APPENDIX A

Air Quality and Greenhouse Gases

Arden Middle School

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	1,200.00	Student	3.24	141,074.02	0
Other Asphalt Surfaces	87.36	1000sqft	2.01	87,355.00	0
Parking Lot	186.00	Space	1.67	74,400.00	0
City Park	10.28	Acre	10.28	447,796.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	N/a				
CO2 Intensity (lb/MWhr)		**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 1200 students is from description. The other parking area includes the sport area is 87355 sqft. See XLS.

Construction Phase -

Off-road Equipment -

Off-road Equipment - For contruction run only.

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Off-road Equipment - For contruction run only.

Demolition - The demolation is (64149 - 3903 = 60246 sqft). The debris is (60246 * 10 *0.33*0.037*1.4) = 10299 tons.

Table Name	Column Name	Default Value	New Value
tblGrading	AcresOfGrading	45.00	75.00
tblLandUse	LandUseSquareFeet	87,360.00	87,355.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblTripsAndVMT	HaulingTripNumber	274.00	0.00
tblTripsAndVMT	HaulingTripNumber	1,018.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1471	1.4737	0.9310	1.9900e-003	0.3397	0.0652	0.4050	0.1017	0.0609	0.1626	0.0000	179.6857	179.6857	0.0368	0.0000	180.6063
2020	0.4072	3.6020	3.0215	9.3600e-003	0.3973	0.1020	0.4993	0.1078	0.0972	0.2050	0.0000	855.4546	855.4546	0.0726	0.0000	857.2691
2021	0.7172	0.3069	0.3040	8.3000e-004	0.0325	0.0102	0.0427	8.8000e-003	9.6300e-003	0.0184	0.0000	74.9541	74.9541	8.3400e-003	0.0000	75.1626
Maximum	**0.7172**	**3.6020**	**3.0215**	**9.3600e-003**	**0.3973**	**0.1020**	**0.4993**	**0.1078**	**0.0972**	**0.2050**	**0.0000**	**855.4546**	**855.4546**	**0.0726**	**0.0000**	**857.2691**

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	0.1471	1.4737	0.9310	1.9900e-003	0.3397	0.0652	0.4050	0.1017	0.0609	0.1626	0.0000	179.6855	179.6855	0.0368	0.0000	180.6062
2020	0.4072	3.6020	3.0215	9.3600e-003	0.3973	0.1020	0.4993	0.1078	0.0972	0.2050	0.0000	855.4544	855.4544	0.0726	0.0000	857.2689
2021	0.7172	0.3069	0.3040	8.3000e-004	0.0325	0.0102	0.0427	8.8000e-003	9.6300e-003	0.0184	0.0000	74.9541	74.9541	8.3400e-003	0.0000	75.1626
Maximum	**0.7172**	**3.6020**	**3.0215**	**9.3600e-003**	**0.3973**	**0.1020**	**0.4993**	**0.1078**	**0.0972**	**0.2050**	**0.0000**	**855.4544**	**855.4544**	**0.0726**	**0.0000**	**857.2689**

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	ROG	NOx	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**	**0.01**	**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)
1	**7-17-2019**	**10-16-2019**	0.4269	0.4269
2	**10-17-2019**	**1-16-2020**	1.3464	1.3464
3	**1-17-2020**	**4-16-2020**	0.9984	0.9984
4	**4-17-2020**	**7-16-2020**	0.9887	0.9887
5	**7-17-2020**	**10-16-2020**	1.0016	1.0016
6	**10-17-2020**	**1-16-2021**	0.9955	0.9955
7	**1-17-2021**	**4-16-2021**	0.8739	0.8739
		Highest	1.3464	1.3464

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	0.6350	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Energy	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	725.1915	725.1915	0.0161	4.9900e-003	727.0809
Mobile	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876
Waste						0.0000	0.0000		0.0000	0.0000	44.6337	0.0000	44.6337	2.6378	0.0000	110.5780
Water						0.0000	0.0000		0.0000	0.0000	1.0292	48.1619	49.1911	4.6400e-003	2.4700e-003	50.0419
Total	**1.0509**	**1.8119**	**4.5573**	**0.0144**	**1.1892**	**0.0204**	**1.2096**	**0.3188**	**0.0196**	**0.3384**	**45.6629**	**2,043.0394**	**2,088.7023**	**2.7202**	**7.4600e-003**	**2,158.9277**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6350	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Energy	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	725.1915	725.1915	0.0161	4.9900e-003	727.0809
Mobile	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876
Waste						0.0000	0.0000		0.0000	0.0000	44.6337	0.0000	44.6337	2.6378	0.0000	110.5780
Water						0.0000	0.0000		0.0000	0.0000	1.0292	48.1619	49.1911	4.6400e-003	2.4700e-003	50.0419
Total	**1.0509**	**1.8119**	**4.5573**	**0.0144**	**1.1892**	**0.0204**	**1.2096**	**0.3188**	**0.0196**	**0.3384**	**45.6629**	**2,043.0394**	**2,088.7023**	**2.7202**	**7.4600e-003**	**2,158.9277**

	ROG	NOx	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	9/1/2019	9/27/2019	5	20	
2	Building Demo Haul	Demolition	9/15/2019	10/11/2019	5	20	
3	Asphalt and Concrete Demo Haul	Demolition	10/12/2019	11/8/2019	5	20	
4	Grading	Grading	10/23/2019	12/3/2019	5	30	
5	Site Preparation	Site Preparation	11/18/2019	11/29/2019	5	10	
6	Building Construction	Building Construction	12/4/2019	1/26/2021	5	300	
7	Paving	Paving	1/27/2021	2/23/2021	5	20	
8	Architectural Coating	Architectural Coating	2/24/2021	3/23/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 3.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 211,611; Non-Residential Outdoor: 70,537; Striped Parking Area: 9,705 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Building Demo Haul	Concrete/Industrial Saws	1	8.00	81	0.73
Building Demo Haul	Excavators	1	8.00	158	0.38
Building Demo Haul	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt and Concrete Demo Haul	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt and Concrete Demo Haul	Excavators	1	8.00	158	0.38
Asphalt and Concrete Demo Haul	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	1	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cement and Mortar Mixers	1		9	0.56
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	1	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Demo Haul	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt and Concrete Demo Haul	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	315.00	123.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	63.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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					
Off-Road	0.0186	0.1835	0.1125	2.0000e-004		9.4800e-003	9.4800e-003		8.9000e-003	8.9000e-003	0.0000	17.6830	17.6830	4.2700e-003	0.0000	17.7898
Total	**0.0186**	**0.1835**	**0.1125**	**2.0000e-004**		**9.4800e-003**	**9.4800e-003**		**8.9000e-003**	**8.9000e-003**	**0.0000**	**17.6830**	**17.6830**	**4.2700e-003**	**0.0000**	**17.7898**

3.2 Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	3.2000e-004	2.3000e-004	2.4500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5371	0.5371	2.0000e-005	0.0000	0.5375
Total	**3.2000e-004**	**2.3000e-004**	**2.4500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5371**	**0.5371**	**2.0000e-005**	**0.0000**	**0.5375**

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	0.0186	0.1835	0.1125	2.0000e-004		9.4700e-003	9.4700e-003		8.9000e-003	8.9000e-003	0.0000	17.6830	17.6830	4.2700e-003	0.0000	17.7898
Total	**0.0186**	**0.1835**	**0.1125**	**2.0000e-004**		**9.4700e-003**	**9.4700e-003**		**8.9000e-003**	**8.9000e-003**	**0.0000**	**17.6830**	**17.6830**	**4.2700e-003**	**0.0000**	**17.7898**

3.2 Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	3.2000e-004	2.3000e-004	2.4500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5371	0.5371	2.0000e-005	0.0000	0.5375
Total	**3.2000e-004**	**2.3000e-004**	**2.4500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5371**	**0.5371**	**2.0000e-005**	**0.0000**	**0.5375**

3.3 Building Demo Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0309	0.0000	0.0309	4.6800e-003	0.0000	4.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1835	0.1125	2.0000e-004		9.4800e-003	9.4800e-003		8.9000e-003	8.9000e-003	0.0000	17.6830	17.6830	4.2700e-003	0.0000	17.7898
Total	**0.0186**	**0.1835**	**0.1125**	**2.0000e-004**	**0.0309**	**9.4800e-003**	**0.0404**	**4.6800e-003**	**8.9000e-003**	**0.0136**	**0.0000**	**17.6830**	**17.6830**	**4.2700e-003**	**0.0000**	**17.7898**

3.3 Building Demo Haul - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.3000e-004	2.4500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5371	0.5371	2.0000e-005	0.0000	0.5375
Total	**3.2000e-004**	**2.3000e-004**	**2.4500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5371**	**0.5371**	**2.0000e-005**	**0.0000**	**0.5375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0309	0.0000	0.0309	4.6800e-003	0.0000	4.6800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1835	0.1125	2.0000e-004		9.4700e-003	9.4700e-003		8.9000e-003	8.9000e-003	0.0000	17.6830	17.6830	4.2700e-003	0.0000	17.7898
Total	**0.0186**	**0.1835**	**0.1125**	**2.0000e-004**	**0.0309**	**9.4700e-003**	**0.0404**	**4.6800e-003**	**8.9000e-003**	**0.0136**	**0.0000**	**17.6830**	**17.6830**	**4.2700e-003**	**0.0000**	**17.7898**

3.3 Building Demo Haul - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.3000e-004	2.4500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5371	0.5371	2.0000e-005	0.0000	0.5375
Total	**3.2000e-004**	**2.3000e-004**	**2.4500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5371**	**0.5371**	**2.0000e-005**	**0.0000**	**0.5375**

3.4 Asphalt and Concrete Demo Haul - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1149	0.0000	0.1149	0.0174	0.0000	0.0174	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1835	0.1125	2.0000e-004		9.4800e-003	9.4800e-003		8.9000e-003	8.9000e-003	0.0000	17.6830	17.6830	4.2700e-003	0.0000	17.7898
Total	**0.0186**	**0.1835**	**0.1125**	**2.0000e-004**	**0.1149**	**9.4800e-003**	**0.1244**	**0.0174**	**8.9000e-003**	**0.0263**	**0.0000**	**17.6830**	**17.6830**	**4.2700e-003**	**0.0000**	**17.7898**

3.4 Asphalt and Concrete Demo Haul - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.3000e-004	2.4500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5371	0.5371	2.0000e-005	0.0000	0.5375
Total	**3.2000e-004**	**2.3000e-004**	**2.4500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5371**	**0.5371**	**2.0000e-005**	**0.0000**	**0.5375**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1149	0.0000	0.1149	0.0174	0.0000	0.0174	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0186	0.1835	0.1125	2.0000e-004		9.4700e-003	9.4700e-003		8.9000e-003	8.9000e-003	0.0000	17.6830	17.6830	4.2700e-003	0.0000	17.7898
Total	**0.0186**	**0.1835**	**0.1125**	**2.0000e-004**	**0.1149**	**9.4700e-003**	**0.1244**	**0.0174**	**8.9000e-003**	**0.0263**	**0.0000**	**17.6830**	**17.6830**	**4.2700e-003**	**0.0000**	**17.7898**

3.4 Asphalt and Concrete Demo Haul - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	2.3000e-004	2.4500e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5371	0.5371	2.0000e-005	0.0000	0.5375
Total	**3.2000e-004**	**2.3000e-004**	**2.4500e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5371**	**0.5371**	**2.0000e-005**	**0.0000**	**0.5375**

3.5 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.5488	0.2962	5.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	52.0026	52.0026	0.0165	0.0000	52.4139
Total	**0.0477**	**0.5488**	**0.2962**	**5.8000e-004**	**0.1301**	**0.0239**	**0.1540**	**0.0540**	**0.0220**	**0.0759**	**0.0000**	**52.0026**	**52.0026**	**0.0165**	**0.0000**	**52.4139**

3.5 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.5000e-004	5.9800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3092	1.3092	4.0000e-005	0.0000	1.3102
Total	**7.9000e-004**	**5.5000e-004**	**5.9800e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3092**	**1.3092**	**4.0000e-005**	**0.0000**	**1.3102**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0477	0.5488	0.2962	5.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	52.0026	52.0026	0.0165	0.0000	52.4139
Total	**0.0477**	**0.5488**	**0.2962**	**5.8000e-004**	**0.1301**	**0.0239**	**0.1540**	**0.0540**	**0.0220**	**0.0759**	**0.0000**	**52.0026**	**52.0026**	**0.0165**	**0.0000**	**52.4139**

3.5 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.5000e-004	5.9800e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.3092	1.3092	4.0000e-005	0.0000	1.3102
Total	**7.9000e-004**	**5.5000e-004**	**5.9800e-003**	**1.0000e-005**	**1.4300e-003**	**1.0000e-005**	**1.4400e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.3092**	**1.3092**	**4.0000e-005**	**0.0000**	**1.3102**

3.6 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0301	0.0000	0.0301	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0721	0.0329	6.0000e-005		3.7200e-003	3.7200e-003		3.4300e-003	3.4300e-003	0.0000	5.2298	5.2298	1.6500e-003	0.0000	5.2712
Total	**6.8400e-003**	**0.0721**	**0.0329**	**6.0000e-005**	**0.0301**	**3.7200e-003**	**0.0338**	**0.0166**	**3.4300e-003**	**0.0200**	**0.0000**	**5.2298**	**5.2298**	**1.6500e-003**	**0.0000**	**5.2712**

3.6 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1678	0.1678	1.0000e-005	0.0000	0.1680
Total	**1.0000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1678**	**0.1678**	**1.0000e-005**	**0.0000**	**0.1680**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0301	0.0000	0.0301	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8400e-003	0.0721	0.0329	6.0000e-005		3.7200e-003	3.7200e-003		3.4300e-003	3.4300e-003	0.0000	5.2298	5.2298	1.6500e-003	0.0000	5.2712
Total	**6.8400e-003**	**0.0721**	**0.0329**	**6.0000e-005**	**0.0301**	**3.7200e-003**	**0.0338**	**0.0166**	**3.4300e-003**	**0.0200**	**0.0000**	**5.2298**	**5.2298**	**1.6500e-003**	**0.0000**	**5.2712**

3.6 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	7.7000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1678	0.1678	1.0000e-005	0.0000	0.1680
Total	**1.0000e-004**	**7.0000e-005**	**7.7000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1678**	**0.1678**	**1.0000e-005**	**0.0000**	**0.1680**

3.7 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	0.0163	0.1413	0.1075	1.8000e-004		7.9500e-003	7.9500e-003		7.5800e-003	7.5800e-003	0.0000	15.8825	15.8825	3.3100e-003	0.0000	15.9653
Total	**0.0163**	**0.1413**	**0.1075**	**1.8000e-004**		**7.9500e-003**	**7.9500e-003**		**7.5800e-003**	**7.5800e-003**	**0.0000**	**15.8825**	**15.8825**	**3.3100e-003**	**0.0000**	**15.9653**

3.7 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-003	0.1509	0.0461	3.1000e-004	7.1900e-003	1.0800e-003	8.2700e-003	2.0800e-003	1.0300e-003	3.1100e-003	0.0000	29.2851	29.2851	1.8400e-003	0.0000	29.3310
Worker	0.0127	8.9500e-003	0.0967	2.3000e-004	0.0231	1.7000e-004	0.0233	6.1500e-003	1.6000e-004	6.3100e-003	0.0000	21.1483	21.1483	6.6000e-004	0.0000	21.1647
Total	**0.0186**	**0.1598**	**0.1428**	**5.4000e-004**	**0.0303**	**1.2500e-003**	**0.0316**	**8.2300e-003**	**1.1900e-003**	**9.4200e-003**	**0.0000**	**50.4334**	**50.4334**	**2.5000e-003**	**0.0000**	**50.4958**

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	0.0163	0.1413	0.1075	1.8000e-004		7.9500e-003	7.9500e-003		7.5800e-003	7.5800e-003	0.0000	15.8824	15.8824	3.3100e-003	0.0000	15.9653
Total	**0.0163**	**0.1413**	**0.1075**	**1.8000e-004**		**7.9500e-003**	**7.9500e-003**		**7.5800e-003**	**7.5800e-003**	**0.0000**	**15.8824**	**15.8824**	**3.3100e-003**	**0.0000**	**15.9653**

3.7 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-003	0.1509	0.0461	3.1000e-004	7.1900e-003	1.0800e-003	8.2700e-003	2.0800e-003	1.0300e-003	3.1100e-003	0.0000	29.2851	29.2851	1.8400e-003	0.0000	29.3310
Worker	0.0127	8.9500e-003	0.0967	2.3000e-004	0.0231	1.7000e-004	0.0233	6.1500e-003	1.6000e-004	6.3100e-003	0.0000	21.1483	21.1483	6.6000e-004	0.0000	21.1647
Total	**0.0186**	**0.1598**	**0.1428**	**5.4000e-004**	**0.0303**	**1.2500e-003**	**0.0316**	**8.2300e-003**	**1.1900e-003**	**9.4200e-003**	**0.0000**	**50.4334**	**50.4334**	**2.5000e-003**	**0.0000**	**50.4958**

3.7 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	0.1919	1.6908	1.3753	2.4100e-003		0.0905	0.0905		0.0862	0.0862	0.0000	205.6733	205.6733	0.0424	0.0000	206.7336
Total	**0.1919**	**1.6908**	**1.3753**	**2.4100e-003**		**0.0905**	**0.0905**		**0.0862**	**0.0862**	**0.0000**	**205.6733**	**205.6733**	**0.0424**	**0.0000**	**206.7336**

3.7 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0617	1.8070	0.5040	3.9700e-003	0.0942	9.3500e-003	0.1036	0.0272	8.9500e-003	0.0362	0.0000	381.2552	381.2552	0.0226	0.0000	381.8195
Worker	0.1536	0.1042	1.1422	2.9700e-003	0.3031	2.1800e-003	0.3053	0.0806	2.0100e-003	0.0826	0.0000	268.5262	268.5262	7.5900e-003	0.0000	268.7160
Total	**0.2153**	**1.9112**	**1.6462**	**6.9400e-003**	**0.3973**	**0.0115**	**0.4088**	**0.1078**	**0.0110**	**0.1188**	**0.0000**	**649.7814**	**649.7814**	**0.0302**	**0.0000**	**650.5355**

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	0.1919	1.6908	1.3753	2.4100e-003		0.0905	0.0905		0.0862	0.0862	0.0000	205.6731	205.6731	0.0424	0.0000	206.7333
Total	**0.1919**	**1.6908**	**1.3753**	**2.4100e-003**		**0.0905**	**0.0905**		**0.0862**	**0.0862**	**0.0000**	**205.6731**	**205.6731**	**0.0424**	**0.0000**	**206.7333**

3.7 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0617	1.8070	0.5040	3.9700e-003	0.0942	9.3500e-003	0.1036	0.0272	8.9500e-003	0.0362	0.0000	381.2552	381.2552	0.0226	0.0000	381.8195
Worker	0.1536	0.1042	1.1422	2.9700e-003	0.3031	2.1800e-003	0.3053	0.0806	2.0100e-003	0.0826	0.0000	268.5262	268.5262	7.5900e-003	0.0000	268.7160
Total	**0.2153**	**1.9112**	**1.6462**	**6.9400e-003**	**0.3973**	**0.0115**	**0.4088**	**0.1078**	**0.0110**	**0.1188**	**0.0000**	**649.7814**	**649.7814**	**0.0302**	**0.0000**	**650.5355**

3.7 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	0.0118	0.1058	0.0926	1.7000e-004		5.3600e-003	5.3600e-003		5.1100e-003	5.1100e-003	0.0000	14.1308	14.1308	2.8600e-003	0.0000	14.2022
Total	**0.0118**	**0.1058**	**0.0926**	**1.7000e-004**		**5.3600e-003**	**5.3600e-003**		**5.1100e-003**	**5.1100e-003**	**0.0000**	**14.1308**	**14.1308**	**2.8600e-003**	**0.0000**	**14.2022**

3.7 Building Construction - 2021

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	3.4800e-003	0.1132	0.0303	2.7000e-004	6.4700e-003	3.1000e-004	6.7900e-003	1.8700e-003	3.0000e-004	2.1700e-003	0.0000	25.9752	25.9752	1.4900e-003	0.0000	26.0123
Worker	9.8200e-003	6.4200e-003	0.0718	2.0000e-004	0.0208	1.5000e-004	0.0210	5.5400e-003	1.3000e-004	5.6700e-003	0.0000	17.8202	17.8202	4.7000e-004	0.0000	17.8319
Total	**0.0133**	**0.1197**	**0.1020**	**4.7000e-004**	**0.0273**	**4.6000e-004**	**0.0278**	**7.4100e-003**	**4.3000e-004**	**7.8400e-003**	**0.0000**	**43.7954**	**43.7954**	**1.9600e-003**	**0.0000**	**43.8442**

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	0.0118	0.1058	0.0926	1.7000e-004		5.3600e-003	5.3600e-003		5.1100e-003	5.1100e-003	0.0000	14.1308	14.1308	2.8600e-003	0.0000	14.2022
Total	**0.0118**	**0.1058**	**0.0926**	**1.7000e-004**		**5.3600e-003**	**5.3600e-003**		**5.1100e-003**	**5.1100e-003**	**0.0000**	**14.1308**	**14.1308**	**2.8600e-003**	**0.0000**	**14.2022**

3.7 Building Construction - 2021

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	3.4800e-003	0.1132	0.0303	2.7000e-004	6.4700e-003	3.1000e-004	6.7900e-003	1.8700e-003	3.0000e-004	2.1700e-003	0.0000	25.9752	25.9752	1.4900e-003	0.0000	26.0123
Worker	9.8200e-003	6.4200e-003	0.0718	2.0000e-004	0.0208	1.5000e-004	0.0210	5.5400e-003	1.3000e-004	5.6700e-003	0.0000	17.8202	17.8202	4.7000e-004	0.0000	17.8319
Total	**0.0133**	**0.1197**	**0.1020**	**4.7000e-004**	**0.0273**	**4.6000e-004**	**0.0278**	**7.4100e-003**	**4.3000e-004**	**7.8400e-003**	**0.0000**	**43.7954**	**43.7954**	**1.9600e-003**	**0.0000**	**43.8442**

