0.0173	6.2104	169.9028	176.1131	0.3830	1.2500e-003	186.0620

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0923	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004

Energy	1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	87.1752	87.1752	2.0000e-003	5.9000e-004	87.4025
Mobile	0.0128	0.0717	0.1912	7.1000e-004	0.0591	5.7000e-004	0.0597	0.0158	5.4000e-004	0.0164	0.0000	65.3213	65.3213	3.1200e-003	0.0000	65.3993
Waste						0.0000	0.0000		0.0000	0.0000	2.9860	0.0000	2.9860	0.1765	0.0000	7.3977
Water						0.0000	0.0000		0.0000	0.0000	0.1907	15.5865	15.7773	0.0200	5.4000e-004	16.4367
Total	0.1063	0.0832	0.2012	7.8000e-004	0.0591	1.4500e-003	0.0606	0.0158	1.4200e-003	0.0173	3.1767	168.0835	171.2603	0.2016	1.1300e-003	176.6368

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.85	1.07	2.76	47.37	9.60	5.07

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	6/10/2019	7/8/2019	5	21	
2	Site Preparation	Site Preparation	7/9/2019	7/9/2019	5	1	
3	Grading	Grading	7/10/2019	7/31/2019	5	16	
4	Building Construction	Building Construction	8/1/2019	8/3/2020	5	263	
5	Architectural Coating	Architectural Coating	1/1/2020	8/3/2020	5	154	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 33,945; Non-Residential Outdoor: 11,315; Striped Parking

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	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Rubber Tired Dozers	1	1.00	247	0.40

Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Forklifts	2	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	59.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	10.00	4.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved 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					6.3800e-003	0.0000	6.3800e-003	9.7000e-004	0.0000	9.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0100	0.0903	0.0808	1.3000e-004		5.6400e-003	5.6400e-003		5.3800e-003	5.3800e-003	0.0000	11.0462	11.0462	2.1100e-003	0.0000	11.0989
Total	0.0100	0.0903	0.0808	1.3000e-004	6.3800e-003	5.6400e-003	0.0120	9.7000e-004	5.3800e-003	6.3500e-003	0.0000	11.0462	11.0462	2.1100e-003	0.0000	11.0989

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.6000e-004	9.0700e-003	1.8100e-003	2.0000e-005	5.1000e-004	3.0000e-005	5.4000e-004	1.4000e-004	3.0000e-005	1.7000e-004	0.0000	2.2611	2.2611	1.7000e-004	0.0000	2.2653
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.0000e-004	4.3800e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	1.0713	1.0713	3.0000e-005	0.0000	1.0721
Total	7.7000e-004	9.4700e-003	6.1900e-003	3.0000e-005	1.6600e-003	4.0000e-005	1.7000e-003	4.5000e-004	4.0000e-005	4.8000e-004	0.0000	3.3324	3.3324	2.0000e-004	0.0000	3.3374

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					2.4900e-003	0.0000	2.4900e-003	3.8000e-004	0.0000	3.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0900e-003	0.1089	0.0834	1.3000e-004		4.2200e-003	4.2200e-003		4.2200e-003	4.2200e-003	0.0000	11.0462	11.0462	2.1100e-003	0.0000	11.0989
Total	5.0900e-003	0.1089	0.0834	1.3000e-004	2.4900e-003	4.2200e-003	6.7100e-003	3.8000e-004	4.2200e-003	4.6000e-003	0.0000	11.0462	11.0462	2.1100e-003	0.0000	11.0989

Mitigated Construction Off-Site

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	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0255	0.0255	0.0000	0.0000	0.0255
Total	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0255	0.0255	0.0000	0.0000	0.0255

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					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	4.3100e-003	2.9300e-003	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	1.5000e-004	4.3100e-003	2.9300e-003	0.0000	1.0000e-004	1.2000e-004	2.2000e-004	1.0000e-005	1.2000e-004	1.3000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413

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	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0255	0.0255	0.0000	0.0000	0.0255
Total	1.0000e-005	1.0000e-005	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0255	0.0255	0.0000	0.0000	0.0255

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					6.0800e-003	0.0000	6.0800e-003	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6200e-003	0.0688	0.0615	1.0000e-004		4.3000e-003	4.3000e-003		4.1000e-003	4.1000e-003	0.0000	8.4162	8.4162	1.6000e-003	0.0000	8.4563
Total	7.6200e-003	0.0688	0.0615	1.0000e-004	6.0800e-003	4.3000e-003	0.0104	3.3200e-003	4.1000e-003	7.4200e-003	0.0000	8.4162	8.4162	1.6000e-003	0.0000	8.4563

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4000e-004	0.0192	3.8400e-003	5.0000e-005	1.0700e-003	7.0000e-005	1.1400e-003	2.9000e-004	7.0000e-005	3.6000e-004	0.0000	4.7905	4.7905	3.5000e-004	0.0000	4.7993
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	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8162	0.8162	3.0000e-005	0.0000	0.8168
Total	9.3000e-004	0.0195	7.1800e-003	6.0000e-005	1.9500e-003	8.0000e-005	2.0200e-003	5.2000e-004	8.0000e-005	6.0000e-004	0.0000	5.6067	5.6067	3.8000e-004	0.0000	5.6161

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					2.3700e-003	0.0000	2.3700e-003	1.2900e-003	0.0000	1.2900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	3.8800e-003	0.0829	0.0635	1.0000e-004		3.2100e-003	3.2100e-003		3.2100e-003	3.2100e-003	0.0000	8.4162	8.4162	1.6000e-003	0.0000	8.4563
Total	3.8800e-003	0.0829	0.0635	1.0000e-004	2.3700e-003	3.2100e-003	5.5800e-003	1.2900e-003	3.2100e-003	4.5000e-003	0.0000	8.4162	8.4162	1.6000e-003	0.0000	8.4563

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4000e-004	0.0192	3.8400e-003	5.0000e-005	1.0700e-003	7.0000e-005	1.1400e-003	2.9000e-004	7.0000e-005	3.6000e-004	0.0000	4.7905	4.7905	3.5000e-004	0.0000	4.7993
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	3.9000e-004	3.1000e-004	3.3400e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.8000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.8162	0.8162	3.0000e-005	0.0000	0.8168
Total	9.3000e-004	0.0195	7.1800e-003	6.0000e-005	1.9500e-003	8.0000e-005	2.0200e-003	5.2000e-004	8.0000e-005	6.0000e-004	0.0000	5.6067	5.6067	3.8000e-004	0.0000	5.6161

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	0.0385	0.3715	0.3486	4.6000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	41.6330	41.6330	0.0132	0.0000	41.9623
Total	0.0385	0.3715	0.3486	4.6000e-004		0.0261	0.0261		0.0240	0.0240	0.0000	41.6330	41.6330	0.0132	0.0000	41.9623

Unmitigated Construction Off-Site

Vendor	8.7000e-004	0.0255	6.5100e-003	6.0000e-005	1.3700e-003	1.7000e-004	1.5400e-003	4.0000e-004	1.6000e-004	5.6000e-004	0.0000	5.3677	5.3677	3.8000e-004	0.0000	5.3771
Worker	2.6200e-003	2.0900e-003	0.0228	6.0000e-005	5.9800e-003	5.0000e-005	6.0300e-003	1.5900e-003	4.0000e-005	1.6300e-003	0.0000	5.5604	5.5604	1.7000e-004	0.0000	5.5647
Total	3.4900e-003	0.0276	0.0293	1.2000e-004	7.3500e-003	2.2000e-004	7.5700e-003	1.9900e-003	2.0000e-004	2.1900e-003	0.0000	10.9280	10.9280	5.5000e-004	0.0000	10.9418

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	0.0489	0.4741	0.4874	6.5000e-004		0.0317	0.0317		0.0291	0.0291	0.0000	57.5300	57.5300	0.0186	0.0000	57.9951
Total	0.0489	0.4741	0.4874	6.5000e-004		0.0317	0.0317		0.0291	0.0291	0.0000	57.5300	57.5300	0.0186	0.0000	57.9951

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	1.0400e-003	0.0330	8.3300e-003	8.0000e-005	1.9400e-003	1.6000e-004	2.1000e-003	5.6000e-004	1.5000e-004	7.1000e-004	0.0000	7.5351	7.5351	5.0000e-004	0.0000	7.5477
Worker	3.4300e-003	2.6400e-003	0.0292	8.0000e-005	8.4500e-003	7.0000e-005	8.5100e-003	2.2400e-003	6.0000e-005	2.3000e-003	0.0000	7.6125	7.6125	2.2000e-004	0.0000	7.6179
Total	4.4700e-003	0.0357	0.0375	1.6000e-004	0.0104	2.3000e-004	0.0106	2.8000e-003	2.1000e-004	3.0100e-003	0.0000	15.1476	15.1476	7.2000e-004	0.0000	15.1656

Mitigated Construction On-Site

Off-Road	0.0187	0.1297	0.1410	2.3000e-004		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	19.6601	19.6601	1.5200e-003	0.0000	19.6981
Total	0.1235	0.1297	0.1410	2.3000e-004		8.5400e-003	8.5400e-003		8.5400e-003	8.5400e-003	0.0000	19.6601	19.6601	1.5200e-003	0.0000	19.6981

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	6.9000e-004	5.3000e-004	5.8400e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5225	1.5225	4.0000e-005	0.0000	1.5236
Total	6.9000e-004	5.3000e-004	5.8400e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5225	1.5225	4.0000e-005	0.0000	1.5236

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1049					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7700e-003	0.1811	0.1411	2.3000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	19.6600	19.6600	1.5200e-003	0.0000	19.6981
Total	0.1137	0.1811	0.1411	2.3000e-004		7.3200e-003	7.3200e-003		7.3200e-003	7.3200e-003	0.0000	19.6600	19.6600	1.5200e-003	0.0000	19.6981

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	6.9000e-004	5.3000e-004	5.8400e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5225	1.5225	4.0000e-005	0.0000	1.5236
Total	6.9000e-004	5.3000e-004	5.8400e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5225	1.5225	4.0000e-005	0.0000	1.5236

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0128	0.0717	0.1912	7.1000e-004	0.0591	5.7000e-004	0.0597	0.0158	5.4000e-004	0.0164	0.0000	65.3213	65.3213	3.1200e-003	0.0000	65.3993
Unmitigated	0.0128	0.0717	0.1912	7.1000e-004	0.0591	5.7000e-004	0.0597	0.0158	5.4000e-004	0.0164	0.0000	65.3213	65.3213	3.1200e-003	0.0000	65.3993

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	36.43	36.43	36.43	155,603	155,603
Total	36.43	36.43	36.43	155,603	155,603

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.551391	0.043400	0.201050	0.120272	0.016162	0.005864	0.021029	0.030512	0.002059	0.001866	0.004766	0.000706	0.000924

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	74.6159	74.6159	1.7600e-003	3.6000e-004	74.7686
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	74.6159	74.6159	1.7600e-003	3.6000e-004	74.7686
NaturalGas Mitigated	1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	12.5593	12.5593	2.4000e-004	2.3000e-004	12.6339
NaturalGas Unmitigated	1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	12.5593	12.5593	2.4000e-004	2.3000e-004	12.6339

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 School	235352	1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	12.5593	12.5593	2.4000e-004	2.3000e-004	12.6339
Total		1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	12.5593	12.5593	2.4000e-004	2.3000e-004	12.6339

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 School	235352	1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	12.5593	12.5593	2.4000e-004	2.3000e-004	12.6339
Total		1.2700e-003	0.0115	9.6900e-003	7.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	12.5593	12.5593	2.4000e-004	2.3000e-004	12.6339

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	133970	74.6159	1.7600e-003	3.6000e-004	74.7686
Total		74.6159	1.7600e-003	3.6000e-004	74.7686

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	133970	74.6159	1.7600e-003	3.6000e-004	74.7686
Total		74.6159	1.7600e-003	3.6000e-004	74.7686

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0923	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004
Unmitigated	0.0923	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0105					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0818					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004
Total	0.0923	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-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	tons/yr										MT/yr					
Architectural Coating	0.0105					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0818					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004
Total	0.0923	0.0000	2.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.6000e-004	5.6000e-004	0.0000	0.0000	6.0000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet

- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.7773	0.0200	5.4000e-004	16.4367
Unmitigated	17.6442	0.0249	6.6000e-004	18.4642

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	0.751421 / 1.93223	17.6442	0.0249	6.6000e-004	18.4642
Total		17.6442	0.0249	6.6000e-004	18.4642

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	0.601137 / 1.81436	15.7773	0.0200	5.4000e-004	16.4367
Total		15.7773	0.0200	5.4000e-004	16.4367

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.9860	0.1765	0.0000	7.3977
Unmitigated	5.9720	0.3529	0.0000	14.7954

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

High School	29.42	5.9720	0.3529	0.0000	14.7954
Total		5.9720	0.3529	0.0000	14.7954

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	14.71	2.9860	0.1765	0.0000	7.3977
Total		2.9860	0.1765	0.0000	7.3977

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

Boilers

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 2 - South Coast Air Basin, Annual

Windward School Master Plan - Phase 2

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	58.19	1000sqft	0.40	58,190.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2024
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.4 acres during this phase.

Construction Phase - Based on phasing development assumptions, no paving.

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment - Operational only

Off-road Equipment -

Off-road Equipment -

Demolition - Approximately 13,596 sf of existing buildings to be removed.

Grading - Phase 2 would export approximately 4,000 cubic yards of soil

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and based on a proportion of total future trips with respect to Phase 1 trips. 130 total trips would correlate with 94 trips for the phase 2 buildings.

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	5.00	176.00
tblConstructionPhase	NumDays	100.00	439.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	2.00	22.00
tblConstructionPhase	NumDays	1.00	22.00
tblConstructionPhase	PhaseEndDate	11/11/2021	5/8/2023
tblConstructionPhase	PhaseEndDate	11/4/2021	5/8/2023
tblConstructionPhase	PhaseEndDate	6/14/2021	6/30/2021

tblConstructionPhase	PhaseEndDate	6/17/2021	8/31/2021
tblConstructionPhase	PhaseEndDate	6/15/2021	7/31/2021
tblConstructionPhase	PhaseStartDate	11/5/2021	9/5/2022
tblConstructionPhase	PhaseStartDate	6/18/2021	9/1/2021
tblConstructionPhase	PhaseStartDate	6/16/2021	8/1/2021
tblConstructionPhase	PhaseStartDate	6/15/2021	7/1/2021
tblGrading	AcresOfGrading	11.00	0.50
tblGrading	MaterialExported	0.00	4,000.00
tblLandUse	LotAcreage	1.34	0.40
tblVehicleTrips	ST_TR	4.37	1.62
tblVehicleTrips	SU_TR	1.79	1.62
tblVehicleTrips	WD_TR	12.89	1.62

2.0 Emissions Summary

2.1 Overall Construction Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0585	0.6123	0.5606	1.2100e-003	0.0377	0.0280	0.0657	0.0116	0.0261	0.0378	0.0000	109.6962	109.6962	0.0205	0.0000	110.2087
2022	0.2204	0.8305	1.0216	1.9000e-003	0.0448	0.0410	0.0858	0.0121	0.0380	0.0501	0.0000	170.1153	170.1153	0.0349	0.0000	170.9877
2023	0.1747	0.2994	0.4123	7.6000e-004	0.0173	0.0143	0.0317	4.6700e-003	0.0134	0.0181	0.0000	68.0084	68.0084	0.0126	0.0000	68.3233
Maximum	0.2204	0.8305	1.0216	1.9000e-003	0.0448	0.0410	0.0858	0.0121	0.0380	0.0501	0.0000	170.1153	170.1153	0.0349	0.0000	170.9877

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0406	0.8080	0.5957	1.2100e-003	0.0282	0.0266	0.0548	8.2000e-003	0.0266	0.0348	0.0000	109.6961	109.6961	0.0205	0.0000	110.2086
2022	0.2036	1.3018	1.0510	1.9000e-003	0.0448	0.0479	0.0926	0.0121	0.0479	0.0599	0.0000	170.1152	170.1152	0.0349	0.0000	170.9876
2023	0.1686	0.5173	0.4245	7.6000e-004	0.0173	0.0196	0.0370	4.6700e-003	0.0196	0.0243	0.0000	68.0084	68.0084	0.0126	0.0000	68.3232
Maximum	0.2036	1.3018	1.0510	1.9000e-003	0.0448	0.0479	0.0926	0.0121	0.0479	0.0599	0.0000	170.1152	170.1152	0.0349	0.0000	170.9876

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	9.03	-50.79	-3.84	0.00	9.45	-12.88	-0.71	12.09	-21.25	-12.32	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2021	8-31-2021	0.3461	0.4123
2	9-1-2021	11-30-2021	0.2370	0.3189
3	12-1-2021	2-28-2022	0.2185	0.3142
4	3-1-2022	5-31-2022	0.2145	0.3202
5	6-1-2022	8-31-2022	0.2143	0.3200
6	9-1-2022	11-30-2022	0.3587	0.4898
7	12-1-2022	2-28-2023	0.3441	0.4872
8	3-1-2023	5-31-2023	0.2566	0.3712
		Highest	0.3587	0.4898

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2373	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003

Energy	3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	224.1593	224.1593	5.1500e-003	1.5300e-003	224.7439
Mobile	0.0266	0.1307	0.3995	1.6800e-003	0.1529	1.2000e-003	0.1541	0.0410	1.1200e-003	0.0421	0.0000	155.0079	155.0079	6.6800e-003	0.0000	155.1749
Waste						0.0000	0.0000		0.0000	0.0000	15.3563	0.0000	15.3563	0.9075	0.0000	38.0445
Water						0.0000	0.0000		0.0000	0.0000	0.6130	44.7566	45.3696	0.0640	1.7100e-003	47.4782
Total	0.2671	0.1604	0.4252	1.8600e-003	0.1529	3.4500e-003	0.1564	0.0410	3.3700e-003	0.0443	15.9693	423.9252	439.8944	0.9834	3.2400e-003	465.4430

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2373	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003
Energy	3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	224.1593	224.1593	5.1500e-003	1.5300e-003	224.7439
Mobile	0.0266	0.1307	0.3995	1.6800e-003	0.1529	1.2000e-003	0.1541	0.0410	1.1200e-003	0.0421	0.0000	155.0079	155.0079	6.6800e-003	0.0000	155.1749
Waste						0.0000	0.0000		0.0000	0.0000	7.6781	0.0000	7.6781	0.4538	0.0000	19.0223
Water						0.0000	0.0000		0.0000	0.0000	0.4904	40.0787	40.5691	0.0513	1.3900e-003	42.2647
Total	0.2671	0.1604	0.4252	1.8600e-003	0.1529	3.4500e-003	0.1564	0.0410	3.3700e-003	0.0443	8.1685	419.2473	427.4158	0.5169	2.9200e-003	441.2073

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	48.85	1.10	2.84	47.44	9.88	5.21

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	6/1/2021	6/30/2021	5	22
2	Site Preparation	Site Preparation	7/1/2021	7/31/2021	5	22
3	Grading	Grading	8/1/2021	8/31/2021	5	22
4	Building Construction	Building Construction	9/1/2021	5/8/2023	5	439
5	Architectural Coating	Architectural Coating	9/5/2022	5/8/2023	5	176

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 87,285; Non-Residential Outdoor: 29,095; Striped Parking

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	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	4	24.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.6900e-003	0.0000	6.6900e-003	1.0100e-003	0.0000	1.0100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7600e-003	0.0798	0.0833	1.3000e-004		4.4800e-003	4.4800e-003		4.2700e-003	4.2700e-003	0.0000	11.4503	11.4503	2.1300e-003	0.0000	11.5036
Total	8.7600e-003	0.0798	0.0833	1.3000e-004	6.6900e-003	4.4800e-003	0.0112	1.0100e-003	4.2700e-003	5.2800e-003	0.0000	11.4503	11.4503	2.1300e-003	0.0000	11.5036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	8.2900e-003	1.8300e-003	2.0000e-005	5.3000e-004	3.0000e-005	5.6000e-004	1.5000e-004	2.0000e-005	1.7000e-004	0.0000	2.3265	2.3265	1.7000e-004	0.0000	2.3307
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	4.6000e-004	3.4000e-004	3.8400e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0523	1.0523	3.0000e-005	0.0000	1.0530

Total	7.0000e-004	8.6300e-003	5.6700e-003	3.0000e-005	1.7400e-003	4.0000e-005	1.7800e-003	4.7000e-004	3.0000e-005	5.0000e-004	0.0000	3.3788	3.3788	2.0000e-004	0.0000	3.3837
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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					2.6100e-003	0.0000	2.6100e-003	4.0000e-004	0.0000	4.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3300e-003	0.1140	0.0873	1.3000e-004		4.4200e-003	4.4200e-003		4.4200e-003	4.4200e-003	0.0000	11.4503	11.4503	2.1300e-003	0.0000	11.5036
Total	5.3300e-003	0.1140	0.0873	1.3000e-004	2.6100e-003	4.4200e-003	7.0300e-003	4.0000e-004	4.4200e-003	4.8200e-003	0.0000	11.4503	11.4503	2.1300e-003	0.0000	11.5036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.4000e-004	8.2900e-003	1.8300e-003	2.0000e-005	5.3000e-004	3.0000e-005	5.6000e-004	1.5000e-004	2.0000e-005	1.7000e-004	0.0000	2.3265	2.3265	1.7000e-004	0.0000	2.3307
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	4.6000e-004	3.4000e-004	3.8400e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0523	1.0523	3.0000e-005	0.0000	1.0530
Total	7.0000e-004	8.6300e-003	5.6700e-003	3.0000e-005	1.7400e-003	4.0000e-005	1.7800e-003	4.7000e-004	3.0000e-005	5.0000e-004	0.0000	3.3788	3.3788	2.0000e-004	0.0000	3.3837

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.0400e-003	0.0860	0.0443	1.1000e-004		3.2900e-003	3.2900e-003		3.0300e-003	3.0300e-003	0.0000	9.4061	9.4061	3.0400e-003	0.0000	9.4821
Total	7.0400e-003	0.0860	0.0443	1.1000e-004	2.7000e-004	3.2900e-003	3.5600e-003	3.0000e-005	3.0300e-003	3.0600e-003	0.0000	9.4061	9.4061	3.0400e-003	0.0000	9.4821

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	2.3000e-004	1.7000e-004	1.9200e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5262	0.5262	1.0000e-005	0.0000	0.5265
Total	2.3000e-004	1.7000e-004	1.9200e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5262	0.5262	1.0000e-005	0.0000	0.5265

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					1.0000e-004	0.0000	1.0000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3900e-003	0.0948	0.0644	1.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003	0.0000	9.4061	9.4061	3.0400e-003	0.0000	9.4821

Total	3.3900e-003	0.0948	0.0644	1.1000e-004	1.0000e-004	2.6500e-003	2.7500e-003	1.0000e-005	2.6500e-003	2.6600e-003	0.0000	9.4061	9.4061	3.0400e-003	0.0000	9.4821
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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	2.3000e-004	1.7000e-004	1.9200e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5262	0.5262	1.0000e-005	0.0000	0.5265
Total	2.3000e-004	1.7000e-004	1.9200e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5262	0.5262	1.0000e-005	0.0000	0.5265

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.5100e-003	0.0000	8.5100e-003	4.5900e-003	0.0000	4.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7600e-003	0.0798	0.0833	1.3000e-004		4.4800e-003	4.4800e-003		4.2700e-003	4.2700e-003	0.0000	11.4503	11.4503	2.1300e-003	0.0000	11.5036
Total	8.7600e-003	0.0798	0.0833	1.3000e-004	8.5100e-003	4.4800e-003	0.0130	4.5900e-003	4.2700e-003	8.8600e-003	0.0000	11.4503	11.4503	2.1300e-003	0.0000	11.5036

Unmitigated Construction Off-Site

Worker	4.6000e-004	3.4000e-004	3.8400e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0523	1.0523	3.0000e-005	0.0000	1.0530
Total	2.3800e-003	0.0672	0.0186	2.0000e-004	5.5100e-003	2.1000e-004	5.7200e-003	1.5000e-003	2.0000e-004	1.7000e-003	0.0000	19.8141	19.8141	1.3800e-003	0.0000	19.8487

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0250	0.2447	0.2760	3.7000e-004		0.0154	0.0154		0.0141	0.0141	0.0000	32.8848	32.8848	0.0106	0.0000	33.1507
Total	0.0250	0.2447	0.2760	3.7000e-004		0.0154	0.0154		0.0141	0.0141	0.0000	32.8848	32.8848	0.0106	0.0000	33.1507

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	1.2600e-003	0.0428	0.0108	1.1000e-004	2.7700e-003	9.0000e-005	2.8600e-003	8.0000e-004	8.0000e-005	8.8000e-004	0.0000	10.6835	10.6835	6.9000e-004	0.0000	10.7007
Worker	4.3900e-003	3.2600e-003	0.0369	1.1000e-004	0.0116	9.0000e-005	0.0117	3.0800e-003	8.0000e-005	3.1600e-003	0.0000	10.1023	10.1023	2.7000e-004	0.0000	10.1090
Total	5.6500e-003	0.0461	0.0477	2.2000e-004	0.0144	1.8000e-004	0.0145	3.8800e-003	1.6000e-004	4.0400e-003	0.0000	20.7857	20.7857	9.6000e-004	0.0000	20.8098

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	0.0176	0.3630	0.2828	3.7000e-004		0.0147	0.0147		0.0147	0.0147	0.0000	32.8847	32.8847	0.0106	0.0000	33.1506
Total	0.0176	0.3630	0.2828	3.7000e-004		0.0147	0.0147		0.0147	0.0147	0.0000	32.8847	32.8847	0.0106	0.0000	33.1506

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	1.2600e-003	0.0428	0.0108	1.1000e-004	2.7700e-003	9.0000e-005	2.8600e-003	8.0000e-004	8.0000e-005	8.8000e-004	0.0000	10.6835	10.6835	6.9000e-004	0.0000	10.7007
Worker	4.3900e-003	3.2600e-003	0.0369	1.1000e-004	0.0116	9.0000e-005	0.0117	3.0800e-003	8.0000e-005	3.1600e-003	0.0000	10.1023	10.1023	2.7000e-004	0.0000	10.1090
Total	5.6500e-003	0.0461	0.0477	2.2000e-004	0.0144	1.8000e-004	0.0145	3.8800e-003	1.6000e-004	4.0400e-003	0.0000	20.7857	20.7857	9.6000e-004	0.0000	20.8098

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0650	0.6414	0.8069	1.1100e-003		0.0371	0.0371		0.0341	0.0341	0.0000	97.2394	97.2394	0.0315	0.0000	98.0257

Total	0.0650	0.6414	0.8069	1.1100e-003		0.0371	0.0371		0.0341	0.0341	0.0000	97.2394	97.2394	0.0315	0.0000	98.0257
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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	3.5100e-003	0.1200	0.0303	3.2000e-004	8.1900e-003	2.2000e-004	8.4200e-003	2.3600e-003	2.1000e-004	2.5800e-003	0.0000	31.2860	31.2860	1.9600e-003	0.0000	31.3351
Worker	0.0122	8.6900e-003	0.1006	3.2000e-004	0.0342	2.5000e-004	0.0345	9.0900e-003	2.3000e-004	9.3200e-003	0.0000	28.7785	28.7785	7.3000e-004	0.0000	28.7966
Total	0.0157	0.1287	0.1308	6.4000e-004	0.0424	4.7000e-004	0.0429	0.0115	4.4000e-004	0.0119	0.0000	60.0645	60.0645	2.6900e-003	0.0000	60.1317

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	0.0519	1.0725	0.8354	1.1100e-003		0.0434	0.0434		0.0434	0.0434	0.0000	97.2393	97.2393	0.0315	0.0000	98.0256
Total	0.0519	1.0725	0.8354	1.1100e-003		0.0434	0.0434		0.0434	0.0434	0.0000	97.2393	97.2393	0.0315	0.0000	98.0256

Mitigated Construction Off-Site

Vendor	9.1000e-004	0.0315	9.4900e-003	1.1000e-004	2.8700e-003	4.0000e-005	2.9000e-003	8.3000e-004	3.0000e-005	8.6000e-004	0.0000	10.6120	10.6120	6.1000e-004	0.0000	10.6272
Worker	4.0100e-003	2.7500e-003	0.0325	1.1000e-004	0.0120	9.0000e-005	0.0121	3.1800e-003	8.0000e-005	3.2600e-003	0.0000	9.6972	9.6972	2.3000e-004	0.0000	9.7029
Total	4.9200e-003	0.0343	0.0419	2.2000e-004	0.0149	1.3000e-004	0.0150	4.0100e-003	1.1000e-004	4.1200e-003	0.0000	20.3092	20.3092	8.4000e-004	0.0000	20.3301

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	0.0182	0.3754	0.2924	3.9000e-004		0.0152	0.0152		0.0152	0.0152	0.0000	34.0616	34.0616	0.0110	0.0000	34.3370
Total	0.0182	0.3754	0.2924	3.9000e-004		0.0152	0.0152		0.0152	0.0152	0.0000	34.0616	34.0616	0.0110	0.0000	34.3370

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	9.1000e-004	0.0315	9.4900e-003	1.1000e-004	2.8700e-003	4.0000e-005	2.9000e-003	8.3000e-004	3.0000e-005	8.6000e-004	0.0000	10.6120	10.6120	6.1000e-004	0.0000	10.6272
Worker	4.0100e-003	2.7500e-003	0.0325	1.1000e-004	0.0120	9.0000e-005	0.0121	3.1800e-003	8.0000e-005	3.2600e-003	0.0000	9.6972	9.6972	2.3000e-004	0.0000	9.7029
Total	4.9200e-003	0.0343	0.0419	2.2000e-004	0.0149	1.3000e-004	0.0150	4.0100e-003	1.1000e-004	4.1200e-003	0.0000	20.3092	20.3092	8.4000e-004	0.0000	20.3301

3.6 Architectural Coating - 2022

Unmitigated Construction On-Site

Off-Road	4.8400e-003	0.1000	0.0779	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	10.8513	10.8513	7.1000e-004	0.0000	10.8690
Total	0.1351	0.1000	0.0779	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	10.8513	10.8513	7.1000e-004	0.0000	10.8690

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	8.3000e-004	5.9000e-004	6.8500e-003	2.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.3000e-004	0.0000	1.9601	1.9601	5.0000e-005	0.0000	1.9613
Total	8.3000e-004	5.9000e-004	6.8500e-003	2.0000e-005	2.3300e-003	2.0000e-005	2.3500e-003	6.2000e-004	2.0000e-005	6.3000e-004	0.0000	1.9601	1.9601	5.0000e-005	0.0000	1.9613

3.6 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1395					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.7200e-003	0.0593	0.0824	1.4000e-004		3.2200e-003	3.2200e-003		3.2200e-003	3.2200e-003	0.0000	11.6173	11.6173	7.0000e-004	0.0000	11.6347
Total	0.1482	0.0593	0.0824	1.4000e-004		3.2200e-003	3.2200e-003		3.2200e-003	3.2200e-003	0.0000	11.6173	11.6173	7.0000e-004	0.0000	11.6347

Unmitigated Construction Off-Site

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	5.7000e-004	6.7600e-003	2.0000e-005	2.5000e-003	2.0000e-005	2.5100e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	2.0202	2.0202	5.0000e-005	0.0000	2.0214
Total	8.4000e-004	5.7000e-004	6.7600e-003	2.0000e-005	2.5000e-003	2.0000e-005	2.5100e-003	6.6000e-004	2.0000e-005	6.8000e-004	0.0000	2.0202	2.0202	5.0000e-005	0.0000	2.0214

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0266	0.1307	0.3995	1.6800e-003	0.1529	1.2000e-003	0.1541	0.0410	1.1200e-003	0.0421	0.0000	155.0079	155.0079	6.6800e-003	0.0000	155.1749
Unmitigated	0.0266	0.1307	0.3995	1.6800e-003	0.1529	1.2000e-003	0.1541	0.0410	1.1200e-003	0.0421	0.0000	155.0079	155.0079	6.6800e-003	0.0000	155.1749

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High School	94.27	94.27	94.27	402,597	402,597
Total	94.27	94.27	94.27	402,597	402,597

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.553363	0.042540	0.203692	0.115607	0.014606	0.005830	0.021800	0.032323	0.002120	0.001725	0.004837	0.000711	0.000846

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	191.8648	191.8648	4.5300e-003	9.4000e-004	192.2575
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	191.8648	191.8648	4.5300e-003	9.4000e-004	192.2575
NaturalGas Mitigated	3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	32.2945	32.2945	6.2000e-004	5.9000e-004	32.4864
NaturalGas Unmitigated	3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	32.2945	32.2945	6.2000e-004	5.9000e-004	32.4864

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 School	605176	3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	32.2945	32.2945	6.2000e-004	5.9000e-004	32.4864
Total		3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	32.2945	32.2945	6.2000e-004	5.9000e-004	32.4864

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 School	605176	3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	32.2945	32.2945	6.2000e-004	5.9000e-004	32.4864
Total		3.2600e-003	0.0297	0.0249	1.8000e-004		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	32.2945	32.2945	6.2000e-004	5.9000e-004	32.4864

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	344485	191.8648	4.5300e-003	9.4000e-004	192.2575
Total		191.8648	4.5300e-003	9.4000e-004	192.2575

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

High School	344485	191.8648	4.5300e-003	9.4000e-004	192.2575
Total		191.8648	4.5300e-003	9.4000e-004	192.2575

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2373	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003
Unmitigated	0.2373	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0270					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003
Total	0.2373	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0270					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2103					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003
Total	0.2373	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4400e-003	1.4400e-003	0.0000	0.0000	1.5400e-003

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	40.5691	0.0513	1.3900e-003	42.2647
Unmitigated	45.3696	0.0640	1.7100e-003	47.4782

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	1.93218 / 4.96846	45.3696	0.0640	1.7100e-003	47.4782
Total		45.3696	0.0640	1.7100e-003	47.4782

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

High School	1.54574 / 4.66538	40.5691	0.0513	1.3900e- 003	42.2647
Total		40.5691	0.0513	1.3900e- 003	42.2647

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.6781	0.4538	0.0000	19.0223
Unmitigated	15.3563	0.9075	0.0000	38.0445

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	75.65	15.3563	0.9075	0.0000	38.0445
Total		15.3563	0.9075	0.0000	38.0445

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	37.825	7.6781	0.4538	0.0000	19.0223
Total		7.6781	0.4538	0.0000	19.0223

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Phase 3 - South Coast Air Basin, Annual

Windward School Master Plan - Phase 3

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.20	Acre	0.20	4,065.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2026
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - The lot area would be approximately 0.2 acres during this phase to include the student plaza and bridges.

Construction Phase - Based on phasing development assumptions, no paving or architectural coating.

Off-road Equipment -

Off-road Equipment - No cranes.

Off-road Equipment -

Off-road Equipment -

Demolition -

Grading - Phase 3 would export approximately 500 cubic yards of soil

Vehicle Trips - Trips are generated for the proposed buildings in Phase 1 and Phase 2

Woodstoves - No woodstoves

Construction Off-road Equipment Mitigation - Per CARB Title 13 CCR Section 2520-2427, equipment required to be Tier 4 Final for new equipment. For a conservative analysis, construction equipment will be set to Tier 2.

Area Mitigation -

Water Mitigation -

Waste Mitigation - SCAG landfill capacity MM-USS-6(b): 75 percent of the waste stream be recycled and waste reduction goal by 50 percent that are within responsibility of Lead Agency.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	100.00	112.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	1.00	21.00
tblConstructionPhase	PhaseEndDate	11/5/2025	12/31/2025
tblConstructionPhase	PhaseEndDate	6/18/2025	7/28/2025
tblConstructionPhase	PhaseEndDate	6/16/2025	6/30/2025
tblConstructionPhase	PhaseStartDate	6/19/2025	7/29/2025
tblConstructionPhase	PhaseStartDate	6/17/2025	7/1/2025
tblConstructionPhase	PhaseStartDate	6/14/2025	6/2/2025
tblGrading	AcresOfGrading	10.50	0.50
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	8,712.00	4,065.00

tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	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					
2025	0.0336	0.3288	0.4683	7.6000e-004	0.0116	0.0136	0.0252	5.1900e-003	0.0126	0.0178	0.0000	67.0309	67.0309	0.0186	0.0000	67.4964
Maximum	0.0336	0.3288	0.4683	7.6000e-004	0.0116	0.0136	0.0252	5.1900e-003	0.0126	0.0178	0.0000	67.0309	67.0309	0.0186	0.0000	67.4964

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					
2025	0.0316	0.6654	0.5104	7.6000e-004	6.8400e-003	0.0253	0.0321	2.6500e-003	0.0253	0.0279	0.0000	67.0308	67.0308	0.0186	0.0000	67.4963
Maximum	0.0316	0.6654	0.5104	7.6000e-004	6.8400e-003	0.0253	0.0321	2.6500e-003	0.0253	0.0279	0.0000	67.0308	67.0308	0.0186	0.0000	67.4963

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Percent Reduction	6.10	-102.37	-8.97	0.00	41.09	-85.53	-27.24	48.94	-100.40	-56.77	0.00	0.00	0.00	0.00	0.00	0.00
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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-2-2025	9-1-2025	0.1713	0.3157
2	9-2-2025	9-30-2025	0.0453	0.0904
		Highest	0.1713	0.3157

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	4.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	4.0600e-003	0.0000	4.0600e-003	2.4000e-004	0.0000	0.0101
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.4745	1.4745	3.0000e-005	1.0000e-005	1.4776
Total	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.0600e-003	1.4745	1.4786	2.7000e-004	1.0000e-005	1.4876

Mitigated Operational

[illegible]

Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	2.0300e-003	0.0000	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.3846	1.3846	3.0000e-005	1.0000e-005	1.3874
Total	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0300e-003	1.3846	1.3866	1.5000e-004	1.0000e-005	1.3925

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.00	6.10	6.22	44.44	0.00	6.40

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/2/2025	6/30/2025	5	21	
2	Grading	Grading	7/1/2025	7/28/2025	5	20	
3	Building Construction	Building Construction	7/29/2025	12/31/2025	5	112	

Acres of Grading (Site Preparation Phase): 0.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	62.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	2.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

- Use Cleaner Engines for Construction Equipment
- Water Exposed Area
- Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2025

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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6500e-003	0.0503	0.0402	1.0000e-004		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	8.9758	8.9758	2.9000e-003	0.0000	9.0484
Total	4.6500e-003	0.0503	0.0402	1.0000e-004	2.7000e-004	1.7400e-003	2.0100e-003	3.0000e-005	1.6000e-003	1.6300e-003	0.0000	8.9758	8.9758	2.9000e-003	0.0000	9.0484

Unmitigated Construction Off-Site

Worker	1.7000e-004	1.1000e-004	1.3500e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4331	0.4331	1.0000e-005	0.0000	0.4333
Total	1.7000e-004	1.1000e-004	1.3500e-003	0.0000	5.8000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.4331	0.4331	1.0000e-005	0.0000	0.4333

3.3 Grading - 2025

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					7.5600e-003	0.0000	7.5600e-003	4.1400e-003	0.0000	4.1400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.7400e-003	0.0510	0.0736	1.2000e-004		2.1000e-003	2.1000e-003		2.0100e-003	2.0100e-003	0.0000	10.4246	10.4246	1.8700e-003	0.0000	10.4714
Total	5.7400e-003	0.0510	0.0736	1.2000e-004	7.5600e-003	2.1000e-003	9.6600e-003	4.1400e-003	2.0100e-003	6.1500e-003	0.0000	10.4246	10.4246	1.8700e-003	0.0000	10.4714

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5000e-004	4.8100e-003	1.6700e-003	2.0000e-005	5.3000e-004	1.0000e-005	5.4000e-004	1.5000e-004	1.0000e-005	1.5000e-004	0.0000	2.1837	2.1837	1.5000e-004	0.0000	2.1875
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	3.3000e-004	2.1000e-004	2.5700e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8249	0.8249	2.0000e-005	0.0000	0.8253
Total	4.8000e-004	5.0200e-003	4.2400e-003	3.0000e-005	1.6300e-003	2.0000e-005	1.6400e-003	4.4000e-004	2.0000e-005	4.5000e-004	0.0000	3.0085	3.0085	1.7000e-004	0.0000	3.0128

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					2.9500e-003	0.0000	2.9500e-003	1.6200e-003	0.0000	1.6200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8400e-003	0.1037	0.0794	1.2000e-004		4.0200e-003	4.0200e-003		4.0200e-003	4.0200e-003	0.0000	10.4246	10.4246	1.8700e-003	0.0000	10.4714
Total	4.8400e-003	0.1037	0.0794	1.2000e-004	2.9500e-003	4.0200e-003	6.9700e-003	1.6200e-003	4.0200e-003	5.6400e-003	0.0000	10.4246	10.4246	1.8700e-003	0.0000	10.4714

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5000e-004	4.8100e-003	1.6700e-003	2.0000e-005	5.3000e-004	1.0000e-005	5.4000e-004	1.5000e-004	1.0000e-005	1.5000e-004	0.0000	2.1837	2.1837	1.5000e-004	0.0000	2.1875
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	3.3000e-004	2.1000e-004	2.5700e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.8249	0.8249	2.0000e-005	0.0000	0.8253
Total	4.8000e-004	5.0200e-003	4.2400e-003	3.0000e-005	1.6300e-003	2.0000e-005	1.6400e-003	4.4000e-004	2.0000e-005	4.5000e-004	0.0000	3.0085	3.0085	1.7000e-004	0.0000	3.0128

3.4 Building Construction - 2025

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	0.0221	0.2183	0.3450	4.8000e-004		9.7400e-003	9.7400e-003		8.9600e-003	8.9600e-003	0.0000	41.9708	41.9708	0.0136	0.0000	42.3101

Total	0.0221	0.2183	0.3450	4.8000e-004		9.7400e-003	9.7400e-003		8.9600e-003	8.9600e-003	0.0000	41.9708	41.9708	0.0136	0.0000	42.3101
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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	1.1000e-004	3.8300e-003	1.1100e-003	1.0000e-005	3.5000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	1.2943	1.2943	7.0000e-005	0.0000	1.2961
Worker	3.7000e-004	2.4000e-004	2.8800e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9239	0.9239	2.0000e-005	0.0000	0.9244
Total	4.8000e-004	4.0700e-003	3.9900e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.6000e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	2.2181	2.2181	9.0000e-005	0.0000	2.2204

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	0.0224	0.4620	0.3599	4.8000e-004		0.0187	0.0187		0.0187	0.0187	0.0000	41.9707	41.9707	0.0136	0.0000	42.3101
Total	0.0224	0.4620	0.3599	4.8000e-004		0.0187	0.0187		0.0187	0.0187	0.0000	41.9707	41.9707	0.0136	0.0000	42.3101

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	1.1000e-004	3.8300e-003	1.1100e-003	1.0000e-005	3.5000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	1.2943	1.2943	7.0000e-005	0.0000	1.2961
Worker	3.7000e-004	2.4000e-004	2.8800e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	0.9239	0.9239	2.0000e-005	0.0000	0.9244
Total	4.8000e-004	4.0700e-003	3.9900e-003	2.0000e-005	1.5800e-003	1.0000e-005	1.6000e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	2.2181	2.2181	9.0000e-005	0.0000	2.2204

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.554129	0.042164	0.205182	0.113554	0.013848	0.005806	0.021992	0.033191	0.002140	0.001609	0.004858	0.000715	0.000811

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas
Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use Low VOC Cleaning Supplies

[illegible]

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.0000e-005					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	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005
Total	4.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.0000e-005					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	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005
Total	4.0000e-005	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet

- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.3846	3.0000e-005	1.0000e-005	1.3874
Unmitigated	1.4745	3.0000e-005	1.0000e-005	1.4776

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.238296	1.4745	3.0000e-005	1.0000e-005	1.4776
Total		1.4745	3.0000e-005	1.0000e-005	1.4776

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0.22376	1.3846	3.0000e-005	1.0000e-005	1.3874
Total		1.3846	3.0000e-005	1.0000e-005	1.3874

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Unmitigated	4.0600e-003	2.4000e-004	0.0000	0.0101

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

City Park	0.02	4.0600e-003	2.4000e-004	0.0000	0.0101
Total		4.0600e-003	2.4000e-004	0.0000	0.0101

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.01	2.0300e-003	1.2000e-004	0.0000	5.0300e-003
Total		2.0300e-003	1.2000e-004	0.0000	5.0300e-003

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing - South Coast Air Basin, Annual

Windward School Master Plan - Existing South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	90.15	1000sqft	2.07	90,150.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 114 total trips for the existing school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.26
tblVehicleTrips	SU_TR	1.79	1.26
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.26
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4279	5.9500e-003	0.2104	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4215	4.4215	4.2000e-004	7.0000e-005	4.4542
Energy	6.5800e-003	0.0590	0.0441	3.6000e-004		4.5400e-003	4.5400e-003		4.5400e-003	4.5400e-003	0.0000	408.2140	408.2140	9.3500e-003	2.8700e-003	409.3031
Mobile	0.1111	0.5892	1.5973	4.8000e-003	0.3692	5.8200e-003	0.3750	0.0989	5.4800e-003	0.1044	0.0000	441.5859	441.5859	0.0245	0.0000	442.1982
Waste						0.0000	0.0000		0.0000	0.0000	25.6581	0.0000	25.6581	1.5164	0.0000	63.5668
Water						0.0000	0.0000		0.0000	0.0000	1.3631	83.8720	85.2351	0.1420	3.7200e-003	89.8919

Total	0.5455	0.6541	1.8518	5.1900e-003	0.3692	0.0118	0.3810	0.0989	0.0114	0.1104	27.0211	938.0934	965.1146	1.6926	6.6600e-003	1,009.4141
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4279	5.9500e-003	0.2104	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4215	4.4215	4.2000e-004	7.0000e-005	4.4542
Energy	6.5800e-003	0.0590	0.0441	3.6000e-004		4.5400e-003	4.5400e-003		4.5400e-003	4.5400e-003	0.0000	408.2140	408.2140	9.3500e-003	2.8700e-003	409.3031
Mobile	0.1111	0.5892	1.5973	4.8000e-003	0.3692	5.8200e-003	0.3750	0.0989	5.4800e-003	0.1044	0.0000	441.5859	441.5859	0.0245	0.0000	442.1982
Waste						0.0000	0.0000		0.0000	0.0000	25.6581	0.0000	25.6581	1.5164	0.0000	63.5668
Water						0.0000	0.0000		0.0000	0.0000	1.3631	83.8720	85.2351	0.1420	3.7200e-003	89.8919
Total	0.5455	0.6541	1.8518	5.1900e-003	0.3692	0.0118	0.3810	0.0989	0.0114	0.1104	27.0211	938.0934	965.1146	1.6926	6.6600e-003	1,009.4141

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Concrete/Industrial Saws	0	8.00	8	0.73

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	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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	0.0000	0.0000	0.0000	0.0000	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

Unmitigated Construction Off-Site

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	0.1111	0.5892	1.5973	4.8000e-003	0.3692	5.8200e-003	0.3750	0.0989	5.4800e-003	0.1044	0.0000	441.5859	441.5859	0.0245	0.0000	442.1982
Unmitigated	0.1111	0.5892	1.5973	4.8000e-003	0.3692	5.8200e-003	0.3750	0.0989	5.4800e-003	0.1044	0.0000	441.5859	441.5859	0.0245	0.0000	442.1982

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	113.59	113.59	113.59	485,114	485,114
Total	259.59	259.59	234.99	972,009	972,009

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

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	343.1165	343.1165	8.1000e-003	1.6800e-003	343.8187
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	343.1165	343.1165	8.1000e-003	1.6800e-003	343.8187
NaturalGas Mitigated	6.5800e-003	0.0590	0.0441	3.6000e-004		4.5400e-003	4.5400e-003		4.5400e-003	4.5400e-003	0.0000	65.0975	65.0975	1.2500e-003	1.1900e-003	65.4844
NaturalGas Unmitigated	6.5800e-003	0.0590	0.0441	3.6000e-004		4.5400e-003	4.5400e-003		4.5400e-003	4.5400e-003	0.0000	65.0975	65.0975	1.2500e-003	1.1900e-003	65.4844

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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
High School	937560	5.0600e-003	0.0460	0.0386	2.8000e-004		3.4900e-003	3.4900e-003		3.4900e-003	3.4900e-003	0.0000	50.0318	50.0318	9.6000e-004	9.2000e-004	50.3291

Total		6.5800e-003	0.0590	0.0442	3.6000e-004		4.5400e-003	4.5400e-003		4.5400e-003	4.5400e-003	0.0000	65.0975	65.0975	1.2500e-003	1.2000e-003	65.4844
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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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
High School	937560	5.0600e-003	0.0460	0.0386	2.8000e-004		3.4900e-003	3.4900e-003		3.4900e-003	3.4900e-003	0.0000	50.0318	50.0318	9.6000e-004	9.2000e-004	50.3291
Total		6.5800e-003	0.0590	0.0442	3.6000e-004		4.5400e-003	4.5400e-003		4.5400e-003	4.5400e-003	0.0000	65.0975	65.0975	1.2500e-003	1.2000e-003	65.4844

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
High School	533688	297.2437	7.0200e-003	1.4500e-003	297.8520
Total		343.1165	8.1000e-003	1.6700e-003	343.8187

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
High School	533688	297.2437	7.0200e-003	1.4500e-003	297.8520
Total		343.1165	8.1000e-003	1.6700e-003	343.8187

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4279	5.9500e-003	0.2104	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4215	4.4215	4.2000e-004	7.0000e-005	4.4542
Unmitigated	0.4279	5.9500e-003	0.2104	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4215	4.4215	4.2000e-004	7.0000e-005	4.4542

6.2 Area by SubCategory

Unmitigated

[illegible]

Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.5100e-003	2.4200e-003	0.2089	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3392	0.3392	3.4000e-004	0.0000	0.3477
Total	0.4279	5.9400e-003	0.2104	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4215	4.4215	4.2000e-004	7.0000e-005	4.4542

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	0.0460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3749					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.5100e-003	2.4200e-003	0.2089	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3392	0.3392	3.4000e-004	0.0000	0.3477
Total	0.4279	5.9400e-003	0.2104	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4215	4.4215	4.2000e-004	7.0000e-005	4.4542

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	85.2351	0.1420	3.7200e-003	89.8919
Unmitigated	85.2351	0.1420	3.7200e-003	89.8919

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.821507	14.9470	0.0428	1.0700e-003	16.3370
High School	2.9934 / 7.69731	70.2881	0.0992	2.6400e-003	73.5549
Total		85.2351	0.1420	3.7100e-003	89.8919

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.821507	14.9470	0.0428	1.0700e-003	16.3370
High School	2.9934 / 7.69731	70.2881	0.0992	2.6400e-003	73.5549
Total		85.2351	0.1420	3.7100e-003	89.8919

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	25.6581	1.5164	0.0000	63.5668
Unmitigated	25.6581	1.5164	0.0000	63.5668

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
High School	117.2	23.7905	1.4060	0.0000	58.9401
Total		25.6581	1.5164	0.0000	63.5668

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
High School	117.2	23.7905	1.4060	0.0000	58.9401

Total		25.6581	1.5164	0.0000	63.5668
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9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1 - South Coast Air Basin, Annual

Windward School Master Plan - Existing+Phase 1 South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	112.78	1000sqft	2.59	112,780.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 buildings and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.26
tblVehicleTrips	SU_TR	1.79	1.26
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.26
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5202	5.9500e-003	0.2107	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4220	4.4220	4.2000e-004	7.0000e-005	4.4548
Energy	7.8500e-003	0.0705	0.0538	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	495.3892	495.3892	0.0114	3.4600e-003	496.7056
Mobile	0.1242	0.6605	1.7937	5.4000e-003	0.4155	6.5500e-003	0.4220	0.1113	6.1700e-003	0.1175	0.0000	496.6376	496.6376	0.0275	0.0000	497.3252
Waste						0.0000	0.0000		0.0000	0.0000	31.6280	0.0000	31.6280	1.8692	0.0000	78.3571
Water						0.0000	0.0000		0.0000	0.0000	1.6015	101.2778	102.8792	0.1669	4.3800e-003	108.3561

Total	0.6522	0.7369	2.0582	5.8600e-003	0.4155	0.0134	0.4288	0.1113	0.0130	0.1244	33.2295	1,097.7267	1,130.9561	2.0753	7.9100e-003	1,185.1988
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5202	5.9500e-003	0.2107	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4220	4.4220	4.2000e-004	7.0000e-005	4.4548
Energy	7.8500e-003	0.0705	0.0538	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	495.3892	495.3892	0.0114	3.4600e-003	496.7056
Mobile	0.1242	0.6605	1.7937	5.4000e-003	0.4155	6.5500e-003	0.4220	0.1113	6.1700e-003	0.1175	0.0000	496.6376	496.6376	0.0275	0.0000	497.3252
Waste						0.0000	0.0000		0.0000	0.0000	31.6280	0.0000	31.6280	1.8692	0.0000	78.3571
Water						0.0000	0.0000		0.0000	0.0000	1.2812	90.0113	91.2924	0.1337	3.5500e-003	95.6923
Total	0.6522	0.7369	2.0582	5.8600e-003	0.4155	0.0134	0.4288	0.1113	0.0130	0.1244	32.9092	1,086.4601	1,119.3693	2.0421	7.0800e-003	1,172.5350

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	1.03	1.02	1.60	10.49	1.07

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	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73

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	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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	0.0000	0.0000	0.0000	0.0000	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

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					

[illegible]

Mitigated Construction On-Site

[illegible]

Mitigated Construction Off-Site

[illegible]

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1242	0.6605	1.7937	5.4000e-003	0.4155	6.5500e-003	0.4220	0.1113	6.1700e-003	0.1175	0.0000	496.6376	496.6376	0.0275	0.0000	497.3252
Unmitigated	0.1242	0.6605	1.7937	5.4000e-003	0.4155	6.5500e-003	0.4220	0.1113	6.1700e-003	0.1175	0.0000	496.6376	496.6376	0.0275	0.0000	497.3252

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	142.10	142.10	142.10	606,890	606,890
Total	288.10	288.10	263.50	1,093,785	1,093,785

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

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	417.7324	417.7324	9.8700e-003	2.0400e-003	418.5873
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	417.7324	417.7324	9.8700e-003	2.0400e-003	418.5873
NaturalGas Mitigated	7.8500e-003	0.0705	0.0538	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6568	77.6568	1.4900e-003	1.4200e-003	78.1183
NaturalGas Unmitigated	7.8500e-003	0.0705	0.0538	4.3000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6568	77.6568	1.4900e-003	1.4200e-003	78.1183

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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
High School	1.17291e+006	6.3200e-003	0.0575	0.0483	3.4000e-004		4.3700e-003	4.3700e-003		4.3700e-003	4.3700e-003	0.0000	62.5911	62.5911	1.2000e-003	1.1500e-003	62.9630
Total		7.8400e-003	0.0705	0.0538	4.2000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6568	77.6568	1.4900e-003	1.4300e-003	78.1183

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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
High School	1.17291e+006	6.3200e-003	0.0575	0.0483	3.4000e-004		4.3700e-003	4.3700e-003		4.3700e-003	4.3700e-003	0.0000	62.5911	62.5911	1.2000e-003	1.1500e-003	62.9630
Total		7.8400e-003	0.0705	0.0538	4.2000e-004		5.4200e-003	5.4200e-003		5.4200e-003	5.4200e-003	0.0000	77.6568	77.6568	1.4900e-003	1.4300e-003	78.1183

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
High School	667658	371.8596	8.7800e-003	1.8200e-003	372.6207
Total		417.7324	9.8600e-003	2.0400e-003	418.5873

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
High School	667658	371.8596	8.7800e-003	1.8200e-003	372.6207

Consumer Products	0.4567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.5400e-003	2.4200e-003	0.2092	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3397	0.3397	3.4000e-004	0.0000	0.3483
Total	0.5202	5.9400e-003	0.2107	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4220	4.4220	4.2000e-004	7.0000e-005	4.4548

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	0.0565					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4567					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.5400e-003	2.4200e-003	0.2092	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3397	0.3397	3.4000e-004	0.0000	0.3483
Total	0.5202	5.9400e-003	0.2107	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4220	4.4220	4.2000e-004	7.0000e-005	4.4548

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	91.2924	0.1337	3.5500e-003	95.6923
Unmitigated	102.8792	0.1669	4.3800e-003	108.3561

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.821507	14.9470	0.0428	1.0700e-003	16.3370
High School	3.74482 / 9.62954	87.9323	0.1241	3.3100e-003	92.0191
Total		102.8792	0.1669	4.3800e-003	108.3561

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Low Rise	1.04246 / 0.771395	12.6642	0.0343	8.6000e-004	13.7776
High School	2.99586 / 9.04213	78.6283	0.0995	2.6800e-003	81.9147
Total		91.2924	0.1337	3.5400e-003	95.6923

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	31.6280	1.8692	0.0000	78.3571
Unmitigated	31.6280	1.8692	0.0000	78.3571

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
High School	146.61	29.7605	1.7588	0.0000	73.7304
Total		31.6280	1.8692	0.0000	78.3571

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
High School	146.61	29.7605	1.7588	0.0000	73.7304
Total		31.6280	1.8692	0.0000	78.3571

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1+Phase 2 - South Coast Air Basin, Annual

Windward School Master Plan - Existing+Phase 1+Phase 2 South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	170.97	1000sqft	3.92	170,970.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 and 2 buildings and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
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tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	SU_TR	1.79	1.61
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.61
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

[illegible]

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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564
Energy	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	719.5485	719.5485	0.0165	4.9900e-003	721.4495
Mobile	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675
Waste						0.0000	0.0000		0.0000	0.0000	46.9843	0.0000	46.9843	2.7767	0.0000	116.4016
Water						0.0000	0.0000		0.0000	0.0000	2.2145	146.0343	148.2488	0.2309	6.0800e-003	155.8342

Total	0.9540	1.0997	3.0011	8.8300e-003	0.6315	0.0190	0.6505	0.1692	0.0185	0.1877	49.1988	1,623.7344	1,672.9331	3.0661	0.0111	1,752.9091
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564
Energy	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	719.5485	719.5485	0.0165	4.9900e-003	721.4495
Mobile	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675
Waste						0.0000	0.0000		0.0000	0.0000	46.9843	0.0000	46.9843	2.7767	0.0000	116.4016
Water						0.0000	0.0000		0.0000	0.0000	1.7716	130.0899	131.8615	0.1850	4.9300e-003	137.9570
Total	0.9540	1.0997	3.0011	8.8300e-003	0.6315	0.0190	0.6505	0.1692	0.0185	0.1877	48.7559	1,607.7900	1,656.5458	3.0202	9.9900e-003	1,735.0319

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.98	0.98	1.50	10.32	1.02

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	9/24/2018	9/23/2018	5	0	

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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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	0.0000	0.0000	0.0000	0.0000	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

Unmitigated Construction Off-Site

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	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675
Unmitigated	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	275.26	275.26	275.26	1,175,583	1,175,583
Total	421.26	421.26	396.66	1,662,478	1,662,478

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

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	609.5972	609.5972	0.0144	2.9800e-003	610.8448
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	609.5972	609.5972	0.0144	2.9800e-003	610.8448
NaturalGas Mitigated	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047
NaturalGas Unmitigated	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047

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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
High School	1.77809e+006	9.5900e-003	0.0872	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8856	94.8856	1.8200e-003	1.7400e-003	95.4494

Total		0.0111	0.1002	0.0788	6.0000e-004		7.6700e-003	7.6700e-003		7.6700e-003	7.6700e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047
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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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
High School	1.77809e+006	9.5900e-003	0.0872	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8856	94.8856	1.8200e-003	1.7400e-003	95.4494
Total		0.0111	0.1002	0.0788	6.0000e-004		7.6700e-003	7.6700e-003		7.6700e-003	7.6700e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
High School	1.01214e+006	563.7244	0.0133	2.7500e-003	564.8781
Total		609.5972	0.0144	2.9700e-003	610.8448

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
High School	1.01214e+006	563.7244	0.0133	2.7500e-003	564.8781
Total		609.5972	0.0144	2.9700e-003	610.8448

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564
Unmitigated	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564

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	0.0835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.6100e-003	2.4300e-003	0.2099	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3412	0.3412	3.5000e-004	0.0000	0.3498
Total	0.7575	5.9500e-003	0.2114	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4235	4.4235	4.3000e-004	7.0000e-005	4.4564

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	0.0835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6669					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.6100e-003	2.4300e-003	0.2099	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3412	0.3412	3.5000e-004	0.0000	0.3498
Total	0.7575	5.9500e-003	0.2114	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4235	4.4235	4.3000e-004	7.0000e-005	4.4564

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	131.8615	0.1850	4.9300e-003	137.9570
Unmitigated	148.2488	0.2309	6.0800e-003	155.8342

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.821507	14.9470	0.0428	1.0700e-003	16.3370
High School	5.677 / 14.598	133.3018	0.1881	5.0100e-003	139.4972
Total		148.2488	0.2309	6.0800e-003	155.8342

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

Apartments Low Rise	1.04246 / 0.771395	12.6642	0.0343	8.6000e-004	13.7776
High School	4.5416 / 13.7075	119.1974	0.1508	4.0700e-003	124.1794
Total		131.8615	0.1850	4.9300e-003	137.9570

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	46.9843	2.7767	0.0000	116.4016
Unmitigated	46.9843	2.7767	0.0000	116.4016

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
High School	222.26	45.1168	2.6663	0.0000	111.7749
Total		46.9843	2.7767	0.0000	116.4016

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
High School	222.26	45.1168	2.6663	0.0000	111.7749
Total		46.9843	2.7767	0.0000	116.4016

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Windward School Master Plan - Existing+Phase 1+Phase 2+Phase 3 - South Coast Air Basin, Annual

Windward School Master Plan - Existing+Phase 1+Phase 2+Phase 3 South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	170.97	1000sqft	3.92	170,970.00	0
Apartments Low Rise	20.00	Dwelling Unit	1.25	13,600.00	57
City Park	0.20	Acre	0.20	4,056.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	11			Operational Year	2018
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MW hr)	1227.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project site consist of existing 7-12th grade school facilities plus phase 1 and 2 buildings, student plaza, and apartment buildings

Construction Phase - Operational only

Off-road Equipment - Operational only

Vehicle Trips - Project trip rates based on a 20 dwelling unit apartment and 130 total trips for the new school facilities.

