APPENDICES

Appendix AIR: Air Quality and Greenhouse Gas Assessment

Hollister Park Facility Master Plan Project - San Benito County, Annual

Hollister Park Facility Master Plan Project

San Benito County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	275.00	Space	2.47	110,000.00	0
Parking Lot	100.00	Space	0.90	40,000.00	0
Arena	2.00	1000sqft	0.64	2,000.00	0
Arena	2.00	1000sqft	0.64	2,000.00	0
City Park	49.72	Acre	49.72	2,165,803.20	0
City Park	19.00	Acre	19.00	827,640.00	0
City Park	6.40	Acre	6.40	278,784.00	0
City Park	3.06	Acre	3.06	133,293.60	0
Racquet Club	4.50	1000sqft	0.10	4,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.5	**Precipitation Freq (Days)**	50
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - anticipated construction scheduling

Vehicle Trips - per the traffic study.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1,550.00	365.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	22.75	30.31
tblVehicleTrips	ST_TR	21.35	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	16.74	30.31
tblVehicleTrips	SU_TR	17.40	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	1.89	30.31
tblVehicleTrips	WD_TR	14.03	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					
2020	0.5234	5.4993	3.4254	6.4100e-003	1.0730	0.2599	1.3328	0.4938	0.2399	0.7337	0.0000	563.4451	563.4451	0.1708	0.0000	567.7138

2021	1.3176	11.2150	9.3244	0.0361	2.1496	0.2244	2.3740	0.5936	0.2097	0.8033	0.0000	3,320.4800	3,320.4800	0.6472	0.0000	3,336.6607
2022	0.6730	6.4415	5.0177	0.0235	1.2399	0.0830	1.3229	0.3367	0.0782	0.4148	0.0000	2,175.0248	2,175.0248	0.3953	0.0000	2,184.9068
Maximum	**1.3176**	**11.2150**	**9.3244**	**0.0361**	**2.1496**	**0.2599**	**2.3740**	**0.5936**	**0.2399**	**0.8033**	**0.0000**	**3,320.4800**	**3,320.4800**	**0.6472**	**0.0000**	**3,336.6607**

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	0.5234	5.4993	3.4254	6.4100e-003	0.4297	0.2598	0.6895	0.1956	0.2399	0.4354	0.0000	563.4445	563.4445	0.1708	0.0000	567.7131
2021	1.3176	11.2150	9.3243	0.0361	1.9269	0.2244	2.1513	0.5266	0.2097	0.7362	0.0000	3,320.4794	3,320.4794	0.6472	0.0000	3,336.6601
2022	0.6730	6.4415	5.0177	0.0235	1.2399	0.0830	1.3229	0.3367	0.0782	0.4148	0.0000	2,175.0246	2,175.0246	0.3953	0.0000	2,184.9066
Maximum	**1.3176**	**11.2150**	**9.3243**	**0.0361**	**1.9269**	**0.2598**	**2.1513**	**0.5266**	**0.2399**	**0.7362**	**0.0000**	**3,320.4794**	**3,320.4794**	**0.6472**	**0.0000**	**3,336.6601**

	ROG	NOx	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**	**19.41**	**0.00**	**17.22**	**25.65**	**0.00**	**18.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2020**	**3-31-2020**	1.1902	1.1902
2	**4-1-2020**	**6-30-2020**	1.3398	1.3398
3	**7-1-2020**	**9-30-2020**	1.6773	1.6773
4	**10-1-2020**	**12-31-2020**	1.8004	1.8004
5	**1-1-2021**	**3-31-2021**	1.9893	1.9893
6	**4-1-2021**	**6-30-2021**	3.7670	3.7670
7	**7-1-2021**	**9-30-2021**	3.5023	3.5023
8	**10-1-2021**	**12-31-2021**	3.2200	3.2200

9	**1-1-2022**	**3-31-2022**	2.9337	2.9337
10	**4-1-2022**	**6-30-2022**	2.9225	2.9225
11	**7-1-2022**	**9-30-2022**	1.2846	1.2846
		Highest	3.7670	3.7670

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	0.0845	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0122
Energy	9.6000e-004	8.7000e-003	7.3000e-003	5.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	46.5490	46.5490	1.8600e-003	5.2000e-004	46.7505
Mobile	0.9227	11.7000	8.1523	0.0396	1.9288	0.0395	1.9683	0.5185	0.0374	0.5559	0.0000	3,696.2389	3,696.2389	1.0908	0.0000	3,723.5098
Waste						0.0000	0.0000		0.0000	0.0000	6.5932	0.0000	6.5932	0.3896	0.0000	16.3342
Water						0.0000	0.0000		0.0000	0.0000	0.6311	98.2538	98.8849	0.0693	2.4500e-003	101.3464
Total	**1.0082**	**11.7088**	**8.1656**	**0.0397**	**1.9288**	**0.0401**	**1.9690**	**0.5185**	**0.0381**	**0.5566**	**7.2242**	**3,841.0531**	**3,848.2774**	**1.5516**	**2.9700e-003**	**3,887.9532**

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	0.0820	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0122
Energy	9.6000e-004	8.7000e-003	7.3000e-003	5.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	46.5490	46.5490	1.8600e-003	5.2000e-004	46.7505

Mobile	0.9227	11.7000	8.1523	0.0396	1.9288	0.0395	1.9683	0.5185	0.0374	0.5559	0.0000	3,696.2389	3,696.2389	1.0908	0.0000	3,723.5098
Waste						0.0000	0.0000		0.0000	0.0000	6.5932	0.0000	6.5932	0.3896	0.0000	16.3342
Water						0.0000	0.0000		0.0000	0.0000	0.5531	97.8668	98.4198	0.0612	2.2600e-003	100.6232
Total	**1.0057**	**11.7088**	**8.1656**	**0.0397**	**1.9288**	**0.0401**	**1.9690**	**0.5185**	**0.0381**	**0.5566**	**7.1462**	**3,840.6661**	**3,847.8123**	**1.5436**	**2.7800e-003**	**3,887.2299**

	ROG	NOx	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	**0.25**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.08**	**0.01**	**0.01**	**0.52**	**6.40**	**0.02**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	5/19/2020	5	100	
2	Site Preparation	Site Preparation	5/20/2020	8/11/2020	5	60	
3	Grading	Grading	8/12/2020	3/16/2021	5	155	
4	Building Construction	Building Construction	3/17/2021	8/9/2022	5	365	
5	Paving	Paving	3/17/2021	8/17/2021	5	110	
6	Architectural Coating	Architectural Coating	3/17/2021	8/17/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 3.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,750; Non-Residential Outdoor: 4,250; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,497.00	584.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	299.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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	0.1656	1.6601	1.0877	1.9400e-003		0.0829	0.0829		0.0771	0.0771	0.0000	169.9930	169.9930	0.0480	0.0000	171.1927
Total	**0.1656**	**1.6601**	**1.0877**	**1.9400e-003**		**0.0829**	**0.0829**		**0.0771**	**0.0771**	**0.0000**	**169.9930**	**169.9930**	**0.0480**	**0.0000**	**171.1927**

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	2.7800e-003	2.1800e-003	0.0203	5.0000e-005	5.9800e-003	4.0000e-005	6.0200e-003	1.5900e-003	4.0000e-005	1.6200e-003	0.0000	4.9643	4.9643	1.5000e-004	0.0000	4.9680
Total	**2.7800e-003**	**2.1800e-003**	**0.0203**	**5.0000e-005**	**5.9800e-003**	**4.0000e-005**	**6.0200e-003**	**1.5900e-003**	**4.0000e-005**	**1.6200e-003**	**0.0000**	**4.9643**	**4.9643**	**1.5000e-004**	**0.0000**	**4.9680**

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	0.1656	1.6601	1.0877	1.9400e-003		0.0829	0.0829		0.0771	0.0771	0.0000	169.9928	169.9928	0.0480	0.0000	171.1925
Total	**0.1656**	**1.6601**	**1.0877**	**1.9400e-003**		**0.0829**	**0.0829**		**0.0771**	**0.0771**	**0.0000**	**169.9928**	**169.9928**	**0.0480**	**0.0000**	**171.1925**

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	2.7800e-003	2.1800e-003	0.0203	5.0000e-005	5.9800e-003	4.0000e-005	6.0200e-003	1.5900e-003	4.0000e-005	1.6200e-003	0.0000	4.9643	4.9643	1.5000e-004	0.0000	4.9680
Total	**2.7800e-003**	**2.1800e-003**	**0.0203**	**5.0000e-005**	**5.9800e-003**	**4.0000e-005**	**6.0200e-003**	**1.5900e-003**	**4.0000e-005**	**1.6200e-003**	**0.0000**	**4.9643**	**4.9643**	**1.5000e-004**	**0.0000**	**4.9680**

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					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1223	1.2725	0.6454	1.1400e-003		0.0659	0.0659		0.0607	0.0607	0.0000	100.2920	100.2920	0.0324	0.0000	101.1030
Total	**0.1223**	**1.2725**	**0.6454**	**1.1400e-003**	**0.5420**	**0.0659**	**0.6079**	**0.2979**	**0.0607**	**0.3586**	**0.0000**	**100.2920**	**100.2920**	**0.0324**	**0.0000**	**101.1030**

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	2.0000e-003	1.5700e-003	0.0146	4.0000e-005	4.3000e-003	3.0000e-005	4.3300e-003	1.1400e-003	3.0000e-005	1.1700e-003	0.0000	3.5743	3.5743	1.1000e-004	0.0000	3.5770
Total	**2.0000e-003**	**1.5700e-003**	**0.0146**	**4.0000e-005**	**4.3000e-003**	**3.0000e-005**	**4.3300e-003**	**1.1400e-003**	**3.0000e-005**	**1.1700e-003**	**0.0000**	**3.5743**	**3.5743**	**1.1000e-004**	**0.0000**	**3.5770**

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					0.2114	0.0000	0.2114	0.1162	0.0000	0.1162	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1223	1.2725	0.6454	1.1400e-003		0.0659	0.0659		0.0607	0.0607	0.0000	100.2919	100.2919	0.0324	0.0000	101.1028
Total	**0.1223**	**1.2725**	**0.6454**	**1.1400e-003**	**0.2114**	**0.0659**	**0.2773**	**0.1162**	**0.0607**	**0.1768**	**0.0000**	**100.2919**	**100.2919**	**0.0324**	**0.0000**	**101.1028**

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	2.0000e-003	1.5700e-003	0.0146	4.0000e-005	4.3000e-003	3.0000e-005	4.3300e-003	1.1400e-003	3.0000e-005	1.1700e-003	0.0000	3.5743	3.5743	1.1000e-004	0.0000	3.5770
Total	**2.0000e-003**	**1.5700e-003**	**0.0146**	**4.0000e-005**	**4.3000e-003**	**3.0000e-005**	**4.3300e-003**	**1.1400e-003**	**3.0000e-005**	**1.1700e-003**	**0.0000**	**3.5743**	**3.5743**	**1.1000e-004**	**0.0000**	**3.5770**

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					0.5126	0.0000	0.5126	0.1910	0.0000	0.1910	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2270	2.5601	1.6299	3.1600e-003		0.1109	0.1109		0.1020	0.1020	0.0000	277.8699	277.8699	0.0899	0.0000	280.1166
Total	**0.2270**	**2.5601**	**1.6299**	**3.1600e-003**	**0.5126**	**0.1109**	**0.6235**	**0.1910**	**0.1020**	**0.2930**	**0.0000**	**277.8699**	**277.8699**	**0.0899**	**0.0000**	**280.1166**

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	3.7800e-003	2.9600e-003	0.0276	7.0000e-005	8.1300e-003	5.0000e-005	8.1800e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	6.7515	6.7515	2.0000e-004	0.0000	6.7565
Total	**3.7800e-003**	**2.9600e-003**	**0.0276**	**7.0000e-005**	**8.1300e-003**	**5.0000e-005**	**8.1800e-003**	**2.1600e-003**	**5.0000e-005**	**2.2100e-003**	**0.0000**	**6.7515**	**6.7515**	**2.0000e-004**	**0.0000**	**6.7565**

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					0.1999	0.0000	0.1999	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2270	2.5601	1.6299	3.1600e-003		0.1109	0.1109		0.1020	0.1020	0.0000	277.8696	277.8696	0.0899	0.0000	280.1163
Total	**0.2270**	**2.5601**	**1.6299**	**3.1600e-003**	**0.1999**	**0.1109**	**0.3108**	**0.0745**	**0.1020**	**0.1765**	**0.0000**	**277.8696**	**277.8696**	**0.0899**	**0.0000**	**280.1163**

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	3.7800e-003	2.9600e-003	0.0276	7.0000e-005	8.1300e-003	5.0000e-005	8.1800e-003	2.1600e-003	5.0000e-005	2.2100e-003	0.0000	6.7515	6.7515	2.0000e-004	0.0000	6.7565

Total	**3.7800e-003**	**2.9600e-003**	**0.0276**	**7.0000e-005**	**8.1300e-003**	**5.0000e-005**	**8.1800e-003**	**2.1600e-003**	**5.0000e-005**	**2.2100e-003**	**0.0000**	**6.7515**	**6.7515**	**2.0000e-004**	**0.0000**	**6.7565**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3651	0.0000	0.3651	0.1099	0.0000	0.1099	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1111	1.2296	0.8183	1.6400e-003		0.0526	0.0526		0.0484	0.0484	0.0000	144.4117	144.4117	0.0467	0.0000	145.5793
Total	**0.1111**	**1.2296**	**0.8183**	**1.6400e-003**	**0.3651**	**0.0526**	**0.4177**	**0.1099**	**0.0484**	**0.1583**	**0.0000**	**144.4117**	**144.4117**	**0.0467**	**0.0000**	**145.5793**

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	1.8200e-003	1.3600e-003	0.0132	4.0000e-005	4.2200e-003	3.0000e-005	4.2500e-003	1.1200e-003	2.0000e-005	1.1500e-003	0.0000	3.4044	3.4044	9.0000e-005	0.0000	3.4067
Total	**1.8200e-003**	**1.3600e-003**	**0.0132**	**4.0000e-005**	**4.2200e-003**	**3.0000e-005**	**4.2500e-003**	**1.1200e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4044**	**3.4044**	**9.0000e-005**	**0.0000**	**3.4067**

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					0.1424	0.0000	0.1424	0.0429	0.0000	0.0429	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1111	1.2296	0.8183	1.6400e-003		0.0526	0.0526		0.0484	0.0484	0.0000	144.4115	144.4115	0.0467	0.0000	145.5792
Total	**0.1111**	**1.2296**	**0.8183**	**1.6400e-003**	**0.1424**	**0.0526**	**0.1950**	**0.0429**	**0.0484**	**0.0913**	**0.0000**	**144.4115**	**144.4115**	**0.0467**	**0.0000**	**145.5792**

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	1.8200e-003	1.3600e-003	0.0132	4.0000e-005	4.2200e-003	3.0000e-005	4.2500e-003	1.1200e-003	2.0000e-005	1.1500e-003	0.0000	3.4044	3.4044	9.0000e-005	0.0000	3.4067
Total	**1.8200e-003**	**1.3600e-003**	**0.0132**	**4.0000e-005**	**4.2200e-003**	**3.0000e-005**	**4.2500e-003**	**1.1200e-003**	**2.0000e-005**	**1.1500e-003**	**0.0000**	**3.4044**	**3.4044**	**9.0000e-005**	**0.0000**	**3.4067**

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	0.1977	1.8129	1.7238	2.8000e-003		0.0997	0.0997		0.0937	0.0937	0.0000	240.9028	240.9028	0.0581	0.0000	242.3558
Total	**0.1977**	**1.8129**	**1.7238**	**2.8000e-003**		**0.0997**	**0.0997**		**0.0937**	**0.0937**	**0.0000**	**240.9028**	**240.9028**	**0.0581**	**0.0000**	**242.3558**

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	0.2374	6.9315	1.5724	0.0179	0.4018	0.0208	0.4226	0.1161	0.0199	0.1360	0.0000	1,696.6278	1,696.6278	0.4753	0.0000	1,708.5095
Worker	0.5345	0.4006	3.8624	0.0111	1.2409	7.9300e-003	1.2488	0.3299	7.3100e-003	0.3372	0.0000	1,000.0310	1,000.0310	0.0274	0.0000	1,000.7164
Total	**0.7719**	**7.3321**	**5.4348**	**0.0290**	**1.6426**	**0.0287**	**1.6714**	**0.4460**	**0.0272**	**0.4732**	**0.0000**	**2,696.6588**	**2,696.6588**	**0.5027**	**0.0000**	**2,709.2259**