3.8 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2800e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927
Paving	4.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0111**	**0.0646**	**0.0733**	**1.1000e-004**		**3.3900e-003**	**3.3900e-003**		**3.1200e-003**	**3.1200e-003**	**0.0000**	**10.0117**	**10.0117**	**3.2400e-003**	**0.0000**	**10.0927**

3.8 Paving - 2021

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	2.8000e-004	1.8000e-004	2.0200e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5029	0.5029	1.0000e-005	0.0000	0.5032
Total	**2.8000e-004**	**1.8000e-004**	**2.0200e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5029**	**0.5029**	**1.0000e-005**	**0.0000**	**0.5032**

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	6.2800e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927
Paving	4.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0111**	**0.0646**	**0.0733**	**1.1000e-004**		**3.3900e-003**	**3.3900e-003**		**3.1200e-003**	**3.1200e-003**	**0.0000**	**10.0117**	**10.0117**	**3.2400e-003**	**0.0000**	**10.0927**

3.8 Paving - 2021

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	2.8000e-004	1.8000e-004	2.0200e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5029	0.5029	1.0000e-005	0.0000	0.5032
Total	**2.8000e-004**	**1.8000e-004**	**2.0200e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5029**	**0.5029**	**1.0000e-005**	**0.0000**	**0.5032**

3.9 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.6786**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.9 Architectural Coating - 2021

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	2.1800e-003	1.4300e-003	0.0160	4.0000e-005	4.6300e-003	3.0000e-005	4.6600e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9601	3.9601	1.0000e-004	0.0000	3.9627
Total	**2.1800e-003**	**1.4300e-003**	**0.0160**	**4.0000e-005**	**4.6300e-003**	**3.0000e-005**	**4.6600e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**3.9601**	**3.9601**	**1.0000e-004**	**0.0000**	**3.9627**

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	0.6764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.6786**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.9 Architectural Coating - 2021

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	2.1800e-003	1.4300e-003	0.0160	4.0000e-005	4.6300e-003	3.0000e-005	4.6600e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9601	3.9601	1.0000e-004	0.0000	3.9627
Total	**2.1800e-003**	**1.4300e-003**	**0.0160**	**4.0000e-005**	**4.6300e-003**	**3.0000e-005**	**4.6600e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**3.9601**	**3.9601**	**1.0000e-004**	**0.0000**	**3.9627**

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	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876
Unmitigated	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	19.43	233.87	172.09	132,600	132,600
Junior High School	1,944.00	0.00	0.00	3,056,465	3,056,465
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,963.43	233.87	172.09	3,189,065	3,189,065

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Junior High School	10.00	5.00	6.50	72.80	22.20	5.00	63	25	12
Other Asphalt Surfaces	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865
Junior High School	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865
Other Asphalt Surfaces	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865
Parking Lot	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

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	610.3104	610.3104	0.0139	2.8800e-003	611.5172
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	610.3104	610.3104	0.0139	2.8800e-003	611.5172
NaturalGas Mitigated	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637
NaturalGas Unmitigated	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637

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
Junior High School	2.15279e+006	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0116**	**0.1055**	**0.0886**	**6.3000e-004**		**8.0200e-003**	**8.0200e-003**		**8.0200e-003**	**8.0200e-003**	**0.0000**	**114.8811**	**114.8811**	**2.2000e-003**	**2.1100e-003**	**115.5637**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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
Junior High School	2.15279e+006	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0116**	**0.1055**	**0.0886**	**6.3000e-004**		**8.0200e-003**	**8.0200e-003**		**8.0200e-003**	**8.0200e-003**	**0.0000**	**114.8811**	**114.8811**	**2.2000e-003**	**2.1100e-003**	**115.5637**

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
Junior High School	1.03266e+006	595.2991	0.0136	2.8100e-003	596.4762
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	26040	15.0113	3.4000e-004	7.0000e-005	15.0410
Total		**610.3104**	**0.0139**	**2.8800e-003**	**611.5172**

5.3 Energy by Land Use - Electricity

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
Junior High School	1.03266e+006	595.2991	0.0136	2.8100e-003	596.4762
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	26040	15.0113	3.4000e-004	7.0000e-005	15.0410
Total		**610.3104**	**0.0139**	**2.8800e-003**	**611.5172**

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	0.6350	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Unmitigated	0.6350	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393

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	0.0676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7600e-003	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Total	**0.6350**	**1.7000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0368**	**0.0368**	**1.0000e-004**	**0.0000**	**0.0393**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7600e-003	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Total	**0.6350**	**1.7000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0368**	**0.0368**	**1.0000e-004**	**0.0000**	**0.0393**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	49.1911	4.6400e-003	2.4700e-003	50.0419
Unmitigated	49.1911	4.6400e-003	2.4700e-003	50.0419

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.2484	24.7130	5.6000e-004	1.2000e-004	24.7619
Junior High School	2.90909 / 7.48051	24.4781	4.0800e-003	2.3500e-003	25.2800
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**49.1911**	**4.6400e-003**	**2.4700e-003**	**50.0419**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.2484	24.7130	5.6000e-004	1.2000e-004	24.7619
Junior High School	2.90909 / 7.48051	24.4781	4.0800e-003	2.3500e-003	25.2800
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**49.1911**	**4.6400e-003**	**2.4700e-003**	**50.0419**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	44.6337	2.6378	0.0000	110.5780
Unmitigated	44.6337	2.6378	0.0000	110.5780

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.88	0.1786	0.0106	0.0000	0.4426
Junior High School	219	44.4550	2.6272	0.0000	110.1354
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**44.6337**	**2.6378**	**0.0000**	**110.5780**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.88	0.1786	0.0106	0.0000	0.4426
Junior High School	219	44.4550	2.6272	0.0000	110.1354
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**44.6337**	**2.6378**	**0.0000**	**110.5780**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Arden Middle School (operations)

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior High School	1,200.00	Student	3.24	141,074.02	0
Other Asphalt Surfaces	87.36		2.01	87,355.00	0
Parking Lot	186.00	Space	1.67	74,400.00	0
City Park	10.28	Acre	10.28	447,796.80	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.5	**Precipitation Freq (Days)**	58
Climate Zone	6			**Operational Year**	2022
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	590.31	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project specifics entered.

Off-road Equipment -

On-road Fugitive Dust -

Architectural Coating -

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Consumer Products -

Area Coating -

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	150.00
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	100	0

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					
2020	0.4948	4.6422	3.7315	9.4600e-003	0.5246	0.1795	0.7042	0.1862	0.1678	0.3540	0.0000	856.3044	856.3044	0.1203	0.0000	859.3112
2021	1.1979	1.7133	1.6079	4.3300e-003	0.1604	0.0593	0.2196	0.0435	0.0556	0.0991	0.0000	393.7884	393.7884	0.0464	0.0000	394.9471
Maximum	**1.1979**	**4.6422**	**3.7315**	**9.4600e-003**	**0.5246**	**0.1795**	**0.7042**	**0.1862**	**0.1678**	**0.3540**	**0.0000**	**856.3044**	**856.3044**	**0.1203**	**0.0000**	**859.3112**

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					
2020	0.4948	4.6422	3.7315	9.4600e-003	0.5246	0.1795	0.7042	0.1862	0.1678	0.3540	0.0000	856.3040	856.3040	0.1203	0.0000	859.3108
2021	1.1979	1.7133	1.6079	4.3300e-003	0.1604	0.0593	0.2196	0.0435	0.0556	0.0991	0.0000	393.7883	393.7883	0.0464	0.0000	394.9470
Maximum	**1.1979**	**4.6422**	**3.7315**	**9.4600e-003**	**0.5246**	**0.1795**	**0.7042**	**0.1862**	**0.1678**	**0.3540**	**0.0000**	**856.3040**	**856.3040**	**0.1203**	**0.0000**	**859.3108**

Arden Middle School (operations) - Sacramento County, Annual

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-7-2020**	**4-6-2020**	1.5145	1.5145
2	**4-7-2020**	**7-6-2020**	1.2140	1.2140
3	**7-7-2020**	**10-6-2020**	1.2281	1.2281
4	**10-7-2020**	**1-6-2021**	1.2318	1.2318
5	**1-7-2021**	**4-6-2021**	1.1004	1.1004
6	**4-7-2021**	**7-6-2021**	1.2788	1.2788
7	**7-7-2021**	**9-30-2021**	0.4757	0.4757
		Highest	1.5145	1.5145

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	0.6350	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Energy	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	398.3592	398.3592	0.0161	4.9900e-003	400.2486
Mobile	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876
Waste						0.0000	0.0000		0.0000	0.0000	44.6337	0.0000	44.6337	2.6378	0.0000	110.5780
Water						0.0000	0.0000		0.0000	0.0000	1.0292	22.3703	23.3996	4.6400e-003	2.4700e-003	24.2504
Total	**1.0509**	**1.8119**	**4.5573**	**0.0144**	**1.1892**	**0.0204**	**1.2096**	**0.3188**	**0.0196**	**0.3384**	**45.6629**	**1,690.4155**	**1,736.0784**	**2.7202**	**7.4600e-003**	**1,806.3038**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6328	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Energy	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	398.3592	398.3592	0.0161	4.9900e-003	400.2486
Mobile	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876
Waste						0.0000	0.0000		0.0000	0.0000	44.6337	0.0000	44.6337	2.6378	0.0000	110.5780
Water						0.0000	0.0000		0.0000	0.0000	1.0292	22.3703	23.3996	4.6400e-003	2.4700e-003	24.2504
Total	**1.0487**	**1.8119**	**4.5573**	**0.0144**	**1.1892**	**0.0204**	**1.2096**	**0.3188**	**0.0196**	**0.3384**	**45.6629**	**1,690.4155**	**1,736.0784**	**2.7202**	**7.4600e-003**	**1,806.3038**

	ROG	NOx	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	**0.21**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/7/2020	2/3/2020	5	20	
2	Site Preparation	Site Preparation	2/4/2020	2/17/2020	5	10	
3	Grading	Grading	2/18/2020	3/30/2020	5	30	
4	Building Construction	Building Construction	3/31/2020	5/24/2021	5	300	
5	Paving	Paving	5/25/2021	6/21/2021	5	20	
6	Architectural Coating	Architectural Coating	6/22/2021	7/19/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 3.68

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 211,611; Non-Residential Outdoor: 70,537; Striped Parking Area: 9,705 (Architectural Coating – sqft)

OffRoad Equipment

Arden Middle School (operations) - Sacramento County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	315.00	123.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	63.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2386**

3.2 Demolition - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.8000e-004	4.1500e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9761	0.9761	3.0000e-005	0.0000	0.9768
Total	**5.6000e-004**	**3.8000e-004**	**4.1500e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9761**	**0.9761**	**3.0000e-005**	**0.0000**	**0.9768**

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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
Total	**0.0331**	**0.3320**	**0.2175**	**3.9000e-004**		**0.0166**	**0.0166**		**0.0154**	**0.0154**	**0.0000**	**33.9986**	**33.9986**	**9.6000e-003**	**0.0000**	**34.2385**

3.2 Demolition - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	3.8000e-004	4.1500e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9761	0.9761	3.0000e-005	0.0000	0.9768
Total	**5.6000e-004**	**3.8000e-004**	**4.1500e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9761**	**0.9761**	**3.0000e-005**	**0.0000**	**0.9768**

3.3 Site Preparation - 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					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.3000e-004	2.4900e-003	1.0000e-005	6.6000e-004	0.0000	6.7000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5857	0.5857	2.0000e-005	0.0000	0.5861
Total	**3.4000e-004**	**2.3000e-004**	**2.4900e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5857**	**0.5857**	**2.0000e-005**	**0.0000**	**0.5861**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	**0.0204**	**0.2121**	**0.1076**	**1.9000e-004**	**0.0903**	**0.0110**	**0.1013**	**0.0497**	**0.0101**	**0.0598**	**0.0000**	**16.7153**	**16.7153**	**5.4100e-003**	**0.0000**	**16.8505**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.3000e-004	2.4900e-003	1.0000e-005	6.6000e-004	0.0000	6.7000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5857	0.5857	2.0000e-005	0.0000	0.5861
Total	**3.4000e-004**	**2.3000e-004**	**2.4900e-003**	**1.0000e-005**	**6.6000e-004**	**0.0000**	**6.7000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**0.5857**	**0.5857**	**2.0000e-005**	**0.0000**	**0.5861**

3.4 Grading - 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					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7264	81.7264	0.0264	0.0000	82.3872
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.1301**	**0.0326**	**0.1627**	**0.0540**	**0.0300**	**0.0840**	**0.0000**	**81.7264**	**81.7264**	**0.0264**	**0.0000**	**82.3872**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	7.6000e-004	8.3000e-003	2.0000e-005	2.2000e-003	2.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.9522	1.9522	6.0000e-005	0.0000	1.9536
Total	**1.1200e-003**	**7.6000e-004**	**8.3000e-003**	**2.0000e-005**	**2.2000e-003**	**2.0000e-005**	**2.2200e-003**	**5.9000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.9522**	**1.9522**	**6.0000e-005**	**0.0000**	**1.9536**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1301	0.0000	0.1301	0.0540	0.0000	0.0540	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0668	0.7530	0.4794	9.3000e-004		0.0326	0.0326		0.0300	0.0300	0.0000	81.7263	81.7263	0.0264	0.0000	82.3871
Total	**0.0668**	**0.7530**	**0.4794**	**9.3000e-004**	**0.1301**	**0.0326**	**0.1627**	**0.0540**	**0.0300**	**0.0840**	**0.0000**	**81.7263**	**81.7263**	**0.0264**	**0.0000**	**82.3871**

3.4 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1200e-003	7.6000e-004	8.3000e-003	2.0000e-005	2.2000e-003	2.0000e-005	2.2200e-003	5.9000e-004	1.0000e-005	6.0000e-004	0.0000	1.9522	1.9522	6.0000e-005	0.0000	1.9536
Total	**1.1200e-003**	**7.6000e-004**	**8.3000e-003**	**2.0000e-005**	**2.2000e-003**	**2.0000e-005**	**2.2200e-003**	**5.9000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.9522**	**1.9522**	**6.0000e-005**	**0.0000**	**1.9536**

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	0.2099	1.8994	1.6680	2.6600e-003		0.1106	0.1106		0.1040	0.1040	0.0000	229.2939	229.2939	0.0559	0.0000	230.6924
Total	**0.2099**	**1.8994**	**1.6680**	**2.6600e-003**		**0.1106**	**0.1106**		**0.1040**	**0.1040**	**0.0000**	**229.2939**	**229.2939**	**0.0559**	**0.0000**	**230.6924**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0466	1.3656	0.3809	3.0000e-003	0.0712	7.0700e-003	0.0783	0.0206	6.7600e-003	0.0273	0.0000	288.1241	288.1241	0.0171	0.0000	288.5506
Worker	0.1161	0.0787	0.8632	2.2500e-003	0.2290	1.6500e-003	0.2307	0.0609	1.5200e-003	0.0624	0.0000	202.9320	202.9320	5.7400e-003	0.0000	203.0755
Total	**0.1627**	**1.4443**	**1.2441**	**5.2500e-003**	**0.3002**	**8.7200e-003**	**0.3090**	**0.0815**	**8.2800e-003**	**0.0898**	**0.0000**	**491.0561**	**491.0561**	**0.0228**	**0.0000**	**491.6261**

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	0.2099	1.8994	1.6680	2.6600e-003		0.1106	0.1106		0.1040	0.1040	0.0000	229.2936	229.2936	0.0559	0.0000	230.6921
Total	**0.2099**	**1.8994**	**1.6680**	**2.6600e-003**		**0.1106**	**0.1106**		**0.1040**	**0.1040**	**0.0000**	**229.2936**	**229.2936**	**0.0559**	**0.0000**	**230.6921**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0466	1.3656	0.3809	3.0000e-003	0.0712	7.0700e-003	0.0783	0.0206	6.7600e-003	0.0273	0.0000	288.1241	288.1241	0.0171	0.0000	288.5506
Worker	0.1161	0.0787	0.8632	2.2500e-003	0.2290	1.6500e-003	0.2307	0.0609	1.5200e-003	0.0624	0.0000	202.9320	202.9320	5.7400e-003	0.0000	203.0755
Total	**0.1627**	**1.4443**	**1.2441**	**5.2500e-003**	**0.3002**	**8.7200e-003**	**0.3090**	**0.0815**	**8.2800e-003**	**0.0898**	**0.0000**	**491.0561**	**491.0561**	**0.0228**	**0.0000**	**491.6261**

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	0.0970	0.8890	0.8453	1.3700e-003		0.0489	0.0489		0.0460	0.0460	0.0000	118.1350	118.1350	0.0285	0.0000	118.8475
Total	**0.0970**	**0.8890**	**0.8453**	**1.3700e-003**		**0.0489**	**0.0489**		**0.0460**	**0.0460**	**0.0000**	**118.1350**	**118.1350**	**0.0285**	**0.0000**	**118.8475**

3.5 Building Construction - 2021

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	0.0197	0.6417	0.1715	1.5300e-003	0.0367	1.7700e-003	0.0385	0.0106	1.7000e-003	0.0123	0.0000	147.1926	147.1926	8.4200e-003	0.0000	147.4030
Worker	0.0556	0.0364	0.4066	1.1200e-003	0.1180	8.2000e-004	0.1188	0.0314	7.6000e-004	0.0321	0.0000	100.9812	100.9812	2.6500e-003	0.0000	101.0475
Total	**0.0754**	**0.6781**	**0.5781**	**2.6500e-003**	**0.1547**	**2.5900e-003**	**0.1573**	**0.0420**	**2.4600e-003**	**0.0444**	**0.0000**	**248.1738**	**248.1738**	**0.0111**	**0.0000**	**248.4504**

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	0.0970	0.8890	0.8453	1.3700e-003		0.0489	0.0489		0.0460	0.0460	0.0000	118.1349	118.1349	0.0285	0.0000	118.8474
Total	**0.0970**	**0.8890**	**0.8453**	**1.3700e-003**		**0.0489**	**0.0489**		**0.0460**	**0.0460**	**0.0000**	**118.1349**	**118.1349**	**0.0285**	**0.0000**	**118.8474**

3.5 Building Construction - 2021

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	0.0197	0.6417	0.1715	1.5300e-003	0.0367	1.7700e-003	0.0385	0.0106	1.7000e-003	0.0123	0.0000	147.1926	147.1926	8.4200e-003	0.0000	147.4030
Worker	0.0556	0.0364	0.4066	1.1200e-003	0.1180	8.2000e-004	0.1188	0.0314	7.6000e-004	0.0321	0.0000	100.9812	100.9812	2.6500e-003	0.0000	101.0475
Total	**0.0754**	**0.6781**	**0.5781**	**2.6500e-003**	**0.1547**	**2.5900e-003**	**0.1573**	**0.0420**	**2.4600e-003**	**0.0444**	**0.0000**	**248.1738**	**248.1738**	**0.0111**	**0.0000**	**248.4504**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	4.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 2021

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	5.2000e-004	3.4000e-004	3.8000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9429	0.9429	2.0000e-005	0.0000	0.9435
Total	**5.2000e-004**	**3.4000e-004**	**3.8000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9429**	**0.9429**	**2.0000e-005**	**0.0000**	**0.9435**

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	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	4.8200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0174**	**0.1292**	**0.1465**	**2.3000e-004**		**6.7800e-003**	**6.7800e-003**		**6.2400e-003**	**6.2400e-003**	**0.0000**	**20.0235**	**20.0235**	**6.4800e-003**	**0.0000**	**20.1854**

3.6 Paving - 2021

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	5.2000e-004	3.4000e-004	3.8000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9429	0.9429	2.0000e-005	0.0000	0.9435
Total	**5.2000e-004**	**3.4000e-004**	**3.8000e-003**	**1.0000e-005**	**1.1000e-003**	**1.0000e-005**	**1.1100e-003**	**2.9000e-004**	**1.0000e-005**	**3.0000e-004**	**0.0000**	**0.9429**	**0.9429**	**2.0000e-005**	**0.0000**	**0.9435**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.0033					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**1.0055**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

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	2.1800e-003	1.4300e-003	0.0160	4.0000e-005	4.6300e-003	3.0000e-005	4.6600e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9601	3.9601	1.0000e-004	0.0000	3.9627
Total	**2.1800e-003**	**1.4300e-003**	**0.0160**	**4.0000e-005**	**4.6300e-003**	**3.0000e-005**	**4.6600e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**3.9601**	**3.9601**	**1.0000e-004**	**0.0000**	**3.9627**

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	1.0033					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**1.0055**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

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	2.1800e-003	1.4300e-003	0.0160	4.0000e-005	4.6300e-003	3.0000e-005	4.6600e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9601	3.9601	1.0000e-004	0.0000	3.9627
Total	**2.1800e-003**	**1.4300e-003**	**0.0160**	**4.0000e-005**	**4.6300e-003**	**3.0000e-005**	**4.6600e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**3.9601**	**3.9601**	**1.0000e-004**	**0.0000**	**3.9627**

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	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876
Unmitigated	0.4043	1.7062	4.4497	0.0138	1.1892	0.0123	1.2015	0.3188	0.0115	0.3303	0.0000	1,269.6492	1,269.6492	0.0615	0.0000	1,271.1876

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	19.43	233.87	172.09	132,600	132,600
Junior High School	1,944.00	0.00	0.00	3,056,465	3,056,465
Parking Lot	0.00	0.00	0.00		
Total	1,963.43	233.87	172.09	3,189,065	3,189,065