Woodstoves - No woodstoves

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	10/19/2018	9/23/2018
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.00	0.00
tblLandUse	LandUseSquareFeet	20,000.00	13,600.00
tblLandUse	LandUseSquareFeet	8,712.00	4,056.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	7.16	7.30
tblVehicleTrips	ST_TR	4.37	1.61
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	1.79	1.61
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	6.59	7.30
tblVehicleTrips	WD_TR	12.89	1.61
tblVehicleTrips	WD_TR	1.89	0.00
tblWoodstoves	NumberCatalytic	1.00	0.00
tblWoodstoves	NumberNoncatalytic	1.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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					

2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	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

	ROG	NOx	CO	SO2	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					
2018	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564

Energy	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	719.5485	719.5485	0.0165	4.9900e-003	721.4495
Mobile	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675
Waste						0.0000	0.0000		0.0000	0.0000	46.9884	0.0000	46.9884	2.7769	0.0000	116.4116
Water						0.0000	0.0000		0.0000	0.0000	2.2145	147.5089	149.7233	0.2309	6.0900e-003	157.3118
Total	0.9540	1.0997	3.0012	8.8300e-003	0.6315	0.0190	0.6505	0.1692	0.0185	0.1877	49.2028	1,625.2089	1,674.4117	3.0664	0.0112	1,754.3967

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564
Energy	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	719.5485	719.5485	0.0165	4.9900e-003	721.4495
Mobile	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675
Waste						0.0000	0.0000		0.0000	0.0000	46.9884	0.0000	46.9884	2.7769	0.0000	116.4116
Water						0.0000	0.0000		0.0000	0.0000	1.7716	131.4745	133.2461	0.1851	4.9400e-003	139.3444
Total	0.9540	1.0997	3.0012	8.8300e-003	0.6315	0.0190	0.6505	0.1692	0.0185	0.1877	48.7599	1,609.1745	1,657.9345	3.0205	1.0000e-002	1,736.4294

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.90	0.99	0.98	1.50	10.31	1.02

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
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1	Demolition	Demolition	9/24/2018	9/23/2018	5	0
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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: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	8	0.73

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	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

Unmitigated Construction On-Site

[illegible]

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	0.0000	0.0000	0.0000	0.0000	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 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	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675
Unmitigated	0.1854	0.9935	2.7110	8.1900e-003	0.6315	9.9300e-003	0.6414	0.1692	9.3500e-003	0.1786	0.0000	753.7280	753.7280	0.0416	0.0000	754.7675

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	146.00	146.00	121.40	486,895	486,895
High School	275.26	275.26	275.26	1,175,583	1,175,583
City Park	0.00	0.00	0.00		
Total	421.26	421.26	396.66	1,662,478	1,662,478

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
High School	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026
City Park	0.546979	0.044837	0.199064	0.126777	0.018273	0.005878	0.019668	0.028140	0.001951	0.002100	0.004606	0.000701	0.001026

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	609.5972	609.5972	0.0144	2.9800e-003	610.8448
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	609.5972	609.5972	0.0144	2.9800e-003	610.8448
NaturalGas Mitigated	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047
NaturalGas Unmitigated	0.0111	0.1002	0.0788	6.1000e-004		7.6800e-003	7.6800e-003		7.6800e-003	7.6800e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047

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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.77809e+006	9.5900e-003	0.0872	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8856	94.8856	1.8200e-003	1.7400e-003	95.4494
Total		0.0111	0.1002	0.0788	6.0000e-004		7.6700e-003	7.6700e-003		7.6700e-003	7.6700e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047

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					
Apartments Low Rise	282321	1.5200e-003	0.0130	5.5400e-003	8.0000e-005		1.0500e-003	1.0500e-003		1.0500e-003	1.0500e-003	0.0000	15.0658	15.0658	2.9000e-004	2.8000e-004	15.1553
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.77809e+006	9.5900e-003	0.0872	0.0732	5.2000e-004		6.6200e-003	6.6200e-003		6.6200e-003	6.6200e-003	0.0000	94.8856	94.8856	1.8200e-003	1.7400e-003	95.4494
Total		0.0111	0.1002	0.0788	6.0000e-004		7.6700e-003	7.6700e-003		7.6700e-003	7.6700e-003	0.0000	109.9513	109.9513	2.1100e-003	2.0200e-003	110.6047

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667

City Park	0	0.0000	0.0000	0.0000	0.0000
High School	1.01214e+006	563.7244	0.0133	2.7500e-003	564.8781
Total		609.5972	0.0144	2.9700e-003	610.8448

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	82362.6	45.8728	1.0800e-003	2.2000e-004	45.9667
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	1.01214e+006	563.7244	0.0133	2.7500e-003	564.8781
Total		609.5972	0.0144	2.9700e-003	610.8448

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr									MT/yr						
Mitigated	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564
Unmitigated	0.7575	5.9600e-003	0.2114	3.0000e-005		1.4300e-003	1.4300e-003		1.4300e-003	1.4300e-003	0.0000	4.4235	4.4235	4.2000e-004	7.0000e-005	4.4564

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	0.0835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6670					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066
Landscaping	6.6100e-003	2.4300e-003	0.2099	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3412	0.3412	3.5000e-004	0.0000	0.3498
Total	0.7575	5.9500e-003	0.2114	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4235	4.4235	4.3000e-004	7.0000e-005	4.4564

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	0.0835					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6670					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	4.1000e-004	3.5200e-003	1.5000e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004	0.0000	4.0823	4.0823	8.0000e-005	7.0000e-005	4.1066

Landscaping	6.6100e-003	2.4300e-003	0.2099	1.0000e-005		1.1400e-003	1.1400e-003		1.1400e-003	1.1400e-003	0.0000	0.3412	0.3412	3.5000e-004	0.0000	0.3498
Total	0.7575	5.9500e-003	0.2114	3.0000e-005		1.4200e-003	1.4200e-003		1.4200e-003	1.4200e-003	0.0000	4.4235	4.4235	4.3000e-004	7.0000e-005	4.4564

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	133.2461	0.1851	4.9400e-003	139.3444
Unmitigated	149.7233	0.2309	6.0900e-003	157.3118

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.30308 / 0.821507	14.9470	0.0428	1.0700e-003	16.3370

City Park	0 / 0.238296	1.4745	3.0000e- 005	1.0000e- 005	1.4776
High School	5.677 / 14.598	133.3018	0.1881	5.0100e- 003	139.4972
Total		149.7233	0.2309	6.0900e- 003	157.3118

Mitigated

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.04246 / 0.771395	12.6642	0.0343	8.6000e- 004	13.7776
City Park	0 / 0.22376	1.3846	3.0000e- 005	1.0000e- 005	1.3874
High School	4.5416 / 13.7075	119.1974	0.1508	4.0700e- 003	124.1794
Total		133.2461	0.1851	4.9400e- 003	139.3444

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	46.9884	2.7769	0.0000	116.4116
Unmitigated	46.9884	2.7769	0.0000	116.4116

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
City Park	0.02	4.0600e-003	2.4000e-004	0.0000	0.0101
High School	222.26	45.1168	2.6663	0.0000	111.7749
Total		46.9884	2.7769	0.0000	116.4116

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	9.2	1.8675	0.1104	0.0000	4.6267
City Park	0.02	4.0600e-003	2.4000e-004	0.0000	0.0101
High School	222.26	45.1168	2.6663	0.0000	111.7749
Total		46.9884	2.7769	0.0000	116.4116

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation



**CITY OF LOS ANGELES NON-PROTECTED TREE REPORT
WINDWARD SCHOOL
11350 PALMS BOULEVARD
LOS ANGELES, CALIFORNIA 90066**

SUBMITTED TO:

**DAWN BARRETT
OPERATING OFFICER
WINDWARD SCHOOL
11350 PALMS BOULEVARD
LOS ANGELES, CALIFORNIA 90066**

PREPARED BY:

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OCTOBER 2, 2018

www.cycarlberg.com

CITY OF LOS ANGELES NON-PROTECTED TREE REPORT
11350 PALMS BOULVEARD, LOS ANGELES, CALIFORNIA

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October 2, 2018

Dawn Barrett
Operating Officer
Windward School
11350 Palms Boulevard
Los Angeles, California 90066

Re: Windward School – City of Los Angeles Tree Report

Dear Ms. Barrett,

This letter addresses our office's site visit of September 28, 2018 to the properties comprising the Windward School at 11350 Palms Boulevard in Los Angeles, California. We were retained to visit portions of the site and determine if any trees considered protected by the City of Los Angeles Tree Preservation Ordinance No. 177.044, significant by the guidelines set forth by the City's Planning Department, or recognized by CEQA were present. We were retained only to inventory those trees affected by proposed architectural and landscape renovations (see graphics on page 7). All trees were inventoried regardless of size.

The table on the following page sets forth the data for the 68 private property trees and two City of Los Angeles rights-of-way trees that were inventoried. ***None of the private property species are considered protected by the ordinance. Further, none of the inventoried trees are California native specimens.*** A private property weeping fig tree (no. 68), has experienced extensive root loss due to construction of adjacent planters and should be removed regardless of construction. Thirty-seven other private property trees are proposed to be removed and 30 trees retained and incorporated into the project design. The two City rights-of-way trees along Sawtelle Blvd will be preserved and protected during construction.

Please feel welcome to contact me at our Santa Monica office if you have any immediate questions or concerns.

Respectfully submitted,

Cy Carlberg, Registered Consulting Arborist



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TABLE 1 – TREE INVENTORY

Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) In inches	Height (approximated) in feet	Canopy Spread (approximated) N/E/S/W	Condition	Structure	Scenic Tree (CEQA)	Disposition	Comments
1	Tipu tree	<i>Tipuana tipu</i>	18.2	35	21/24/23/21	A	A	No	Remove	
2	Tipu tree	<i>Tipuana tipu</i>	22.9	35	21/18/25/25	A	A	No	Remove	
3	Tipu tree	<i>Tipuana tipu</i>	7.9	18	12/12/15/12	A	A	No	Remove	
4	Silver maple	<i>Acer saccharinum</i>	38.9	40	26/28/18/21	A	A	Yes	Remove	
5	Gold medallion	<i>Cassia leptophylla</i>	7	15	10/10/10/10	A	A	No	Remove	
6	Gold medallion	<i>Cassia leptophylla</i>	4.8	15	10/10/10/10	A	A	No	Remove	
7	Gold medallion	<i>Cassia leptophylla</i>	6.7	18	12/12/10/10	A	A	No	Remove	
8	Chinese pistache	<i>Pistacia chinensis</i>	4.2	15	7/9/0/3	A	A	No	Remove	
9	Chinese pistache	<i>Pistacia chinensis</i>	6.8	17	9/12/8/11	A	A	No	Remove	
10	Chinese pistache	<i>Pistacia chinensis</i>	7.4	22	7/8/12/12	A	A	No	Remove	
11	Gold medallion tree	<i>Cassia leptophylla</i>	10.4	22	12/11/15/15	A	A	No	Remove	
12	Chitalpa	<i>Chitalpa x tashkentensis</i>	1.8	12	4/4/4/4	A	A	No	Preserve and Protect	
13	Chitalpa	<i>Chitalpa x tashkentensis</i>	1.9	12	4/4/5/4	A	A	No	Preserve and Protect	
14	Chitalpa	<i>Chitalpa x tashkentensis</i>	1.7	12	5/4/2/4	A	A	No	Preserve and Protect	
15	Chitalpa	<i>Chitalpa x tashkentensis</i>	1.8	12	4/4/3/5	A	A	No	Preserve and Protect	



Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) In inches	Height (approximated) in feet	Canopy Spread (approximated) N/E/S/W	Condition	Structure	Scenic Tree (CEQA)	Disposition	Comments
16	Chitalpa	<i>Chitalpa x tashkentensis</i>	1.9	12	5/3/3/4	A	A	No	Preserve and Protect	
17	Chitalpa	<i>Chitalpa x tashkentensis</i>	1.6	12	4/2/4/4	A	A	No	Preserve and Protect	
18	Magnolia soulangiana	<i>Saucer magnolia</i>	1.2, 1.2, 1.2, 1.3	10	3/0/3/5	B-	B	No	Remove	
19	Magnolia soulangiana	<i>Saucer magnolia</i>	2.6, 1.8, 1.6, 1.9, 1.8, 1.8, 1.3, 1.3	11	7/8/6/5	B-	B	No	Remove	
20	Canary Island pine	<i>Pinus canariensis</i>	27	60	17/12/12/14	A	A	No	Remove	
21	Canary Island pine	<i>Pinus canariensis</i>	21.2	55	12/12/15/12	A	A	No	Remove	
22	Canary Island pine	<i>Pinus canariensis</i>	19.6	55	15/15/15/7	A	A	No	Remove	
23	American sweetgum	<i>Liquidambar styraciflua</i>	2.5, 4.1	23	9/9/8/9	A	A	No	Remove	
24	American sweetgum	<i>Liquidambar styraciflua</i>	5.1	25	8/6/7/10	A	A	No	Remove	
25	American sweetgum	<i>Liquidambar styraciflua</i>	4, 5.2	25	12/8/6/8	A	A	No	Remove	
26	Magnolia soulangiana	<i>Saucer magnolia</i>	2.8, 3.5, 4.4, 3.5, 4.5, 4.8, 3.3	20	12/10/9/8	A	A	No	Remove	
27	Magnolia soulangiana	<i>Saucer magnolia</i>	4.9., 4.2, 5.1, 3.9, 5.3, 5.2	20	12/10/6/6	A	A	No	Remove	
28	American sweetgum	<i>Liquidambar styraciflua</i>	8	30	7/12/12/12	A	A	No	Remove	
29	American sweetgum	<i>Liquidambar styraciflua</i>	5, 6.5	30	10/10/7/12	A	A	No	Remove	
30	American sweetgum	<i>Liquidambar styraciflua</i>	9.4	30	10/12/12/15	A	A	No	Remove	
31	Australian willow	<i>Geijera parviflora</i>	1.8	25	13/10/10/12	A	A	No	Remove	



Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) In inches	Height (approximated) in feet	Canopy Spread (approximated) N/E/S/W	Condition	Structure	Scenic Tree (CEQA)	Disposition	Comments
32	Australian willow	<i>Geijera parviflora</i>	13.1	30	15/15/10/12	A	A	No	Preserve and Protect	Secondary communication lines through canopy
33	Australian willow	<i>Geijera parviflora</i>	11.1	30	12/12/10/10	A	A	No	Preserve and Protect	Secondary communication lines through canopy
34	Australian willow	<i>Geijera parviflora</i>	13	30	12/12/12/12	A	A	No	Preserve and Protect	
35	Australian willow	<i>Geijera parviflora</i>	12.9	30	12/12/12/12	A	A	No	Preserve and Protect	
36	Indian hawthorne	<i>Rhaphiolepis indica</i>	2.7 @ 3'	5	4/4/4/4	A	A	No	Preserve and Protect	
37	Indian hawthorne	<i>Rhaphiolepis indica</i>	2.7 @ 3'	5	4/4/4/4	A	A	No	Preserve and Protect	
38	Indian hawthorne	<i>Rhaphiolepis indica</i>	2.5 @ 3'	5	4/4/4/4	A	A	No	Preserve and Protect	
39	Gold medallion tree	<i>Cassia leptophylla</i>	8.1	27	10/9/15/12	A	A	No	Preserve and Protect	
40	Mayten tree	<i>Maytenus boaria</i>	3.8	10	6/4/2/6	A	A	No	Preserve and Protect	
41	Mayten tree	<i>Maytenus boaria</i>	3.1	13	6/3/3/4	A	A	No	Preserve and Protect	
42	Mayten tree	<i>Maytenus boaria</i>	4.3	13	5/3/6/7	A	A	No	Preserve and Protect	
43	Tipu tree	<i>Tipuana tipu</i>	8.2	25	18/18/12/15	A	A	No	Remove	
44	Tipu tree	<i>Tipuana tipu</i>	15.5	35	15/18/18/25	A	A	No	Remove	
45	Citrus	<i>Citrus sp.</i>	1, 1	7	3/4/3/3	A	A	No	Remove	
46	Tipu tree	<i>Tipuana tipu</i>	13.1	35	18/25/12/12	A	A	No	Remove	
47	Tipu tree	<i>Tipuana tipu</i>	17.2	40	18/21/30/21	A	A	No	Remove	



Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) In inches	Height (approximated) in feet	Canopy Spread (approximated) N/E/S/W	Condition	Structure	Scenic Tree (CEQA)	Disposition	Comments
48	Mayten tree	<i>Maytenus boaria</i>	3, 3, 2, 3.4, 2.5	17	9/9/7/9	A	A	No	Remove	
49	Mayten tree	<i>Maytenus boaria</i>	2.8, 4.8	20	9/5/7/5	A	A	No	Preserve and Protect	
50	Mayten tree	<i>Maytenus boaria</i>	1.9, 2.2	12	6/4/3/4	A	A	No	Preserve and Protect	
51	Brisbane box	<i>Lophostemon confertus</i>	13	35	13/13/12/12	A	A	No	Preserve and Protect	
52	Canary Island pine	<i>Pinus canariensis</i>	19	50	12/12/10/8	A	A	No	Preserve and Protect	
53	Brisbane box	<i>Lophostemon confertus</i>	9.7	35	10/10/9/9	A	A	No	Remove	
54	Brisbane box	<i>Lophostemon confertus</i>	8.6	30	10/10/12/8	A	A	No	Remove	
55	pink trumpet tree	<i>Handroanthus impetiginosus</i>	4.3	20	7/9/6/6	A	A	No	Preserve and Protect	
56	African sumac	<i>Rhus lancea</i>	10.5	20	10/10/12/12	A	A	No	Preserve and Protect	
57	African sumac	<i>Rhus lancea</i>	10.7	20	10/10/7/10	A	A	No	Preserve and Protect	
58	African sumac	<i>Rhus lancea</i>	10.8	20	9/12/10/10	A	A	No	Preserve and Protect	
59	African sumac	<i>Rhus lancea</i>	11.8	22	8/10/12/10	A	A	No	Preserve and Protect	
60	Brisbane box	<i>Lophostemon confertus</i>	7.2	26	10/8/10/10	A	A	No	Preserve and Protect	
61	Brisbane box	<i>Lophostemon confertus</i>	8	30	10/13/11/7	A	A	No	Preserve and Protect	
62	Brisbane box	<i>Lophostemon confertus</i>	7.8	25	10/10/10/10	A	A	No	Preserve and Protect	
63	African sumac	<i>Rhus lancea</i>	10.1	18	10/10/10/11	A	A	No	Preserve and Protect	



Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) In inches	Height (approximated) in feet	Canopy Spread (approximated) N/E/S/W	Condition	Structure	Scenic Tree (CEQA)	Disposition	Comments
64	African sumac	<i>Rhus lancea</i>	9.6	15	6/9/9/6	A	A	No	Remove	
65	African sumac	<i>Rhus lancea</i>	9	20	9/10/10/12	A	A	No	Remove	
66	Spanish dagger	<i>Yucca gloriosa</i>	16.5	25	3/8/6/7	A	A	No	Remove	
67	rubber tree	<i>Ficus elastica</i>	8.9, 9.5	25	10/15/12/6	A	A	No	Remove	
68	weeping fig	<i>Ficus benjamina</i>	10, 17.5 @ 4'	30	10/9/8/12	A	B	No	Remove	Buttress roots pruned when enclosing planter was created; should remove
ST69	lemon bottlebrush	<i>Callistemon citrinus</i>	15.9	25	6/10/7/6	A	A	No	Preserve and Protect	
ST70	lemon bottlebrush	<i>Callistemon citrinus</i>	14	25	13/10/9/9	A	A	No	Preserve and Protect	

ST – Right-of-Way tree



EXHIBIT A – SITE PLAN SHOWING AREAS OF POTENTIAL IMPACT – TREES WERE INVENTORIED WITHIN THESE AREAS

(SOURCE: Montgomery Clark)

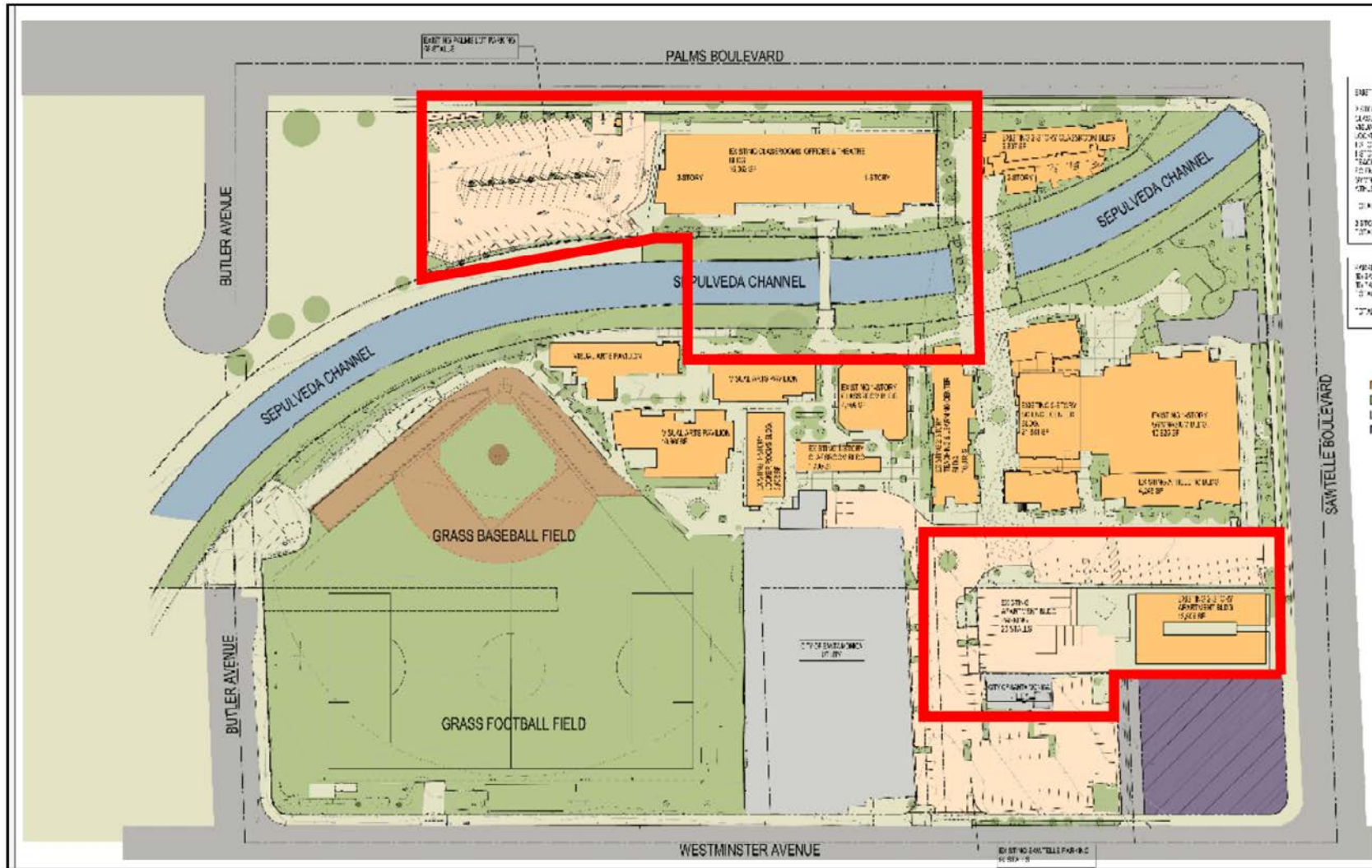
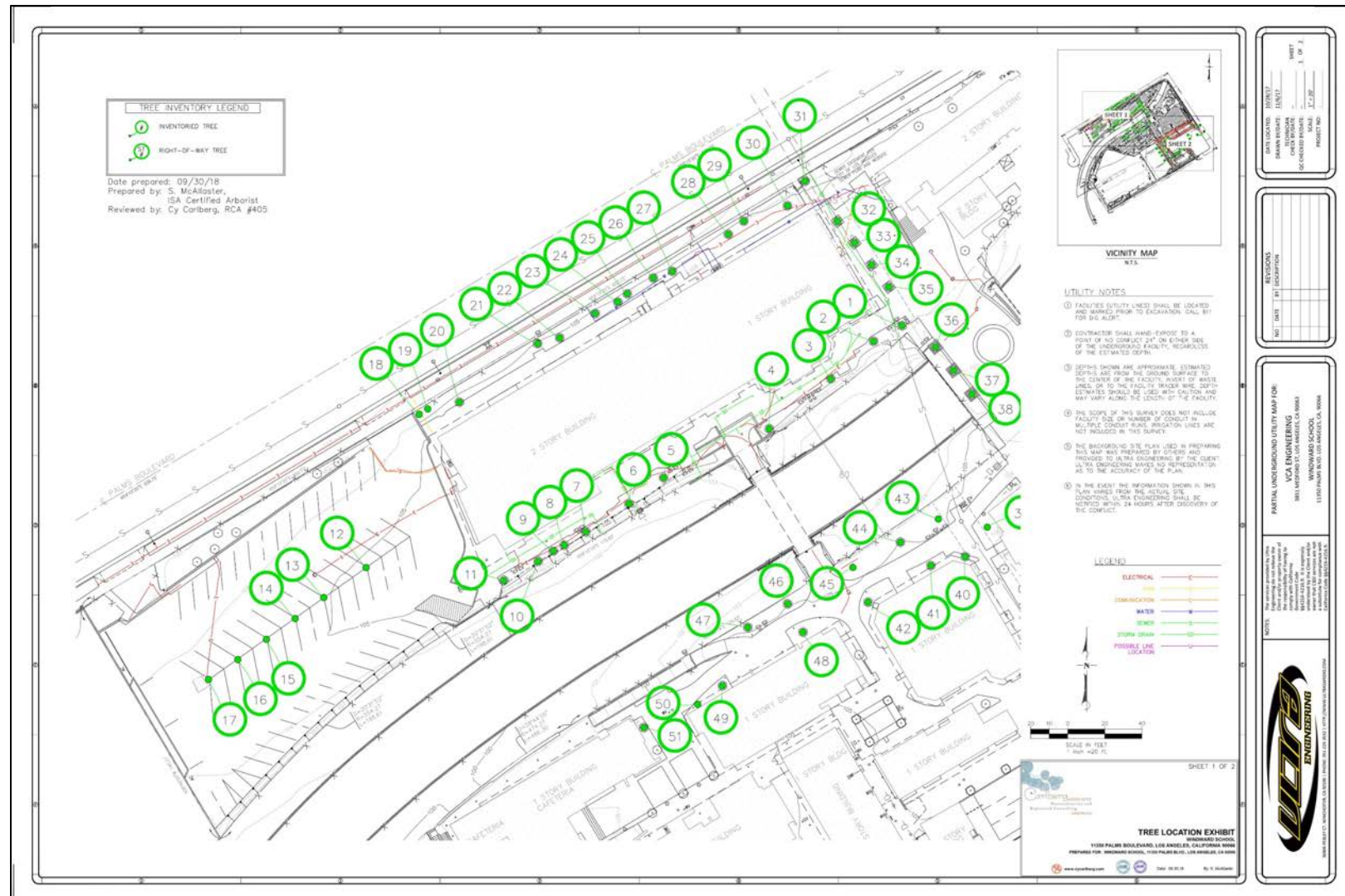


EXHIBIT B – REDUCED COPY OF THE TREE LOCATION EXHIBIT



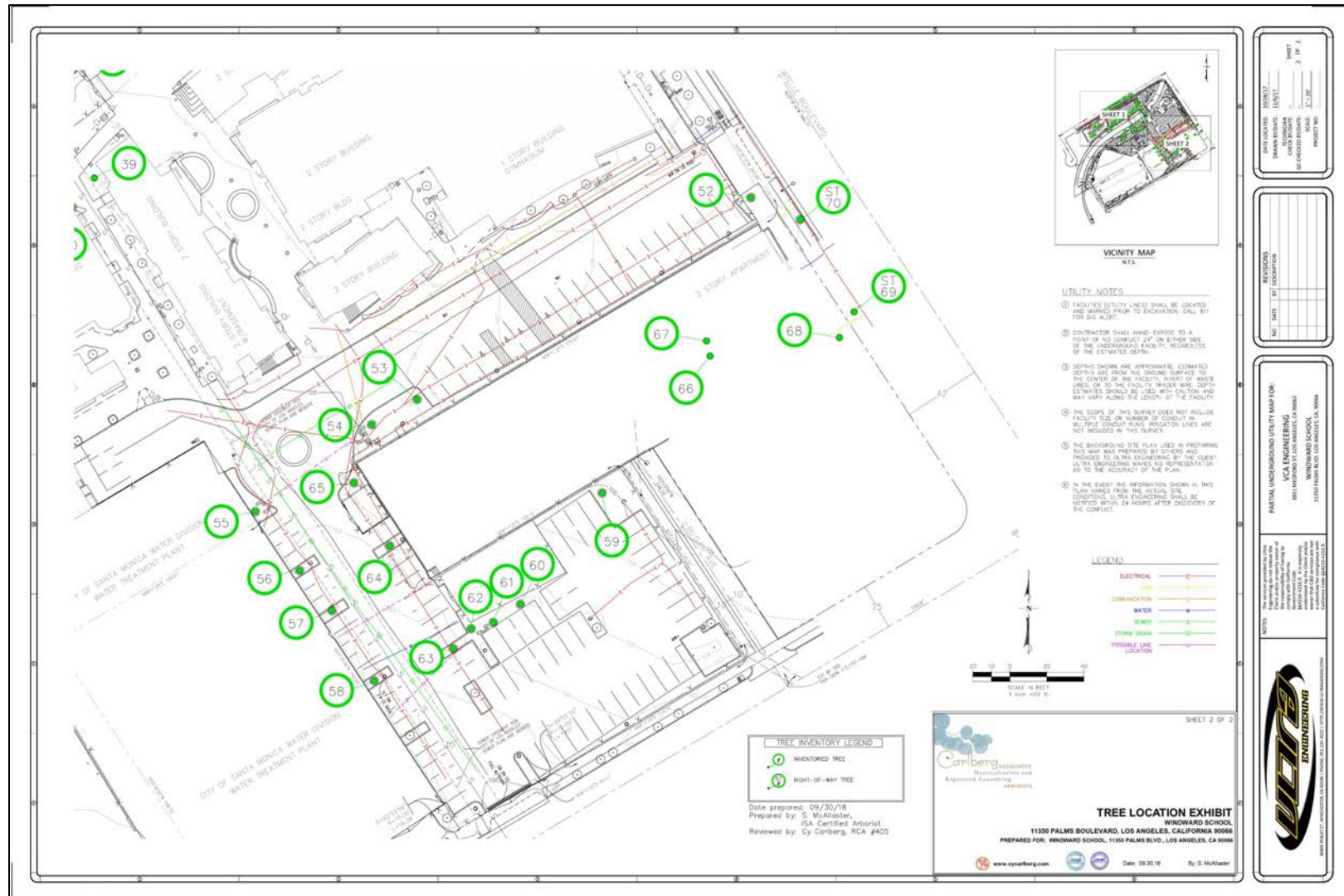


EXHIBIT C – TREE PHOTOGRAPHS



Tree #1



Tree #2



Tree #3





Tree #4



Tree #5



Tree #6

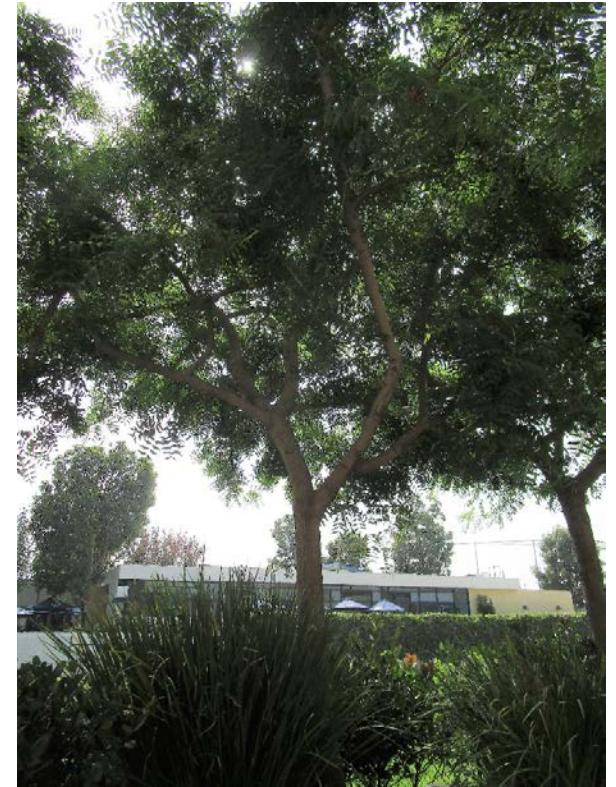




Tree #7



Tree #8



Tree #9



Tree #10



Tree #11



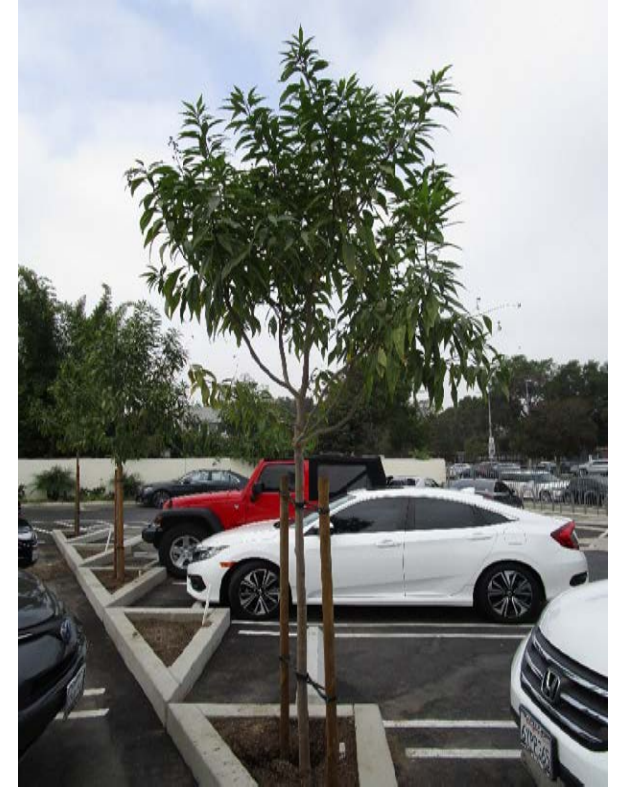
Tree #12



Tree #13



Tree #14



Tree #15





Tree #16



Tree #17



Tree #18



Tree #19



Tree #20



Tree #21





Tree #22



Tree #23



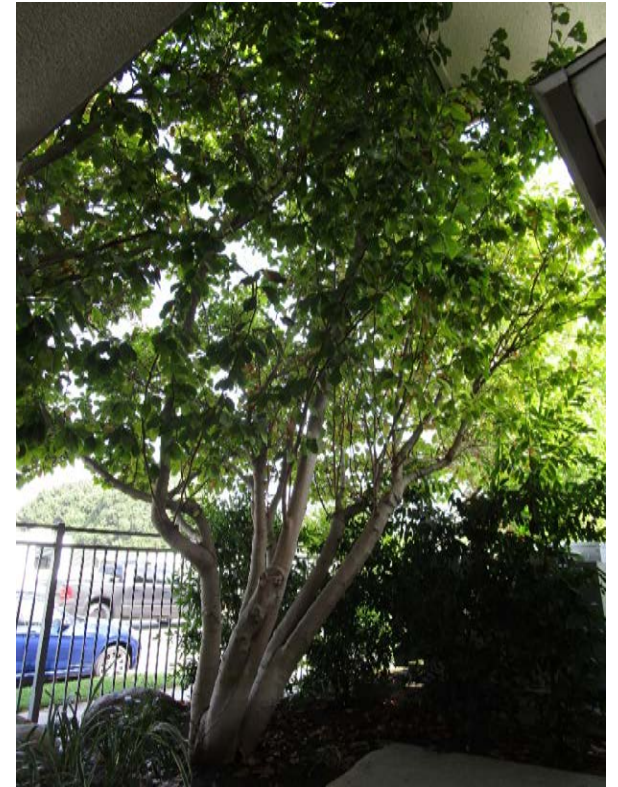
Tree #24



Tree #25



Tree #26



Tree #27



Tree #28



Tree #29



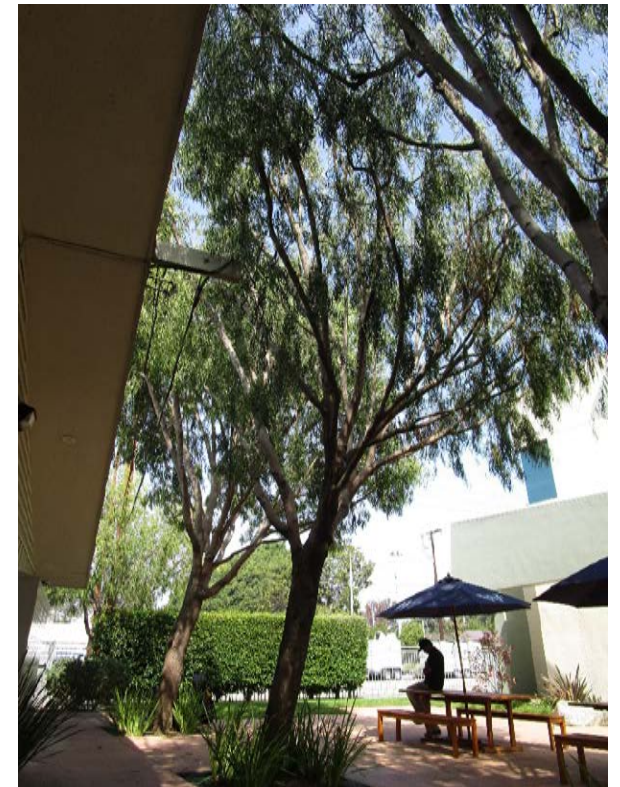
Tree #30



Tree #31



Tree #32



Tree #33





Tree #34



Tree #35



Tree #36



Tree #37



Tree #38



Tree #39





Tree #40



Tree #41



Tree #42



Tree #43



Tree #44



Tree #45



Tree #46



Tree #47



Tree #48





Tree #49



Tree #50



Tree #51



Tree #52



Tree #53



Tree #54



Tree #55



Tree #56



Tree #57



Tree #58



Tree #59



Tree #60





Tree #61



Tree #62



Tree #63



Tree #64



Tree #65



Tree #66



Tree #67



Tree #68



Tree ST69





Tree ST70



HEALTH AND STRUCTURE GRADE DEFINITIONS

Health and structure ratings of the trees are based on the archetype tree of the same species through a subjective evaluation of its physiological health, aesthetic quality, and structural integrity.

Overall physiological condition (health) and structural condition are rated A-F:

Health

- A) Outstanding – Exceptional trees of good growth form and vigor for their age class; exhibiting very good to excellent health as evidenced by normal to exceptional shoot growth during current season, good bud development and leaf color, lack of leaf, twig or branch dieback throughout the crown, and the absence of decay, bleeding, or cankers. Common leaf and/or twig pests may be noted at very minor levels.
- B) Above average – Good to very good trees that exhibit minor necrotic or physiological symptoms of stress and/or disease; shoot growth is less than reasonably expected, leaf color is less than optimal in some areas, the crown may be thinning, minor levels of leaf, twig, and branch dieback may be present, and minor areas of decay, bleeding, or cankers may be manifesting. Minor amounts of epicormic growth may be present. Minor amounts of fire damage or mechanical damage may be present. Still healthy, but with moderately diminished vigor and vitality. No significant decline noted.
- C) Average – Average, moderately good trees whose growth habit and physiological or fire-induced symptoms indicate an equal chance to either decline or continue with good health into the near future. Most of these trees exhibit moderate to significant small deadwood in outer crown areas, decreased shoot growth and diminished leaf color and mass. Some stem and branch dieback is usually present and epicormic growth may be moderate to extensive. Cavities, pockets of decay, relatively significant fire damage, bark exfoliation, or cracks may be present. Moderate to significant amounts of insect or disease symptoms may be present; the tree may be shaded or crowded in such a way that it is expected to negatively impact the lifespan of the tree. Tree may be in early decline.
- D) Below Average/Poor - trees whose growth habit and physiological or fire-induced symptoms indicate significant, irreversible decline. Most of these trees exhibit significant dieback of wood in the crown, possibly accompanied by significant epicormic sprouting. Shoot growth and leaf color and mass is either significantly diminished or nonexistent throughout the crown. Cavities, pockets of decay, significant fire damage, bark exfoliation, and/or cracks may be present. Significant amounts of insect or disease symptoms may be present; the tree may be shaded or crowded in such a way that it has negatively impacted the lifespan of the tree. Tree appears to be in irreversible decline.
- F) Dead or in spiral of decline – this tree exhibits very little to no signs of life.

Structure

- A) Outstanding – Trees with outstanding structure for their species exhibit trunk and branch arrangement and orientation that result in a sturdy form or architecture that resists failure under normal circumstances. The spacing, orientation, and size of the branches relative to the trunk are quintessential for the species and free from defects. No outward sign of decay or pathological disease is present. Some trees exhibit naturally inherent branching defects, like multiple, narrow points of attachment from one point on the trunk, which would preclude them from achieving an “A” grade.

- B) Above average - Trees with good to very good structure for their species. They exhibit trunk and branch arrangement and orientation that result in a relatively sturdy form or architecture that resists failure under normal circumstances, but may have some mechanical damage, over-pruning, or other minor structural defects. The spacing, orientation, and size of the branches relative to the trunk are still in the normal range for the species, but they exhibit a minor degree of defects. Minor, sub-critical levels of decay or pathological disease may be present, but the degree of damage is not yet structurally significant. Trees that exhibit naturally inherent branching defects, like multiple, narrow points of attachment from one point on the trunk, would generally fall in to this category. A small percentage of the canopy may be shaded or crowded, but not in such a way that it is expected to negatively impact the structural integrity or lifespan of the tree.
- C) Average - Trees with moderately good structure for their species, but with obvious defects. They exhibit trunk and branch arrangement and orientation that result in a less than sturdy form or architecture, which reduces their resistance to failure under normal circumstances. Moderate levels of mechanical damage, over-pruning, or other structural defects may be present. The spacing, orientation, and size of some of the branches relative to the trunk are not in the normal range for the species. Moderate to significant levels of decay or pathological disease may be present that increase the likelihood of structural instability. Influences such as an excessive trunk lean, slope erosion, root pruning, or other growth-inhibiting factors may be present. A moderate to significant percentage of the canopy may be shaded or crowded in such a way that it is expected to negatively impact the structural integrity or lifespan of the tree. Risk of full or partial failure in the near future appears to be moderately elevated.
- D) Well Below Average/Poor - Trees poor structure for their species and with obvious defects. They exhibit trunk and branch arrangement and orientation that result in a significantly less than sturdy form or architecture, significantly reducing their resistance to failure under normal circumstances. Significant levels of mechanical damage, over-pruning, or other structural defects may be present. The spacing, orientation, and size of many of the branches relative to the trunk are not in the normal range for the species. Significant levels of decay or pathological disease may be present that increase the likelihood of structural instability. Influences such as an excessive trunk lean, slope erosion, root pruning, or other growth-inhibiting factors may be present. A significant percentage of the canopy may be shaded or crowded in such a way that it is expected to negatively impact the structural integrity or lifespan of the tree. Risk of full or partial failure in the near future appears to be advanced.
- F) Severely Compromised – trees with very poor structure and numerous or severe defects due to growing conditions, historical or recent pruning, mechanical damage, history of limb or trunk failures, advanced and irreparable decay, disease, or severe fire damage. Trees with this rating are in severe, irreparable decline, or are barely alive. Risk of full or partial failures in the near future may be severe.



CY CARLBERG
CARLBERG ASSOCIATES

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cy@cycarlberg.com • o: 310.451.4804 • www.cycarlberg.com

<u>Education</u>	B.S., Landscape Architecture, California State Polytechnic University, Pomona, 1985 Graduate, Arboricultural Consulting Academy, American Society of Consulting Arborists, Chicago, Illinois, February 2002 Graduate, Municipal Forestry Institute, Lied, Nebraska, 2012
<u>Experience</u>	Consulting Arborist, Carlberg Associates, 1998-present Manager of Grounds Services, California Institute of Technology, Pasadena, 1992-1998 Director of Grounds, Scripps College, Claremont, 1988-1992
<u>Certificates</u>	Certified Arborist (#WE-0575A), International Society of Arboriculture, 1990 Registered Consulting Arborist (#405), American Society of Consulting Arborists, 2002 Certified Urban Forester (#013), California Urban Forests Council, 2004 Qualified Tree Risk Assessor, International Society of Arboriculture, 2011

AREAS OF EXPERTISE

Ms. Carlberg is experienced in the following areas of tree management and preservation:

- Tree health, pest and disease identification, and risk assessment
- Master Planning
- Historic landscape assessments, preservation plans, reports
- Tree inventories and reports to satisfy jurisdictional requirements
- Expert Testimony
- Post-fire assessment, valuation, and mitigation for trees and native plant communities
- Value assessments for native and non-native trees
- Guidelines for oak preservation
- Selection of appropriate tree species
- Planting, pruning, and maintenance specifications
- Tree and landscape resource mapping – GPS, GIS, and AutoCAD
- Planning Commission, City Council, and community meetings representation

PREVIOUS CONSULTING EXPERIENCE

Ms. Carlberg has overseen residential and commercial construction projects to prevent damage to protected and specimen trees. She has thirty-five years of experience in arboriculture and horticulture and has performed tree health evaluation, value and risk assessment, and expert testimony for private clients, government agencies, cities, school districts, and colleges. Representative clients include:

The Huntington Library and Botanical Gardens	The City of Claremont
The Los Angeles Zoo and Botanical Gardens	The City of Beverly Hills
The Rose Bowl and Brookside Golf Course, Pasadena	The City of Pasadena
Walt Disney Concert Hall and Gardens	The City of Los Angeles
The Art Center College of Design, Pasadena	The City of Santa Monica
Pepperdine University	Santa Monica/Malibu Unified School District
Loyola Marymount University	San Diego Gas & Electric
The Claremont Colleges (Pomona, Scripps, CMC, Harvey Mudd,	Los Angeles Department of Water and Power
Claremont Graduate University, Pitzer, Claremont University Center)	Rancho Santa Ana Botanic Garden, Claremont
Quinn, Emanuel, Urquhart and Sullivan (attorneys at law)	Latham & Watkins, LLP (attorneys at law)
Getty Trust – Eames House	Architectural Resources Group
Historic Resources Group	AHBE Landscape Architects
Mia Lehrer + Associates	Moule and Polyzoïdes, Architects and Urbanists

AFFILIATIONS

Ms. Carlberg serves with the following national, state, and community professional organizations:

- California Urban Forests Council, Board Member, 1995-2006
- Street Tree Seminar, Past President, 2000-present
- American Society of Consulting Arborists Academy, Faculty Member, 2003-2005; 2014
- American Society of Consulting Arborists, Board of Directors, 2013-2015
- Member, Los Angeles Oak Woodland Habitat Conservation Strategic Alliance, 2010-present



JAMES SANCHEZ

CARLBERG ASSOCIATES

828 Fifth Street, Suite 3, Santa Monica, California 90403
james@cycarlberg.com • m: 310.924.2246 • www.cycarlberg.com

<u>Education</u>	Graduate, Environmental Horticulture Program, El Camino College, Torrance, California, 2002 Graduate, Hawthorne High School, Hawthorne, California, 1995
<u>Experience</u>	Staff Arborist, Carlberg Associates, 2015-present Staff Arborist, Approved Tree Care, 2014-2015 Community Forester, Tree Musketeers, 2010-2014 Interior Plant Technician, Reliable Plant Service, 2008-2009 Exterior Plant Technician, Inner Gardens, 2006-2007 Exterior Plant Lead, Rolling Greens Nursery, 2005-2006 Nursery Foremen, Big Seven Nursery, 2001-2003
<u>Certificates</u>	Qualified Tree Risk Assessor, International Society of Arboriculture, 2017 Certified Arborist (#WE-9883A), International Society of Arboriculture, 2012 Environmental Horticulture Certificate, El Camino College, 2002

AREAS OF EXPERTISE

Mr. Sanchez is experienced in the following areas of tree management and preservation:

- Tree health assessment
- Tree inventories and reports to satisfy jurisdictional requirements
- Pest and disease identification
- Selection of appropriate tree species
- Planting, pruning, and maintenance specifications
- Working with community and city leaders in large tree planting programs

PREVIOUS CONSULTING EXPERIENCE

Mr. Sanchez has performed tree inventories, health evaluations, and impact analyses for private developers, architects, engineers, and homeowners. He has over 14 years of experience in arboriculture and is trained in environmental horticulture. Representative clients include:

City of Pasadena	City of LA – Department of Water & Power
City of South Gate	Claremont Golf Course
Metropolitan Transit Authority	The New Home Company
E & S Ring, Inc.	William Carey University
Hollywood Forever Cemetery	City of Inglewood
Archdiocese of Los Angeles	Universal Hilton
City of Signal Hill	Gensler Architects
Kovac Architects	Marmol Radziner, Architects
City of Torrance	Rose Bowl Stadium
Ojai Valley Community Hospital	Aurora/Signature Health Services
The Kibo Group	Colfax Charter Elementary School
Monte Vista Grove Homes	Highpointe Communities
Google Venice	Snapchat
John Anson Ford Theater	Los Angeles Football Club
The Village Green, Baldwin Hills	Monte Cedro Senior Living
Camp Munz/Mendenhall	Southern California Edison
Hotel Figueroa	Howard Hughes Center
California State University, Long Beach	Katella High School, Anaheim
Pacific Charter School	Square One Homes
Mill Creek Development	EPT Landscape Architecture
Los Angeles Unified School District	Tim Barber, Ltd., Architects

AFFILIATIONS

Mr. Sanchez serves with the following national professional organizations:

- Member in good standing, International Society of Arboriculture, Western Chapter



Map Pocket for Full-size Tree Location Exhibits



TREE INVENTORY LEGEND

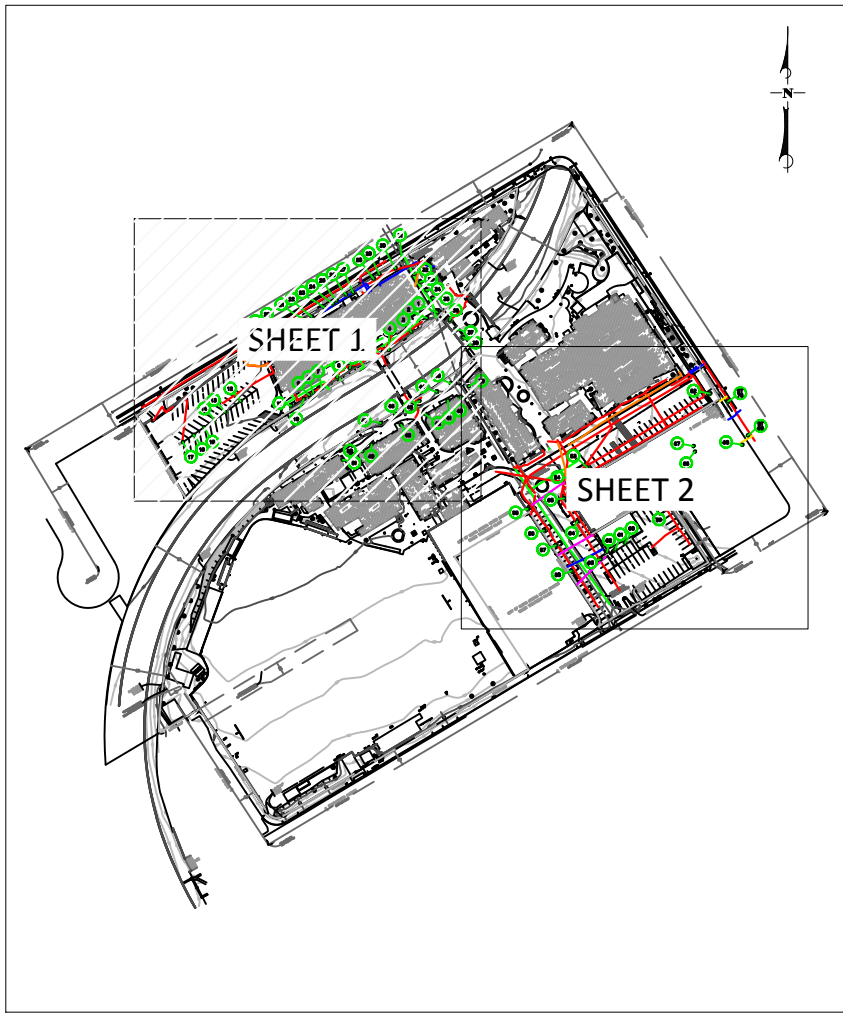
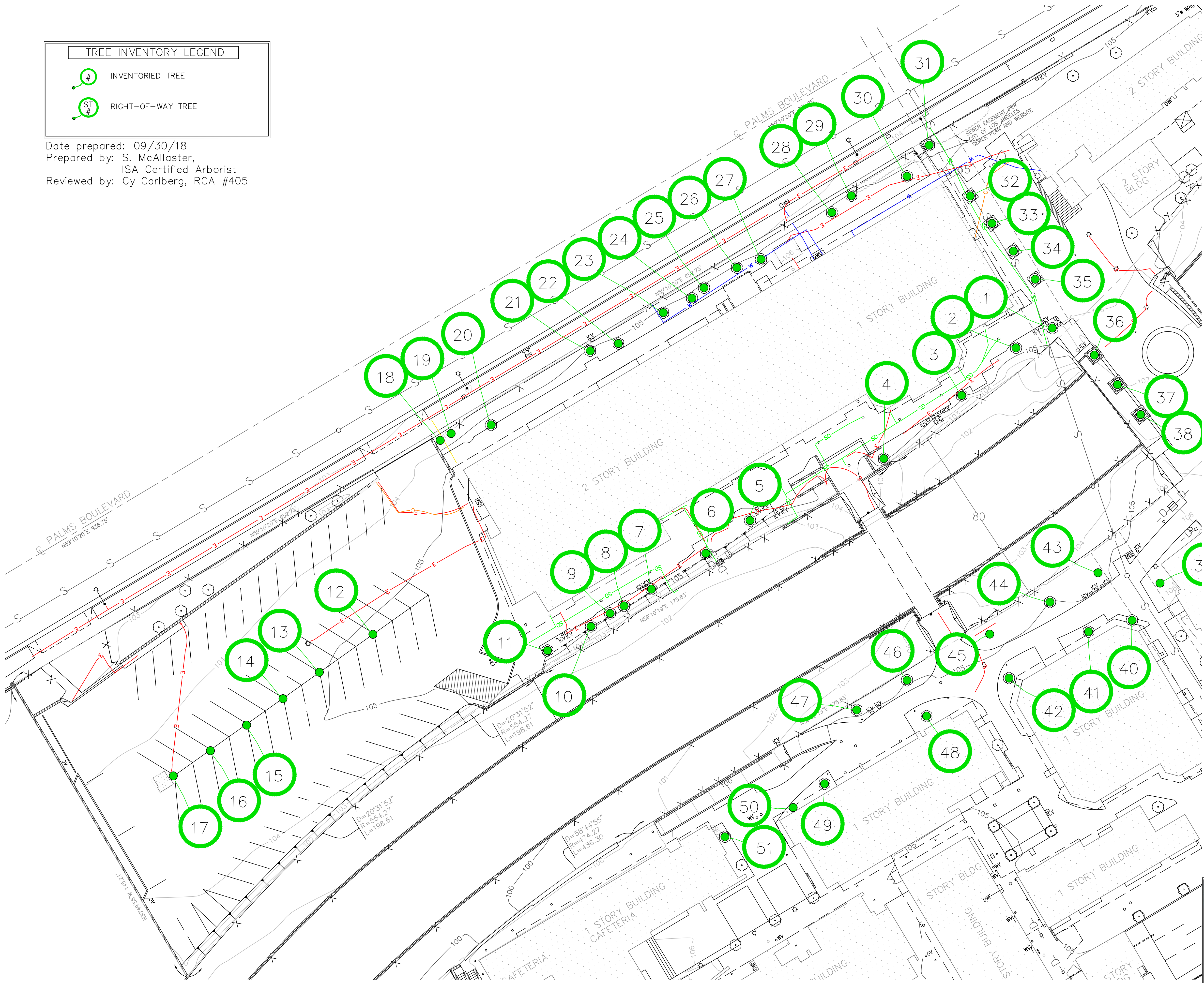
#

INVENTORIED TREE

ST #

RIGHT-OF-WAY TREE

Date prepared: 09/30/18
Prepared by: S. McAllaster,
ISA Certified Arborist
Reviewed by: Cy Carlberg, RCA #405



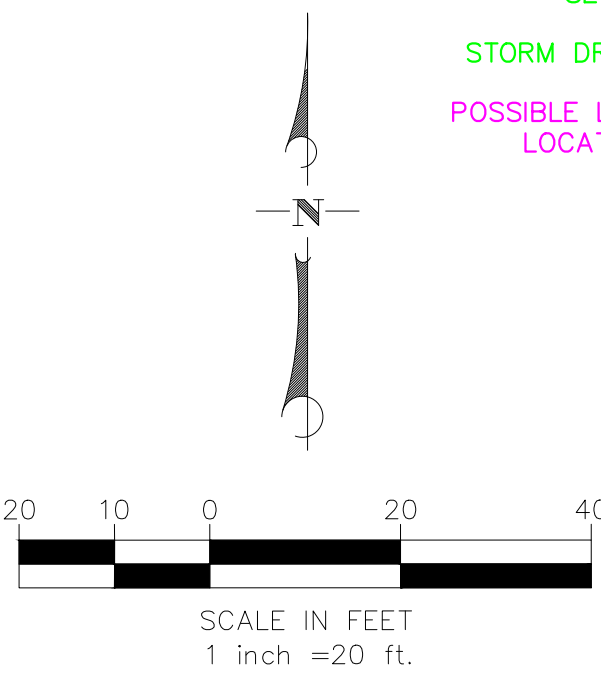
VICINITY MAP
N.T.S.