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	0.1977	1.8129	1.7238	2.8000e-003		0.0997	0.0997		0.0937	0.0937	0.0000	240.9025	240.9025	0.0581	0.0000	242.3555
Total	**0.1977**	**1.8129**	**1.7238**	**2.8000e-003**		**0.0997**	**0.0997**		**0.0937**	**0.0937**	**0.0000**	**240.9025**	**240.9025**	**0.0581**	**0.0000**	**242.3555**

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	0.2374	6.9315	1.5724	0.0179	0.4018	0.0208	0.4226	0.1161	0.0199	0.1360	0.0000	1,696.6278	1,696.6278	0.4753	0.0000	1,708.5095
Worker	0.5345	0.4006	3.8624	0.0111	1.2409	7.9300e-003	1.2488	0.3299	7.3100e-003	0.3372	0.0000	1,000.0310	1,000.0310	0.0274	0.0000	1,000.7164
Total	**0.7719**	**7.3321**	**5.4348**	**0.0290**	**1.6426**	**0.0287**	**1.6714**	**0.4460**	**0.0272**	**0.4732**	**0.0000**	**2,696.6588**	**2,696.6588**	**0.5027**	**0.0000**	**2,709.2259**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1339	1.2258	1.2845	2.1100e-003		0.0635	0.0635		0.0598	0.0598	0.0000	181.9043	181.9043	0.0436	0.0000	182.9938
Total	**0.1339**	**1.2258**	**1.2845**	**2.1100e-003**		**0.0635**	**0.0635**		**0.0598**	**0.0598**	**0.0000**	**181.9043**	**181.9043**	**0.0436**	**0.0000**	**182.9938**

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	0.1647	4.9471	1.0719	0.0134	0.3033	0.0137	0.3169	0.0877	0.0131	0.1007	0.0000	1,266.6617	1,266.6617	0.3334	0.0000	1,274.9958
Worker	0.3744	0.2685	2.6613	8.0400e-003	0.9366	5.8400e-003	0.9425	0.2490	5.3700e-003	0.2544	0.0000	726.4588	726.4588	0.0183	0.0000	726.9172
Total	**0.5391**	**5.2156**	**3.7332**	**0.0214**	**1.2399**	**0.0195**	**1.2594**	**0.3367**	**0.0184**	**0.3551**	**0.0000**	**1,993.1205**	**1,993.1205**	**0.3517**	**0.0000**	**2,001.9130**

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	0.1339	1.2258	1.2845	2.1100e-003		0.0635	0.0635		0.0598	0.0598	0.0000	181.9041	181.9041	0.0436	0.0000	182.9936
Total	**0.1339**	**1.2258**	**1.2845**	**2.1100e-003**		**0.0635**	**0.0635**		**0.0598**	**0.0598**	**0.0000**	**181.9041**	**181.9041**	**0.0436**	**0.0000**	**182.9936**

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	0.1647	4.9471	1.0719	0.0134	0.3033	0.0137	0.3169	0.0877	0.0131	0.1007	0.0000	1,266.6617	1,266.6617	0.3334	0.0000	1,274.9958
Worker	0.3744	0.2685	2.6613	8.0400e-003	0.9366	5.8400e-003	0.9425	0.2490	5.3700e-003	0.2544	0.0000	726.4588	726.4588	0.0183	0.0000	726.9172

Total	**0.5391**	**5.2156**	**3.7332**	**0.0214**	**1.2399**	**0.0195**	**1.2594**	**0.3367**	**0.0184**	**0.3551**	**0.0000**	**1,993.1205**	**1,993.1205**	**0.3517**	**0.0000**	**2,001.9130**

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	0.0691	0.7106	0.8059	1.2500e-003		0.0373	0.0373		0.0343	0.0343	0.0000	110.1291	110.1291	0.0356	0.0000	111.0196
Paving	4.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0735**	**0.7106**	**0.8059**	**1.2500e-003**		**0.0373**	**0.0373**		**0.0343**	**0.0343**	**0.0000**	**110.1291**	**110.1291**	**0.0356**	**0.0000**	**111.0196**

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	2.8300e-003	2.1200e-003	0.0205	6.0000e-005	6.5800e-003	4.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.2992	5.2992	1.5000e-004	0.0000	5.3029
Total	**2.8300e-003**	**2.1200e-003**	**0.0205**	**6.0000e-005**	**6.5800e-003**	**4.0000e-005**	**6.6200e-003**	**1.7500e-003**	**4.0000e-005**	**1.7900e-003**	**0.0000**	**5.2992**	**5.2992**	**1.5000e-004**	**0.0000**	**5.3029**

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	0.0691	0.7106	0.8059	1.2500e-003		0.0373	0.0373		0.0343	0.0343	0.0000	110.1290	110.1290	0.0356	0.0000	111.0195
Paving	4.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0735**	**0.7106**	**0.8059**	**1.2500e-003**		**0.0373**	**0.0373**		**0.0343**	**0.0343**	**0.0000**	**110.1290**	**110.1290**	**0.0356**	**0.0000**	**111.0195**

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	2.8300e-003	2.1200e-003	0.0205	6.0000e-005	6.5800e-003	4.0000e-005	6.6200e-003	1.7500e-003	4.0000e-005	1.7900e-003	0.0000	5.2992	5.2992	1.5000e-004	0.0000	5.3029
Total	**2.8300e-003**	**2.1200e-003**	**0.0205**	**6.0000e-005**	**6.5800e-003**	**4.0000e-005**	**6.6200e-003**	**1.7500e-003**	**4.0000e-005**	**1.7900e-003**	**0.0000**	**5.2992**	**5.2992**	**1.5000e-004**	**0.0000**	**5.3029**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Archit. Coating	0.0904					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	**0.1024**	**0.0840**	**0.1000**	**1.6000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**14.0429**	**14.0429**	**9.6000e-004**	**0.0000**	**14.0670**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0423	0.4080	1.1700e-003	0.1311	8.4000e-004	0.1319	0.0349	7.7000e-004	0.0356	0.0000	105.6312	105.6312	2.9000e-003	0.0000	105.7036
Total	**0.0565**	**0.0423**	**0.4080**	**1.1700e-003**	**0.1311**	**8.4000e-004**	**0.1319**	**0.0349**	**7.7000e-004**	**0.0356**	**0.0000**	**105.6312**	**105.6312**	**2.9000e-003**	**0.0000**	**105.7036**

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	0.0904					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0120	0.0840	0.1000	1.6000e-004		5.1800e-003	5.1800e-003		5.1800e-003	5.1800e-003	0.0000	14.0429	14.0429	9.6000e-004	0.0000	14.0670
Total	**0.1024**	**0.0840**	**0.1000**	**1.6000e-004**		**5.1800e-003**	**5.1800e-003**		**5.1800e-003**	**5.1800e-003**	**0.0000**	**14.0429**	**14.0429**	**9.6000e-004**	**0.0000**	**14.0670**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0565	0.0423	0.4080	1.1700e-003	0.1311	8.4000e-004	0.1319	0.0349	7.7000e-004	0.0356	0.0000	105.6312	105.6312	2.9000e-003	0.0000	105.7036
Total	**0.0565**	**0.0423**	**0.4080**	**1.1700e-003**	**0.1311**	**8.4000e-004**	**0.1319**	**0.0349**	**7.7000e-004**	**0.0356**	**0.0000**	**105.6312**	**105.6312**	**2.9000e-003**	**0.0000**	**105.7036**

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	0.9227	11.7000	8.1523	0.0396	1.9288	0.0395	1.9683	0.5185	0.0374	0.5559	0.0000	3,696.2389	3,696.2389	1.0908	0.0000	3,723.5098
Unmitigated	0.9227	11.7000	8.1523	0.0396	1.9288	0.0395	1.9683	0.5185	0.0374	0.5559	0.0000	3,696.2389	3,696.2389	1.0908	0.0000	3,723.5098

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
Arena	0.00	0.00	0.00		
City Park	1,507.01	1,507.01	1507.01	3,217,251	3,217,251
City Park	575.89	575.89	575.89	1,229,440	1,229,440
City Park	193.98	193.98	193.98	414,127	414,127
City Park	92.75	92.75	92.75	198,005	198,005
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Racquet Club	0.00	0.00	0.00		
Total	2,369.64	2,369.64	2,369.64	5,058,823	5,058,823

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Racquet Club	9.50	7.30	7.30	11.50	69.50	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
City Park	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
Parking Lot	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
Racquet Club	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914

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	37.0825	37.0825	1.6800e-003	3.5000e-004	37.2278
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	37.0825	37.0825	1.6800e-003	3.5000e-004	37.2278
NaturalGas Mitigated	9.6000e-004	8.7000e-003	7.3000e-003	5.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	9.4665	9.4665	1.8000e-004	1.7000e-004	9.5227
NaturalGas Unmitigated	9.6000e-004	8.7000e-003	7.3000e-003	5.0000e-005		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	9.4665	9.4665	1.8000e-004	1.7000e-004	9.5227

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					
Arena	41740	4.5000e-004	4.0900e-003	3.4400e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4548	4.4548	9.0000e-005	8.0000e-005	4.4813
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
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
Racquet Club	93915	5.1000e-004	4.6000e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0117	5.0117	1.0000e-004	9.0000e-005	5.0414
Total		**9.6000e-004**	**8.6900e-003**	**7.3100e-003**	**5.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**9.4665**	**9.4665**	**1.9000e-004**	**1.7000e-004**	**9.5227**

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					
Arena	41740	4.5000e-004	4.0900e-003	3.4400e-003	2.0000e-005		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	4.4548	4.4548	9.0000e-005	8.0000e-005	4.4813
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
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
Racquet Club	93915	5.1000e-004	4.6000e-003	3.8700e-003	3.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	5.0117	5.0117	1.0000e-004	9.0000e-005	5.0414
Total		**9.6000e-004**	**8.6900e-003**	**7.3100e-003**	**5.0000e-005**		**6.6000e-004**	**6.6000e-004**		**6.6000e-004**	**6.6000e-004**	**0.0000**	**9.4665**	**9.4665**	**1.9000e-004**	**1.7000e-004**	**9.5227**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	17640	10.2634	4.6000e-004	1.0000e-004	10.3036
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	14000	4.0728	1.8000e-004	4.0000e-005	4.0887
Parking Lot	38500	11.2001	5.1000e-004	1.0000e-004	11.2440
Racquet Club	39690	11.5463	5.2000e-004	1.1000e-004	11.5915
Total		**37.0825**	**1.6700e-003**	**3.5000e-004**	**37.2278**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Arena	17640	10.2634	4.6000e-004	1.0000e-004	10.3036
City Park	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	14000	4.0728	1.8000e-004	4.0000e-005	4.0887
Parking Lot	38500	11.2001	5.1000e-004	1.0000e-004	11.2440
Racquet Club	39690	11.5463	5.2000e-004	1.1000e-004	11.5915
Total		**37.0825**	**1.6700e-003**	**3.5000e-004**	**37.2278**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0820	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0122
Unmitigated	0.0845	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0122

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.0400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0749					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0122
Total	**0.0845**	**5.0000e-005**	**5.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0115**	**0.0115**	**3.0000e-005**	**0.0000**	**0.0122**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.0400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0724					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.5000e-004	5.0000e-005	5.9200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0115	0.0115	3.0000e-005	0.0000	0.0122
Total	**0.0820**	**5.0000e-005**	**5.9200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0115**	**0.0115**	**3.0000e-005**	**0.0000**	**0.0122**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	98.4198	0.0612	2.2600e-003	100.6232
Unmitigated	98.8849	0.0693	2.4500e-003	101.3464

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	1.72308 / 0.109984	3.3710	0.0563	1.3500e-003	5.1808
City Park	0 / 93.15	94.8444	4.2900e-003	8.9000e-004	95.2161
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0.266144 / 0.163121	0.6695	8.7000e-003	2.1000e-004	0.9496
Total		**98.8849**	**0.0693**	**2.4500e-003**	**101.3464**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Arena	1.51011 / 0.109984	2.9682	0.0493	1.1900e-003	4.5543
City Park	0 / 93.15	94.8444	4.2900e-003	8.9000e-004	95.2161
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Racquet Club	0.233249 / 0.163121	0.6073	7.6200e-003	1.8000e-004	0.8528
Total		**98.4198**	**0.0612**	**2.2600e-003**	**100.6232**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.5932	0.3896	0.0000	16.3342
Unmitigated	6.5932	0.3896	0.0000	16.3342

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.11	0.0223	1.3200e-003	0.0000	0.0553
City Park	6.72	1.3641	0.0806	0.0000	3.3795
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	25.65	5.2067	0.3077	0.0000	12.8994
Total		**6.5932**	**0.3897**	**0.0000**	**16.3342**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Arena	0.11	0.0223	1.3200e-003	0.0000	0.0553
City Park	6.72	1.3641	0.0806	0.0000	3.3795
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Racquet Club	25.65	5.2067	0.3077	0.0000	12.8994
Total		**6.5932**	**0.3897**	**0.0000**	**16.3342**

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

Hollister Park Facility Master Plan Project

San Benito County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	275.00	Space	2.47	110,000.00	0
Parking Lot	100.00	Space	0.90	40,000.00	0
Arena	2.00	1000sqft	0.64	2,000.00	0
Arena	2.00	1000sqft	0.64	2,000.00	0
City Park	49.72	Acre	49.72	2,165,803.20	0
City Park	19.00	Acre	19.00	827,640.00	0
City Park	6.40	Acre	6.40	278,784.00	0
City Park	3.06	Acre	3.06	133,293.60	0
Racquet Club	4.50	1000sqft	0.10	4,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.5	**Precipitation Freq (Days)**	50
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - anticipated construction scheduling

Vehicle Trips - per the traffic study.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1,550.00	365.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	22.75	30.31
tblVehicleTrips	ST_TR	21.35	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	16.74	30.31
tblVehicleTrips	SU_TR	17.40	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	1.89	30.31
tblVehicleTrips	WD_TR	14.03	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5276	50.2485	32.5254	0.0636	18.2141	2.1983	20.4125	9.9699	2.0225	11.9924	0.0000	6,162.1069	6,162.1069	1.9470	0.0000	6,210.7809

2021	13.8281	102.0805	94.1589	0.3651	18.8365	2.0190	20.8555	5.0863	1.8916	6.9779	0.0000	37,032.0646	37,032.0646	6.4778	0.0000	37,194.0093
2022	8.7416	81.1827	64.6127	0.3092	16.2571	1.0536	17.3107	4.4021	0.9925	5.3946	0.0000	31,538.3699	31,538.3699	5.3020	0.0000	31,670.9193
Maximum	**13.8281**	**102.0805**	**94.1589**	**0.3651**	**18.8365**	**2.1983**	**20.8555**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**37,032.0646**	**37,032.0646**	**6.4778**	**0.0000**	**37,194.0093**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5276	50.2485	32.5254	0.0636	7.1937	2.1983	9.3920	3.9122	2.0225	5.9347	0.0000	6,162.1069	6,162.1069	1.9470	0.0000	6,210.7809
2021	13.8281	102.0805	94.1589	0.3651	18.8365	2.0190	20.8555	5.0863	1.8916	6.9779	0.0000	37,032.0646	37,032.0646	6.4778	0.0000	37,194.0092
2022	8.7416	81.1827	64.6127	0.3092	16.2571	1.0536	17.3107	4.4021	0.9925	5.3946	0.0000	31,538.3699	31,538.3699	5.3020	0.0000	31,670.9193
Maximum	**13.8281**	**102.0805**	**94.1589**	**0.3651**	**18.8365**	**2.1983**	**20.8555**	**5.0863**	**2.0225**	**6.9779**	**0.0000**	**37,032.0646**	**37,032.0646**	**6.4778**	**0.0000**	**37,194.0092**

	ROG	NOx	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**	**20.67**	**0.00**	**18.81**	**31.13**	**0.00**	**24.86**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4644	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078

Energy	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179
Mobile	5.5110	63.8754	43.8390	0.2266	10.9126	0.2127	11.1253	2.9263	0.2015	3.1278		23,298.3934	23,298.3934	6.2664		23,455.0524
Total	**5.9806**	**63.9235**	**43.9263**	**0.2269**	**10.9126**	**0.2165**	**11.1291**	**2.9263**	**0.2053**	**3.1316**		**23,355.6725**	**23,355.6725**	**6.2677**	**1.0500e-003**	**23,512.6780**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4508	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Energy	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179
Mobile	5.5110	63.8754	43.8390	0.2266	10.9126	0.2127	11.1253	2.9263	0.2015	3.1278		23,298.3934	23,298.3934	6.2664		23,455.0524
Total	**5.9670**	**63.9235**	**43.9263**	**0.2269**	**10.9126**	**0.2165**	**11.1291**	**2.9263**	**0.2053**	**3.1316**		**23,355.6725**	**23,355.6725**	**6.2677**	**1.0500e-003**	**23,512.6780**