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
Junior High School	10.00	5.00	6.50	72.80	22.20	5.00	63	25	12
Parking Lot	10.00	5.00	6.50	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865
Junior High School	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865
Other Asphalt Surfaces	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865
Parking Lot	0.559527	0.038733	0.206173	0.118029	0.019040	0.005245	0.018552	0.023249	0.002031	0.002054	0.005884	0.000619	0.000865

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	283.4781	283.4781	0.0139	2.8800e-003	284.6849
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	283.4781	283.4781	0.0139	2.8800e-003	284.6849
NaturalGas Mitigated	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637
NaturalGas Unmitigated	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637

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
Junior High School	2.15279e+006	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0116**	**0.1055**	**0.0886**	**6.3000e-004**		**8.0200e-003**	**8.0200e-003**		**8.0200e-003**	**8.0200e-003**	**0.0000**	**114.8811**	**114.8811**	**2.2000e-003**	**2.1100e-003**	**115.5637**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
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
Junior High School	2.15279e+006	0.0116	0.1055	0.0886	6.3000e-004		8.0200e-003	8.0200e-003		8.0200e-003	8.0200e-003	0.0000	114.8811	114.8811	2.2000e-003	2.1100e-003	115.5637
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0116**	**0.1055**	**0.0886**	**6.3000e-004**		**8.0200e-003**	**8.0200e-003**		**8.0200e-003**	**8.0200e-003**	**0.0000**	**114.8811**	**114.8811**	**2.2000e-003**	**2.1100e-003**	**115.5637**

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
Junior High School	1.03266e+006	276.5057	0.0136	2.8100e-003	277.6828
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	26040	6.9725	3.4000e-004	7.0000e-005	7.0022
Total		**283.4781**	**0.0139**	**2.8800e-003**	**284.6849**

5.3 Energy by Land Use - Electricity

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
Junior High School	1.03266e+006	276.5057	0.0136	2.8100e-003	277.6828
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	26040	6.9725	3.4000e-004	7.0000e-005	7.0022
Total		**283.4781**	**0.0139**	**2.8800e-003**	**284.6849**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	0.6328	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Unmitigated	0.6350	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393

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	0.0676					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7600e-003	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Total	**0.6350**	**1.7000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0368**	**0.0368**	**1.0000e-004**	**0.0000**	**0.0393**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0654					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5656					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7600e-003	1.7000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0368	0.0368	1.0000e-004	0.0000	0.0393
Total	**0.6328**	**1.7000e-004**	**0.0190**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0368**	**0.0368**	**1.0000e-004**	**0.0000**	**0.0393**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	23.3996	4.6400e-003	2.4700e-003	24.2504
Unmitigated	23.3996	4.6400e-003	2.4700e-003	24.2504

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.2484	11.4787	5.6000e-004	1.2000e-004	11.5276
Junior High School	2.90909 / 7.48051	11.9208	4.0800e-003	2.3500e-003	12.7228
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**23.3996**	**4.6400e-003**	**2.4700e-003**	**24.2504**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 12.2484	11.4787	5.6000e-004	1.2000e-004	11.5276
Junior High School	2.90909 / 7.48051	11.9208	4.0800e-003	2.3500e-003	12.7228
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**23.3996**	**4.6400e-003**	**2.4700e-003**	**24.2504**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	44.6337	2.6378	0.0000	110.5780
Unmitigated	44.6337	2.6378	0.0000	110.5780

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.88	0.1786	0.0106	0.0000	0.4426
Junior High School	219	44.4550	2.6272	0.0000	110.1354
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**44.6337**	**2.6378**	**0.0000**	**110.5780**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.88	0.1786	0.0106	0.0000	0.4426
Junior High School	219	44.4550	2.6272	0.0000	110.1354
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**44.6337**	**2.6378**	**0.0000**	**110.5780**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B

Noise

Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: 60605273 - Arden Middle School ISMND

Date: **Wednesday, June 26, 2019** **to** **Thursday, June 27, 2019**

Site: LT-01

Hour	Leq	Lmax	L50	L90
11:00	54.6	90.2	53.7	50.5
12:00	55.4	91.0	54.5	51.4
13:00	56.8	92.4	55.7	52.9
14:00	57.5	93.1	56.4	53.4
15:00	57.4	92.9	56.0	53.0
16:00	57.7	93.3	56.5	53.5
17:00	55.7	91.3	54.6	52.3
18:00	55.3	90.9	54.9	52.4
19:00	55.3	90.9	54.8	51.4
20:00	54.8	90.4	54.2	50.8
21:00	53.2	88.8	52.5	48.8
22:00	52.9	88.5	51.9	48.0
23:00	50.1	85.7	49.2	45.5
0:00	47.4	83.0	45.4	40.5
1:00	48.6	84.2	46.0	42.2
2:00	45.6	81.2	43.6	38.5
3:00	47.8	83.4	45.9	41.2
4:00	49.7	85.3	48.5	45.1
5:00	54.5	90.1	53.1	49.5
6:00	54.7	90.3	53.9	50.5
7:00	54.5	90.0	53.6	50.6
8:00	53.8	89.4	52.6	49.4
9:00	53.0	88.6	52.0	48.4
10:00	52.8	88.4	50.5	47.1

Averages

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	55.5	90.8	54.2	51.1
Nighttime (10 p.m. - 7 a.m.)	51.2	85.7	48.6	44.6

Uppermost-Level

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	57.7	93.3	56.5	53.5
Nighttime (10 p.m. - 7 a.m.)	54.7	90.3	53.9	50.5

Percentage of Energy

Daytime	82%
Nighttime	18%

Calculated L_{dn}, dBA

58.6

Long-Term 24 Hour Continuous Noise Monitoring
Model Input Sheet

Project: 60605273 - Arden Middle School ISMND

Date: **Wednesday, June 26, 2019** **to** **Thursday, June 27, 2019**

Site: LT-02

Hour	Leq	Lmax	L50	L90
11:00	50.7	86.3	48.4	45.4
12:00	50.8	86.4	49.8	47.2
13:00	52.9	88.5	51.4	48.7
14:00	53.9	89.5	52.0	49.6
15:00	52.3	87.9	51.7	49.2
16:00	54.6	90.1	52.6	50.0
17:00	51.4	87.0	50.1	48.0
18:00	51.4	87.0	50.1	48.0
19:00	50.7	86.3	49.4	47.1
20:00	50.3	85.9	49.5	47.1
21:00	48.6	84.1	47.3	44.7
22:00	48.7	84.3	47.9	45.7
23:00	46.8	82.4	46.3	43.5
0:00	42.6	78.2	40.9	37.5
1:00	42.3	77.9	40.9	38.6
2:00	42.5	78.1	40.5	38.0
3:00	42.6	78.1	41.7	38.9
4:00	43.9	79.5	43.3	40.5
5:00	49.1	84.6	47.8	44.3
6:00	50.3	85.9	49.4	47.1
7:00	50.5	86.0	48.1	46.1
8:00	49.0	84.5	46.7	44.4
9:00	48.5	84.0	46.2	42.7
10:00	49.0	84.6	45.2	42.2

Averages

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	51.4	86.5	49.2	46.7
Nighttime (10 p.m. - 7 a.m.)	46.5	81.0	44.3	41.6

Uppermost-Level

	Leq	Lmax	L50	L90
Daytime (7 a.m. - 10 p.m.)	54.6	90.1	52.6	50.0
Nighttime (10 p.m. - 7 a.m.)	50.3	85.9	49.4	47.1

Percentage of Energy

Daytime	83%
Nighttime	17%

Calculated L_{dn}, dBA

54.1

Project-Generated Construction Source Noise Prediction Model

60605273 - Arden Middle School ISMND

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	591	60
	50	87
West	100	79
South	100	79

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Excavator	85	0.4
Dump Truck	84	0.4
Dozer	85	0.4
Grader	85	0.4
Pickup Truck	55	0.4

Ground Type	Soft
Ground Factor	0.50

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Excavator	81.0
Dump Truck	80.0
Dozer	81.0
Grader	81.0
Pickup Truck	51.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
86.8

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Janua

[2] Based on the following from the Federal Transit Noise and Vibration

L_{eq}(equip) = E.L.+10*log (U.F.) - 20*log (D/50) - 10*G*log (D/50)

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60605273 - Arden Middle School ISMND

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	585	60
	50	87
West	100	79
South	100	79

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Excavator	85	0.4
Dozer	85	0.4
Flat Bed Truck	84	0.4
Crane	85	0.16
Man Lift	85	0.2

Ground Type	Soft
Ground Factor	0.50

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Excavator	81.0
Dozer	81.0
Flat Bed Truck	80.0
Crane	77.0
Man Lift	78.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
86.7

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Janua

[2] Based on the following from the Federal Transit Noise and Vibration

$L_{eq}(equip) = E.L.+10*\log(U.F.) - 20*\log(D/50) - 10*G*\log(D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Project-Generated Construction Source Noise Prediction Model

60605273 - Arden Middle School ISMND

Location	Distance to Nearest Receiver in feet	Combined Predicted Noise Level (L_{eq} dBA)
Threshold*	598	60
	50	87
West	100	79
South	100	79

Assumptions:	Reference Emission Noise Levels (L_{max}) at 50 feet[1]	Usage Factor[1]
Paver	85	0.5
Concrete Mixer Truck	85	0.4
Man Lift	85	0.2
Compactor (ground)	80	0.2
Concrete Mixer Truck	85	0.4

Ground Type	Soft
Ground Factor	0.50

Predicted Noise Level [2]	L_{eq} dBA at 50 feet[2]
Paver	82.0
Concrete Mixer Truck	81.0
Man Lift	78.0
Compactor (ground)	73.0
Concrete Mixer Truck	81.0

Combined Predicted Noise Level (L_{eq} dBA at 50 feet)
86.9

Sources:

[1] Obtained from the FHWA Roadway Construction Noise Model, Janua

[2] Based on the following from the Federal Transit Noise and Vibration

$L_{eq}(equip) = E.L.+10*\log (U.F.) - 20*\log (D/50) - 10*G*\log (D/50)$

Where: E.L. = Emission Level;

U.F.= Usage Factor;

G = Constant that accounts for topography and ground effects; and

D = Distance from source to receiver.

*Project specific threshold

Packaged HVAC Noise Prediction Model
60605273 - Arden Middle School ISMND

Project Name : Gerber Road School IS/MND
Project Number : 60542871
Metric (L_{eq}, L_{dn}) : Leq
Cooling Capacity / 1,000SqFt: 1.2

ID	Building Description	Square footage	Cooling Capacity, Tons	Shielding Offset	L_w	Distance to Reciever	L_p @ Receiver
1	Building A	48,000	57.6		108.1	200	64
2	Building M	12,000	14		100.9	200	57
3	Building L	19,200	23.04		103.3	100	65

Combined Noise Level: 68

Source: Bolt Beranek and Newman Inc. (BBN). 1981. *Noise Control for Buildings and Manufacturing Plants* . Cambridge MA.

Project-Generated Parking Lot Noise Prediction Model

60605273 - Arden Middle School ISMND

AECOM

Ref SEL: 71 **Metric: Leq**

Description	# of Stalls	Trip Multiplier	Trips /Period	Lp @ 50'	Distance to Rec.	Shielding Offset	Lp at Rec.
West	186	1	186	58.1	450		39
West	186	1	186	58.1	50		58

APPENDIX C

Traffic

Memorandum

To: Dan Porter
Senior Project Manager
Kitchell, CEM
2450 Venture Oaks Way, Suite 500
Sacramento, CA 95833

From: Mehul Champaneri and Matthew Gerken, AECOM

Date: July 8, 2019

Subject: Arden Middle School Traffic Analysis

INTRODUCTION

This traffic study describes the current and future conditions associated with the proposed reconstruction of the Arden Middle School in Sacramento, California. A brief description of the proposed project, location, and analysis scenarios are provided in the subsequent sections. This study describes traffic conditions for the existing, existing plus project, 2035 cumulative and 2035 cumulative plus project scenarios.

PROJECT DESCRIPTION

The proposed project would be situated at an existing District school property located at 1640 Watt Avenue in the urbanized Arden-Arcade area of unincorporated Sacramento County, CA. The property comprises 17.2 acres southeast of the intersection of Watt Avenue and Arden Way. Arden Middle School serves students in grades 6–8. The proposed project is intended to modernize the existing school campus to meet current building code requirements, add parking and improve circulation, to provide an improved learning environment that better meets the needs of today's student body, and to provide an improved factor of safety. The proposed project would allow for an increase in the maximum student capacity. The existing capacity of Arden Middle School is 1,000 students and the proposed project would increase the school's capacity to 1,200 students.

An expanded parking area would be constructed adjacent to Arden Way and Watt Avenue (where the existing school buildings are located now). The proposed project includes a larger parking area with 107 additional parking spaces.

Figure 1 illustrates the project location and study area considered for the traffic operations analysis. Both the existing site plan and the conceptual plan for the proposed project are included in the **Appendix**.

Figure 1: Project Location & Study Area



STUDY AREA

The traffic analysis studied all the access points and intersections surrounding the school area on Arden Way and Watt Avenue that would be affected by project traffic. Arden Way provides the most direct route choice to access the school campus from north, west, and east of the school campus, while Watt Avenue provides access from south of the campus. The intersections selected for the analysis are listed below and illustrated in **Figure 1**.

1. Arden Way and Watt Avenue
2. Arden Way and School Entry Driveway
3. Arden Way and School Exit Driveway
4. Arden Way and El Nido Way
5. Watt Ave and School Entry Driveway

DATA COLLECTION

Based on the school schedule, peak-period traffic counts were collected at the study intersections for two hours in the morning and two hours in the afternoon. The intersection counts were collected from 6:45 a.m. to 8:45 a.m. in the morning and 1:30 p.m. to 3:30 p.m. in the afternoon. Peak hours of operation were determined from the traffic counts and used for the evaluation. Along with the intersection counts, drone video recording was also collected to assess queues at key pick-up locations. Drone video was collected from 7:10 a.m. to 8:00 a.m. during the morning drop-off time and 2:20 p.m. to 2:50 p.m. during the afternoon pick-up time. AECOM also conducted a thorough field survey during both the drop-off and pick-up time periods to assess key traffic circulation issues.

ANALYSIS METHODOLOGY

Traffic operations were analyzed using the Highway Capacity Manual (HCM) 2010 Method, per Sacramento County Traffic Impact Analysis Guidelines. HCM is an analysis method that determines the average control delay for intersections, which is converted to a level of service (LOS) associated with signalized and un-signalized intersections. The average control delay per vehicle is estimated for each lane group and aggregated for each approach, as well as the intersection as a whole. LOS criteria are summarized in **Table 1** for both signalized and unsignalized intersections.

Sacramento County General Plan Policy CI-9 defines the minimum acceptable operation level for its roadways and intersections to be LOS D or better for rural areas and LOS E or better for urban areas. Urban areas are those within the County's Urban Service Boundary, as shown in the Land Use Element of the Sacramento County General Plan. The areas outside the Urban Service Boundary are considered rural. The project site is in the County's existing Urban Services Boundary.

Table 1: Intersection LOS Criteria

LOS	Signalized Intersections	Unsignalized Intersections
	Delay (sec/veh)	Delay (sec/veh)
A	Less than or equal to 10	Less than or equal to 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80	> 50

Source: Highway Capacity Manual 2010.

Traffic operations at the school driveways and adjacent intersections is different from other intersections in the vicinity in that there are relatively higher numbers of pedestrian and bicyclist movements in these locations, and crossing guards at the school engage in manual intersection control. Therefore, along with the HCM methodology, queues were determined based on the field observations. Queue lengths are depicted from the drone video captured during peak traffic periods. Future queues were determined based on the estimated additional vehicles and observed dwell times at the pick-up and drop-off areas.

BELL SCHEDULE

For circulation during drop-off and pick-up times, it is important to understand the bell schedule of the school. Some students arrive early for breakfast, while some are dropped off just a few minutes before the school session begins. The typical bell schedule for the school is summarized below:

- Breakfast: 7:10 a.m. – 7:40 a.m.
- Warning Bell: 7:45 a.m.
- School Session Begins: 7:50 a.m.
- School Session Ends: 2:36 p.m.

EXISTING CONDITIONS

Roadways

Arden Way

The school campus is bounded by Arden Way on the north, Watt Avenue on the west, and residential development on the east and south. Arden Way is an east-west, two-way, four-lane arterial that provides direct access to the school, as well as surrounding residential and commercial development in the vicinity of the school. There is a pedestrian and bicycle access to the school campus from Arden Way just east of the exit driveway that facilitates pedestrian crossing with minimum conflict with vehicles at the school driveways.

Watt Avenue

Watt Avenue is a north-south, two-way, six-lane arterial that also provides direct access to the school through the south entrance, as well as residential and commercial development in the vicinity of the school. It narrows down to a four-lane arterial just south of the school. There is a pedestrian and bicycle access to the school from Watt Avenue, as well just south of the entry driveway on Watt Avenue, allowing vehicles to enter the school with minimum pedestrian conflicts. There is a third pedestrian and bicycle access south of the school through the school playground, providing direct access from the surrounding residential neighborhood.

El Nido Way

El Nido Way is a north-south, two-way, two-lane residential street located just east of the school campus that provides access to Arden Way.

Intersections

As shown in **Figure 1**, five study intersections were included in this analysis. Three of these intersections are school access locations for vehicular traffic and two are intersections on the major arterials that provide access to the school site, as well as surrounding residential and commercial development. Two driveways on Arden Way that are analyzed as separate intersections provide entry and exit from school with semi-circular lanes and an option to park or drop-off at the designated areas. The entry driveway from Watt Avenue allows vehicles to drop-off students and continue to exit on Arden Way.

Existing peak-hour turning movement volumes at the study intersections for the weekday morning and afternoon peak hours are illustrated in **Figure 2**. The morning peak at the school occurs from 7:30 to 8:30 a.m. and the afternoon peak occurs from 2:30 to 3:30 p.m. These peak hours are for the school traffic operations and are different compared to the peak hours for typical arterial traffic in the study area.

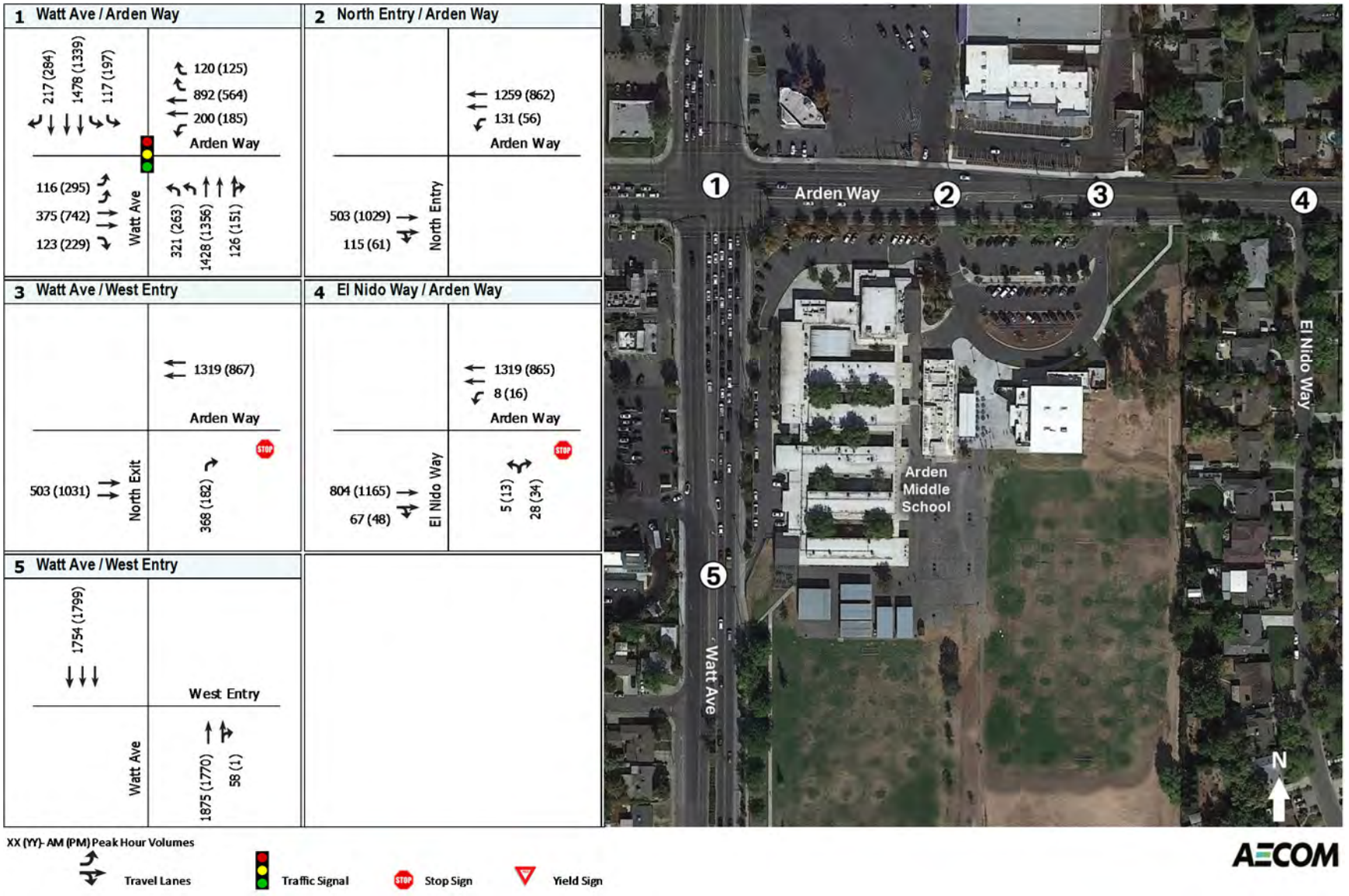
Table 2 provides the existing LOS for the five study intersections. All five study intersections operate at LOS D or better under existing conditions. The traffic analysis worksheets for existing conditions are provided in the **Appendix**.