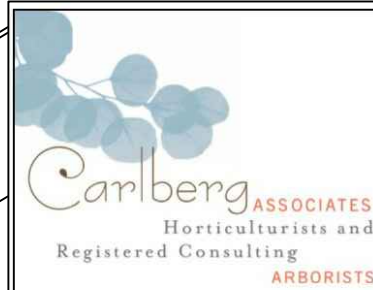
UTILITY NOTES

- FACILITIES (UTILITY LINES) SHALL BE LOCATED AND MARKED PRIOR TO EXCAVATION. CALL 811 FOR DIG ALERT.
- CONTRACTOR SHALL HAND-EXPOSE TO A POINT OF NO CONFLICT 24" ON EITHER SIDE OF THE UNDERGROUND FACILITY, REGARDLESS OF THE ESTIMATED DEPTH.
- DEPTHS SHOWN ARE APPROXIMATE. ESTIMATED DEPTHS ARE FROM THE GROUND SURFACE TO THE CENTER OF THE FACILITY, INVERT OF WASTE LINES, OR TO THE FACILITY TRACER WIRE. DEPTH ESTIMATES SHOULD BE USED WITH CAUTION AND MAY VARY ALONG THE LENGTH OF THE FACILITY.
- THE SCOPE OF THIS SURVEY DOES NOT INCLUDE FACILITY SIZE OR NUMBER OF CONDUIT IN MULTIPLE CONDUIT RUNS. IRRIGATION LINES ARE NOT INCLUDED IN THIS SURVEY.
- THE BACKGROUND SITE PLAN USED IN PREPARING THIS MAP WAS PREPARED BY OTHERS AND PROVIDED TO ULTRA ENGINEERING BY THE CLIENT. ULTRA ENGINEERING MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE PLAN.
- IN THE EVENT THE INFORMATION SHOWN IN THIS PLAN VARIES FROM THE ACTUAL SITE CONDITIONS, ULTRA ENGINEERING SHALL BE NOTIFIED WITHIN 24 HOURS AFTER DISCOVERY OF THE CONFLICT.

LEGEND

- ELECTRICAL
- E
- GAS
- G
- COMMUNICATION
- C
- WATER
- W
- SEWER
- S
- STORM DRAIN
- SD
- POSSIBLE LINE LOCATION
- U






CARLBERG ASSOCIATES
Horticulturists and
Registered Consulting
ARBORISTS


SHEET 1 OF 2

TREE LOCATION EXHIBIT

11350 PALMS BOULEVARD, LOS ANGELES, CALIFORNIA 90066
PREPARED FOR: WINDWARD SCHOOL, 11350 PALMS BLVD., LOS ANGELES, CA 90066



www.cycarlberg.com



ULTRA ENGINEERING

Date: 09.30.18

By: S. McAllaster

DATE LOCATED:	10/28/17	SHEET	1 OF 2
DRAWN BY/DATE:	11/6/17	TECHNICIAN	
CHECK BY/DATE:		QC CHECKED BY/DATE:	
PROJECT NO.:		SCALE:	1" = 20'

NO	DATE	BY	DESCRIPTION

PARTIAL UNDERGROUND UTILITY MAP FOR:

VCA ENGINEERING
3851 MIDFORD ST, LOS ANGELES, CA 90063

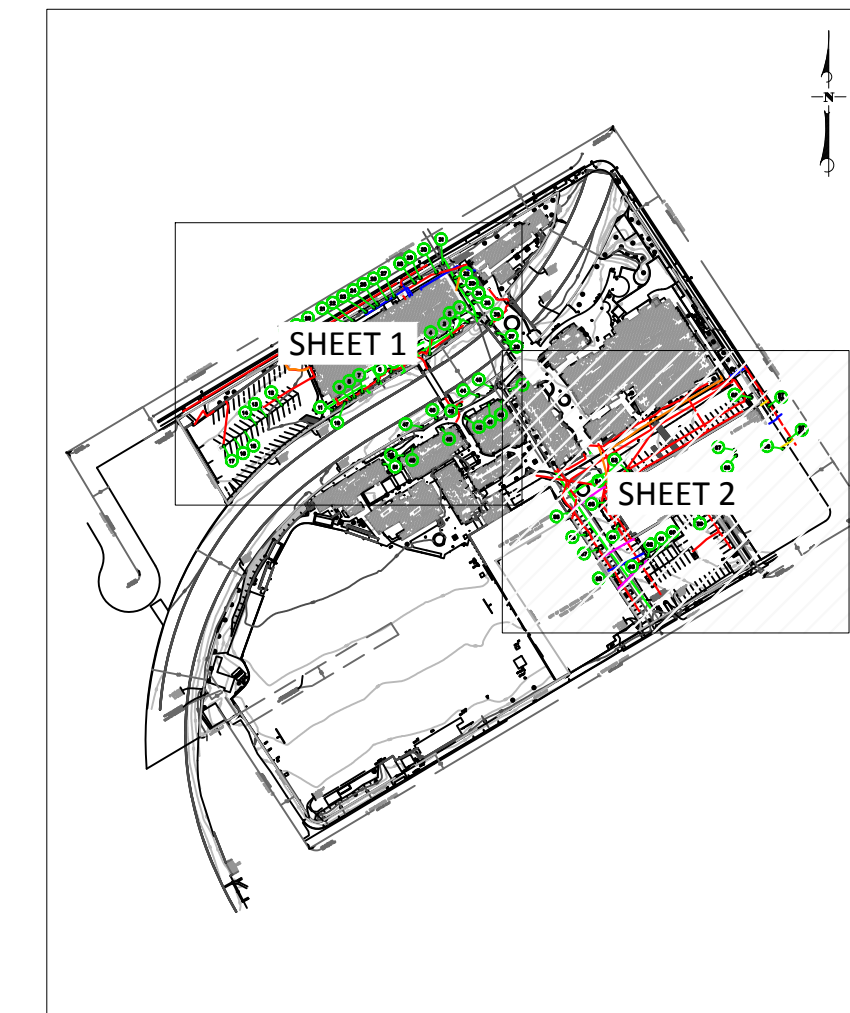
WINDWARD SCHOOL
11350 PALMS BLVD. LOS ANGELES, CA 90066

NOTES:
The services provided by Ultra Engineering do not relieve the Client and/or property owner of the responsibility of having to comply with California 684216-4216.5. It is expressly understood by the Client and/or owner that CBS services are not a substitute for compliance with California Code 684216-4216.5.



ULTRA ENGINEERING

38906 PEBLEY CT. WINCHESTER, CA 92596 | PHONE: 951-223-3552 | HTTP://WWW.ULTRAENGINEERING.COM



VICINITY MAP
N.T.S.

UTILITY NOTES

- FACILITIES (UTILITY LINES) SHALL BE LOCATED AND MARKED PRIOR TO EXCAVATION. CALL 811 FOR DIG ALERT.
- CONTRACTOR SHALL HAND-EXPOSE TO A POINT OF NO CONFLICT 24" ON EITHER SIDE OF THE UNDERGROUND FACILITY, REGARDLESS OF THE ESTIMATED DEPTH.
- DEPTHS SHOWN ARE APPROXIMATE. ESTIMATED DEPTHS ARE FROM THE GROUND SURFACE TO THE CENTER OF THE FACILITY, INVERT OF WASTE LINES, OR TO THE FACILITY TRACER WIRE. DEPTH ESTIMATES SHOULD BE USED WITH CAUTION AND MAY VARY ALONG THE LENGTH OF THE FACILITY.
- THE SCOPE OF THIS SURVEY DOES NOT INCLUDE FACILITY SIZE OR NUMBER OF CONDUIT IN MULTIPLE CONDUIT RUNS. IRRIGATION LINES ARE NOT INCLUDED IN THIS SURVEY.
- THE BACKGROUND SITE PLAN USED IN PREPARING THIS MAP WAS PREPARED BY OTHERS AND PROVIDED TO ULTRA ENGINEERING BY THE CLIENT. ULTRA ENGINEERING MAKES NO REPRESENTATION AS TO THE ACCURACY OF THE PLAN.
- IN THE EVENT THE INFORMATION SHOWN IN THIS PLAN VARIES FROM THE ACTUAL SITE CONDITIONS, ULTRA ENGINEERING SHALL BE NOTIFIED WITHIN 24 HOURS AFTER DISCOVERY OF THE CONFLICT.

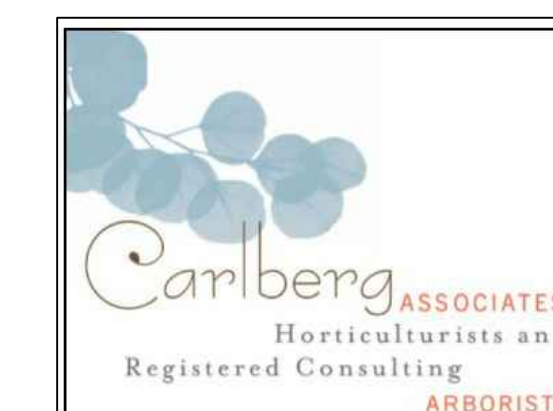
LEGEND

- | | |
|------------------------|----|
| ELECTRICAL | E |
| GAS | G |
| COMMUNICATION | C |
| WATER | W |
| SEWER | S |
| STORM DRAIN | SD |
| POSSIBLE LINE LOCATION | U |

TREE INVENTORY LEGEND

- | | |
|----|-------------------|
| # | INVENTORIED TREE |
| ST | RIGHT-OF-WAY TREE |

Date prepared: 09/30/18
Prepared by: S. McAllaster,
ISA Certified Arborist
Reviewed by: Cy Carlberg, RCA #405



TREE LOCATION EXHIBIT
WINDWARD SCHOOL
11350 PALMS BOULEVARD, LOS ANGELES, CALIFORNIA 90066
PREPARED FOR: WINDWARD SCHOOL, 11350 PALMS BLVD., LOS ANGELES, CA 90066

www.cycarlberg.com



Date: 09.30.18

By: S. McAllaster

PARTIAL UNDERGROUND UTILITY MAP FOR:

VCA ENGINEERING
3851 MEDFORD ST, LOS ANGELES, CA 90063
WINDWARD SCHOOL
11350 PALMS BLVD. LOS ANGELES, CA 90066

NOTES: The services provided by Ultra Engineering do not relieve the Client and/or property owner of the responsibility of having to comply with California Public Resources Code §84216.5. It is expressly understood by the Client and/or owner that CBS services are not a substitute for compliance with California Code §84216.5.



38906 PEBLEY CT. WINCHESTER, CA 92596 | PHONE: 951-223-3552 | HTTP://WWW.ULTRAENGINEERING.COM

REVISIONS

NO	DATE	BY	DESCRIPTION

DATE LOCATED:	10/28/17	SHEET	2 OF 2
DRAWN BY/DATE:	11/6/17	TECHNICIAN	
CHECK BY/DATE:		QC CHECKED BY/DATE:	
SCALE:	1" = 20'	PROJECT NO:	

APPENDIX C

Noise Measurement Data



WINDWARD SCHOOL PROJECT NOISE MONITORING

Page 1 of 3

Project and Task Number: 177-001-17	Date: 9/26/17
Project Name: Windward School Project	Field Activity: Noise Monitoring
Location: 11350 Palms Blvd, Los Angeles, CA	Weather: Mid to High 60's, Clear, light breeze

PERSONNEL:	Name	Company	Time In	Time Out
	Jesse McCandless	Meridian Consultants	6:40 AM	9:20 AM

PERSONAL SAFETY CHECKLIST

X	Protective Footwear	X	Hard Hat	X	Safety Vest
X	Safety Goggles	X			

TIME	DESCRIPTION OF WORK PERFORMED
6:59 AM	<u>Site:</u> 1 <u>File No:</u> 831_Data.042_Site 1 <u>GPS:</u> N34.01755 W118.42444
	<u>Location:</u>
	- East side of Sawtelle Blvd, outside of 3450 Sawtelle Blvd lobby.
	<u>Description:</u>
	-N: Multi-family residential
	-S: Multi-family residential
	-E: Multi-family residential
	-W: Entrance to parking lot of Windward School
	<u>Activity:</u>
	- Medium amount of traffic, steady flow.
	- Constant flow of cars entering Windward parking lot.
	- Small amount of foot traffic.
7:17 AM	<u>Site:</u> 5 <u>File No:</u> 831_Data.043_Site 5 <u>GPS:</u> N34.01649 W118.42365
	<u>Location:</u>
	- East side of Sawtelle Blvd, south of Westminster Ave
	<u>Description:</u>
	-N: Multi-family residential
	-S: Multi-family residential
	-E: Multi-family residential
	-W: Multi-family residential
	<u>Activity:</u>
	- Medium amount of traffic, steady flow, but no congestion.
	- @4min 50s: Loud motorcycle passed by.
	- @9min 4s: Loud box truck passed by.

NOISE MONITORING (continued)

Page 2 of 3

Project and Task Number: 177-001-17

Date: 9/26/17

TIME	DESCRIPTION OF WORK PERFORMED
7:35 AM	<u>Site:</u> 2 <u>File No:</u> 831_Data.044_Site 2 <u>GPS:</u> N34.01656 W118.42427
	<u>Location:</u>
	- South side of Westminster Ave., approx. 60 feet west of Sawtelle Blvd.
	<u>Description:</u>
	-N: Multi-family residential
	-S: Multi-family residential
	-E: Multi-family residential
	-W: Single family homes, parking lot of Windward School
	<u>Activity:</u>
	- Lots of noise from Sawtelle Blvd..
	- Traffic is becoming denser at this time on Sawtelle Blvd.
8:01 AM	<u>Site:</u> 3 <u>File No:</u> 831_Data.045_Site 3 <u>GPS:</u> N34.01567 W118.42610
	<u>Location:</u>
	- South side of Westminster Ave., midway down the football field.
	<u>Description:</u>
	-N: Football field at Windward School.
	-S: Single family residential
	-E: Single family residential
	-W: Single family residential
	<u>Activity:</u>
	- Very low activity of both cars and pedestrians.
8:28 AM	<u>Site:</u> 4 <u>File No:</u> 831_Data.046_Site 4 <u>GPS:</u> N34.01670 W118.42749
	<u>Location:</u>
	- 8440 Butler Avenue, approx. 50 feet south of Palms Blvd.
	<u>Description:</u>
	-N: Palms Blvd & Mar Vista Recreation Center
	-S: Single family residential
	-E: Single family residential
	-W: Single family residential
	<u>Activity:</u>
	- Medium amount of steady traffic on Palms Blvd. High amount of noise.

NOISE MONITORING (continued)

Page 3 of 3

Project and Task Number: 177-001-17

Date: 9/26/17

[illegible]

Summary									
Filename	831_Data.042								
Serial Number	1671								
Model	Model 831								
Firmware Version	2.313								
User									
Location									
Job Description									
Note									
Measurement Description									
Start	2017/09/26 6:59:27								
Stop	2017/09/26 7:14:34								
Duration	0:15:06.6								
Run Time	0:15:06.6								
Pause	0:00:00.0								
Pre Calibration	2017/09/26 6:51:14								
Post Calibration	None								
Calibration Deviation	---								
Overall Settings									
RMS Weight	A Weighting								
Peak Weight	A Weighting								
Detector	Slow								
Preamp	PRM831								
Microphone Correction	Off								
Integration Method	Linear								
Gain	20.0 dB								
Overload	123.1 dB								
	A	C	Z						
Under Range Peak	55.7	52.7	57.7 dB						
Under Range Limit	24.6	24.9	31.8 dB						
Noise Floor	15.5	15.8	20.6 dB						
Results									
LAeq	68.1 dB								
LAE	97.7 dB								
EA	649.892 μPa²h								
LApeak (max)	2017/09/26 7:11:09	98.9 dB							
LASmax	2017/09/26 7:11:09	81.1 dB							
LASmin	2017/09/26 7:13:56	52.2 dB							
SEA	-99.9 dB								
LAS > 65.0 dB (Exceedence Counts / Duration)	39	526.0 s							
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0 s							
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s							
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s							
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s							
Community Noise									
	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00		
	79.4		67.7	73.4	79.9	67.7	-99.9	73.4	
LCeq	74.9 dB								
LAeq	68.1 dB								
LCeq - LAeq	6.8 dB								
LAleq	70.9 dB								
LAeq	68.1 dB								
LAleq - LAeq	2.8 dB								
# Overloads	0								
Overload Duration	0.0 s								
Statistics									
LAS5.00	73.6 dB								
LAS10.00	72.0 dB								
LAS33.30	67.8 dB								
LAS50.00	65.2 dB								
LAS66.60	61.6 dB								
LAS90.00	55.3 dB								

Summary							
Filename	831_Data.044						
Serial Number	1671						
Model	Model 831						
Firmware Version	2.313						
User							
Location							
Job Description							
Note							
Measurement Description							
Start	2017/09/26 7:35:53						
Stop	2017/09/26 7:51:00						
Duration	0:15:07.7						
Run Time	0:15:07.7						
Pause	0:00:00.0						
Pre Calibration	2017/09/26 6:51:14						
Post Calibration	None						
Calibration Deviation	---						
Overall Settings							
RMS Weight	A Weighting						
Peak Weight	A Weighting						
Detector	Slow						
Preamp	PRM831						
Microphone Correction	Off						
Integration Method	Linear						
Gain	20.0 dB						
Overload	123.1 dB						
	A	C	Z				
Under Range Peak	55.7	52.7	57.7 dB				
Under Range Limit	24.6	24.9	31.8 dB				
Noise Floor	15.5	15.8	20.6 dB				
Results							
LAeq	61.1 dB						
LAE	90.7 dB						
EA	130.831 μPa²h						
LApeak (max)	2017/09/26 7:37:10	98.0 dB					
LASmax	2017/09/26 7:45:23	71.2 dB					
LASmin	2017/09/26 7:40:51	52.4 dB					
SEA	-99.9 dB						
LAS > 65.0 dB (Exceedence Counts / Duration)	21	70.4 s					
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s					
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	61.1	61.1	-99.9	61.1	61.1	-99.9	-99.9
LCeq	69.5 dB						
LAeq	61.1 dB						
LCeq - LAeq	8.4 dB						
LAleq	62.8 dB						
LAeq	61.1 dB						
LAleq - LAeq	1.7 dB						
# Overloads	0						
Overload Duration	0.0 s						
Statistics							
LAS5.00	64.7 dB						
LAS10.00	63.7 dB						
LAS33.30	61.6 dB						
LAS50.00	60.4 dB						
LAS66.60	58.8 dB						
LAS90.00	56.3 dB						

Summary							
Filename	831_Data.045						
Serial Number	1671						
Model	Model 831						
Firmware Version	2.313						
User							
Location							
Job Description							
Note							
Measurement Description							
Start	2017/09/26 8:01:36						
Stop	2017/09/26 8:16:41						
Duration	0:15:04.6						
Run Time	0:15:04.6						
Pause	0:00:00.0						
Pre Calibration	2017/09/26 6:51:14						
Post Calibration	None						
Calibration Deviation	---						
Overall Settings							
RMS Weight	A Weighting						
Peak Weight	A Weighting						
Detector	Slow						
Preamp	PRM831						
Microphone Correction	Off						
Integration Method	Linear						
Gain	20.0 dB						
Overload	123.1 dB						
	A	C	Z				
Under Range Peak	55.7	52.7	57.7 dB				
Under Range Limit	24.6	24.9	31.8 dB				
Noise Floor	15.5	15.8	20.6 dB				
Results							
LAeq	55.4 dB						
LAE	84.9 dB						
EA	34.452 μPa²h						
LApeak (max)	2017/09/26 8:02:03	98.6 dB					
LASmax	2017/09/26 8:03:16	72.2 dB					
LASmin	2017/09/26 8:08:40	46.9 dB					
SEA	-99.9 dB						
LAS > 65.0 dB (Exceedence Counts / Duration)	5	17.5 s					
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s					
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	55.4	55.4	-99.9	55.4	55.4	-99.9	-99.9
LCeq	64.6 dB						
LAeq	55.4 dB						
LCeq - LAeq	9.2 dB						
LAleq	61.2 dB						
LAeq	55.4 dB						
LAleq - LAeq	5.9 dB						
# Overloads	0						
Overload Duration	0.0 s						
Statistics							
LAS5.00	60.9 dB						
LAS10.00	58.5 dB						
LAS33.30	53.0 dB						
LAS50.00	51.1 dB						
LAS66.60	49.4 dB						
LAS90.00	47.6 dB						

Summary							
Filename	831_Data.046						
Serial Number	1671						
Model	Model 831						
Firmware Version	2.313						
User							
Location							
Job Description							
Note							
Measurement Description							
Start	2017/09/26 8:28:53						
Stop	2017/09/26 8:44:00						
Duration	0:15:06.8						
Run Time	0:15:06.8						
Pause	0:00:00.0						
Pre Calibration	2017/09/26 6:51:14						
Post Calibration	None						
Calibration Deviation	---						
Overall Settings							
RMS Weight	A Weighting						
Peak Weight	A Weighting						
Detector	Slow						
Preamp	PRM831						
Microphone Correction	Off						
Integration Method	Linear						
Gain	20.0 dB						
Overload	123.1 dB						
	A	C	Z				
Under Range Peak	55.7	52.7	57.7 dB				
Under Range Limit	24.6	24.9	31.8 dB				
Noise Floor	15.5	15.8	20.6 dB				
Results							
LAeq	60.1 dB						
LAE	89.6 dB						
EA	102.207 μPa²h						
LApeak (max)	2017/09/26 8:35:33	105.3 dB					
LASmax	2017/09/26 8:35:33	69.7 dB					
LASmin	2017/09/26 8:43:53	46.3 dB					
SEA	-99.9 dB						
LAS > 65.0 dB (Exceedence Counts / Duration)	10	29.5 s					
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s					
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	60.1	60.1	-99.9	60.1	60.1	-99.9	-99.9
LCeq	67.3 dB						
LAeq	60.1 dB						
LCeq - LAeq	7.3 dB						
LAleq	62.4 dB						
LAeq	60.1 dB						
LAleq - LAeq	2.3 dB						
# Overloads	0						
Overload Duration	0.0 s						
Statistics							
LAS5.00	63.7 dB						
LAS10.00	62.8 dB						
LAS33.30	60.7 dB						
LAS50.00	59.5 dB						
LAS66.60	58.0 dB						
LAS90.00	52.6 dB						

Summary							
Filename	831_Data.043						
Serial Number	1671						
Model	Model 831						
Firmware Version	2.313						
User							
Location							
Job Description							
Note							
Measurement Description							
Start	2017/09/26 7:17:39						
Stop	2017/09/26 7:32:48						
Duration	0:15:08.4						
Run Time	0:15:08.4						
Pause	0:00:00.0						
Pre Calibration	2017/09/26 6:51:14						
Post Calibration	None						
Calibration Deviation	---						
Overall Settings							
RMS Weight	A Weighting						
Peak Weight	A Weighting						
Detector	Slow						
Preamp	PRM831						
Microphone Correction	Off						
Integration Method	Linear						
Gain	20.0 dB						
Overload	123.1 dB						
	A	C	Z				
Under Range Peak	55.7	52.7	57.7 dB				
Under Range Limit	24.6	24.9	31.8 dB				
Noise Floor	15.5	15.8	20.6 dB				
Results							
LAeq	71.4 dB						
LAE	100.9 dB						
EA	1.382 mPa²h						
LApeak (max)	2017/09/26 7:22:26	107.8 dB					
LASmax	2017/09/26 7:26:37	89.7 dB					
LASmin	2017/09/26 7:30:26	55.5 dB					
SEA	-99.9 dB						
LAS > 65.0 dB (Exceedence Counts / Duration)	29	712.7 s					
LAS > 85.0 dB (Exceedence Counts / Duration)	2	4.8 s					
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s					
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s					
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	71.4	71.4	-99.9	71.4	71.4	-99.9	-99.9
LCeq	77.5 dB						
LAeq	71.4 dB						
LCeq - LAeq	6.1 dB						
LAleq	74.3 dB						
LAeq	71.4 dB						
LAleq - LAeq	3.0 dB						
# Overloads	0						
Overload Duration	0.0 s						
Statistics							
LAS5.00	74.8 dB						
LAS10.00	73.8 dB						
LAS33.30	70.9 dB						
LAS50.00	68.7 dB						
LAS66.60	66.2 dB						
LAS90.00	60.4 dB						

Summary							
Filename	831_Data.047						
Serial Number	1671						
Model	Model 831						
Firmware Version	2.313						
User							
Location							
Job Description							
Note							
Measurement Description							
Start	2017/09/26 8:45:04						
Stop	2017/09/26 9:00:12						
Duration	0:15:07.7						
Run Time	0:15:07.7						
Pause	0:00:00.0						
Pre Calibration	2017/09/26 6:51:14						
Post Calibration	None						
Calibration Deviation	---						
Overall Settings							
RMS Weight	A Weighting						
Peak Weight	A Weighting						
Detector	Slow						
Preamp	PRM831						
Microphone Correction	Off						
Integration Method	Linear						
Gain	20.0 dB						
Overload	123.1 dB						
	A	C	Z				
Under Range Peak	55.7	52.7	57.7	dB			
Under Range Limit	24.6	24.9	31.8	dB			
Noise Floor	15.5	15.8	20.6	dB			
Results							
LAeq	73.6 dB						
LAE	103.2 dB						
EA	2.309 mPa²h						
LApeak (max)	2017/09/26 8:47:09	99.7	dB				
LASmax	2017/09/26 8:47:09	84.3	dB				
LASmin	2017/09/26 8:45:11	49.6	dB				
SEA	-99.9 dB						
LAS > 65.0 dB (Exceedence Counts / Duration)	16	760.5	s				
LAS > 85.0 dB (Exceedence Counts / Duration)	0	0.0	s				
LApeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0	s				
LApeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0	s				
LApeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0	s				
Community Noise	Ldn	LDay 07:00-22:00	LNight 22:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-22:00	LNight 22:00-07:00
	73.6	73.6	-99.9	73.6	73.6	-99.9	-99.9
LCeq	77.0 dB						
LAeq	73.6 dB						
LCeq - LAeq	3.4 dB						
LAleq	74.9 dB						
LAeq	73.6 dB						
LAleq - LAeq	1.3 dB						
# Overloads	0						
Overload Duration	0.0 s						
Statistics							
LAS5.00	78.3 dB						
LAS10.00	77.3 dB						
LAS33.30	74.1 dB						
LAS50.00	72.0 dB						
LAS66.60	69.1 dB						
LAS90.00	59.6 dB						

Site
Ambient Noise

REC-1
68.1

Construction Phase	Number of	Acoustical	Actual Noise Level	Distance	Spec	Actual
Equipment Type	Units	Usage Factor	At 50 feet, Lmax	Feet	Lmax	Lmax
Maximum Construction					89.6	84.6
Concrete Saws	1	0.2	90	50	89.6	82.6
Rubber Tired Dozers	1	0.4	85	50	81.7	77.7
Tractor/Loaders/Backhoes	1	0.4	80	50	77.6	73.6
Tractor/Loaders/Backhoes	1	0.4	80	50	77.6	73.6

Project Title:

Site

Ambient Noise

Windward School Master Plan

REC-2

55.4

Calculation

Construction Phase	Number of Units	Acoustical Usage Factor	Actual Noise Level At 50 feet, Lmax	Distance Feet	Spec Lmax	Actual Lmax
Equipment Type						
Maximum Construction					95.6	90.6
Concrete Saws	1	0.2	90	25	95.6	88.6
Rubber Tired Dozers	1	0.4	85	25	87.7	83.7
Tractor/Loaders/Backhoes	1	0.4	80	25	83.6	79.6
Tractor/Loaders/Backhoes	1	0.4	80	25	82.6	79.6

Project Title:

Site

Ambient Noise

Windward School Master Plan

REC-3

55.4

Calculation

Construction Phase	Number of Units	Acoustical Usage Factor	Actual Noise Level At 50 feet, Lmax	Distance Feet	Spec Lmax	Actual Lmax
Equipment Type						
Maximum Construction					95.6	90.6
Concrete Saws	1	0.2	90	25	95.6	88.6
Rubber Tired Dozers	1	0.4	85	25	87.7	83.7
Tractor/Loaders/Backhoes	1	0.4	80	25	83.6	79.6
Tractor/Loaders/Backhoes	1	0.4	80	25	82.6	79.6

TRAFFIC IMPACT ANALYSIS REPORT

Proposed Windward School Master Plan Update 11350 Palms Boulevard Los Angeles, California



Prepared for:

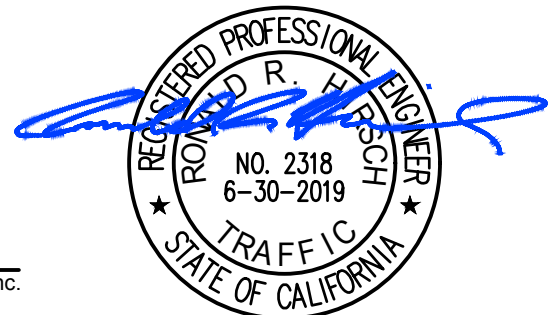
**Windward School
11350 Palms Boulevard
Los Angeles, California**

Prepared by:



Hirsch/Green Transportation Consulting, Inc.

13333 Ventura Boulevard, #204
Sherman Oaks, California 91423
(818) 325-0530



REVISED MAY 2018

EXECUTIVE SUMMARY

The project under consideration is a proposed update to the current Master Plan (approved in May 1999) for the existing Windward School campus located at 11350 Palms Boulevard, et al, on the southwest corner of the intersection of Palms Boulevard and Sawtelle Boulevard in the Palms community of the City of Los Angeles. The Windward School is a private middle and high school with a permitted enrollment (per its 1999 Master Plan) of 550 students, although it exhibits an existing enrollment of 585 students. The School's campus is currently developed with a total of approximately 90,147 square feet of classroom space, administrative offices, and other facilities including a gymnasium, a small school-related theater, and athletic fields, along with two on-site parking lots (one along Palms Boulevard and one along Sawtelle Boulevard) containing a total of approximately 152 vehicular parking spaces. However, during the spring of 2018, the School intends to reconfigure the existing "Palms Boulevard" parking lot, including the consolidation of all vehicular access for the lot to a single driveway, which will slightly reduce the amount of parking in that lot, and result in a total on-site vehicular parking supply at the School of approximately 150 spaces (prior to the initiation of the proposed Master Plan Update Project). The School also owns an adjacent parcel along Sawtelle Boulevard that is currently developed with a 20-unit apartment complex and associated site-serving parking lot.

The proposed Master Plan Update Project itself will include the renovation and/or expansion of several of the existing buildings located on the "main" campus, along with the construction of a new approximately 58,157 square foot performing arts facility housing a 250-seat auditorium and flexible-seating (up to 189 seats) theater space on the "apartment building" parcel; in total, the Master Plan Update Project will increase the amount of education-related development on the "expanded" Windward School campus by approximately 67,851 square feet. Additionally, the Master Plan Update Project includes a request for an immediate increase in the School's permitted enrollment from 550 students to 585 students (equivalent to its existing enrollment), as well as a future 40-student enrollment increase to a total of 625 students. The improvements will occur in multiple phases over a period of several years, with both the renovation/expansion of the existing buildings and construction of the new performing arts facility, and the requested enrollment increase to 625 students expected to be completed by the end of 2024.

The project applicant (Windward School) retained Hirsch/Green Transportation Consulting, Inc. to evaluate the potential traffic-related impacts of the proposed Master Plan Update Project on the roadways and intersections in the area surrounding the School. The scope of this study was

reviewed and approved by LADOT prior to the initiation of these analyses, in order to ensure that appropriate and acceptable methodologies and assumptions were utilized. Based on those reviews and LADOT's recommendations, this study evaluates the existing (year 2017) and forecast future (year 2024) weekday traffic conditions at a total of five signalized intersections adjacent to or near the campus during the School's specific peak morning student/staff "arrival" and afternoon class "dismissal" periods. Further, although the primary purpose of this study is to identify the potential traffic impacts associated with the future 40-student enrollment increase requested as part of the Master Plan Update Project, it also includes a supplemental evaluation of the School's prior (unanalyzed) 35-student enrollment increase (from its permitted enrollment of 550 students to the existing enrollment level of 585 students), in order to determine whether any detrimental impacts had occurred due to this earlier increase in enrollment, as part of the School's requested action to approve its current enrollment conditions. This study also includes an analysis of potential project-related impacts to regionally-significant transportation facilities in the study area, including freeways and associated access ramps, and key arterial intersections as required by the Los Angeles County Congestion Management Program ("CMP"), along with evaluations to identify any impacts to the existing public transit facilities serving the study area.

The traffic-generation rates and other data used to estimate the number of trips associated with most development projects located within the City of Los Angeles, including "school" uses such as the proposed Windward School Master Plan Update Project, are typically obtained from the Institute of Transportation Engineers' ("ITE") *Trip Generation Manual*. The current edition of this ITE publication identifies trip generation and other data for several different school-related uses, although a review of the data indicated that none would accurately reflect the operations of either the existing Windward School or the proposed Master Plan Update Project. Therefore, this study includes, and is based upon, a series of trip generation and parking utilization surveys conducted at the existing Windward School, which were used to estimate and evaluate the potential trip generation and parking demands of the proposed Master Plan Update Project.

Based on these empirical trip generation and parking demand observations, it was determined that the existing Windward School, at its current enrollment level of 585 students, generates an average of about 662 trips (393 inbound, 269 outbound) during the "AM (School) Peak Hour", and about 407 trips (167 inbound, 240 outbound) during the "PM (School) Peak Hour" periods analyzed in this study. Using these values, the number of trips expected to be generated by the School's prior 35-student enrollment increase, and by the future 40-student enrollment increase requested in the proposed Master Plan Update Project, were then estimated. This procedure

identified that the prior 35-student enrollment increase could have resulted in an increase of about 114 new trips per day, including about 35 new trips during the “AM (School) Peak Hour” and about 23 new trips during the “PM (School) Peak Hour”, from the traffic levels generated by the School’s currently-permitted 550-student enrollment limit; note that these incremental trips are already occurring, and are therefore intrinsically included in the traffic counts used to identify the “existing” (year 2017) conditions at each of the five study intersections. Additionally, the future 40-student enrollment increase requested as a part of the Master Plan Update Project is anticipated to result in a total of about 130 new trips per day, including about 40 new trips during the “AM (School) Peak Hour” and about 26 new trips during the “PM (School) Peak Hour”, which would occur in addition to the School’s current trip generation levels identified earlier.

The Master Plan Update Project also includes the demolition of the existing apartment complex located on the campus-adjacent parcel, which will result in the removal of its associated trips from the “existing” area traffic volumes, thereby offsetting some of the potential new traffic expected to be generated by the Master Plan Update Project’s 40-student enrollment increase (the removal of the existing apartment complex will not affect the number of trips estimated to occur due to the prior 35-student enrollment increase, since the apartment complex was active and generating traffic at the time these earlier enrollment increase traffic additions occurred). However, for the purposes of this study, in order to provide a highly conservative evaluation of the potential traffic impacts of the proposed Master Plan Update Project, the trip reductions resulting from the removal of the existing apartment complex were not included in this analysis. This assumption produces a higher estimate of the incremental trip increases at the School due to the requested future 40-student enrollment increase, and results in a worst case assessment of the potential traffic impacts associated with the proposed Master Plan Update Project.

The results of the analyses of the potential impacts of the incremental traffic additions related to the previous (unanalyzed) 35-student enrollment increase at the Windward School indicate that no significant impacts are likely to have occurred due to this earlier enrollment increase at any of the study intersections during either the “AM (School)” or “PM (School)” peak hours, thereby supporting the School’s request for an “immediate” increase in its permitted enrollment levels to accommodate its current enrollment of 585 students (which includes the additional 35 students). Similarly, the development of the proposed Master Plan Update Project and the addition of the incremental traffic associated with its requested 40-student enrollment increase will not result in significant impacts to any of the study intersections under either the existing (year 2017) or forecast future (year 2024) conditions. Further, neither the prior 35-student enrollment increase

nor the future 40-student enrollment increase requested in the Master Plan Update Project, either individually or cumulatively, will generate a sufficient amount of net new traffic to result in significant impacts to any of the freeway segments or access ramps, or CMP arterial roadways or intersections in the vicinity of the School, and no significant impacts to any of the existing public transit services in the area will occur. Therefore, no traffic-related mitigation measures associated with the Windward School's current or anticipated future operations is warranted.

Additionally, an evaluation of the existing and proposed on-site parking supply at the campus was conducted, to assess whether the amount of parking provided will be adequate to meet the School's parking requirements and accommodate its current and anticipated parking demands. Pursuant to its existing entitlements, the Windward School is required to provide a minimum of 140 on-site vehicular parking spaces, and as currently configured, the campus exhibits a total of 152 vehicular parking spaces. Although the modifications to the "Palms Boulevard" parking lot (which will occur prior to the initiation of the proposed Master Plan Update Project) will slightly reduce the on-site vehicular parking to a total of 150 spaces, the School will continue to provide sufficient parking to meet the requirements associated with its existing level of development. The current entitlements do not specifically identify any requirements for bicycle parking spaces, although the School currently provides a limited number of on-site bicycle racks.

Following the completion of the proposed Master Plan Update Project, the Windward School will be required to provide a total of approximately 228 on-site vehicular parking spaces, including the currently-required 140 spaces, plus a total of approximately 88 additional spaces associated with the proposed new performing arts facility (50 "auditorium" spaces and 38 "theater" spaces). Further, while the School's existing entitlements do not specifically require any bicycle parking, the current City of Los Angeles Municipal Code ("LAMC") identifies that the new classrooms and assembly areas constructed as part of the Master Plan Update Project will require the provision of a minimum of approximately 35 on-site bicycle parking spaces (29 short-term, six long-term).

The Master Plan Update Project includes a total of approximately 40 bicycle parking spaces located throughout the campus, which will comply with the applicable LAMC requirements, and as a result, no significant bicycle parking-related impacts are anticipated. However, the School will provide a total of only 150 on-site vehicular parking spaces following the completion of the Master Plan Update Project, resulting in a vehicular parking shortfall of approximately 78 spaces compared to the applicable requirement of 228 total spaces. Therefore, as a part of the proposed Master Plan Update Project, the Windward School will request a variance to allow the provision of 150 on-site vehicular parking spaces in lieu of the 228 spaces otherwise required.

The approval of a parking variance (to provide fewer parking spaces than are required) is typically contingent upon proof that the requested number of parking spaces will be adequate to accommodate the actual parking demands expected to occur at the subject facility. To this end, the traffic and parking data collected at the School was further evaluated in order to determine whether the proposed (and requested) 150-space vehicular parking supply will be sufficient.

These data indicated that the current maximum total parking demand for the School, including both on-site and off-site (on-street) utilizations, is approximately 184 vehicles, consisting of about 110 faculty/staff-related vehicles and about 74 student-related (student-driven) vehicles. Additionally, the potential future parking demands for the School following the completion of the Master Plan Update Project and its requested 40-student enrollment increase were estimated. Assuming that the travel characteristics of the School's students and faculty/staff personnel remain relatively stable throughout the proposed enrollment increase, the 40 additional students would be expected to generate an incremental parking demand of only about five (5) vehicles; since the Master Plan Update Project does not propose any significant changes to the School's current staffing levels, no increases to its existing faculty/staff parking demands are anticipated. As a result, at its requested full enrollment level of 625 students, the School is forecast to exhibit a total vehicular parking demand of approximately 189 vehicles, including about 110 faculty/staff (remaining unchanged from its current level) and about 79 student-driven vehicles. Therefore, not only will the School's requested 150-space on-site vehicular parking supply be less than the 228 spaces required by the LAMC, the empirical parking demand evaluations indicate that it will not be adequate to accommodate the parking demands anticipated at the School following the completion of the Master Plan Update Project and its requested 40-student enrollment increase.

However, in order to address these anticipated LAMC-related and empirical parking shortfalls, the Master Plan Update Project includes a Transportation Demand Management ("TDM") Plan to reduce the vehicular parking demands for the School during typical (school day) operations to a level that can be fully accommodated on-site within the requested 150-space parking supply. Additionally, the TDM Plan will also include a variety of strategies and programs to minimize the amount of traffic generated by the School, including limiting the number of student drivers, requiring minimum vehicle occupancies for faculty/staff-related and student-driven vehicles, enhancing and/or expanding the School's existing student bus program, assisting with the formation of carpools for both students and faculty/staff personnel, and educating and assisting students and faculty/staff about the use of public transit.

Specifically, the TDM Plan will limit the number of student-drivers to a maximum of 45 vehicles, with each vehicle required to exhibit a minimum occupancy of 3.00 students (including the student driver and at least two student passengers), nearly twice the current average occupancy of about 1.615 students per vehicle, while also requiring that all faculty/staff-driven vehicles maintain an average occupancy of 1.33 (faculty/staff) persons, or about 10 percent higher than the current level of about 1.202 persons per vehicle, reducing the parking demands for the School's faculty/staff personnel to between about 99 and 103 spaces (depending on the number of faculty/staff that arrive at the campus via drop-offs, or who walk, bicycle, or use public transit). As a result, the TDM Plan is expected to reduce the School's total (student and faculty/staff) vehicular parking demands to between 144 and 148 total spaces at its anticipated maximum enrollment of 625 students, which can be fully accommodated within the requested 150-space on-campus parking supply without the need for any off-site parking for either the faculty/staff or student-related vehicles. Therefore, with the implementation of the TDM Plan and achievement of its recommended minimum vehicle occupancies, the School's request for a parking variance to reduce its required parking from 228 spaces to 150 spaces can be supported.

Additionally, the TDM Plan will also include measures to reduce the overall trip generation levels at the School by requiring minimum vehicle occupancies for both its student busing program, and for the parent-driven carpools that transport students to and from the campus. The School currently operates five bus routes, which together exhibit a total capacity of about 188 students, although it exhibits an average ridership of only about 54 students per day (about 29 percent of its total capacity), and as such, is substantially underutilized. The TDM Plan will require that a minimum of 20 percent of the School's students (125 students at the maximum enrollment level of 625 students requested in the Master Plan Update Project), participate in the busing program during the "morning arrival" period (since the number of students leaving the campus during the afternoon "class dismissal" period can vary substantially due to off-site or afterschool activities, the TDM Plan will not require a specific level of student bus ridership during this period). Although this component of the TDM Plan will not reduce the number of vehicle trips to or from the campus (the number of school buses will be unchanged), it will reduce the number of students who utilize other trip-making modes of transportation and ultimately reduce the overall School-related traffic. Finally, the parent-driven (carpool) vehicles that drop-off/pick-up students at the School site currently exhibit an average occupancy of about 1.480 students per vehicle. The TDM Plan will require that this occupancy level be increased by about 20 percent, to an average of about 1.75 students per vehicle (again, during the "morning arrival" period only).

To summarize the effects of the parking demand and trip reduction measures in the TDM Plan, at the total maximum enrollment of 625 students requested in the Master Plan Update Project, a minimum of 125 students will be required to use the School's student busing program, with an additional 365 students expected to be dropped off at the School via parent-driven carpools, resulting in a total of 490 students that will be transported to the campus without generating any vehicular parking demands (the School's buses will not be parked at the site during the day). The remaining 135 students will arrive in student-driven carpools with a minimum occupancy of three students per vehicle, producing a maximum student-related parking demand of 45 spaces. The School's 137 faculty and staff will be required to participate in a carpool/rideshare program designed to achieve an average vehicle occupancy of 1.33 (faculty/staff) persons per vehicle, resulting in a total faculty/staff-related parking demand of between about 99 and 103 spaces.

Additionally, the increases in the average occupancies for the various School-related vehicles recommended in the TDM Plan, including the increased ridership in the student busing program, will also result in reductions to the School's trip generation levels. Overall, the TDM Plan is anticipated to reduce the School's "AM (School) Peak Hour" traffic by about 144 trips, or just over 20 percent, from the levels expected at its requested maximum enrollment of 625 students. However, more importantly, the TDM Plan will also reduce the School's traffic during this period by about 104 trips, or nearly 16 percent, compared to its current (585-student enrollment) levels, and by about 69 trips, or 11 percent, from the amount of traffic estimated to have occurred under the "pre-existing" (550-student) conditions, which reflect the assumed operations of the School prior to its existing enrollment level. Similarly, during the "PM (School) Peak Hour", the TDM Plan is anticipated to result in a reduction of about 66 trips, or just over 15 percent, from the traffic levels forecast for the School at its requested maximum enrollment of 625 students, as well as reductions of about 40 trips, or nearly 10 percent, compared to its existing trip levels, and of about 17 trips, or just over four percent, from the number of trips assumed to have been generated by the School at its previous ("pre-existing") enrollment level of 550 students.

Therefore, even though no significant traffic-related impacts are anticipated as a result of the proposed Master Plan Update Project, the Windward School's TDM Plan will not only offset any potential traffic increases resulting from the requested 40-student enrollment increase during both the "morning arrival" and afternoon "class dismissal" periods, it will also reduce the amount of traffic currently occurring at the site, and bring the School's overall peak hour traffic to levels below that estimated to have been generated prior to its earlier 35-student enrollment increase.

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INTRODUCTION

This report summarizes the results of a traffic impact and parking demand study conducted for a proposed update to the current Master Plan Project (originally approved in May of 1999) for the existing Windward School campus at 11350 Palms Boulevard, et al, on the southwest corner of the intersection of Palms Boulevard and Sawtelle Boulevard in the Palms community of the City of Los Angeles. The Windward School is a private college preparatory middle and high school with a permitted enrollment (per its approved 1999 Master Plan) of 550 students, although it exhibits an existing enrollment of 585 students. The School's approximately 8.75-acre campus is currently developed with a total of approximately 90,147 square feet of classroom space, administrative offices, and other facilities including a gymnasium, a small school-related theater, athletic fields, and two separate surface parking lots (one along Palms Boulevard and the other along Sawtelle Boulevard) containing a total of approximately 152 vehicular parking spaces. Additionally, the Windward School owns an additional approximately 0.47-acre parcel located along Sawtelle Boulevard adjacent to the southeast corner of the existing campus that is currently developed with a 20-unit apartment complex and associated site-serving parking lot.

The location of the existing Windward School campus and adjacent "apartment building" parcel, which together comprise the sites of the proposed Master Plan Update Project described in the preceding paragraphs, are shown in relation to the surrounding vicinity in Figure 1.

However, it should also be noted that, during the spring of 2018, the Windward School intends to reconfigure the "Palms Boulevard" parking lot, including a restriping of the parking lot layout to improve internal ("on-site") vehicular circulation, and the consolidation of all vehicular access to a single driveway to be located near the eastern end of the parking lot, which will replace the existing exit-only driveway at that location and eliminate the existing entry-only driveway at the western end of the parking lot. These modifications, which will occur prior to and independent of the proposed Master Plan Update Project (thereby becoming the "existing" conditions upon which the Master Plan Update Project is developed), will reduce the amount of parking provided in the "Palms Boulevard" lot by two spaces, resulting in a total on-site vehicular parking supply at the Windward School of about 150 spaces (including the "Sawtelle Boulevard" parking lot).

The proposed Master Plan Update Project itself will include the renovation and/or expansion of several of the existing buildings located on the "main" campus, along with the construction of a new approximately 58,157 square foot performing arts facility housing a 250-seat auditorium

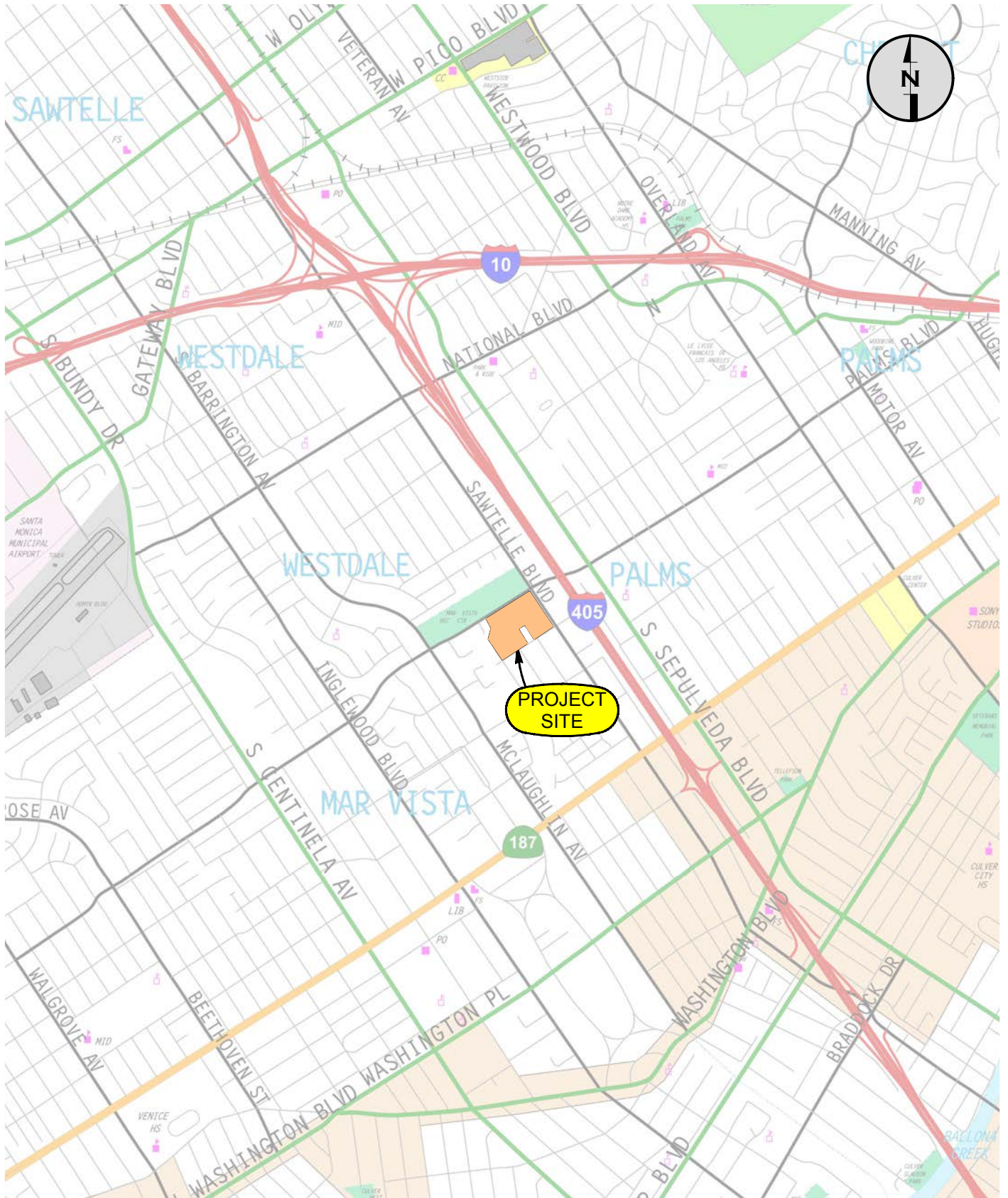


FIGURE 1

PROJECT SITE VICINITY MAP



Hirsch/Green Transportation Consulting, Inc.

and flexible-seating (up to 189 seats) theater space on the “apartment building” parcel; in total, the Master Plan Update Project will increase the amount of education-related development on the “expanded” Windward School campus by approximately 67,851 square feet. Additionally, the Master Plan Update Project includes a request for an immediate increase in the School’s permitted enrollment from 550 students to 585 students (equivalent to its existing enrollment), as well as a future enrollment increase to a maximum of 625 students. These improvements will occur in multiple phases over a period of several years, with the renovation/expansion of the existing buildings and construction of the new performing arts facility expected to be completed by the end of 2024; note that, although the requested future enrollment increase to 625 students may take slightly longer, for the purposes of this study, it was also assumed to occur by 2024.

The project applicant (Windward School) retained Hirsch/Green Transportation Consulting, Inc. to evaluate the potential traffic-related impacts of the proposed Master Plan Update Project on the transportation network serving the area surrounding the site. However, in addition to the analysis of the potential impacts associated with the future 40-student enrollment increase (from the existing 585-student enrollment to a maximum future enrollment of 625 students) requested in the proposed Master Plan Update Project, this study also includes a supplemental evaluation of the potential impacts related to the prior (unauthorized) 35-student enrollment increase from the School’s currently-permitted maximum enrollment of 550 students (per its 1999 Master Plan) to its existing enrollment level of 585 students; this additional level of analysis was necessary to determine whether any detrimental impacts occurred due to this earlier increase in enrollment, as part of the requested approval of the School’s current 585-student enrollment. This study also includes a draft Transportation Demand Management (“TDM”) Plan for the School, which identifies a number of recommended policies and/or programs designed primarily to manage the School’s current and forecast future parking demands such that it can be wholly accommodated within the on-site parking supply, but which will also result in reductions to the overall amount of traffic generated by the School in order to minimize impacts to the surrounding community.

The scope of this study, including identification of the evaluation methodologies and procedures, as well as a discussion of other assumptions proposed to be utilized in this study were presented to LADOT for review and approval prior to the initiation of these analyses. Based on LADOT’s recommendations following their review, this study evaluates the existing (year 2017) and forecast future (year 2024) weekday morning and afternoon traffic conditions (during the School’s specific peak morning student/staff “arrival” and afternoon class “dismissal” periods) at five (5) signalized intersections located adjacent or proximate to the Windward School campus.

The five selected study intersections are listed below, and are shown in relation to the existing Windward School campus/Master Plan Update Project site in Figure 2.

1. Sawtelle Boulevard and National Boulevard
2. McLaughlin Avenue and Palms Boulevard
3. Sawtelle Boulevard and Palms Boulevard
4. Sepulveda Boulevard and Palms Boulevard
5. Sawtelle Boulevard and Venice Boulevard

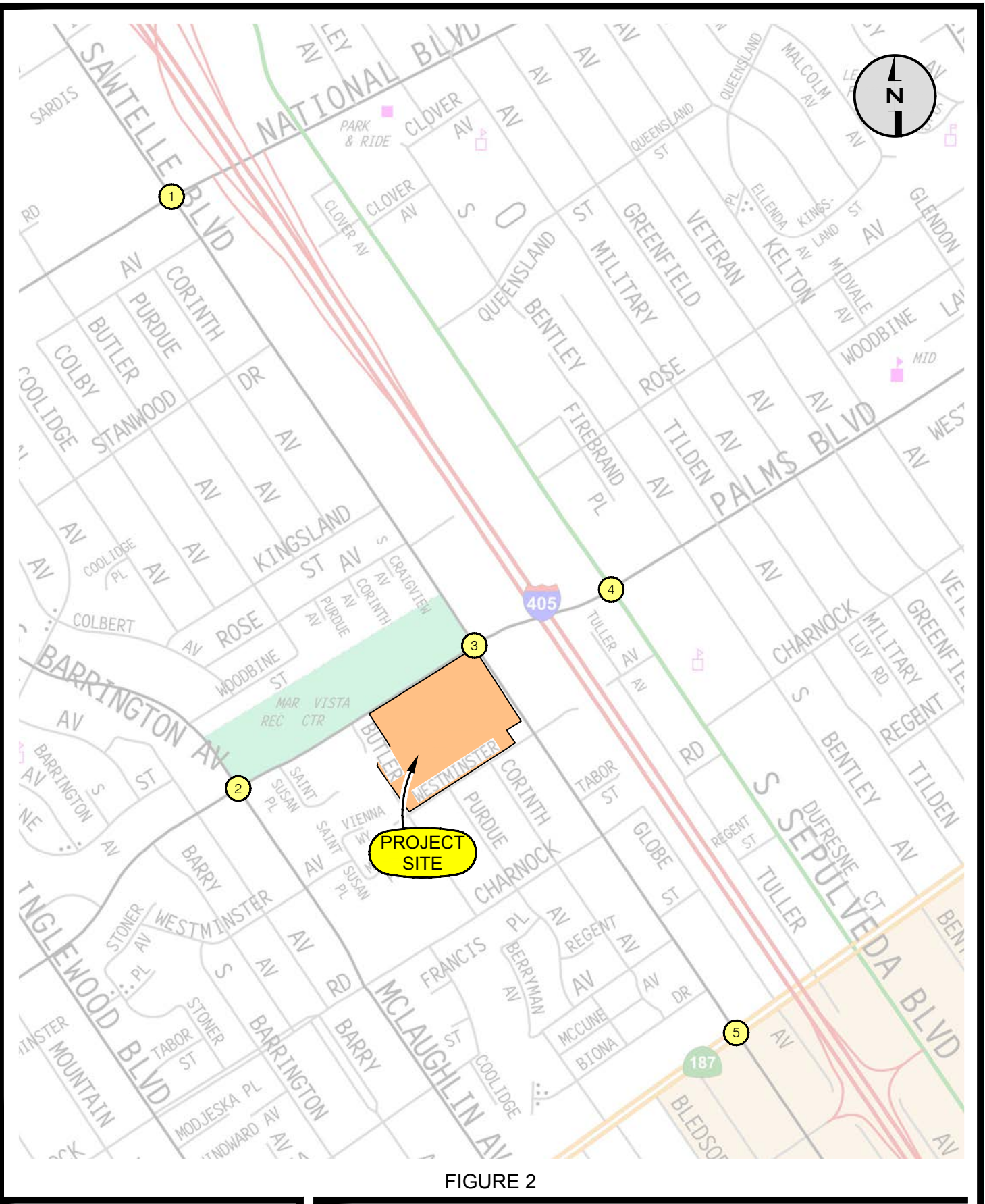


FIGURE 2

STUDY INTERSECTION LOCATIONS



Hirsch/Green Transportation Consulting, Inc.

PROJECT DESCRIPTION

The project evaluated in this study involves proposed updates to the current Master Plan for the existing Windward School campus located at 11350 Palms Boulevard (and associated parcels), in the Palms community of the City of Los Angeles. Windward School is an independent, coeducational college preparatory middle and high school (7th through 12th grades) facility, with an existing enrollment of approximately 585 students. The existing Windward School campus occupies the southwest corner of the intersection of Palms Boulevard and Sawtelle Boulevard, and is generally bounded by Palms Boulevard on the north, Sawtelle Boulevard on the east, Westminster Avenue on the south, and by existing residential development fronting along the northern cul-de-sac'ed portion of Butler Avenue (accessed only from Palms Boulevard) and by a cul-de-sac'ed segment of Butler Avenue itself (accessed via Westminster Avenue) on the west. The Sawtelle Channel of the Los Angeles County Storm Drain System runs roughly northeast to southwest across the site, dividing the total approximately 8.75-acre campus into two portions, including a 1.49-acre area to the north of the Sawtelle Channel (owned by the School itself), and a 7.26-acre area to the south of the Sawtelle Channel (utilized pursuant to a long-term lease with the City of Santa Monica); two internal ("on-site") pedestrian bridges currently connect the separated northern and southern portions of the campus to allow access throughout the site. The Windward School also owns an adjoining approximately 0.47-acre parcel located along Sawtelle Boulevard near the southeastern corner of the campus that is currently developed with a 20-unit apartment building and associated parking lot (accessed from Sawtelle Boulevard).

The Windward School has operated at its current site since 1982, and exhibits an existing total of approximately 90,147 square feet of classroom space, administrative offices, a gymnasium, and a small school-related ("black box") theater, along with a number of other supporting uses. Of this total, approximately 22,869 square feet, including the School's administrative offices, classrooms, and theater facility, as well as the School's 62-space "Palms Boulevard" parking lot, are located on the northern portion of the site (north of the flood control channel), while the remaining approximately 67,278 square feet of the School's existing development, including additional classrooms, offices, and other educational uses, along with the School's athletic fields and its 90-space "Sawtelle Boulevard" parking lot, occupy the southern portion of the site.

Prior to (and separate from) the implementation of the proposed Master Plan Update Project, which itself is described in detail later in this report, the Windward School intends to modify both the vehicular access and internal ("on-site") layout of the existing "Palms Boulevard" parking lot,

which is currently used for faculty/staff (only) parking and student drop-off and pick-up activities. Specifically, these modifications will include replacing the two existing parking lot driveways with a single new two-way (entry and exit) driveway located near the eastern end of the parking lot. Additionally, the parking lot itself will be restriped to improve its internal vehicular circulation and to enhance its faculty/staff parking and student drop-off/pick-up operations, which will remain unchanged from the current usage. However, the restriping is also expected to slightly reduce the number of vehicular parking spaces provided within this lot, from its current 62 spaces to about 60 spaces, resulting in a total on-site vehicular parking supply for the Windward School of approximately 150 spaces (including 90 spaces in the existing “Sawtelle Boulevard” parking lot, which will be unaffected by the “Palms Boulevard” parking lot improvements); note that this amount of parking will still meet the School’s current parking requirement of 140 spaces (for its existing level of development). Therefore, since the “Palms Boulevard” parking lot modifications are expected to be “in place” prior to the initiation of the proposed Master Plan Update Project, for the purposes of this study, they are considered to be part of the “existing” site conditions.

The current layout of the Windward School campus, including the adjacent parcel containing the existing 20-unit (approximately 13,596 square foot) apartment building, is shown in Figure 3(a), while the site layout following the modifications to the School’s “Palms Boulevard” parking lot, which represent the anticipated “existing” conditions at the School immediately prior to the initiation of the proposed Master Plan Update Project improvements, is shown in Figure 3(b).