	ROG	NOx	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	**0.23**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	5/19/2020	5	100	
2	Site Preparation	Site Preparation	5/20/2020	8/11/2020	5	60	
3	Grading	Grading	8/12/2020	3/16/2021	5	155	
4	Building Construction	Building Construction	3/17/2021	8/9/2022	5	365	
5	Paving	Paving	3/17/2021	8/17/2021	5	110	

6	Architectural Coating	Architectural Coating	3/17/2021	8/17/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 3.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,750; Non-Residential Outdoor: 4,250; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,497.00	584.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	299.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0581	0.0382	0.4254	1.1800e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		117.1812	117.1812	3.4100e-003		117.2664
Total	**0.0581**	**0.0382**	**0.4254**	**1.1800e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**117.1812**	**117.1812**	**3.4100e-003**		**117.2664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0581	0.0382	0.4254	1.1800e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		117.1812	117.1812	3.4100e-003		117.2664
Total	**0.0581**	**0.0382**	**0.4254**	**1.1800e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**117.1812**	**117.1812**	**3.4100e-003**		**117.2664**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0697	0.0459	0.5104	1.4100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.6000e-004	0.0401		140.6174	140.6174	4.0900e-003		140.7197
Total	**0.0697**	**0.0459**	**0.5104**	**1.4100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.6000e-004**	**0.0401**		**140.6174**	**140.6174**	**4.0900e-003**		**140.7197**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**7.0458**	**2.1974**	**9.2433**	**3.8730**	**2.0216**	**5.8946**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0697	0.0459	0.5104	1.4100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.6000e-004	0.0401		140.6174	140.6174	4.0900e-003		140.7197
Total	**0.0697**	**0.0459**	**0.5104**	**1.4100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.6000e-004**	**0.0401**		**140.6174**	**140.6174**	**4.0900e-003**		**140.7197**

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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0775	0.0510	0.5672	1.5700e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		156.2416	156.2416	4.5400e-003		156.3552
Total	**0.0775**	**0.0510**	**0.5672**	**1.5700e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**156.2416**	**156.2416**	**4.5400e-003**		**156.3552**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257

Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**3.3826**	**2.1739**	**5.5565**	**1.4026**	**2.0000**	**3.4026**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0775	0.0510	0.5672	1.5700e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		156.2416	156.2416	4.5400e-003		156.3552
Total	**0.0775**	**0.0510**	**0.5672**	**1.5700e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**156.2416**	**156.2416**	**4.5400e-003**		**156.3552**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0719	0.0452	0.5218	1.5200e-003	0.1643	1.0200e-003	0.1653	0.0436	9.4000e-004	0.0445		151.6126	151.6126	4.0800e-003		151.7145
Total	**0.0719**	**0.0452**	**0.5218**	**1.5200e-003**	**0.1643**	**1.0200e-003**	**0.1653**	**0.0436**	**9.4000e-004**	**0.0445**		**151.6126**	**151.6126**	**4.0800e-003**		**151.7145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.3826**	**1.9853**	**5.3679**	**1.4026**	**1.8265**	**3.2292**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0719	0.0452	0.5218	1.5200e-003	0.1643	1.0200e-003	0.1653	0.0436	9.4000e-004	0.0445		151.6126	151.6126	4.0800e-003		151.7145
Total	**0.0719**	**0.0452**	**0.5218**	**1.5200e-003**	**0.1643**	**1.0200e-003**	**0.1653**	**0.0436**	**9.4000e-004**	**0.0445**		**151.6126**	**151.6126**	**4.0800e-003**		**151.7145**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.2228	66.1065	13.8601	0.1746	3.9596	0.1962	4.1558	1.1402	0.1877	1.3279		18,261.5242	18,261.5242	4.7593		18,380.5069
Worker	5.3782	3.3858	39.0599	0.1139	12.2975	0.0763	12.3738	3.2619	0.0703	3.3321		11,348.2003	11,348.2003	0.3053		11,355.8319
Total	**7.6010**	**69.4923**	**52.9200**	**0.2885**	**16.2571**	**0.2725**	**16.5296**	**4.4021**	**0.2579**	**4.6600**		**29,609.7245**	**29,609.7245**	**5.0646**		**29,736.3388**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.2228	66.1065	13.8601	0.1746	3.9596	0.1962	4.1558	1.1402	0.1877	1.3279		18,261.5242	18,261.5242	4.7593		18,380.5069
Worker	5.3782	3.3858	39.0599	0.1139	12.2975	0.0763	12.3738	3.2619	0.0703	3.3321		11,348.2003	11,348.2003	0.3053		11,355.8319
Total	**7.6010**	**69.4923**	**52.9200**	**0.2885**	**16.2571**	**0.2725**	**16.5296**	**4.4021**	**0.2579**	**4.6600**		**29,609.7245**	**29,609.7245**	**5.0646**		**29,736.3388**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.0422	62.5594	12.4880	0.1727	3.9596	0.1703	4.1299	1.1402	0.1629	1.3031		18,062.8153	18,062.8153	4.4193		18,173.2965
Worker	4.9931	3.0076	35.7613	0.1096	12.2975	0.0743	12.3718	3.2619	0.0685	3.3303		10,921.2210	10,921.2210	0.2708		10,927.9907
Total	**7.0354**	**65.5671**	**48.2493**	**0.2823**	**16.2571**	**0.2446**	**16.5017**	**4.4021**	**0.2313**	**4.6334**		**28,984.0364**	**28,984.0364**	**4.6900**		**29,101.2871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.0422	62.5594	12.4880	0.1727	3.9596	0.1703	4.1299	1.1402	0.1629	1.3031		18,062.8153	18,062.8153	4.4193		18,173.2965
Worker	4.9931	3.0076	35.7613	0.1096	12.2975	0.0743	12.3718	3.2619	0.0685	3.3303		10,921.2210	10,921.2210	0.2708		10,927.9907
Total	**7.0354**	**65.5671**	**48.2493**	**0.2823**	**16.2571**	**0.2446**	**16.5017**	**4.4021**	**0.2313**	**4.6334**		**28,984.0364**	**28,984.0364**	**4.6900**		**29,101.2871**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3358**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0539	0.0339	0.3914	1.1400e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		113.7094	113.7094	3.0600e-003		113.7859
Total	**0.0539**	**0.0339**	**0.3914**	**1.1400e-003**	**0.1232**	**7.6000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**113.7094**	**113.7094**	**3.0600e-003**		**113.7859**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3358**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0539	0.0339	0.3914	1.1400e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		113.7094	113.7094	3.0600e-003		113.7859
Total	**0.0539**	**0.0339**	**0.3914**	**1.1400e-003**	**0.1232**	**7.6000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**113.7094**	**113.7094**	**3.0600e-003**		**113.7859**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6433					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.8622**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0742	0.6763	7.8016	0.0228	2.4562	0.0152	2.4715	0.6515	0.0140	0.6655		2,266.6078	2,266.6078	0.0610		2,268.1321
Total	**1.0742**	**0.6763**	**7.8016**	**0.0228**	**2.4562**	**0.0152**	**2.4715**	**0.6515**	**0.0140**	**0.6655**		**2,266.6078**	**2,266.6078**	**0.0610**		**2,268.1321**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6433					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.8622**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0742	0.6763	7.8016	0.0228	2.4562	0.0152	2.4715	0.6515	0.0140	0.6655		2,266.6078	2,266.6078	0.0610		2,268.1321
Total	**1.0742**	**0.6763**	**7.8016**	**0.0228**	**2.4562**	**0.0152**	**2.4715**	**0.6515**	**0.0140**	**0.6655**		**2,266.6078**	**2,266.6078**	**0.0610**		**2,268.1321**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.5110	63.8754	43.8390	0.2266	10.9126	0.2127	11.1253	2.9263	0.2015	3.1278		23,298.3934	23,298.3934	6.2664		23,455.0524
Unmitigated	5.5110	63.8754	43.8390	0.2266	10.9126	0.2127	11.1253	2.9263	0.2015	3.1278		23,298.3934	23,298.3934	6.2664		23,455.0524

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
Arena	0.00	0.00	0.00		
City Park	1,507.01	1,507.01	1507.01	3,217,251	3,217,251
City Park	575.89	575.89	575.89	1,229,440	1,229,440
City Park	193.98	193.98	193.98	414,127	414,127
City Park	92.75	92.75	92.75	198,005	198,005
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Racquet Club	0.00	0.00	0.00		
Total	2,369.64	2,369.64	2,369.64	5,058,823	5,058,823

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
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Racquet Club	9.50	7.30	7.30	11.50	69.50	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
City Park	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
Parking Lot	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
Racquet Club	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179
NaturalGas Unmitigated	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	114.356	2.4700e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003		26.9073	26.9073	5.2000e-004	4.9000e-004	27.0672
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
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
Racquet Club	257.301	2.7700e-003	0.0252	0.0212	1.5000e-004		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003		30.2708	30.2708	5.8000e-004	5.5000e-004	30.4506
Total		**5.2400e-003**	**0.0477**	**0.0400**	**2.8000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**		**57.1781**	**57.1781**	**1.1000e-003**	**1.0400e-003**	**57.5179**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	0.114356	2.4700e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003		26.9073	26.9073	5.2000e-004	4.9000e-004	27.0672
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
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
Racquet Club	0.257301	2.7700e-003	0.0252	0.0212	1.5000e-004		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003		30.2708	30.2708	5.8000e-004	5.5000e-004	30.4506
Total		**5.2400e-003**	**0.0477**	**0.0400**	**2.8000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**		**57.1781**	**57.1781**	**1.1000e-003**	**1.0400e-003**	**57.5179**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4508	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Unmitigated	0.4644	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4200e-003	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Total	**0.4644**	**4.3000e-004**	**0.0473**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**		**0.1010**	**0.1010**	**2.7000e-004**		**0.1078**

Mitigated

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

SubCategory	lb/day										lb/day					
Architectural Coating	0.0495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3969					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4200e-003	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Total	**0.4508**	**4.3000e-004**	**0.0473**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**		**0.1010**	**0.1010**	**2.7000e-004**		**0.1078**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Hollister Park Facility Master Plan Project - San Benito County, Winter

Hollister Park Facility Master Plan Project

San Benito County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	275.00	Space	2.47	110,000.00	0
Parking Lot	100.00	Space	0.90	40,000.00	0
Arena	2.00	1000sqft	0.64	2,000.00	0
Arena	2.00	1000sqft	0.64	2,000.00	0
City Park	49.72	Acre	49.72	2,165,803.20	0
City Park	19.00	Acre	19.00	827,640.00	0
City Park	6.40	Acre	6.40	278,784.00	0
City Park	3.06	Acre	3.06	133,293.60	0
Racquet Club	4.50	1000sqft	0.10	4,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.5	**Precipitation Freq (Days)**	50
Climate Zone	3			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - anticipated construction scheduling

Vehicle Trips - per the traffic study.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	1,550.00	365.00
tblVehicleTrips	ST_TR	10.71	0.00
tblVehicleTrips	ST_TR	22.75	30.31
tblVehicleTrips	ST_TR	21.35	0.00
tblVehicleTrips	SU_TR	10.71	0.00
tblVehicleTrips	SU_TR	16.74	30.31
tblVehicleTrips	SU_TR	17.40	0.00
tblVehicleTrips	WD_TR	10.71	0.00
tblVehicleTrips	WD_TR	1.89	30.31
tblVehicleTrips	WD_TR	14.03	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5313	50.2622	32.5294	0.0635	18.2141	2.1983	20.4125	9.9699	2.0225	11.9924	0.0000	6,150.6423	6,150.6423	1.9468	0.0000	6,199.3125

2021	14.2903	103.4342	97.1333	0.3488	18.8365	2.0281	20.8647	5.0863	1.9003	6.9866	0.0000	35,362.1995	35,362.1995	7.1246	0.0000	35,540.3137
2022	9.1205	82.1505	67.1789	0.2950	16.2571	1.0623	17.3194	4.4021	1.0007	5.4028	0.0000	30,080.9678	30,080.9678	5.9131	0.0000	30,228.7951
Maximum	**14.2903**	**103.4342**	**97.1333**	**0.3488**	**18.8365**	**2.1983**	**20.8647**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**35,362.1995**	**35,362.1995**	**7.1246**	**0.0000**	**35,540.3137**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5313	50.2622	32.5294	0.0635	7.1937	2.1983	9.3920	3.9122	2.0225	5.9347	0.0000	6,150.6423	6,150.6423	1.9468	0.0000	6,199.3125
2021	14.2903	103.4342	97.1333	0.3488	18.8365	2.0281	20.8647	5.0863	1.9003	6.9866	0.0000	35,362.1995	35,362.1995	7.1246	0.0000	35,540.3137
2022	9.1205	82.1505	67.1789	0.2950	16.2571	1.0623	17.3194	4.4021	1.0007	5.4028	0.0000	30,080.9678	30,080.9678	5.9131	0.0000	30,228.7951
Maximum	**14.2903**	**103.4342**	**97.1333**	**0.3488**	**18.8365**	**2.1983**	**20.8647**	**5.0863**	**2.0225**	**6.9866**	**0.0000**	**35,362.1995**	**35,362.1995**	**7.1246**	**0.0000**	**35,540.3137**

	ROG	NOx	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**	**20.67**	**0.00**	**18.81**	**31.13**	**0.00**	**24.85**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4644	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078

Energy	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179
Mobile	5.1060	64.1113	49.1246	0.2128	10.9126	0.2231	11.1357	2.9263	0.2115	3.1378		21,874.2386	21,874.2386	7.1088		22,051.9573
Total	**5.5756**	**64.1594**	**49.2119**	**0.2131**	**10.9126**	**0.2269**	**11.1395**	**2.9263**	**0.2153**	**3.1416**		**21,931.5178**	**21,931.5178**	**7.1101**	**1.0500e-003**	**22,109.5829**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4508	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Energy	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179
Mobile	5.1060	64.1113	49.1246	0.2128	10.9126	0.2231	11.1357	2.9263	0.2115	3.1378		21,874.2386	21,874.2386	7.1088		22,051.9573
Total	**5.5620**	**64.1594**	**49.2119**	**0.2131**	**10.9126**	**0.2269**	**11.1395**	**2.9263**	**0.2153**	**3.1416**		**21,931.5178**	**21,931.5178**	**7.1101**	**1.0500e-003**	**22,109.5829**

	ROG	NOx	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	**0.24**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2020	5/19/2020	5	100	
2	Site Preparation	Site Preparation	5/20/2020	8/11/2020	5	60	
3	Grading	Grading	8/12/2020	3/16/2021	5	155	
4	Building Construction	Building Construction	3/17/2021	8/9/2022	5	365	
5	Paving	Paving	3/17/2021	8/17/2021	5	110	

6	Architectural Coating	Architectural Coating	3/17/2021	8/17/2021	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 3.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,750; Non-Residential Outdoor: 4,250; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	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	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,497.00	584.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	299.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.0485	0.4284	1.0900e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		108.5828	108.5828	3.2900e-003		108.6651
Total	**0.0609**	**0.0485**	**0.4284**	**1.0900e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**108.5828**	**108.5828**	**3.2900e-003**		**108.6651**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**		**1.6587**	**1.6587**		**1.5419**	**1.5419**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Mitigated Construction Off-Site

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

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0609	0.0485	0.4284	1.0900e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		108.5828	108.5828	3.2900e-003		108.6651
Total	**0.0609**	**0.0485**	**0.4284**	**1.0900e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**108.5828**	**108.5828**	**3.2900e-003**		**108.6651**

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	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0731	0.0582	0.5140	1.3100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.6000e-004	0.0401		130.2993	130.2993	3.9500e-003		130.3981
Total	**0.0731**	**0.0582**	**0.5140**	**1.3100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.6000e-004**	**0.0401**		**130.2993**	**130.2993**	**3.9500e-003**		**130.3981**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**7.0458**	**2.1974**	**9.2433**	**3.8730**	**2.0216**	**5.8946**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0731	0.0582	0.5140	1.3100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.6000e-004	0.0401		130.2993	130.2993	3.9500e-003		130.3981
Total	**0.0731**	**0.0582**	**0.5140**	**1.3100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.6000e-004**	**0.0401**		**130.2993**	**130.2993**	**3.9500e-003**		**130.3981**

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	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**8.6733**	**2.1739**	**10.8472**	**3.5965**	**2.0000**	**5.5965**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0812	0.0647	0.5711	1.4500e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		144.7770	144.7770	4.3900e-003		144.8867
Total	**0.0812**	**0.0647**	**0.5711**	**1.4500e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**144.7770**	**144.7770**	**4.3900e-003**		**144.8867**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257

Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**3.3826**	**2.1739**	**5.5565**	**1.4026**	**2.0000**	**3.4026**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0812	0.0647	0.5711	1.4500e-003	0.1643	1.0300e-003	0.1653	0.0436	9.5000e-004	0.0445		144.7770	144.7770	4.3900e-003		144.8867
Total	**0.0812**	**0.0647**	**0.5711**	**1.4500e-003**	**0.1643**	**1.0300e-003**	**0.1653**	**0.0436**	**9.5000e-004**	**0.0445**		**144.7770**	**144.7770**	**4.3900e-003**		**144.8867**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0752	0.0574	0.5230	1.4100e-003	0.1643	1.0200e-003	0.1653	0.0436	9.4000e-004	0.0445		140.4949	140.4949	3.9300e-003		140.5931
Total	**0.0752**	**0.0574**	**0.5230**	**1.4100e-003**	**0.1643**	**1.0200e-003**	**0.1653**	**0.0436**	**9.4000e-004**	**0.0445**		**140.4949**	**140.4949**	**3.9300e-003**		**140.5931**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3826	0.0000	3.3826	1.4026	0.0000	1.4026			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**3.3826**	**1.9853**	**5.3679**	**1.4026**	**1.8265**	**3.2292**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0752	0.0574	0.5230	1.4100e-003	0.1643	1.0200e-003	0.1653	0.0436	9.4000e-004	0.0445		140.4949	140.4949	3.9300e-003		140.5931
Total	**0.0752**	**0.0574**	**0.5230**	**1.4100e-003**	**0.1643**	**1.0200e-003**	**0.1653**	**0.0436**	**9.4000e-004**	**0.0445**		**140.4949**	**140.4949**	**3.9300e-003**		**140.5931**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.3832	66.3584	16.7265	0.1683	3.9596	0.2054	4.1650	1.1402	0.1964	1.3367		17,598.3626	17,598.3626	5.4197		17,733.8542
Worker	5.6277	4.2965	39.1492	0.1056	12.2975	0.0763	12.3738	3.2619	0.0703	3.3321		10,516.0440	10,516.0440	0.2940		10,523.3951
Total	**8.0109**	**70.6550**	**55.8757**	**0.2739**	**16.2571**	**0.2817**	**16.5388**	**4.4021**	**0.2667**	**4.6688**		**28,114.4066**	**28,114.4066**	**5.7137**		**28,257.2493**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.3832	66.3584	16.7265	0.1683	3.9596	0.2054	4.1650	1.1402	0.1964	1.3367		17,598.3626	17,598.3626	5.4197		17,733.8542
Worker	5.6277	4.2965	39.1492	0.1056	12.2975	0.0763	12.3738	3.2619	0.0703	3.3321		10,516.0440	10,516.0440	0.2940		10,523.3951
Total	**8.0109**	**70.6550**	**55.8757**	**0.2739**	**16.2571**	**0.2817**	**16.5388**	**4.4021**	**0.2667**	**4.6688**		**28,114.4066**	**28,114.4066**	**5.7137**		**28,257.2493**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.1903	62.7192	15.1410	0.1664	3.9596	0.1789	4.1385	1.1402	0.1711	1.3113		17,405.8150	17,405.8150	5.0410		17,531.8406
Worker	5.2239	3.8157	35.6745	0.1016	12.2975	0.0743	12.3718	3.2619	0.0685	3.3303		10,120.8192	10,120.8192	0.2601		10,127.3222
Total	**7.4142**	**66.5349**	**50.8155**	**0.2680**	**16.2571**	**0.2533**	**16.5103**	**4.4021**	**0.2396**	**4.6417**		**27,526.6342**	**27,526.6342**	**5.3012**		**27,659.1629**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.1903	62.7192	15.1410	0.1664	3.9596	0.1789	4.1385	1.1402	0.1711	1.3113		17,405.8150	17,405.8150	5.0410		17,531.8406
Worker	5.2239	3.8157	35.6745	0.1016	12.2975	0.0743	12.3718	3.2619	0.0685	3.3303		10,120.8192	10,120.8192	0.2601		10,127.3222
Total	**7.4142**	**66.5349**	**50.8155**	**0.2680**	**16.2571**	**0.2533**	**16.5103**	**4.4021**	**0.2396**	**4.6417**		**27,526.6342**	**27,526.6342**	**5.3012**		**27,659.1629**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3358**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0564	0.0431	0.3923	1.0600e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		105.3712	105.3712	2.9500e-003		105.4448
Total	**0.0564**	**0.0431**	**0.3923**	**1.0600e-003**	**0.1232**	**7.6000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**105.3712**	**105.3712**	**2.9500e-003**		**105.4448**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.0803					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3358**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

Mitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0564	0.0431	0.3923	1.0600e-003	0.1232	7.6000e-004	0.1240	0.0327	7.0000e-004	0.0334		105.3712	105.3712	2.9500e-003		105.4448
Total	**0.0564**	**0.0431**	**0.3923**	**1.0600e-003**	**0.1232**	**7.6000e-004**	**0.1240**	**0.0327**	**7.0000e-004**	**0.0334**		**105.3712**	**105.3712**	**2.9500e-003**		**105.4448**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6433					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.8622**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1240	0.8582	7.8194	0.0211	2.4562	0.0152	2.4715	0.6515	0.0140	0.6655		2,100.3989	2,100.3989	0.0587		2,101.8672
Total	**1.1240**	**0.8582**	**7.8194**	**0.0211**	**2.4562**	**0.0152**	**2.4715**	**0.6515**	**0.0140**	**0.6655**		**2,100.3989**	**2,100.3989**	**0.0587**		**2,101.8672**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.6433					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.8622**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1240	0.8582	7.8194	0.0211	2.4562	0.0152	2.4715	0.6515	0.0140	0.6655		2,100.3989	2,100.3989	0.0587		2,101.8672
Total	**1.1240**	**0.8582**	**7.8194**	**0.0211**	**2.4562**	**0.0152**	**2.4715**	**0.6515**	**0.0140**	**0.6655**		**2,100.3989**	**2,100.3989**	**0.0587**		**2,101.8672**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.1060	64.1113	49.1246	0.2128	10.9126	0.2231	11.1357	2.9263	0.2115	3.1378		21,874.2386	21,874.2386	7.1088		22,051.9573
Unmitigated	5.1060	64.1113	49.1246	0.2128	10.9126	0.2231	11.1357	2.9263	0.2115	3.1378		21,874.2386	21,874.2386	7.1088		22,051.9573

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Arena	0.00	0.00	0.00		
Arena	0.00	0.00	0.00		
City Park	1,507.01	1,507.01	1507.01	3,217,251	3,217,251
City Park	575.89	575.89	575.89	1,229,440	1,229,440
City Park	193.98	193.98	193.98	414,127	414,127
City Park	92.75	92.75	92.75	198,005	198,005
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Racquet Club	0.00	0.00	0.00		
Total	2,369.64	2,369.64	2,369.64	5,058,823	5,058,823

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
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
Arena	9.50	7.30	7.30	0.00	81.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Racquet Club	9.50	7.30	7.30	11.50	69.50	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
City Park	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
Parking Lot	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914
Racquet Club	0.483631	0.025473	0.170508	0.113275	0.023943	0.005057	0.011555	0.156463	0.001430	0.001153	0.006006	0.000591	0.000914

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179
NaturalGas Unmitigated	5.2400e-003	0.0477	0.0400	2.9000e-004		3.6200e-003	3.6200e-003		3.6200e-003	3.6200e-003		57.1781	57.1781	1.1000e-003	1.0500e-003	57.5179

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	114.356	2.4700e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003		26.9073	26.9073	5.2000e-004	4.9000e-004	27.0672
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
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
Racquet Club	257.301	2.7700e-003	0.0252	0.0212	1.5000e-004		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003		30.2708	30.2708	5.8000e-004	5.5000e-004	30.4506
Total		**5.2400e-003**	**0.0477**	**0.0400**	**2.8000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**		**57.1781**	**57.1781**	**1.1000e-003**	**1.0400e-003**	**57.5179**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Arena	0.114356	2.4700e-003	0.0224	0.0188	1.3000e-004		1.7000e-003	1.7000e-003		1.7000e-003	1.7000e-003		26.9073	26.9073	5.2000e-004	4.9000e-004	27.0672
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
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
Racquet Club	0.257301	2.7700e-003	0.0252	0.0212	1.5000e-004		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003		30.2708	30.2708	5.8000e-004	5.5000e-004	30.4506
Total		**5.2400e-003**	**0.0477**	**0.0400**	**2.8000e-004**		**3.6200e-003**	**3.6200e-003**		**3.6200e-003**	**3.6200e-003**		**57.1781**	**57.1781**	**1.1000e-003**	**1.0400e-003**	**57.5179**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4508	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Unmitigated	0.4644	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4105					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4200e-003	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Total	**0.4644**	**4.3000e-004**	**0.0473**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**		**0.1010**	**0.1010**	**2.7000e-004**		**0.1078**

Mitigated

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

SubCategory	lb/day										lb/day					
Architectural Coating	0.0495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3969					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.4200e-003	4.3000e-004	0.0473	0.0000		1.7000e-004	1.7000e-004		1.7000e-004	1.7000e-004		0.1010	0.1010	2.7000e-004		0.1078
Total	**0.4508**	**4.3000e-004**	**0.0473**	**0.0000**		**1.7000e-004**	**1.7000e-004**		**1.7000e-004**	**1.7000e-004**		**0.1010**	**0.1010**	**2.7000e-004**		**0.1078**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX BIO: BIOLOGICAL RESOURCES

IPaC

U.S. Fish & Wildlife Service

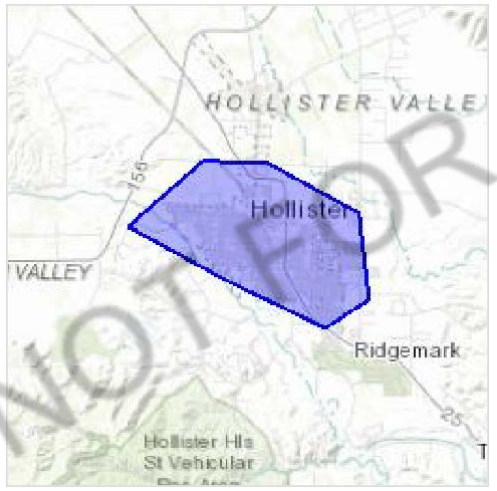
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS offce(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Benito County, California



Local offce

Ventura Fish And Wildlife Offce

□ (805) 644-1766
□ (805) 644-3958

2493 Portola Road, Suite B
Ventura, CA 93003-7726

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

San Joaquin Kit Fox Vulpes macrotis mutica — Endangered
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/2873

Birds

NAME	STATUS
California Condor Gymnogyps californianus There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/8193	Endangered
Least Bell's Vireo Vireo bellii pusillus There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher Empidonax traillii extimus There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6749	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard Gambelia silus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625	Endangered

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
Marsh Sandwort Arenaria paludicola No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2229	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
California Tiger Salamander Ambystoma californiense https://ecos.fws.gov/ecp/species/2076#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Allen's Hummingbird Selasphorus sasin This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Bald Eagle Haliaeetus leucocephalus This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Burrowing Owl Athene cunicularia This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Costa's Hummingbird Calypte costae — Breeds Jan 15 to Jun 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9470

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

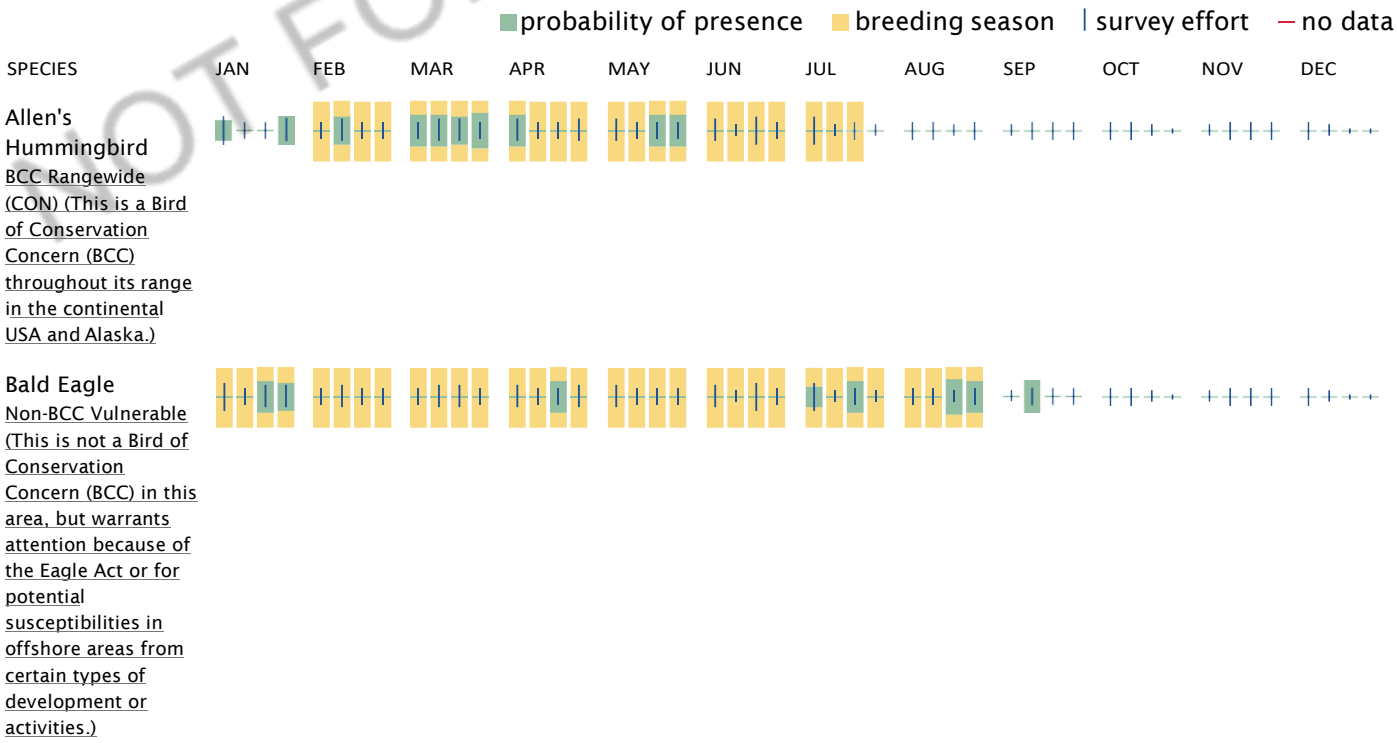
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ( )
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

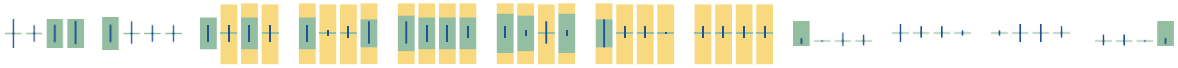
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)
A week is marked as having no data if there were no survey events for that week.

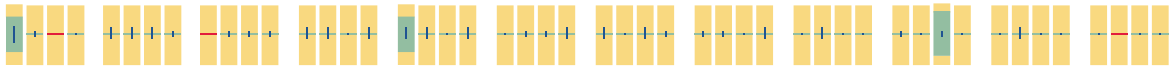
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



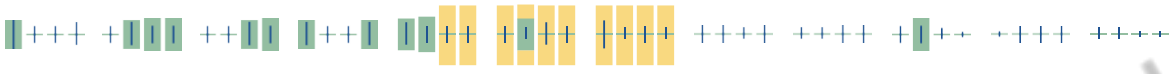
Burrowing Owl
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

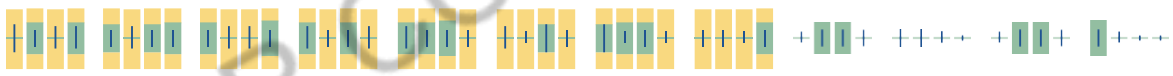


Common Yellowthroat
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Costa's Hummingbird
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Golden Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Lawrence's Goldfinch
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Nuttall's Woodpecker
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the

Oak Titmouse
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Rufous Hummingbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Song Sparrow
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

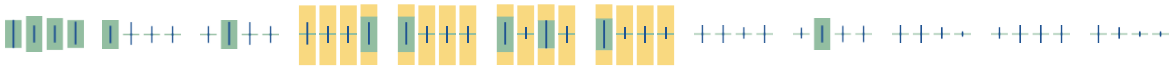
Spotted Towhee
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Tricolored Blackbird
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Yellow-billed Magpie
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1Ax

FRESHWATER FORESTED/SHRUB WETLAND

- PSSA
- PSSC
- PFOA
- PSS/FOA
- PFO/SSA

PSS/EM1C

FRESHWATER POND

PUBKx
PUS/SSA
PUBFx

RIVERINE

R4SBC
R4SBA
R4SBCx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Table 1. Special-status plant species evaluated for potential to occur in the vicinity of Hollister Parks project area, October 2018.