Table 2: Existing Intersection Level of Service

ID	Intersection	Control Type	Morning Peak Hour		Afternoon Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
1	Arden Way and Watt Avenue	Signalized	D	37.8	D	43.1
2	Arden Way and School Entry Driveway	Unsignalized	A	0.9	A	0.7
3	Arden Way and School Exit Driveway	Unsignalized	D	28.3	C	17.8
4	Arden Way and El Nido Way	Unsignalized	D	26.8	D	33.2
5	Watt Ave and School Entry Driveway	Unsignalized	C	22.5	C	20.8

Note: HCM 2010 Methodology.

Figure 2: Existing Peak-Hour Traffic Volumes and Lane Configurations



Queues

Queues were assessed at the three drop-off/pick-up locations at the school campus. Queue lengths were determined directly from the observed drone videos. Afternoon queues were slightly longer than morning queues at the pick-up lanes near the north entrance. Many drivers arrive at pick-up locations approximately 15 minutes prior to the dismissal times, so the queues continue to build up until the loading begins. There is a greater loading dwell time for pick-up in the afternoon compared to drop-off in the morning. Presumably to avoid waiting at the pick-up queues, many parents park at the adjacent commercial parking lots to the north and west of the school and wait for students to walk there**. Table 3** below shows the maximum queue lengths in feet, as observed during the morning or afternoon peaks. As shown in the table, the queue at the westbound left-turn pocket on Arden Way entering the school extends to the through lanes and last for approximately one minute before it clears. The queues at the drop-off/pick-up areas on campus do not extend beyond the available storage, but cause slight congestion at the Arden Way entrance driveway due to traffic merging from two directions, as shown in Figure 4.

Table 3: Existing Maximum Queues

	Location	Vehicle Storage (feet)	Maximum Queue Length (feet)
1	Westbound Left Turn at Arden Way & School Entrance Driveway	90	**300**
2	Drop-off/Pick-up Area near Office Building (access from Watt Avenue)	250	150
3	Drop-off/Pick-up Area near east MP Room (access from Arden Way)	500	360

Note: **Bold** indicates queue length exceeds the storage capacity. Queue lengths are measured based on the number of cars waiting at the drop-off/pic-up lanes as observed.

Figures 3 and **4** show the actual queues on Arden Way and school drop-off/pick-up area, as observed from the drone video. As shown in **Figure 3**, the queue at the westbound left turn pocket on Arden Way is partially due to eastbound through traffic and pedestrian crossing at the entrance driveway. The queues at the drop-off area shown in **Figure 4** showed queueing near the entry driveway that lasted for 3 to 5 minutes. Overall, peak traffic in the vicinity of the campus during drop-off and pick-up times lasts for approximately 20 minutes.

Figure 3: Queues during School Drop-Off



Note: Maximum queues on Arden Way were observed during the drop-off time at approximately 7:30 a.m.

Figure 4: Queues during School Drop-Off



Note: Maximum queues at drop-off area were observed during the drop-off time at approximately 7:40 a.m.

Pedestrian Movements

Many parents prefer to park at the commercial parking lots north and west of the school campus, depending on their travel directions, instead of using existing parking spaces or pick-up/drop-off areas on the school campus. Students then walk to the school using the pedestrian crosswalks at the intersection of Arden Way and Watt Avenue. Currently, there is one guard with a stop sign assisting the students while crossing during both drop-off and pick-up times. The crosswalks at the intersection of Arden Way and Watt Avenue are heavily used by students. As the drop-off time of the students are relatively scattered compared to the pick-time time, relatively heavier pedestrian traffic was observed on these crosswalks during the afternoon peak.

Figure 5 shows the students walking towards the northern commercial parking lot, while **Figure 6** shows the students walking towards the western commercial parking lot and other pick-up locations outside the school. The heavy pedestrian traffic – especially during the pick-up time – affects a few vehicles turning right at both Arden Way (eastbound right turn) and Watt Avenue (northbound right turn), as seen in the figures.

Figure 5: Pedestrian Activity during School Pick-Up

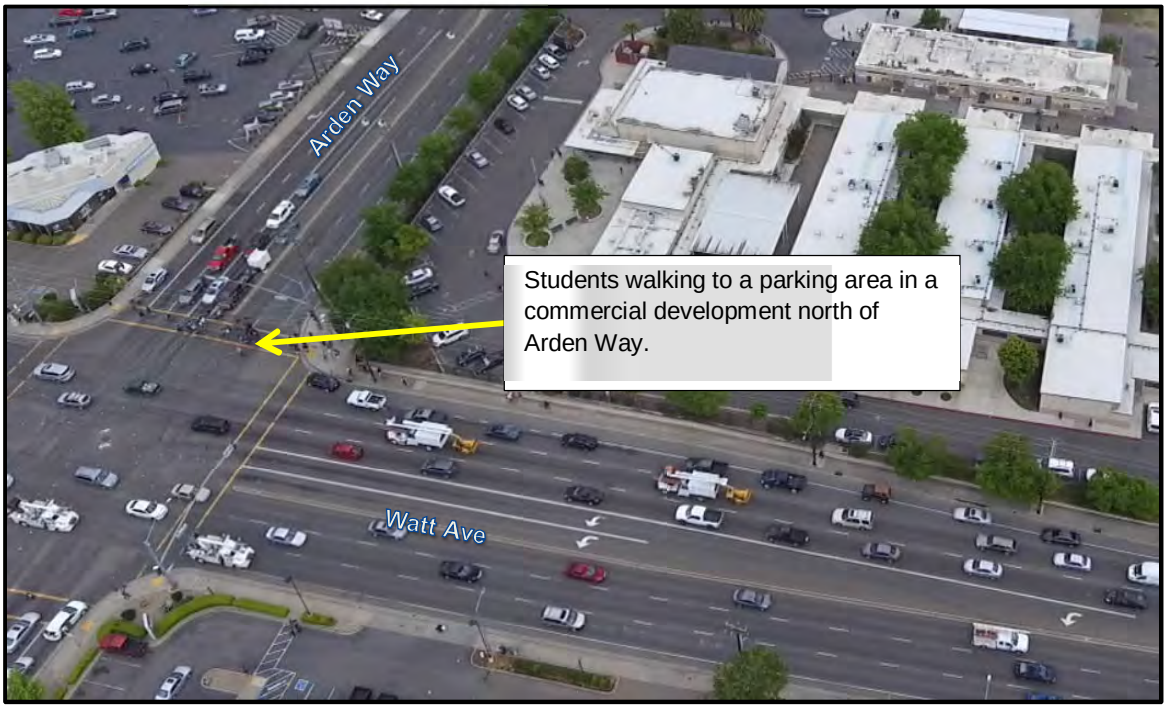


Figure 6: Pedestrian Activity during School Pick-Up



Pedestrian counts were collected at the study intersections and designated pedestrian access locations during both the morning and afternoon school traffic operations. As shown in the table below, the afternoon traffic operations have higher peak pedestrian activities compared to the morning. This is mainly due to the dismissal of students at the same time in the afternoon, whereas morning arrival times are scattered. The highest pedestrian activities were observed at the crosswalks at the intersection of Arden Way and Watt Avenue when students walk to the commercial parking lots after dismissal. The pedestrian crossing at this intersection is assisted by a crossing guard. During the field survey, as well from the drone video captured, it was observed that pedestrians were safely able to cross the street and access the school with the help of crossing guard.

Table 4: Existing Pedestrian and Bike Counts

	Location	Morning Peak Hour Pedestrian (Bike)	Afternoon Peak Hour Pedestrian (Bike)
1	Pedestrian Access from Arden Way	8 (0)	34 (0)
2	Pedestrian Access north of El Ricon Way	45 (18)	103 (15)
3	Pedestrian Access from Watt Avenue	9 (18)	6 (18)
4	Arden Way and Watt Ave Crosswalks	98 (9)	223 (12)

Note: XX = Pedestrian, (XX)=Bikes. Counts are reported from 7:00 to 8:00 AM in the morning, and 2:30 to 3:30 PM in the afternoon.

Parking

Parking is available on the northern and western portions of the school campus. There are 32 parking spaces near the Arden Way entry and exit driveways and approximately 10 spaces alongside the curb near drop-off/pick-up area. There are 27 parking spaces accessible from the Watt Avenue entrance and approximately 11 spaces alongside the curb in the western portion of the school campus. These parking spaces are not accessible from the

Arden Way driveway due to one-way traffic circulation at the drop-off/pick-up area. In total, there are 80 parking spaces available within the school campus. The parking spaces were utilized completely during the peak school traffic operations during field observation.

PROJECT TRIP CHARACTERISTICS

This section summarizes the trip generation calculations conducted for the proposed project, based on a three-step process that involves trip generation, trip distribution, and trip assignment.

Project Trip Generation

The proposed school expansion will accommodate 200 additional students. Traffic volumes were estimated based on the numbers of anticipated new students and trip generation rates for middle schools published in the Institute of Transportation Engineers (ITE) *Trip Generation, 9th Edition*. The existing mode share data provided by the school district, as shown in **Table 5** was considered for the trip generation. Trip generation estimates from the proposed school expansion are summarized in **Table 6**. Afternoon trip generation rates for the middle school are not available in the *Trip Generation* manual, so the afternoon trips were estimated based on the current travel patterns and dwell times during the school dismissal.

Typically, schools attract a substantial number of walking and bicycle trips. However, most of the new students are assumed to be coming from outside the school's neighborhood, so this analysis conservatively assumes a total of 150 vehicles during the morning peak hour and 130 vehicles during the afternoon peak hour. These estimates are also consistent with the existing mode share data.

Table 5: Existing Mode Share of Arden Middle School

Walk	Bike	Other	Transit	School Bus	Carpool	Family Vehicle	Total
7.3%	**5.0%**	**1.4%**	**0.6%**	**0.2%**	**20.5**	**65.0%**	**100%**

Table 6: Trip Generation

Land Use	Size	Morning Peak Hour			Afternoon Peak Hour		
		Rate	In	Out	Rate	In	Out
Middle School [a]	200 Students	0.54	59	49	-	-	-
Trips Entering School			110	95		95	80
Trips Parking Outside			40	30		35	25

Note: [a] Code 522 (Middle/Jr.High School) in *ITE Trip Generation Manual*, 9th Edition. Afternoon peak-hour trips are not available in the ITE Trip Generation Manual. New trips are estimated considering the existing model share.

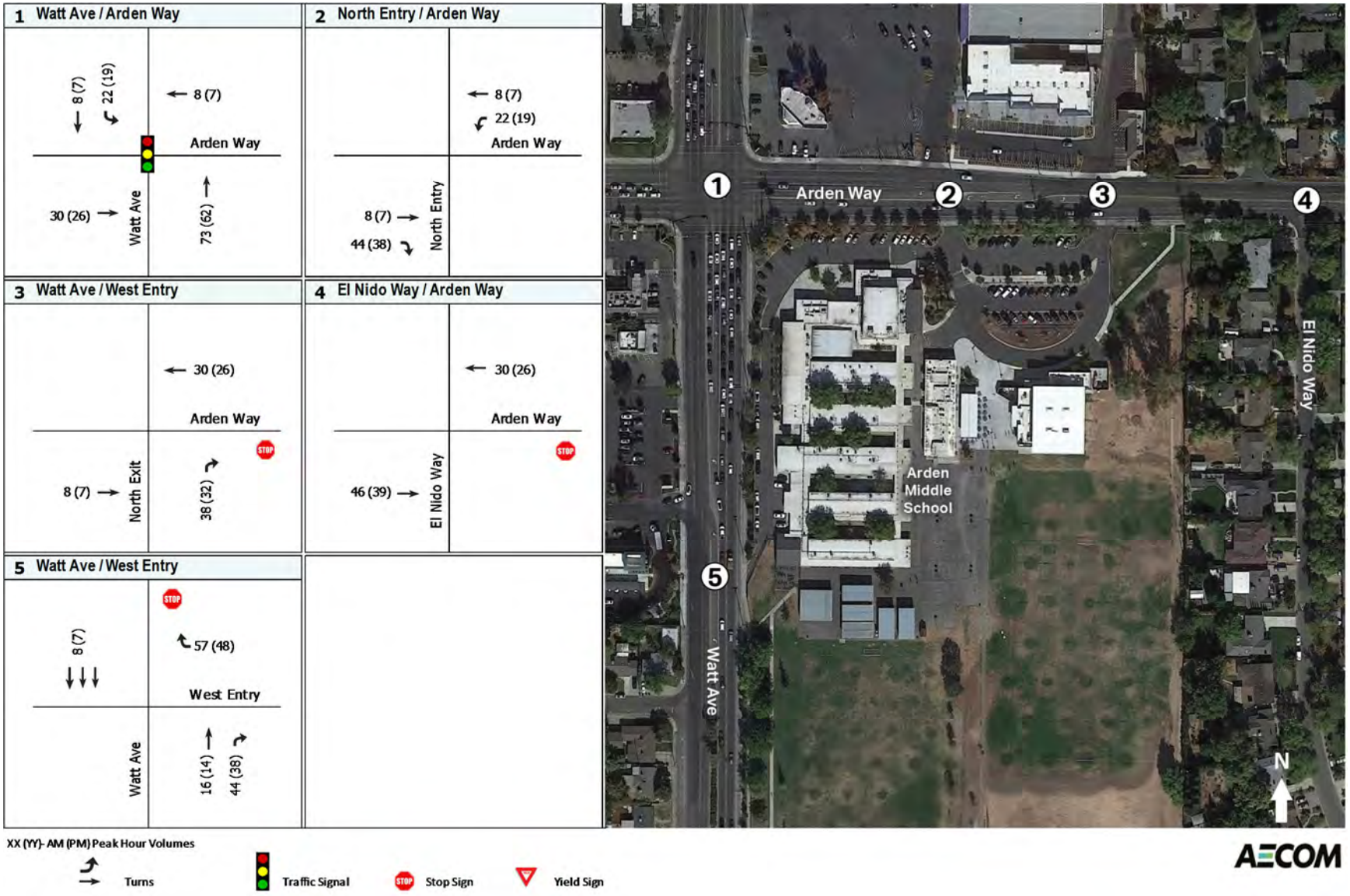
Project Trip Distribution

Trip distribution represents the paths that traffic will use to travel to and from a project site. Trip distribution for this project was estimated based on the school access locations, as well as assumed home locations of new students. Based on the home location assumed for the new students and considering the best route choices to access the school, the additional traffic will enter the school campus using both Arden Way and Watt Avenue.

Project Trip Assignment

Trip assignment is the product of the project trip generation and the trip distribution percentages at each intersection. The result of the trip assignment process is a full accounting of project trips, by direction and turning movement at the study intersections. **Figure 7** illustrates the assignment of project trips at the study area intersections.

Figure 7: Project Trips



EXISTING PLUS PROJECT CONDITIONS

Project traffic was estimated and traffic operations were analyzed for the existing plus project conditions, as described below.

Intersections

The existing plus project peak-hour turning movement volumes at the study intersections for the weekday morning and afternoon peak hours are illustrated in **Figure 8**. **Table 7** provides the existing plus project LOS for the study intersections. **Table 7** shows that all study intersections will operate at LOS E or better under existing plus project conditions. However, the project would increase the average delay per vehicle at the exit driveway on Arden Way. The traffic analysis worksheets for existing conditions are provided in the **Appendix**.

Table 7: Existing Plus Project Intersection Level of Service

ID	Intersection	Control Type	Morning Peak Hour		Afternoon Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
1	Arden Way and Watt Avenue	Signalized	D	38.7	D	44.6
2	Arden Way and School Entry Driveway	Unsignalized	A	1.1	A	1.0
3	Arden Way and School Exit Driveway	Unsignalized	E	37.9	C	19.6
4	Arden Way and El Nido Way	Unsignalized	D	30.8	E	36.6
5	Watt Ave and School Entry Driveway	Unsignalized	D	30.4	C	21.2

Note: HCM 2010 Methodology.

Queues

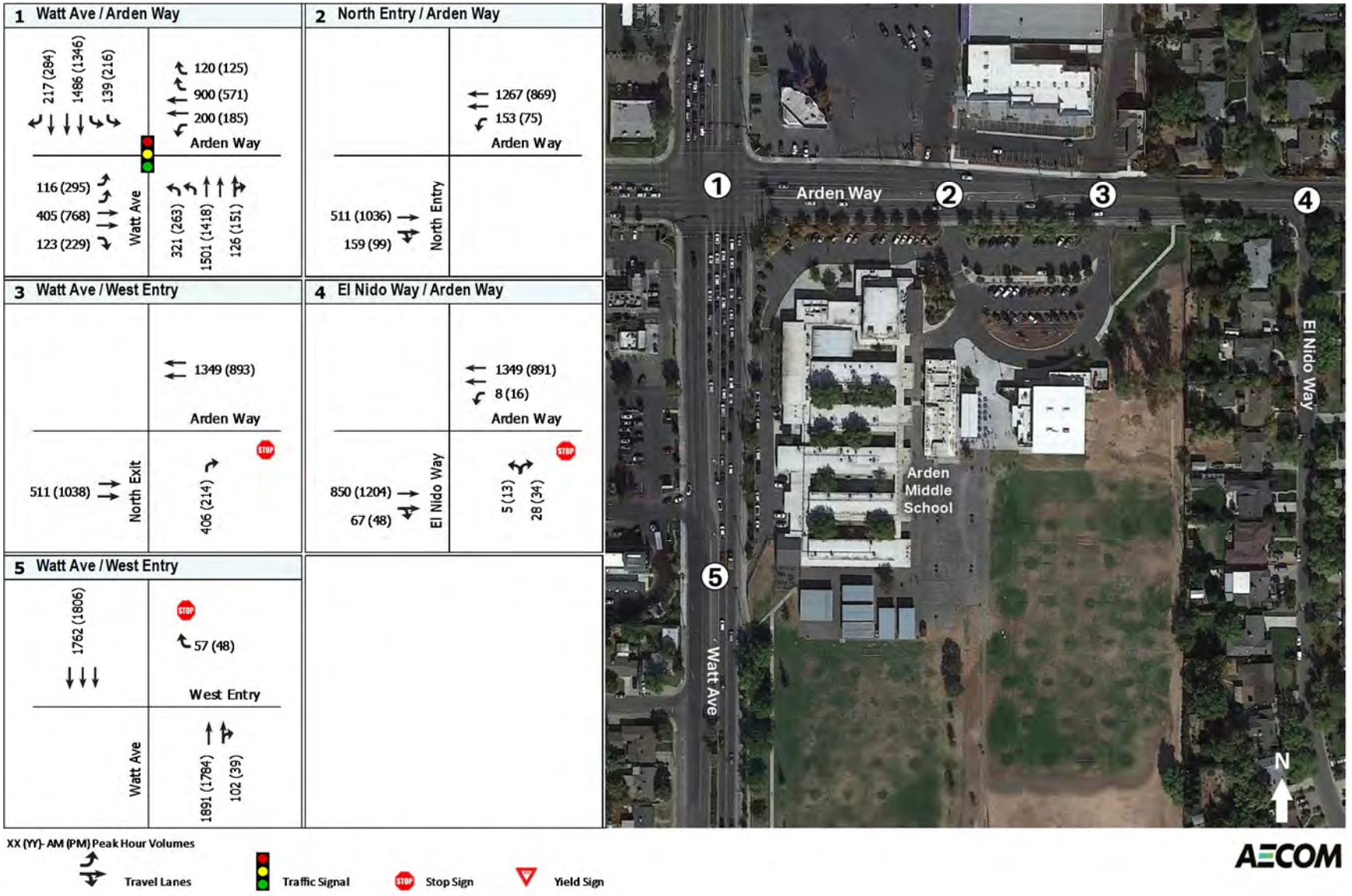
The queue lengths for existing plus project conditions were determined based on the observed existing queue lengths, estimated project-related traffic, and dwell times at the drop-off and pick-up locations**. Table 8** shows the estimated queue lengths in feet. As shown in the table, the queue at the pick-up lane in the northeastern portion of the campus is anticipated to extend further on Arden Way. The queue at the pick-up area of the school is anticipated to extend further with more vehicles allowed from both Arden Way and Watt Avenue entrance. Additional proposed parking is also anticipated to help reduce the queues inside the school campus.

Table 8: Existing Plus Project Maximum Estimated Queues

	Location	Vehicle Storage (feet)	Maximum Queue Length (feet)
1	Westbound Left Turn at Arden Way & School Entrance Driveway	90	**330**
2	First Drop-off/Pick-up Area (access from Watt Avenue)*	250	210
3	Second Drop-off/Pick-up Area (access from Arden Way)	500	420

Note: **Bold** indicates queue length exceeds the storage capacity. * Drop-off/pick-up area accessible from Watt Avenue entrance is proposed to be modified.

Figure 8: Existing Plus Project Peak-Hour Traffic Volumes and Lane Configurations



2035 CUMULATIVE WITHOUT PROJECT CONDITIONS

The traffic volumes for the 2035 cumulative without project conditions were derived based on the area-wide growth and trips from planned projects included in the latest available Sacramento Area Council of Governments (SACOG 2016) model.

Intersections

The 2035 cumulative without project peak-hour turning movement volumes at the study intersections for the weekday morning and afternoon peak hours are illustrated in **Figure 9**. **Table 9** provides the 2035 cumulative without project LOS for the study intersections. **Table 9** shows that all study intersections will operate at LOS E or better under cumulative without project conditions, except for the intersection of Arden Way and El Nido Way during the afternoon peak hour of school operations. The traffic analysis worksheets for existing conditions are provided in the **Appendix**.