Existing 1999 Master Plan Entitlements

Although the current operations and site development levels at the Windward School reflect the cumulative effects of a number of previous approvals and/or entitlements, the most pertinent of those prior City actions to the currently-proposed (2017) Master Plan Update Project are related to the School’s existing Master Plan (ZA-98-0983-ZV-YV), which was approved in May of 1999. The 1999 Master Plan Project for the Windward School anticipated a two-phase development, with the first phase allowing for approximately 55,251 square feet of new educational facilities, including classrooms, a library, a visual arts pavilion, and administrative offices, plus upgrades to existing school facilities, along with an increase to a maximum enrollment of 550 students. These previously entitled improvements were completed in or about 2008, and when combined with the prior School-related development, resulted in the existing total of 90,147 square feet of education-related uses currently occupying the site. Further, the previously-permitted increase in enrollment to a total of 550 students has also occurred, and in fact, the Windward School’s current (Fall 2017) enrollment level of 585 students exceeds this limit by 35 students.

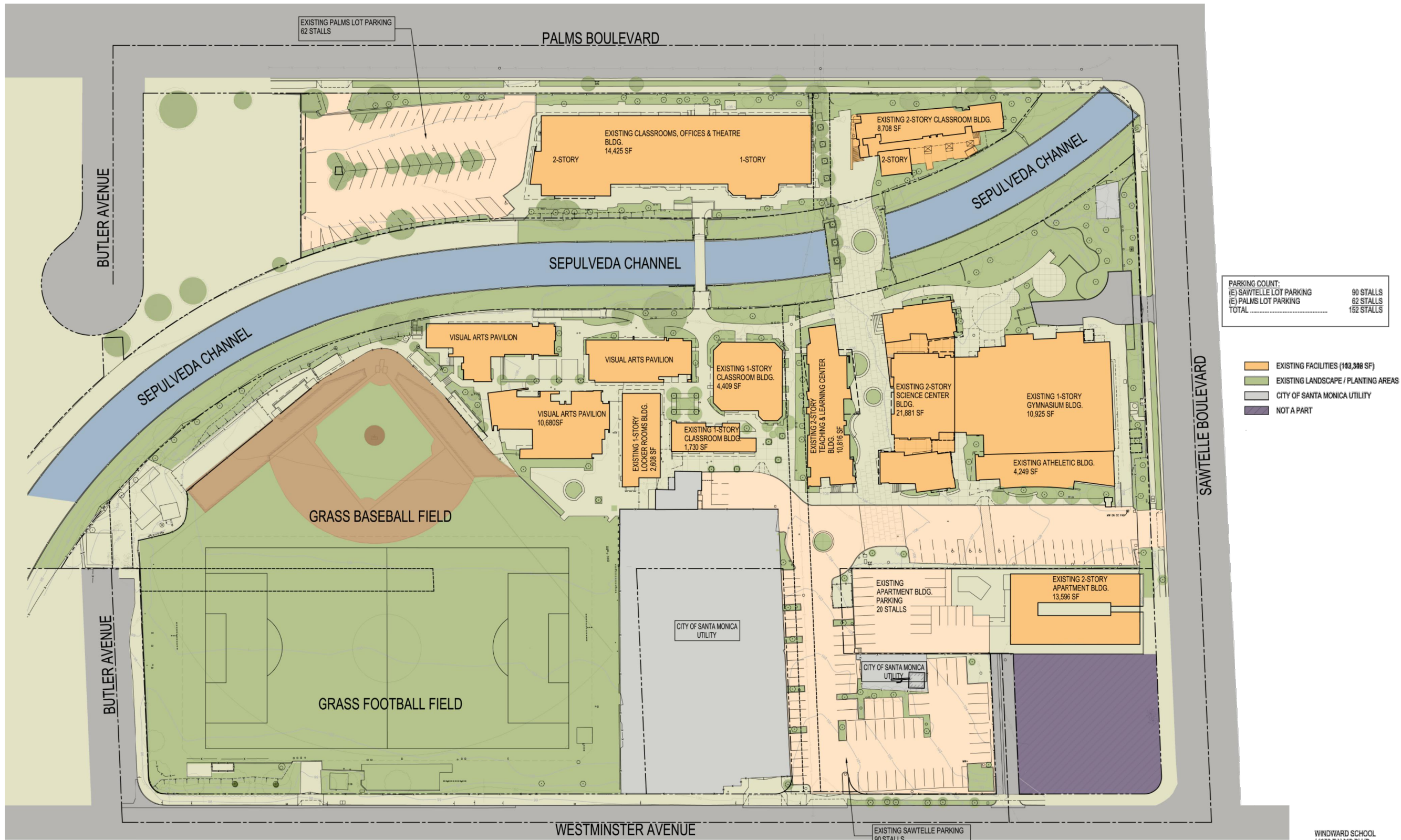
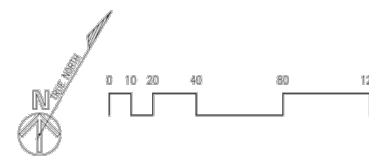


FIGURE 3(a)

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
EXISTING CAMPUS SITE LAYOUT

CAMPUS SITE PLAN
EXISTING SITE PLAN



WINDWARD SCHOOL
11350 PALMS BLVD.
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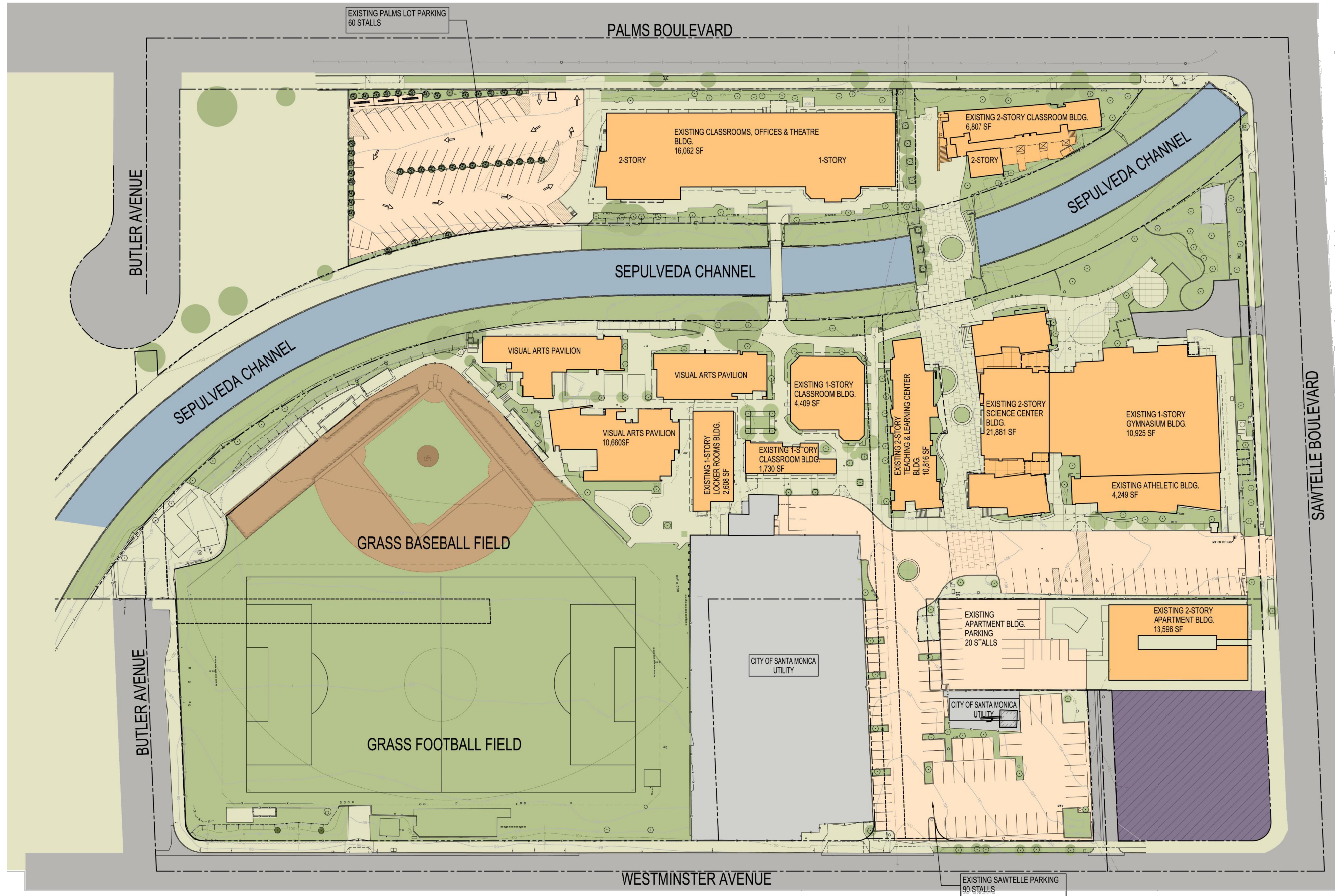


FIGURE 3(b)

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
EXISTING CAMPUS SITE LAYOUT
WITH PALMS BOULEVARD PARKING LOT MODIFICATIONS

The second phase of the 1999 Master Plan allowed a total of approximately 60,608 square feet of additional on-site development in order to construct new gymnasium and auditorium facilities, plus the removal of the existing 20-unit (approximately 13,596 square foot) apartment building located on an adjacent School-owned parcel. In total, the approved 1999 Master Plan allowed for the development of a total of approximately 150,755 square feet of educational development on the Windward School site (and including the “apartment building” parcel). However, none of these permitted “phase two” improvements was ever constructed, and upon further evaluation, the Windward School determined that the additional site-related upgrades entitled as part of the 1999 Master Plan approval would not meet its current or anticipated future needs. As a result, the School has elected not to construct those improvements as approved, and has instead proposed the following updates and/or modifications to the approved 1999 Master Plan.

(Note that, as described earlier, the School will modify the “Palms Boulevard” parking lot prior to the start of the Master Plan Update Project improvements described in the following pages.)

Requested (2017) Master Plan Update Entitlements

As part of the requested Master Plan Update Project, the School is proposing to renovate and/or demolish/replace portions of the existing classroom, theater, and administrative office facilities, and to construct about 9,664 square feet of new education-related uses on the northern portion of the site. The requested improvements to this portion of the campus will include upgrades to the existing “black box” theater, plus the construction of new visual arts educational facilities (including rehearsal space, dance room, and tech classrooms) and administrative office space, and reconfiguration of the driveways and internal layout of the “Palms Boulevard” parking lot. Additionally, the Master Plan Update Project will include the already-permitted removal of the existing 20-unit apartment building on the campus-adjacent parcel to allow for the construction of a new, approximately 58,187 square foot performing arts facility on that site, along with the demolition and replacement/enhancement of one of the two existing on-site pedestrian bridges (connecting the northern and southern parcels of the site across the flood control channel), and the creation of a new outdoor plaza connecting the remaining existing pedestrian bridge with the new pedestrian bridge (the new plaza will not affect the site’s development square footage).

Upon completion, the proposed Master Plan Update Project will allow for a total development of approximately 157,998 square feet of education-related uses on the Windward School site, including about 32,533 square feet of development on the northern portion of the site, and about 125,465 square feet of development on the southern portion of the site, along with a total of

about 150 on-site vehicular parking spaces (unchanged from the amount of parking provided following the planned modifications to the “Palms Boulevard” parking lot prior to initiation of the Master Plan Update Project improvements). Finally, in addition to the physical modifications to the existing Windward School campus, the proposed Master Plan Update Project also includes a request for an immediate increase (upon approval of the project) in its permitted enrollment from 550 students to its current enrollment level of 585 students, along with an additional request for a future increase in enrollment of 40 students, to a total of up to 625 students.

Therefore, in total, the requested Master Plan Update Project will result in the addition of a total of about 67,851 square feet of new education-related uses to the existing Windward School site (or a net increase of approximately 54,255 square feet of total site-related development when considering the removal of the existing approximately 13,596 square foot apartment building), including an increase of about 9,664 square feet of development on the northern part of the site, and an increase of about 58,187 square feet of development on the southern portion of the site (net increase of 44,591 square feet accounting for removal of the existing apartment building).

As a result, the proposed Windward School Master Plan Update Project will allow for the development of a total of up to approximately 157,998 square feet of education-related uses. However, it is of note that, although the proposed Master Plan Update Project would result in a net development increase of about 54,255 square feet compared to the current levels at the site (including the adjacent “apartment building” parcel), this level of development represents an increase of only about 7,243 square feet from the total of 150,755 square feet of development currently permitted under the School’s approved 1999 Master Plan entitlements.

Master Plan Update Project Construction Details and Schedule

Specifically, the requested Master Plan Update Project will occur in three development phases over a total period of about five years. As described previously, the northern portion of the existing Windward School campus contains a total of about 22,869 square feet of development, which is located in two main buildings, including one building housing about 6,807 square feet of classrooms, and a second building containing a total of about 16,062 square feet of classrooms, a theater, and administrative office space. Phase 1 of the Master Plan Update Project, which is anticipated to begin in the spring of 2019 and take about one year to complete, will begin with the demolition of the existing 20-unit apartment building on the School-owned adjacent parcel, and the construction of about 8,000 square feet of temporary classroom and office space on that site. This phase will then continue with the demolition of a total of about 12,964 square feet

of existing classroom space (in the larger of the two buildings on the northern portion of the site) and the construction of a total of about 22,628 square feet of new/replacement development, including academic, visual arts, and administrative office uses. Phase 1 will also demolish the smaller of the two existing on-site pedestrian bridges that cross the flood control channel, and replace it with a new, broader pedestrian bridge that will provide better accessibility between the northern and southern portions of the campus for students, faculty, and staff. When completed, this first phase of the Master Plan Update Project will result in a total on-campus development of approximately 99,811 square feet (including about 32,533 square feet on the northern portion and about 67,278 square feet on the southern portion of the campus), reflecting a net increase of about 9,664 square feet of floor area (all on the northern portion of the site) compared to the existing development levels, excluding the 8,000 square feet of temporary (modular) classroom and administrative office space on the adjacent (apartment building) parcel, portions of which will be removed once the renovation and construction of the new building is completed.

Phase 2 of the proposed Master Plan Update Project will begin following the completion of Phase 1, and will require about two years to construct, with its own completion scheduled for some time in the year 2023. This phase will occur completely within the southern portion of the School's campus (including the adjacent "apartment building" parcel), and will complete the classroom and other building-related improvements proposed in the Master Plan Update Project with the removal of any remaining classroom and/or administrative office uses that had been temporarily placed on the "apartment building" site during Phase 1, and their replacement with a new, approximately 58,187 square foot performing arts facility ("Arts and Innovation Center") housing an approximately 250-seat auditorium, along with additional theater space with seating for about 189 attendees, and other supporting uses. Phase 2 will also include the construction of a new pedestrian footbridge connecting the new "Arts and Innovation Center" building to the School's existing gymnasium and science center facilities. Once completed, Phase 2 will result in a total of approximately 125,465 square feet of education-related floor area located within the "expanded" (with "apartment building" parcel) southern portion of the Windward School campus, which when combined with the total of about 32,533 square feet of development area provided on the northern portion of the site following the earlier completion of the Phase 1 improvements, equates to the total of approximately 157,998 square feet of development area requested in the Master Plan Update Project, and represents a net increase of approximately 67,851 square feet of new education-related uses at the site (or an overall net increase of about 54,255 square feet of new development when including the removal of the existing apartment building).

Finally, Phase 3, which is expected to begin in about 2024 (following the completion of Phase 2) and to be completed within that same year, will construct a new on-site “plaza” that will span the Sawtelle flood control channel and connect the two pedestrian bridges across that feature (including the new pedestrian bridge constructed during Phase 1). This new plaza will provide outdoor educational space and a “gathering place” for the School’s students, faculty, and staff, but will not increase the development area on the site beyond the Phase 2 levels. As a result, for the purposes of this study, since all classroom and other building improvements necessary to accommodate the School’s requested student enrollment increase (to 625 students) will be completed by 2024, that year was assumed as the “future study year” for these analyses.

The proposed layouts for each of the three Master Plan Update Project development phases are shown in Figure 4(a) for Phase 1, in Figure 4(b) for Phase 2, and in Figure 4(c) for Phase 3.

Master Plan Update Project Traffic Generation

The traffic-generation rates and other data used to estimate the number of trips associated with most development projects located within the City of Los Angeles, including “school” uses such as the proposed Windward School Master Plan Update Project, are typically obtained from the current (9th Edition) of the Institute of Transportation Engineers’ (“ITE”) *Trip Generation Manual*.¹ The trip generation data contained in this publication are nationally recognized, and are typically used and accepted as the basis for trip estimation purposes for most traffic studies prepared for LADOT and similar agencies in other jurisdictions throughout the Southern California region.

The current ITE *Trip Generation Manual* identifies trip generation and other data for a number of different school-related uses, including “Middle School/Junior High School” (ITE Land Use 522), which is generally associated with schools serving students in the 7th through 8th or 9th grades, “High School” (Land Use 530), related to schools serving 9th or 10th through 12th grade students, and “Private School (K-12)” (Land Use 536), although a review of the data indicated that none of these categories would accurately reflect the operations of either the existing Windward School or for the proposed Master Plan Update Project. Specifically, as described earlier in this report, the Windward School currently serves students in the 7th through 12th grades, and as a result, neither the ITE “middle school/junior high school” nor “high school” categories individually are applicable to the School in its entirety. Additionally, there are a number of families with more than one child currently attending the Windward School, including several with students in both the “lower” (7th through 8th or 9th) and “upper” (9th or 10th through 12th) grade levels, and as such,

¹ *Trip Generation Manual*, 9th Edition, Institute of Transportation Engineers, Washington, D.C., 2012.

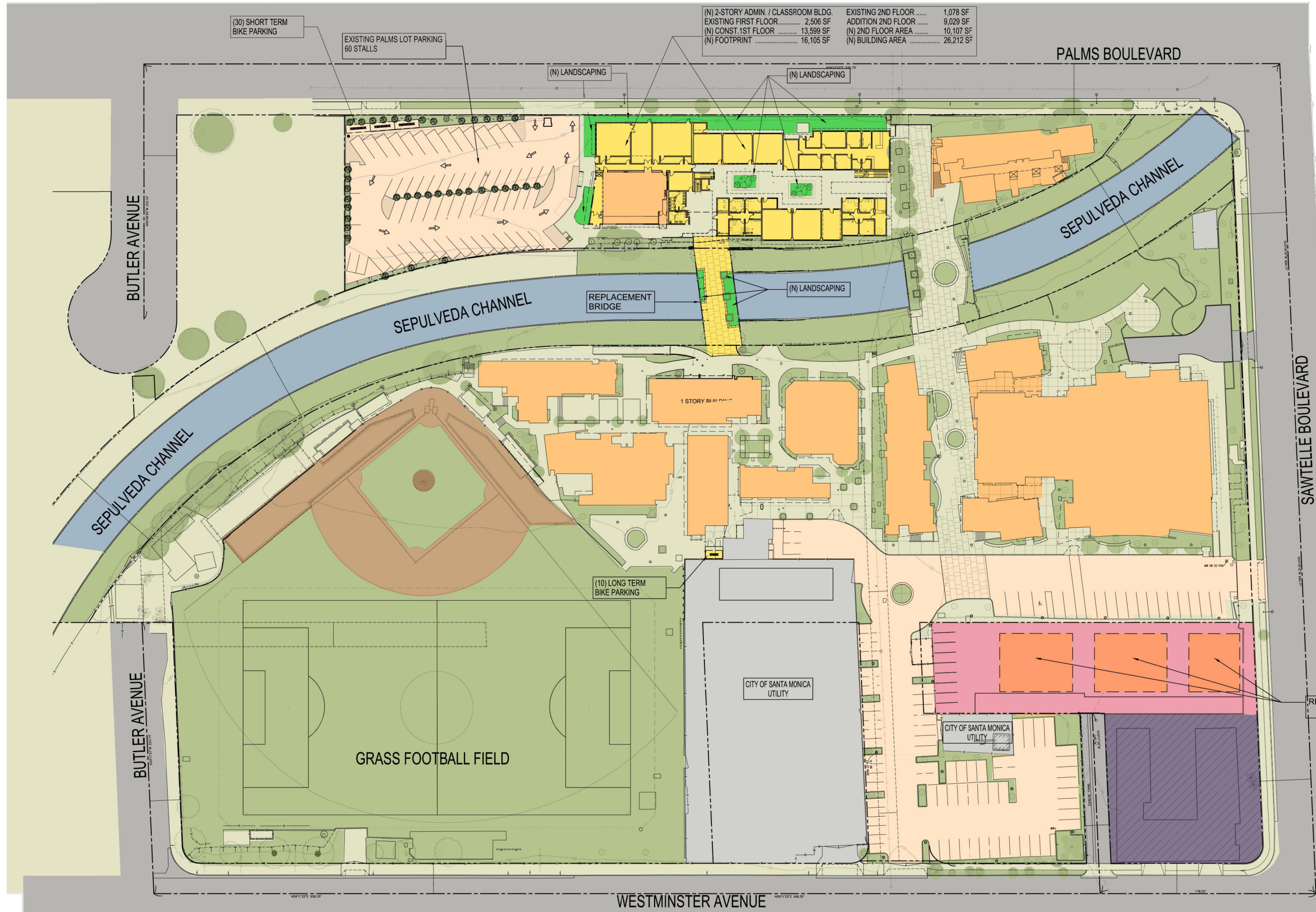


FIGURE 4(a)

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
PHASE 1 - CAMPUS SITE LAYOUT

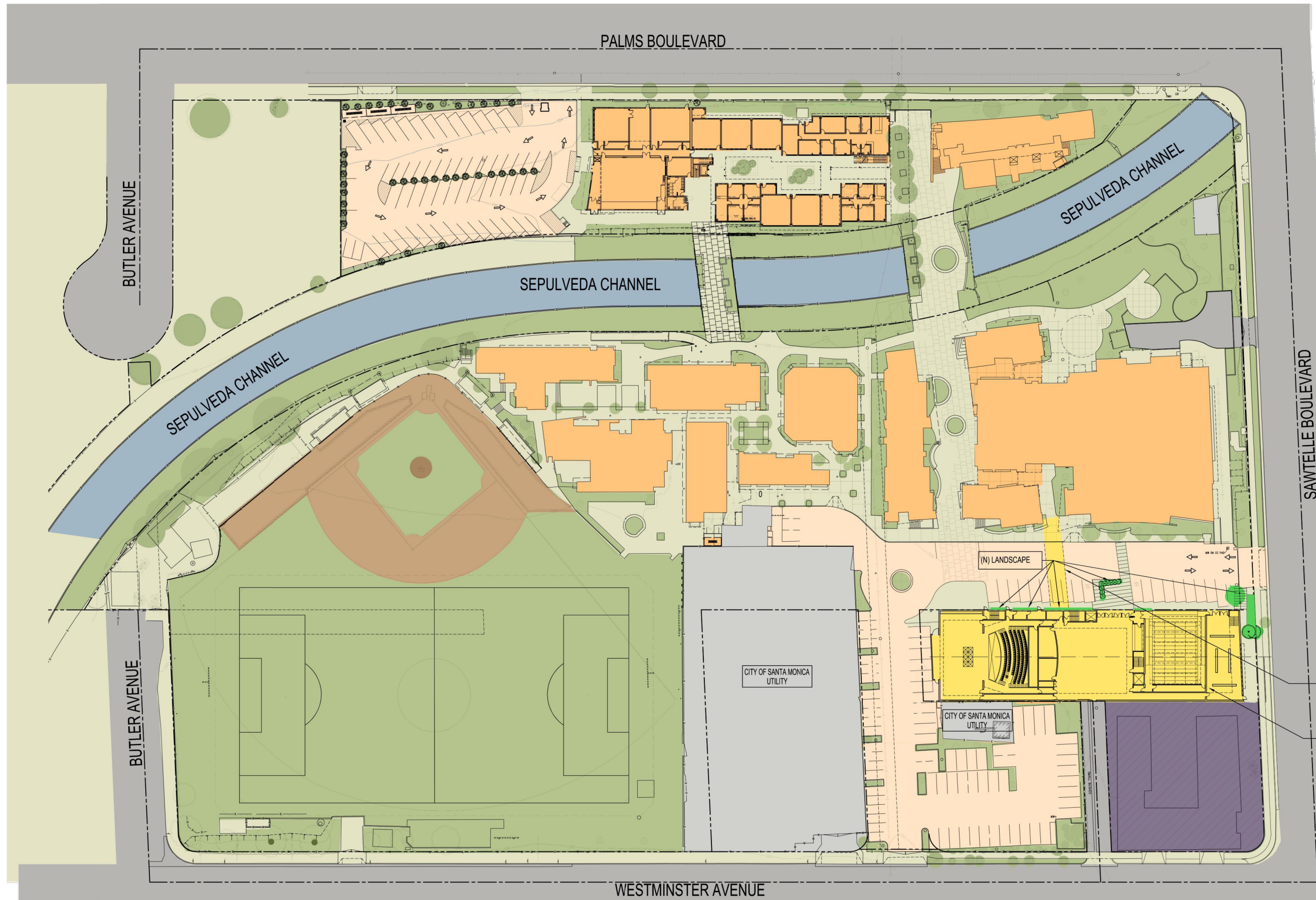


FIGURE 4(b)

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
PHASE 2 - CAMPUS SITE LAYOUT

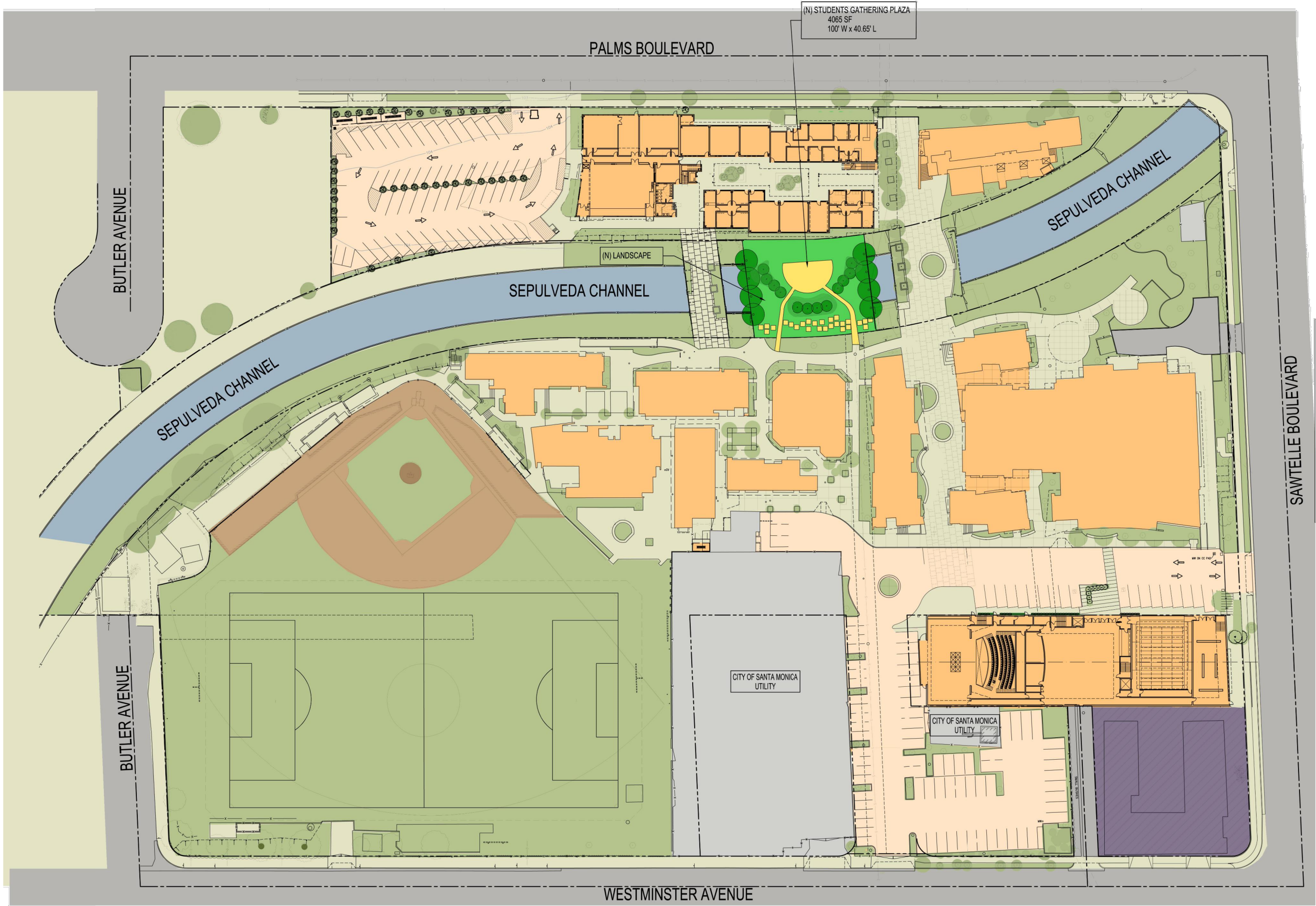


FIGURE 4(c)

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
PHASE 3 - CAMPUS SITE LAYOUT

the use of the individual “middle school/junior high school” and “high school” trip generation data to estimate the traffic for the “lower” and “upper” Windward School grade levels, respectively, would not reflect the effects of the “shared” trips (one vehicle carrying at least one student from both the “upper” and “lower” grade levels) generally associated with such multi-student families.

Further, the ITE’s “Private School (K – 12)” land use category includes several class levels that are not applicable to the Windward School; these lower grades (kindergarten through 6th grade) are comprised of some students who are too young to participate in school busing programs, and therefore, result in more “parent-driven” carpool trips than “middle school/junior high school” or “high school” uses where bus ridership is a normal component of the trip generation rates. As a result, this land use category would tend to overstate the number of trips generated by the Windward School, and was not considered to be appropriate for the purposes of this study.

Finally, none of the data for any of the ITE school-related land use categories provide sufficient detail with which to identify any specific characteristics of the School’s trip generation estimates, such as the number of student, faculty/staff, or visitor trips, or the number of bus trips, and result only in an estimate of the “total” trips. The details of the School’s trip-making characteristics are critical to the overall understanding and evaluation of the potential traffic-related impacts of the proposed Master Plan Update Project, as well as to the development and implementation of the parking demand management and trip-reduction strategies to be included in the School’s Transportation Demand Management (“TDM”) Plan, as described in detail later in this report.

Therefore, due to these factors, this study includes, and is based on, a series of trip generation and parking utilization surveys conducted at the existing Windward School in order to provide the level of detail necessary to estimate and evaluate the trip generation and parking demands related to the School’s proposed Master Plan Update Project. The data collection procedures, including the assumptions and methodologies used to evaluate the data, as well as the results of the surveys themselves, are described in detail in the following sections of this report.

Trip Generation and Parking Demand Survey Procedures

As described previously in this report, the Windward School exhibits an existing enrollment level of 585 students, along with a total of about 137 full-time faculty and staff personnel. Most of the student and faculty/staff parking currently occurs within the School’s two on-site parking lots, although, while generally discouraged by the School, it is acknowledged that some students and faculty/staff also park off-site along Palms Boulevard and Sawtelle Boulevard in the vicinity of the School. Student (morning) drop-off and (afternoon) pick-up operations also take place

primarily within the on-site parking lots, although again, some nominal student (and faculty/staff) drop-off/pick-up activities do occur off-site along both Palms Boulevard and Sawtelle Boulevard. Classes at the Windward School typically begin at about 8:00 AM and dismiss at about 3:05 PM for both the “lower” (middle school) and “upper” (high school) facilities, although some variations to this general schedule occur throughout the week, including on Wednesdays, when all classes begin somewhat later, at about 8:45 AM (although class dismissal continues to be at 3:05 PM). Additionally, on Mondays, all classes at the School dismiss slightly earlier, at about 2:55 PM, while on Tuesdays, the high school level classes again dismiss early, at about 2:25 PM, and the middle school level classes let out slightly later than normal, at about 3:20 PM (class start times continue to be at about 8:00 AM on both days). Various athletic activities/practices and/or academic programs also occur after school on various days throughout the typical school week.

Based on these class schedules, the empirical traffic and parking utilization observations used for this study were conducted at the Windward School site (and surrounding vicinity) over the course of three typical mid-week weekdays (Tuesday October 10, Wednesday October 11, and Thursday October 12, 2017) during a week with no holidays or other notable special events, and with the School itself exhibiting normal activity and attendance levels. Specifically, on Tuesday, a total of 571 of the currently-enrolled 585 students (about 97.6 percent) were in attendance, while on Wednesday, a total of 575 students (about 98.3 percent of the current total enrollment) were present, and on Thursday, a total of 567 students (about 96.9 percent) were at the School. Additionally, 135 of the total of 137 full-time faculty and staff (about 98.5 percent) were present on each of the three observed days. Therefore, the student attendance and staffing levels at the Windward School throughout the survey period represent its typical operations, and as such, no adjustments to the empirical traffic or parking data collected at the site were considered to be necessary to account for any unusual or excessive student or employee absentee rates.

The School-related trip generation and parking utilization data itself was collected on each of the surveyed days from 7:00 AM to 8:30 AM for the morning student and faculty/staff arrival period (except on Wednesday, when the count period was extended until 9:15 AM to account for the later class start times on that day), and again from 2:30 to 4:00 PM for the afternoon student and faculty/staff departure period. These 90-minute count periods, which “bracket” the typical 8:00 AM start and 3:05 PM dismissal times for the Windward School classes by about one-half to one hour on each end, were used to assure that all regular traffic and parking-related activity at the Windward School site was identified. The data collection included counts of the number and type of vehicles (student and/or faculty/staff drop-off/pick-up, student and/or faculty-driven, school bus, visitor-related, etc.) entering and exiting each of the School’s parking lot driveways,

along with additional observations to identify the number and type of School-related vehicles that parked, or dropped-off/picked-up students or faculty/staff, along both Palms Boulevard (generally between about Butler Avenue and Sawtelle Boulevard) and Sawtelle Boulevard (between Palms Boulevard and about Westminster Avenue) in the immediate School vicinity; when possible, these counts also identified the occupancies of each of the subject vehicles.

Additional observations were also conducted at each of the parking lot driveways to estimate the number of students and/or faculty/staff personnel that walked or bicycled to or from the site, while the School provided supplemental information regarding the number of students and/or faculty/staff who typically utilize public transit. Finally, the current parking demands at the site were identified through a series of parking “sweeps” (counts of the actual number of vehicles parked within each of the School’s on-site parking lots) collected at both the beginning and end of the morning student and faculty/staff arrival period (at 7:00 AM and 8:30 AM), and again at the beginning and end of the afternoon School class dismissal period (at 2:30 PM and 4:00 PM).

The results of these traffic and parking surveys, which both represent the existing conditions at the Windward School site, and provide the basis for estimating the potential trip generation and parking demands related to the proposed Master Plan Update Project, are discussed in detail in the following pages, while the data itself is provided in the appendices of this report.

Summary of Results – Trip Generation and Other Windward School Traffic Characteristics

The traffic counts collected at the Windward School site (for both the parking lot driveways and the “off-site” parking and drop-off/pick-up activities) were first reviewed in order to “balance” the raw data over the entire 90-minute morning and afternoon (school) peak periods. This process involved minor adjustments to the School’s driveway traffic counts such that the differences between the number of vehicles entering and exiting each of the School’s parking lots reflected the actual cumulative parking increases identified for each lot by the parking sweeps. Further, additional adjustments were also made to balance the number of “inbound” and “outbound” trips associated with short-term vehicle stays at the site (such as student drop-off/pick-up activities), including vehicles parked both in the on-site parking lots and on the site-adjacent street, since some vehicles were observed to arrive immediately prior to or departed immediately following the start of end of the count periods. It should be noted that these adjustments did not result in any *reductions* to the raw traffic counts, and therefore, the trip generation data used in this study reflect conservative (actual or higher) estimates of traffic activity at the Windward School site. The results of the “peak period” balancing procedures are shown in Tables A-1(a) and A-1(b) in Appendix A of this report for the morning arrival and afternoon departure periods, respectively.

As shown in Table A-1(a), the total traffic activity levels at the School were relatively consistent during the morning student and faculty/staff arrival period over the course of the surveyed days, including a total of approximately 684 trips (416 inbound, 268 outbound) occurring on Tuesday, a total of about 708 trips (423 inbound, 285 outbound) observed on Wednesday, and a total of about 697 trips (414 inbound, 283 outbound) counted on Thursday. However, the traffic levels at the site exhibited more fluctuation during the afternoon class dismissal period, due primarily to daily variability in the School's operations and activity levels during this time, which includes students who may leave the campus early for off-site athletic or other events, or others who may remain on-site after the normal class dismissal times to participate in on-campus athletics and/or academic activities. As a result, and as shown in Table A-1(b), the surveys identified a total of about 495 trips (219 inbound, 276 outbound) during the afternoon dismissal period on Wednesday, but only about 403 total trips (169 inbound, 234 outbound) on Thursday; no traffic or parking data was collected during the afternoon dismissal period on Tuesday, October 10th (the first day of the surveys); although it was known that the "upper" (high school) grade levels dismissed early (at 2:25 PM) on that day, the survey start time was inadvertently not adjusted.

In addition to the overall traffic totals described in the preceding paragraph, the traffic surveys also identified the number of vehicles associated with each "user type" (student-driven vehicle, faculty/staff-related vehicles, parent-driven carpools, school buses, etc.), which are also shown for each of the three surveyed days in Tables A-1(a) and A-1(b). This information was used to develop the trip generation rates for each of the various individual components of the School's traffic during both the morning arrival and afternoon class dismissal periods, which in turn were used to estimate the number of trips generated by both the prior 35-student enrollment increase and for the proposed Master Plan Update Project, as described later in this report.

The overall morning and afternoon school "peak period" traffic data were then further evaluated in order to identify the "peak hour" of traffic activity at the Windward School, representing the highest one-hour traffic periods at the site during the approximately 90-minute morning arrival and afternoon dismissal time periods. Based on the results of these evaluations, which are shown in Tables A-2(a) through A-2(c) in Appendix A of this report, it was determined that the peak hour of School-related traffic during the morning student and faculty/staff arrival period occurred between 7:15 AM and 8:15 AM on both Tuesday and Thursday, while on Wednesday, which as noted previously, exhibited a later class start time of 8:45 AM, the peak hour occurred from 8:00 AM to 9:00 AM. Similarly, during the afternoon class dismissal period, the peak hour of School-related traffic occurred from 3:00 PM to 4:00 PM on both Wednesday and Thursday; as discussed earlier, no traffic or parking data was collected during this time period for Tuesday.

The “peak hour” traffic volumes at the School during the morning student and faculty/staff arrival and afternoon class dismissal periods are also shown in Tables A-1(a) and A-1(b). It is of note that there may be slight discrepancies between the various individual traffic component values shown in Tables A-2(a) through A-2(c) and their associated values in Tables A-1(a) and A-1(b) as a result of minor additional adjustments that were necessary to correct numerical “rounding” and other calculation-related issues, although neither the overall peak hour traffic volumes nor the “peak hours” identified in Tables A-1(a) and A-1(b) were affected by these adjustments.

As shown in Table A-1(a), about 96 percent of the total site-related traffic identified during the overall morning arrival period (7:00 AM to 8:30 AM) at the Windward School occurs during the “AM (School) Peak Hour” from 7:15 AM to 8:15 AM on Tuesday and Thursday, with totals of about 653 trips (390 inbound, 263 outbound), and about 668 trips (394 inbound, 274 outbound), respectively, entering or exiting the site during that time on those days; on Wednesday, a total of about 606 trips (342 inbound, 264 outbound), or nearly 86 percent of the overall traffic during the morning arrival period (7:00 AM to 9:15 AM, due to the later class start times noted earlier) occurs during the 8:00 AM to 9:00 “AM (School) Peak Hour” for this day. Similarly, as shown in Table A-1(b), about 82 to 84 percent of the traffic for the overall afternoon class dismissal period (2:30 PM to 4:00 PM) occurs during the “PM (School) Peak Hour” from 3:00 PM to 4:00 PM, including a total of about 407 trips (167 inbound, 240 outbound) on Wednesday, and a total of about 337 trips (134 inbound, 203 outbound) on Thursday.

Finally, the individual daily “AM (School)” and “PM (School)” peak hour traffic volumes identified in Tables A-1(a) and A-1(b) were used to estimate the average traffic volumes associated with the existing Windward School facilities during those times. However, as described earlier, although the overall “morning arrival period” School-related traffic levels for Wednesday are comparable to those for both Tuesday and Thursday, the later class start times on Wednesday appear to result in the arriving and/or departing traffic being more widely dispersed throughout the morning count period. As such, the percentage (and actual number) of the peak period trips occurring during the “AM (School) Peak Hour” was lower on Wednesday than on either of the other two surveyed days. Since these lower traffic volumes would inappropriately reduce the average morning peak hour traffic estimates used to develop the empirical trip generation rates for the analysis of the proposed Master Plan Update Project, for the purposes of this study, and in order to provide for a conservative estimate of the amount of traffic typically generated by the existing Windward School during the “AM (School) Peak Hour”, the Wednesday data was not included in the calculation of the average trip generation levels for this time period. Additionally, as also described previously, only two days (Wednesday and Thursday) of data were collected

at the School site during the afternoon class dismissal period, and as shown in Table A-1(b), the peak hour traffic identified for each of these two surveyed days exhibited substantial differences. Therefore, in order to avoid any potential underestimation of the amount of traffic generated by the existing Windward School facilities during the “PM (School) Peak Hour” that could occur as a result of averaging the Wednesday and Thursday peak hour traffic volumes, for the purposes of this study, only the Wednesday traffic data (the highest of the two days) was utilized.

Using these assumptions and evaluation methodologies, the number of trips associated with the existing Windward School facilities was estimated for both the “AM (School) Peak Hour” and “PM (School) Peak Hour” periods evaluated in this study, as shown in Table 1. As summarized in this table, during the peak hour of the overall morning student and faculty/staff arrival period, the School currently generates a total of approximately 662 trips (393 inbound, 269 outbound), based on the average of the traffic observed at the site during two typical mid-week weekdays, while during the highest hour within the overall afternoon class dismissal period, which reflects the maximum traffic observed on any of the surveyed days during this time period, the School exhibits a total of about 407 trips (167 inbound, 240 outbound). For the purposes of this study, the values shown in Table 1 are considered to represent the trip generation characteristics of the existing Windward School under typical conditions at its current enrollment of 585 students.

Table 1
Existing Windward School Trip Generation
(based on empirical data)

Component	AM (School) Peak Hour (7:15 AM - 8:15 AM)			PM (School) Peak Hour (3:00 PM - 4:00 PM)		
	I/B	O/B	Total	I/B	O/B	Total
Faculty/Staff Vehicles (Parking)	62	0	62	0	22	22
Faculty/Staff Vehicles (Drop-off/Pick-up)	5	5	10	1	1	2
Student Vehicles (Student-driven; Parking)	66	0	66	0	27	27
Parent-driven Vehicles (Drop-off/Pick-up)	254	259	513	166	185	351
Student Buses	5	5	10	0	5	5
Visitor Vehicles (Parking)	1	0	1	0	0	0
Total Vehicular Trips	393	269	662	167	240	407

Next, based on the “typical” trip generation levels identified in Table 1, the trip generation *rates* associated with the various vehicular components of the School’s overall traffic were developed. As described previously, this study includes an evaluation of the potential traffic impacts related to both the School’s previous (unpermitted) 35-student enrollment increase, as well as to the

future 40-student enrollment increase requested in the proposed Master Plan Update Project. Typically, trip generation rates for “school” land uses are calculated by dividing the total number of trips generated by the school by the total number of students (or other appropriate variable). However, the trip generation rates identified via this procedure are “all inclusive”, and produce estimates that intrinsically include all trips generated by all vehicles associated with the facility, including student and faculty/staff-driven vehicles, student drop-off/pick-up traffic, school buses, and visitor-related and other miscellaneous vehicles. While such trip generation rates are useful in identifying the total number of trips related to new school developments and/or projects that include increases in both student enrollment and faculty/staff personnel levels, they are not considered to be appropriate for the specific purposes of this study.

As discussed earlier in this report, neither the previous 35-student enrollment increase nor the future 40-student enrollment increase requested in the proposed Master Plan Update Project resulted in or are expected to result in any increases in the School’s current faculty/staff levels, and therefore, no new faculty/staff-related trips were or are anticipated due to either of these increases in student enrollment levels. Additionally, the Windward School currently operates five school buses (during both the morning arrival and afternoon class dismissal periods) that together provide a total capacity of approximately 188 students, although as described later in this document, the overall bus ridership is relatively low, and adequate surplus capacity exists within the existing Windward School student busing program to accommodate a large number of additional students without generating any new bus trips. Finally, increases in the School’s enrollment levels alone are not anticipated to result in any changes to the number of visitor trips or increases in any other “miscellaneous” traffic at the site. Therefore, for the purposes of this study, the empirical Windward School trip generation rates derived from the information shown in Table 1 and contained in the appendices of this report were developed specifically to identify the number of student-related trips (including both student-driven and parent carpool vehicles) associated with both the previous and proposed student enrollment increases at the School.

The assumptions and calculations used to identify the student-related trip generation rates for both the “AM (School) Peak Hour” and “PM (School) Peak Hour” conditions are summarized in Table A-3 in Appendix A; note that this table also includes the same trip generation information as shown in Table 1, which as noted earlier, is the basis for the trip generation rate calculations. First, the overall student-related trip generation rates were identified by dividing the total number of student-related trips (including both student-driven vehicles and parent-driven carpools) occurring during either the morning arrival or afternoon class dismissal peak hour periods by the

total number of students currently enrolled at the School. During the “AM (School) Peak Hour”, the existing 585-student enrollment level generates a total of about 579 student-related trips, resulting in an overall trip generation rate of approximately 0.990 trips per enrolled student, with about 55 percent of these total trips arriving to the School site and about 45 percent departing from the site during this time period, while during the “PM (School) Peak Hour”, the School exhibited a total of about 378 student-related trips, equating to an overall trip generation rate of approximately 0.646 trips per enrolled student, with about 44 percent of the trips travelling to and about 56 percent of the trips leaving the School. These total trip generation rates were then further reviewed in order to identify the specific trip generation rates associated with both the individual student-driven and parent-driven (carpool) trips; this level of detail was necessary for purposes of developing and evaluating the TDM Plan to be implemented by the School as part of the proposed Master Plan Update Project. The details of the “peak hour” trip generation rate calculations are provided in Table A-3, but are also summarized for convenience in Table 2.

Table 2
Windward School Empirical "Student-Related" Trip Generation Rates

AM (School) Peak Hour

Total "Student-Related" Trips: $T = 0.990$ (St); I/B = 55%, O/B = 45%

Student-driven Vehicles: $T = 0.113$ (St); I/B = 100%, O/B = 0%

Parent-driven Carpools: $T = 0.877$ (St); I/B = 49%, O/B = 51%

PM (School) Peak Hour

Total "Student-Related" Trips: $T = 0.646$ (St); I/B = 44%, O/B = 56%

Student-driven Vehicles: $T = 0.046$ (St); I/B = 0%, O/B = 100%

Parent-driven Carpools: $T = 0.600$ (St); I/B = 47%, O/B = 53%

Where: T = Total Trip Ends I/B = Inbound Trip Percentage
 St = Number of Students O/B = Outbound Trip Percentage

While Table 2 identifies the empirical trip generation characteristics of the existing School for both the “AM (School) Peak Hour” and “PM (School) Peak Hour” periods, the “daily” (24-hour) traffic conditions at the Windward School were not observed as part of the trip generation and parking demand surveys. Therefore, for the purposes of this study, the daily traffic associated with both the previous 35-student enrollment increase and future 40-student enrollment increase requested in the proposed Master Plan Update Project was estimated via a comparison of the daily trip generation rates to the total of the AM and PM (school) peak hour trip generation rates

identified for each of the three ITE school-related land uses described previously in this report. Although none of these ITE “school” land uses are considered to be directly applicable to the operations of the Windward School for the various reasons described earlier in this document, this approach was utilized in order to provide a “worst case” estimate of the amount of traffic generated by the prior and/or requested student enrollment increases.

A review of the trip generation data for each of the subject ITE “school” land uses indicated that the “Middle School/Junior High School” category exhibits an average daily trip generation rate of 1.62 trips per student, with “AM (School)” and “PM (School)” peak hour trip generation rates of 0.54 and 0.30 trips per student, respectively, resulting in a “daily-to-total peak hour” ratio of about 1.93 ($1.62 \div 0.84$). Similarly, the ITE “High School” land use identified a daily trip rate of 1.71 trips per student, with an “AM (School) Peak Hour” trip rate of 0.43 trips per student and a “PM (School) Peak Hour” trip rate of 0.29 trips per student, or a ratio of 2.38 ($1.71 \div 0.72$), while finally, the “Private School (K-12)” ITE land use showed a daily trip rate of 2.48 trips per student, along with AM and PM peak hour trip rates of 0.81 and 0.58 trips per student, respectively, which equates to a “daily-to-total peak hour” comparison ratio of about 1.78 ($2.48 \div 1.39$).

However, as noted earlier, since none of these individual land use categories specifically reflect the conditions at the Windward School, this study utilized the average of the three trip “ratios” to identify an applicable trip generation ratio for purposes of estimating the School’s daily traffic. This procedure identified an overall “average” “daily-to-total peak hour” trip generation rate ratio of about 1.97 ($5.81 \div 2.95$), which was applied to the sum of the “AM (School) Peak Hour” and “PM (School) Peak Hour” trips for both the School’s previous 35-student enrollment increase and requested 40-student Master Plan Update Project enrollment increase as identified via the empirical peak hour trip generation rates shown in Table 1. Note that, as described earlier in this report, the ITE school-related trip generation rates do not include any specific information on the types of trips included in either the daily or peak hour data, and as such, the estimates of the daily trips generated by the prior and proposed student enrollment increases at the School also do not attempt differentiate between the “student-driven” and “parent-driven (carpool)” trips.

Based on these assumptions and methodologies, the number of trips associated with both the prior 35-student enrollment increase and the future 40-student enrollment increase requested as part of the proposed Master Plan Update Project were estimated, and are identified in Table 3. As shown in this table, based on the empirical trip generation rates and other characteristics developed from the surveys of the operations of the existing Windward School facilities, it is estimated that the prior 35-student enrollment increase could have resulted in an increase of

Table 3
Windward School Trip Generation Estimates
Prior 35-Student and Requested 40-Student Master Plan Update Project Enrollment Increases

Enrollment Increase	Component	Daily	AM (School) Peak Hour (7:15 - 8:15 AM)			PM (School) Peak Hour (3:00 - 4:00 PM)		
			I/B	O/B	Total	I/B	O/B	Total
35 Students (existing "overage" from currently permitted levels)	Student-driven Vehicles	(Total	4	0	4	0	2	2
	Parent-driven Vehicles	Only)	15	16	31	10	11	21
	Total Trips	114	19	16	35	10	13	23
40 Students (Net Master Plan increase from current enrollment)	Student-driven Vehicles	(Total	5	0	5	0	2	2
	Parent-driven Vehicles	Only)	17	18	35	11	13	24
	Total Trips	130	22	18	40	11	15	26

about 114 new trips per day, including about 35 new trips during the “AM (School) Peak Hour” and about 23 new trips during the “PM (School) Peak Hour”, from the traffic levels generated by the School’s currently-permitted 550-student enrollment limit (note that these incremental trips are already occurring, and are therefore intrinsically included in the traffic counts used to identify the “existing” conditions at each of the five study intersections, as described in more detail later in this report). Additionally, the future 40-student enrollment increase requested as a part of the proposed Master Plan Update Project is anticipated to generate about 130 new trips per day, including about 40 new trips during the “AM (School) Peak Hour” and about 26 new trips during the “PM (School) Peak Hour”. These incremental trip increases would be expected to occur in addition to the School’s current trip generation levels identified earlier in Table 1.

The incremental trips shown in Table 3 for both the previous 35-student enrollment increase and future 40-student (Master Plan Update Project) enrollment increase were then combined with the existing School-related “AM (School)” and “PM (School)” peak hour traffic volumes shown earlier in Table 1, to identify the total number of trips related to both the “pre-existing” conditions (reflecting the estimated number of trips generated by the School at its currently-permitted enrollment level of 550 students, prior to the earlier addition of the now-existing 35 students) and the future 625-student enrollment level (representing the total number of trips expected to be generated by the School following the completion of the Master Plan Update Project and its associated 40-student enrollment increase from the current 585-student enrollment conditions). The results of this procedure are summarized for both the subject School-related peak hours in Table A-4 in Appendix A of this report. It should be noted that, while the information provided in

Table A-4 was not used directly in the analysis of the potential traffic impacts associated with either the previous or requested future student enrollment increases (since as described earlier, such impacts are based on the effects of the incremental increases in site-related trips), these total trip generation values were utilized to evaluate the effectiveness of the School's TDM Plan (described in detail later in this document) in reducing the overall traffic at the site.

Finally, as described previously, the proposed Master Plan Update Project will also include the demolition of an existing on-site 20-unit apartment complex, which will also result in the removal of its associated trips from the “existing” area traffic volumes, thereby offsetting some of the potential new traffic expected to be generated by the Master Plan Update Project (the removal of the existing apartment complex will not affect the number of trips estimated to occur due to the prior 35-student enrollment increase, since the apartment complex remains active, and was generating traffic at the time these earlier student enrollment increase traffic additions occurred).

The number of trips associated with the existing 20-unit apartment complex was identified using the procedures recommended in LADOT's current *Transportation Impact Study Guidelines*, which state that the trip generation estimates for most “typical” land uses (such as “apartments”) utilize data from the current (10th) edition of the ITE *Trip Generation Manual* discussed earlier in this report. However, the Windward School site, including the subject apartment complex, lies within the West Los Angeles Transportation Improvement and Mitigation Specific Plan area (“WLA TIMP”, City of Los Angeles Ordinance Number 171,492), which identifies locally-specific PM peak hour trip generation rates for a variety of land use categories, including “apartments”, and LADOT's policies also require the use of the WLA TIMP PM peak hour trip generation rates where applicable, and therefore, these rates were utilized in this study. It is also of note that the WLA TIMP does not identify either “daily” and AM peak hour trip generation rates, and as such, LADOT recommends using the appropriate 10th Edition ITE rates and/or equations to estimate a project's trip generation during these times. Further, data from the ITE manual were also used to identify the “inbound/outbound” directional characteristics of the PM peak hour trip estimates, since this information is not specified for the trip generation rates identified in the WLA TIMP. The daily and peak hour trip generation rates used to estimate the amount of traffic generated by the existing apartment complex, and the number of trips themselves, are shown in Table 4.

As identified in Table 4, the existing 20-unit on-site apartment complex is estimated to generate a total of approximately 146 daily trips, including about nine trips (two inbound, seven outbound) during the AM peak hour and 10 trips (six inbound, four outbound) during the PM peak hour, and as such, the removal of the apartment complex and its existing traffic would fully offset the

Table 4
Existing 20-Unit Apartment Complex
Trip Generation Rates and Trip Generation Estimates

Trip Generation Rates and Assumptions:

Multifamily Housing (Low-Rise) - per dwelling unit (ITE Land Use 220)

Daily Trips: T = 7.32 (U)

AM Peak Hour: T = 0.46 (U); I/B = 23%, O/B = 77%

PM Peak Hour: * T = 0.49 (U); I/B = 63%, O/B = 37%

Where: T = Trip Ends

U = Number of Residential Units

I/B = Inbound Trip Percentage

O/B = Outbound Trip Percentage

*** Note:**

PM peak hour trip generation rates per West Los Angeles Timp Specific Plan. All other rates and information per 10th Ed. ITE *Trip Generation Manual*, unless otherwise noted.

Existing Apartment Complex Trip Generation Estimates:

Size/Use	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
20 -unit Apartment Complex	146	2	7	9	6	4	10

approximately 130 new daily trips expected to result from the 40-student enrollment increase requested as part of the Master Plan Update Project, and would partially, but not fully, offset the approximately 40 new “AM (School) Peak Hour” and 26 new “PM (School) Peak Hour” trips estimated to occur under the proposed Master Plan Update Project as shown earlier in Table 3.

However, for the purposes of this study, in order to provide a highly conservative evaluation of the potential traffic impacts of the proposed Master Plan Update Project, the trip reductions resulting from the removal of the existing 20-unit apartment complex, and which are applicable and appropriate pursuant to LADOT’s traffic study policies, were not included in this analysis. This assumption produces a higher estimate of the incremental trip increases at the School due to the requested future 40-student enrollment increase, and results in a worst case assessment of the potential traffic impacts associated with the proposed Master Plan Update Project.

Therefore, the trip generation estimates shown earlier in Table 3 were used, without adjustment, to evaluate the potential traffic impacts related to both the prior 35-student enrollment increase and the requested future 40-student Master Plan Update Project enrollment increase at each of the five study intersections. The assumptions and methodologies used in this study to identify the anticipated general travel routes and specific intersection turning movements associated with these incremental School-related trips are described in detail later in this report.

In addition to the student-related trip generation rates identified in the preceding discussions, the empirical traffic and parking utilization surveys conducted for this study were also used to identify other important trip-making characteristics of the School's traffic, including the number of students who arrive via student-driven vehicles, parent-driven carpools, and/or participate in the School's existing busing program, and the number of faculty/staff who drive and/or carpool, as well as the average vehicle occupancies ("AVO") of the various types of vehicles. Note that this information was based on the data collected during the "AM (School) Peak Period" only, since as described earlier in the discussion of the School's trip generation rate evaluations, the "PM (School) Peak Period" exhibited substantial fluctuation in both person and vehicular trips due primarily to daily variability in the School's operations and activity levels, and as a result, this time period did not provide consistent or meaningful data related to these additional factors. However, unlike the methodology used to develop the student-related trip generation rates, which as noted earlier only utilized data from two of the three surveyed days, the identification of the supplemental trip-making characteristics included data from all three of the surveyed days, as the "late start" time on Wednesday (the day not used in the trip generation rate evaluations) did not materially affect the total number of students or faculty/staff arriving at the School during the overall 90-minute "AM (School) Peak Period". The supplemental trip-making characteristics for the existing Windward School are summarized in Table A-5 in Appendix A of this report.

As shown in Table A-5, on average, about 571 of the total of 585 currently-enrolled students (approximately 97.6 percent), were in attendance at the School at the "first period" start time on each day during the three-day survey period. Of this average attendance level, an average of approximately 105 students, or about 18.4 percent (ranging from about 89 to 123 students, or between 15.5 and 21.5 percent on each of the individual survey days) arrived at the School in a student-driven vehicle (including the driver and any student passengers), with such vehicles exhibiting a three-day average AVO of about 1.615 students per vehicle (including individual daily AVO's ranging between about 1.576 and 1.662 students per vehicle). Additionally, an average of about 401 students, or about 70.2 percent (ranging from about 372 to 426 students, or between 65.1 and 73.9 percent on each individual day) were dropped-off at the School by a parent or other adult, reflecting a three-day average AVO of about 1.480 students per vehicle (with individual daily AVO's ranging from about 1.453 to 1.521 students per vehicle). Further, an average of approximately 54 students, or about 9.5 percent (ranging from 47 to 66 students, or between about 8.3 and 11.6 percent on each of the individual survey days) participated in the School's busing program, with the remaining (three-day average) total of about 11 students, or

about 1.9 percent (ranging from 10 to 13 students, or between about 1.7 and 2.3 percent of the total student attendees on each individual day) arriving at the School with a faculty/staff parent (about five students), or via public transportation, walking, or bicycling (average of six students).

Similarly, approximately 135 of the total of 137 faculty/staff personnel were at the School on each of the surveyed days (although only 119 faculty/staff were actually observed to arrive during the 90-minute “AM (School) Peak Period” count times; Windward School indicated that the remaining 16 faculty/staff arrived each day following the end of the data collection period). Of the 119 faculty/staff personnel observed during the survey periods, a three-day average of about 113 faculty/staff (including faculty/staff passengers), or about 94.9 percent of this total (ranging from 109 to 117 persons, or between about 91.6 and 98.3 percent of the total for each of the individual surveyed days), arrived at the School in faculty/staff-driven vehicles, reflecting a three-day average vehicle occupancy of approximately 1.202 faculty/staff persons per vehicle (with individual daily AVO’s ranging between about 1.160 and 1.284 persons per vehicle). Additionally, a three-day average of about four faculty/staff persons, or about 3.4 percent of the total observed faculty/staff arrival activity (ranging from one to seven persons, or between about 0.8 and 5.9 percent on each of the individual days) were dropped-off at the site, with these vehicles exhibiting an AVO of 1.000 faculty/staff persons per vehicle. Finally, the remaining observed faculty/staff (an average of two persons, or about 1.7 percent of the observed total, including an individual daily range of between one to three persons, or about 0.8 to 2.5 percent) utilized public transit, or walked or bicycled to the School during the “AM (School) Peak Period”.