Common Name *Scientific Name*	Listing Status Federal	State	CNPS	Flowering Period	Habitat Requirements	Potential to Occur within Project Site
Douglas' fiddleneck *Amsinckia douglasiana*	-	-	List 4.2	Mar-May	Cismontane woodland, valley and foothill grassland.	Low. Habitat within project sites is disturbed.
Gabilan Mountains manzanita *Arctostaphylos gabilanensis*	-	-	List 1B.2	Jan	Chaparral, cismontane woodland.	None. Suitable habitat not present onsite.
Pajaro manzanita *Arctostaphylos pajaroensis*	-	-	List 1B.2	Dec-Mar	Arnold series soils in maritime chaparral or under sparse canopy of coast live oak woodland.	No potential to occur. Chaparral and coast live oak habitat not present.
Marsh sandwort *Arenaria paludicola*	FE	CE	List 1B.1	May-Aug	Sandy openings in marshes and swamps (fresh water or brackish).	None. Suitable habitat not present onsite.
Carlotta Hall's lace fern *Aspidotis carlotta-halliae*	-	-	List 4.2	Jan-Dec	Chaparral, cismontane woodland.	None. Suitable habitat not present onsite.

Common Name *Scientific Name*	Listing Status Federal	State	CNPS	Flowering Period	Habitat Requirements	Potential to Occur within Project Site
Alkali milk-vetch *Astragalus tener* var. *tener*	-	-	List 1B.2	Mar-Jun	Playas, valley and foothill grassland (adobe clay), vernal pools.	Low-moderate potential to occur on wetland edges and sandy soils. One non-specific occurrence in Hollister area, but is dated 1897 and is possibly extirpated.
San Joaquin spearscale *Atriplex joaquiniana*	-	-	List 1B.2	Apr-Oct	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland (alkaline). 1 - 835 meters.	Low-moderate potential to occur along drainages, especially if alkali habitat is present. Known to occur 2.5 miles south-southwest of project sites.
Pink creamsacs *Castilleja rubicundula* var. *rubicundula*	-	-	List 1B.2	Apr-Jun	Chaparral (openings), cismontane woodland, meadows and seeps, valley and foothill grassland.	Low. Habitat within project sites is disturbed.
Monterey ceanothus *Ceanothus rigidus*	-	-	List 4.2	Feb-Apr (Jun)	Closed-cone coniferous forest, chaparral, coastal scrub.	None. Suitable habitat not present onsite.
Congdon's tarplant *Centromadia parryi* ssp. *congdonii*	-	-	List 1B.1	May-Oct (Nov)	Valley and foothill grassland (alkaline), dry creek beds, edges of water bodies with seasonal inundation.	Low-moderate potential to occur along Santa Ana Creek or edge of ephemeral drainages. No CNDDB records within 5 miles.

Common Name *Scientific Name*	Listing Status Federal	State	CNPS	Flowering Period	Habitat Requirements	Potential to Occur within Project Site
Monterey spineflower *Chorizanthe pungens* var. *pungens*	-	-	List 1B.2	Apr-Jun (Jul-Aug)	Chaparral (maritime), cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland.	Low-moderate potential to occur in silty or sandy habitat, especially along San Benito River adjacent to the Water Reclamation Recreation Site. However, there are no CNDDB records within 5 miles.
Lewis' clarkia *Clarkia lewisii*	-	-	List 4.3	May-Jul	Broad-leafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub.	None. Suitable habitat not present onsite.
Rattan's cryptantha *Cryptantha rattanii*	-	-	List 4.3	Apr-Jul	Cismontane woodland, riparian woodland, valley and foothill grassland.	Low. Habitat within project sites is disturbed.
Elegant wild buckwheat *Eriogonum elegans*	-	-	List 4.3	May-Nov	Cismontane woodland, valley and foothill grassland.	Low. Habitat within project sites is disturbed.
Western Heermann's buckwheat *Eriogonum heermannii* var. *occidentale*	-	-	List 1B.2	Jul-Oct	Often serpentinite; roadsides or alluvium floodplains, rarely clay or shale slopes. Cismontane woodland (openings).	Low. Habitats are disturbed. One occurrence over 3 miles southeast of project site.
Pinnacles buckwheat *Eriogonum nortonii*	-	-	List 1B.3	Apr-Sep	Chaparral, valley and foothill grassland, sandy soils.	Low. Habitat within project sites is disturbed. One occurrence 2.7 miles southwest of sites.

Common Name *Scientific Name*	Listing Status Federal	 State	 CNPS	Flowering Period	Habitat Requirements	Potential to Occur within Project Site
Hoover's button-celery *Eryngium aristulatum* var. *hooveri*	-	-	List 1B.1	(Jun)Jul (Aug)	Vernal pools.	None. Suitable habitat not present onsite.
Fragrant fritillary *Fritillaria liliacea*	-	-	List 1B.2	Feb-Apr	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland (often serpentinite). 3 - 410 meters.	Low. Habitat within project sites is disturbed.
Vernal barley *Hordeum intercedens*	-	-	List 3.2	Mar-Jun	Coastal dunes, coastal scrub, valley and foothill grassland (saline flats and depressions), vernal pools.	None. Suitable habitat not present onsite.
Woolly-headed lessingia *Lessingia hololeuca*	-	-	List 3	Jun-Oct	Broad-leafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland.	Low. Habitat within project sites is disturbed.
Indian valley bush-mallow *Malacothamnus aboriginum*	-	-	List 1B.2	Apr-Oct	Rocky, granitic, often in burned areas; chaparral; cismontane woodland.	Low. Habitat within project sites is disturbed. Occurs over 3.25 miles south of project site.
San Antonio Hills monardella *Monardella antonina* ssp. *Antonina*	-	-	List 1B.1	Jun-Aug	Chaparral, cismontane woodland.	None. Suitable habitat not present onsite.

Common Name *Scientific Name*	Listing Status Federal	State	CNPS	Flowering Period	Habitat Requirements	Potential to Occur within Project Site
Prostrate vernal pool navarretia *Navarretia prostrata*	-	-	List 1B.1	Apr-Jul	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), vernal pools.	Low. Habitat within project sites is disturbed.
San Francisco popcornflower *Plagiobothrys diffusus*	-	CE	List 1B.1	Mar-Jun	Coastal prairie, valley and foothill grassland.	Low-moderate potential to occur in grassland habitat at all sites. No CNDDB occurrences are within 5 miles, however.
Hairless popcornflower *Plagiobothrys glaber*	-	-	List 1A	Mar-May	Meadows and seeps (alkaline), marshes and swamps (coastal salt).	None. Suitable habitat not present. Presumed extirpated in California.
California alkali grass *Puccinellia simplex*	-	-	List 1B.2	May-Nov	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools.	Low-moderate potential to occur, especially if alkali sinks are present. No CNDDB occurrences.
Most beautiful jewelflower *Streptanthus albidus* ssp. *peramoenus*	-	-	List 1B.2	(Mar)Apr-Sep (Oct)	Chaparral, cismontane woodland, valley and foothill grassland.	Low. Habitat within project sites is disturbed.
Saline clover *Trifolium hydrophilum*	-	-	List 1B.2	Apr-Jun	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools.	Low. Occurrence is dated 1897, and habitat within project sites is disturbed.

Table 2. Special-status animal species evaluated for potential to occur in the vicinity of Hollister Parks project area, October 2018.

Common Name *Scientific Name*	Listing Status Federal/State	Habitat Requirements	Potential to Occur within Project Site
Invertebrates			
Vernal pool fairy shrimp *Branchinecta lynchi*	FT/-	Species found only in vernal pools. Endemic to grasslands of the Central Valley, Central Coast mountains, and South Coast mountains.	Not expected to occur; no CNDDB occurrences within 5 miles and no vernal pools observed onsite.
Amphibians			
California tiger salamander *Ambystoma californiense*	FT/ST	Reproduces in vernal pools and/or seasonal water sources. Aestivate during dry months in underground refuges, especially ground squirrel burrows.	Low to moderate potential to occur. Numerous suitable breeding ponds near project site. Suitable upland habitat exists on-site. Closest occurrence is 0.37 miles southwest of Water Reclamation Facility. Closest breeding occurrence is 0.79 miles east of Santa Ana Creek Trail. Critical habitat is located 0.45 miles east of the Santa Ana Creek Trail site.
California red-legged frog *Rana draytonii*	FT/SSC	Breeds in ponds and pools in slow-moving streams with emergent vegetation; adjacent upland habitats are used for temporary refuges or dispersal movements.	Moderate potential to use project site as upland dispersal habitat or non-breeding aquatic habitat. Numerous occurrences within dispersal distance, including adults and juveniles within San Benito River adjacent to Water Reclamation Facility (dated 2001) and records of reproduction 1.23 miles southeast of Fire Station site. Critical habitat located 2.4 miles south-southwest of project site.

Common Name *Scientific Name*	Listing Status Federal/State	Habitat Requirements	Potential to Occur within Project Site
Western spadefoot *Spea hammondii*	-/SSC	Grasslands, occasionally valley-foothill hardwood woodlands. Breeding and egg laying occur in shallow, temporary pools formed by heavy winter rains. Adults remain in burrows in uplands most of the year.	Low potential to occur. Several breeding records on CNDDB, including 0.85 miles southwest of Water Reclamation Facility, but none within expected dispersal distance.
Coast range (California) newt *Taricha torosa*	-/SSC	Reproduction, egg laying, and larval development occurs in ponds, reservoirs, and sluggish pools in streams. Upland habitat includes oak woodland, chaparral, and grassland with burrows or other refugia.	One occurrence 2.3 miles southwest of Water Reclamation Facility. Suitable habitat present at many sites; moderate potential to occur.
Reptiles			
Western pond turtle *Emys [=Clemmys] marmorata*	-/SSC	Permanent and seasonal ponds, lakes, and slow-moving parts of streams.	Moderate potential to occur. Suitable upland nesting habitat present. Several occurrences within dispersal distance, including one occurrence in San Benito Creek, immediately adjacent to Water Reclamation Recreational Facility.
Blunt-nosed leopard lizard *Gambelia sila [silus]*	FE/CFP	Found in grasslands, alkali flats, and washes, preferring flat, open areas. Avoids densely vegetated areas. Uses mammal dens and burrows for refuge, with available burrows determining population.	No potential to occur; nearest CNDDB occurrences are approximately 20 miles away, on east side of Diablo Range.

Common Name *Scientific Name*	Listing Status Federal/State	Habitat Requirements	Potential to Occur within Project Site
San Joaquin coachwhip *Masticophis (=Coluber) flagellum ruddocki*	-/SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub. Seeks cover in mammal burrows.	Moderate potential to occur. One CNDDB occurrence from 1996 (in San Benito River riparian scrub) overlaps with Water Reclamation Site. Habitat present at Water Reclamation site and Santa Ana Creek Trail.
Birds			
Tricolored blackbird *Agelaius tricolor*	-/SSC	Highly colonial species requires open water, protected nesting substrate, and foraging area with insect prey near colony. Nests in freshwater marshes containing emergent vegetation such as cattails and tules.	Low potential to occur. Six presumed extant occurrences within 5 miles of project site; nearest 0.91 miles south of Fire Station and 1.29 miles southwest of Water Reclamation Facility. However, freshwater marshland not present.
Western burrowing owl *Athene cunicularia hypugaea*	-/SSC	Nests in burrows and forages in low-growing grasslands and other open, semi-arid habitats that support small burrowing mammals.	Moderate potential to occur. Suitable foraging habitat and multiple suitable burrows located within the project boundary. Four extant occurrences within 5 miles of project site; nearest is 0.35 miles northeast of Santa Ana Creek Trail.
California condor *Gymnogyps californianus*	FE/CFP	Rocky shrubland, coniferous forests, and oak savannas. Nest on cliffs or large trees.	Low potential to occur. Suitable habitat may be present in hills west of Water Reclamation Site, but habitat not present onsite. Nearest CNDDB occurrences from Pinnacles National Park, approximately 25 miles south of Hollister.
Bank swallow *Riparia riparia*	-/ST	Low areas along rivers, streams, ocean coasts, or reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. May be found in sand and gravel quarries or road cuts.	Low potential to occur. One occurrence from 1992 in San Benito River, potentially within Water Reclamation site. One summer eBird (2018) observation at water treatment ponds on the other side of the river.

Common Name *Scientific Name*	Listing Status Federal/State	Habitat Requirements	Potential to Occur within Project Site
Least Bell's vireo *Vireo bellii pusillus*	FE/SE	Prefers willow-dominated riparian woodland or scrub with a dense understory and a stratified canopy.	Low potential to occur. Suitable habitat may be present along San Benito River, adjacent to Water Reclamation Site, and Santa Ana Creek. No CNDDB occurrences within 5 miles of site.
Mammals			
Western mastiff bat *Eumops perotis californicus*	-/SSC	Roosts in crevices in cliff faces, high buildings, trees, and tunnels. When roosting in rock crevices, needs vertical faces to drop off to take flight.	Low; few suitable roosting sites. One non-specific occurrence exists in Hollister.
Western red bat *Lasiurus blossevillii*	-/SSC	Roosts in tree and shrub foliage. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. Preferred roost sites are protected from above, open below, and located above dark ground cover.	Low-moderate. Suitable roosting habitat present, especially at Santa Ana Creek Trail and Water Reclamation Facility. One non-specific occurrence in vicinity of Hollister.
American badger *Taxidea taxus*	-/SSC	Prefers grasslands and open areas with grasslands, which can include parklands, farms, and treeless areas with friable soil and a supply of rodent prey. They may also be found in forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows.	Low-moderate potential to occur. One occurrence is a non-specific area in Hollister. Next nearest occurrence is 0.45 miles east of Santa Ana Creek Trail. Suitable foraging habitat and burrows not observed onsite, but burrow survey recommended.

Common Name *Scientific Name*	Listing Status Federal/State	Habitat Requirements	Potential to Occur within Project Site
San Joaquin kit fox *Vulpes macrotis mutica*	FE/ST	Open grassland and shrubland communities; rarely orchards that border grassland or shrub plant communities. Relies on dens for breeding and cover.	Low-moderate potential to occur. Marginally suitable habitat located onsite, and one occurrence from 1992 is located immediately southwest of Water Reclamation Facility. Occurrence location has low density housing but some habitat connectivity to project area.

Key to Listing Status

Code	Meaning
FE	Federally Endangered
FT	Federally Threatened
FC	Federal Candidate
SE	California Endangered
ST	California Threatened
CFP	California Fully Protected
SSC	California Species of Special Concern
CNPS Listing	Meaning
1A	Plants presumed extirpated in California, and either rare or extinct elsewhere
1B	Pants rare, threatened, or endangered in California, or elsewhere
2A	Plants presumed extirpated in California, but more common elsewhere
2B	Plants rare, threatened, or endangered in California, but more common elsewhere
3	Plants about which more information is needed – a review list
4	Plants of limited distribution – a watch list

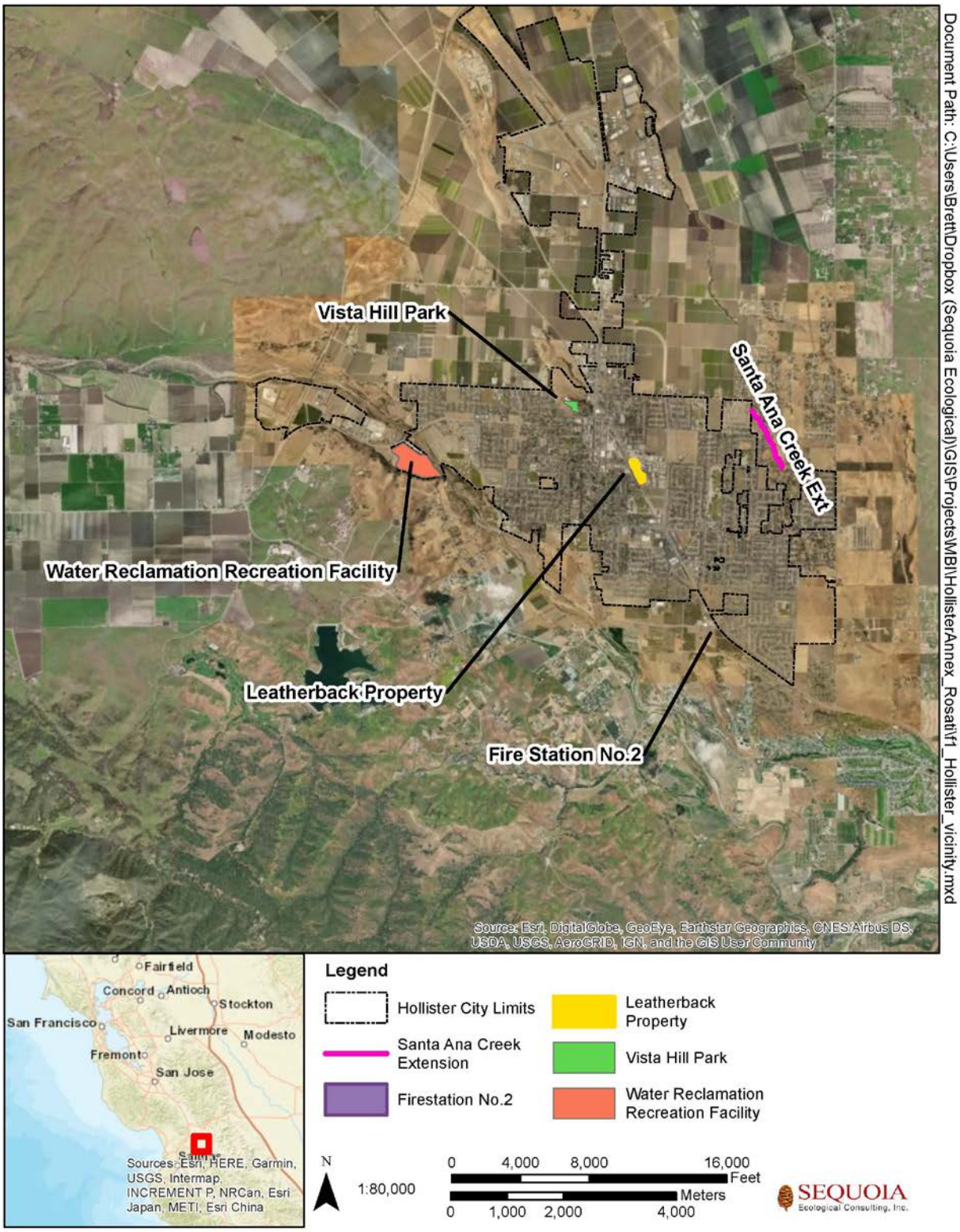


Figure 1. Project vicinity.