Table 9: 2035 Cumulative without Project Intersection Level of Service

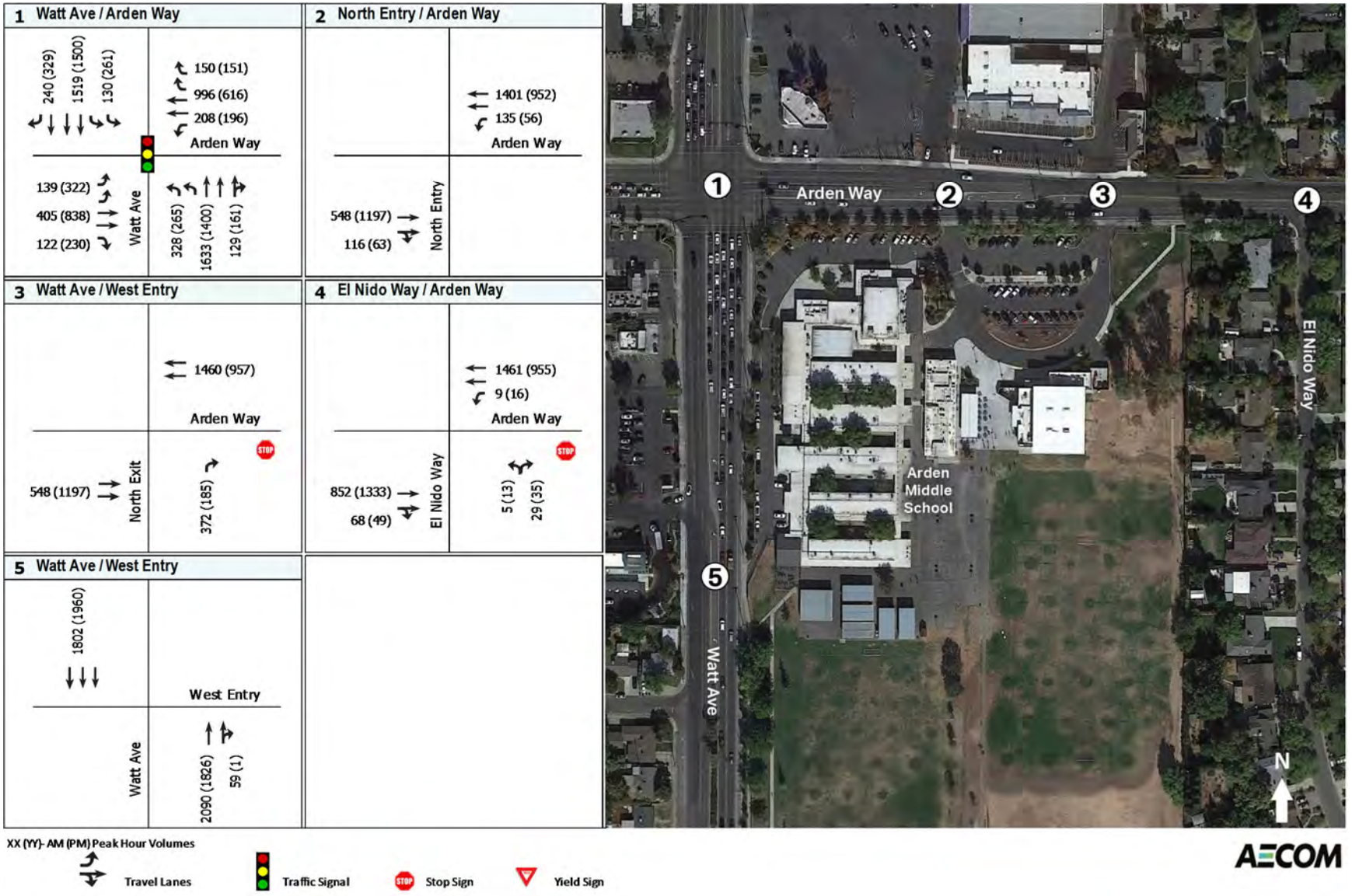
ID	Intersection	Control Type	Morning Peak Hour		Afternoon Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
1	Arden Way and Watt Avenue	Signalized	D	44.1	D	47.7
2	Arden Way and School Entry Driveway	Unsignalized	A	0.9	A	0.7
3	Arden Way and School Exit Driveway	Unsignalized	D	33.7	C	21.3
4	Arden Way and El Nido Way	Unsignalized	D	27.0	**F**	**51.8**
5	Watt Ave and School Entry Driveway	Unsignalized	C	23.4	C	23.0

Note: **Bold** indicates unsatisfactory LOS according to County of Sacramento policy. HCM 2010 Methodology.

Queues

Queue lengths for the existing conditions were determined directly from the observed drone videos. The queue lengths in the cumulative without project conditions are anticipated to be similar to those in the current conditions, as the traffic entering and exiting the school is assumed to be similar in the cumulative without project conditions.

Figure 9: 2035 without Project Peak-Hour Traffic Volumes and Lane Configurations



2035 CUMULATIVE WITH PROJECT CONDITIONS

The traffic volumes for the 2035 cumulative with project conditions were derived adding the project trips to the 2035 without project traffic volumes.

Intersections

The 2035 cumulative with project peak-hour turning movement volumes at the study intersections for the weekday morning and afternoon peak hours are illustrated in **Figure 10**. **Table 10** provides the 2035 cumulative with project LOS for the study intersections. **Table 10** shows that all study intersections will operate at LOS E or better under cumulative with project conditions, except for the intersection of Arden Way and El Nido Way during the afternoon peak hour of school operations. The traffic analysis worksheets for existing conditions are provided in the **Appendix**.

Table 10: 2035 Cumulative With Project Intersection Level of Service

ID	Intersection	Control Type	Morning Peak Hour		Afternoon Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
1	Arden Way and Watt Avenue	Signalized	D	46.2	D	49.5
2	Arden Way and School Entry Driveway	Unsignalized	A	1.0	A	1.0
3	Arden Way and School Exit Driveway	Unsignalized	E	47.3	C	24.4
4	Arden Way and El Nido Way	Unsignalized	D	30.0	**F**	**57.7**
5	Watt Ave and School Entry Driveway	Unsignalized	E	38.2	C	23.2

Note: **Bold** indicates unsatisfactory LOS according to County of Sacramento policy. HCM 2010 Methodology.

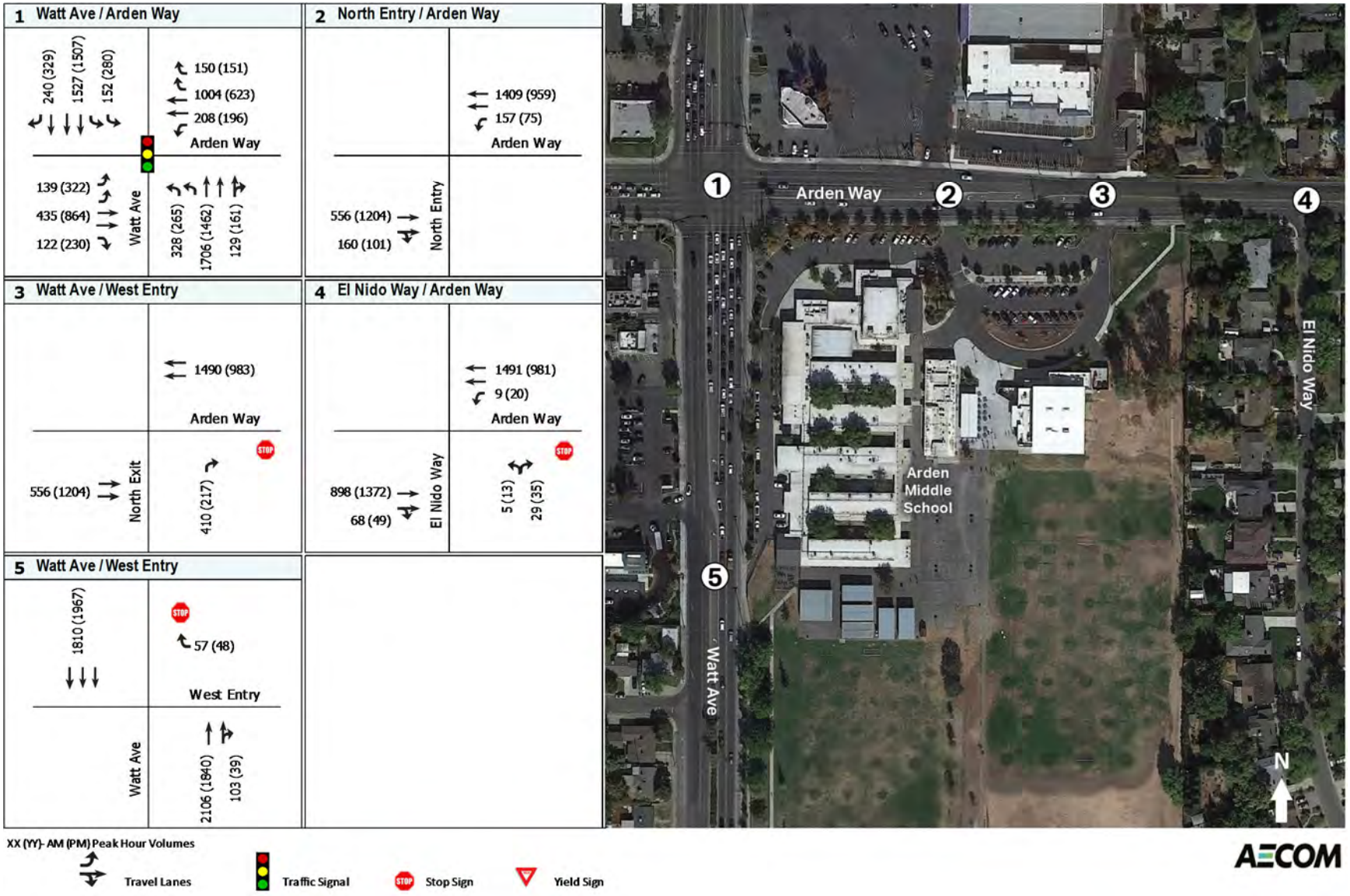
Queues

The queue lengths in the cumulative with project conditions are anticipated to be similar to those in the existing plus project conditions, as the traffic entering and exiting the school is assumed to be similar in the cumulative with project conditions. As part of the mitigation measures to reduce queues and bottlenecks at the entrance driveway, an additional traffic control guard is recommended at the driveway to control pedestrian movements blocking the westbound left turn vehicles on Arden Way, as well as vehicles merging at the drop-off/pick-up lanes and parking area.

Parking

Currently, significant drop-off and pick-up occurs at the adjacent commercial parking lots. With the additional project traffic, this behavior may increase. As described previously, the proposed project will reconstruct the parking spaces at the northwest portion of the school campus to provide additional parking. The parking area with approximately 27 spaces will be replaced with 144 parking spaces. The additional parking is anticipated to attract more vehicles entering the school campus for drop-off and pick-up of the students, rather than using the adjacent commercial parking lots. With more traffic in the parking and drop-off area, the exit driveways on Arden Way and Watt Avenue may experience congestion during the peak hours of operations. Peak traffic congestion and bottlenecks are anticipated to last approximately 20 minutes. As mentioned above in the Queues section, an additional traffic control guard would help to relieve some congestion in the parking area.

Figure 10: 2035 with Project Peak-Hour Traffic Volumes and Lane Configurations



CONSTRUCTION RELATED TRAFFIC IMPACTS

The proposed reconstruction of the school is anticipated to generate a variety of truck and construction employee trips. Since the percentage of these trips compared to the existing arterial traffic would not be high, the impacts (in terms of delay and queuing) would not be significant. To verify this, study intersections were analyzed by assuming some volumes during construction. Afternoon peak was analyzed for the existing plus construction scenario since the volumes are slightly higher compared to the morning peak of the school traffic operations. As shown in **Table 11,** the intersection LOS are the same for both with and without construction scenarios.

Table 11: Existing with and without Construction Intersection Level of Service

ID	Intersection	Control Type	Existing Afternoon Peak Hour		Existing + Construction Afternoon Peak Hour	
			LOS	Delay (sec)	LOS	Delay (sec)
1	Arden Way and Watt Avenue	Signalized	D	43.1	D	43.4
2	Arden Way and School Entry Driveway	Unsignalized	A	0.7	A	0.7
3	Arden Way and School Exit Driveway	Unsignalized	C	17.8	C	18.0
4	Arden Way and El Nido Way	Unsignalized	D	33.2	D	34.1
5	Watt Ave and School Entry Driveway	Unsignalized	C	20.8	C	20.8

Note: **Bold** indicates unsatisfactory LOS according to County of Sacramento policy. HCM 2010 Methodology.

As a mitigation measure to minimize construction impacts, it is recommended that the District develop and implement a Construction Traffic Management Plan (TMP). The plan may include items such as: the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, location/amount of employee parking, a driveway access plan (including provisions for safe vehicular, pedestrian, and bicycle travel, minimum distance from any open trench, special signage, and private vehicle access points), and the proposed use of traffic control/partial street closures on public streets. The overall goal of the Construction TMP would be to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. The Construction TMP will adhere to the following performance standards throughout project construction:

- Delivery trucks shall not be permitted during school drop-off and pick-up times, and shall not idle/stage on Arden Way or Watt Avenue.
- Safe and efficient access routes shall be maintained for existing businesses (and emergency vehicles) in the adjacent commercial places.
- Although unlikely to be necessary, any lane closures on Arden Way or Watt Avenue during project construction shall be limited to a single lane during off-peak hours (9:00 AM to 2:00 PM and).
- Roadways, sidewalks, crosswalks, and bicycle facilities shall be maintained clear of debris (e.g., rocks) that could otherwise impede travel and impact public safety.

Implementation of the Construction TMP will help ensure against any impact during construction.

CONCLUSION AND RECOMMENDATIONS

Overall, peak traffic in the vicinity of the campus during drop-off and pick-up times lasts for approximately 15 to 20 minutes. The school expansion will add traffic to study intersections and is anticipated to increase average delay for each vehicle by approximately 15 seconds. The additional proposed parking in the school campus is anticipated to attract more vehicles entering the school campus for drop-off and pick-up of the students rather than using the adjacent commercial parking lots.

Queues at the westbound left-turn pocket at Arden Way and Entry Driveway, as well as the drop-off/pick-up areas within the school are anticipated to increase slightly with the additional project traffic. To further reduce congestion associated with the school expansion during the 15 to 20 minutes where this congestion occurs, the following strategies are recommended:

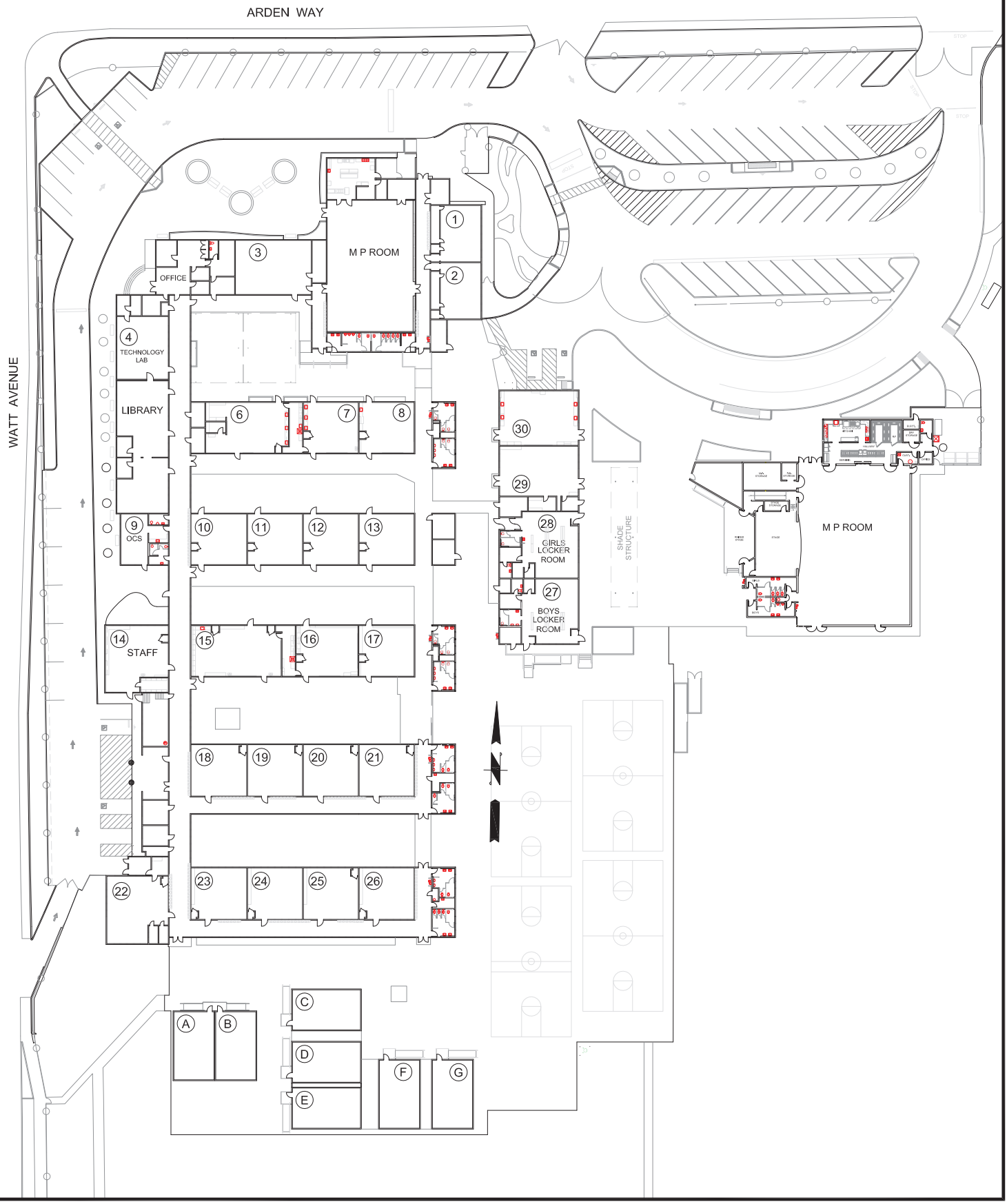
- Different school dismissal times for certain grades can reduce congestion during the pick-up operations.
- Pre-planned drop-off/pick-up locations on the campus can help school guards anticipate the traffic accurately and facilitate quicker and more efficient pick up and drop off.
- Additional school staff to assist with the loading/unloading of students can help to reduce the dwell times and clear queues faster.
- Additional guards near the parking area and exit driveway may be added for efficient circulation and avoid longer period of bottlenecks and congestion during the peak operations.
- The District should encourage parents to use the additional parking included as a part of the project and pre-planned pick-up and drop-off areas, rather than using off-site parking areas across Arden Way and Watt Avenue north and west of the campus.
- Vehicles entering the school from Arden Way should be allowed to use the expanded parking area, as well as exit onto Watt Avenue, as shown in the proposed site plan. This will allow more flexibility to the vehicles coming from different directions and continue to their next destination after the drop-off/pick-up.