Note that, while the supplemental trip-making characteristics described in the preceding pages do not change the actual trip generation rates or incremental trip generation estimates for either the prior 35-student or requested Master Plan Update Project 40-student enrollment increases identified earlier in Table 2 and Table 3, respectively, they are important to the development of the trip and parking demand reduction strategies contained in the School’s new TDM Plan to be implemented as a feature of the Master Plan Update Project, as detailed later in this report.

Windward School Trip Assignment Methodology

Geographic Project-Related Trip Distributions

The general geographic distributions for all Windward School-related traffic, including the incremental trips associated with both the prior 35-student enrollment increase and the requested future 40-student enrollment increase requested in the Master Plan Update Project identified previously in Table 3, were identified based primarily on the current student and

faculty/staff residence locations and site driveway utilizations and turning movements obtained from the empirical surveys conducted at the School, although the existing traffic volumes and travel patterns in the immediate vicinity of the School site were also reviewed. The resulting general geographic trip distributions of the School-related trips in the study area and through the surrounding region are shown in Table 5. Note that the empirical driveway utilization data from the site surveys indicated that the trip distribution percentages identified in Table 5 reflect the travel patterns for the School's traffic for both the "AM (School)" and "PM (School)" peak hours.

Table 5
Windward School General Geographic Trip Distribution Percentages

Direction	Surface Streets		Freeways	
	I/B	O/B	I/B	O/B
North	20%	20%	6%	6%
South	13%	18%	7%	7%
East	22%	22%	nominal *	
West	31%	26%	1%	1%
Totals	86%	86%	14%	14%

* Indicates typical utilizations of less than 1 percent.

Project-Related Traffic Assignments

Based on the general geographic distributions shown in Table 5, the approximate percentages of the School-related traffic on the various surface streets and freeways serving the site and the surrounding vicinity were identified. This process considered a number of factors that could affect the use of potential travel routes, including turn restrictions at intersections located along the travel routes, one-way or limited access streets, "connectivity" between surface streets and regional transportation facilities (freeways), and the overall "completeness" of the street system through and surrounding the study area (to account for any discontinuities in the travel routes). The percentages of the trips assigned to the key arterial (surface street) and regional (freeway) transportation facilities serving the study area are shown in Figure 5. Figure 5 also includes more specific traffic movement details at several intersections outside of the general study area, in order to more fully describe the anticipated travel paths of the School-related trips into and out of the immediate vicinity of the project site. Again, it is of note that, as described previously, the general trip assignment percentages shown in Figure 5 represent the assumed travel routes during both the "AM (School)" and "PM (School)" peak hour periods.

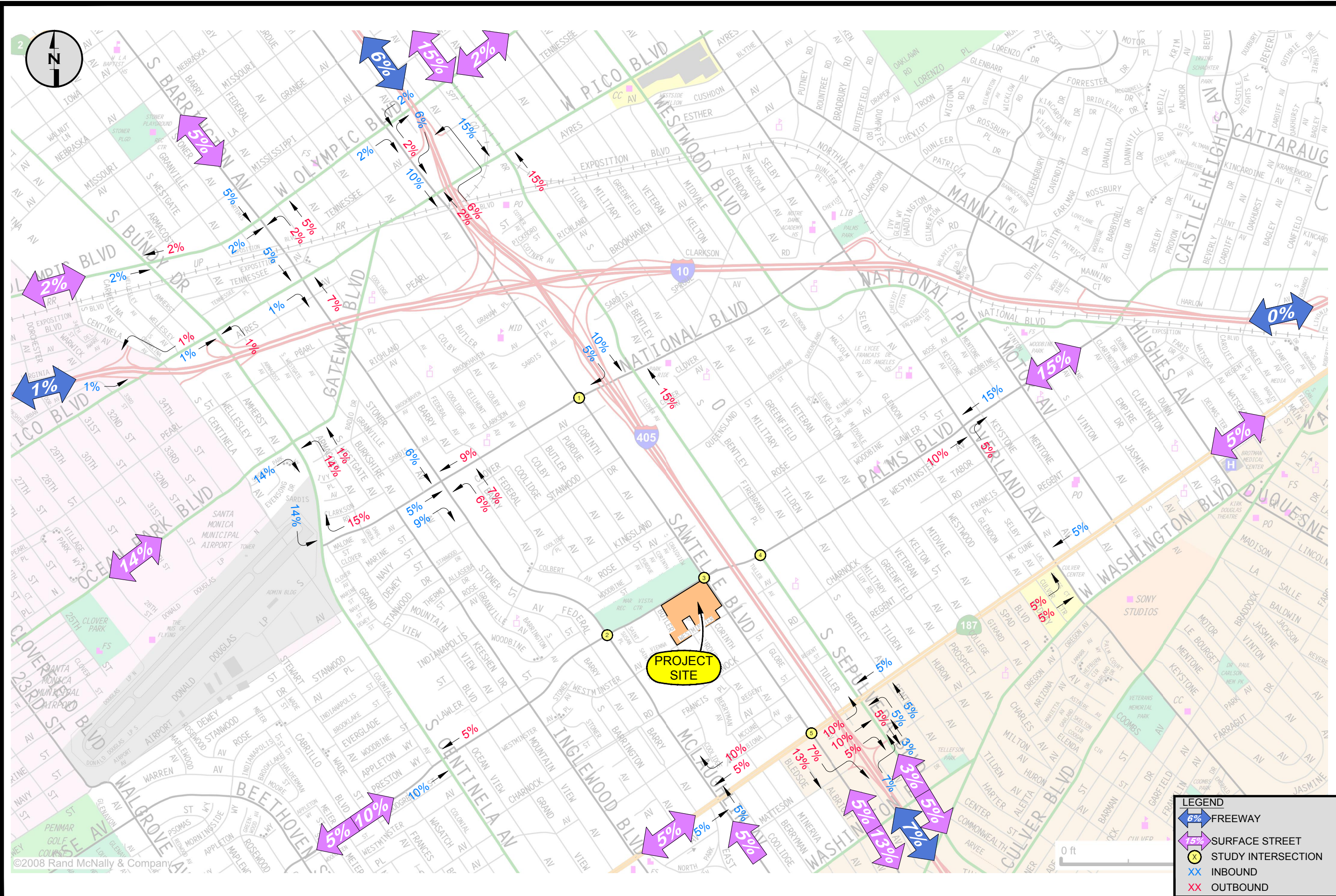


FIGURE 5

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
GEOGRAPHIC PROJECT TRAFFIC DISTRIBUTION PERCENTAGES

The general geographic traffic assignments summarized in Table 5 and shown in Figure 5 were then further refined in order to identify the specific movement (left-turn, through, right-turn) of the School-related traffic through each of the five study intersections as it travels to and from the Windward School site. In addition to the area-wide factors noted earlier that could influence the overall general geographic travel patterns of the School-related traffic, this step also considered the effects of more “localized” factors such as turning restrictions or prohibitions at any of the study intersections, and the locations and operations of each of the individual site driveways. This level of detail is necessary to evaluate the potential incremental effects of the new trips identified previously in Table 3 on each of the study locations.

Based on these factors, the specific “turning-movement” traffic assignment percentages for the School-related traffic at each of the five study intersections were identified, and are shown in Figure 6. The “intersection-level” trip assignment percentages shown in this figure reflect the combination of the “surface street” and “freeway” general geographic assignment percentages summarized earlier in Table 5 and shown in Figure 5, and again, represent the travel patterns of the School-related trips during both the “AM (School)” and “PM (School)” peak hours.

The final step in the trip assignment process identified the number of new trips anticipated to travel through each of the study intersections due to the prior 35-student enrollment increase and to the future 40-student enrollment increase requested in the Master Plan Update Project. The resulting incremental School-related trips at each of the five study intersections associated with the previous 35-student enrollment increase are shown for the “AM (School) Peak Hour” and “PM (School) Peak Hour” periods in Figures 7(a) and 7(b), respectively, while the number of new trips anticipated due to the proposed future 40-student enrollment increase are shown in Figure 8(a) for the “AM (School) Peak Hour” and in Figure 8(b) for the “PM (School) Peak Hour”. The values shown in these figures represent the potential net increases in “peak hour” traffic at each of the study intersections attributable to the prior and proposed future enrollment increases at the Windward School, and provide the level of detail necessary to identify and evaluate the incremental School-related traffic impacts to these locations, as described later in this report.

Windward School Vehicular Parking

As briefly noted earlier, and shown previously in Figure 3(a) of this report, vehicular parking for the existing Windward School campus is provided by two on-site surface parking lots containing a total of approximately 152 spaces, including about 62 spaces in the “Palms Boulevard” lot located on the northern portion of the site, and about 90 spaces in the “Sawtelle Boulevard” lot

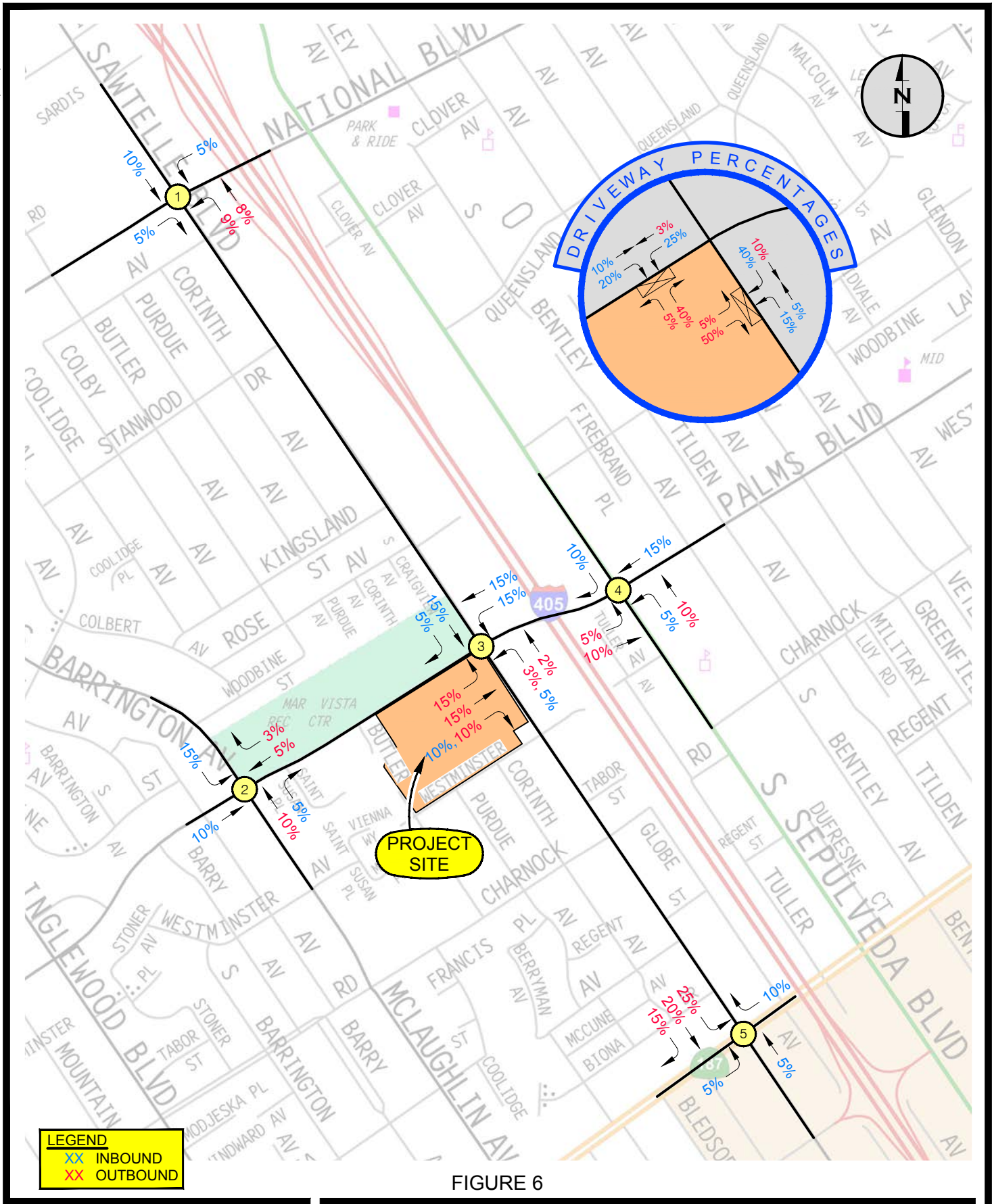


FIGURE 6

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT PROJECT TRIP DISTRIBUTION PERCENTAGES



Hirsch/Green Transportation Consulting, Inc.

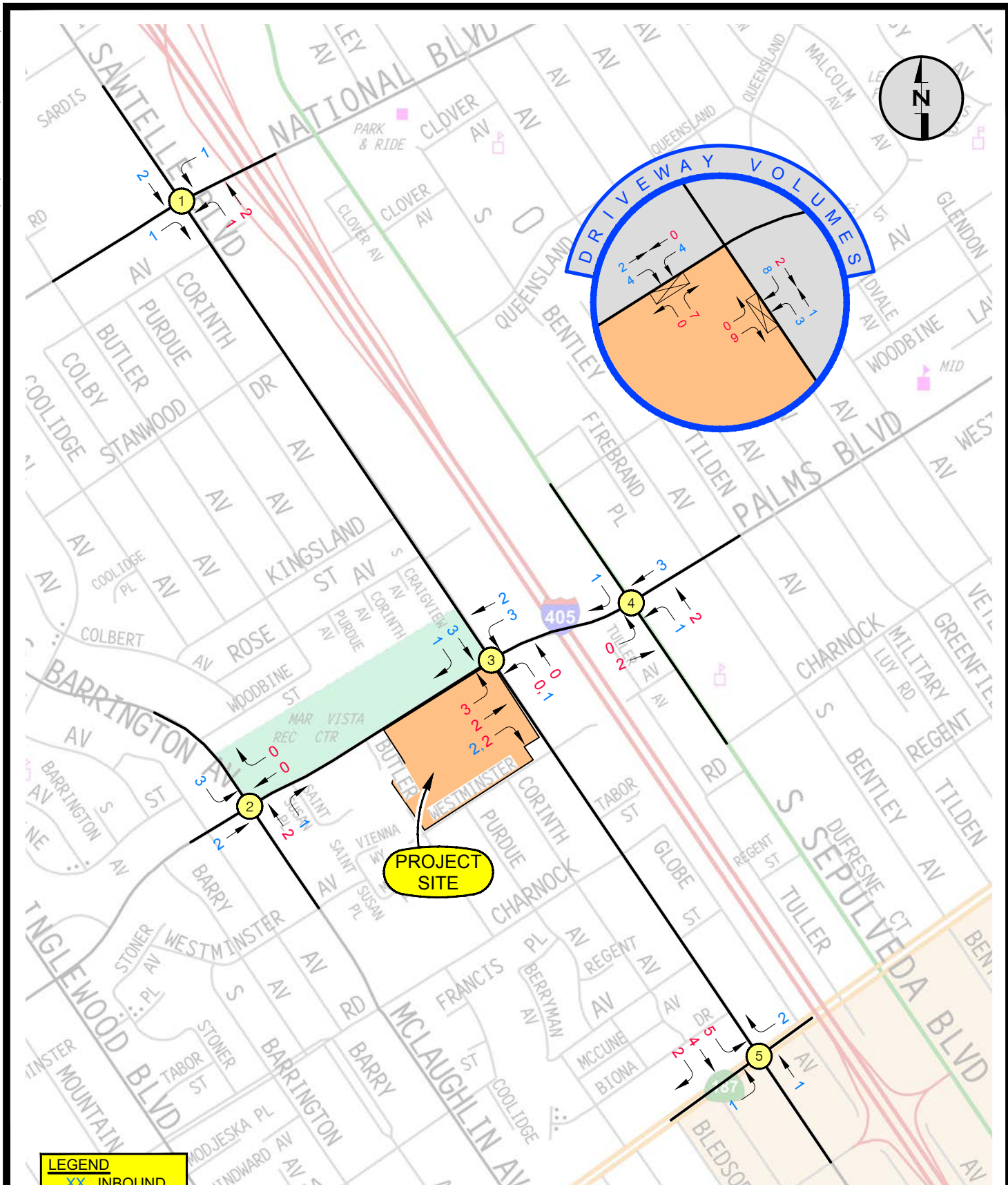
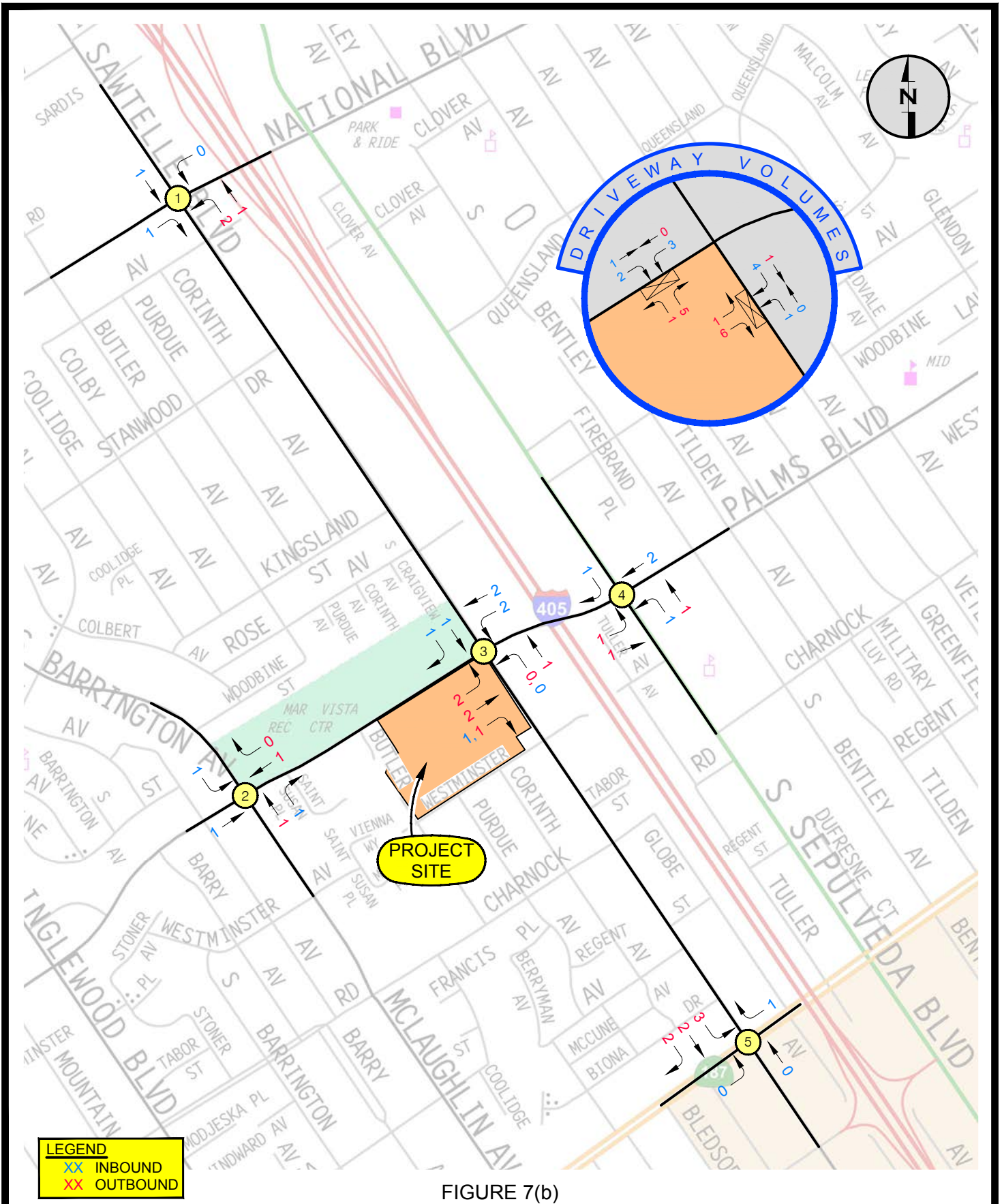
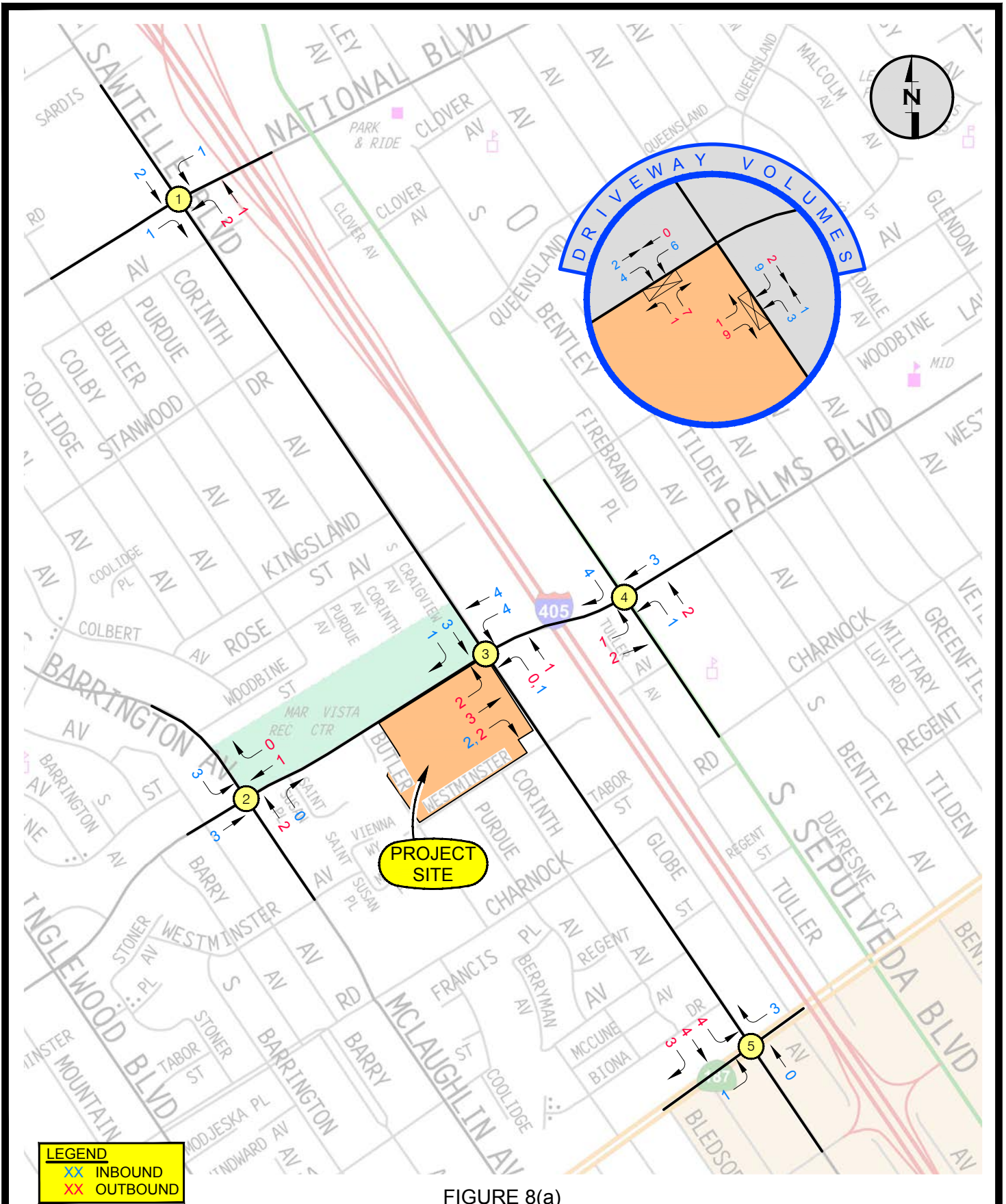


FIGURE 7(a)

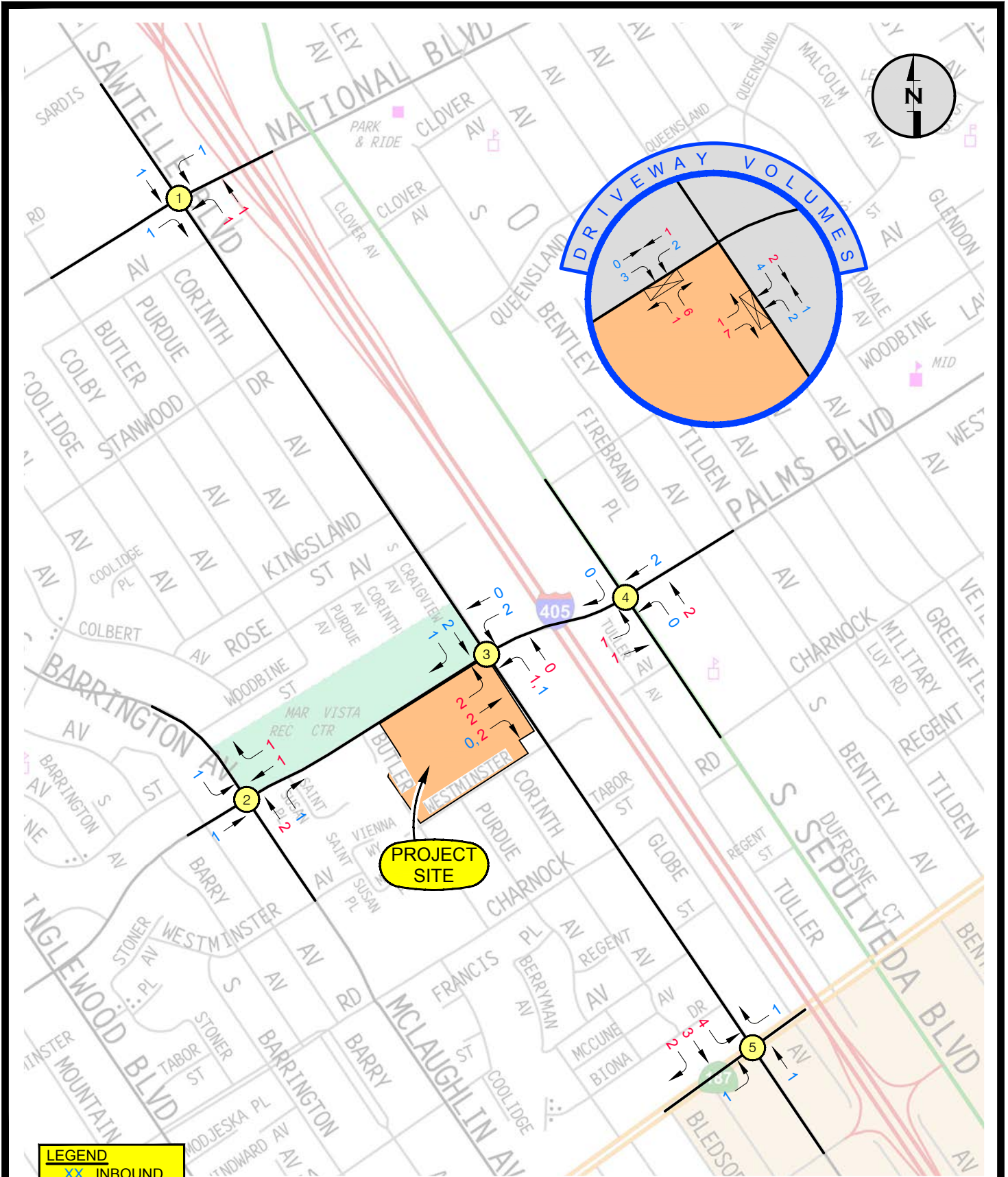
TRIPS GENERATED BY
 PREVIOUS 35-STUDENT ENROLLMENT INCREASE
 (FROM PERMITTED 550 TO CURRENT 585 STUDENTS)
 AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



TRIPS GENERATED BY
 PREVIOUS 35-STUDENT ENROLLMENT INCREASE
 (FROM PERMITTED 550 TO CURRENT 585 STUDENTS)
 PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)



PROPOSED MASTER PLAN PROJECT TRAFFIC VOLUMES
(40-STUDENT ENROLLMENT INCREASE FROM CURRENT LEVELS)
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



PROPOSED MASTER PLAN PROJECT TRAFFIC VOLUMES
(40-STUDENT ENROLLMENT INCREASE FROM CURRENT LEVELS)
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)

located on the southern portion of the campus. The “Palms Boulevard” parking lot is currently accessed via an entry-only driveway at the west end of the lot and an exit-only driveway located near the eastern end of the lot, and exhibits a counterclockwise internal circulation scheme to accommodate student (and faculty/staff) drop-off and pick-up operations, although all parking within this lot is restricted to faculty/staff vehicles only. The “Sawtelle Boulevard” parking lot is accessed via a single entry/exit driveway from Sawtelle Boulevard, and provides parking for both faculty/staff and student-driven vehicles, along with short-term parking for School visitors, as well as a drop-off/pick-up area for parent-driven carpools and the School’s student buses. These two lots are physically separated by both distance and the flood control channel bisecting the campus, and as a result, no vehicular circulation between the two parking areas is available.

It is of note that off-site School-related parking is not permitted along those segments of either Westminster Avenue or Butler Avenue adjacent to the Windward School campus. Additionally, while no formal parking prohibitions for Windward School-related vehicles are in place along Palms Boulevard or Sawtelle Boulevard in the immediate vicinity of the Windward School site, current Windward School policy discourages student-related parking along the north side of Palms Boulevard and along the east side of Sawtelle Boulevard, primarily for purposes of enhancing student safety. However, both student and faculty/staff parking is allowed (although also discouraged by School policy) along the site-adjacent frontages of both streets.

Additionally, as also briefly described earlier in this report, prior to the initiation of Phase 1 of the Master Plan Update Project, the School will reconfigure the access and internal layout of the existing “Palms Boulevard” parking lot in order to enhance its existing (faculty/staff-only) parking and (student) drop-off and pick-up operations. Specifically, the existing vehicular access to this parking lot will be modified to remove the westernmost (entry-only) of its two driveways and consolidate all vehicular entry and exit moves to a location near its existing (eastern) driveway. Additionally, the internal vehicular circulation will be revised to reverse the traffic flow direction of the northernmost of the lot’s “drive aisles” to provide additional on-site vehicular queuing for the student drop-off/pick-up activities. This reconfiguration will provide about the same amount of additional on-site vehicular queuing length (approximately 150 feet) as is provided between the two existing “Palms Boulevard” parking lot driveways in the median two-way left-turn lane along the site’s Palms Boulevard frontage (which is used by westbound School-related vehicles awaiting entry into the lot’s existing western entry-only driveway). Note that this reconfiguration of the on-site layout and vehicular circulation pattern will slightly reduce the amount of parking provided in the “Palms Boulevard” parking lot, from the current 62 spaces to about 60 spaces,

and result in a total on-site vehicular parking supply of approximately 150 spaces (prior to the start of the subject Master Plan Update Project improvements). However, the relocation of the “Palms Boulevard” parking lot driveway and the consolidation of its vehicular access operations will not remove or otherwise affect the existing two-way left-turn lane on Palms Boulevard, which will continue to provide about 250 feet of on-street (westbound) vehicular queuing length for School-related vehicles entering the new consolidated parking lot driveway, and which is considered adequate to accommodate the anticipated future traffic demands at this driveway. Further, the pre-Master Plan Update Project modifications to the “Palms Boulevard” parking lot are not expected to result in changes to its current usage, and it will continue to be designated for faculty/staff parking only, and as a location for on-site student drop-off and pick-up activities.

Existing Windward School Parking Requirements and Supply

Pursuant to its existing entitlements (ZA-98-0983-ZV-YV, May 1999), the Windward School is required to provide a minimum of 140 on-site vehicular parking spaces, and currently provides a total of 152 vehicular parking spaces (including 62 spaces in the “Palms Boulevard” parking lot, and 90 spaces in the “Sawtelle Boulevard” parking lot). However, as described earlier, prior to the start of the proposed Master Plan Update Project improvements, the School will modify the “Palms Boulevard” parking lot, which will result in a reduction of two parking spaces within that specific parking lot, from the existing 62 spaces to 60 spaces, as well as a similar reduction in the overall Windward School parking supply, from the current total of 152 spaces to 150 spaces, although even this somewhat reduced amount of on-site vehicular parking will remain adequate to meet the School’s existing vehicular parking requirements. The School’s current entitlements do not specifically identify any requirements for the provision of on-site bicycle parking spaces (the entitlements were approved prior to the inclusion of such requirements in the LAMC), although the School does provide a limited number of on-site bicycle racks. Therefore, the Windward School is currently compliant with the vehicular and bicycle parking requirements related to its current conditions of approval, and will remain so following the reconfiguration of the “Palms Boulevard” parking lot (prior to the Master Plan Update Project improvements).

Proposed Windward School Master Plan Update Project Parking Requirements

The parking requirements for the proposed Windward School Master Plan Update Project were calculated based on the provisions of the current City of Los Angeles Municipal Code (“LAMC”). Section 12.21.A of the LAMC identifies the vehicular parking requirements for a variety of uses, although it is of note that there is no specific “high school” category in the LAMC. As a result,

the City generally utilizes the LAMC's "Auditorium" land use parking requirements to determine the amount of vehicular parking required for high schools, based on the size or seating capacity of any "assembly areas" (auditoriums, gymnasiums, etc.) associated with the subject facility. The LAMC also identifies requirements for the provision of bicycle parking for many land uses, including "private high schools" (such as the "upper" grades of the Windward School), based either on the number of classrooms, or on the size (or seating capacity) of the subject school's "assembly areas". The vehicular and bicycle parking requirements for the Windward School's proposed Master Plan Update Project are identified and discussed in the following pages.

Vehicular Parking Requirements

Although the proposed Master Plan Update Project infrastructure improvements will include both renovations to and expansion of the existing classroom facilities, resulting in the addition of approximately five (5) new classrooms, with regard to the School's future parking requirements (which will be applicable following the completion of the proposed Master Plan Update Project), the more pertinent factor is the construction of the new "Arts and Innovation Center" facility, which as described previously, will include both a 250-seat auditorium and a 189-seat theater. Both the new auditorium and theater are considered to be "auditorium" areas under the LAMC, which exhibits a vehicular parking requirement of one (1.0) space for every five (5) fixed seats. As a result, the proposed auditorium will require the provision of 50 vehicular parking spaces (250 seats at one parking space for every five fixed seats), while the new 189-seat theater will require a total of about 38 vehicular parking spaces (again, at one space per every five seats).

It is of note that, while the new auditorium and theater facilities are not generally expected to be used concurrently (and as such, the LAMC vehicular parking requirements identified above for each of these individual uses would not typically be applied cumulatively), it is possible that these two new "assembly areas" could occasionally be occupied simultaneously. Therefore, the proposed "Arts and Innovation Center" will require approximately 88 vehicular parking spaces (50 "auditorium" spaces plus about 38 "theater" spaces), in addition to the 140 parking spaces currently required, resulting in a total future on-site vehicular parking requirement for the School (following the completion of the Master Plan Update Project) of approximately 228 spaces.

As described in detail previously in this report, the Windward School currently provides a total of approximately 152 on-site vehicular parking spaces, although the planned modifications to the "Palms Boulevard" parking lot will reduce the on-site vehicular parking supply to 150 spaces, including 60 spaces in the reconfigured "Palms Boulevard" parking lot, and 90 spaces in the

“Sawtelle Boulevard” parking lot. The proposed Master Plan Update project will maintain this amount of parking, and as a result, the School will exhibit a future vehicular parking shortfall (compared to the applicable LAMC requirements) of about 78 on-site spaces. Measures to address this Code-related parking deficit are discussed and evaluated, later in this document.

Bicycle Parking Requirements

Although the current entitlements for the Windward School do not identify any requirements for bicycle parking, the development of the proposed Master Plan Update Project will dictate that the School comply with the current bicycle parking requirements of the LAMC. Specifically, the LAMC requires that “private schools” provide short-term bicycle parking, intended primarily for day-to-day use by the School’s students and employees, at a ratio of 4.0 spaces per classroom, or at 1.0 space per 350 square feet or 50 fixed seats for assembly areas (whichever is greater), while long-term bicycle parking (essentially, enclosed bicycle storage facilities), is required to be provided at a ratio of 1.0 space for every 10 classrooms, or at 1.0 space per 700 square feet or 100 fixed seats for assembly areas (whichever is greater), with a minimum of two (2) long-term and two (2) short-term bicycle spaces required regardless of the calculation methodology used.

However, unlike the vehicular parking requirement calculations described earlier, which utilize the higher of either the “per classroom” or “per seat” methodologies to identify the amount of required vehicular parking, the bicycle parking requirements for the School were calculated based on the sum (total) of the results of both calculation approaches. Therefore, using the LAMC bicycle parking requirements identified previously, the five new classrooms associated with the development of the proposed Master Plan Update Project will require the provision of about 20 new (or additional) short-term bicycle parking spaces (at 4.0 spaces per classroom), along with the minimum of two new long-term bicycle parking spaces. Further, the proposed new “Arts and Innovation Center” building, which as described previously will contain a total of approximately 439 fixed seats (250 seats for the auditorium and 189 seats for the theater use), resulting in a bicycle parking requirement of about nine short-term spaces (total of 439 seats at 1.0 space for every 50 fixed seats equals approximately 8.8 spaces, rounded up to 9.0 spaces) plus about four additional long-term bicycle parking spaces (439 seats at 1.0 space per 10 seats equals about 4.4 spaces, rounded down to 4.0 spaces per the LAMC calculation methodology).

Based on these calculations, the proposed Master Plan Update Project will require that a total of approximately 35 new on-site bicycle parking spaces (29 short-term, six long-term) be provided, in addition to any existing bicycle parking that may be required. However, as also noted earlier,

the School's current entitlements do not include any specific requirement for bicycle parking, and as such, it is anticipated that, following the completion of the Master Plan Update Project, the School will be required to provide a minimum of 35 on-site bicycle parking spaces (the LAMC bicycle parking requirements are not retroactive to the existing development on the site).

As shown previously in Figure 4(c), following the completion of the Master Plan Update Project, the Windward School will provide a total of approximately 40 on-site bicycle parking spaces, including 30 short-term and 10 long-term spaces, at various locations throughout the campus (pursuant to the LAMC bicycle parking "locating" requirements). Therefore, it is expected that the School will provide a sufficient number of on-site bicycle parking spaces to comply with the applicable requirements associated with its proposed Master Plan Update improvements, and as a result, no significant bicycle parking-related impacts are anticipated.

Empirical Existing and Forecast Future Windward School Vehicular Parking Demands

The preceding discussions identify that the Windward School Master Plan Update Project will be required (by City Code) to provide a total of approximately 228 on-site vehicular parking spaces. However, as also noted earlier, a total of only 150 on-site vehicular parking spaces is proposed, and as a result, pursuant to Section 12.27 of the LAMC, the School will request a variance to provide 150 on-site vehicular parking spaces in lieu of the 228 spaces required based on its current entitlements (per Case No. ZA 98-0893-ZV-ZY) combined with the additional parking required for the new auditorium and theater, as calculated under LAMC Section 12.21 A.4(e).

However, the approval of a parking variance (to provide fewer parking spaces than are required) is typically contingent upon proof that the requested number of parking spaces will be adequate to accommodate the anticipated parking demands of the subject facility. Therefore, to this end, the empirical traffic data collected at the School (as described previously) was further evaluated in order to identify the actual existing parking demands at the site, and to estimate the potential future parking demands following the completion of the proposed Master Plan Update Project, to determine if the proposed (and requested) 150-space vehicular parking supply is acceptable.

As noted earlier, the current on-site parking demands at the Windward School campus were identified via a series of counts and observations conducted at the School's on-site parking lots at the beginning and the end of both the "morning" and "afternoon" traffic count periods; these parking "sweeps" were conducted on the same days as the traffic-related counts, and include vehicles parked in the on-site parking lots prior to the start of the parking surveys (which were not included in the previously-discussed empirical trip generation rate calculations).

These observations indicated that the current maximum total on-site parking demand (at the end of the “morning arrival” period) was 125 vehicles (on Tuesday, October 10, 2017), including 81 faculty/staff vehicles (45 in the “Palms Boulevard” parking lot, 36 in the “Sawtelle Boulevard” parking lot) and 44 student-driven vehicles (all in the “Sawtelle Boulevard” parking lot). Overall, throughout the three-day count period, the maximum number of faculty/staff-related vehicles utilizing the School’s on-site parking lots occurred on Wednesday, October 11th, at 88 vehicles, while the 44 student-related vehicles observed on Tuesday (as noted above) represents the maximum on-site student-related parking demands observed on any of the surveyed days.

Additionally, the School has also identified that 16 faculty and/or staff personnel currently exhibit work schedules that do not typically require them to be present at the start of the school day (they arrive somewhat later in the day), and as a result, the parking demands associated with these faculty/staff personnel may not be included in the empirical observations, which end at approximately 8:30 AM, just after the beginning of classes at the School. Therefore, in order to provide a conservative estimate of the total number of vehicles using the School’s on-site lots, an additional 16 faculty/staff-related vehicles were added to the observed parking demands on each of the surveyed days. *(Note that, as described in detail earlier in this report, the typical vehicle occupancy for the School’s faculty/staff personnel is about 1.202 persons per vehicle, and as such, the number of parked vehicles associated with the 16 “late arriving” faculty/staff would be expected to be about 13 vehicles, assuming that none of these faculty or staff were dropped-off or used public transit. Therefore, the assumption of 16 additional parked vehicles for the “late arriving” faculty and staff personnel is considered to be a “worst case” condition.)* Based on this assumption, the maximum total on-site vehicular parking demand at the School is estimated at a total of 141 vehicles, including 97 faculty/staff and 44 student-related vehicles.

Further, as also discussed previously in this study, the parking observations also identified the number of both student-driven and faculty/staff-related vehicles parked off-campus along both Palms Boulevard and Sawtelle Boulevard in the general vicinity of the School. As noted earlier, although on-street parking by both students and faculty/staff is discouraged by the School, some on-street parking does occur, and therefore, in order to fully identify the School’s existing and potential future parking demands, additional observations were conducted to identify the number of School-related vehicles that currently park along either side of both Palms Boulevard (generally between Sawtelle Boulevard and Barrington Avenue/McLaughlin Avenue) and Sawtelle Boulevard (between Palms Boulevard and approximately Charnock Road).

The results of the on-street parking utilization surveys, which are actually based on observations of the overall traffic activity occurring at the site, as identified in Tables A-2(a) through A-2(c) in Appendix A of this report, indicate that a maximum total of about 44 School-related vehicles, including 18 faculty/staff vehicles and 26 student-driven vehicles, were parked off campus along either Palms Boulevard or Sawtelle Boulevard at about 8:30 AM (the end of “morning arrival” survey period) on Thursday (October 12th). The School-related off-site parking activity was also similar on Tuesday (October 10th), at a total of about 43 vehicles, including 13 faculty/staff and 30 student-related vehicles, although the on-street parking usage on Wednesday (October 11th) was lower, at about 32 total vehicles, including 11 faculty/staff and 21 student-related vehicles.

When taken together, these empirical on-site and on-street parking utilization surveys identified that the maximum parking demands generated by the existing Windward School operations during the survey period occurred on Tuesday, at a total of approximately 184 parked vehicles, consisting of a total of about 110 faculty/staff vehicles (97 vehicles parked in the on-site lots, including the assumed 16 “late arrival” faculty/staff vehicles, and 13 additional vehicles parked off-site along either Palms Boulevard or Sawtelle Boulevard) and 74 student-related vehicles (44 in the on-site “Sawtelle Boulevard” lot and 30 on the adjacent streets). *(Note that, while the highest observed on-site parking demand for the faculty/staff-related vehicles actually occurred on Wednesday, at about 88 total vehicles as identified earlier, due to the later class start time on this day and the associated extended “morning arrival” survey period, it is unclear whether this amount of parking included any or all of the assumed 16 “late arrival” faculty/staff vehicles, and therefore, this data was not used to determine the overall maximum School parking demands.)* This parking demand exceeds the School’s current 152-space on-site vehicular parking supply by about 32 vehicles, and will exceed the anticipated “future” 150-space on-site parking supply (following the planned modifications to the existing “Palms Boulevard” parking lot, which will be unaffected by the proposed Master Plan Update Project) by approximately 34 vehicles.

Next, using these existing peak parking utilizations, the potential future parking demands for the Windward School following the completion of the proposed Master Plan Update Project and its requested 40-student enrollment increase were estimated. Based on the School’s current enrollment level of 585 students, the maximum observed student-related (i.e., student-driven) vehicular parking demand of 74 total spaces, including both on-site and on-street parking) equates to a parking demand of about 0.126 parked vehicles per enrolled student, inclusive of students who are transported in parent-driven carpools or school buses, or who walk, bicycle, or take public transit). Therefore, assuming that the travel characteristics of the School’s students

remain relatively stable throughout the proposed enrollment increase, the 40 additional students would be expected to generate an incremental parking demand of only about five (5) vehicles; since the Master Plan Update Project does not propose any significant changes to the School's current staffing levels, no increases to its existing faculty/staff parking demands are anticipated. As a result, at its requested full enrollment level of 625 students following the completion of the Master Plan Update Project, the School is forecast to exhibit a total vehicular parking demand of approximately 189 vehicles (including about 110 faculty/staff and 79 student-driven vehicles). While this empirically-based parking demand is less than the previously-identified 228-space LAMC requirement for the School's future (with Master Plan Update Project) conditions, it will exceed the (planned) future 150-space on-site vehicular parking supply by about 39 spaces.

Therefore, the results of the parking demand evaluations for the Windward School indicate that neither its existing nor its anticipated future on-site vehicular parking supply will be adequate to accommodate the forecast future parking demands for the School following the completion of the proposed Master Plan Update Project (and its associated 40-student enrollment increase), as well as that the proposed on-site parking supply will be less than that required by the LAMC. As a result, and as briefly noted earlier in this report, the proposed Master Plan Update Project will also include a Transportation Demand Management ("TDM") Plan designed to reduce the vehicular parking demands for the School during typical (school day) operations to a level that can be fully accommodated on-site within the anticipated future 150-space parking supply. Additionally, the TDM Plan will also include a variety of strategies and programs to minimize the amount of traffic generated by the School, including limiting the number of student drivers, requiring minimum vehicle occupancies for faculty/staff-related and student-driven vehicles, enhancing and/or expanding the School's existing student bus program, assisting with the formation of carpools for both students and faculty/staff personnel, and educating and assisting students and faculty/staff about the use of public transit. The key programs and strategies anticipated to be included in the Master Plan Update Project TDM Plan are described in the following section of this report, along with an evaluation of the effectiveness of each element.

Recommended Transportation Demand Management ("TDM") Program

Parking Demand Reduction Strategies

The existing Windward School campus provides a total of 152 on-site vehicular parking spaces, including about 44 spaces assigned to permitted student drivers and about 102 spaces provided for faculty/staff parking, with the remaining spaces either unassigned or used as visitor parking,

although the School's plans to modify the layout of the "Palms Boulevard" parking lot prior to the start of the proposed Master Plan Update Project will reduce the on-campus vehicular parking to a total of approximately 150 spaces, which will be retained in the Master Plan Update Project. The School has indicated that 45 spaces will be assigned for use by its student drivers, with the remainder to be provided as parking for the School's faculty and staff, and for visitors to the site.

However, as identified in the preceding section of this report, the School's existing 152-space parking supply is not sufficient to fully accommodate its current parking demands on site, resulting in off-site parking by both students and faculty/staff along both Palms Boulevard and Sawtelle Boulevard. Additionally, the 150-space "future" parking supply will not be adequate to meet the School's forecast (with 40-student enrollment increase) parking demands, and further, will be approximately 78 spaces less than the 228 on-site parking spaces required by the LAMC following the completion of the proposed Master Plan Update Project improvements.

Due to this LAMC-related parking shortfall, the School's Master Plan Update Project will include a request for a parking variance to provide 150 on-site vehicular parking spaces in lieu of the required 228 spaces, although it must prove that the proposed amount of parking will be adequate to accommodate its anticipated parking demands in order to obtain such a variance. Therefore, as briefly noted previously, the School's proposed Master Plan Update Project will also include a TDM Plan designed in part to reduce its parking demands to levels that can be fully accommodated within the proposed "future" 150-space on-site parking supply.

As described earlier, of the anticipated 150 on-site vehicular parking spaces provided both prior to and following the completion of the Master Plan Update Project, 45 spaces will be assigned to student-driven vehicles, leaving about 105 spaces for faculty/staff and visitor parking. However, the empirical surveys at the School indicate that the existing parking demands associated with the School's 137 faculty and staff are estimated to be about 110 total spaces, each with an average occupancy of about 1.202 faculty/staff persons per vehicle (an average of about six faculty/staff personnel are dropped-off, walk, bicycle, or use public transportation during the "morning arrival" period). In order to reduce the School's overall parking demands, the TDM Plan will require that the average occupancy for faculty/staff vehicles (that utilize the School's on-site parking, not including drop-offs) be increased to 1.33 persons per vehicle.

Assuming that the current faculty/staff travel characteristics remain relatively stable in the future, with about six faculty/staff arriving via travel modes that do not require vehicular parking spaces, this measure would result in a faculty/staff-related parking demand of approximately 99 vehicles

(137 total faculty/staff, less six drop-off/walk/bike/transit users, equals 131 faculty/staff “drivers”; at an average of 1.33 persons/vehicle, this equates to 98.5 vehicles, rounded up to 99 vehicles). When combined with the 45 spaces assigned for the student-driven vehicles, this amount of faculty/staff parking would result in a total of 144 of the anticipated 150 on-site parking spaces being utilized, leaving six spaces for use as visitor parking. Note that, even if all of the School’s 137 faculty and staff were to drive to the site (with no drop-offs or walk/bicycle/transit utilization), this assumption would result in a maximum faculty/staff parking demand of about 103 vehicles, and a total maximum on-site parking utilization, again including the 45 student-driven vehicles, of about 148 spaces. This amount of on-site parking usage is still less than the 150 spaces provided by the Master Plan Update Project, but would allow for only two visitor parking spaces.

However, while increasing the average faculty/staff vehicle occupancy from its current level of approximately 1.202 persons per vehicle to a minimum of 1.33 persons per vehicle will allow for all of the faculty/staff-related parking demands to be fully accommodated within the School’s future 150-space on-site parking supply, and thereby eliminate the need for faculty and staff to park on the adjacent streets, it does not address the existing student-related on-street parking. Therefore, the Master Plan Update Project TDM Plan will include additional measures to reduce the overall student-related parking demands, as described in the following pages.

As noted earlier, and as summarized in Table A-5 in Appendix A of this report, the School’s student-driven vehicles (including vehicles parked both on-site and along the adjacent streets) currently exhibit an average occupancy of about 1.615 students per vehicle. The TDM Plan will require that, in order to qualify for one of the 45 on-site parking permits, student-driven vehicles must carry a minimum of three students (student driver plus at least two student passengers). This measure will increase the number of students being transported in student-driven vehicles from the current average of approximately 105 students (as shown in Table A-5) to a minimum of 135 students, and further, is expected to reduce the student-related on-street parking activity by approximately 18 vehicles (from its current level of about 30 vehicles). Note that, although some current Windward School students walk, bicycle, or ride with a faculty/staff parent, for the purposes of this analysis, no such activity was assumed for the future conditions at the School, since it cannot be guaranteed in perpetuity or during inclement weather.

The residual student-related on-street parking usage will be addressed via increased ridership in the School’s existing student busing program, and through minimum occupancy requirements for parent-driven carpools that drop off students at the site. The Windward School currently operates five student bus routes, which together exhibit a total capacity of about 188 students.

However, this service provides transportation to the campus during the “morning arrival” period for an average of only 54 students per day (about 29 percent of its total capacity), and as such, is substantially underutilized. The TDM Plan will require that a minimum of 20 percent of the School’s maximum enrollment of 625 students requested under the Master Plan Update Project, or a minimum of 125 students, use the student busing program as their primary mode of travel during the “morning arrival” period (it is acknowledged that student bus utilization during the afternoon “class dismissal” period may vary substantially due to student participation in off-site and/or afterschool activities or programs, and therefore, no specific student bus ridership during this period will be required). It is also of note that the Windward School identifies that a total of approximately 134 of its current 585 students (about 23 percent) are signed up to participate in the student bus program, although as noted earlier, only about 40 percent of these students actually utilize the bus program on a regular basis. Nonetheless, this information indicates that the TDM Plan’s recommended minimum 20 percent student bus ridership level is achievable.

Together, the TDM Plan’s minimum student-driven vehicle occupancy and student bus ridership requirements will account for a total of 260 of the School’s requested maximum enrollment level of 625 students (about 42 percent), leaving a total of about 365 students that are expected to be transported to the campus via parent-driven vehicles (either individually or as part of a carpool). These parent-driven vehicles, which both drop-off and pick-up students on or adjacent to the School’s campus, currently exhibit an average occupancy of about 1.480 students per vehicle. The TDM Plan will require that this occupancy level be increased by about 20 percent, to an average of about 1.75 students per parent-driven vehicle. At this minimum occupancy level, the remaining 365 students (out of the total future maximum requested enrollment of 625 students) that are not accounted for in the enhanced student-driven vehicle and school busing programs described earlier, will generate a total of approximately 209 parent-driven “drop-off” vehicles during the Windward School’s typical “morning arrival” period.

To briefly summarize the effectiveness of the various parking demand reduction measures that are recommended for inclusion in the School’s TDM Plan, of the total maximum enrollment of 625 students requested in the Master Plan Update Project, a minimum of 125 students will be required to use the School’s student busing program, with an additional 365 students expected to be dropped off at the School via parent-driven carpools, resulting in a total of 490 students that will be transported to the campus without requiring any vehicular parking (the school buses will need an area for short-term student unloading, but will not be parked on-site during the day). The remaining 135 students will arrive in student-driven carpools exhibiting a required minimum

occupancy of three students per vehicle, thus generating a student-related parking demand of no more than 45 spaces. Finally, the School's 137 faculty and staff personnel will be required to participate in a carpool/rideshare program designed to achieve an average vehicle occupancy of 1.33 (faculty/staff) persons per vehicle, resulting in a total faculty/staff-related parking demand of between about 99 and 103 spaces (depending on the number of future faculty/staff that arrive at the campus via drop-offs, walk or bicycle, and/or utilize public transportation).

As a result, the measures recommended for inclusion in the School's TDM Plan are anticipated to result in a total (student and faculty/staff) parking demand of between 144 and 148 spaces at its requested future maximum enrollment level of 625 students. These parking demands can be fully accommodated on-site within the anticipated future 150-space on-campus parking supply, without the need for any off-site parking for either the faculty/staff or student-related vehicles, and therefore, with the implementation of the TDM Plan and achievement of its recommended target vehicle occupancies, the School's anticipated request for a parking variance to reduce its required parking from 228 spaces to 150 spaces can be supported.

TDM Plan Trip Generation Reductions

Although the recommended TDM Plan measures described earlier are designed primarily to address the School's vehicular parking demands, the increases in the average occupancies for the various School-related vehicles, including increased ridership in the student busing program, will also result in reductions to the School's overall trip generation levels.

"Morning Arrival" Period

As identified in Table A-1(a) in Appendix A of this report, the School's faculty and staff currently generate an average of approximately 70 "inbound" vehicular trips related to both their on-site and on-street parking activity (but not including an average of about five vehicles that currently drop-off faculty and staff at the site) during the 90-minute "morning arrival" observation period between 7:00 to 8:30 AM. However, this trip generation level does not include an average of about 20 faculty/staff-related vehicles (as shown in the footnote in Table A-5) that were parked in the School's on-site parking lots, and therefore generated an "inbound" trip to the site, prior to the start of the observations, or the 16 "late arrival" faculty/staff vehicles, each of which was assumed to result in an "inbound" trip after the end of the "morning arrival" period observations. *(Note that the "omission" of the pre- and post-observation period faculty/staff trips does not affect the "morning arrival" peak hour trip generation estimates shown earlier in Table 1, which reflect the actual number of trips observed during the highest one-hour period, as identified in*

Tables A-2(a) through A-2(c) in Appendix A of this report. The “peak period” trip values were used only to estimate the percentage of those trips that occurred during the “peak hour” period, as discussed earlier, and shown in Appendix A in Tables A-1(a) and A-1(b). This percentage was then used to estimate the number of “peak hour” trips generated by the School following the implementation of the TDM Plan and its associated trip-reducing measures, based on the number of “peak period” trips anticipated for that scenario, as described in the following pages. As a result, the use of the lower number of “peak period” trips results in a larger percentage of such trips that are assumed to occur during the “peak hour”, and producing a more conservative (i.e., higher) estimate of the number of “peak hour” trips than would otherwise be identified.)

Therefore, during the overall “morning arrival” period, the School’s faculty/staff-driven vehicles (not including faculty/staff drop-offs) currently generate a total of about 106 trips (all “inbound”), including trips that may occur prior to 7:00 AM or after 8:30 AM. However, increasing the faculty/staff vehicle occupancy level from its current average of about 1.202 persons per vehicle to a minimum of 1.33 persons per vehicle as recommended in the TDM Plan is expected to reduce this number to a total of approximately 99 (“inbound”) faculty/staff-driven vehicle trips. However, for the purposes of this evaluation, it was conservatively assumed that the number of faculty/staff-related “drop-off” trips occurring during the School’s “morning arrival” period would be unaffected by the TDM Plan, and as a result, would remain unchanged from its current level of approximately five vehicles (producing a total of five “inbound” and five “outbound” trips).

Additionally, the increased student occupancy levels required by the TDM Plan will reduce the number of trips associated with both the student-driven and parent-driven carpool vehicles. Currently, student-driven vehicles account for an average of approximately 70 “inbound” trips during the School’s “morning arrival” period, including both vehicles that were parked in the on-site parking lot prior to the start of the survey period, and those that park off-site along the adjacent streets. As noted earlier, the TDM Plan will limit the number of student-driven vehicles to the maximum of 45 such vehicles (each with a minimum occupancy of 3.0 students) that will be assigned on-site parking spaces under the Master Plan Update Project, thereby reducing the total student-driven vehicle traffic to about 45 “inbound” trips during the “morning arrival” period, or a reduction of nearly 36 percent from the current number of student-driven vehicle trips.

Further, the increase in the student occupancy levels for parent-driven carpool vehicles required by the TDM Plan (to a minimum average of 1.75 students per vehicle) will reduce the number of such vehicles needed to transport students to the School during the “morning arrival” period to a total of about 209 vehicles, about 21 percent less than the current average of 266 such vehicles.

Conversely, while the TDM Plan will also require that a minimum of 20 percent of the School's students (a minimum of 125 students at the requested future enrollment level of 625 students) utilize the busing program, the total capacity of the five existing bus routes (about 188 persons) is adequate to accommodate the resulting increases in ridership, and as such, the number of buses (and the associated number of bus trips) will remain unchanged from the current levels. Similarly, for the purposes of this study, the number of visitor trips to and from the campus, which are not directly addressed by the TDM Plan, are also assumed to be unaffected.

Based on these increased faculty/staff and student-related vehicle occupancy requirements, the number of vehicles arriving to and departing from the Windward School campus following the implementation of the TDM Plan was calculated, and is summarized in Table A-6 in Appendix A. As shown in this table, a total of approximately 583 vehicle trips (364 inbound, 219 outbound) are expected to occur during the overall (90-minute) "morning arrival" period. It should be noted that these estimates are based on the conservative assumption that all School-related traffic, including that associated with vehicles that currently arrive outside the "morning arrival" period, such as the faculty/staff and student-related vehicles that were parked on-site before 7:00 AM, and the "late arrival" faculty/staff vehicles that occurred after 8:30 AM. Therefore, the trip values shown in Table A-6 for the School's morning "Total Count Period" are considered to represent a "worst case" estimate of the potential number of School-related trips during this time period.

Next, the number of these "Total Count Period" trips that would be expected to occur during the "AM (School) Peak Hour" (7:15 to 8:15 AM) was calculated, using the applicable percentages associated with each of the various individual vehicle categories (faculty/staff, student-driven, parent-driven carpool, etc.) as discussed previously and identified in Table A-1(a). The results of this procedure, which are also shown in Table A-6 as the "AM (School) Peak Hour" trips, indicate that a total of approximately 558 trips (346 inbound, 212 outbound) are expected to arrive to or depart from the School site during the "AM (School) Peak Hour". As also identified in Table A-6, this represents a reduction of about 144 total trips (69 inbound, 75 outbound), or a little over 20 percent, from the "AM (School) Peak Hour" trip levels estimated for the School at its requested future maximum enrollment level of 625 students. These trip reduction levels were used to evaluate the effectiveness of the TDM Plan on the potential traffic impacts related to the School's Master Plan Update Project, as discussed in detail later in this report.