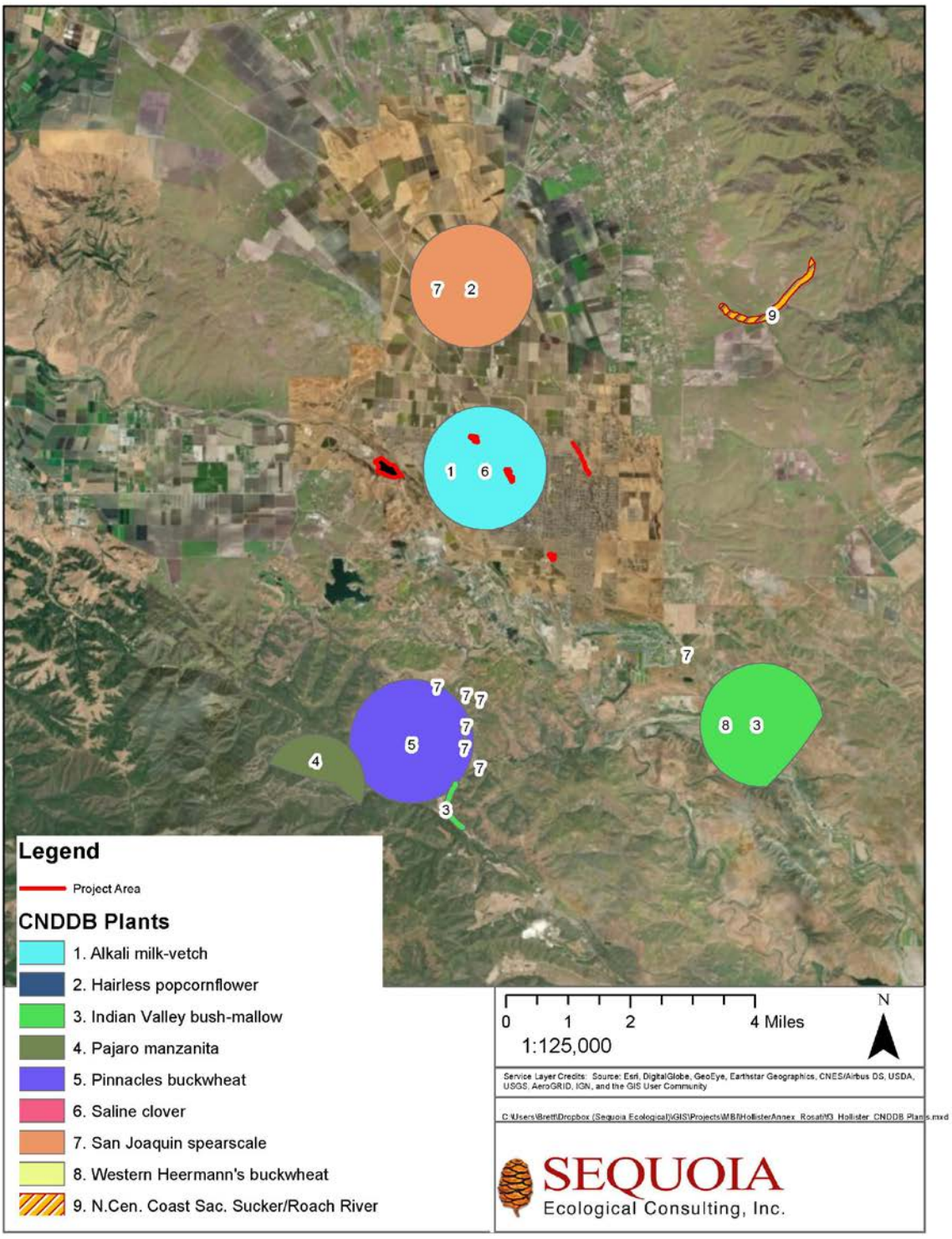


Figure 2. Results of CNDDB special-status plant query within project area and a 5-mile radius (CNDDB 2018).

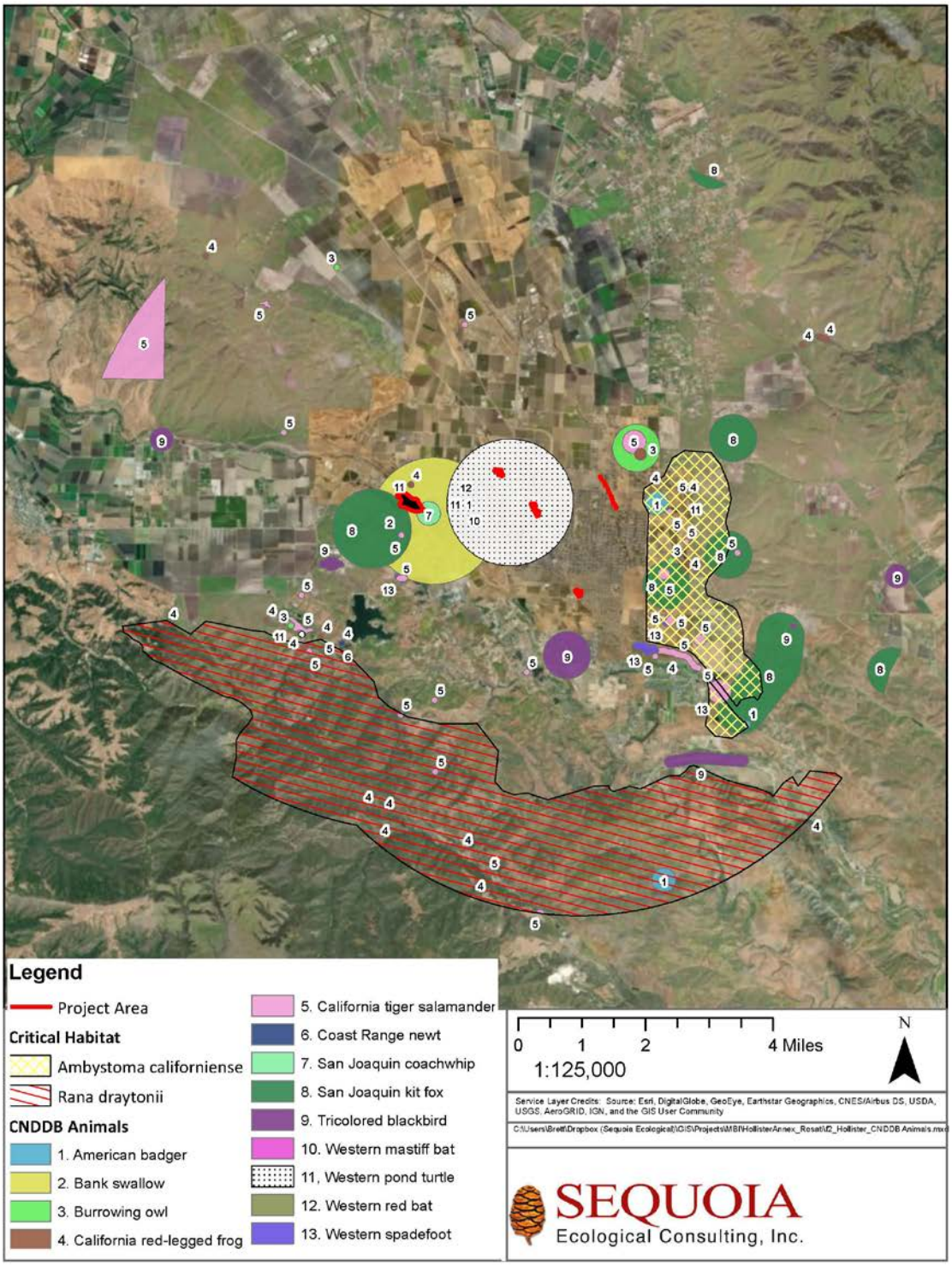


Figure 3. Results of CNDDB special-status wildlife and critical habitat query within project area and a 5-mile radius (CNDDB 2018).

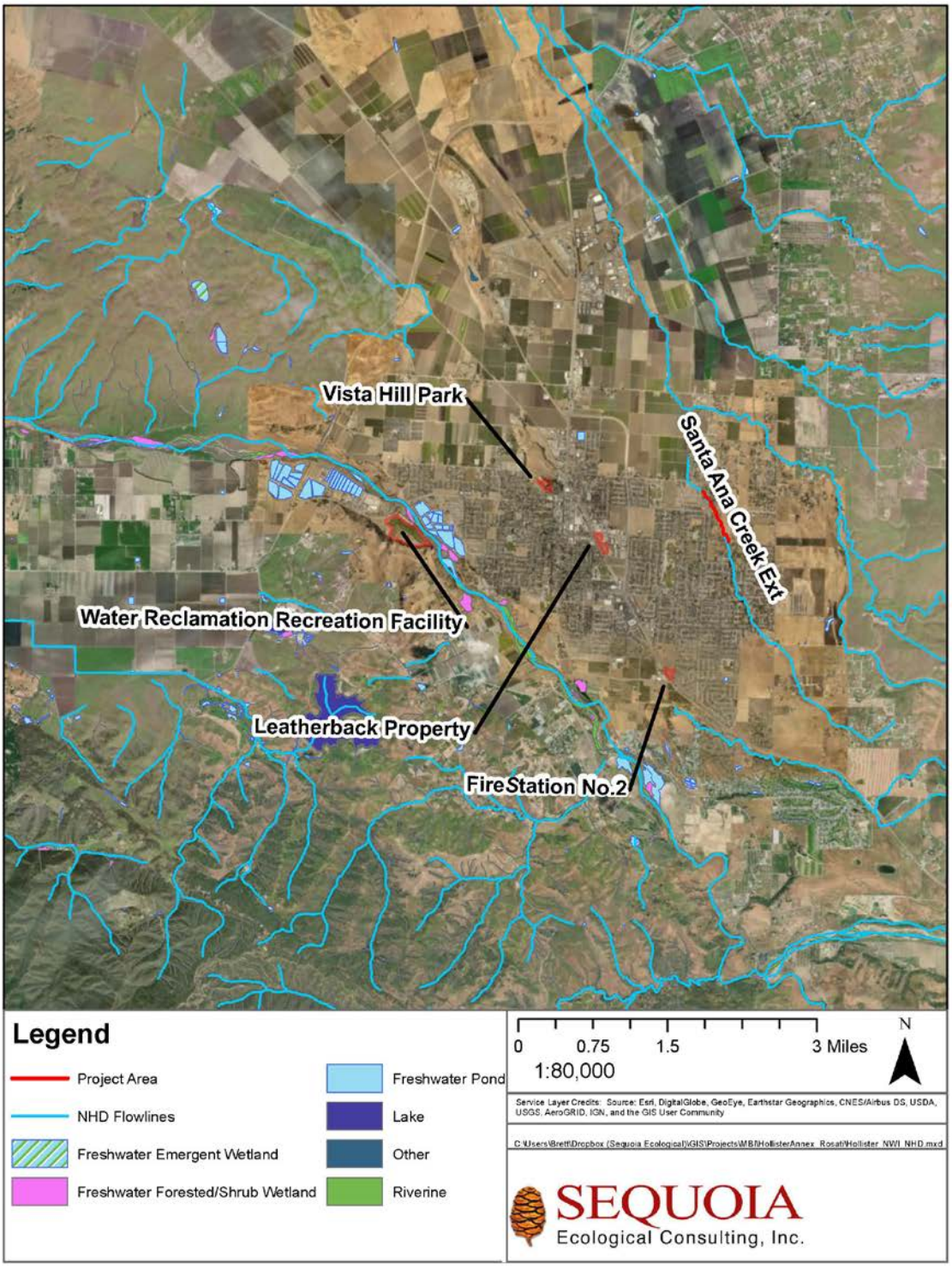


Figure 4. Results of USFWS National Wetlands Inventory and USGS National Hydrography Dataset query.

APPENDIX CUL: CULTURAL RESOURCES STUDY AND ELIGIBILITY EVALUATIONS

Michael Baker
INTERNATIONAL

We Make a Difference

October 18, 2018

Katrina Hardt-Holoch, Project Manager
MICHAEL BAKER INTERNATIONAL
1 Kaiser Plaza, Suite 1150
Oakland, CA 94612

RE: CULTURAL AND PALEONTOLOGICAL RESOURCES IDENTIFICATION FOR HOLLISTER PARKS MASTER PLAN PROJECT, CITY OF HOLLISTER, SAN BENITO COUNTY, CALIFORNIA

Dear Ms. Hardt-Holoch:

In support of the Hollister Parks Master Plan project (project), Michael Baker International staff completed a Northwest Information Center (NWIC) records search, field survey, and literature and historical map review to determine whether the project proposes impacts to historical resources as defined by CEQA Section 15064.5. Methods, results, and recommendations are summarized below; figures are provided in **Attachment 1**.

PROJECT LOCATION AND DESCRIPTION

The City of Hollister's previous Park Facility Master Plan was completed in 2002, over 16 years ago. The City is updating the 2002 plan with the goal of providing parks and recreation facilities with safe, inclusive opportunities for all community members.

As part of this update process, the City prepared an inventory of existing park facilities, conducted demographic and context research, and conducted a public input process, including advertisements and notices, public meetings, an online survey, and hearings. Based on this research, the City prepared the 2018 Hollister Park Facility Master Plan to recommend upgrades, expansions, and new park facilities to meet city residents' needs. This cultural resources technical study is prepared as a supplement to the Master Plan.

The Leatherback property, Hollister Fire Station No. 2, the Santa Ana Creek extension, and Vista Park Hill all propose ground disturbance and were the subject of analysis in this technical study. Other parks in the Master Plan are existing or will be developed as part of approved subdivisions. The existing conditions and proposed activities within each park with proposed ground disturbance (project area) are described in detail below. The regional and project location overviews are depicted in **Figure 1** through **Figure 3**.

WATER RECLAMATION RECREATIONAL FACILITY

The Water Reclamation Recreational Facility (also known as Riverside or Brigantino Park) is south of San Juan Road. The facility is developed with a parking area, turf, picnic areas, and gravel walking paths. The facility was developed as a spray field for the disposal of reclaimed water from the Hollister Domestic Water Reclamation Facility, along with fields near Hollister Municipal Airport. Currently, reclaimed water is sold for agricultural irrigation, and the park is irrigated with groundwater. Photos of the facility are included as **Figure 4**.

Proposed activities: Parking (275 spaces), large and small dog parks, water play areas (with restrooms), playground equipment (for ages 2–5 and 5–12), basketball and tennis courts, softball and soccer fields, shade structure, amphitheater (with vendor areas), natural exploration and education trail, future pedestrian and bicyclist bridge, sidewalks and walking paths, exercise stations, sand volleyball courts, ADA accessible trail (eastern side of San Benito River), amphitheater and sport field night lighting, wastewater disposal alternatives (Alternative 1: lift station and connection to 8-inch existing sewer main on San Juan Hollister Road; Alternative 2: holding tank; Alternative 3: septic system), and stormwater retention features. Proposed activities are depicted on **Figure 9**.