APPENDIX

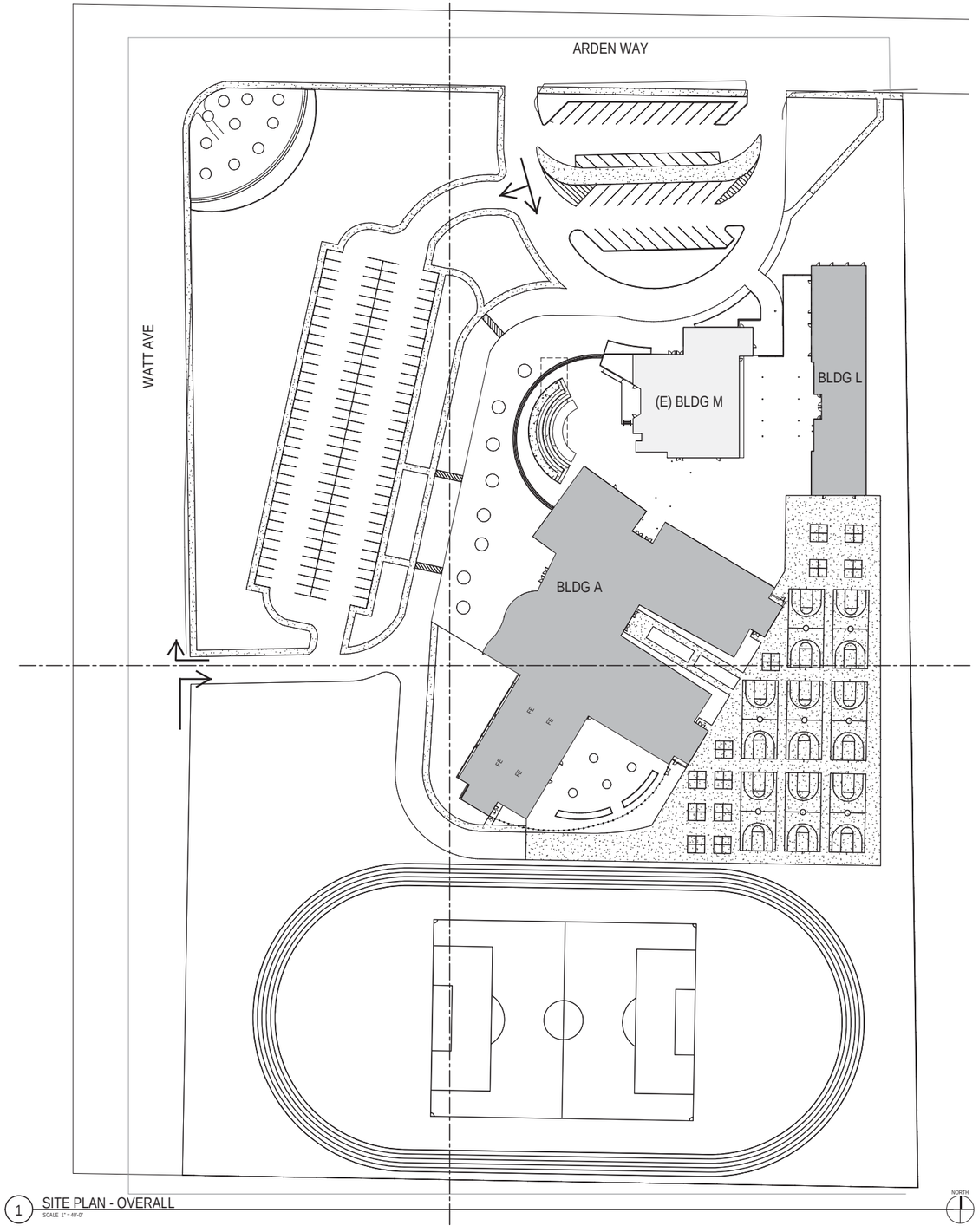
Arden Middle School - Existing Site Plan

Address: 1640 Watt Avenue
Sacramento CA 95864
School Number: 002

Initial Construction Completion Date: 1938
Total Sq. Ft. of Floor Space: 74,508
Acres: 17.2



Drawing Updated: 01/23/17 Date Printed: 01/23/17 Drawn By: Engineering Archives



1 SITE PLAN - OVERALL
SCALE 1" = 40'-0"

NORTH

GENERAL NOTES

1. SEE CIVIL DRAWINGS FOR ASPHALTIC AND PORTLAND CEMENT CONCRETE PAVING TYPES AND SECTIONS.
2. SEE CIVIL DRAWINGS FOR ADDITIONAL PATH OF TRAVEL IMPROVEMENT.
3. SEE CIVIL DRAWINGS FOR LOCATION OF ALL UNDERGROUND UTILITIES.
4. SEE LANDSCAPE PLANS FOR ALL PLANTING MATERIAL SPECIES, QUANTITIES AND LOCATIONS, AND IRRIGATION SYSTEM.
5. SEE SHEETS GA101A AND GA101B FOR ACCESSIBLE PATH OF TRAVEL.
6. SEE HORIZONTAL CONTROL PLAN, CIVIL DRAWINGS, FOR DIMENSIONS NOT OTHERWISE SHOWN ON THIS DRAWING.
7. PROVIDE 12" CONCRETE MOW STRIP BETWEEN ALL LANDSCAPE AREAS AND BUILDING.
8. SEE PLUMBING SHEETS FOR ROUTING OF ALL UNDERGROUND GAS LINES AND ROOF DRAINAGE CONNECTION POINTS TO STORM DRAINAGE SYSTEM, WATER, AND SEWER LINES SHOWN ON CIVIL DRAWINGS.
9. SEE ELECTRICAL DRAWINGS FOR LOCATION AND TYPES OF VARIOUS POWER AND SIGNAL PULL BOXES AND LIGHT FIXTURES.
10. CONTROL JOINTS SHALL BE LOCATED AT THE OUTSIDE CORNERS OF THE BUILDING.
11. SEE CIVIL DRAWINGS FOR TYPICAL PAVEMENT STRIPING, SYMBOLS, ETC., UNO.
12. SEE LANDSCAPE DRAWINGS FOR MISCELLANEOUS SITE FEATURES NOT LIMITED TO, BUT INCLUDING CONCRETE PLANTERS, SURFACING MATERIAL, AND TREE GRATES.
13. SEE CIVIL DRAWINGS FOR ALL ADA WALKWAYS, RAMPS, DROP-OFF AREAS, PARKING LOT STRIPING AND SIGNAGE, AND CURB MARKINGS.
14. LOCATE TOW AWAY SIGNAGE AT EACH PARKING ENTRANCE, SEE CIVIL DRAWINGS.
15. EXTERIOR OPENING DOORS AT WALKWAYS TO HAVE RED ARC STRIPING TO SHOW THE SWING OF DOOR, SEE 5/AS504

NOTE: PC APPROVED SHADE STRUCTURE MODEL PC #04-113614
PC APPROVED METAL SHADE STRUCTURE MODEL PC #02-113608
PC APPROVED BALL WALL MODEL PC #03-115781

LEGEND

- PROPERTY LINE AND LIMITS OF ARCHITECTURAL SCOPE OF WORK
- (E) BUILDING TO REMAIN
- NEW BUILDING LOCATION UNDER THE SCOPE OF THE PROJECT, INCREMENT # 2
- CONCRETE PAVING, SEE CIVIL DRAWINGS
- CHAIN LINK FENCING AS NOTED, SEE 1/AS502, 2/AS502, 13/AS503
- DECORATIVE FENCING, SEE 11/AS501
- XXXX SITE GATES - SEE GATE SCHEDULE 1/AS501
- LIGHT FIXTURES, SEE ELECTRICAL DRAWINGS
- FH FIRE HYDRANT, SEE CIVIL DRAWINGS
- FDC FIRE DEPARTMENT CONNECTION, SEE CIVIL DRAWINGS
- PIV POST INDICATOR VALUE, SEE CIVIL DRAWINGS
- PH PANIC HARDWARE

LIONAKIS
1919 Nineteenth Street
Sacramento CA 95811
P 916.558.1900 F 916.558.1919
www.lionakis.com
CONSULTANT

SEAL
FOR REVIEW ONLY. NOT FOR CONSTRUCTION

PROJECT
ARDEN MIDDLE SCHOOL
INCREMENT #2
1640 WATT AVE
SACRAMENTO, CA 95864

CLIENT
SAN JUAN UNIFIED SCHOOL DISTRICT
3738 WALNUT AVENUE
CARMICHAEL, CA 95608

ISSUED

MARK	DATE	DESCRIPTION

MANAGEMENT
LIONAKIS PROJECT NO: 019021
CLIENT PROJECT NO:
COPYRIGHT: LIONAKIS 2019

AGENCY

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
AC ____ FLS ____ SS ____
DATE ____

TITLE
SITE PLAN - OVERALL

SHEET
AS101

IF THIS SHEET IS NOT 30"x42", IT IS A REDUCED PRINT - SCALE ACCORDINGLY
C:\Users\alicia.chavez\Documents_Revit Local Files\19021_BIM_AAMSTER_RS8_CENTRAL_alicia.chavez.rvt
7/2/2019 9:38:53 AM

Traffic Counts

Prepared by National Data & Surveying Services

Watt Ave & Arden Way

Peak Hour Turning Movement Count

ID: 19-07198-001
City: Sacramento

Day: Friday
Date: 05/17/2019

PEAK HOURS	
AM	07:30 AM - 08:30 AM
NOON	02:30 PM - 03:30 PM
PM	NONE

COUNT PERIODS	
AM	06:45 AM - 08:45 AM
NOON	01:30 PM - 03:30 PM
PM	NONE

Watt Ave — SOUTHBOUND

AM	217	1478	115	2	1657	AM
NOON	284	1339	188	9	1776	NOON
PM	0	0	0	0	0	PM
	1	3	2	0		

EASTBOUND — Arden Way

AM	NOON	PM		
1437	1113	0		
9	9	0	0	
107	286	0	2	
375	742	0	2	
123	229	0	1	
AM	NOON	PM		

WESTBOUND — Arden Way

	PM	NOON	AM
1	0	125	120
2	0	564	892
2	0	172	194
0	0	13	6
	0	1084	603
	PM	NOON	AM

CONTROL

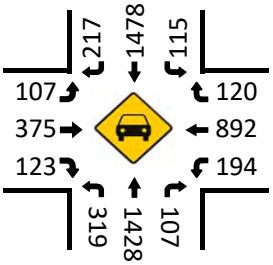
Signalized

	AM	NOON	PM
TEV	5494	5720	0
PHF	0.98	0.97	

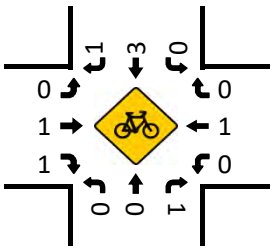
Watt Ave — NORTHBOUND

	0	2	3	0		
PM	0	0	0	0	0	PM
NOON	1747	7	256	1356	141	NOON
AM	1797	2	319	1428	107	AM

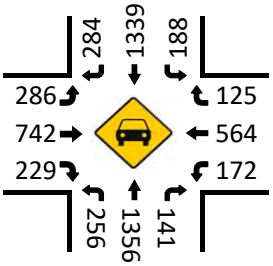
Total Vehicles (AM)



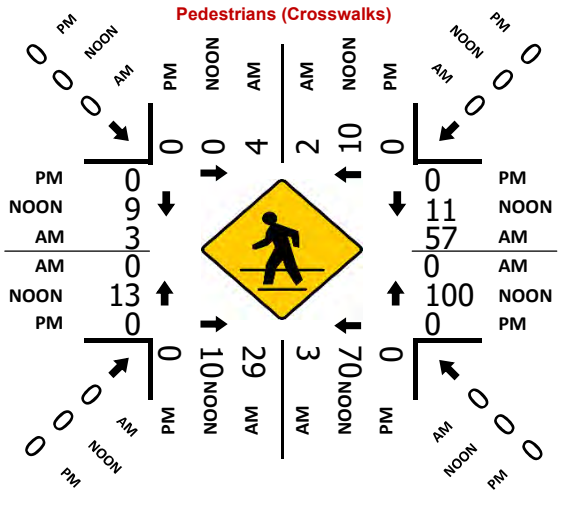
Bikes (AM)



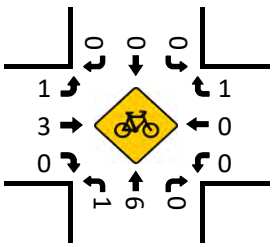
Total Vehicles (Noon)



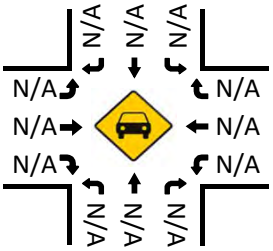
Pedestrians (Crosswalks)



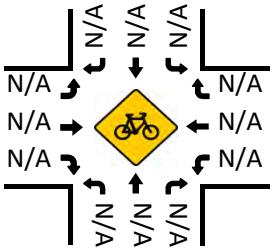
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Arden Middle School Drop Off Entrance & Arden Way

Peak Hour Turning Movement Count

ID: 19-07198-002
City: Sacramento

Day: Friday
Date: 05/17/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	06:45 AM - 08:45 AM
02:30 PM - 03:30 PM	01:30 PM - 03:30 PM
NONE	NONE

Arden Middle School Drop Off Entrance — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Arden Way)

AM	NOON	PM	
1259	862	0	
0	0	0	0
0	0	0	0
503	1029	0	2
115	61	0	0
AM	NOON	PM	

WESTBOUND (Arden Way)

PM	NOON	AM	
0	0	0	0
0	862	1259	2
0	53	131	1
0	3	0	0
0	1034	503	
PM	NOON	AM	

NORTHBOUND (rden Middle School Drop Off Entranc)

PM	0	0	0	0	0	PM
NOON	114	0	0	0	2	NOON
AM	246	0	0	0	0	AM

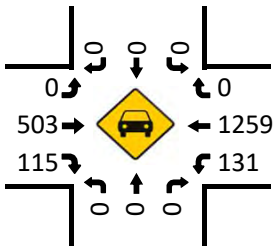
	0	0	1	0

CONTROL

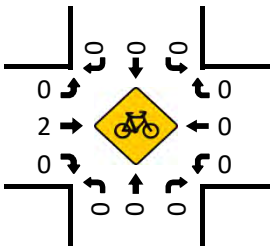
1-Way Stop(SB)

TEV	2008 AM	2010 NOON	0 PM
PHF	0.93	0.93	

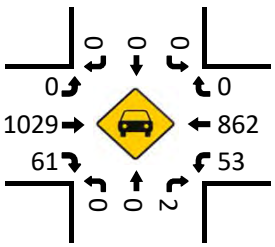
Total Vehicles (AM)



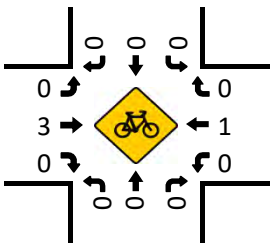
Bikes (AM)



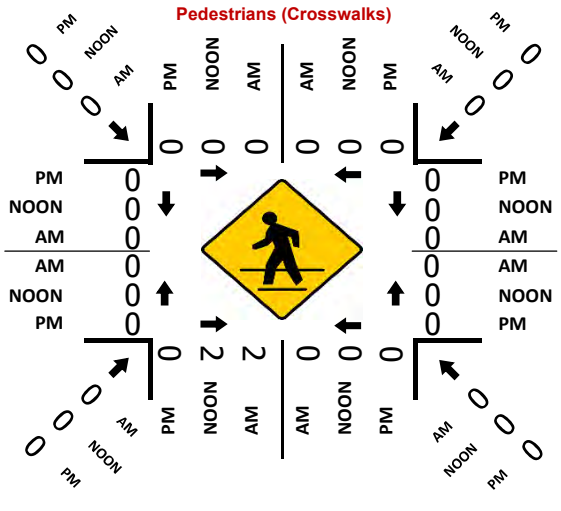
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
0
0

Prepared by National Data & Surveying Services

Arden Middle School Drop Off Exit & Arden Way

Peak Hour Turning Movement Count

ID: 19-07198-003
City: Sacramento

Day: Friday
Date: 05/17/2019

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	02:30 PM - 03:30 PM
PM	NONE

COUNT PERIODS

AM	06:45 AM - 08:45 AM
NOON	01:30 PM - 03:30 PM
PM	NONE

Arden Middle School Drop Off Exit — SOUTHBOUND

AM	11	0	5	0	24	AM
NOON	21	0	28	0	31	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Arden Way

AM	NOON	PM		
1352	914	0		
1	7	0		0
3	18	0		0
435	1013	0		2
0	0	0		1
AM	NOON	PM		

WESTBOUND — Arden Way

PM	NOON	AM		
0	11	19		0
0	867	1319		2
0	0	0		0
0	0	0		0
0	1223	808		
PM	NOON	AM		

CONTROL: 1-Way Stop(NB)

TEV	2184	2168	0
	AM	NOON	PM
PHF	0.79	0.93	

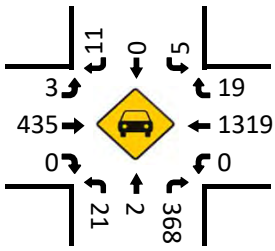
NORTHBOUND — Arden Middle School Drop Off Exit

PM	0	0	0	0	0	PM
NOON	0	0	19	2	182	NOON
AM	0	0	21	2	368	AM

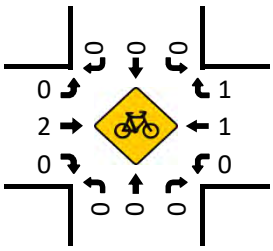
0 0 0 2

0 1 0 0

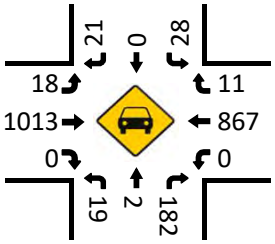
Total Vehicles (AM)



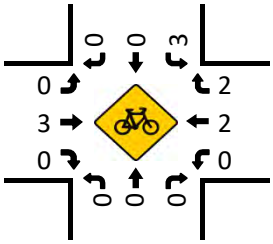
Bikes (AM)



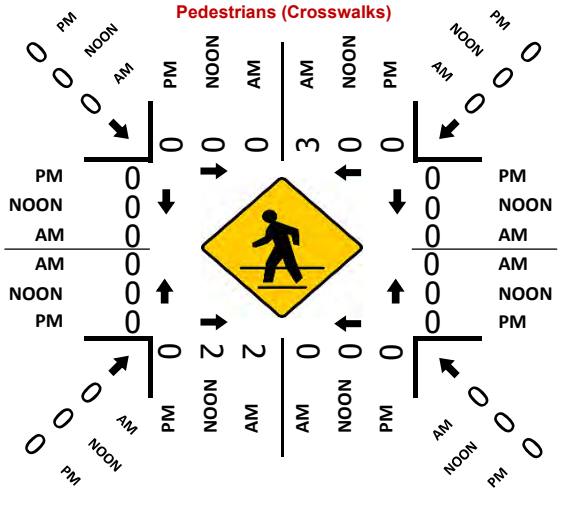
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
3
0
0
0

Prepared by National Data & Surveying Services

El Nido Way & Arden Way

Peak Hour Turning Movement Count

ID: 19-07198-004
City: Sacramento

Day: Friday
Date: 05/17/2019

PEAK HOURS	
AM	07:15 AM - 08:15 AM
NOON	02:30 PM - 03:30 PM
PM	NONE

COUNT PERIODS	
AM	06:45 AM - 08:45 AM
NOON	01:30 PM - 03:30 PM
PM	NONE

SOUTHBOUND (El Nido Way)

	AM	NOON	PM	
Left	0	0	0	0
Through	0	0	0	0
Right	0	0	0	0
U-Turn	0	0	0	0
Approach	0	0	0	0

EASTBOUND (Arden Way)

	AM	NOON	PM	
Approach	1345	878	0	0
Left	21	0	0	0
Through	0	0	0	0
Right	710	1178	0	2
U-Turn	67	48	0	0

WESTBOUND (Arden Way)

	PM	NOON	AM	
Approach	0	1212	738	0
Left	0	0	0	0
Through	0	865	1319	2
Right	0	16	8	0
U-Turn	0	0	0	0

NORTHBOUND (El Nido Way)

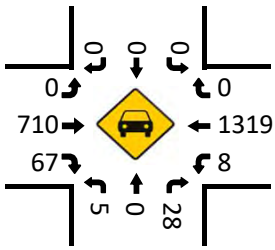
	PM	NOON	AM	
Approach	0	64	75	0
Left	0	0	0	0
Through	0	13	5	1
Right	0	0	0	0
U-Turn	0	34	28	0

CONTROL

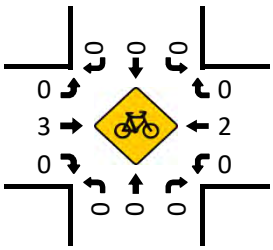
1-Way Stop(NB)

	2158	2154	0
TEV	AM	NOON	PM
PHF	0.80	0.94	

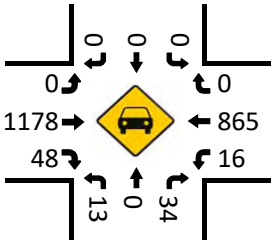
Total Vehicles (AM)



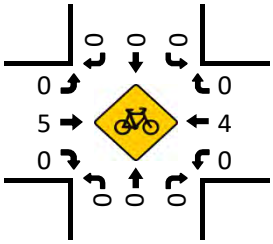
Bikes (AM)



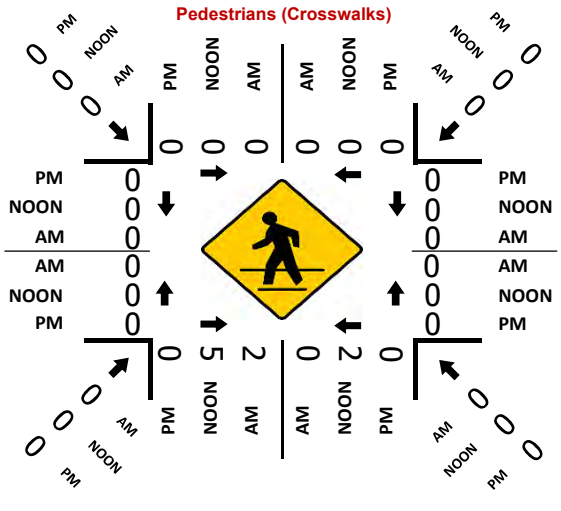
Total Vehicles (Noon)



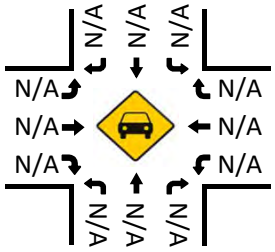
Bikes (NOON)



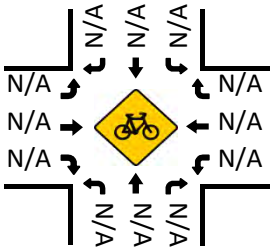
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Watt Ave & Arden Middle School Parking Lot Entrance

Peak Hour Turning Movement Count

ID: 19-07198-005
City: Sacramento

Day: Friday
Date: 05/17/2019

PEAK HOURS	COUNT PERIODS
07:30 AM - 08:30 AM	06:45 AM - 08:45 AM
02:30 PM - 03:30 PM	01:30 PM - 03:30 PM
NONE	NONE

Watt Ave — SOUTHBOUND

AM	0	1754	0	0	1833	AM
NOON	0	1799	0	0	1758	NOON
PM	0	0	0	0	0	PM

Arden Middle School Parking Lot — EASTBOUND

AM	NOON	PM
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

CONTROL

No Control

TEV	3645	3558	0
	AM	NOON	PM
PHF	0.90	0.99	

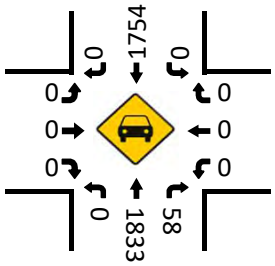
WESTBOUND — Arden Middle School Parking Lot

PM	NOON	AM
0	0	0
0	0	0
0	0	0
0	0	0
0	1	58

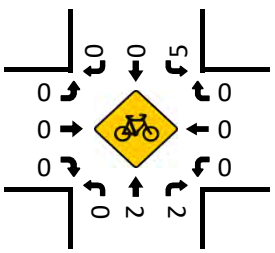
NORTHBOUND — Watt Ave

PM	0	0	0	0	PM
NOON	1799	0	0	1758	1	NOON
AM	1754	0	0	1833	58	AM

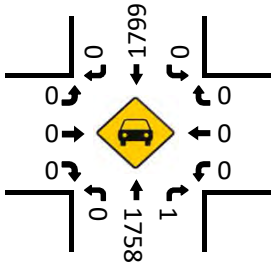
Total Vehicles (AM)