Further, and more importantly, as also noted in Table A-6, the TDM Plan is expected to reduce the School's "AM (School) Peak Hour" traffic by about 104 trips (47 inbound, 57 outbound), or nearly 16 percent, compared to its current (585-student) levels (as identified earlier in Table 1),

and by approximately 69 trips (28 inbound, 41 outbound), or about 11 percent, from the total of about 627 trips (374 inbound, 253 outbound) that are estimated to have been generated under the “pre-existing” (550-student) conditions (as shown in Table A-4 in Appendix A), which reflect the operations of the School prior to the addition of the 35 students described previously.

Afternoon “Class Dismissal” Period

Unlike the “morning arrival” period described in the preceding pages, when nearly all of the School’s traffic regularly occurs during a limited and specific time period, the traffic patterns at the site during the afternoon “class dismissal” period are more fluid, and occur over a longer and difficult to define period, due to variability in the School’s operations during this time, including students who leave early for off-site athletic or other events, or who may remain on-site after the normal class dismissal times to participate in on-campus athletics and/or academic activities. As a result, the application of specific vehicle occupancies (including student bus ridership) or other similar measures is generally unenforceable. However, that is not to say that some of the programs or strategies identified for the “morning arrival” period are not effective or should not be implemented during the afternoon “class dismissal” period, but rather, that general flexibility in the identification of specific (vehicle or user-type) trip reduction levels should be permitted.

Therefore, based on the trip reduction levels to be achieved during the “morning arrival” period, the TDM Plan shall require that the School achieve a 10 percent reduction in the faculty/staff, student-driven, and parent-driven (carpool) vehicle trip levels, compared to the existing levels shown in Table A-1(b) in Appendix A, during both the overall afternoon “class dismissal” period (from 2:30 to 4:00 PM), and its associated peak hour period (from 3:00 to 4:00 PM). Based on these general trip reduction requirements, and as also shown in Table A-6 in Appendix A, the School will generate a total of approximately 448 trips (198 inbound, 250 outbound) during the overall (90-minute) afternoon “class dismissal” period following implementation of the TDM Plan, along with about 367 trips (150 inbound, 217 outbound) during the “PM (School) Peak Hour”.

This represents a TDM Plan-related reduction of about 66 total trips (28 inbound, 38 outbound), or just over 15 percent, from the total of 433 trips (178 inbound, 255 outbound) forecast to occur at the School during the afternoon “class dismissal” peak hour at its requested future enrollment of 625 students, as shown in Table A-4 in Appendix A. Similar to the “AM (School) Peak Hour” analyses described earlier, the “peak hour” trip reductions were used to assess the effects of the TDM Plan on the potential traffic impacts related to the School’s Master Plan Update Project during the “PM (School) Peak Hour”, as described in a later section of this report. Additionally,

as again identified in Table A-6 in Appendix A, the TDM Plan is anticipated to reduce the School's "PM (School) Peak Hour" traffic by approximately 40 trips (17 inbound, 23 outbound), or nearly 10 percent (9.8 percent), compared to the current trip levels shown earlier in Table 1, and by about 17 trips (seven inbound, 10 outbound), or about 4.4 percent, from the total of approximately 384 trips (157 inbound, 227 outbound) shown in Table A-4 in Appendix A that were estimated to have occurred at the School at its previous (550 student) enrollment level.

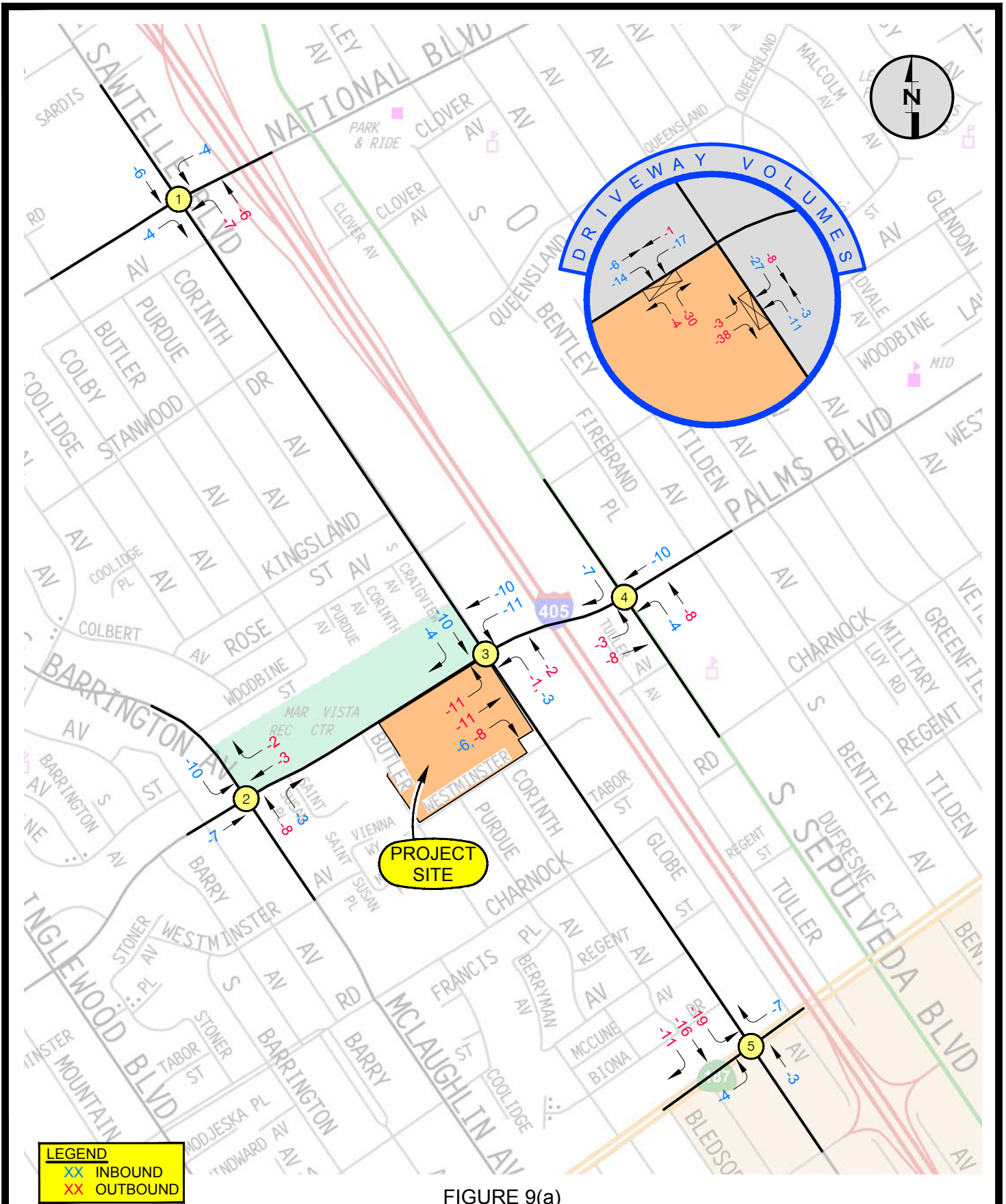
The results of the implementation of the recommended parking demand reduction measures in the TDM Plan on the School's trip generation levels described in the preceding pages are shown in Table 6 for both the "AM (School) Peak Hour" and "PM (School) Peak Hour" periods.

Table 6
Windward School "With Master Plan Update Project TDM Plan" Trip Generation Estimates

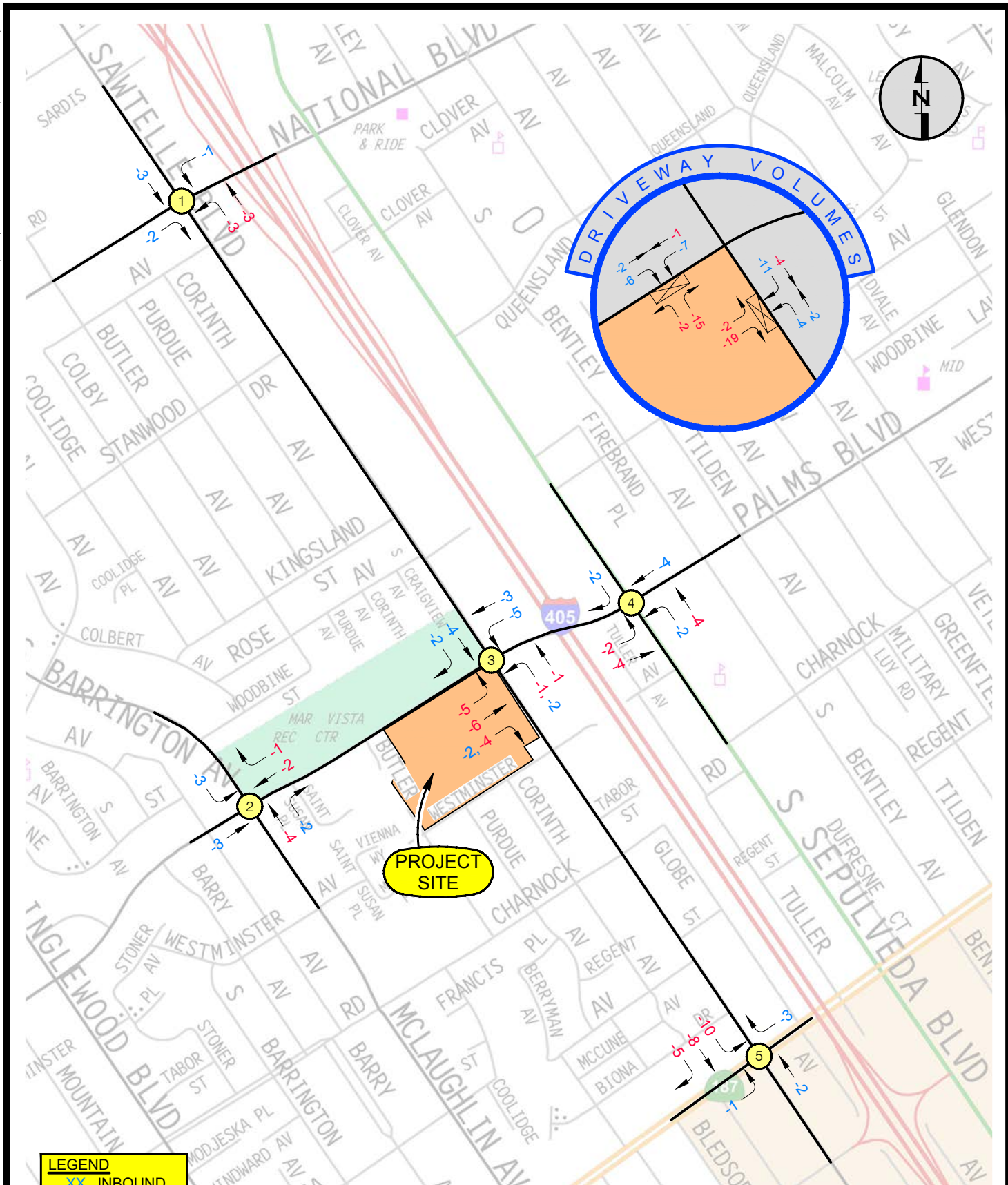
Component	AM (School) Peak Hour (7:15 AM - 8:15 AM)			PM (School) Peak Hour (3:00 PM - 4:00 PM)		
	I/B	O/B	Total	I/B	O/B	Total
Faculty/Staff Vehicles (Parking)	89	0	89	0	20	20
Faculty/Staff Vehicles (Drop-off/Pick-up)	5	5	10	1	1	2
Student Vehicles (Student-driven; Parking)	44	0	44	0	24	24
Parent-driven Vehicles (Drop-off/Pick-up)	202	202	404	149	157	306
Student Buses	5	5	10	0	5	5
Visitor Vehicles (Parking)	1	0	1	0	0	0
Total Vehicular Trips	346	212	558	150	207	357

Therefore, as detailed in the preceding discussions, not only is the TDM Plan anticipated to more than offset the potential trip generation increases at the Windward School associated with the 40 student enrollment increase requested in the proposed Master Plan Update Project during both the "morning arrival" and afternoon "class dismissal" periods (including during their associated "peak hour" periods), it will also reduce the amount of traffic currently occurring at the site by nearly 16 percent during the morning and nearly 10 percent during the afternoon, and further, will bring the School's overall "AM (School)" and "PM (School)" peak hour traffic to less than the estimated levels prior to the earlier 35-student enrollment increase.

The net trip reductions at each of the study intersections resulting from the implementation of the School's Master Plan Update Project TDM Plan are shown in Figures 9(a) and 9(b) for the "AM (School)" and "PM (School)" peak hours, respectively, while the preliminary strategies, programs, and target vehicle occupancy levels for the TDM Plan are identified in Appendix B.



PROPOSED MASTER PLAN PROJECT
 NET TDM PLAN TRIP REDUCTIONS
 AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



PROPOSED MASTER PLAN PROJECT
 NET TDM PLAN TRIP REDUCTIONS
 PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)

Windward School Vehicular Access and Operations

As identified previously in Figure 3(a), the Windward School provides two on-site parking lots; the “Palms Boulevard” lot, and the “Sawtelle Boulevard” lot. The “Palms Boulevard” parking lot is currently accessed via two driveways on Palms Boulevard, including an entry-only driveway at the west end of the lot and an exit-only driveway located near the eastern end of the lot, while the “Sawtelle Boulevard” parking lot exhibits a single entry/exit driveway on Sawtelle Boulevard. No on-site vehicular circulation is provided between these two parking areas. However, as shown earlier in Figure 3(b), prior to the start of Phase 1 of the Master Plan Update Project, the School plans to reconfigure the access and internal layout of the “Palms Boulevard” parking lot to remove the current entry-only driveway and consolidate all vehicular entry and exit moves to a location near its existing (eastern) driveway. Additionally, the internal vehicular circulation will be revised to reverse the traffic flow direction of the northernmost of the lot’s “drive aisles” to provide additional on-site vehicular queuing for the student drop-off/pick-up activities. Both of these parking lots are currently used by parent-driven carpools and the School’s buses for student drop-off activities during the “morning arrival” period, and for student pick-up operations during the afternoon “class dismissal” period, as well as for faculty/staff parking (both lots) and parking for student-driven vehicles (“Sawtelle Boulevard” lot only).

The “Palms Boulevard” parking lot currently provides a total on-site vehicular queuing capacity of approximately 13 vehicles, although the planned access and internal circulation modifications will increase the queuing capacity within this lot to a total of about 20 vehicles (as noted earlier, the planned relocation/consolidation of the access driveway for this parking lot will essentially move some of the existing westbound on-street queuing from the median two-way left-turn lane along Palms Boulevard onto the site). The “Sawtelle Boulevard” parking lot currently exhibits two on-site vehicular drop-off/pick-up lanes, providing a total on-site vehicular queuing capacity of approximately 22 to 24 vehicles. Neither the modified “Palms Boulevard” parking lot nor the existing “Sawtelle Boulevard” parking lot on-site vehicular queuing capacities, configurations, or operations will be substantially affected by the School’s proposed Master Plan Update Project.

Therefore, the School’s total existing on-site parking lots can accommodate about 14 percent of the total of about 266 parent-driven (student) carpool vehicles that currently enter the site during the overall (90-minute) “morning arrival” period, while following the planned modifications to the “Palms Boulevard” parking lot, which will increase its internal vehicle queuing capacity, a total of nearly 17 percent of the parent-driven carpool vehicles will be able to queue on-site.

Observations at the Windward School throughout the overall “morning arrival” period indicate that the student-related drop-off activities generally exhibit acceptable operations within both the “Palms Boulevard” and “Sawtelle Boulevard” parking lots, although it is also acknowledged that some short-term (up to about 10 minutes) vehicular queuing can extend beyond the site itself and onto the adjacent streets during peak vehicular arrival activity (typically, 15 to 20 minutes). The increase in the number of vehicles arriving at the site due to the additional 40 students requested in the Master Plan Update Project will exacerbate these conditions.

However, as described earlier, the implementation of the School’s TDM Plan (which is a part of the Master Plan Update Project) will reduce the total number of vehicles arriving at the campus during the overall “morning arrival” period by nearly 16 percent from the current levels, including a reduction in the number of parent-driven carpool vehicles, which are the primary contributor to the current vehicular queuing, of over 21 percent (from the current 266 to about 209 vehicles). This reduction in the vehicular queuing demand (along with overall TDM Plan-related reductions to the total School-related traffic) will more than offset the potential traffic increases associated with the proposed Master Plan Update Project, and in fact, will result in forecast future trip levels for the School that are lower than those exhibited under the existing conditions. As a result, when considered along with the increase in overall on-site vehicular queuing capacity resulting from the “Palms Boulevard” parking lot modifications, the Master Plan Update Project (including the TDM Plan) will not result in significant impacts to the operations of the School’s driveways, and will reduce the potential for off-site vehicular queuing compared to the current conditions.

The School’s existing “AM (School)” and “PM (School)” peak hour driveway traffic volumes, along with those expected to occur after the completion of the Master Plan Update Project, and following the implementation of the TDM Plan, are shown in Figure 10. *(It should be noted that, although some of the School’s existing traffic is due to faculty/staff and student-driven vehicles that park off-site on the adjacent streets, and as such, do not actually enter or exit the site itself, for the purposes of this study, the trips related to these vehicles were assigned to the driveways in order to provide a direct comparison of the existing and future traffic conditions at the School.)*

Project Roadway Improvements

The LAMC requires that all development projects within the City improve the roadways and other transportation facilities along their site frontages to the rights-of-way and street widths appropriate to each street’s current classification and design specifications, as identified in the City’s “Mobility Plan 2035”. As described earlier, the Windward School campus is located on

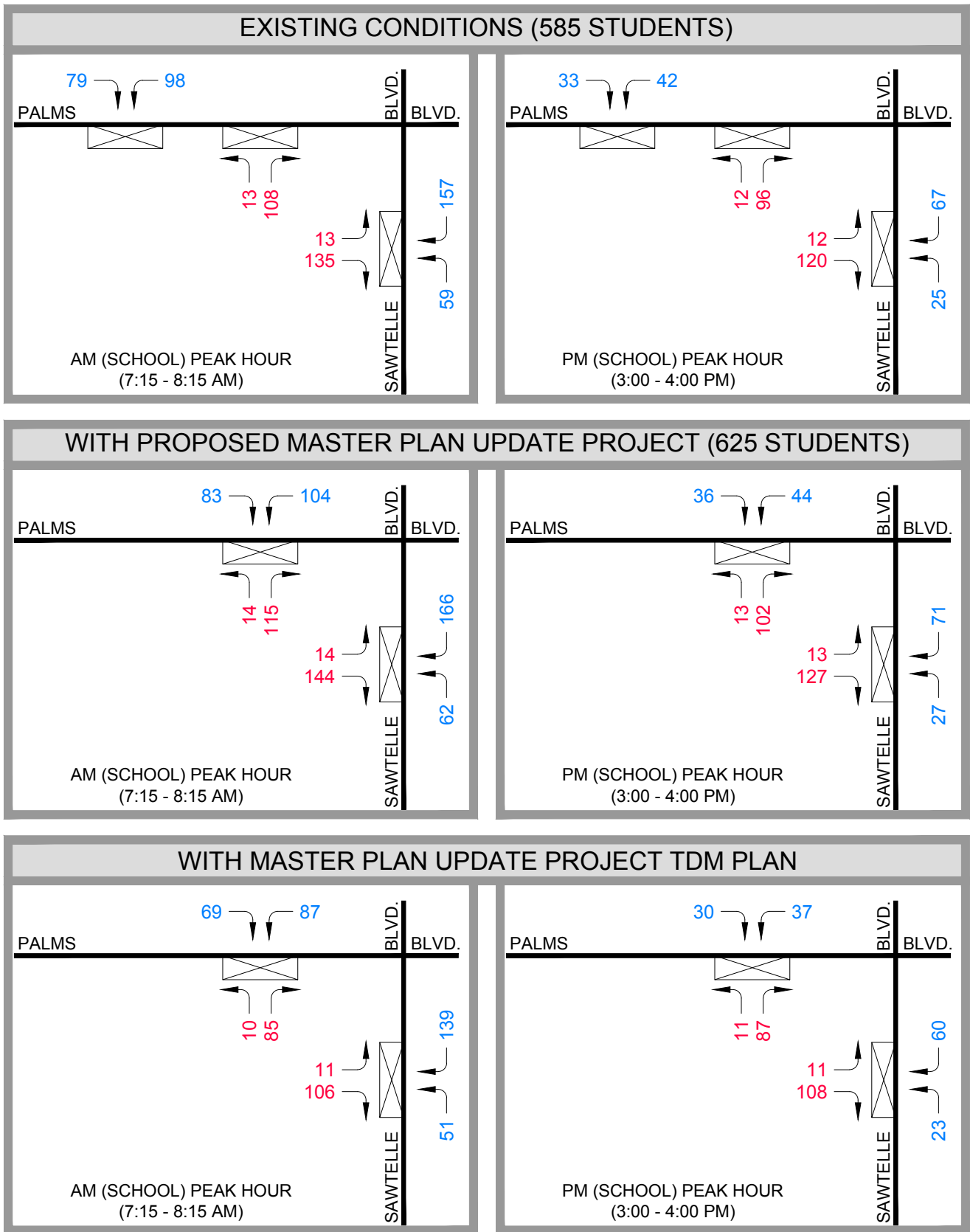


FIGURE 10

WINDWARD SCHOOL DRIVEWAY VOLUMES



Hirsch/Green Transportation Consulting, Inc.

the southwest corner of Palms Boulevard and Sawtelle Boulevard, with frontages along portions of each of these facilities, as well as on Westminster Avenue along the southern boundary of the site. Therefore, as part of the Master Plan Update Project, the Windward School will be required to improve each of these roadways to the applicable “Mobility Plan 2035” requirements.

The “Mobility Plan 2035” designates Sawtelle Boulevard through the study area, including along the Windward School frontage, as an “Avenue I (Secondary Highway)” facility. This designation exhibits a typical design standard of a total right-of-way dedication of 100 feet improved with a total roadway width of 70 feet, or a half-roadway width (centerline to face of curb) of 35 feet within a half right-of-way width (centerline to property line) of 50 feet (which includes both the half-roadway itself and a 15-foot wide sidewalk/parkway area). Adjacent to the School site, Sawtelle Boulevard currently exhibits a half right-of-way dedication of approximately 42 feet, including a half-roadway width of about 31 feet along with an 11-foot wide sidewalk/parkway. As a result, the School will be required to provide a right-of-way dedication of about eight feet, along with a roadway widening of approximately four feet along its Sawtelle Boulevard frontage, in order to comply with the applicable “Mobility Plan 2035” design standards.

Palms Boulevard within the project vicinity, including adjacent to the Windward School campus, is classified by the “Mobility Plan 2035” as an “Avenue II (Secondary Highway)” roadway, which exhibits a typical design standard of an 86-foot total right-of-way dedication improved with a total 56-foot wide roadway, or a half-roadway width of 28 feet within a half right-of-way width of 43 feet (which includes both the half-roadway itself and a 15-foot wide sidewalk/parkway area). Palms Boulevard is currently dedicated to a half right-of-way width of approximately 42 feet along the School frontage, including a 31-foot half-roadway and an 11-foot sidewalk/parkway. Therefore, as a result of its proposed Master Plan Update Project, the School will be required to provide a one foot right-of-way dedication along its Palms Boulevard frontage in order to provide the applicable 43-foot half right-of-way width, although the existing half-roadway width along Palms Boulevard adjacent to the School already exceeds the “Mobility Plan 2035” requirements (by about three feet), and as such, no roadway widening is necessary.

However, in accordance with the provisions of LAMC Section 12.37, the School will file for a Waiver of Dedication and Improvement (“WDI”) from the one-foot right-of-way dedication along Palms Boulevard, and from both the right-of-way and roadway widening requirements along Sawtelle Boulevard, due to several unique circumstances associated with the School site, including that many of the existing buildings and other infrastructure improvements on the

campus will remain in place under the proposed Master Plan Update Project, thereby precluding any additional right-of-way dedications, that adequate rights-of-way are not available, nor are anticipated to become available within the foreseeable future, along Sawtelle Boulevard to allow for any meaningful roadway widenings beyond the limits of the Windward School site, and that the mandated roadway widening along Sawtelle Boulevard would require the reconstruction and expansion of the Los Angeles County Storm Drain System Sawtelle Channel culvert, which runs beneath the subject portion of Sawtelle Boulevard (and bisects the Windward School campus).

Westminster Avenue, bordering the south side of the Windward School site, is designated in the “Mobility Plan 2035” as a “Local Street – Standard” facility (indicating that it is not a dead-end or cul-de-sac’ed street, which are identified as “Local Street – Limited” facilities). These roadways require a total right-of-way dedication of 60 feet, improved with a total 36-foot wide roadway, or a half-roadway of 18 feet within a half right-of-way dedication of 30 feet. Westminster Avenue adjacent to the School site currently provides the required 30-foot half right-of-way dedication, along with a half-roadway improvement of 20 feet, and therefore, meets the “Mobility Plan 2035” right-of-way requirements while exceeding the required roadway width by two feet, although the existing 10-foot sidewalk/parkway width is two feet less than the “Local Street – Standard” design standard of 12 feet. However, as also noted in LAMC Section 12.37 (Subsection A.5), *“no dedication shall be required where the existing right-of-way is equal to or greater than the street standard, even where the improved sidewalk does not meet the standard dimensions”*. Therefore, since both the existing half right-of-way dedication and half-roadway width along the subject segment of Westminster Avenue currently meet the applicable requirements, no further right-of-way dedications or roadway widenings are necessary along this street.

TRAFFIC IMPACT ANALYSIS STUDY AREA

Environmental Setting

The existing Windward School campus (and site of the proposed Master Plan Update Project) is located at 11350 Palms Boulevard (and adjoining parcels), and occupies the southwest corner of the intersection of Palms Boulevard and Sawtelle Boulevard, in the Palms community of the City of Los Angeles. The areas immediately surrounding the site are developed primarily with single and multi-family residential uses, although the Mar Vista Recreational Center and Park is located immediately to the north of the School site (across Palms Boulevard), and pockets of low to medium-density commercial and retail development are also evident along and at the intersections of many of the arterial roadways serving the vicinity, including Sawtelle Boulevard, Palms Boulevard, Sepulveda Boulevard, National Boulevard, and Venice Boulevard.

Area Transportation Facilities

The study area is served by both local-circulation and regional access transportation facilities. Regional vehicular access in the vicinity is provided by the San Diego (I-405) Freeway, located less than one-tenth of a mile directly east of the School, and the Santa Monica (I-10) Freeway, located approximately one mile north of the site. Additionally, localized vehicular circulation in the areas surrounding the Windward School site is provided by an extensive and well-developed surface street network, including arterial and collector roadways, and local streets, which serve both as important connections through the study area, and to provide local-serving access to area residents and businesses. A number of public transportation facilities (primarily, bus lines) also provide service to the project site and/or surrounding area. The key transportation facilities serving the study area, including the freeways, arterials, and local-access surface streets, and current public transit services, are each described in more detail in the following pages.

Freeways

San Diego (I-405) Freeway – This freeway is one of the most important transportation facilities in the project vicinity, providing a critical, generally north-south oriented regional connection through the western portions of the San Fernando Valley, the Los Angeles basin, and much of Orange County from its northern terminus at its interchange with the Golden State (I-5) Freeway in the Sylmar community of the City of Los Angeles to its southern terminus at its reconnection to the Golden State Freeway in the City of Irvine in Orange County about 70 miles to the south.

Through the study area, the San Diego Freeway typically provides five mainline travel lanes along with a high-occupancy vehicle (HOV, or carpool) lane in each direction, with additional (auxiliary) lanes provided at or between surface street access ramps or freeway interchanges. The San Diego Freeway is located about one-tenth of a mile east of the Windward School site, between Sawtelle Boulevard and Sepulveda Boulevard, although no direct access between the School site and this freeway is provided (to/from Palms Boulevard); the nearest freeway ramps are located about eight-tenths of a mile to the south of the Windward School (on and off-ramps for southbound travel from Sawtelle Boulevard, and on and off-ramps for northbound travel from Sepulveda Boulevard), and approximately seven-tenths of a mile to the north of the School site (southbound on-ramp and northbound off-ramp at National Boulevard). This freeway provides a full interchange with the nearby Santa Monica (I-10) Freeway, described below.

Santa Monica (I-10) Freeway – This freeway, located approximately one mile to the north of the Windward School site, is the primary east-west regional transportation facility in the study area, providing a direct connection from its western terminus at the Pacific Coast Highway (SR-1) in the City of Santa Monica eastward through the greater metropolitan Los Angeles area and into San Bernardino County and beyond. The Santa Monica Freeway is typically configured as an eight-lane facility throughout the project vicinity, with four mainline travel lanes in each direction, although additional auxiliary lanes are generally provided at surface street access ramps or freeway interchange locations. No direct access between this freeway and the surface streets serving the immediate study area (or project site) is available; the nearest surface street access to the project site is provided by a full set of ramps (on- and off-ramps for both directions of the Santa Monica Freeway) at Overland Avenue about one mile to the northeast of the project site, by a partial set of ramps (westbound off-ramps and eastbound on-ramp only) at Bundy Drive, and by a series of on- and off-ramps located along both Centinela Avenue and Pico Boulevard near the intersection of those two streets, about one and three-quarter miles northwest of the Windward School site. As noted earlier, the Santa Monica Freeway provides a full interchange with the San Diego (I-405) Freeway approximately one mile north of the project site.

Streets and Highways

Boulevards and Avenues (Major and Secondary Highways)

Sawtelle Boulevard – This generally north-south oriented roadway is located immediately west of and runs roughly parallel to the Santa Monica Freeway, and serves as the eastern boundary of the Windward School site. Sawtelle Boulevard provides an uninterrupted connection through

the project vicinity from its northern terminus at Ohio Avenue (although it continues northward for a short distance to provide access to the West Los Angeles Veterans Administration Hospital and related facilities) to its southern terminus at Overland Avenue in the City of Culver City. Sawtelle Boulevard exhibits a variety of roadway classifications throughout its length, although within the general study area (between Olympic Boulevard and Venice Boulevard), this street is designated as an “Avenue I (Secondary Highway)” facility in the City’s “Mobility Plan 2035”. Throughout the immediate project vicinity, Sawtelle Boulevard is typically configured to provide two “through” travel lanes in each direction, plus additional (exclusive) left-turn channelization at key (generally, signalized) intersections. On-street parking is typically allowed on both sides of the street throughout this area, although some localized restrictions or prohibitions are present.

Palms Boulevard – This generally east-west oriented facility borders the Windward School site on the north, and provides a connection from its western terminus at Abbot Kinney Boulevard in the Venice community of the City of Los Angeles to National Boulevard/Exposition Boulevard, near Hughes Avenue in the eastern portion of the Palms community of the City of Los Angeles approximately one and one-half miles east of the Windward School site, although the roadway exhibits an approximately two-block “jog” (offset) between its eastern and western approaches, from Lincoln Boulevard/Pacific Coast Highway to Penmar Avenue in the Venice area of the City of Los Angeles. Palms Boulevard is designated as an “Avenue II (Secondary Highway)” facility between McLaughlin Avenue, just west of the Windward School site, and its eastern terminus, including adjacent to the School site, although it is downgraded to a Collector Street designation throughout its length west of McLaughlin Avenue. Within the immediate study area, to the east of Sawtelle Boulevard, Palms Boulevard typically provides two travel lanes in each direction, plus left-turn channelization at key intersections, and on-street parking is generally prohibited along both sides of the street. However, between Sawtelle Boulevard and McLaughlin Avenue (adjacent to the Windward School site), Palms Boulevard transitions to provide one westbound and two eastbound lanes, plus a median two-way left-turn lane and exclusive left-turn lanes at both Sawtelle Boulevard and McLaughlin Avenue, and on-street parking is typically permitted along both sides of the street. Finally, to the west of McLaughlin Avenue, Palms Boulevard is typically configured to provide one travel lane and on-street parking in each direction.

National Boulevard – This roughly east-west oriented roadway is located just over one-half mile north of the Windward School site, and provides a connection from its western terminus at its intersection with Bundy Drive/Centinela Avenue, opposite the Santa Monica Municipal Airport, eastward through the West Los Angeles area to Overland Avenue, where it briefly turns south

before again turning eastward to run generally parallel to the Santa Monica (I-10) Freeway for a short distance before ultimately turning southeasterly and continuing through the eastern portion of the City of Culver City to its eastern terminus at Jefferson Boulevard. Although exhibiting various designations, National Boulevard is classified as an “Avenue I (Secondary Highway)” in the project vicinity (Bundy Drive/Centinela Avenue to Overland Avenue). Within the study area, the segments of National Boulevard to the west of Sawtelle Boulevard are typically configured to provide two travel lanes in each direction, plus a median two-way left-turn lane that converts to exclusive left-turn channelization at key intersections, with on-street parking generally prohibited throughout these segments. To the east of Sawtelle Boulevard, National Boulevard is again striped to provide two lanes in each direction, plus left-turn channelization at key intersections, with on-street parking generally permitted along both sides of the street through this area.

Sepulveda Boulevard – This north-south oriented roadway is located about two-tenths of a mile to the east of the Windward School site, immediately east of the San Diego (I-405) Freeway, and is one of the most highly-utilized surface streets on the west side of the Los Angeles Basin. Sepulveda Boulevard runs roughly parallel to the San Diego Freeway, thereby providing an important freeway-alternative travel route between Rinaldi Street in the Mission Hills community of the City of Los Angeles on the north and the Terminal Island (SR-103) Freeway in the City of Long Beach to the south. Similar to a number of other roadways serving the project vicinity, Sepulveda Boulevard exhibits a number of different roadway designations throughout its length, although it is designated as a “Boulevard II (Major Highway)” throughout the entire study area. Within the immediate project vicinity, Sepulveda Boulevard typically provide two travel lanes plus a bicycle lane in each direction, along with a mid-block median two-way left-turn lane that converts to exclusive left-turn channelization at most intersections. On-street parking is generally permitted throughout the day along both sides of the roadway in the study area.

Venice Boulevard – This generally east-west oriented roadway is located at the southern edge of the study area, just over one-half mile south of the Windward School site. Although located approximately one and one-half miles south of the Santa Monica Freeway in the project vicinity, Venice Boulevard serves as an important alternative route to that regional transportation facility, providing a connection from its western terminus at Speedway (just west of Pacific Avenue) in the Venice community of the City of Los Angeles, through the Mar Vista, Palms, Mid-City, and Harvard Heights areas of Los Angeles, and into the southern portion of downtown Los Angeles to Main Street, where it continues eastward as “16th Street” for about one and one-half miles before eventually terminating at Hooper Avenue. Within the general project vicinity (Speedway

to National Boulevard), Venice Boulevard is designated as a “Boulevard II (Major Highway)”, and is typically configured to provide three through lanes and a bicycle lane in each direction, plus exclusive left-turn channelization at major intersections; a raised median island prohibits left-turns into or out of minor roadways through much of the project vicinity. On-street parking is typically permitted along both sides of Venice Boulevard throughout the study area.

Collector and Local Streets

McLaughlin Avenue – This north-south oriented roadway is located about two-tenths of a mile to the west of the Windward School site, and provides a connection between its northern terminus at Federal Avenue, approximately one-quarter mile north of Palms Boulevard, to just north of Culver Boulevard in the Mar Vista/Del Rey area of the City of Los Angeles. McLaughlin Avenue is classified as a “Collector Street” throughout its length through the City of Los Angeles, including within the project study area. To the north of Federal Avenue, McLaughlin Avenue changes names to become Barrington Avenue, which itself continues northward through the Sawtelle community of the City of Los Angeles to terminate just north of Sunset Boulevard in the Brentwood area of the City. Within the immediate project vicinity, McLaughlin Avenue typically provides one travel lane in each direction on the segment to the north of Palms Boulevard, although two southbound through lanes, plus an exclusive left-turn only lane, are provided at the intersection with Palms Boulevard. South of Palms Boulevard, McLaughlin Avenue widens to generally provide two travel lanes in each direction, although left-turn channelization is not typically provided on these segments. On-street parking is generally permitted along both sides of McLaughlin Avenue in the study area, including both north and south of Palms Boulevard.

Westminster Avenue – This roadway provides the southern border of the Windward School site, and serves primarily as a local-access roadway throughout its entire length between May Street (three blocks west of Beethoven Street) in the Mar Vista community of the City of Los Angeles on the west, and Overland Avenue, in the Palms community of the City on the east. However, Westminster Avenue is discontinuous at numerous locations (and for several blocks at a time), including across the Sawtelle Channel of the Los Angeles County Storm Drain System just west of the Windward School campus, as well as across the San Diego (I-405) Freeway corridor just east of Sawtelle Boulevard and the Windward School site, and as such, does not provide a viable travel route through the study area. Westminster Avenue is classified as a “Local Street” throughout its length, and is typically configured to provide one travel lane in each direction, with on-street parking generally permitted throughout the day along both sides of the street.

Butler Avenue – This roadway is located immediately to the west of the Windward School site, and generally provides a connection between its northern terminus at Rochester Avenue in the Westwood area of the City of Los Angeles and its southern terminus at Venice Boulevard, about one-half mile south of the School’s campus. However, Butler Avenue is discontinuous at a number of locations along its route, including within the study area between Woodbine Street and Palms Boulevard (across the Mar Vista Recreational Center and Park, directly north of the Windward School site), and along the western edge of the Windward School campus (across the Sawtelle Channel of the Los Angeles County Storm Drain System), where the roadway consists of two disconnected cul-de-sac’ed segments (one accessed only via Palms Boulevard and the other accessed only from Westminster Avenue). Butler Avenue is generally designated as a Collector Street throughout its length, although all segments of this roadway to the south of Palms Boulevard are downgraded to “Local Street” status. Within the study area, Butler Avenue is typically unstriped, but is generally configured to provide a single travel lane in each direction, with on-street parking generally allowed along both sides of the street on most segments.

Public Transportation

The public transportation in the study area consist primarily of local-serving bus lines providing multiple stops and convenient local access to shopping, business, and recreation destinations, although some regional transit opportunities also exist. A number of public transit providers, including the Santa Monica Big Blue Bus (“SMBBB”), the City of Culver City Municipal Bus, the Los Angeles County Metropolitan Transportation Authority (“Metro”), LADOT (DASH Lines), and Commuter Express, operate within the general vicinity. However, most of the services provided by these operators are considered to be too distant (more than about one-quarter mile) from the Windward School site to be used by its students and/or faculty/staff, with only three bus lines currently providing stops within convenient walking distance of the School itself. A map of the existing public transit services in the study area is shown in Figure 11, while the three bus lines serving the Windward School site directly are described in the following pages; route maps and schedules for each of these site-serving lines are also provided in Appendix C of this report.

Culver City Municipal Bus Line 6 – Line 6 provides weekday, weekend, and holiday bus service between the UCLA Westwood Campus on the north and the Metro Green Line light rail station at Aviation Boulevard and 116th Street, near the Los Angeles International Airport (“LAX”), on the south, travelling primarily along Sepulveda Boulevard for much of its route, including through the immediate study area. This local-serving line provides stops in both directions of travel

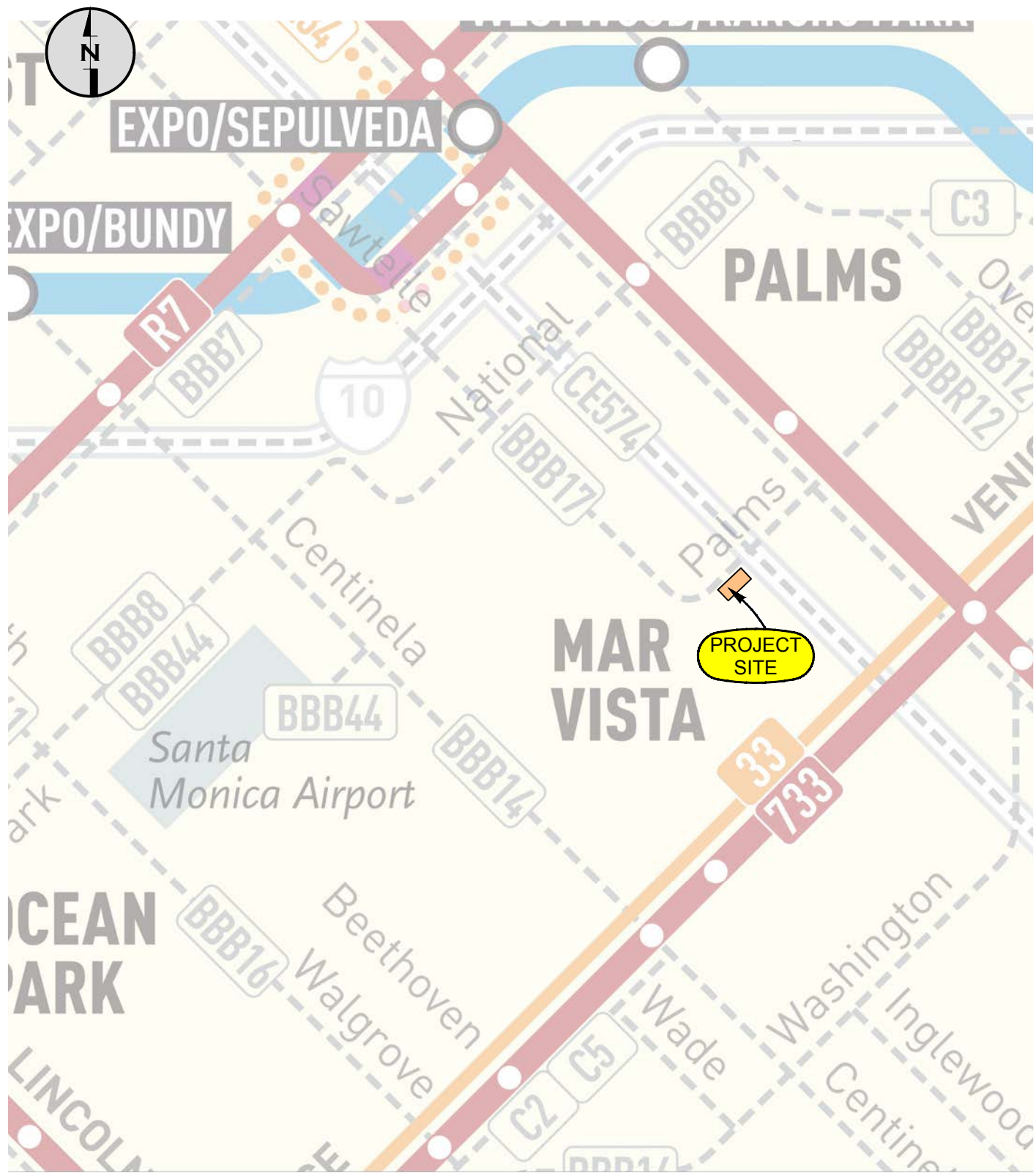


FIGURE 11

PROJECT AREA TRANSIT SERVICES MAP



Hirsch/Green Transportation Consulting, Inc.

within convenient walking distance (less than one-quarter mile) of the Windward School site, along Palms Boulevard just north of Sepulveda Boulevard. As described earlier, Line 6 runs between the UCLA Westwood Campus and the Metro Green Line Station, and includes service to the Metro Expo Line light rail station near Exposition Boulevard and Sepulveda Boulevard, the Howard Hughes Center in Westchester, and the LAX Transit Center (in LAX Parking Lot C), in addition to various other local stops along its route. Within the project vicinity, Line 6 provides weekday service from about 5:30 AM to 12:15 AM, with typical headways of 15 to 20 minutes in both directions, while on weekends and holidays, Line 6 operates on a more limited schedule from about 6:00 AM to 11:15 PM, with headways of 20 to 30 minutes throughout the day.

Culver City Municipal Bus Rapid Line 6 – Rapid Line 6 provides weekday-only express service between the UCLA Campus in Westwood and the Metro Green Line light rail station near LAX, along the same route as local-stop Line 6, and including Windward School-serving stops in both directions at the intersection of Palms Boulevard and Sepulveda Boulevard. In the vicinity of the Windward School, Rapid Line 6 provides service from approximately 6:30 AM to 7:00 PM, with peak period headways of approximately 15 minutes, lengthening to approximately 30 minutes during other times of the day. No weekend or holiday service is available on this bus line.

Santa Monica Big Blue Bus Line 17 – This local-stop bus line provides weekday, weekend, and holiday service between the UCLA Westwood Campus/Westwood Village area on the north and the Metro Expo Line Station near Washington Boulevard and National Boulevard in the City of Culver City on the south. Travelling primarily along Wilshire Boulevard, Sawtelle Boulevard, Palms Boulevard, and National Boulevard, Line 17 provides site-serving stops in both directions of travel near the Windward School campus, on Sawtelle Boulevard north of Palms Boulevard, in addition to service to the West Los Angeles Veterans Administration (“VA”) Hospital campus, and stops at both the Metro Expo Line Sepulveda and Palms Stations. Within the study area, Line 17 operates from about 6:00 AM and 10:30 PM on weekdays, with typical headways of about 20 minutes throughout the day, while weekend and holiday service is available from about 6:30 AM to 8:30 PM, with 45-minute headways in both directions throughout this period.

As described in the preceding pages, only a limited number of public transit services currently provide direct or convenient service to the Windward School site, and although the results of the recent empirical traffic and parking demand surveys at the School indicate that some students and/or faculty/staff at the School currently use public transit, this travel mode is not considered to be a significant factor in either the existing or future operations of the site.

STUDY AREA TRAFFIC VOLUMES

Existing (Year 2017) Traffic Volumes

The current traffic volumes for each of the five study intersections analyzed in this report were obtained from counts performed specifically for this study for Hirsch/Green in October of 2017 (on one or more of the same days during which the empirical Windward School trip generation and parking demand surveys described earlier in this study were conducted). The data reflect typical mid-week conditions, both at the Windward School itself and throughout the study area, during a week with no holidays or other notable special events, and with other nearby schools and businesses generally exhibiting normal operations and activity levels. The traffic count data for each of the five study intersections is provided in the appendices of this report

Generally, the “peak hour” traffic volumes used in traffic impact studies prepared for projects in the City of Los Angeles represent the four highest-volume consecutive 15-minute periods within a larger “peak period” count window (typically, 7:00 AM to 10:00 AM, and 3:00 PM to 7:00 PM), and in fact, a review of the intersection traffic count data collected for this study indicates that the highest levels of traffic at most of the study intersections occur during the morning between about 7:45 AM to 9:00 AM, and again during the evening between about 5:00 PM and 6:30 PM. However, as detailed previously in this document, the Windward School exhibits specific periods during which the majority of its traffic occurs, with more than 95 percent of its “morning” traffic arriving to or departing from the site between 7:15 AM and 8:15 AM, and more than 82 percent of its afternoon (“school dismissal period”) trips taking place between 3:00 PM and 4:00 PM, and the School is expected to retain this current schedule (including arrival and dismissal times) through development and following the completion of the proposed Master Plan Update Project. As such, most of the current (and anticipated future) traffic generated by the Windward School occurs outside the typical AM and PM peak hours of traffic on the street system serving the site, and therefore, in order to more accurately identify the actual effects of the School’s traffic on the surrounding area, both the existing and future conditions at each of the study intersections were analyzed during the School-specific peak hours (7:15 AM to 8:15 AM, and 3:00 PM to 4:00 PM).

Further, as also described earlier in this report, the scope of this study was expanded to include an analysis of the impacts related to a previous (and unstudied) 35-student enrollment increase (from its permitted level of 550 students to its current enrollment level of 585 students) that occurred at the School prior to the initiation of this study, in addition to the “typical” evaluations of the potential traffic-related impacts associated with the 40-student future enrollment increase

included as a part of the Windward School's currently-proposed Master Plan Update Project. However, pursuant to discussions with LADOT staff, since the 35-student enrollment increase and its related traffic impacts have already occurred and are reflected in the existing traffic data, it was determined that the analysis of its estimated (prior) effects on the area roadway system serving the Windward School site was required only for the "existing" conditions.

A description of each of the various analysis scenarios evaluated in this study, along with a discussion of the assumptions and methodologies utilized to develop the traffic volumes at each of the five study intersections for each of the scenarios (and including graphics identifying the intersection traffic volumes themselves) are provided in the following pages.

Traffic Volume Estimates – Prior 35-Student Enrollment Increase

Estimated "Pre-Existing" Traffic Conditions (Prior to 35-Student Enrollment Increase)

This scenario represents the estimated traffic conditions at each of the five study intersections prior to the addition of the recent (unpermitted) 35-student enrollment increase at the School. As described earlier, this enrollment increase occurred prior to the initiation of this study, and as a result, the "existing" (October 2017) traffic counts conducted at each of the study intersections already intrinsically include the trips associated with these additional students. Therefore, the "without 35-student enrollment increase" traffic conditions in the study area were estimated by subtracting the number of trips generated by the enrollment increase, as identified previously in Figures 7(a) and 7(b) for the "AM (School)" and "PM (School)" peak hours, respectively, from the intersection volumes identified by the recent counts. The resulting year 2017 "pre-existing" (without 35-student enrollment increase) traffic volumes at each of the study intersections are shown in Figure 12(a) for the "AM (School) Peak Hour" (7:15 AM to 8:15 AM) conditions, and in Figure 12(b) for the "PM (School) Peak Hour" (3:00 PM to 4:00 PM) conditions.

Existing (With 35-Student Enrollment Increase) Traffic Conditions

This analysis scenario reflects the existing traffic volumes at the study intersections, including the traffic related to the previous 35-student increase in enrollment levels at the School (from its currently-permitted level of 550 students to its actual existing enrollment level of 585 students). Typically, the traffic volumes for these conditions, as identified in Figure 13(a) and Figure 13(b) for the "AM (School)" and "PM (School)" peak hours, respectively, would be developed by adding the incremental number of trips generated by the 35-student enrollment increase (again, as described in detail earlier and identified previously in Figures 7(a) and 7(b) of this report)

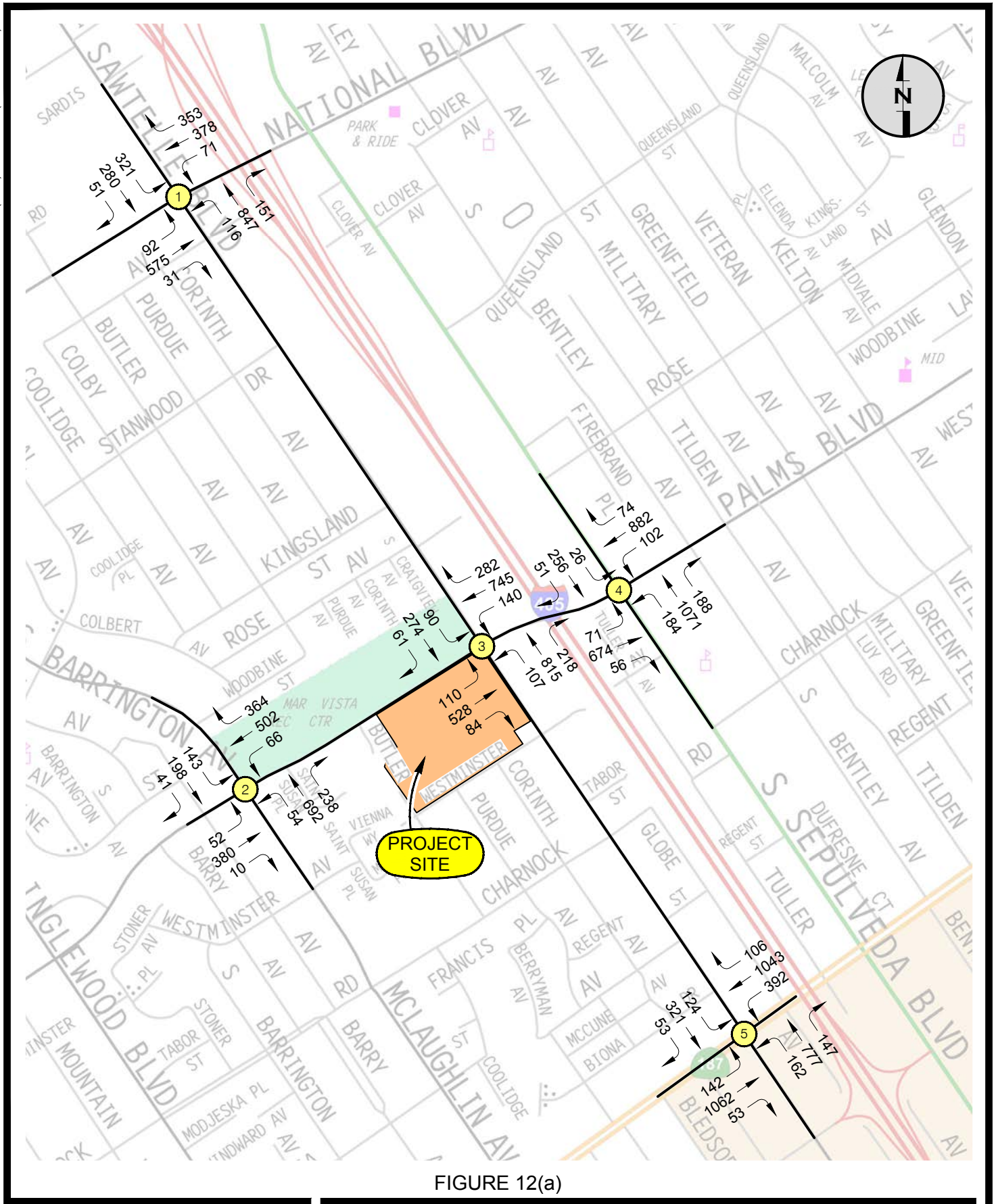


FIGURE 12(a)

ESTIMATED "PRE-EXISTING" (2017) TRAFFIC VOLUMES
AT PERMITTED 550-STUDENT ENROLLMENT
(PRIOR TO CURRENT 35-STUDENT ENROLLMENT INCREASE)
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



Hirsch/Green Transportation Consulting, Inc.

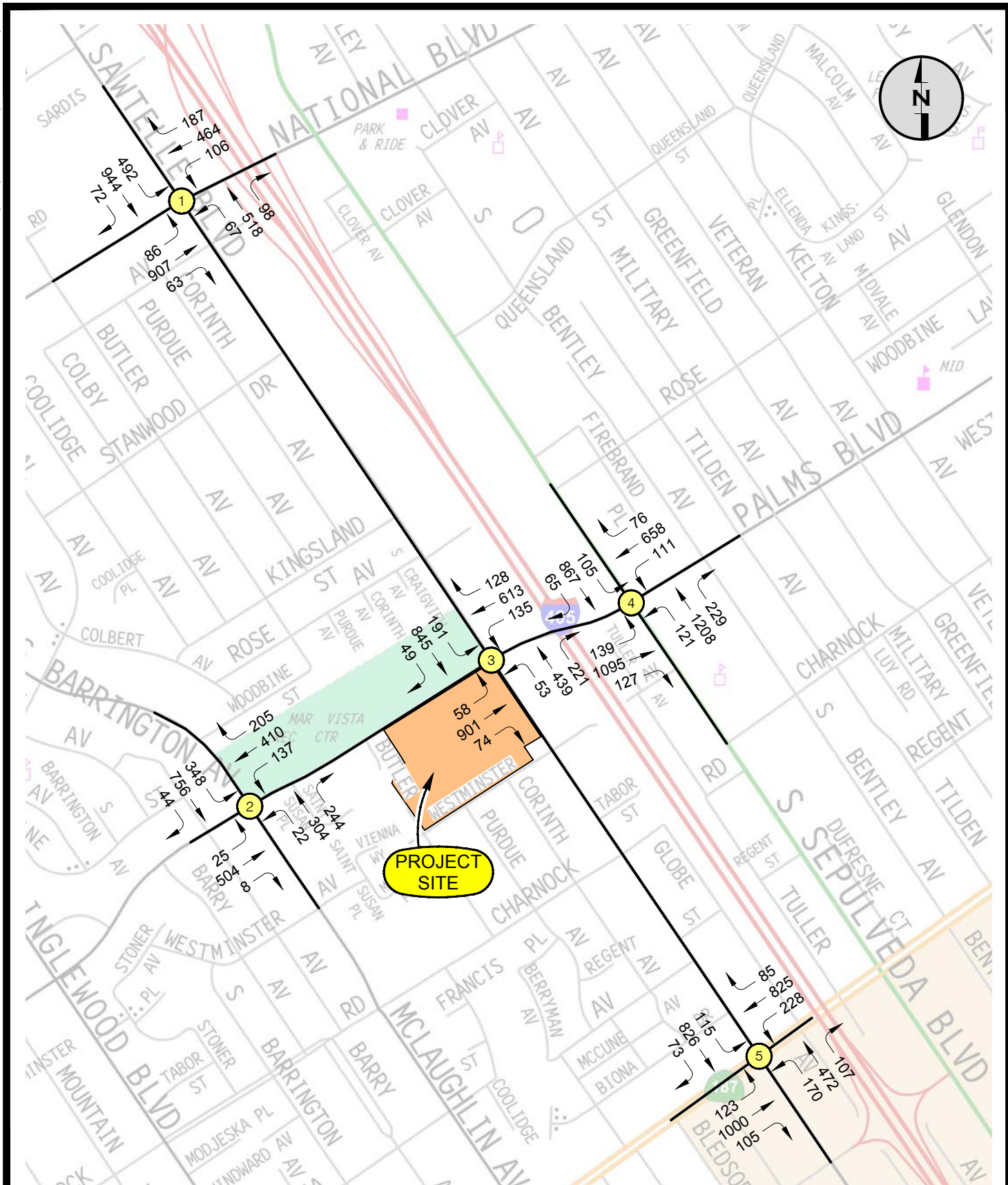


FIGURE 12(b)

ESTIMATED "PRE-EXISTING" (2017) TRAFFIC VOLUMES
AT PERMITTED 550-STUDENT ENROLLMENT
(PRIOR TO CURRENT 35-STUDENT ENROLLMENT INCREASE)
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)



Hirsch/Green Transportation Consulting, Inc.

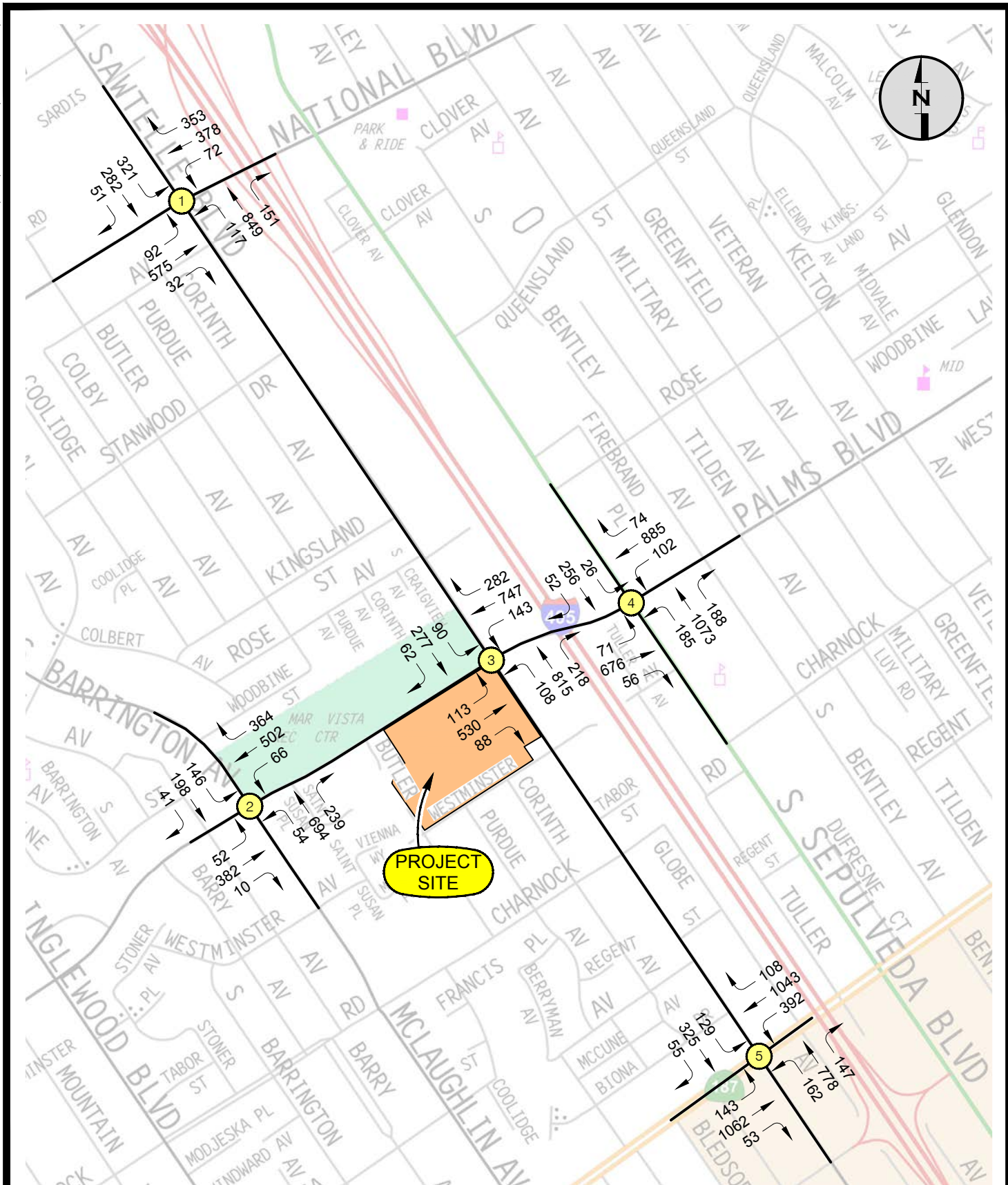


FIGURE 13(a)



Hirsch/Green Transportation Consulting, Inc.