VISTA PARK HILL

Vista Park Hill is at the end of Hill Court, atop a hill north of the downtown area. The park is accessed via Hill Street or the unpaved Locust Avenue. Existing park development and City-owned water tanks are located on the site. **Figure 5** shows the existing Vista Park Hill and the condition of the proposed development area of the park.

Proposed activities: Signage; ADA and hiking trails and pedestrian paths; traffic roundabout; disc golf course; parking; picnic and kitchen facilities; toddler, early childhood, and school-age play areas; amphitheater; gazebo; turf and open play areas; half-court basketball; dog park; native plantings; wind sculptures; and site art and movie screen.

LEATHERBACK PROPERTY

The Leatherback property is owned by the City of Hollister Successor Agency to the former Redevelopment Agency and is located at the intersection of Hillcrest Road and McCray Street. The property is in the shape of an hourglass and includes properties between 111 Hillcrest Road and 901 McCray Street. The site was previously developed—first for agricultural processing and subsequently as a tar paper plant. Because of the former uses on the site, the entire site has been excavated to a depth of 4 feet to remediate hazardous materials contamination on the property. The site is currently fenced on all sides and is not open to the public. Surrounding land uses are industrial and approved commercial, with residential subdivisions just beyond these industrial areas to both the east and west. Photos of the Leatherback property are included as **Figure 6**.

Proposed activities: Recreation hall, softball and soccer fields, basketball and tennis courts, walking loop, group barbecue, and shaded picnic area.

HOLLISTER FIRE STATION NO. 2

Hollister Fire Station No. 2 is located at the intersection of Union Road and Airline Highway. The proposed park portion of the site is undeveloped and currently includes some vegetation and trees. Photos of the proposed park area at the fire station are included as **Figure 7**.

Proposed activities: Outdoor fitness equipment circuit, walking loop, group or individual barbecues and shaded picnic area, basketball courts, and public art (along Airline Highway).

SANTA ANA CREEK TRAIL

Santa Ana Creek runs through several neighborhoods in east Hollister. Much of the residential development in this area is fairly recent. A park and a paved trail have been developed south of Santa Ana Road. The existing trail is aligned adjacent to the creek through a new subdivision, extending from Lucero Drive on the west to about 135 feet west of Cielo Court and Blenheim Court. The future extension of the Santa Ana Creek linear park and the existing site are shown in **Figure 8**.

Proposed activities: Trail extension, regulatory signage, traditional or pervious concrete trail (8-foot width), benches, shaded areas, wayfinding signage, and ADA accessible roadway crossings at trailheads.

CULTURAL SETTING

Descriptions of regional prehistory, ethnography, and history are presented below.

PREHISTORY

The prehistory of Hollister Valley is not well known compared to other localities in the Central Coast region, including the southern Santa Clara Valley, Monterey Peninsula, and Elkhorn Slough. Based on several important archaeological studies done on the Central Coast, including at sites along the coast and bays, the interior valleys, and the Diablo Range, six chronological periods have been proposed for the region as a whole (Jones et al. 2007), as described below.

Paleo-Indian Period (Pre-8000 BC)

The existence of a Paleo-Indian Period in this region is tentative based on a paucity of remains that can be definitively dated to this time and the lack of visibility of such ancient deposits due to extensive Holocene deposition in some areas (Rosenthal et al. 2003). This period is represented by isolated fluted projectile points, which have been identified at Nipomo (Bertrando 2004) and at CA-SLO-1429 near Santa Margarita (Gibson 1996). Eccentric crescents may also be associated with Paleo-Indian occupation.

Early Archaic Period (8000–3500 BC)

This period is commonly referred to as being associated with the Millingstone Culture and is marked by large numbers of handstones and milling slabs, core tools, and less-abundant flake tools and large, side-notched projectile points. Millingstone Culture components tend to be identified near the coast, rarely having been found farther than 15.5 miles inland from the Pacific shore (Jones et al. 2007:137). Faunal remains from the oldest inland expression of Millingstone at CA-SLO-1797 showed almost no use of vertebrates, but rather heavy exploitation of shellfish and seeds and other vegetal foods (as implied by the milling equipment).

Early Period (3500–600 BC)

The Early Period represents the first of three phases associated with the Hunting Culture, with the Middle and Middle/Late Transition periods constituting the two subsequent phases (see below). The Hunting Culture was first identified by David Rogers in 1929 to define a distinctive complex in the Santa Barbara area that was in contrast to the Millingstone Culture and is marked by large quantities of stemmed and notched projectile points (Jones et al. 2007:138). The Early Period phase of the Hunting Culture includes assemblages that contain contracting-stemmed, Rossi square-stemmed,

and large side-notched projectile points, as well as a retention of Millingstone Culture traits, including the handstone and metate and cobble-core tools, and low frequencies of mortars and pestles.

Middle Period (600 BC–AD 1000)

The Middle Period is marked by the disappearance of square-stemmed and large side-notched variants, while contracting-stemmed projectile points are retained. Toward the end of the period, small leaf-shaped projectile points appear, indicating the introduction of the bow and arrow. Ground-stone assemblages retain the milling slab and handstone, although portable mortars and pestles are more common in some assemblages.

Middle/Late Transition Period (AD 1000–1250)

The Middle/Late Transition Period occurred at different times in different areas in the Central Coast region, although it is generally seen in assemblages and settlements sometime after circa AD 1000 (see Hylkema 2002). The Middle/Late Transition Period is marked by the appearance of double side-notched projectile points, while retaining contracting-stemmed and small leaf-shaped projectile points. The milling slab and handstone are retained, as are circular shell fishhooks. Expedient, notched-line sinkers appear for the first time as well.

Late Period (AD 1250–1769)

The final period in Central Coast prehistory is marked by an artifact assemblage that includes abundant Desert side-notched and Cottonwood projectile points, small bifacial bead drills, bedrock and hopper mortars, lipped (Class E) and cupped (Class K) *Olivella* beads, and steatite beads. Late Period sites are most abundant away from the coast, represented as single-component sites characterized by small midden deposits with associated or nearby bedrock mortars.

ETHNOGRAPHIC CONTEXT

Ethnographically, the project area is in Costanoan territory (Levy 1978).

Costanoan

The project area was formerly the territory of the Costanoan within the Ohlone language group. The basic Ohlone social unit was the patrilineal family household. Households grouped together to form villages, and villages combined to form tribelets. There were approximately 40 Ohlone tribelets that traded goods such as obsidian, shell beads, and baskets; participated in ceremonial and religious activities together; intermarried; and maintained extensive reciprocal obligations to one another involving resource collection (Levy 1978:492; Milliken 1995).

For the Ohlone, acorns served as a dietary staple. Acorns were knocked from trees with poles, leached to remove bitter tannins, and eaten as mush or bread. The Ohlone used a range of other plant resources including buckeye, California laurel, elderberries, strawberries, manzanita berries, gooseberries, toyon berries, wild grapes, wild onion, cattail, amole, wild carrots, clover, and an herb called chuchupate. The Ohlone also hunted black-tailed deer, Roosevelt elk, antelope, and marine mammals; smaller mammals such as dog, skunk, raccoon, rabbit, and squirrel; birds, including geese and ducks; and fish such as salmon, sturgeon, and mollusks (Levy 1978:492).

The Ohlone lived in dome-shaped shelters thatched with ferns, tule, grass, and carrizo. They also built small sweathouses dug into creek banks and roofed with brush, and circular dance areas enclosed by

fences woven from brush or laurel branches. Basketmaking was generally done by women who crafted cooking and storage containers. Tightly woven baskets, decorated with feathers or shell, were valued exchange items (Levy 1978:492; Margolin 1978:121–122).

Animal bones, teeth, beaks, and claws were used to make awls, pins, knives, and scrapers. Pelts and feathers were used to make clothing and bedding, and sinews were used for cordage and bow strings. Feathers, bone, and shells were crafted into ornaments (Levy 1978:492).

By the late eighteenth century, Spanish settlers established the mission system in Northern California. Mission records indicate that the first tribelet arrived at Mission San Francisco in the fall of 1794. Following the secularization of the missions in 1834, many Ohlone worked as manual laborers on ranchos (Milliken 1995:243; Levy 1978:486).

HISTORY

The first foreigners to travel through what became San Benito County were led by Pedro Fages in 1770. This early expedition documented encounters with villages of the *Unjaima* and *Ausaima* tribes of Costanoan in the San Felipe Sink area (Milliken et al. 1993:63). In 1772, Fages set out again from Monterey with Father Juan Crespi. During the course of the expedition, Father Crespi named a small river "San Benito" in honor of Saint Benedict (Hoover et al. 1990:299).

Father Fermin Lasuén firmly established the Spanish presence in what became San Benito County with the founding of the Mission San Juan Bautista on June 24, 1797. A temporary house for worship was erected, but the cornerstone of the mission was not set until 1803 (Hoover et al. 1990:299). The population of the mission reached its height in 1823 with a total of 1,248 neophytes, including several from the *Ausaima* tribe from the Hollister Valley.

By 1848, 14 ranchos had been established in what became San Benito County. Most of the ranchos raised cattle, sheep, and horses, and harvested oats and hay for stock grazing. Hides and tallow were transported overland to Monterey for shipment to foreign ports. The project areas fall within Rancho San Justo, a 34,620-acre Mexican land grant awarded to José Castro in 1839.

After the gold rush, wheat became the dominant crop in the county. After 1875, hay and barley replaced wheat as a major crop when yields declined and freight charges increased. With the arrival of the Southern Pacific Railroad in the 1870s, the town of Hollister soon became a thriving commercial center and by 1890 became known as "Hay City" due to the importance of the local crop to the town's economy (City of Hollister 2008:4.6-1).

Agriculture still dominates the landscape and economy of San Benito County as a whole; today's major exports include lettuce, nursery stock, wine grapes, and cattle. Agriculture within and adjacent to the Area of Potential Effect (APE) consists of cattle ranching and orchards.

CULTURAL AND PALEONTOLOGICAL RESOURCES IDENTIFICATION EFFORTS

The results of the cultural and paleontological resources records searches; literature review, including a geoarchaeological assessment given the high sensitivity in the region; historical map search; and pedestrian survey are presented below.

NORTHWEST INFORMATION CENTER

Michael Baker International cultural resources staff conducted a records search at the Northwest Information Center. The records search (File No. 18-0239) was conducted on August 2, 2018. The NWIC, as part of the California Historical Resources Information System, California State University, Sonoma, an affiliate of the California Office of Historic Preservation (OHP), is the official state repository of cultural resources records and reports for San Benito County. As part of the records search, the following federal and California inventories were reviewed:

- California Inventory of Historic Resources (OHP 1976).
- California Points of Historical Interest (OHP 1992 and updates).
- California Historical Landmarks (OHP 1996).
- Directory of Properties in the Historic Property Data File (OHP 2012). The directory includes the listings of the National Register of Historic Places (National Register), National Historic Landmarks, the California Register of Historical Resources (California Register), California Historical Landmarks, and California Points of Historical Interest.

The records search results for the five project areas are as follows.

Water Reclamation Recreational Facility

No cultural resources were identified within the project area or the quarter-mile search radius. Three cultural resources studies were completed in the project area and five were completed within the search radius, as identified below.

Author	Date	Title	In project area?	Resources identified in project area?
Lawrence W. Spanne	1979	*Supplement to Archaeological Survey Report 05-SBt-156, P.M. 2.2-9.1, San Benito County 05201-248801 by James McManus*	Yes	No
Thomas F. King and Patricia P. Hickman	1973	*Archaeological Impact Evaluation: San Felipe Division, Central Valley Project, Part I; The Southern Santa Clara Valley, California: A General Plan for Archaeology*	Yes	No
BioSystems Analysis, Inc.	1989	*Technical Report of Cultural Resources Studies for the Proposed WTG-WEST, Inc., Los Angeles to San Francisco and Sacramento, California: Fiber Optic Cable Project*	Yes	No
Archaeological Resource Management	1995	*Cultural Resource Evaluation for the Hollister Treatment Plant EIR, 940003, County of San Benito*	No	No
William Shapiro	1991	*Cultural Resources Investigation for the Proposed Gas Line 103 Replacement Project, City of Hollister, San Benito County, California*	No	No

Author	Date	Title	In project area?	Resources identified in project area?
Archaeological Resource Management	1991	*Cultural Resource Evaluation of a Parcel Located off Buena Vista Road in the City of Hollister, County of San Benito*	No	No
Melinda A. Peak	2012	*Determination of Eligibility and Effect for the Gardens at San Juan Project, City of Hollister, California*	No	No
Candace Ehringer, Michael Vader, and Chris Lockwood	2013	*West Hills Water Treatment Plant Project Phase 1 Cultural Resource Survey Report*	No	No

Vista Park Hill

No cultural resources were identified in the project area; six were identified within the quarter-mile search radius, as identified below.

Resource Name/#	Description	OHP Status Code
Highway 25 P35-000316/CA-SBN-221H	Abandoned highway segment	N/A
Southern Pacific Railroad P35-000334/CA-SBN- 281H	Railroad	N/A
P35-000509/CA-SBN-270H	Refuse scatters	N/A
Town of Hollister P35-000331	Residential and commercial historic district	N/A
Monterey Street Historic District P35-000590	Residential historic district	1S – Listed in the National Register
P35-000015/CA-SBN-14	Prehistoric burial	N/A

Two cultural resources studies were completed in the project area and seven were completed within the search radius, as identified below.

Author	Date	Title	In project area?	Resources identified in project area?
EarthTouch Inc.	2013	*Collocation ("CO") Submission Packet FCC FORM 621: Hollister Water Tank*	Yes	No
Katherine Flynn	1977	*City of Hollister Park Sites*	Yes	No
Barry A. Price	1988	*Cultural Resources Assessment, Pacific Bell Mobile Services Facility SF-709-02 (Hollister Valley), Hollister, San Benito County, California*	No	No

Author	Date	Title	In project area?	Resources identified in project area?
Allen G. Pastron and R. Keith Brown	1999	*Historical Cultural Resource Assessment, Existing Telecommunications Facility Site No. SF-709-02, 420 Hill Street, Hollister, California*	No	No
Lisa A. Shapiro	1992	*Cultural Resources Investigation of the Proposed Area-Wide Sanitary Sewer Project, City of Hollister, San Benito County, California*	No	No
Patricia Mikkelsen, Laura Leach-Palm, Jennifer Hatch, Elizabeth Kallenbach, and Jerome King	2001	*Cultural Resources Inventory of Caltrans District 5 Rural Highways, San Benito County, California, Highways 25, 101, 129, 146, and 156, Volume 1: Report*	No	No
Mary Doane and Gary S. Breschini	2007	*Preliminary Archaeological Reconnaissance for the Brigantino Project in Hollister, San Benito County, California*	No	No
Kendra Carlisle and Trudy Haversat	2004	*Preliminary Archaeological Reconnaissance for the North Street Extension Project in the City of Hollister, San Benito County, California*	No	No
Elizabeth Fernandez and Kim Tremaine	2016	*Cultural Resources Mitigation Report: Judicial Council of California, New Hollister Courthouse Project, Hollister, San Benito County, California*	No	No

Leatherback Property

No cultural resources were identified in the project area; five were identified within the quarter-mile search radius, as identified below.

Resource Name/#	Description	OHP Status Code
Southern Pacific Railroad P35-000334/ CA-SBN- 281H	Railroad	N/A
P35-000509/CA-SBN-270H	Refuse scatters	N/A
Town of Hollister P35-000331	Residential and commercial historic district	N/A
Hollister Cold Storage P35-000371	Industrial building	6Y – Not eligible for the National Register
Guerra Property P35-000381	Residential building	6Y – Not eligible for the National Register

No cultural resources studies were completed in the project area; five were completed within the search radius, as identified below.

Author	Date	Title	In project area?	Resources identified in project area?
Matthew R. Clark	1992	*Archaeological Reconnaissance of Three Alternative Alignments for the Highway 25 Bypass Project in the City of Hollister, San Benito County, California*	No	No
Stephen A. Dietz	1987	*Cultural Resources Assessment of Three Proposed School Sites and One District Office Site in Hollister, San Benito County, California*	No	No
Rand F. Herbert	2000	*Historic Property Survey Report, State Route 25 Hollister Bypass Project, District 5, Hollister, San Benito County, California, 05-SBT-25, KP 80.0/84.3 (PM 49.7/52.4)*	No	No
Robert Cartier	2004	*Cultural Resource Evaluation of the Premier Cinemas Project on McCray Street in the County of San Benito*	No	No
Gary S. Breschini	2008	*Vista Meadows Senior Apartments, AC 4233*	No	No

Hollister Fire Station No. 2

No cultural resources were identified in the project area; one was identified within the quarter-mile search radius, as identified below.

Resource Name/#	Description	OHP Status Code
Highway 25 P35-000316/CA-SBN-221H	Abandoned highway segment	N/A

Four cultural resources studies were completed in the project area and four were completed within the search radius, as identified below.