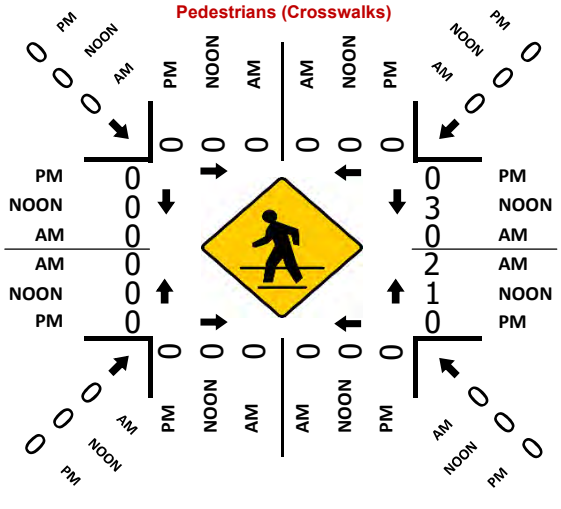
Bikes (AM)



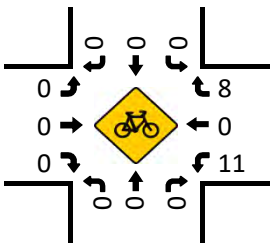
Total Vehicles (Noon)



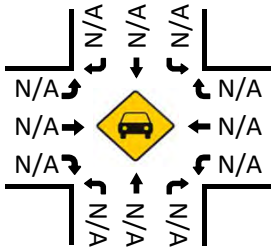
Pedestrians (Crosswalks)



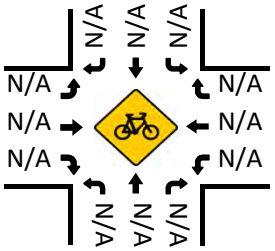
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Synchro Results

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	375	123	200	892	120	321	1428	126	117	1478	217
Future Volume (veh/h)	116	375	123	200	892	120	321	1428	126	117	1478	217
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	118	383	126	204	910	122	328	1457	129	119	1508	221
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	1009	430	261	1098	482	387	2051	182	173	1888	578
Arrive On Green	0.05	0.29	0.29	0.08	0.31	0.31	0.11	0.43	0.43	0.05	0.37	0.37
Sat Flow, veh/h	3442	3539	1509	3442	3539	1554	3442	4733	419	3442	5085	1557
Grp Volume(v), veh/h	118	383	126	204	910	122	328	1043	543	119	1508	221
Grp Sat Flow(s),veh/h/ln	1721	1770	1509	1721	1770	1554	1721	1695	1762	1721	1695	1557
Q Serve(g_s), s	3.9	10.1	7.5	6.7	27.7	6.8	10.8	29.2	29.2	3.9	30.7	12.1
Cycle Q Clear(g_c), s	3.9	10.1	7.5	6.7	27.7	6.8	10.8	29.2	29.2	3.9	30.7	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	174	1009	430	261	1098	482	387	1469	764	173	1888	578
V/C Ratio(X)	0.68	0.38	0.29	0.78	0.83	0.25	0.85	0.71	0.71	0.69	0.80	0.38
Avail Cap(c_a), veh/h	261	1375	586	282	1396	613	431	1481	770	205	1888	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.1	33.2	32.3	52.6	37.1	29.9	50.4	26.9	26.9	54.1	32.6	26.7
Incr Delay (d2), s/veh	4.6	0.2	0.4	12.4	3.4	0.3	13.4	1.6	3.0	7.4	3.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.9	3.2	3.7	14.0	2.9	5.9	13.9	14.8	2.1	15.0	5.5
LnGrp Delay(d),s/veh	58.7	33.4	32.7	65.0	40.5	30.2	63.8	28.5	29.9	61.5	36.2	28.6
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	C
Approach Vol, veh/h		627			1236			1914			1848	
Approach Delay, s/veh		38.0			43.5			34.9			36.9	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	54.7	13.3	37.5	17.5	47.5	10.4	40.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.9	50.6	9.5	45.0	14.5	43.0	8.8	45.7
Max Q Clear Time (g_c+I1), s	5.9	31.2	8.7	12.1	12.8	32.7	5.9	29.7
Green Ext Time (p_c), s	0.0	11.2	0.1	3.2	0.2	7.4	0.1	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	503	115	131	1259	0	0	0	0	0	0	0
Future Vol, veh/h	0	503	115	131	1259	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	541	124	141	1354	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	667	0	0				-	-	677
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	919	-	0				0	0	395
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	919	-	-				-	0	395
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.9	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	919	-	-
HCM Lane V/C Ratio	-	-	0.153	-	-
HCM Control Delay (s)	-	-	9.6	-	0
HCM Lane LOS	-	-	A	-	A
HCM 95th %tile Q(veh)	-	-	0.5	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	503	0	0	1319	0	368
Future Vol, veh/h	503	0	0	1319	0	368
Conflicting Peds, #/hr	0	2	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	699	0	0	1832	0	511

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	350
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	646
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	646
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	28.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	646	-	-
HCM Lane V/C Ratio	0.791	-	-
HCM Control Delay (s)	28.3	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	7.8	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	804	67	8	1319	5	28
Future Vol, veh/h	804	67	8	1319	5	28
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1005	84	10	1649	6	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1091	0	1894	547
Stage 1	-	-	-	-	1049	-
Stage 2	-	-	-	-	845	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	635	-	61	481
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	382	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	634	-	49	480
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	310	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	26.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	206	-	-	634	-
HCM Lane V/C Ratio	0.2	-	-	0.016	-
HCM Control Delay (s)	26.8	-	-	10.8	1
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.7	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	0	0	1875	58	0	1754	0
Future Vol, veh/h	0	0	10	0	0	0	0	1875	58	0	1754	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	90	92	90	92	90	90	90	90	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	0	0	2083	64	0	1949	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	-	-	975				-	0	0	-	-	0
Stage 1	-	-	-				-	-	-	-	-	-
Stage 2	-	-	-				-	-	-	-	-	-
Critical Hdwy	-	-	7.14				-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-				-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-				-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92				-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	216				0	-	-	0	-	0
Stage 1	0	0	-				0	-	-	0	-	0
Stage 2	0	0	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	0	216				-	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-				-	-	-	-	-	-
Stage 1	-	0	-				-	-	-	-	-	-
Stage 2	-	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	216	-
HCM Lane V/C Ratio	-	-	0.05	-
HCM Control Delay (s)	-	-	22.5	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	742	229	185	564	125	263	1356	151	197	1339	284
Future Volume (veh/h)	295	742	229	185	564	125	263	1356	151	197	1339	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	1.00		0.90	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	304	765	236	191	581	129	271	1398	156	203	1380	293
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	1199	492	245	1073	469	327	1699	189	257	1782	545
Arrive On Green	0.11	0.34	0.34	0.07	0.30	0.30	0.09	0.37	0.37	0.07	0.35	0.35
Sat Flow, veh/h	3442	3539	1451	3442	3539	1548	3442	4582	511	3442	5085	1554
Grp Volume(v), veh/h	304	765	236	191	581	129	271	1034	520	203	1380	293
Grp Sat Flow(s),veh/h/ln	1721	1770	1451	1721	1770	1548	1721	1695	1703	1721	1695	1554
Q Serve(g_s), s	10.8	22.7	16.0	6.8	17.0	7.9	9.6	34.4	34.4	7.2	30.1	18.8
Cycle Q Clear(g_c), s	10.8	22.7	16.0	6.8	17.0	7.9	9.6	34.4	34.4	7.2	30.1	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	367	1199	492	245	1073	469	327	1257	631	257	1782	545
V/C Ratio(X)	0.83	0.64	0.48	0.78	0.54	0.27	0.83	0.82	0.82	0.79	0.77	0.54
Avail Cap(c_a), veh/h	498	1280	525	274	1073	469	374	1270	638	291	1782	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	34.7	32.5	56.8	36.1	32.9	55.3	35.4	35.4	56.6	36.0	32.3
Incr Delay (d2), s/veh	8.3	1.0	0.7	12.2	0.6	0.3	13.1	4.5	8.5	12.3	3.4	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	11.2	6.5	3.7	8.4	3.4	5.2	16.9	17.7	3.9	14.6	8.6
LnGrp Delay(d),s/veh	62.8	35.7	33.2	69.0	36.7	33.3	68.4	39.9	44.0	68.9	39.4	36.1
LnGrp LOS	E	D	C	E	D	C	E	D	D	E	D	D
Approach Vol, veh/h		1305			901			1825			1876	
Approach Delay, s/veh		41.5			43.0			45.3			42.0	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	50.6	13.3	46.6	16.3	48.1	17.8	42.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	46.6	9.9	45.0	13.5	43.6	18.0	36.9
Max Q Clear Time (g_c+I1), s	9.2	36.4	8.8	24.7	11.6	32.1	12.8	19.0
Green Ext Time (p_c), s	0.1	7.0	0.1	6.4	0.2	7.8	0.5	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	43.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1029	61	56	862	0	0	0	0	0	0	0
Future Vol, veh/h	0	1029	61	56	862	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1106	66	60	927	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	1174	0	0				-	-	464
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	591	-	0				0	0	545
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	591	-	-				-	0	545
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	591	-	-
HCM Lane V/C Ratio	-	-	0.102	-	-
HCM Control Delay (s)	-	-	11.8	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1031	0	0	867	0	182
Future Vol, veh/h	1031	0	0	867	0	182
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1109	0	0	932	0	196

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	555
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	475
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	475
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	17.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	475	-	-
HCM Lane V/C Ratio	0.412	-	-
HCM Control Delay (s)	17.8	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	2	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1165	48	16	865	13	34
Future Vol, veh/h	1165	48	16	865	13	34
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1239	51	17	920	14	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1292	0	1761	647
Stage 1	-	-	-	-	1267	-
Stage 2	-	-	-	-	494	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	532	-	76	414
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	531	-	71	413
Mov Cap-2 Maneuver	-	-	-	-	71	-
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	33.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	177	-	-	531	-
HCM Lane V/C Ratio	0.282	-	-	0.032	-
HCM Control Delay (s)	33.2	-	-	12	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	1.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	0	0	1770	1	0	1799	0
Future Vol, veh/h	0	0	10	0	0	0	0	1770	1	0	1799	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	99	92	99	92	99	99	99	99	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	0	0	1788	1	0	1817	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	-	-	909				-	0	0	-	-	0
Stage 1	-	-	-				-	-	-	-	-	-
Stage 2	-	-	-				-	-	-	-	-	-
Critical Hdwy	-	-	7.14				-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-				-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-				-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92				-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	238				0	-	-	0	-	0
Stage 1	0	0	-				0	-	-	0	-	0
Stage 2	0	0	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	0	238				-	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-				-	-	-	-	-	-
Stage 1	-	0	-				-	-	-	-	-	-
Stage 2	-	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	238	-
HCM Lane V/C Ratio	-	-	0.046	-
HCM Control Delay (s)	-	-	20.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	405	123	200	900	120	321	1501	126	139	1486	217
Future Volume (veh/h)	116	405	123	200	900	120	321	1501	126	139	1486	217
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	118	413	126	204	918	122	328	1532	129	142	1516	221
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	1015	433	261	1105	485	387	2021	170	198	1882	576
Arrive On Green	0.05	0.29	0.29	0.08	0.31	0.31	0.11	0.42	0.42	0.06	0.37	0.37
Sat Flow, veh/h	3442	3539	1509	3442	3539	1554	3442	4756	400	3442	5085	1557
Grp Volume(v), veh/h	118	413	126	204	918	122	328	1092	569	142	1516	221
Grp Sat Flow(s),veh/h/ln	1721	1770	1509	1721	1770	1554	1721	1695	1766	1721	1695	1557
Q Serve(g_s), s	3.9	10.9	7.6	6.8	28.0	6.8	10.9	31.7	31.8	4.7	31.1	12.1
Cycle Q Clear(g_c), s	3.9	10.9	7.6	6.8	28.0	6.8	10.9	31.7	31.8	4.7	31.1	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	174	1015	433	261	1105	485	387	1441	751	198	1882	576
V/C Ratio(X)	0.68	0.41	0.29	0.78	0.83	0.25	0.85	0.76	0.76	0.72	0.81	0.38
Avail Cap(c_a), veh/h	261	1370	584	281	1392	611	429	1447	754	234	1882	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	33.5	32.2	52.8	37.1	29.8	50.6	28.3	28.4	53.8	32.9	26.9
Incr Delay (d2), s/veh	4.6	0.3	0.4	12.5	3.6	0.3	13.6	2.4	4.5	8.3	3.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.4	3.2	3.7	14.2	2.9	5.9	15.3	16.4	2.5	15.3	5.5
LnGrp Delay(d),s/veh	58.9	33.7	32.6	65.3	40.7	30.1	64.1	30.7	32.8	62.1	36.7	28.8
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	C
Approach Vol, veh/h		657			1244			1989			1879	
Approach Delay, s/veh		38.0			43.7			36.8			37.7	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	53.9	13.3	37.8	17.6	47.5	10.4	40.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.9	49.6	9.5	45.0	14.5	43.0	8.8	45.7
Max Q Clear Time (g_c+I1), s	6.7	33.8	8.8	12.9	12.9	33.1	5.9	30.0
Green Ext Time (p_c), s	0.0	10.2	0.1	3.4	0.2	7.2	0.1	6.3

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	511	159	153	1267	0	0	0	0	0	0	0
Future Vol, veh/h	0	511	159	153	1267	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	549	171	165	1362	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	722	0	0				-	-	681
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	876	-	0				0	0	393
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	876	-	-				-	0	393
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	876	-	-
HCM Lane V/C Ratio	-	-	0.188	-	-
HCM Control Delay (s)	-	-	10.1	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.7	-	-

Intersection	
Int Delay, s/veh	6.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	511	0	0	1349	0	406
Future Vol, veh/h	511	0	0	1349	0	406
Conflicting Peds, #/hr	0	2	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	710	0	0	1874	0	564

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	355
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	641
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	641
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	37.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	641	-	-
HCM Lane V/C Ratio	0.88	-	-
HCM Control Delay (s)	37.9	-	-
HCM Lane LOS	E	-	-
HCM 95th %tile Q(veh)	10.5	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	850	67	8	1349	5	28
Future Vol, veh/h	850	67	8	1349	5	28
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1063	84	10	1686	6	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1149	0	1970	576
Stage 1	-	-	-	-	1107	-
Stage 2	-	-	-	-	863	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	604	-	55	460
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	373	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	603	-	41	459
Mov Cap-2 Maneuver	-	-	-	-	41	-
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	275	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	30.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	180	-	-	603	-
HCM Lane V/C Ratio	0.229	-	-	0.017	-
HCM Control Delay (s)	30.8	-	-	11.1	1.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	57	0	1891	102	0	1762	0
Future Vol, veh/h	0	0	10	0	0	57	0	1891	102	0	1762	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	90	92	90	92	90	90	90	90	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	63	0	2101	113	0	1958	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	979	-	-	1109	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	214	0	0	204	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	214	-	-	204	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.7	30.4	0	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	214	204	-
HCM Lane V/C Ratio	-	-	0.051	0.31	-
HCM Control Delay (s)	-	-	22.7	30.4	-
HCM Lane LOS	-	-	C	D	-
HCM 95th %tile Q(veh)	-	-	0.2	1.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	768	229	185	571	125	263	1418	151	216	1346	284
Future Volume (veh/h)	295	768	229	185	571	125	263	1418	151	216	1346	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	1.00		0.90	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	304	792	236	191	589	129	271	1462	156	223	1388	293
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	366	1198	491	244	1072	469	326	1692	180	275	1793	548
Arrive On Green	0.11	0.34	0.34	0.07	0.30	0.30	0.09	0.37	0.37	0.08	0.35	0.35
Sat Flow, veh/h	3442	3539	1451	3442	3539	1548	3442	4608	491	3442	5085	1554
Grp Volume(v), veh/h	304	792	236	191	589	129	271	1075	543	223	1388	293
Grp Sat Flow(s),veh/h/ln	1721	1770	1451	1721	1770	1548	1721	1695	1709	1721	1695	1554
Q Serve(g_s), s	10.9	23.9	16.1	6.8	17.5	7.9	9.7	36.9	36.9	8.0	30.5	18.9
Cycle Q Clear(g_c), s	10.9	23.9	16.1	6.8	17.5	7.9	9.7	36.9	36.9	8.0	30.5	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	366	1198	491	244	1072	469	326	1245	627	275	1793	548
V/C Ratio(X)	0.83	0.66	0.48	0.78	0.55	0.28	0.83	0.86	0.86	0.81	0.77	0.53
Avail Cap(c_a), veh/h	494	1270	521	261	1072	469	365	1271	641	288	1793	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	35.3	32.8	57.3	36.6	33.2	55.8	36.8	36.8	56.7	36.1	32.4
Incr Delay (d2), s/veh	8.5	1.2	0.7	13.7	0.6	0.3	13.8	6.3	11.7	15.3	3.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	11.9	6.5	3.7	8.6	3.4	5.3	18.3	19.4	4.4	14.8	8.6
LnGrp Delay(d),s/veh	63.4	36.5	33.5	71.0	37.2	33.6	69.6	43.1	48.5	72.0	39.5	36.1
LnGrp LOS	E	D	C	E	D	C	E	D	D	E	D	D
Approach Vol, veh/h		1332			909			1889			1904	
Approach Delay, s/veh		42.1			43.7			48.4			42.8	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	50.5	13.4	46.9	16.4	48.7	17.8	42.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	47.0	9.5	45.0	13.3	44.2	18.0	36.5
Max Q Clear Time (g_c+I1), s	10.0	38.9	8.8	25.9	11.7	32.5	12.9	19.5
Green Ext Time (p_c), s	0.0	6.0	0.0	6.4	0.2	7.9	0.5	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	44.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1036	99	75	869	0	0	0	0	0	0	0
Future Vol, veh/h	0	1036	99	75	869	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1114	106	81	934	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	1222	0	0				-	-	467
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	566	-	0				0	0	542
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	566	-	-				-	0	542
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	566	-	-
HCM Lane V/C Ratio	-	-	0.142	-	-
HCM Control Delay (s)	-	-	12.4	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.5	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	1038	0	0	893	0	214
Future Vol, veh/h	1038	0	0	893	0	214
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1116	0	0	960	0	230

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	558
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	473
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	473
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	473	-	-
HCM Lane V/C Ratio	0.486	-	-
HCM Control Delay (s)	19.6	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	2.6	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1204	48	16	891	13	34
Future Vol, veh/h	1204	48	16	891	13	34
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1281	51	17	948	14	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1334	0	1817	668
Stage 1	-	-	-	-	1309	-
Stage 2	-	-	-	-	508	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	513	-	69	401
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	569	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	512	-	64	400
Mov Cap-2 Maneuver	-	-	-	-	64	-
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	529	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	36.6
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	163	-	-	512	-
HCM Lane V/C Ratio	0.307	-	-	0.033	-
HCM Control Delay (s)	36.6	-	-	12.3	0.4
HCM Lane LOS	E	-	-	B	A
HCM 95th %tile Q(veh)	1.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	48	0	1784	39	0	1806	0
Future Vol, veh/h	0	0	10	0	0	48	0	1784	39	0	1806	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	99	92	99	92	99	99	99	99	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	48	0	1802	39	0	1824	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	912	-	-	925	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	237	0	0	271	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	237	-	-	270	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.9	21.2	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	237	270	-
HCM Lane V/C Ratio	-	-	0.046	0.18	-
HCM Control Delay (s)	-	-	20.9	21.2	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.1	0.6	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	405	122	208	996	150	328	1633	129	130	1519	240
Future Volume (veh/h)	139	405	122	208	996	150	328	1633	129	130	1519	240
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	142	413	124	212	1016	153	335	1666	132	133	1550	245
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1108	474	265	1179	518	388	1963	155	182	1783	546
Arrive On Green	0.06	0.31	0.31	0.08	0.33	0.33	0.11	0.41	0.41	0.05	0.35	0.35
Sat Flow, veh/h	3442	3539	1514	3442	3539	1555	3442	4783	378	3442	5085	1556
Grp Volume(v), veh/h	142	413	124	212	1016	153	335	1180	618	133	1550	245
Grp Sat Flow(s),veh/h/ln	1721	1770	1514	1721	1770	1555	1721	1695	1771	1721	1695	1556
Q Serve(g_s), s	5.0	11.1	7.5	7.4	32.9	8.9	11.7	38.6	38.8	4.7	34.9	14.9
Cycle Q Clear(g_c), s	5.0	11.1	7.5	7.4	32.9	8.9	11.7	38.6	38.8	4.7	34.9	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	195	1108	474	265	1179	518	388	1391	727	182	1783	546
V/C Ratio(X)	0.73	0.37	0.26	0.80	0.86	0.30	0.86	0.85	0.85	0.73	0.87	0.45
Avail Cap(c_a), veh/h	219	1298	555	267	1347	592	407	1409	736	182	1783	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.9	32.8	31.5	55.7	38.3	30.2	53.5	32.7	32.8	57.2	37.2	30.7
Incr Delay (d2), s/veh	10.2	0.2	0.3	15.8	5.4	0.3	16.6	5.0	9.3	13.8	6.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.5	3.2	4.1	17.0	3.9	6.5	19.0	20.8	2.6	17.4	6.8
LnGrp Delay(d),s/veh	67.1	33.0	31.8	71.5	43.6	30.6	70.1	37.7	42.0	71.0	43.3	33.4
LnGrp LOS	E	C	C	E	D	C	E	D	D	E	D	C
Approach Vol, veh/h		679			1381			2133			1928	
Approach Delay, s/veh		39.9			46.5			44.0			44.0	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	54.8	13.9	42.9	18.3	47.5	11.5	45.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	51.0	9.5	45.0	14.5	43.0	7.8	46.7
Max Q Clear Time (g_c+I1), s	6.7	40.8	9.4	13.1	13.7	36.9	7.0	34.9
Green Ext Time (p_c), s	0.0	7.8	0.0	3.4	0.1	4.8	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	548	116	135	1401	0	0	0	0	0	0	0
Future Vol, veh/h	0	548	116	135	1401	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	589	125	145	1506	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	716	0	0				-	-	753
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	880	-	0				0	0	352
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	880	-	-				-	0	352
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.9	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	880	-	-
HCM Lane V/C Ratio	-	-	0.165	-	-
HCM Control Delay (s)	-	-	9.9	-	0
HCM Lane LOS	-	-	A	-	A
HCM 95th %tile Q(veh)	-	-	0.6	-	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	548	0	0	1460	0	372
Future Vol, veh/h	548	0	0	1460	0	372
Conflicting Peds, #/hr	0	2	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	761	0	0	2028	0	517