EXISTING (2017) TRAFFIC VOLUMES
INCLUDING PREVIOUS 35-STUDENT ENROLLMENT INCREASE
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)

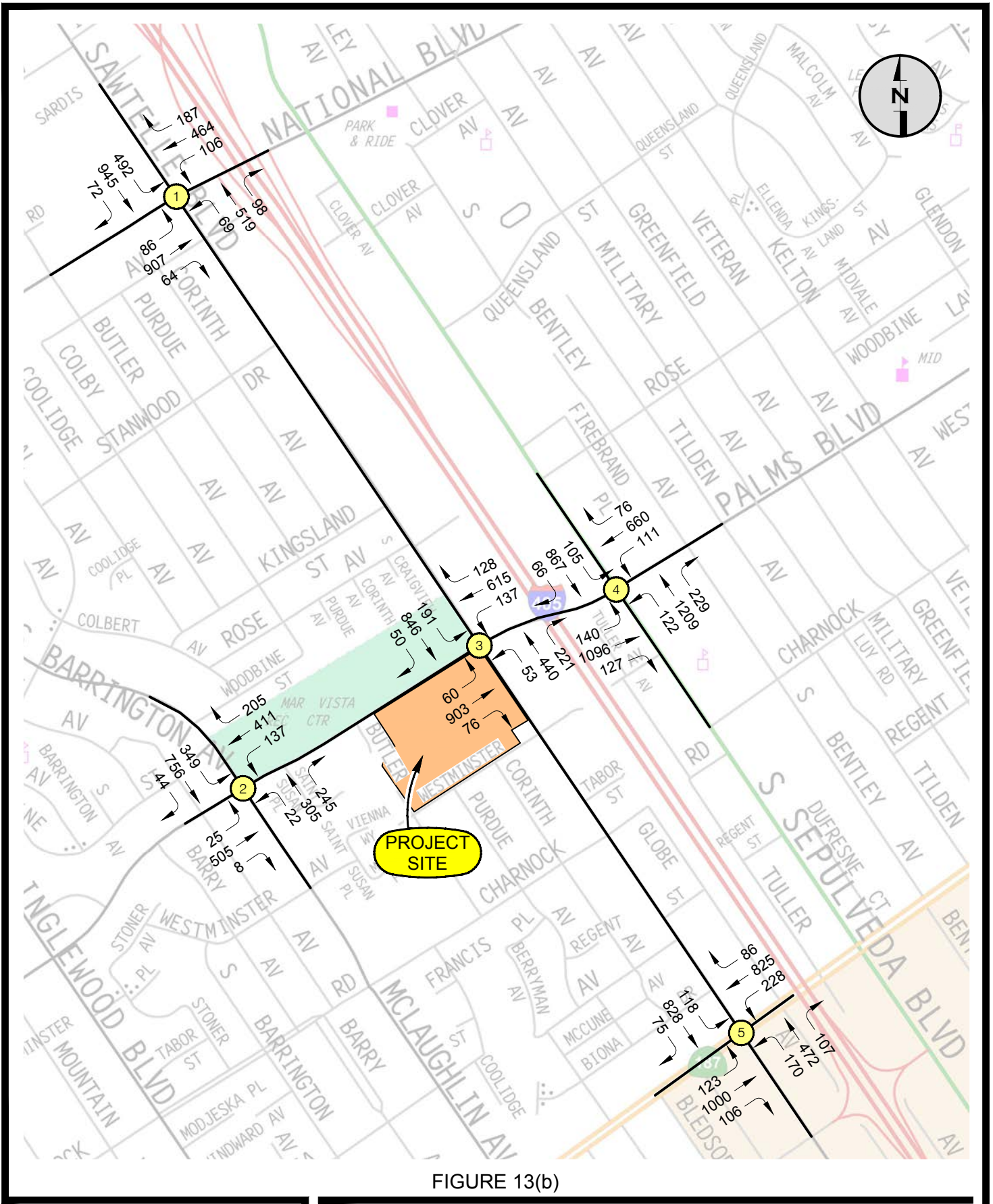


FIGURE 13(b)



Hirsch/Green Transportation Consulting, Inc.

EXISTING (2017) TRAFFIC VOLUMES
INCLUDING PREVIOUS 35-STUDENT ENROLLMENT INCREASE
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)

to the “without 35-student increase” conditions identified in Figures 11(a) and 11(b). However, as also noted earlier, since the 35-student enrollment increase and its related traffic additions have already occurred, the “existing” traffic count data includes these trips, and as such, the “with 35-student enrollment increase” analysis scenario traffic volumes at the study intersections are identical to the current (October 2017) traffic volumes at each of these locations.

Traffic Volume Estimates – Master Plan Update Project (40-Student Enrollment Increase)

Existing (“No Master Plan Update Project”) Traffic Conditions

The existing (year 2017) traffic volumes at each of the five intersections evaluated in this study, which represent the current traffic conditions in the study area prior to the development of the proposed Master Plan Update Project (and its associated 40-student enrollment increase), were obtained directly from the October 2017 counts performed for this study. As also noted earlier, these counts already include the traffic generated by the prior 35-student enrollment increase, and as such, are identical to the traffic volumes identified previously in Figures 12(a) and 12(b) for the “existing conditions plus previous 35-student enrollment increase” analysis scenario. However, for purposes of clarity, these existing (year 2017) traffic volumes, which were also used to identify the potential impacts of the proposed Master Plan Update Project at each of the study intersections, are repeated in Figure 13(a) for the “AM (School) Peak Hour” conditions and in Figure 13(b) for the “PM (School) Peak Hour” conditions.

Existing “With Master Plan Update Project” Traffic Conditions

As described earlier in this study, although the proposed Master Plan Update Project, including its requested 40-student enrollment increase (from the current 585-student level to a maximum future enrollment of 625 students), is not anticipated to be completed until about the year 2024, LADOT’s traffic study policies require that an analysis of the potential project-related impacts on existing conditions in the study area be prepared, to identify any “immediate” traffic impacts that may occur due to the development of the proposed project alone. The traffic volumes for this analysis scenario were developed by adding the incremental AM and PM “School peak hour” trips generated by the Master Plan Update Project’s requested 40-student enrollment increase, as described earlier in this report and identified previously in Figures 8(a) and 8(b), respectively, to the existing (year 2017) traffic volumes identified in Figures 14(a) and 14(b). The resulting “Existing With Master Plan Update Project” conditions traffic volumes are shown in Figure 15(a) for the “AM (School) Peak Hour” and in Figure 15(b) for the “PM (School) Peak Hour”.

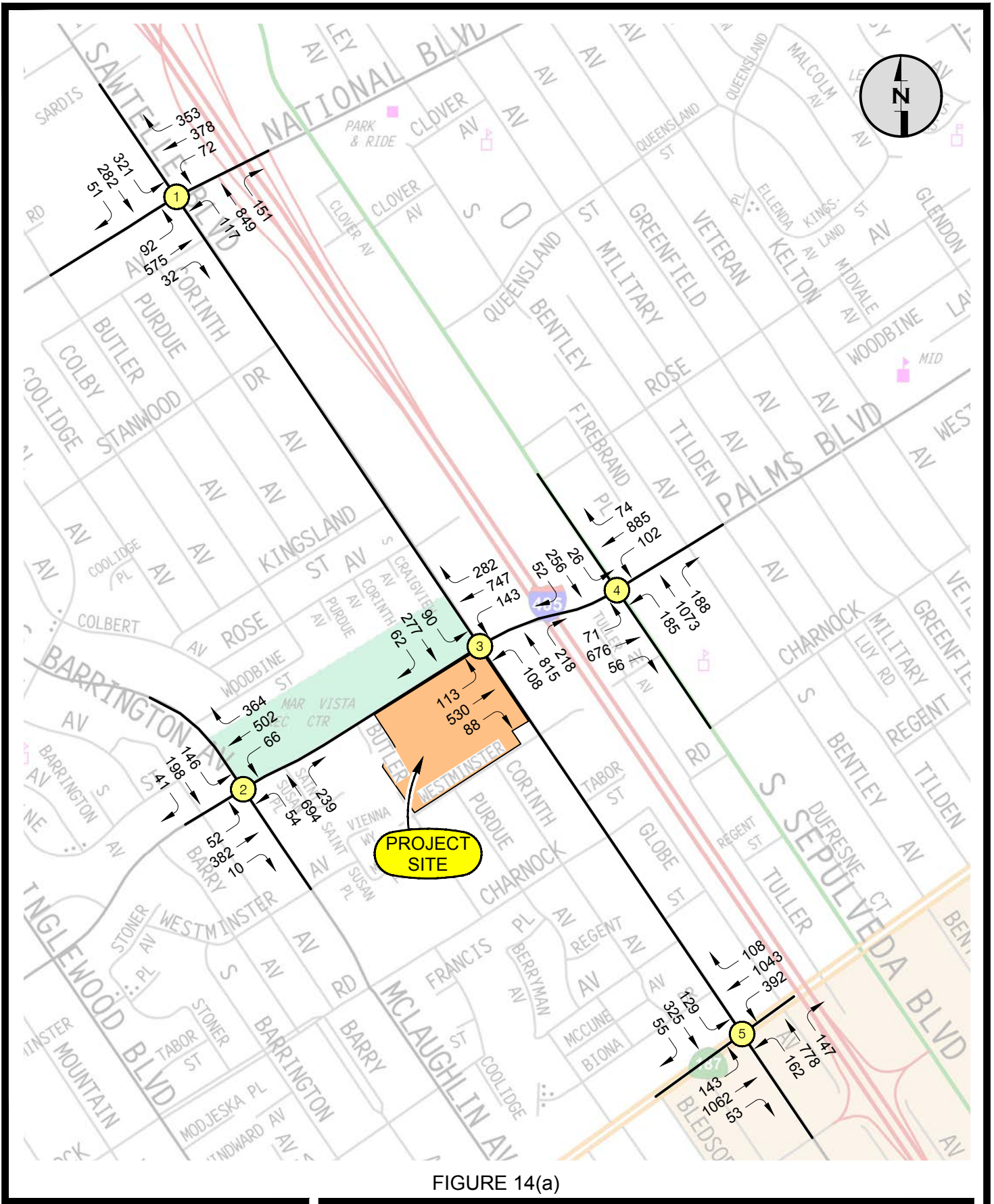


FIGURE 14(a)

EXISTING (2017) TRAFFIC VOLUMES
(INCLUDES TRIPS FROM CURRENT 585-STUDENT ENROLLMENT)
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



Hirsch/Green Transportation Consulting, Inc.

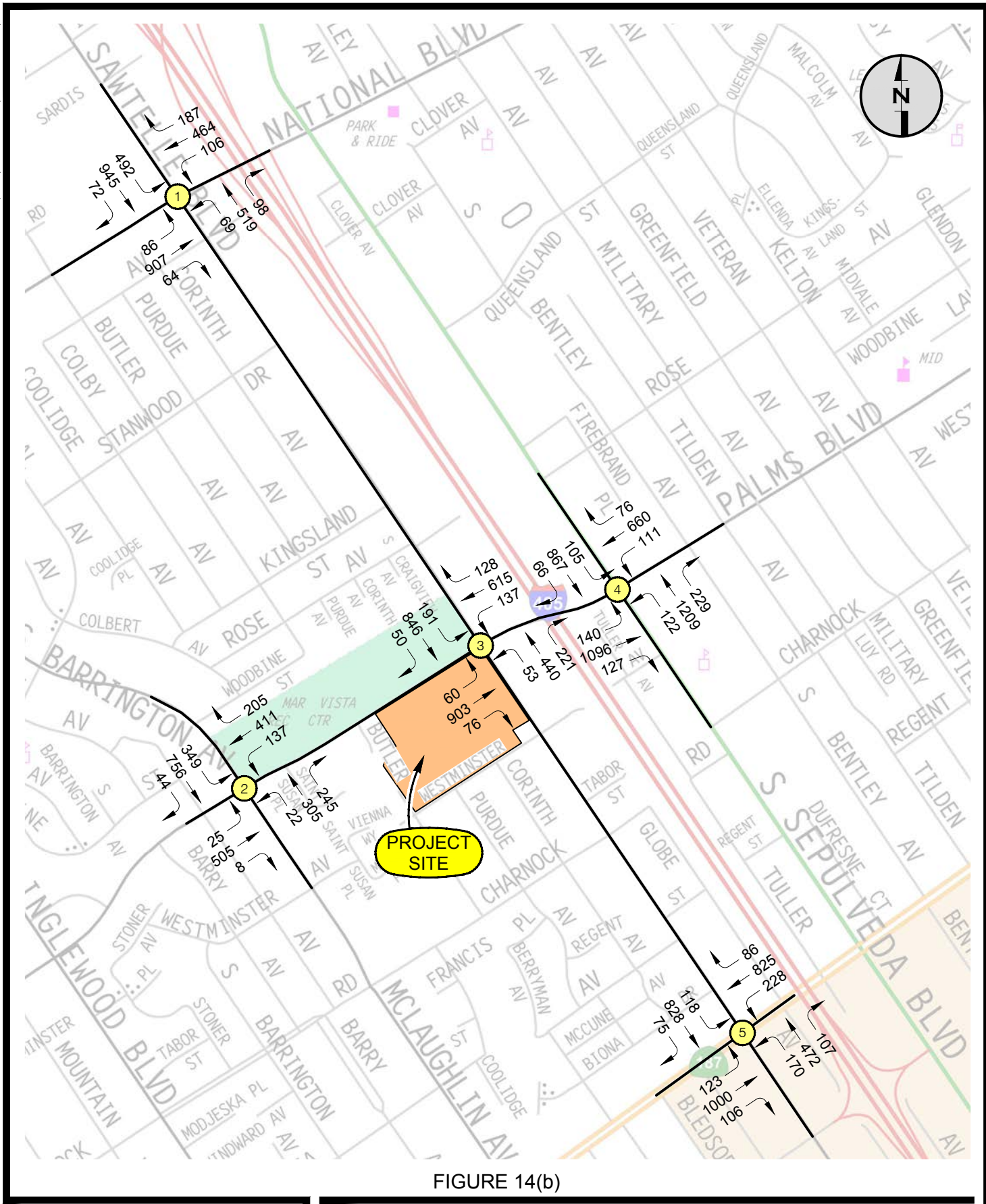


FIGURE 14(b)



Hirsch/Green Transportation Consulting, Inc.

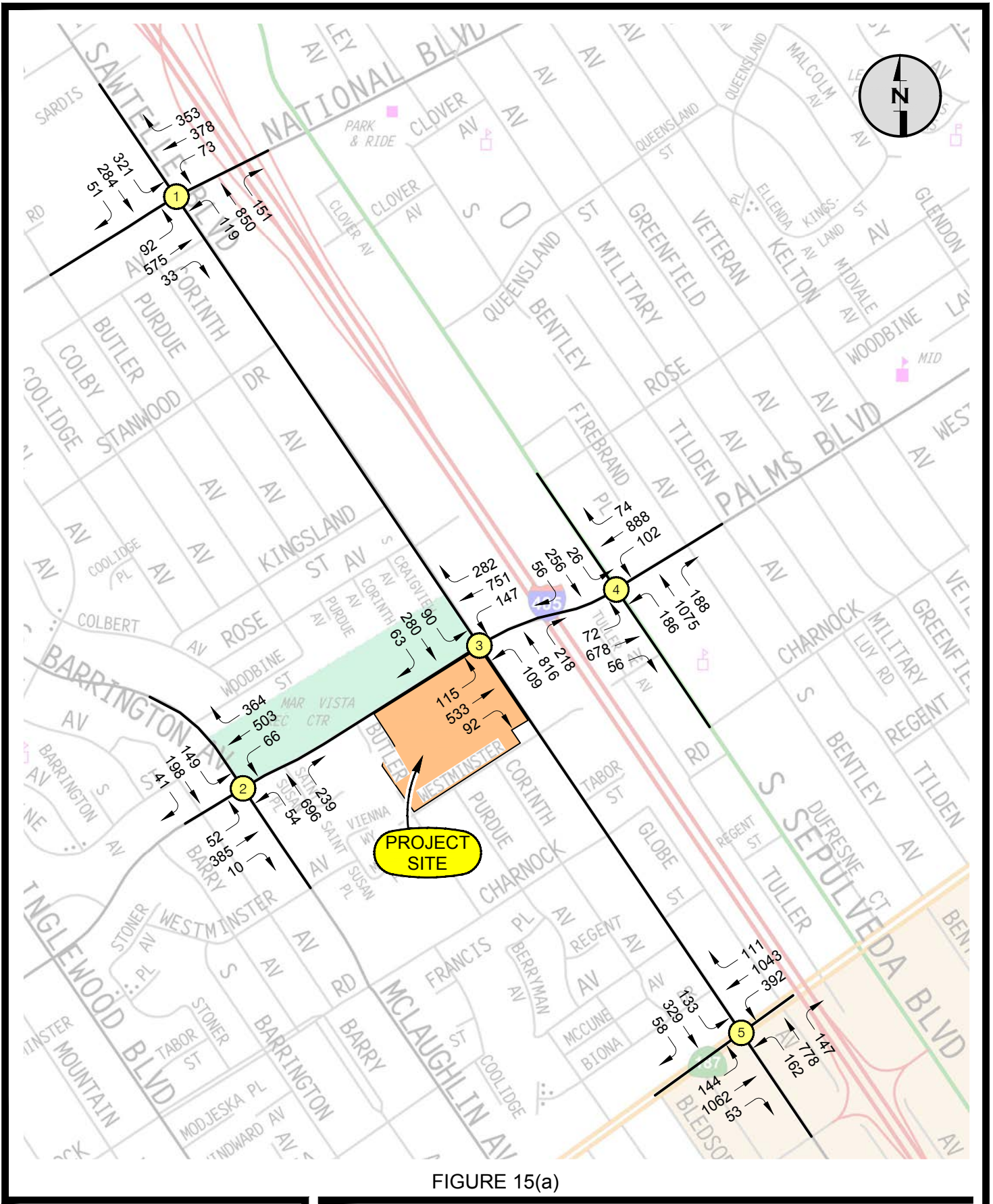


FIGURE 15(a)

EXISTING (2017) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT
(40-STUDENT ENROLLMENT INCREASE)
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



Hirsch/Green Transportation Consulting, Inc.

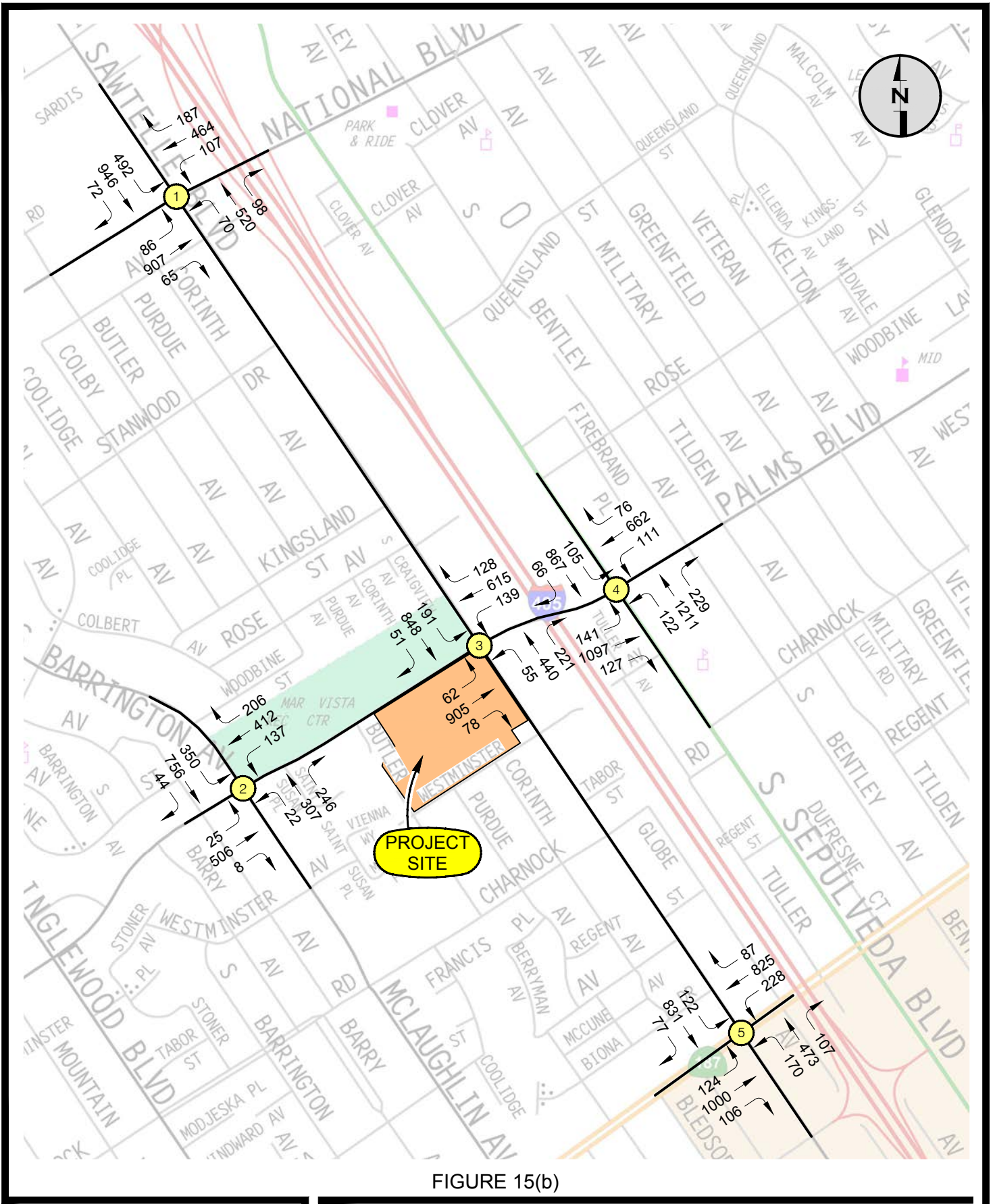


FIGURE 15(b)

EXISTING (2017) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT
(40-STUDENT ENROLLMENT INCREASE)
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)



Future (Year 2024) Traffic Volumes

In addition to the “Existing With Master Plan Update Project” analyses, LADOT also requires an evaluation of the potential traffic effects of the proposed project on the forecast future conditions in the area, with the future study year reflecting the anticipated completion date of the project. Windward School has identified that the proposed Master Plan Update Project is expected to be completed by the end of the year 2024; note that, while the 40-student enrollment increase included as part of the Master Plan Update Project may not be fully implemented until sometime after this date, for purposes of this study, it was also assumed that these additional students would be enrolled and “on campus” by the end of the 2024 study year. This study includes an analysis of both the specific traffic impacts of the proposed Master Plan Update Project, and its cumulative effects (along with anticipated future traffic growth) on the future roadway system.

Future traffic volumes in the project vicinity, and indeed throughout the region, are anticipated to increase as a result of a number of factors, although two factors contribute most significantly to area traffic growth. The first of these factors is “ambient traffic growth”, which occurs on both a local and regional basis for a variety of reasons, including but not limited to increases in area population (not specifically tied to new development), additional vehicles for existing households (as children become driving age, or new multi-vehicle status for current single-vehicle families), economic influences such as new jobs creating new worker trips, and other factors.

The second factor is new traffic resulting from ongoing or continuing development. This factor is generally regarded as more localized than the general ambient growth factor described earlier, and is based on information regarding specific development activity within or in close proximity to the project area. A survey of such development activity in the project vicinity indicated that there are a number of other projects that are currently either under construction or are planned for development which will likely contribute to future traffic growth within the study area.

Since the 40-student enrollment increase included in the Master Plan Update Project is not expected to occur for some time, its traffic (and related impacts) will occur on a roadway system that may exhibit more traffic than under the “Existing (2017)” conditions noted earlier. As such, this study was expanded to include an analysis of potential future year 2024 traffic conditions, reflecting traffic volumes in the study area at the time the proposed enrollment increase is expected to be completed. The process used to estimate the “Future (2024)” traffic volumes at the study intersections, including the forecast “without project” conditions against which the proposed project’s incremental traffic effects are assessed, is described in the following pages.

Future “Without Master Plan Update Project” Forecast Traffic Conditions

The methodology used in this study to estimate the potential future traffic volumes at each of the study intersections consisted of several steps. First, as described in a preceding section of this report, the current (year 2017) traffic volumes in the study area were identified by traffic counts. These existing volumes were then used to estimate the future traffic conditions through the application of an “ambient traffic growth factor”. This growth factor, compounded annually, was applied to all of the turning movement volumes at each of the study intersections to form the “baseline” traffic volume conditions for the future study year of 2024. Additionally, although the annual growth factor is expected to fully reflect all potential area traffic increases, in order to provide a conservative analysis, traffic generated by other nearby development projects was also included in the future baseline traffic estimates of the future “Without Project” conditions.

Ambient Traffic Growth

The “ambient traffic growth factor” is used to account for expected future increases in traffic within the study area resulting from ongoing general regional population growth, as well as from potential additional traffic associated with future as-yet unidentified development, or from known projects that are approved and awaiting or are currently under construction but located outside the immediate study area (“related projects”, as discussed in the following section of this study).

Based on analyses of the traffic growth trends in the study area, LADOT has determined that an annual traffic growth factor of 1.0 percent is appropriate. In fact, the current (2010) Los Angeles County Congestion Management Program (“CMP”) predicts actual future traffic growth within its “Santa Monica” Regional Statistical Area (“RSA”) 16, which contains the Windward School site, to be only about 0.20 percent annually between the year 2015 and the year 2025, inclusive of traffic resulting from both general ambient growth and cumulative area development. As such, the assumed 1.0 percent annual ambient traffic growth factor used in this study is expected to be highly conservative. This (1.0 percent) ambient traffic growth factor, compounded annually, was then applied to the “existing” 2017 intersection traffic volumes described earlier, in order to estimate the future traffic volumes for the forecast study year 2024 “baseline” conditions.

Cumulative Development (“Related Projects”)

In addition to the 1.0 percent annual ambient traffic growth rate, listings of specific projects located within the study area (an approximately 1.5-mile radius from the project site) were obtained from both LADOT and the City of Los Angeles Planning Department files, as well as

from the City of Culver City Department of Community Development records. As noted earlier, the annual ambient traffic growth factor is expected to fully reflect all area traffic growth within the study period, and as such, the inclusion of traffic generated by specific projects within the study area in addition to the ambient traffic growth may overstate the future traffic volumes. Therefore, so as not to inordinately deteriorate future traffic conditions and to more accurately predict future traffic volumes, related projects generating fewer than 20 net new peak hour trips, or developments located outside the 1.5 mile study radius, were assumed to be included within the ambient traffic growth increases, and were not identified as specific traffic generators.

Using these assumptions as guidelines, a review of the current LADOT, City of Los Angeles Planning Department, and City of Culver City Department of Community Development files identified 11 projects within the study area that could produce additional traffic at some or all of the study intersections by the future study year of 2024. The location of each of these projects is shown in Figure 16, while each project is individually listed and described in Table 7.

The amount of traffic expected to be generated by each of the 11 related projects was estimated based on information provided by LADOT, the City of Los Angeles Planning Department, and/or the City of Culver City Department of Community Development, including (when available) data obtained directly from traffic impact studies prepared for the various individual developments. The peak hour trip generation estimates for each of the related projects are identified in Table 8. It should be noted that the related project's trip generation estimates identified in this table represent the typical AM and PM peak hour periods of commute traffic in the study area, and not the specific "AM (School)" and "PM (School)" peak hours described previously and used for the purposes of this study. However, the AM and PM peak hour trip generation levels for the various individual land uses included in the related projects developments are typically higher than those occurring during the "School" peak hours, and as such, the trip generation estimates shown in Table 8 and which were used in this study, are considered to be conservative.

The related projects trips shown in Table 8 were then assigned to the study area roadways and through the study intersections using assumptions and methodologies similar to those described earlier for the trips related to the Windward School's prior 35-student enrollment increase and to the proposed Master Plan Update Project's 40-student enrollment increase, or if applicable, utilizing the specific assignments shown in the traffic studies for the individual related projects. The resulting related projects traffic assignments at each of the study intersections are shown in Figures 17(a) and 17(b) for the "AM (School)" and "PM (School)" peak hours, respectively.

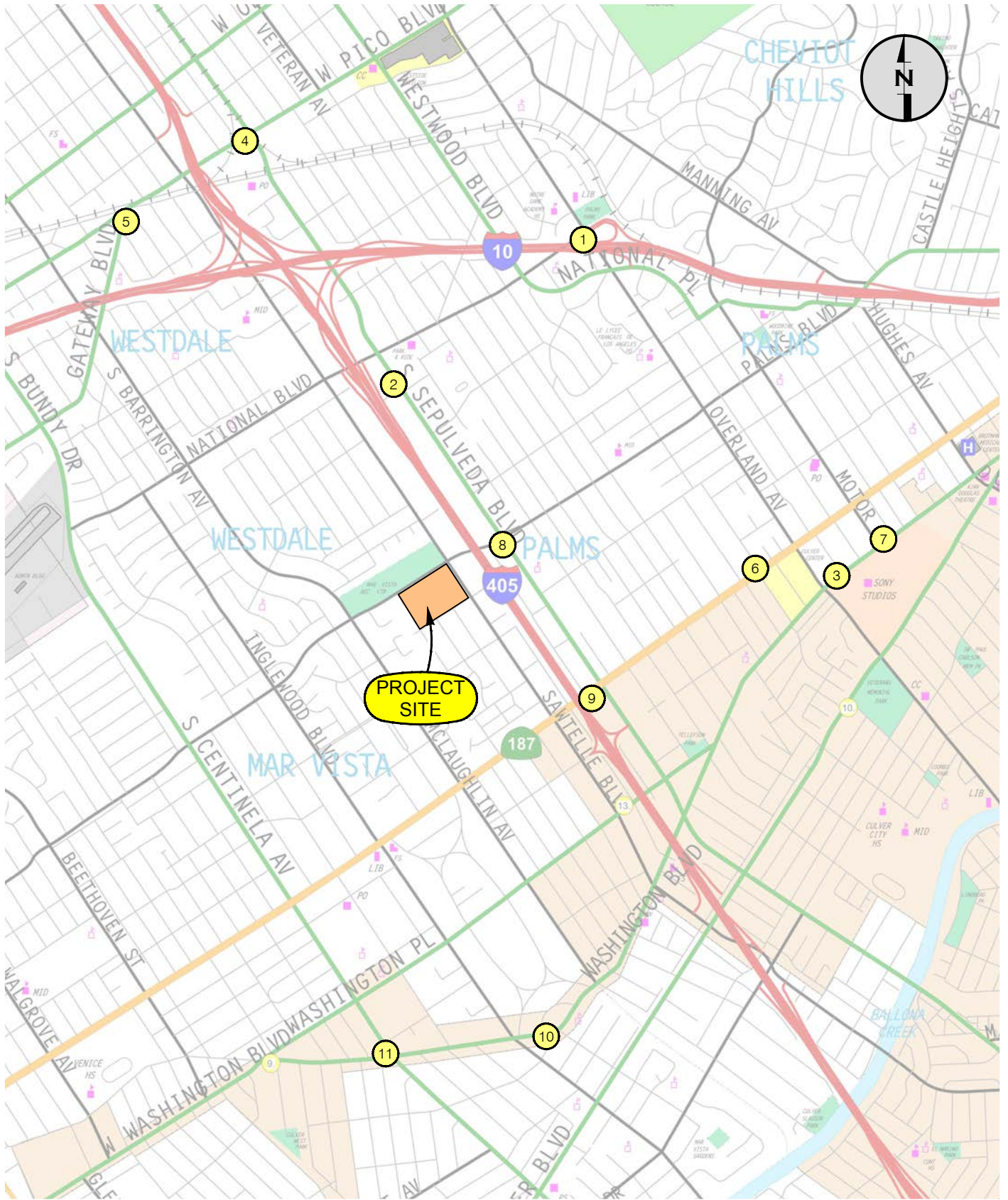


FIGURE 16



Hirsch/Green Transportation Consulting, Inc.

RELATED PROJECTS LOCATIONS MAP

Table 7
Related Projects Descriptions

Map No.	Land Use/Description	Size/Units	Address
<u>City of Los Angeles</u>			
1.	Coffee Shop w/o Drive Thru	1,976 sq. ft.	10612 W. National Boulevard
2.	Condominiums	138 units	3115 S. Sepulveda Boulevard
	Retail	28,000 sq. ft.	
3.	Apartments	132 units	10601 W. Washington Boulevard
	Retail	18,000 sq. ft.	
	Office	26,000 sq. ft.	
4.	Apartments	529 units	11122 W. Pico Boulevard
	Affordable Senior Apartments	66 units	
	Retail	5,000 sq. ft.	
5.	Apartments	128 units	11460 W. Gateway Boulevard
	Retail	5,153 sq. ft.	
6.	Apartments	66 units	10801 W. Venice Boulevard
	Restaurant	1,000 sq. ft.	
	Retail	1,000 sq. ft.	
7.	Condominiums	108 units	10375 W. Washington Boulevard
	Retail	3,600 sq. ft.	
8.	Coffee Shop (Drive thru only)	1,080 sq. ft.	3505 S. Sepulveda Boulevard
<u>City of Culver City</u>			
9.	Convenience Store w/Car Wash	2,114 sq. ft.	3801 Sepulveda Boulevard
10.	Apartments	98 units	11924 Washington Boulevard
	Retail	11,250 sq. ft.	
	Restaurant	3,750 sq. ft.	
11.	Market Hall	26,790 sq. ft.	12403 Washington Boulevard
	Retail	4,800 sq. ft.	

Table 8
Related Projects Trip Generation Estimates

Map No.	Land Use/Description	Size/Units	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
City of Los Angeles									
1.	Coffee Shop w/o Drive Thru	1,976 sq. ft.	636	42	41	83	15	16	31
2.	Condominiums	138 units	772	16	57	73	61	50	111
	Retail	28,000 sq. ft.							
3.	Apartments	132 units	2,343	64	84	148	123	91	214
	Retail	18,000 sq. ft.							
	Office	26,000 sq. ft.							
4. ^[1]	Apartments	529 units	2,800	29	173	202	146	78	224
	Affordable Senior Apartments	66 units							
	Retail	5,000 sq. ft.							
5.	Apartments	128 units	1,107	(1)	84	83	51	17	68
	Retail	5,153 sq. ft.							
6. ^[2]	Apartments	66 units	668	16	42	58	45	11	56
	Restaurant	1,000 sq. ft.							
	Retail	1,000 sq. ft.							
7.	Condominiums	108 units	579	(3)	35	32	31	11	42
	Retail	3,600 sq. ft.							
8. ^[3]	Coffee Shop (Drive thru only)	1,080 sq. ft.	442	28	27	55	12	12	24
City of Culver City									
9. ^[4]	Convenience Store w/Car Wash	2,114 sq. ft.	1,097	16	15	31	18	16	34
10. ^[5]	Apartments	98 units	1,481	21	47	68	66	46	112
	Retail	11,250 sq. ft.							
	Restaurant	3,750 sq. ft.							
11. ^[6]	Market Hall	26,790 sq. ft.	1,802	32	26	58	83	54	137
	Retail	4,800 sq. ft.							

Note:

All project descriptions and trip generation information provided by LADOT Case Logging and Tracking System ("CLATS") unless otherwise noted.

Sources:

[1] Approved Project Trip Generation Estimates, Sepulveda Boulevard and Pico Boulevard Mixed-Use Project, Hirsch/Green Transportation Consulting, Inc., August 2017.

[2] Trip Generation Table From Project Traffic Study Provided by LADOT.

[3] Trip Generation Table From Project Traffic Study Provided by LADOT.

[4] Trip Generation Analysis Letter for Proposed Gas Station Project, Kimley Horn, October 22, 2015.

[5] 11960 Washington Boulevard Mixed Use Project Traffic Impact Analysis, RBF Consulting, August 31, 2015.

[6] Traffic Study for the Market Hall Project, Raju Associates, Inc., June 2017.



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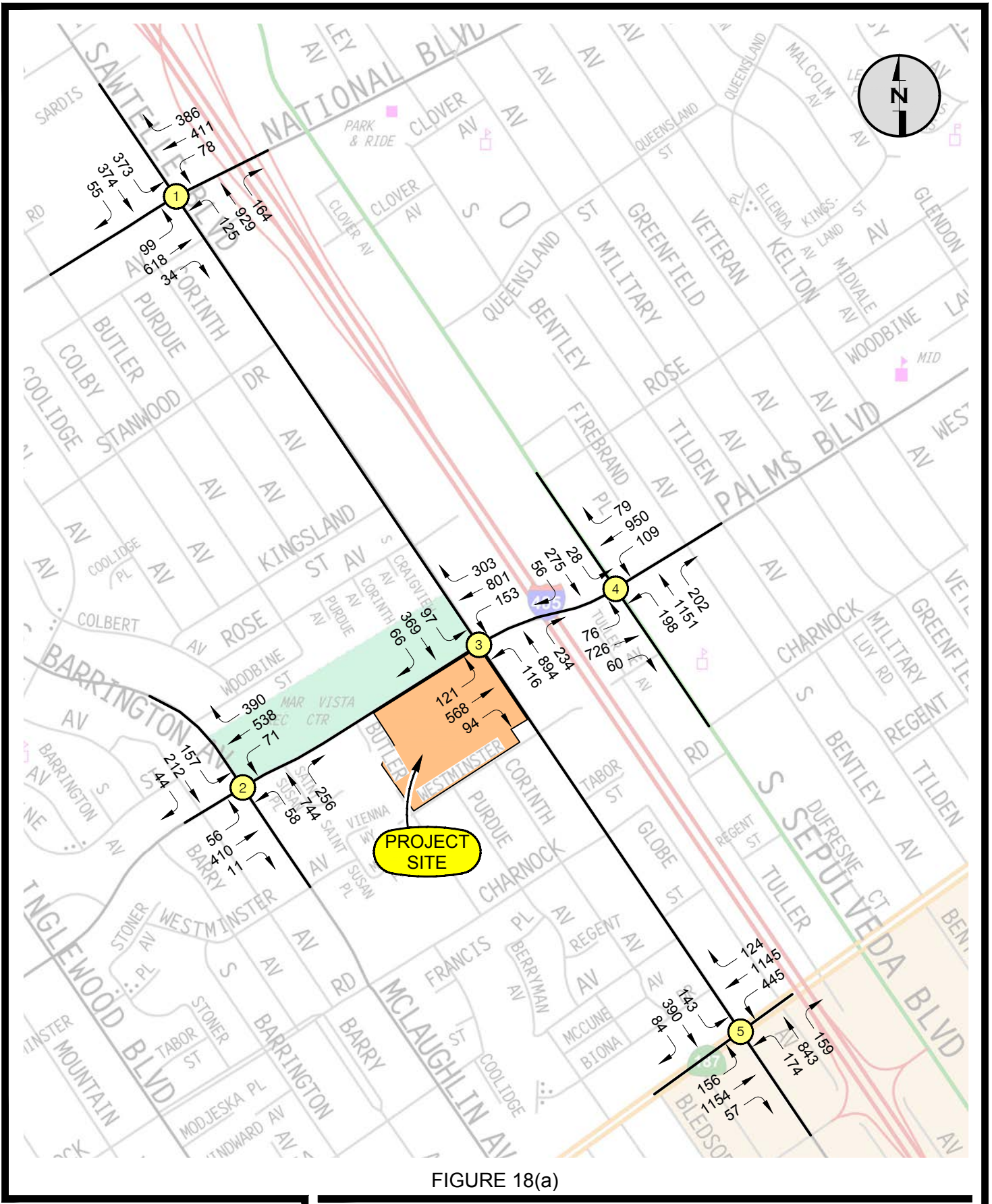
As briefly described earlier, the forecast “Future (2024) Without Master Plan Update Project” analysis scenario traffic volumes used for this study were developed by adding the increases in “background” traffic resulting from the assumed 1.0 percent annual ambient traffic growth factor and the potential traffic increases resulting from the development of the 11 related projects to the “Existing (2017)” traffic volumes shown previously in Figures 14(a) and 14(b). The resulting “Future (2024) Without Master Plan Update Project” traffic volume estimates, which are shown in Figures 18(a) and 18(b) for the “AM (School)” and “PM (School)” peak hours, respectively, represent the anticipated future (year 2024) conditions at the five study intersections prior to the development (and completion) of the proposed Windward School Master Plan Update Project.

Future “With Master Plan Update Project” Forecast Traffic Conditions

The traffic volumes for this analysis scenario, which represent the anticipated future conditions within the project vicinity following the completion of the proposed Master Plan Update Project, were then developed by adding the incremental traffic expected to be generated by the requested 40-student (future) enrollment increase, shown earlier in Figures 8(a) and 8(b), to the year (2024) “Without Master Plan Update Project” volumes identified in Figures 18(a) and 18(b). The resulting “Future (2024) With Master Plan Update Project” traffic estimates are shown in Figures 19(a) and 19(b) for the “AM (School)” and “PM (School)” peak hour, respectively.

Future Traffic Conditions With Master Plan Update Project Plus TDM Plan

The existing and forecast future traffic volumes identified in the preceding discussions reflect the “initial” conditions in the study area resulting from the proposed Master Plan Update Project’s requested 40-student (future) enrollment increase, based on the trip generation characteristics associated with the Windward School’s current operations. However, as noted earlier in this report, the Master Plan Update Project will also include the development and implementation of a Transportation Demand Management (“TDM”) Plan to reduce the amount of traffic generated by the School. The effects of the TDM Plan on the Master Plan Update Project’s traffic impacts were analyzed by adding its anticipated trip reductions, shown earlier in Figures 9(a) and 9(b), to both the existing and forecast future “With Master Plan Update Project” traffic volumes shown earlier in Figures 15(a) and 15(b), and in Figures 19(a) and 19(b), respectively. The resulting “Existing (2017) With Master Plan Update Project Plus TDM” traffic volumes are shown for the “AM (School)” and “PM (School)” peak hours in Figures 20(a) and 20(b), respectively, while the “Future (2024) With Master Plan Update Project Plus TDM” traffic volumes are identified in Figure 21(a) for the “AM (School) Peak Hour” and Figure 21(b) for the “PM (School) Peak Hour”.



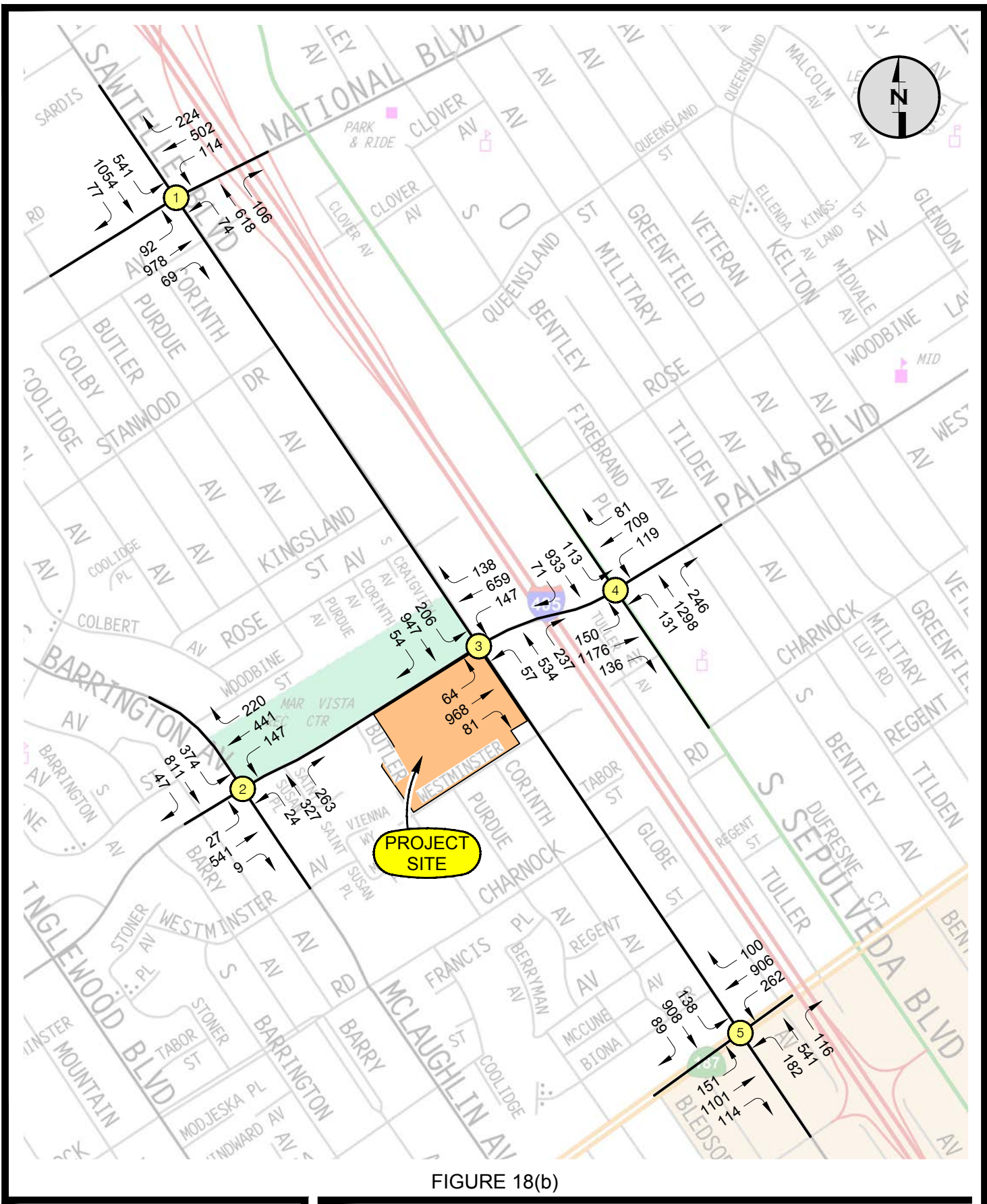


FIGURE 18(b)

FUTURE (2024) TRAFFIC VOLUMES
WITHOUT MASTER PLAN PROJECT
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)



Hirsch/Green Transportation Consulting, Inc.

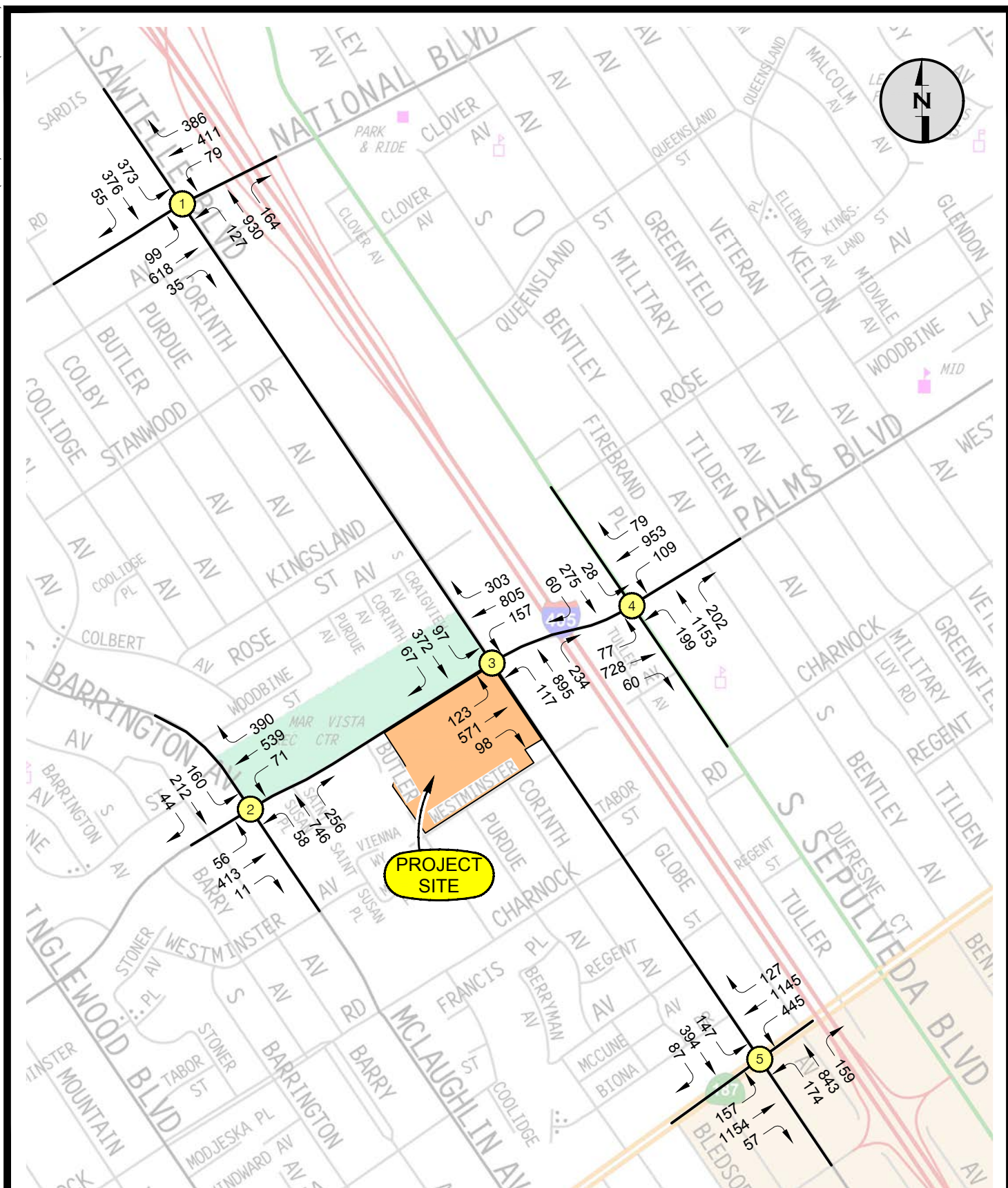


FIGURE 19(a)

FUTURE (2024) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)

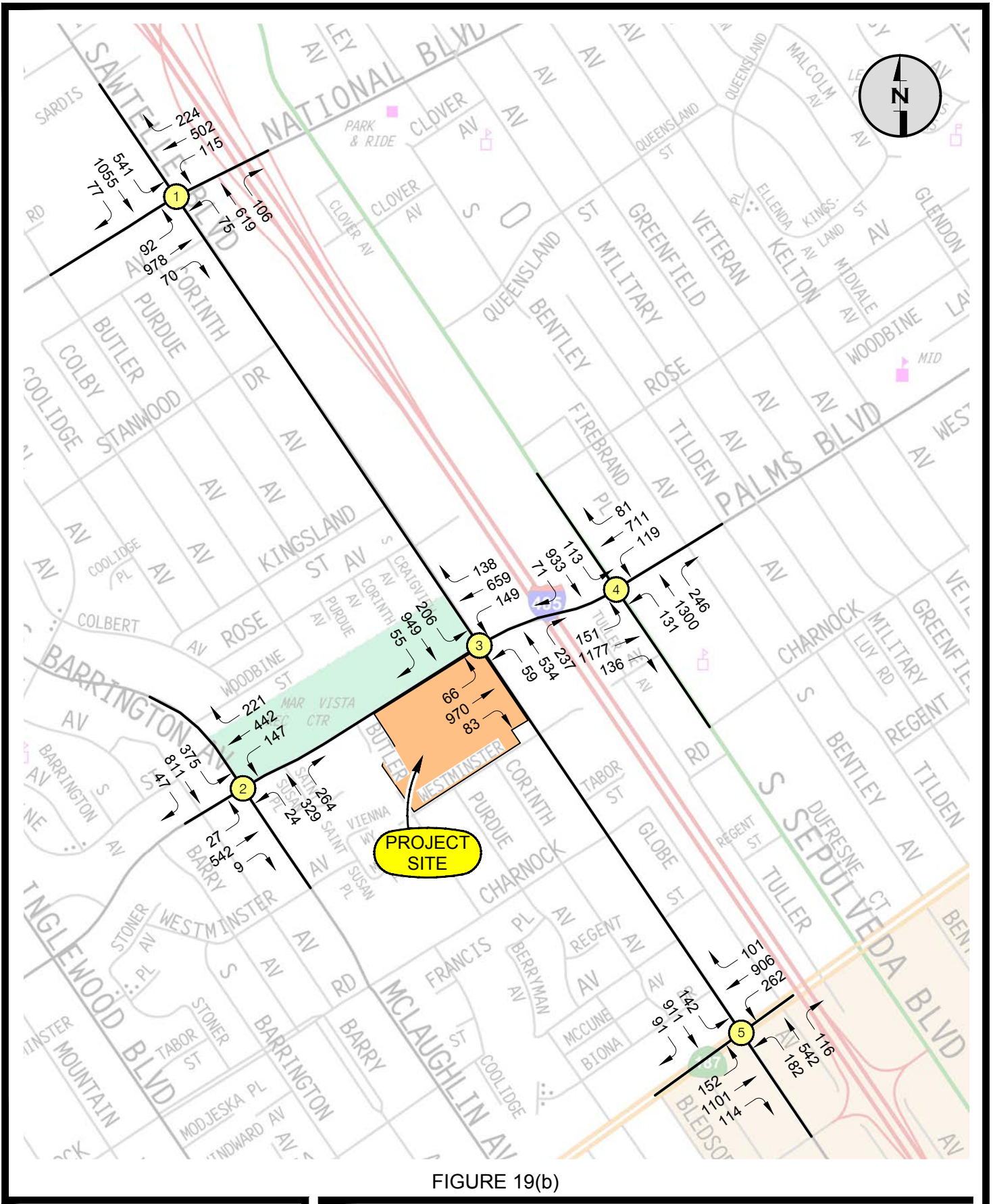


FIGURE 19(b)

FUTURE (2024) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)



Hirsch/Green Transportation Consulting, Inc.



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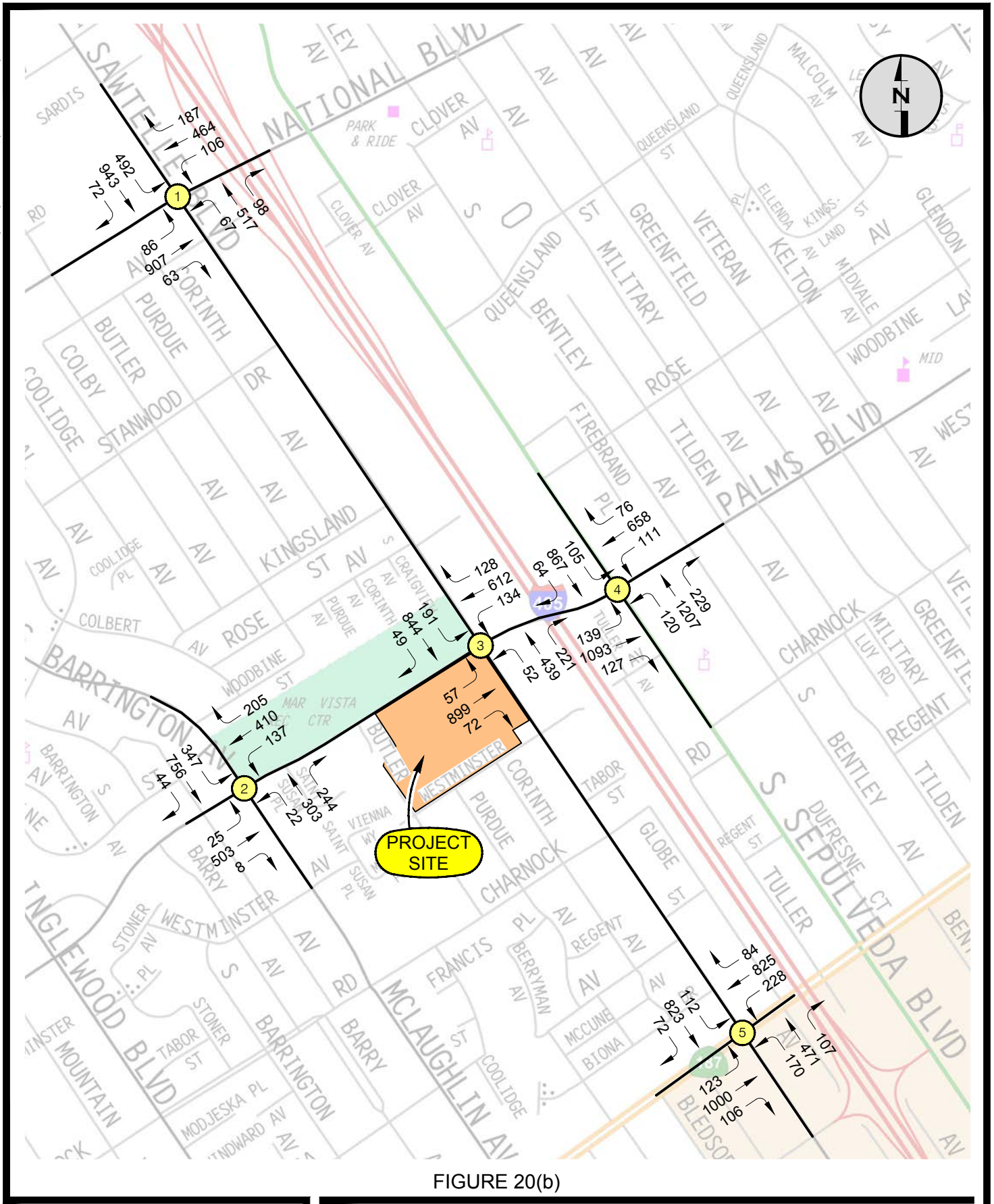


FIGURE 20(b)



Hirsch/Green Transportation Consulting, Inc.