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	381
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	617
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	617
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	33.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	617	-	-
HCM Lane V/C Ratio	0.837	-	-
HCM Control Delay (s)	33.7	-	-
HCM Lane LOS	D	-	-
HCM 95th %tile Q(veh)	9	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	852	68	9	1461	5	29
Future Vol, veh/h	852	68	9	1461	5	29
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1065	85	11	1826	6	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1152	0	2045	577
Stage 1	-	-	-	-	1110	-
Stage 2	-	-	-	-	935	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	602	-	49	460
Stage 1	-	-	-	-	277	-
Stage 2	-	-	-	-	342	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	601	-	49	459
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	342	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	27
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	206	-	-	601	-
HCM Lane V/C Ratio	0.206	-	-	0.019	-
HCM Control Delay (s)	27	-	-	11.1	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	0	0	2090	59	0	1802	0
Future Vol, veh/h	0	0	10	0	0	0	0	2090	59	0	1802	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	90	92	90	92	90	90	90	90	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	0	0	2322	66	0	2002	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	-	-	1001	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	207	0	-	-	0	-	0
Stage 1	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	-	-	0	-	0
Platoon blocked, %					-	-		-	
Mov Cap-1 Maneuver	-	0	207	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-
Stage 1	-	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	207	-
HCM Lane V/C Ratio	-	-	0.053	-
HCM Control Delay (s)	-	-	23.4	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	838	230	196	616	151	265	1400	161	261	1500	329
Future Volume (veh/h)	322	838	230	196	616	151	265	1400	161	261	1500	329
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	1.00		0.89	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	332	864	237	202	635	156	273	1443	166	269	1546	339
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	1193	489	234	1028	449	309	1666	191	309	1856	568
Arrive On Green	0.11	0.34	0.34	0.07	0.29	0.29	0.09	0.37	0.37	0.09	0.37	0.37
Sat Flow, veh/h	3442	3539	1450	3442	3539	1547	3442	4563	525	3442	5085	1555
Grp Volume(v), veh/h	332	864	237	202	635	156	273	1072	537	269	1546	339
Grp Sat Flow(s),veh/h/ln	1721	1770	1450	1721	1770	1547	1721	1695	1698	1721	1695	1555
Q Serve(g_s), s	12.1	27.5	16.6	7.5	19.9	10.2	10.1	37.6	37.7	9.9	35.6	22.7
Cycle Q Clear(g_c), s	12.1	27.5	16.6	7.5	19.9	10.2	10.1	37.6	37.7	9.9	35.6	22.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	394	1193	489	234	1028	449	309	1238	620	309	1856	568
V/C Ratio(X)	0.84	0.72	0.48	0.86	0.62	0.35	0.88	0.87	0.87	0.87	0.83	0.60
Avail Cap(c_a), veh/h	521	1242	509	234	1028	449	309	1238	620	309	1856	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	37.3	33.7	59.2	39.3	35.9	57.7	37.8	37.8	57.6	37.1	33.1
Incr Delay (d2), s/veh	9.3	2.0	0.7	26.9	1.1	0.5	24.7	6.7	12.4	22.7	4.6	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	13.8	6.8	4.4	9.9	4.4	5.8	18.7	19.7	5.7	17.4	10.5
LnGrp Delay(d),s/veh	64.9	39.3	34.4	86.1	40.5	36.4	82.4	44.5	50.2	80.3	41.7	37.6
LnGrp LOS	E	D	C	F	D	D	F	D	D	F	D	D
Approach Vol, veh/h		1433			993			1882			2154	
Approach Delay, s/veh		44.4			49.1			51.6			45.9	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.3	13.2	47.7	16.0	51.3	19.2	41.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.5	46.8	8.7	45.0	11.5	46.8	19.4	34.3
Max Q Clear Time (g_c+I1), s	11.9	39.7	9.5	29.5	12.1	37.6	14.1	21.9
Green Ext Time (p_c), s	0.0	5.3	0.0	6.3	0.0	7.1	0.6	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	47.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1197	63	56	952	0	0	0	0	0	0	0
Future Vol, veh/h	0	1197	63	56	952	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1287	68	60	1024	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	1357	0	0				-	-	512
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	503	-	0				0	0	507
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	503	-	-				-	0	507
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	503	-	-
HCM Lane V/C Ratio	-	-	0.12	-	-
HCM Control Delay (s)	-	-	13.1	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.4	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	1197	0	0	957	0	185
Future Vol, veh/h	1197	0	0	957	0	185
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1287	0	0	1029	0	199

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	644
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	416
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	416
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	416	-	-
HCM Lane V/C Ratio	0.478	-	-
HCM Control Delay (s)	21.3	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	2.5	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1333	49	20	955	13	35
Future Vol, veh/h	1333	49	20	955	13	35
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1418	52	21	1016	14	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1472	0	1996	737
Stage 1	-	-	-	-	1446	-
Stage 2	-	-	-	-	550	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	454	-	52	361
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	453	-	46	360
Mov Cap-2 Maneuver	-	-	-	-	46	-
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	485	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	51.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	126	-	-	453	-
HCM Lane V/C Ratio	0.405	-	-	0.047	-
HCM Control Delay (s)	51.8	-	-	13.3	0.7
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	0	0	1826	1	0	1960	0
Future Vol, veh/h	0	0	10	0	0	0	0	1826	1	0	1960	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	99	92	99	92	99	99	99	99	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	0	0	1844	1	0	1980	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	-	-	990				-	0	0	-	-	0
Stage 1	-	-	-				-	-	-	-	-	-
Stage 2	-	-	-				-	-	-	-	-	-
Critical Hdwy	-	-	7.14				-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-				-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-				-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92				-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	211				0	-	-	0	-	0
Stage 1	0	0	-				0	-	-	0	-	0
Stage 2	0	0	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	0	211				-	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-				-	-	-	-	-	-
Stage 1	-	0	-				-	-	-	-	-	-
Stage 2	-	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	211	-
HCM Lane V/C Ratio	-	-	0.052	-
HCM Control Delay (s)	-	-	23	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	435	122	208	1004	150	328	1706	129	152	1527	240
Future Volume (veh/h)	139	435	122	208	1004	150	328	1706	129	152	1527	240
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	142	444	124	212	1024	153	335	1741	132	155	1558	245
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1118	478	252	1177	517	380	1960	148	199	1809	554
Arrive On Green	0.06	0.32	0.32	0.07	0.33	0.33	0.11	0.41	0.41	0.06	0.36	0.36
Sat Flow, veh/h	3442	3539	1514	3442	3539	1555	3442	4802	363	3442	5085	1556
Grp Volume(v), veh/h	142	444	124	212	1024	153	335	1228	645	155	1558	245
Grp Sat Flow(s),veh/h/ln	1721	1770	1514	1721	1770	1555	1721	1695	1774	1721	1695	1556
Q Serve(g_s), s	5.0	12.2	7.6	7.6	33.8	9.0	11.9	41.8	42.0	5.5	35.4	15.0
Cycle Q Clear(g_c), s	5.0	12.2	7.6	7.6	33.8	9.0	11.9	41.8	42.0	5.5	35.4	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	195	1118	478	252	1177	517	380	1384	724	199	1809	554
V/C Ratio(X)	0.73	0.40	0.26	0.84	0.87	0.30	0.88	0.89	0.89	0.78	0.86	0.44
Avail Cap(c_a), veh/h	216	1282	548	252	1319	579	380	1384	724	199	1809	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	33.2	31.7	56.9	38.9	30.7	54.5	34.1	34.2	57.7	37.2	30.6
Incr Delay (d2), s/veh	10.6	0.2	0.3	21.7	6.0	0.3	20.9	7.4	13.2	17.4	5.7	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.0	3.2	4.4	17.5	3.9	6.8	20.9	23.3	3.1	17.5	6.8
LnGrp Delay(d),s/veh	68.3	33.5	32.0	78.6	45.0	31.0	75.3	41.5	47.4	75.2	42.8	33.1
LnGrp LOS	E	C	C	E	D	C	E	D	D	E	D	C
Approach Vol, veh/h		710			1389			2208			1958	
Approach Delay, s/veh		40.2			48.6			48.4			44.2	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	55.2	13.6	43.7	18.2	48.7	11.5	45.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.2	50.7	9.1	45.0	13.7	44.2	7.8	46.3
Max Q Clear Time (g_c+I1), s	7.5	44.0	9.6	14.2	13.9	37.4	7.0	35.8
Green Ext Time (p_c), s	0.0	5.5	0.0	3.7	0.0	5.4	0.0	5.6

Intersection Summary	
HCM 2010 Ctrl Delay	46.2
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	556	160	157	1409	0	0	0	0	0	0	0
Future Vol, veh/h	0	556	160	157	1409	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	598	172	169	1515	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	772	0	0				-	-	758
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	839	-	0				0	0	350
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	839	-	-				-	0	350
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	839	-	-
HCM Lane V/C Ratio	-	-	0.201	-	-
HCM Control Delay (s)	-	-	10.4	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.7	-	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	556	0	0	1490	0	410
Future Vol, veh/h	556	0	0	1490	0	410
Conflicting Peds, #/hr	0	2	3	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	72	72	72	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	772	0	0	2069	0	569

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	386
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	612
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	612
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	47.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	612	-	-
HCM Lane V/C Ratio	0.93	-	-
HCM Control Delay (s)	47.3	-	-
HCM Lane LOS	E	-	-
HCM 95th %tile Q(veh)	12.2	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	898	68	9	1491	5	29
Future Vol, veh/h	898	68	9	1491	5	29
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1123	85	11	1864	6	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1210	0	2122	606
Stage 1	-	-	-	-	1168	-
Stage 2	-	-	-	-	954	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	572	-	43	440
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	571	-	43	439
Mov Cap-2 Maneuver	-	-	-	-	43	-
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	335	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	30
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	186	-	-	571	-
HCM Lane V/C Ratio	0.228	-	-	0.02	-
HCM Control Delay (s)	30	-	-	11.4	0
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	57	0	2106	103	0	1810	0
Future Vol, veh/h	0	0	10	0	0	57	0	2106	103	0	1810	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	90	92	90	92	90	90	90	90	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	63	0	2340	114	0	2011	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	1006	-	-	1229	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	206	0	0	170	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	206	-	-	170	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.4	38.2	0	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	206	170	-
HCM Lane V/C Ratio	-	-	0.053	0.373	-
HCM Control Delay (s)	-	-	23.4	38.2	-
HCM Lane LOS	-	-	C	E	-
HCM 95th %tile Q(veh)	-	-	0.2	1.6	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	864	230	196	623	151	265	1462	161	280	1507	329
Future Volume (veh/h)	322	864	230	196	623	151	265	1462	161	280	1507	329
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	1.00		0.89	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	332	891	237	202	642	156	273	1507	166	289	1554	339
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	1197	490	230	1028	450	308	1662	183	319	1857	568
Arrive On Green	0.11	0.34	0.34	0.07	0.29	0.29	0.09	0.36	0.36	0.09	0.37	0.37
Sat Flow, veh/h	3442	3539	1451	3442	3539	1547	3442	4589	505	3442	5085	1555
Grp Volume(v), veh/h	332	891	237	202	642	156	273	1113	560	289	1554	339
Grp Sat Flow(s),veh/h/ln	1721	1770	1451	1721	1770	1547	1721	1695	1703	1721	1695	1555
Q Serve(g_s), s	12.1	28.6	16.6	7.5	20.2	10.2	10.1	40.0	40.1	10.7	35.9	22.7
Cycle Q Clear(g_c), s	12.1	28.6	16.6	7.5	20.2	10.2	10.1	40.0	40.1	10.7	35.9	22.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	394	1197	490	230	1028	450	308	1228	617	319	1857	568
V/C Ratio(X)	0.84	0.74	0.48	0.88	0.62	0.35	0.89	0.91	0.91	0.91	0.84	0.60
Avail Cap(c_a), veh/h	520	1240	508	230	1028	450	308	1228	617	319	1857	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.7	37.6	33.6	59.4	39.5	35.9	57.8	38.9	38.9	57.7	37.3	33.1
Incr Delay (d2), s/veh	9.4	2.4	0.7	29.3	1.2	0.5	25.0	9.8	17.4	28.0	4.7	4.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	14.4	6.7	4.5	10.1	4.4	5.8	20.4	21.8	6.3	17.6	10.5
LnGrp Delay(d),s/veh	65.1	40.0	34.4	88.6	40.7	36.4	82.8	48.7	56.3	85.7	41.9	37.7
LnGrp LOS	E	D	C	F	D	D	F	D	E	F	D	D
Approach Vol, veh/h		1460			1000			1946			2182	
Approach Delay, s/veh		44.8			49.7			55.7			47.1	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	51.0	13.1	47.9	16.0	51.4	19.2	41.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.9	46.5	8.6	45.0	11.5	46.9	19.4	34.2
Max Q Clear Time (g_c+I1), s	12.7	42.1	9.5	30.6	12.1	37.9	14.1	22.2
Green Ext Time (p_c), s	0.0	3.5	0.0	6.3	0.0	7.0	0.6	3.9

Intersection Summary	
HCM 2010 Ctrl Delay	49.5
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1204	101	75	959	0	0	0	0	0	0	0
Future Vol, veh/h	0	1204	101	75	959	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1295	109	81	1031	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	1406	0	0				-	-	516
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	481	-	0				0	0	504
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	481	-	-				-	0	504
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	481	-	-
HCM Lane V/C Ratio	-	-	0.168	-	-
HCM Control Delay (s)	-	-	14	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.6	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	1204	0	0	983	0	217
Future Vol, veh/h	1204	0	0	983	0	217
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1295	0	0	1057	0	233

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	648
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	413
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	413
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	413	-	-
HCM Lane V/C Ratio	0.565	-	-
HCM Control Delay (s)	24.4	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	3.4	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1372	49	20	981	13	35
Future Vol, veh/h	1372	49	20	981	13	35
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1460	52	21	1044	14	37

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1514	0	2052	758
Stage 1	-	-	-	-	1488	-
Stage 2	-	-	-	-	564	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	437	-	48	350
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	533	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	436	-	42	349
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	57.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	117	-	-	436	-
HCM Lane V/C Ratio	0.436	-	-	0.049	-
HCM Control Delay (s)	57.7	-	-	13.7	0.8
HCM Lane LOS	F	-	-	B	A
HCM 95th %tile Q(veh)	1.9	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	48	0	1840	39	0	1967	0
Future Vol, veh/h	0	0	10	0	0	48	0	1840	39	0	1967	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	99	92	99	92	99	99	99	99	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	48	0	1859	39	0	1987	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	994	-	-	953	-	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	7.14	-	-	6.94	-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92	-	-	3.32	-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	209	0	0	260	0	-	-	0	-	0
Stage 1	0	0	-	0	0	-	0	-	-	0	-	0
Stage 2	0	0	-	0	0	-	0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	-	209	-	-	259	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.2	22.1	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBT
Capacity (veh/h)	-	-	209	259	-
HCM Lane V/C Ratio	-	-	0.052	0.187	-
HCM Control Delay (s)	-	-	23.2	22.1	-
HCM Lane LOS	-	-	C	C	-
HCM 95th %tile Q(veh)	-	-	0.2	0.7	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	752	229	185	564	125	263	1356	161	202	1339	284
Future Volume (veh/h)	295	752	229	185	564	125	263	1356	161	202	1339	284
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.98	1.00		0.90	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	304	775	236	191	581	129	271	1398	166	208	1380	293
Adj No. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	367	1201	492	245	1075	470	327	1677	199	262	1781	544
Arrive On Green	0.11	0.34	0.34	0.07	0.30	0.30	0.09	0.37	0.37	0.08	0.35	0.35
Sat Flow, veh/h	3442	3539	1451	3442	3539	1548	3442	4545	539	3442	5085	1553
Grp Volume(v), veh/h	304	775	236	191	581	129	271	1043	521	208	1380	293
Grp Sat Flow(s),veh/h/ln	1721	1770	1451	1721	1770	1548	1721	1695	1694	1721	1695	1553
Q Serve(g_s), s	10.8	23.1	16.0	6.8	17.0	7.9	9.6	34.9	34.9	7.4	30.1	18.8
Cycle Q Clear(g_c), s	10.8	23.1	16.0	6.8	17.0	7.9	9.6	34.9	34.9	7.4	30.1	18.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h	367	1201	492	245	1075	470	327	1251	625	262	1781	544
V/C Ratio(X)	0.83	0.65	0.48	0.78	0.54	0.27	0.83	0.83	0.83	0.79	0.77	0.54
Avail Cap(c_a), veh/h	498	1279	524	274	1075	470	373	1264	631	296	1781	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.5	34.8	32.5	56.9	36.1	32.9	55.4	35.8	35.8	56.5	36.1	32.4
Incr Delay (d2), s/veh	8.3	1.0	0.7	12.3	0.5	0.3	13.1	4.9	9.3	12.5	3.4	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	11.5	6.5	3.7	8.4	3.4	5.2	17.2	18.0	4.0	14.6	8.6
LnGrp Delay(d),s/veh	62.8	35.8	33.2	69.1	36.7	33.2	68.5	40.7	45.2	69.0	39.4	36.2
LnGrp LOS	E	D	C	E	D	C	E	D	D	E	D	D
Approach Vol, veh/h		1315			901			1835			1881	
Approach Delay, s/veh		41.6			43.1			46.1			42.2	
Approach LOS		D			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	50.4	13.4	46.7	16.3	48.1	17.8	42.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.7	46.4	9.9	45.0	13.5	43.6	18.0	36.9
Max Q Clear Time (g_c+I1), s	9.4	36.9	8.8	25.1	11.6	32.1	12.8	19.0
Green Ext Time (p_c), s	0.1	6.6	0.1	6.4	0.2	7.7	0.5	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	1044	71	56	862	0	0	0	0	0	0	0
Future Vol, veh/h	0	1044	71	56	862	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	90	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1123	76	60	927	0	0	0	0	0	0	0

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	-	0	0	1201	0	0				-	-	464
Stage 1	-	-	-	-	-	-				-	-	-
Stage 2	-	-	-	-	-	-				-	-	-
Critical Hdwy	-	-	-	4.14	-	-				-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-				-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				-	-	-
Follow-up Hdwy	-	-	-	2.22	-	-				-	-	3.32
Pot Cap-1 Maneuver	0	-	-	577	-	0				0	0	545
Stage 1	0	-	-	-	-	0				0	0	-
Stage 2	0	-	-	-	-	0				0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	577	-	-				-	0	545
Mov Cap-2 Maneuver	-	-	-	-	-	-				-	0	-
Stage 1	-	-	-	-	-	-				-	0	-
Stage 2	-	-	-	-	-	-				-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.7	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	577	-	-
HCM Lane V/C Ratio	-	-	0.104	-	-
HCM Control Delay (s)	-	-	12	-	0
HCM Lane LOS	-	-	B	-	A
HCM 95th %tile Q(veh)	-	-	0.3	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	1046	0	0	867	0	182
Future Vol, veh/h	1046	0	0	867	0	182
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1125	0	0	932	0	196

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	563
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	470
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	470
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	470	-	-
HCM Lane V/C Ratio	0.416	-	-
HCM Control Delay (s)	18	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	2	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1180	48	16	865	13	34
Future Vol, veh/h	1180	48	16	865	13	34
Conflicting Peds, #/hr	0	2	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1255	51	17	920	14	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1308	0	1777	655
Stage 1	-	-	-	-	1283	-
Stage 2	-	-	-	-	494	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	525	-	74	409
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	524	-	69	408
Mov Cap-2 Maneuver	-	-	-	-	69	-
Stage 1	-	-	-	-	224	-
Stage 2	-	-	-	-	541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	34.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	173	-	-	524	-
HCM Lane V/C Ratio	0.289	-	-	0.032	-
HCM Control Delay (s)	34.1	-	-	12.1	0.4
HCM Lane LOS	D	-	-	B	A
HCM 95th %tile Q(veh)	1.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	10	0	0	0	0	1780	1	0	1799	0
Future Vol, veh/h	0	0	10	0	0	0	0	1780	1	0	1799	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	4	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	99	92	99	92	99	99	99	99	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	11	0	0	0	0	1798	1	0	1817	0

Major/Minor	Minor2						Major1			Major2		
Conflicting Flow All	-	-	909				-	0	0	-	-	0
Stage 1	-	-	-				-	-	-	-	-	-
Stage 2	-	-	-				-	-	-	-	-	-
Critical Hdwy	-	-	7.14				-	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-				-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-				-	-	-	-	-	-
Follow-up Hdwy	-	-	3.92				-	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	238				0	-	-	0	-	0
Stage 1	0	0	-				0	-	-	0	-	0
Stage 2	0	0	-				0	-	-	0	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	-	0	238				-	-	-	-	-	-
Mov Cap-2 Maneuver	-	0	-				-	-	-	-	-	-
Stage 1	-	0	-				-	-	-	-	-	-
Stage 2	-	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBT
Capacity (veh/h)	-	-	238	-
HCM Lane V/C Ratio	-	-	0.046	-
HCM Control Delay (s)	-	-	20.8	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.1	-