EXISTING (2017) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT TDM PLAN
PM (SCHOOL) PEAK HOUR (3:00 - 4:00 PM)

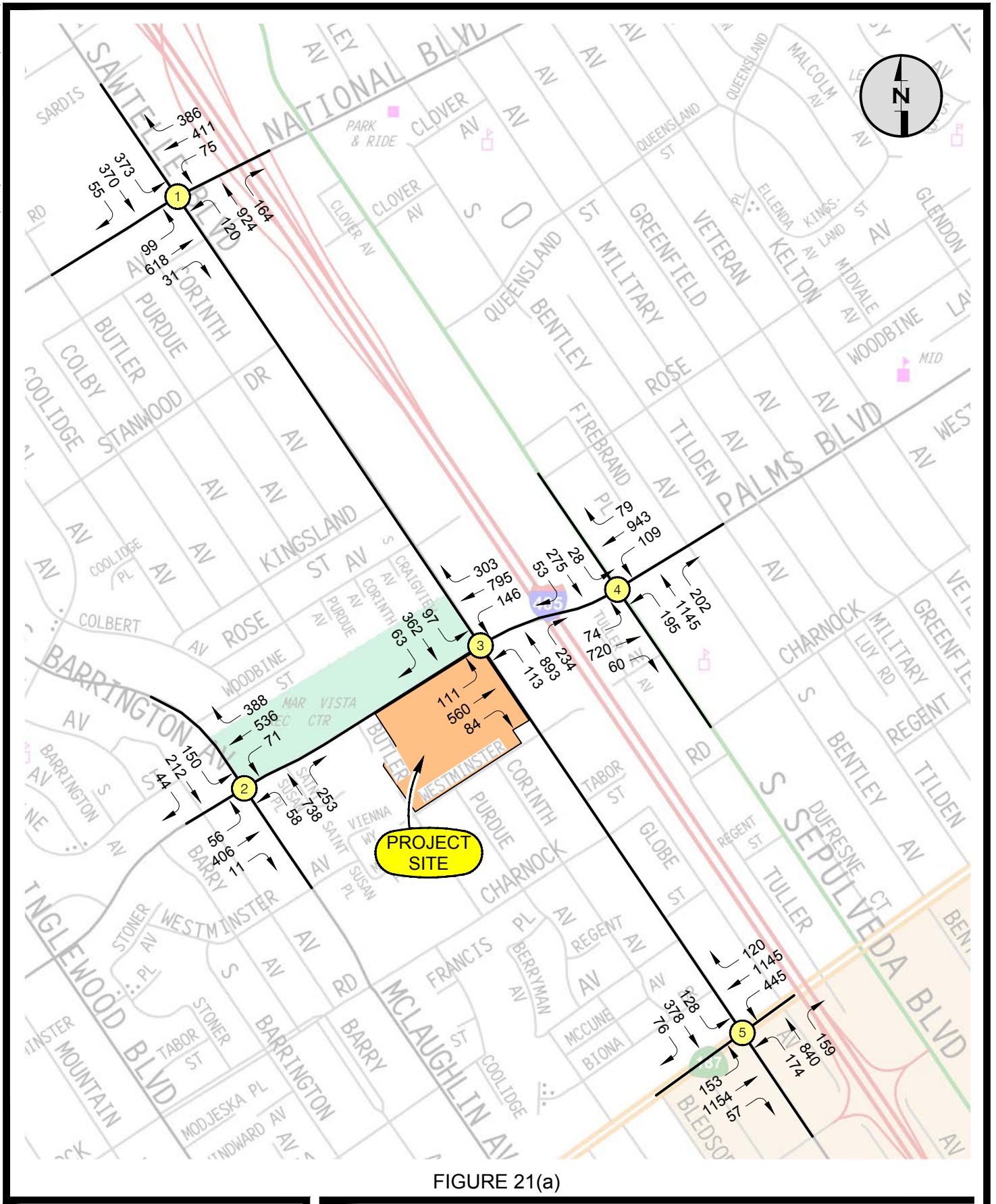


FIGURE 21(a)

FUTURE (2024) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT TDM PLAN
AM (SCHOOL) PEAK HOUR (7:15 - 8:15 AM)



Hirsch/Green Transportation Consulting, Inc.

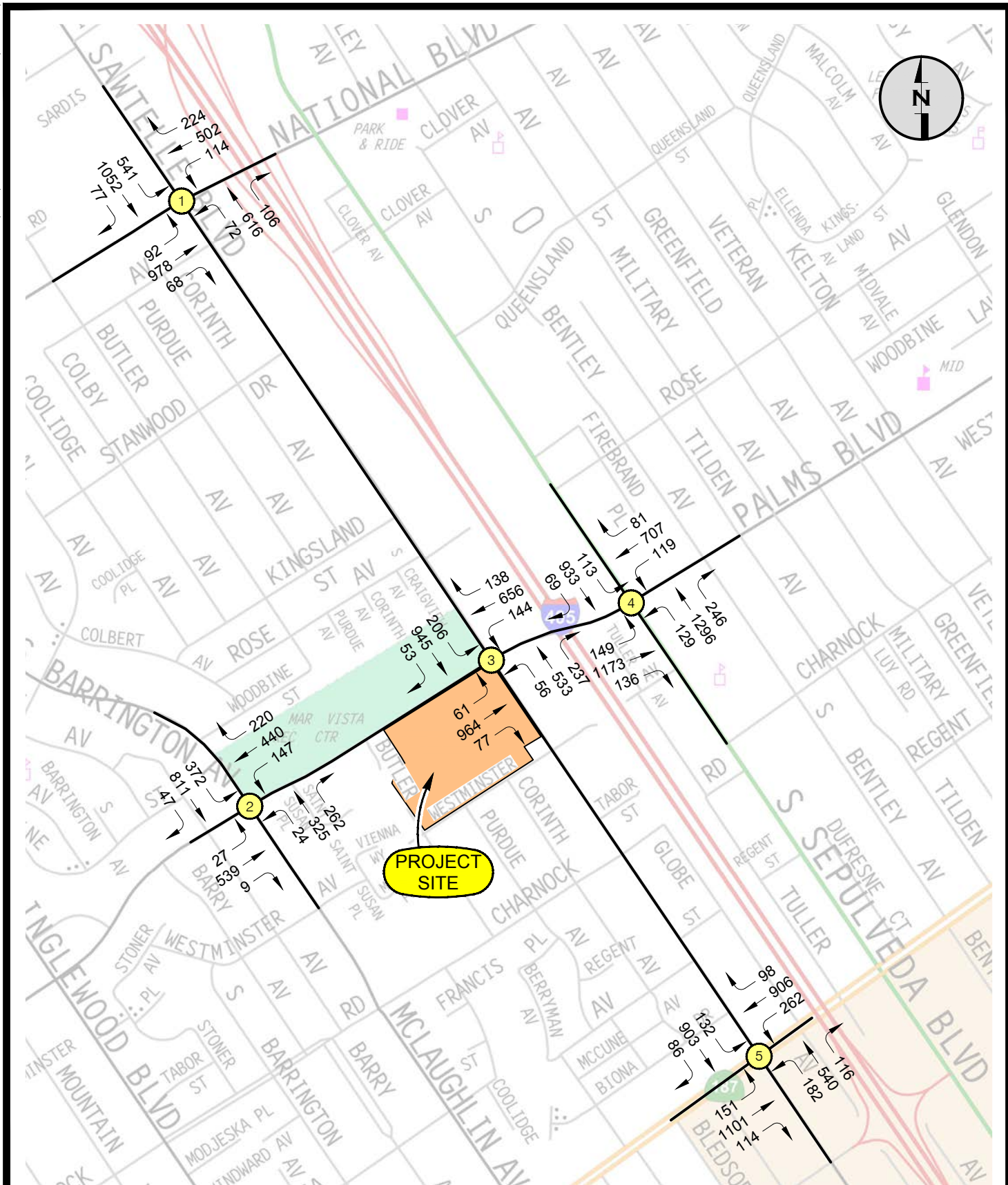


FIGURE 21(b)

FUTURE (2024) TRAFFIC VOLUMES
WITH PROPOSED MASTER PLAN PROJECT TDM PLAN
PM (SCHOOL) 3:00 - 4:00 PM)



Hirsch/Green Transportation Consulting, Inc.

The analyses of both the existing (year 2017) and forecast future (year 2024) operations at each of the five study intersections are discussed in detail in the following section of this document. These analyses include an evaluation of the effects of the prior 35-student enrollment increase on the “existing” (year 2017) conditions, as well as the identification of the incremental impacts associated with the Master Plan Update Project’s requested 40-student enrollment increase on both the existing and future “Without Project” traffic conditions in the study area. Additionally, the effects and effectiveness of the trip reductions anticipated to result from the implementation of the proposed Master Plan Update Project’s TDM Plan are also evaluated. As described in more detail in the following pages, the evaluation and comparison of the appropriate existing and forecast future “Without Master Plan Update Project”, “With Master Plan Update Project”, and “With Master Plan Update Project Plus TDM” traffic conditions for each study intersection allows for the identification of any incremental project-specific traffic impacts, as is necessary to determine the “significance” of the potential project-related traffic impacts to the streets and intersections serving the project site specifically and the study area in general.

ANALYSIS OF AREA TRAFFIC CONDITIONS

Detailed analyses of the existing (year 2017) and forecast future (year 2024) traffic conditions in the project vicinity, as described in detail in the preceding sections of this study, were performed at a total of five signalized intersections located adjacent to or within the immediate vicinity of the Windward School (site of the proposed Master Plan Update Project). These intersections, listed below, are those locations considered by LADOT to be the most likely to be affected by the incremental new traffic generated by the proposed Master Plan Update Project.

1. Sawtelle Boulevard and National Boulevard
2. McLaughlin Avenue and Palms Boulevard
3. Sawtelle Boulevard and Palms Boulevard
4. Sepulveda Boulevard and Palms Boulevard
5. Sawtelle Boulevard and Venice Boulevard

Existing Highway System Improvements

The roadway network serving the study area already includes measures to enhance traffic flow and reduce overall travel delays, such as left-turn and/or right-turn lanes at key intersections, and on-street parking prohibitions along primary thoroughfares in order to provide for additional travel lanes during peak traffic periods. Additionally, all signalized intersections within the City of Los Angeles, including each of the five study intersections, are equipped with LADOT's Automated Traffic Surveillance and Control ("ATSAC") traffic signal coordination system and are also improved with the next-generation Adaptive Traffic Control System ("ATCS") upgrades. These systems monitor traffic flow patterns and vehicular demands throughout a network of interconnected ATSAC/ATCS-equipped intersections, and adjust the operations of individual signals in real time in order to maximize vehicular throughput and minimize delay along key transportation corridors within the study area and throughout the City of Los Angeles.

Ongoing or Programmed Future Highway System Improvements

As noted earlier, a variety of intersection and/or roadway enhancements are already in place on the existing roadway network serving the study area, including both physical improvements (such as left-turn and/or right-turn lanes at many intersections) and traffic signal enhancements (LADOT's ATSAC/ATCS signal coordination systems). The presence of these measures indicates effective use of the available capacity of the highway facilities in the project vicinity.

However, despite this good use of the current roadway capacity, a review of the current City of Los Angeles' Five-Year Capital Improvement Programs ("CIP") list was conducted, in order to identify whether any new roadway or intersection improvements are proposed in the study area; that review indicated that no significant roadway or intersection capacity improvements are expected by the assumed year 2024 project completion date. Further, while some or all of the related projects identified earlier may be required to implement localized roadway or intersection improvements to mitigate their specific traffic impacts, for purposes of presenting a conservative assessment of the future conditions in the project vicinity, no such related projects "mitigation" improvements were assumed in this study. Therefore, the analysis of the forecast (year 2024) "Without Master Plan Update Project" and "With Master Plan Update Project" traffic conditions assumed that the future roadway network (intersection geometries and capacities would remain unchanged from those used in the analysis of the "Existing (2017)" traffic conditions.

Traffic Impact Analysis Methodology and Results

As required pursuant to LADOT's current transportation impact study guidelines, this study utilizes the Critical Movement Analysis ("CMA") methodology for the analysis and evaluation of traffic operations at signalized intersections under their jurisdiction, as detailed in Circular Number 212 published by the Transportation Research Board ("TRB").² This analysis technique describes the operating characteristics of an intersection in terms of the "Level of Service", based on intersection traffic volume and other variables such as the number and type of signal phases, lane geometries, and other factors which determine both the quantity of traffic that can move through an intersection ("Capacity") and the quality of that traffic flow ("Level of Service").

"Capacity" represents the maximum total hourly volume of vehicles in the critical lanes which has a reasonable expectation of passing through an intersection under prevailing roadway and traffic conditions. Critical lanes are defined generally as those intersection movement or groups of movements which exhibit the highest "per lane" volumes, thus defining the maximum amount of vehicles attempting to negotiate through the intersection during a specific time period. The capacity of an intersection also varies based on the number of signal phases for the location, as more signal phases result in more "lost" or "startup" time, as vehicles exhibit slight driver reaction delays when signal indications change from "red" to "green", reducing the efficiency and thus the capacity of an intersection. The intersection capacities associated with the various levels of service are based on the number of traffic signal phases, as shown in Table 9.

² Interim Materials on Highway Capacity, Circular Number 212, Transportation Research Board, Washington, D.C., 1980.

Table 9
Critical Movement Analysis (CMA)
Volume Ranges per Level of Service *

Level of Service	Maximum Sum of Critical Volumes (VPH) vs. Number of Signal Phases		
	Two Phases	Three Phases	Four or More Phases
A	900	855	825
B	1,050	1,000	965
C	1,200	1,140	1,100
D	1,350	1,275	1,225
E	1,500	1,425	1,375
F	----- Not Applicable -----		

* For planning applications only. Not appropriate for operations/design applications.

For the intersection evaluation and transportation planning purposes of this traffic study, current LADOT policies require that the maximum “baseline” capacity of a signalized intersection (without ATSAC/ATCS traffic signal coordination upgrades, as described later in this section) equates to the value of Level of Service (“LOS”) E shown in Table 9. This value represents the highest volume of traffic that can be accommodated by urban area intersections without a breakdown in operations, which can result in unstable traffic flows, high levels of congestion, and long delays at both individual intersections and throughout entire travel corridors.

The “Critical Movement” indices at an intersection are determined by first identifying the sum of the critical lane traffic volumes at the intersection. This total traffic *volume* value, which represents the most critical intersection demand, is then divided by the appropriate intersection *capacity* value (from Table 9) for the type of signal control at the intersection, to determine the “CMA value” for the intersection, which is roughly equivalent to its volume-to-capacity ratio.

“Level of Service” (“LOS”) describes the quality of traffic flow through the intersection. LOS A through LOS C exhibit good traffic flow characteristics and little congestion, while LOS D is typically the level for which metropolitan area street systems are designed, and represents the highest level of acceptable congestion and delay. LOS E represents conditions at or near the capacity of an intersection, and exhibits short-duration stoppages and unstable traffic flows at its upper ranges. LOS F occurs when a facility is overloaded, and is generally characterized by stop-and-go traffic and long-duration delays. Note that the LOS definitions do not represent a single operating condition, but correspond to a range of CMA values as shown in Table 10.

Table 10
Level of Service (LOS) as a Function of CMA Value

CMA Value	LOS	Intersection Operation/Traffic Flow Characteristics
≤ 0.600	A	No congestion; all vehicles clear in a single cycle.
$> 0.600 \leq 0.700$	B	Minimal congestion; all vehicles still clear in a single cycle.
$> 0.700 \leq 0.800$	C	No major congestion; most vehicles clear in a single cycle.
$> 0.800 \leq 0.900$	D	Generally uncongested, but vehicles may wait through more than one cycle; short duration queues may form on critical approaches.
$> 0.900 \leq 1.000$	E	Increased congestion on critical approaches; long duration queues form at higher end of range.
> 1.000	F	Over capacity; forced flow with long periods of congestion; substantial queues form.

Using the analysis procedures and assumptions described earlier, the “basic” CMA value and associated LOS were calculated for the “AM (School)” and “PM (School)” peak hour conditions at each of the five study intersections for the various traffic analysis scenarios described earlier. However, these “basic” calculations were adjusted to account for the operational improvements resulting from the ATSAC/ATCS traffic signal coordination enhancements described earlier, which are not considered in the basic CMA analysis methodology. LADOT has determined that intersections connected to the ATSAC/ATCS signal coordination system experience an approximate ten percent increase in capacity as compared to non-ATSAC/ATCS locations. Therefore, per current LADOT policies, the “basic” CMA value calculated using the standard Circular 212 methodology was reduced by 0.100 for intersections equipped with ATSAC/ATCS, in order to estimate the effectiveness of the resulting increases in intersection capacity.

Finally, the incremental “project-related” impacts at each of the five study intersections were determined by comparing the respective “Without Project” and “With Project” analysis results for each analysis scenario, as described in detail in the following sections of this report.

Analysis of Previous 35-Student Enrollment Increase

As described earlier in this report, these analyses were conducted in order to determine whether the previous (unpermitted) 35-student enrollment increase, which occurred prior to the initiation of this study and increased the enrollment at the School from its entitled 550 students to the current 585-student enrolment level, may have produced significant impacts in the study area. This evaluation compared the results of the analysis of the estimated “pre-existing” traffic levels

at the five study intersections prior to the recent (unpermitted) 35-student enrollment increase at the School, as shown earlier in Figures 12(a) and 12(b), with the current conditions identified by the existing intersection traffic count data identified previously in Figures 13(a) and 13(b), which already include the trips assumed to be generated by the additional 35 students. The results of the analyses of the effects of the prior 35-student enrollment increase are shown in Table 11.

Table 11
Critical Movement Analysis ("CMA") Summary
"Pre-Existing" (2017) Conditions - Without and With Prior 35-Student Enrollment Increase

Int. No.	Intersection	Peak Hour ^[1]	Without Increase ^[2]		With 35-Student Increase		
			CMA	LOS	CMA	LOS	Impact
1	Sawtelle Boulevard and National Boulevard	AM (School)	0.725	C	0.725	C	0.000
		PM (School)	0.751	C	0.752	C	0.001
2	McLaughlin Avenue and Palms Boulevard	AM (School)	0.826	D	0.829	D	0.003
		PM (School)	0.767	C	0.769	C	0.002
3	Sawtelle Boulevard and Palms Boulevard	AM (School)	0.721	C	0.723	C	0.002
		PM (School)	0.663	B	0.666	B	0.003
4	Sepulveda Boulevard and Palms Boulevard	AM (School)	0.641	B	0.643	B	0.002
		PM (School)	0.854	D	0.855	D	0.001
5	Sawtelle Boulevard and Venice Boulevard	AM (School)	0.869	D	0.873	D	0.004
		PM (School)	0.759	C	0.760	C	0.001

Notes:

[1] AM (School) Peak Hour is 7:15 AM to 8:15 AM; PM (School) Peak Hour is 3:00 PM to 4:00 PM.

[2] Reflects estimated conditions at permitted 550 student enrollment level.

"*" Denotes significant impact per LADOT Transportation Impact Study Guidelines, December 2016 (if shown).

As summarized in Table 11, each of the five study intersections are estimated to have exhibited LOS C or better conditions during the morning and/or afternoon school peak hours prior to the addition of the 35 new (now current) students, although the intersections of McLaughlin Avenue and Palms Boulevard, Sepulveda Boulevard and Palms Boulevard, and Sawtelle Boulevard and Venice Boulevard are each identified to have operated at LOS D conditions during one of the peak hour periods. However, most jurisdictions within Southern California, including the City of Los Angeles, typically identify LOS D as the "target" maximum acceptable operational level for urban area intersections (such as the study area), and therefore, these analyses indicate that all of the study intersections are expected to have exhibited "acceptable" operating conditions during both of the subject school peak hour time periods evaluated in this study.

However, the analysis results summarized in Table 11 should not be construed to suggest that no delays or congestion occur at the study intersections or along key roadways in the area during the critical times of the day, and it is acknowledged that several of the key roadways in the study area (particularly Sawtelle Boulevard, Sepulveda Boulevard, and Venice Boulevard) can carry high traffic volumes during both the typical AM and PM peak commute traffic periods. As a result, traffic flows on these facilities can exhibit slow speeds and “stop-and-go” conditions during these times, resulting in temporary undesirable operations.

Similar conditions can also occur during the “AM (School)” and “PM (School)” peak hours, when the traffic generated by the School itself can result in brief (typically, 15 to 20 minute) periods of increased congestion and/or vehicle delays along the key roadways and at critical intersections serving the immediate project vicinity, as students, and faculty and staff arrive at or depart from the School site at the beginning and end of each school day. It is important to note, however, that the operations of the study intersections generally improve both prior to and after these higher-congestion periods, and as a result, the calculated levels of service shown in Table 11 are considered to accurately assess the overall operations of each of the study intersections over the course of an entire hour during the peak morning and afternoon school traffic periods, and have been verified by recent field observations of the traffic conditions in the study area.

Further, as also shown in Table 11, the incremental additional traffic assumed to have resulted from the prior 35-student enrollment increase would likely have produced incremental increases in the CMA values at each of the study intersections to varying degrees, depending upon the intersection’s proximity to the School site, its location along the typical travel routes used by the School’s traffic (as identified from the empirical traffic surveys at the School site), and/or the specific geometries and/or operating characteristics of the intersection. However, despite these potential changes in the CMA values, Table 11 also shows that the incremental traffic additions associated with the prior 35-student enrollment increase are not expected to have resulted in any changes to the operating conditions (LOS) at any of the study locations during either the “AM (School)” or “PM (School)” peak hours, and each of the intersections currently continues to exhibit “acceptable” levels of service (LOS D or better) during both school peak hour periods.

Intersection Impact Significance Criteria

However, potential (project-related) changes to the levels of service at the study intersections are not the sole standard for evaluating the “significance” of the incremental traffic impacts. LADOT defines a significant traffic impact attributable to a project based on a “stepped scale”,

with intersections at high volume-to-capacity ratios being more sensitive to additional traffic than those operating with available surplus capacity. As shown in Table 12, a significant impact is identified by LADOT as an increase in an intersection's CMA value, due to project-related traffic, of 0.010 or more when the final ("With Project") intersection Level of Service is LOS E or F, a CMA increase of 0.020 or more when the final Level of Service is LOS D, or an increase of 0.040 or more at LOS C. No significant impacts are deemed to occur at LOS A or LOS B, as these conditions exhibit sufficient surplus capacities to accommodate traffic increases with little effect on the intersection's traffic flows or overall operations.

Table 12
Significant Traffic Impact Criteria for Signalized Intersections

LOS	Final (With Project) CMA Value	Project-Related Increase in CMA Value
A or B	≤ 0.700	No Impacts
C	$> 0.700 \leq 0.800$	≥ 0.040
D	$> 0.800 \leq 0.900$	≥ 0.020
E or F	> 0.900	≥ 0.010

Therefore, using the current LADOT intersection impact evaluation criteria shown in Table 12, the potential traffic impacts related to the previous (unpermitted) 35-student enrollment increase at the Windward School identified in Table 11 are not considered to be "significant" at any of the study intersections during either the "AM (School)" or "PM (School)" peak hours. As such, the results of these analyses indicate that no previously unidentified significant impacts are likely to have occurred due to the earlier enrollment increase, and support the School's request for an "immediate" increase in its permitted enrollment levels to accommodate its existing enrollment of 585 students (which includes the currently-unpermitted additional 35 students).

Analysis of Proposed Master Plan Update Project (40-Student Enrollment Increase)

In addition to the analysis of the potential impacts of the prior 35-student enrollment increase on the "pre-existing" conditions in the study area described in the preceding pages, this study also includes an analysis of the traffic impacts related to the proposed Master Plan Update Project's requested 40-student enrollment increase (from the current 585-student enrollment level to a future maximum of 625 students) on both the existing (2017) and future (2024) traffic conditions. The results of the analyses of both the existing and future study year conditions are summarized in Table 13, and are described in detail in the following sections of this report.

Table 13
Critical Movement Analysis ("CMA") Summary
Existing (2017) and Future (2024) Peak Hour Conditions - Without and With Master Plan Update Project

Int. No.	Intersection	Peak Hour	Existing (2017)					Future (2024)				
			Without Project ^[1]		With Master Plan Update Project			Without Project		With Master Plan Update Project		
			CMA	LOS	CMA	LOS	Impact	CMA	LOS	CMA	LOS	Impact
1	Sawtelle Boulevard and National Boulevard	AM (School)	0.725	C	0.726	C	0.001	0.809	D	0.809	D	0.000
		PM (School)	0.752	C	0.753	C	0.001	0.844	D	0.845	D	0.001
2	McLaughlin Avenue and Palms Boulevard	AM (School)	0.829	D	0.833	D	0.004	0.897	D	0.901	E	0.004
		PM (School)	0.769	C	0.772	C	0.003	0.832	D	0.835	D	0.003
3	Sawtelle Boulevard and Palms Boulevard	AM (School)	0.723	C	0.726	C	0.003	0.789	C	0.793	C	0.004
		PM (School)	0.666	B	0.669	B	0.003	0.743	C	0.745	C	0.002
4	Sepulveda Boulevard and Palms Boulevard	AM (School)	0.643	B	0.645	B	0.002	0.697	B	0.699	B	0.002
		PM (School)	0.855	D	0.856	D	0.001	0.925	E	0.926	E	0.001
5	Sawtelle Boulevard and Venice Boulevard	AM (School)	0.873	D	0.876	D	0.003	0.972	E	0.975	E	0.003
		PM (School)	0.760	C	0.762	C	0.002	0.853	D	0.854	D	0.001

Notes:

[1] Current conditions at 585-student enrollment level (includes prior unpermitted 35-student enrollment increase).

"*" Denotes significant impact per LADOT *Transportation Impact Study Guidelines*, December 2016 (if shown).

Existing (2017) Conditions

The “existing” (year 2017) conditions for these analyses reflect the current traffic volumes and operations at each of the five study intersections, as determined based on the traffic counts performed for this study in October of 2017. As described earlier in this report, these values already include the traffic generated by the current 585-student enrollment level at the School, which itself also includes the trips related to the prior 35-student enrollment increase analyzed in the preceding pages. As such, the existing “Without Project” conditions identified in Table 13, which represent the conditions at each of the study intersection prior to the completion of the proposed Master Plan Update Project (and its requested future 40-student enrollment increase), are identical to those for the “With 35-Student Increase” conditions shown earlier in Table 11. However, these values are also repeated in Table 11 to provide for a direct comparison with the existing “With Master Plan Update Project” conditions identified in these analyses, in order to identify the specific impacts associated with the Master Plan Update Project itself.

As described earlier, most of the study intersections currently exhibit LOS C or better conditions during one or both of the morning and afternoon school peak hours, although the intersections of McLaughlin Avenue and Palms Boulevard, Sepulveda Boulevard and Palms Boulevard, and Sawtelle Boulevard and Venice Boulevard also operate at somewhat higher LOS D conditions during one or both of the analyzed peak hour periods. However, as also noted previously, all of the study intersections operate at acceptable levels during both school peak hour time periods.

As also shown in Table 13, the development of the proposed Master Plan Update Project and the addition of its associated traffic to the study area could result in incremental increases in the CMA values at each of the study intersections, although such increases will be nominal, and would not affect the current levels of service at any of the five study intersections during either the “AM (School)” or “PM (School)” peak hours. Further, based on the impact thresholds shown earlier in Table 12, the proposed Windward School Master Plan Update Project will not result in significant impacts to any of the study intersections under the existing (year 2017) conditions.

Forecast Future (2024) Conditions

Anticipated increases in traffic volumes in the study area, due to both the ambient traffic growth throughout the region and the potential traffic generated by the 11 related projects identified previously in Table 7, are expected to result in worsening traffic conditions at several of the study intersections by the year 2024 (prior to development of the Master Plan Update Project), and as also shown in Table 13, the existing (2017) operations at each of the study intersections

will be affected to some degree by the potential future traffic increases in the area. Specifically, as indicated by the “Future (2024) Without Project” conditions in Table 13, the intersection of Sawtelle Boulevard and National Boulevard could be reduced from LOS C to LOS D conditions during both the “AM (School)” and “PM (School)” peak hour periods by the year 2024, while the intersection of McLaughlin Avenue and Palms Boulevard could decline from LOS C to LOS D during the “PM (School) Peak Hour”, but is forecast to remain unchanged at LOS D during the “AM (School) Peak Hour”. Further, the site-adjacent intersection of Sawtelle Boulevard and Palms Boulevard could experience a deterioration in its operations from its current LOS B to forecast LOS C conditions during the “PM (School) Peak Hour”, but is expected to continue to operate at its existing LOS C conditions during the “AM (School) Peak Hour”. However, despite these anticipated changes in their levels of service, each of these three study intersections are expected to remain at acceptable (LOS D or better) conditions in the future study year of 2024.

Conversely, the intersection of Sepulveda Boulevard and Palms Boulevard could experience a reduction from its existing acceptable LOS D operations to undesirable LOS E conditions in the future during the “PM (School) Peak Hour”, but remain at its current LOS B conditions during the “AM (School) Peak Hour”, while the intersection of Sawtelle Boulevard and Venice Boulevard is also forecast to exhibit a deterioration from its current LOS D to undesirable LOS E conditions in the future during the “AM (School) Peak Hour”, along with a reduction from its existing LOS C to still acceptable LOS D conditions during the “PM (School) Peak Hour”.

It is also of note that the anticipated future traffic volume increases included in this study and the associated changes in the study intersection operations shown in Table 13 are considered to be “worst case” projections of the future conditions in the project vicinity for a number of reasons. First, some of the 11 related projects identified earlier in Table 7 may not be developed, or may ultimately be built to a lesser density than is currently proposed. Additionally, the estimates of the amount of traffic generated by each of the related projects do not include any “trip linkages” with other existing or new development, which could reduce the traffic increases associated with those projects assumed in this study. Further, some of the related projects may be required to implement trip-reduction programs and/or construct roadway and/or traffic signal improvements that could provide additional traffic capacity and improve the operations of some or all of the study intersections compared to the forecast future conditions identified in Table 13. However, as described earlier in this report, in order to provide for a conservative evaluation of the potential future traffic conditions in the study area, this analysis assumed that no trip reductions or roadway/intersection improvements would be implemented by any of the 11 related projects.

Finally, the traffic resulting from the proposed Master Plan Update Project itself could further affect the future operations of one or more of the study intersections. However, as also shown in Table 13, despite the forecast deterioration in operating conditions in the vicinity of the School (prior to the development of the Master Plan Update Project), the net new project-related trips are expected to result in only nominal changes in the CMA values at the study intersections, and would not affect any of the forecast (year 2024) “Without Project” levels of service, except at the intersection of McLaughlin Avenue and Palms Boulevard, which could be reduced from LOS D to threshold-level LOS E conditions during the “AM (School) Peak Hour”. Further, based on the “impact” thresholds shown earlier in Table 12, the proposed Master Plan Update Project (40-student future enrollment increase) will not significantly impact any of the study intersections during either of the peak hour periods evaluated in this study.

Summary of Traffic Impact Analyses

Therefore, based on the analyses summarized in the preceding pages, neither the incremental traffic assumed to be generated by the prior (unpermitted) 35-student enrollment increase nor the additional trips associated with the proposed Windward School Master Plan Update Project will result in significant impacts to any of the five study intersections during the “AM (School)” or “PM (School)” peak hours, and as a result, no traffic-related mitigation measures are warranted. It is also of note that even the combined effects of the prior 35-student enrollment increase and the Master Plan Update Project, estimated by adding the individual incremental CMA “impacts” related to each of these components, as shown earlier in Table 11 and Table 13, respectively, would not result in significant impacts at any of the study intersections, further validating the conclusion that the previous and proposed future enrollment increases at the Windward School analyzed in this study are relatively nominal factors in the overall traffic conditions in the area.

Effects of Proposed TDM Plan

Although the proposed Windward School Master Plan Update Project is not expected to result in significant impacts to any of the project-area intersections analyzed in this study, and therefore will not require any traffic-related impact mitigation measures, as described earlier in this report, the School will develop a Transportation Demand Management (“TDM”) Plan for implementation as part of the proposed project. While the TDM Plan will be designed primarily to manage the School’s current and anticipated future parking demands, it will also reduce the amount of traffic generated by the School, further reducing the already non-significant impacts of the project. The trip-reducing effects of the TDM Plan-related trip reductions are summarized in Table 14.

Table 14
Critical Movement Analysis ("CMA") Summary
Existing (2017) and Future (2024) Peak Hour Conditions - Without and With Master Plan Update Project Plus TDM Plan

Int. No.	Intersection	Peak Hour	Existing (2017)					Future (2024)				
			Without Project ^[1]		With Master Plan Project Plus TDM			Without Project		With Master Plan Project Plus TDM		
			CMA	LOS	CMA	LOS	Impact	CMA	LOS	CMA	LOS	Impact
1	Sawtelle Boulevard and National Boulevard	AM (School)	0.725	C	0.724	C	-0.001	0.809	D	0.807	D	-0.002
		PM (School)	0.752	C	0.751	C	-0.001	0.844	D	0.843	D	-0.001
2	McLaughlin Avenue and Palms Boulevard	AM (School)	0.829	D	0.819	D	-0.010	0.897	D	0.887	D	-0.010
		PM (School)	0.769	C	0.765	C	-0.004	0.832	D	0.828	D	-0.004
3	Sawtelle Boulevard and Palms Boulevard	AM (School)	0.723	C	0.715	C	-0.008	0.789	C	0.781	C	-0.008
		PM (School)	0.666	B	0.661	B	-0.005	0.743	C	0.737	C	-0.006
4	Sepulveda Boulevard and Palms Boulevard	AM (School)	0.643	B	0.637	B	-0.006	0.697	B	0.691	B	-0.006
		PM (School)	0.855	D	0.853	D	-0.002	0.925	E	0.923	E	-0.002
5	Sawtelle Boulevard and Venice Boulevard	AM (School)	0.873	D	0.861	D	-0.012	0.972	E	0.960	E	-0.012
		PM (School)	0.760	C	0.757	C	-0.003	0.853	D	0.850	D	-0.003

Notes:

[1] Current conditions at 585-student enrollment level (includes prior unpermitted 35-student enrollment increase).

"*" Denotes significant impact per LADOT *Transportation Impact Study Guidelines*, December 2016 (if shown).

As described previously in this report, since the parking demand management elements of the TDM Plan will be applied to the entire Windward School population (including both the existing and future faculty/staff and students), the associated trip reductions that will also result from the implementation of the TDM Plan will not only fully offset the potential traffic increases expected due to the 40-student enrollment increase requested in the Master Plan Update Project, they will also reduce the overall amount of traffic currently generated by the School, particularly during the “AM (School)” and “PM (School)” peak hours. In fact, as detailed earlier in this study, even at the School’s requested future maximum enrollment level of 625 students, the implementation of the recommended TDM Plan would result in a reduction in the total traffic volumes at each of the five study intersections during both the morning and afternoon peak school traffic periods. Therefore, as shown in Table 14, the TDM Plan-related reductions in the School’s traffic levels are expected to result in slight reductions in the CMA values for each of the study intersections as compared to both the existing (2017) and forecast future (2024) “Without Project” conditions, although any noticeable improvements in either the current or future operational levels (LOS) at any of these locations are not generally expected.

Additionally, it is of note that the trip reductions resulting from the TDM Plan are also anticipated to generally offset the effects of the combined increases in School-related traffic resulting from both the proposed Master Plan Update Project and the earlier 35-student enrollment increase. A comparison of the “pre-existing” (year 2017) “Without Increase” intersection conditions shown earlier in Table 11 (which reflect the estimated operations at the study intersections under the School’s permitted 550-student enrollment limit, prior to the subsequent 35-student increase) and the existing (year 2017) “With Master Plan Project Plus TDM” conditions shown in Table 14, indicates that the operations (CMA values) of each of the study intersections following the implementation of the TDM Plan will be the same as or lower than the (estimated) conditions prior to the earlier 35-student enrollment increase. As such, the trip reductions associated with the recommended TDM Plan will generally address all previous and proposed traffic increases at the Windward School site above its currently-permitted 550-student enrollment limit.

Residential Street Traffic Impact Analysis

In addition to the analysis of the potential impacts of the proposed Master Plan Update Project on the study intersections, LADOT’s *Transportation Impact Study Guidelines* (December 2016) also typically require an analysis of the potential traffic-related effects of non-residential projects (such as the Master Plan Update Project) on any local/residential streets that could reasonably be expected to be used as a regular travel route to and from a subject project site. A review of

the study area indicates that no such facilities serve the Windward School site directly, although it is acknowledged that some School-related traffic likely does or will utilize Charnock Road, located less than two-tenth of a mile south of the School's campus, to travel into and out of the general vicinity of the School. Within the immediate study area, Charnock Road provides a connection from Sawtelle Boulevard on the east to Centinela Avenue on the west, and although it also provides a connection between Sepulveda Boulevard and Overland Avenue to the east of the San Diego (I-405) Freeway, the roadway is discontinuous across the freeway corridor, and the "western" and "eastern" segments of the street do not connect. However, Charnock Road is designated as a "Collector" roadway in City's Mobility Plan 2035, and as such, does not qualify as a "local/residential" street for purposes of the City's evaluation methodologies. Nonetheless, through the immediate study area (west of Satwelle Boulevard), Charnock Road is developed exclusively with single- and multi-family residential uses, and therefore, could be considered to act as a primarily residential-oriented facility. Therefore, for the purposes of this study, and to provide a complete assessment of the impacts of the proposed Master Plan Update Project, the effects of its potential incremental traffic increases on Charnock Road were also evaluated.

Unlike the intersection impacts described in the preceding sections of this study, which are based on peak hour volumes, the analysis of traffic impacts to local/residential streets uses the average daily traffic ("ADT") volumes on the subject street in order to identify changes to the amount of traffic traveling in both directions along the street during a typical 24-hour period. LADOT's current *Transportation Impact Study Guidelines* (December 2016) for the analysis of project-related traffic impacts on local/residential streets utilize a variable scale to determine the "significance" of these potential traffic additions, with lower-volume streets exhibiting higher tolerances to additional traffic than streets with higher volumes. However, regardless of the traffic volume levels on such streets, the LADOT "significance" thresholds identify that a project must result in a minimum increase in the total daily (24-hour) two-way traffic on a subject street of 120 net trips per day (total of both directions of travel) in order to create a significant impact.

As shown earlier in Table 2, the proposed Master Plan Update Project is estimated to produce a total of about 130 new trips per day, which would exceed the impact threshold of 120 new trips, although only a small percentage of these trips would be expected to use Charnock Road as a site-access route. Based on the School-related trip distributions shown earlier in Figure 5, it is conservatively assumed that a maximum of only about 25 percent of the School's trips could be expected to utilize Charnock Road as a regular travel route, resulting in the potential addition of a total of approximately 33 Master Plan Update Project-related trips per day on this street, which

is substantially less than LADOT's minimum 120-trip threshold, and as such, would not result in a significant impact to this roadway. Additionally, an analysis of the estimated effects of the prior 35-student enrollment increase on Charnock Road was also performed, in order to assure that no previously unreported impacts to this street had occurred due to the additional traffic related to these students. As also shown in Table 2, the prior 35-student enrollment increase is estimated to have resulted in approximately 114 new daily School-related trips, although again, only about 25 percent of these total trips, or about 29 trips per day, would be expected to use Charnock Road as a travel route, and as such, this prior increase in the enrollment levels at the Windward School would not have resulted in any significant impacts.

Finally, the combined effects of the additional traffic related to both the prior 35-student increase and the Master Plan Update Project were evaluated, to identify whether any cumulative impacts to Charnock Road could be expected. These two School components together are estimated to generate a total of about 244 daily trips, although again, a maximum of only about 25 percent of these trips, or approximately 62 trips per day, would be assumed to utilize Charnock Road as a regular travel route. Therefore, even the total of the new daily trips related to the previous and proposed future enrollment increases at the Windward School would be expected to add only about half of the minimum threshold of 120 daily trips required to produce significant impacts on Charnock Road, and as a result, no further "residential" street impact analyses are warranted.

It is also of note that the preceding evaluations do not account for the trip reductions related to the proposed Master Plan Update project's TDM Plan. As described previously, the TDM Plan is expected to generally offset the traffic increases resulting from both the prior (35-student) and proposed future (40-student) enrollment increases at the Windward School, further reducing any potential incremental traffic increases (and their effects) on Charnock Road.

Project Impacts on Regional Transportation System

To address the impacts of traffic congestion on the quality of life and economic vitality of the State of California, the Los Angeles County Congestion Management Program ("CMP")³ was enacted to help inform transportation decisions within the region. A countywide approach has been established by the Los Angeles County Metropolitan Transportation Authority ("Metro"), the local agency responsible for implementing the statutory requirements of the CMP, including designating a network of regionally-significant transportation facilities within the County, and monitoring the network's Level of Service standards.

³ 2010 Congestion Management Program, Los Angeles County Metropolitan Transportation Authority, 2010.

The CMP's project Traffic Impact Analysis ("TIA") guidelines require an analysis of all identified arterial monitoring intersections where the project could add 50 or more total trips during either the AM peak hour or PM peak hour. Additionally, all freeway segments where a project could add 150 or more trips in either direction during the peak hours must be analyzed.

CMP Monitoring Intersection Impacts

The current (2010) CMP identifies a total of only two arterial monitoring intersections within a two-mile radius of the Windward School campus, Venice Boulevard and Centinela Avenue, and Venice Boulevard and Overland Avenue; although both of these CMP monitoring intersections are within approximately one mile of the School (to the southwest and southeast, respectively), each is located outside the immediate study area. The locations of these two CMP intersections are shown in relation to the Windward School site (and the five study intersections) in Figure 22.

A review of the proposed Master Plan Update Project's trip generation estimates, as identified previously in Table 2, indicates that it is anticipated to result in approximately 40 trips during the "AM (School) Peak Hour", and about 26 trips during the "PM (School) Peak Hour", neither of which are sufficient to meet the CMP's minimum 50-trip analysis threshold. Further, as shown earlier in Figure 5 (general geographic project trip distribution percentages), the School's traffic is expected to disperse throughout the roadway network outside of the immediate study area, and as a result, only a small portion of the Master Plan Update Project's trips are expected to actually travel through either of the CMP arterial monitoring intersections identified earlier. Specifically, only about five percent of the Master Plan Update Project's total ("inbound" and "outbound") trips are anticipated to travel through the CMP intersection of Venice Boulevard and Centinela Avenue, while only about five percent of its "inbound" and only about 10 percent of its "outbound" trips are assumed to travel through the other CMP intersection of Venice Boulevard and Overland Avenue. Based on these assumptions, the proposed Master Plan Update Project would be anticipated to add only about two new trips during the "AM (School) Peak Hour" and only about one or two new trips during the "PM (School) Peak Hour" to the CMP intersection of Venice Boulevard and Centinela Avenue, while the CMP intersection of Venice Boulevard and Overland Avenue would exhibit a Master Plan Update Project-related trip increase of only about three new trips during both the "AM (School)" and "PM (School)" peak hours. These nominal increases in traffic, which are far less than the CMP's 50-trip analysis threshold, are not sufficient to produce a significant impact at either of the subject CMP intersections, and as such, no further CMP-related traffic impact analyses for the Master Plan Update Project are required.

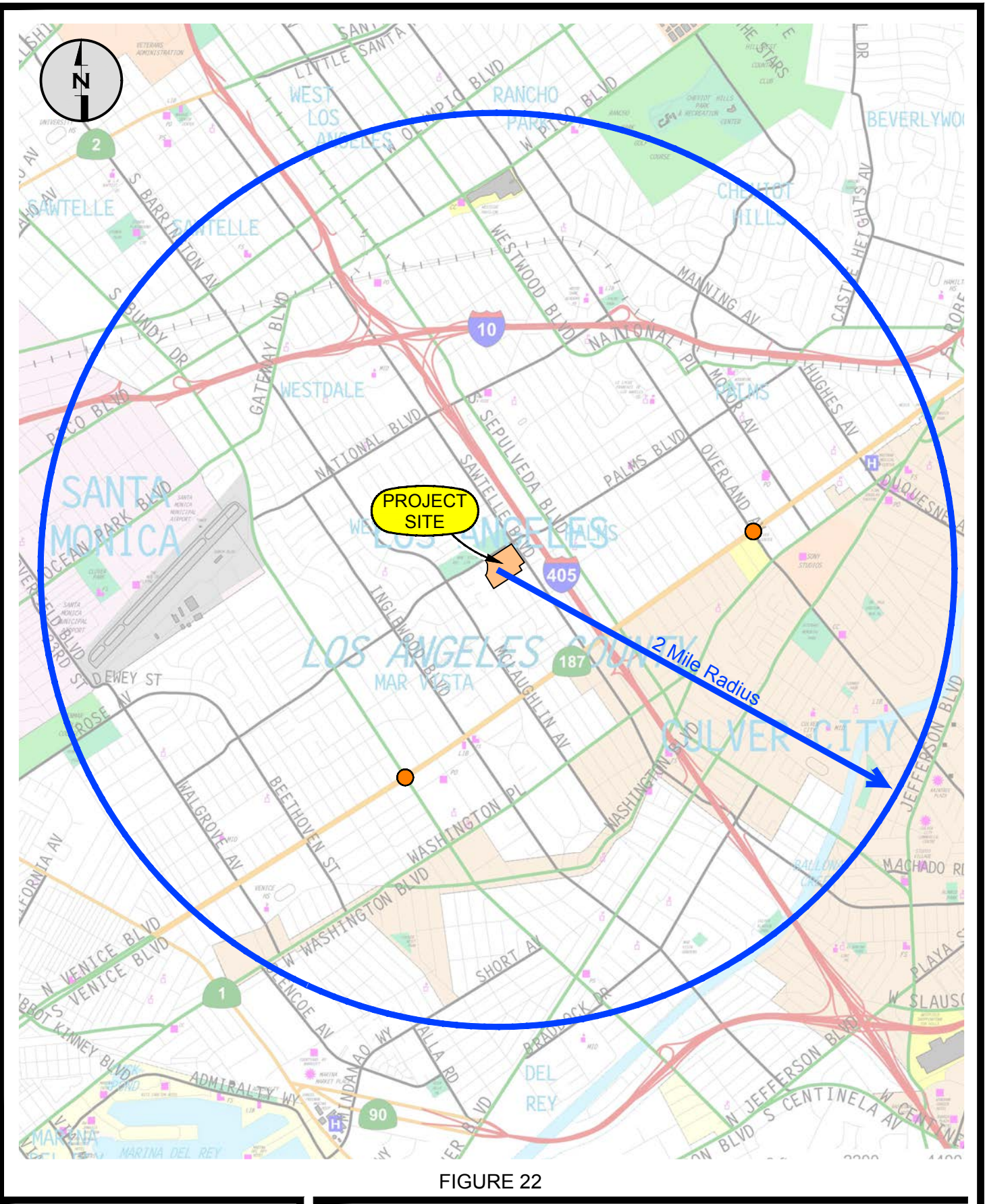


FIGURE 22



Hirsch/Green Transportation Consulting, Inc.

CMP ARTERIAL MONITORING INTERSECTION LOCATIONS

Additionally, the potential impacts of the School's previous 35-student enrollment increase on the two CMP arterial monitoring intersections were also evaluated. As also shown previously in Table 2, this prior enrollment increase is estimated to have resulted in about 35 new trips during the "AM (School) Peak Hour", and about 23 new trips during the "PM (School) Peak Hour", although as with the new trips generated by the proposed Master Plan Update Project, only a small fraction of these total trips would travel through either of the subject CMP intersections. Therefore, again based on the trip distribution percentages noted earlier, it is expected that the prior 35-student enrollment increase could have produced increases of about two trips during the "AM (School)" and one trip during the "PM (School)" peak hours at the CMP intersection of Venice Boulevard and Centinela Avenue, while the CMP intersection of Venice Boulevard and Overland Avenue could have exhibited incremental traffic increases of about three trips during the "AM (School) Peak Hour" and about one or two trips during the "PM (School) Peak Hour". None of these incremental traffic increases would have resulted in significant impacts to either of the CMP intersections during either of the school traffic peak hours examined in this study, and as a result, no mitigation measures or further analysis of the potential impacts related to the prior 35-student enrollment increase on the CMP intersections is warranted.

Finally, the combined effects of the Master Plan Update Project and prior 35-student increase on the subject CMP intersections were analyzed. Based on the preceding evaluations, these School-related "components" would be anticipated to add a total of about four trips during the "AM (School) Peak Hour", and about two or three trips during the "PM (School) Peak Hour" to the intersection of Venice Boulevard and Centinela Avenue, while the potential School-related cumulative traffic increases at the CMP intersection of Venice Boulevard and Overland Avenue are estimated at about six trips during the "AM (School) Peak Hour", and about four or five trips during the "PM (School) Peak Hour". As with each of the individual component traffic impacts, the cumulative effects of the trips generated by the proposed Master Plan Update Project and the prior 35-student increase will be nominal, and would not be expected to significantly impact either of these two CMP intersections during the "AM (School)" or "PM (School)" peak hours. As a result, no cumulative CMP arterial monitoring intersection impact mitigation is warranted.

CMP Freeway Segment Impact Analysis

An evaluation of the potential for project-related traffic impacts to the freeway facilities serving the project vicinity was also conducted. As briefly noted earlier, the CMP requires a detailed analysis of potential project-related impacts to freeway mainline segments where a project could be anticipated to add 150 or more vehicles in either direction during either peak hour on the

subject freeway. However, as identified previously, both the Master Plan Update Project and previous 35-student increase individually, as well as the combination of these two components, will result in substantially fewer than 150 net directional trips during both peak hours, with a maximum (cumulative) “directional” trip generation total of 41 inbound and 34 outbound trips occurring during the “AM (School) Peak Hour”, and a total of 21 inbound and 28 outbound trips occurring during the “PM (School) Peak Hour”. As a result, even if all of these (cumulative) trips were to be added to a single freeway segment, they would still be substantially lower than the CMP’s minimum 150-trip analysis thresholds. Additionally, as again shown earlier in Figure 5, only a small percentage of these total trips are expected to utilize either of the nearby freeways to travel into or out of the study area, including maximums of only about seven percent on the San Diego (I-405) Freeway, and of about one percent on the Santa (I-10) Monica Freeway. Therefore, the total potential peak hour directional traffic additions to either of the area freeways related to the Master Plan Update Project and prior 35-student increase will be well below the CMP’s 150-trip threshold, and no measurable effects on the operations of either of these facilities are expected. As such, no further CMP-based freeway mainline analyses are required.

However, in addition to the required CMP freeway mainline impact analyses, LADOT and the California Department of Transportation (“Caltrans”) recently implemented procedures for the evaluation of project-related traffic impacts to freeway mainline and ramp facilities, as detailed in the *“Agreement between City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures”*, which was originally approved on October 2, 2013, and subsequently revised and renewed in December of 2015. This agreement supplements, and in some cases, supersedes the typical CMP freeway impact analysis methodologies described earlier, in order to facilitate and enhance coordination between the two agencies regarding identification of potential traffic impacts to freeway mainline and access ramp operations. This agreement provides specific “freeway impact analysis screening criteria” for determining whether detailed freeway mainline and/or freeway access ramp analyses are required of a proposed project, based primarily on the potential project-related incremental traffic additions to such facilities compared to their design capacities. The supplemental freeway mainline and access ramp “screening” evaluation methodologies are described in the following pages.

LADOT/Caltrans Freeway Mainline and Ramp Impact Analysis “Screening” Evaluations

The joint LADOT/Caltrans freeway mainline impact analysis screening procedures identify that detailed analyses of potential project-related impacts to such facilities must be prepared for any project that results in an incremental increase in peak hour (directional) freeway mainline traffic

equal to or exceeding one percent (1%) of the design capacity of a subject freeway segment if it currently operates or is forecast to operate at LOS E or LOS F, or an incremental increase in freeway mainline traffic of two percent (2%) of the design capacity for freeway segments that currently or are anticipated to exhibit LOS D conditions. Projects that result in peak hour (directional) traffic additions to the freeway mainline segments that are below these thresholds are not considered to result in significant impacts, and as such, no further analyses beyond the initial “screening” investigations are required. For the purposes of the “screening” evaluations, freeway mainline lanes are assumed to exhibit a capacity of 2,000 vehicles per hour per lane.

Additionally, similar to the freeway mainline evaluation methodologies described above, the joint LADOT/Caltrans agreement includes “screening” procedures and thresholds for the analysis of incremental project-related impacts to freeway access ramps. The freeway access ramp impact “screening” thresholds are the same as those noted earlier for the freeway mainline evaluations, with a detailed freeway ramp impact analysis required for any project resulting in an increase in a ramp’s peak hour traffic volumes of one percent (1%) for ramps operating at LOS E or F, or by two percent (2%) if the ramp exhibits LOS D operations. However, the freeway ramp capacity used for the impact screening evaluations is assumed to be only 850 vehicles per hour per lane to account for the differences in operations between freeway mainline lanes and ramp lanes.

A number of both freeway mainline and off-ramps in the project vicinity were evaluated for the joint LADOT/Caltrans screening process, as shown in Figure 23. These locations represent the freeway mainline and off-ramp locations anticipated to be most utilized by the School’s traffic. Note that the joint LADOT/Caltrans agreement requires that the freeway screening analyses be prepared as a part of the project’s Memorandum of Understanding (“MOU”), which formalizes the scope of study for the project traffic study, in order to identify the potential for impacts to any of the subject freeway mainline or off-ramp facilities. The results of the freeway mainline and off-ramp screening evaluations for the proposed Master Plan Update Project itself are shown in Tables D-1(a) and D-1(b), respectively, in Appendix D of this document. Similarly, the results of the freeway mainline screening evaluations for the previous 35-student enrollment increase are summarized in Table D-2(a), while results of the associated freeway off-ramp analyses are identified in Table D-2(b). Finally, the potential combined effects of the total traffic generated by these two School-related components on the various freeway mainline and off-ramp facilities in the project vicinity are shown in Figures D-3(a) and D-3(b), respectively. These tables indicate that no significant (individual or cumulative) impacts to any of the subject freeway mainline or off-ramps are expected, and therefore, no further freeway-related impact analyses are required.

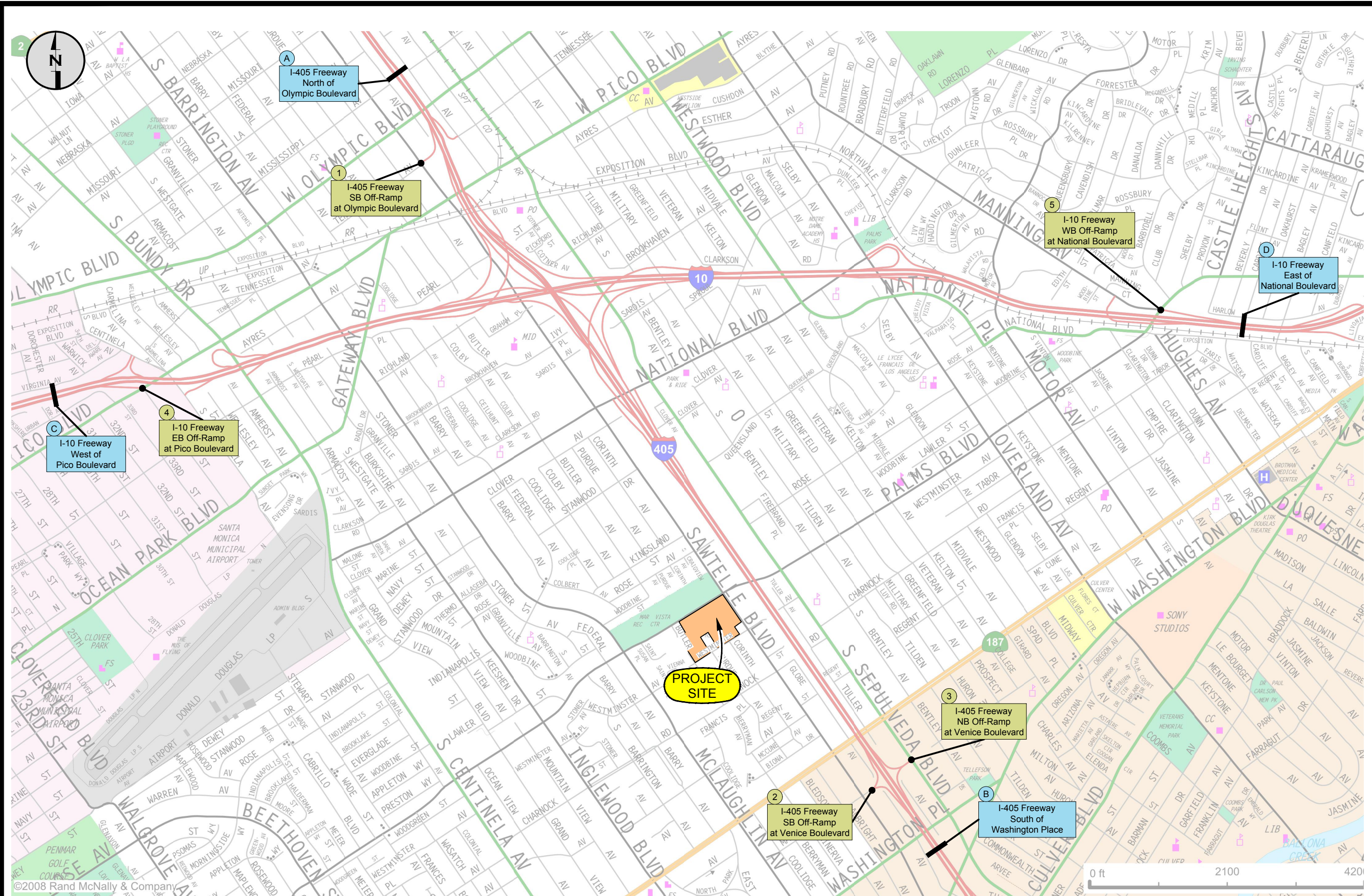


FIGURE 23

WINDWARD SCHOOL 2017 MASTER PLAN UPDATE PROJECT
FREeway MAINLINE AND OFF-RAMP SCREENING EVALUATION LOCATIONS

Project Impacts to Area Transit Facilities

As described earlier in this report, the Windward School site is currently served (stops within one-quarter mile) by a total of three bus lines. However, the empirical trip generation and parking demand surveys conducted at the School as part of this study indicate that few students or faculty/staff currently utilize public transit as their regular mode of travel to or from the School. Further, although the future use of the public transportation facilities in the vicinity of the School by both students and faculty/staff will be encouraged under the TDM Plan to be implemented as a part of the proposed Master Plan Update Project, this option is neither expected nor intended to be a significant factor in the parking demand management and/or trip reduction strategies and programs included in the recommended TDM Plan, and as such, potential impacts to the existing and/or future public transit operations serving the School are expected to be nominal.

However, for the purposes of evaluating potential impacts to the public transit operations in the study area, it was conservatively assumed that up to five percent of both the future (requested) maximum of 625 students and the approximately 137 regular faculty and staff at the School (which is expected to remain unchanged from current levels) would choose to use public transit. Using this assumption, it is possible that up to about 31 of the future maximum of 625 students and about seven of the total of 137 regular faculty and staff personnel could utilize the available public transportation services to travel to and from the Windward School campus.

While it is acknowledged that bus utilization within the Windward School vicinity can be heavy, particularly during the peak weekday commute periods, this relatively nominal level of potential new School-related public transit ridership would likely be divided among the three bus lines identified earlier (Culver City Bus Lines 6 and Rapid 6, and Santa Monica Big Blue Bus Line 17) that currently provide service to the Windward School site via stops along Sawtelle Boulevard and Sepulveda Boulevard. These lines provide a total of about 180 scheduled weekday stops at or near the School (total of all directions of travel), including about 24 scheduled stops during the weekday “AM (School) Peak Hour” (7:15 AM to 8:15 AM) and about 21 scheduled stops during the weekday “PM (School) Peak Hour” (3:00 PM to 6:00 PM). As a result, the potential Master Plan Update Project-related increases in ridership on any single bus along any of the three transit lines currently serving the Windward School site are expected to be nominal, with only about one or two additional School-related riders on each bus during either peak hour. Therefore, the proposed Master Plan Update Project is not anticipated to significantly impact the existing bus service in the study area, and no transit-related mitigation measures are warranted.

MITIGATION MEASURES

The results of the evaluations summarized in this report indicate that the Windward School's proposed Master Plan Update Project, including its requested 40-student enrollment increase, will not generate a sufficient amount of net new traffic to produce significant impacts at any of the intersections analyzed under either the existing (year 2017) or future (year 2024) conditions. Additionally, a supplemental evaluation of the potential traffic-related impacts associated with a prior 35-student enrollment increase, from the School's maximum currently-permitted enrollment of 550 students (per its 1999 Master Plan) to its existing enrollment of 585 students, concluded that this previous enrollment increase would not have resulted in any previously unidentified significant impacts to any of the study intersections, either individually or when combined with the 40-student enrollment increase requested in the proposed Master Plan Update Project. Further, the proposed Master Plan Update Project will not result in significant impacts to any of the arterial monitoring intersections, or freeway mainline segments or access ramps in the area, and the potential for new use of the existing public transit services in the vicinity by the School's faculty/staff and/or students is expected to be nominal, and no adverse impacts are anticipated.

Finally, with the implementation of the vehicle occupancy requirements and other measures identified in the Transportation Demand Management ("TDM") Plan (included as a component of the Master Plan Update Project), the School will provide sufficient on-site vehicular parking to fully accommodate its existing and anticipated future parking demands, reducing or eliminating the existing faculty/staff and student-related parking along the adjacent streets. The TDM Plan will also include measures to increase the ridership of the School's student busing program, and to reduce the total number of vehicles that access the site during the peak "morning arrival" and afternoon "class dismissal" periods. As noted earlier, although the Master Plan Update Project will not result in any significant traffic-related impacts at the study intersections, and as a result, no traffic mitigation measures are required, the trip reductions associated with the TDM Plan will improve the School's existing on-site student drop-off and pick-up operations, and minimize the potential for School-related vehicles to queue out of the site driveways onto the adjacent streets, by reducing the total number of vehicles accessing the site, including a reduction in the number of parent-driven (carpool) vehicles that utilize the on-site student drop-off/pick-up area during the "morning arrival" period by over 20 percent from the current levels.

Therefore, no traffic, access, or parking-related mitigation measures related to the development of the proposed Windward School Master Plan Update Project (and TDM Plan) are warranted.

APPENDICES
(Contained in Separate Document)