Author	Date	Title	In project area?	Resources identified in project area?
Archaeological Resources Management	1989	*Cultural Resource Evaluation for the San Benito Street and Westside Blvd. Projects in the City of Hollister, County of San Benito*	Yes	No
Patricia Mikkelsen, Laura Leach-Palm, Jennifer Hatch, Elizabeth Kallenbach, and Jerome King	2001	*Cultural Resources Inventory of Caltrans District 5 Rural Highways, San Benito County, California, Highways 25, 101, 129, 146, and 156, Volume 1: Report*	No	No

Author	Date	Title	In project area?	Resources identified in project area?
Thomas F. King and Patricia P. Hickman	1973	*Archaeological Impact Evaluation: San Felipe Division, Central Valley Project, Part I; The Southern Santa Clara Valley, California: A General Plan for Archaeology*	Yes	No
Anna Runnings and Trudy Haversat	1994	*Preliminary Archaeological Reconnaissance of Two Sections of Cal-Trans Right-of-Way, Hollister, San Benito County, California*	Yes	No
John L. Edwards	1994	*Cultural Resources Survey for a Pacific Bell Fiber Optic Line Along State Highway 25, Between Hollister and Tres Pinos, San Benito County, California*	No	No
Archaeological Resources Management	1995	*Cultural Resource Evaluation for the Hollister Treatment Plant EIR, 940003, County of San Benito*	No	No
Archaeological Resources Management	1996	*Cultural Resource Evaluation for the Enterprise Stormwater Project in the County of San Benito*	No	No
John Kelley	2004	*Historic Property Survey Report for the Southside Road Bike Lanes Project*	No	No

Santa Ana Creek Trail

No cultural resources were identified in the project area or the quarter-mile search radius. No cultural resources studies were completed in the project area; three were completed within the search radius, as identified below.

Author	Date	Title	In project area?	Resources identified in project area?
Thomas F. King and Patricia P. Hickman	1973	*Archaeological Impact Evaluation: San Felipe Division, Central Valley Project, Part I; The Southern Santa Clara Valley, California: A General Plan for Archaeology*	No	No
Anna Runnings and Trudy Haversat	1994	*Preliminary Cultural Resources Reconnaissance of the Santa Ana Road Addition near Hollister, San Benito County, California*	No	No
Charles R. Smith and Gary S. Breschini	1988	*Preliminary Cultural Resources Reconnaissance of Proposed Widening or Replacing of Existing Box Culverts on Santa Ana Road, Cienega Road, Limekiln Road, McCloskey Road, as Well as Reconstructing the Intersection of Cienega and Hospital Roads and Realignment of a Portion of*	No	No

Author	Date	Title	In project area?	Resources identified in project area?
		Cienega Road at Twin Bridges, San Benito County, California		

Additional Report

In addition to the NWIC records search results, the City of Hollister Reclaimed Water Project Environmental Impact Report (City of Hollister 2008) was reviewed because Analytical Environmental Services (AES) completed a cultural resources study of the Wastewater Treatment Facility. During the study, in 2007, three modern residences were observed, along with a detached garage, metal corral, and barn, and one historic-period bungalow known as the Riverside Bend Homestead that AES recommended not eligible for inclusion in the California Register. The Riverside Bend Homestead is described as approximately 1,050 square feet, with a moderately pitched roof, single-hung wooden sash windows, clapboard siding, and a modern asphalt shingle roof. A small porch is located at the entrance to the house on the south side, facing a modern garage. AES recommended that the residence is not eligible for inclusion in the California Register because the residence is not architecturally significant, is not associated with an important event or individual, and is not likely to yield information important to the study of history. The Riverside Bend Homestead is no longer extant.

Author	Date	Title	In project area?	Resources identified in project area?
City of Hollister	2008	*City of Hollister Reclaimed Water Project Environmental Impact Report*	Yes	Yes

LOS ANGELES NATURAL HISTORY MUSEUM

Staff at the Los Angeles Natural History Museum (LANHM) conducted a paleontological records check of the project areas and the surrounding vicinity on September 6, 2018 (**Appendix 3**). While no known fossil localities were identified, sensitive formations within each project area have known fossil localities in the vicinity.

Water Reclamation Recreational Facility

On the southern margin of the Water Reclamation Recreational Facility, there are exposures of unnamed Pliocene deposits geologically mapped as equivalent to the Ora Loma Formation. The closest Ora Loma Formation localities are LACM 7664-7667, to the east-southeast on Monocline Ridge in the Ciervo Hills in Fresno County. These Oro Loma localities produced fossil specimens of horses, *Dinohippus*, *Hipparion tehonense*, and *Neohipparion leptode*, as well as camel, *Alforjas*. Almost all of the proposed project area for the Water Reclamation Recreational Facility has surface deposits composed of younger Quaternary Alluvium, derived as fluvial overbank deposits from the San Benito River that currently flows adjacent to the northeast.

Vista Park Hill

At the Vista Park Hill project area, there are exposures of the Plio-Pleistocene Santa Clara Formation. The LANHM does not have any Santa Clara Formation localities on record, but the formation has produced vertebrate fossils in the past.

Leatherback Property

Quaternary deposits, similar to those at the Water Reclamation Recreational Facility, occur at the surface at the Leatherback property project area, although alluvial fan deposits derived from more elevated terrain to the east may contribute more to the surface deposits there. These younger Quaternary deposits typically do not contain significant vertebrate fossils in the uppermost layers, but older sedimentary deposits at relatively shallow depth may well contain significant fossil vertebrate remains.

Hollister Fire Station No. 2

Older Quaternary deposits, derived as alluvial fan deposits from the more elevated terrain to the east and south, occupy the surface at the Hollister Fire Station No. 2 project area. These older Quaternary deposits always have the potential to produce significant vertebrate fossils, although the closest older Quaternary locality is LACM 7254, to the east-northeast of the project area just northeast of Chowchilla on the south side of Ash Slough, that produced a fossil specimen of elephantoid, *Proboscidea*.

Santa Ana Creek Trail

Older Quaternary deposits, derived as alluvial fan deposits from the more elevated terrain to the east and south, occupy the surface at the Santa Ana Creek Trail project area. These older Quaternary deposits always have the potential to produce significant vertebrate fossils, although the closest older Quaternary locality is LACM 7254, to the east-northeast of the project area just northeast of Chowchilla on the south side of Ash Slough, that produced a fossil specimen of elephantoid, *Proboscidea*.

LITERATURE AND HISTORICAL MAP REVIEW

Michael Baker International reviewed literature and historic maps for archaeological, ethnographic, historical, paleontological, and environmental information about the project area and the vicinity. Below is a list of resources reviewed, followed by a narrative description of the results for each project area.

- San Justo, Diseño 47, GLO No. 238 (San Benito County 1853)
- Official Map of San Benito County, California (Vic. T. & W. McCray 1891)
- Official Map of San Benito County, California (A. M. McCray 1907)
- Hollister, Calif. 1:48,000 topographic quadrangle (USGS 1919)
- Hollister, Calif. 1:62,500 topographic quadrangle (USGS 1923)
- Hollister, Calif. 15-minute topographic quadrangle (USGS 1955a)
- Hollister, Calif. 7.5-minute topographic quadrangle (USGS 1955b)
- Aerial single-frame photograph 1YF0000010072 (USGS 1953a)
- Aerial single-frame photograph AR1YF0000010074 (USGS 1953b)
- Hollister, Calif. 15-minute topographic quadrangle (USGS 1971)

- Aerial single-frame photograph 1SFB000120085 (USGS 1974a)
- Aerial single-frame photograph AR1SFB000120134 (USGS 1974b)
- Ancestry.com (2018a)
- History of San Benito County (Elliott & Moore 1881)
- History and biographical record of Monterey and San Benito Counties (Guinn 1910)

Water Reclamation Recreational Facility

In 1891 and 1907, the project area was owned by L. Scherer as part of a 122-acre farm that included the project area (Vic. T. & W. McCray 1891; A. M. McCray 1907). The only known L. Scherer in Hollister during this time was Louis Scherer, born circa 1838 in Bavaria, or current-day Germany. He was a saddler and capitalist (Ancestry 2018b, 2018c). It is unclear if Louis lived on the property because no buildings are depicted on property ownership maps dated 1891 and 1907. By 1910, Louis had relocated to Minnesota (Ancestry.com 2018d). He likely sold the property prior to his relocation; ownership of the property is unknown after that point.

The first known depiction of buildings on the Scherer farm is in 1919 when one residence, extant and located outside the project area, is shown. The second residence was located roughly in the area where MR 1 (see **Appendix A: Figure 10** and **Appendix B**) was identified during the field survey (USGS 1919). The residence is pictured in a 1953 aerial photograph as directly adjacent to the project area and was demolished between 1974 and 1998 (USGS 1953a, 1974a; Google Earth 2018).

The 1953 aerial photograph depicts at least 10 additional buildings constructed between 1919 and 1953 in the project area. One residence appears to be the Riverside Park Farmstead, previously recorded in 2007 by AES in support of the City of Hollister Reclaimed Water Project Environmental Impact Report (2008) and recommended ineligible for the California Register; it was demolished circa 2008 (USGS 1953a, 1953b; Google Earth 2018). On a 1955 map, another residence is depicted close to a cluster of nine buildings that appear on a 1953 aerial and on the 1955 map (USGS 1955b). The buildings appear to be ancillary in nature and likely aided in orchard operations. This former residence and ancillary structures were located in the area where MR 2 (see **Appendix A: Figure 10,** and **Appendix B**) was identified during the field survey. The project area appears largely unchanged in 1974, with the exception of an additional residence constructed between 1953 and 1974 that was demolished circa 2008 (USGS 1974a, 1974b; Google Earth 2018). By 1998, the project area had been cleared of an orchard. By circa 2008, the property appears to have been converted for park use and cleared of built environment resources.

Vista Park Hill

The Vista Park Hill project area was located on a 76-acre ranch from at least 1891 to 1907. By 1923, the project area included a small round reservoir, and by 1953, the project area is known as Park Hill and identified as part of a mine. A 1953 aerial photograph depicts a covered reservoir, but by 1971, the reservoir appears filled in and replaced by a water tank adjacent to the project area. The project area was developed as a park circa 1990 (Vic. T. & W. McCray 1891; A. M. McCray 1907; USGS 1919, 1923, 1953b, 1955a, 1971, 1974b; Google Earth 2018).

Leatherback Property

The year 1919 marks the first depiction of features in the project area, when the property included two railroad spurs and associated buildings. By 1953, only one spur serviced the project area, which functioned as a part of an oil refinery with four oil tanks and four large buildings. By 1971, the project area no longer functioned for oil use but maintained the spur and buildings. The buildings were demolished circa 2010 (USGS 1919, 1923, 1953b, 1955a, 1971, 1974b; Google Earth 2018).

Hollister Fire Station No. 2

No resources are depicted in the project area from 1891 until present. The project area was part of larger ranch properties from 1891 to 1907. The surrounding area remained very rural until circa 1970 when residential developments began construction. The adjacent fire station was constructed circa 2000 (Vic. T. & W. McCray 1891; A. M. McCray 1907; USGS 1919, 1953b, 1955a, 1971, 1974b; Google Earth 2018).

Santa Ana Creek Trail

No resources are depicted in the project area from 1891 until the present. In 1891, the creek ran through approximately 172 acres of land owned by William M. Winters. By 1907, the land had been subdivided and owned by the Board of Missions. A residence is first depicted adjacent to the creek in 1919 and remains extant. By 1953, approximately five buildings are depicted adjacent to the creek and the surrounding area is mainly developed with orchards. By 1974, the orchards were replaced by residential development (Vic. T. & W. McCray 1891; A. M. McCray 1907; USGS 1919, 1953b, 1974b; Google Earth 2018).

PEDESTRIAN SURVEY

Michael Baker cultural resources staff conducted an archaeological and built environment field survey of the project areas on August 28, 2018. The surveys were conducted to identify archaeological deposits and built environment resources within and adjacent to the project areas. Archaeological survey methods consisted of pedestrian transects over open land where permitted, with an emphasis on exposed sediment. Ground visibility was limited by built and landscaped surfaces. Archaeological materials were observed in two locations at the Wastewater Treatment Facility. Artifacts observed are consistent with historic-period residences and ancillary structures that were constructed in the project area from 1919 to 1953. All artifacts are fragmented and consist of clear, lime green, cobalt, amethyst, brown, and light blue bottle glass, window glass, bone, buttons, freshwater shell, white earthenware, porcelain, coal, and ferrous metal. No built environment resources over 50 years old were observed within the project areas. Field survey observations were documented with field notes and digital photographs, and archaeological resources were recorded on Department of Parks and Recreation 523 Forms (see **Appendix 2**).

GEOARCHAEOLOGICAL LITERATURE REVIEW

A geoarchaeological sensitivity assessment of the region was completed by Rosenthal, Meyer, Hildebrandt, and King (2003) and is utilized here. The Hollister Valley filled with alluvium in the Late Holocene, contributing to elevated prehistoric archaeological buried site or geoarchaeological sensitivity in the valley. Surface landforms in the project areas are either historical alluvial deposits or

Late Holocene alluvial terrace or basin deposits (Lindsey 1974). The project areas are mapped as having different surface and buried site potential; this information is presented in the findings section below.

FINDINGS AND RECOMMENDATIONS

Two historic-period archaeological resources (MR 1 and MR 2) were observed and recorded at the Water Reclamation Recreational Facility site. Sensitivity for encountering resources varies across each project area, as described in the table below.

Project Area	Surface Prehistoric Archaeology Sensitivity	Buried Prehistoric Archaeology Sensitivity	Historic-Period Archaeology	Paleontological Sensitivity	Pedestrian Survey Observations
Water Reclamation Recreational Facility	Very Low	Low – Moderate	High	High in Pliocene deposits	Positive – Historic-period archaeology – MR 1 and MR 2
Vista Park Hill	Moderate	Very Low	Low	High in Plio-Pleistocene Santa Clara Formation	Negative
Leatherback Property	Low	High	Moderate	High within sedimentary deposits	Historic-period railroad debris
Hollister Fire Station No. 2	High	Very High	Low	High within older Quaternary deposits	Negative
Santa Ana Creek Trail	High	High	Low	High within older Quaternary deposits	No permission to enter; did not survey

MR 1 and MR 2 are remnants of former residences and ancillary structures that were demolished and further impacted by the installation of the water reclamation facility, which is underground, and are continuously scattered over Brigantino Park during mowing and other park maintenance. What little is known about the occupants of these residences doesn't relate them to significant people or events that have made a contribution to local, state, or national history. Relatedly, the resources do not have the potential to yield information that is important to history, and the resources lack integrity due to many impacts over the years.

The NWIC records search, field survey, historic map, and literature review identified no historical resources as defined by CEQA Section 15064.5 within the project area. Late discovery mitigation measures are recommended for archaeological and paleontological resources.

PREPARERS' QUALIFICATIONS

This report was prepared by Michael Baker International Cultural Resources Director Nichole Jordan Davis and reviewed by Michael Baker Cultural Resource Manager Margo Nayyar.

Mrs. Jordan Davis is a registered professional archaeologist (#989208) and meets the Secretary of the Interior's Standards for prehistoric and historical archeology and the Society for California's Archaeology's professional qualification standards for Principal Investigator. She has 15 years of experience in cultural resources management, including project management, personnel management, Native American consultation, archival research, laboratory analysis, ethnographic and historical research, field survey, prehistoric and historical excavation, laboratory analysis, collections management, and GIS applications. She has experience with cultural and tribal cultural resources issues as they relate to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). She directs the preparation of cultural resources technical studies compliant with Section 106 of the National Historic Preservation Act (NHPA) and CEQA, including studies documenting research, survey, testing, excavation, monitoring and evaluation for inclusion in the National Register and the California Register.

Ms. Nayyar is an architectural historian with 7 years of cultural resources management experience in California. Her experience includes built environment surveys, historic context development, archival research, evaluation of historic-era resources using guidelines outlined in the National, California, and various local registers; preparation of cultural resources technical studies pursuant to CEQA and Section 106 of the NHPA, municipal preservation planning, and providing Certified Local Government training to interested local governments. She also specializes in producing HABS/HAER/HALS (Historic American Buildings Survey, the Historic American Engineering Record, and Historic American Landscapes Survey) heritage documentation. Ms. Nayyar meets the Secretary of the Interior's Professional Qualification Standards for history and architectural history.

Sincerely,

NICHOLE JORDAN DAVIS

Nichole Jordan Davis, MA, RPA
Senior Cultural Resources Manager

Margo Nayyar

Margo Nayyar, MA
Cultural Resources Manager

Attachments:

Attachment 1 – Figures

Attachment 2 – DPR Forms

Attachment 3 – Los Angeles Natural History Museum Records Search

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Attachment 1

Figures

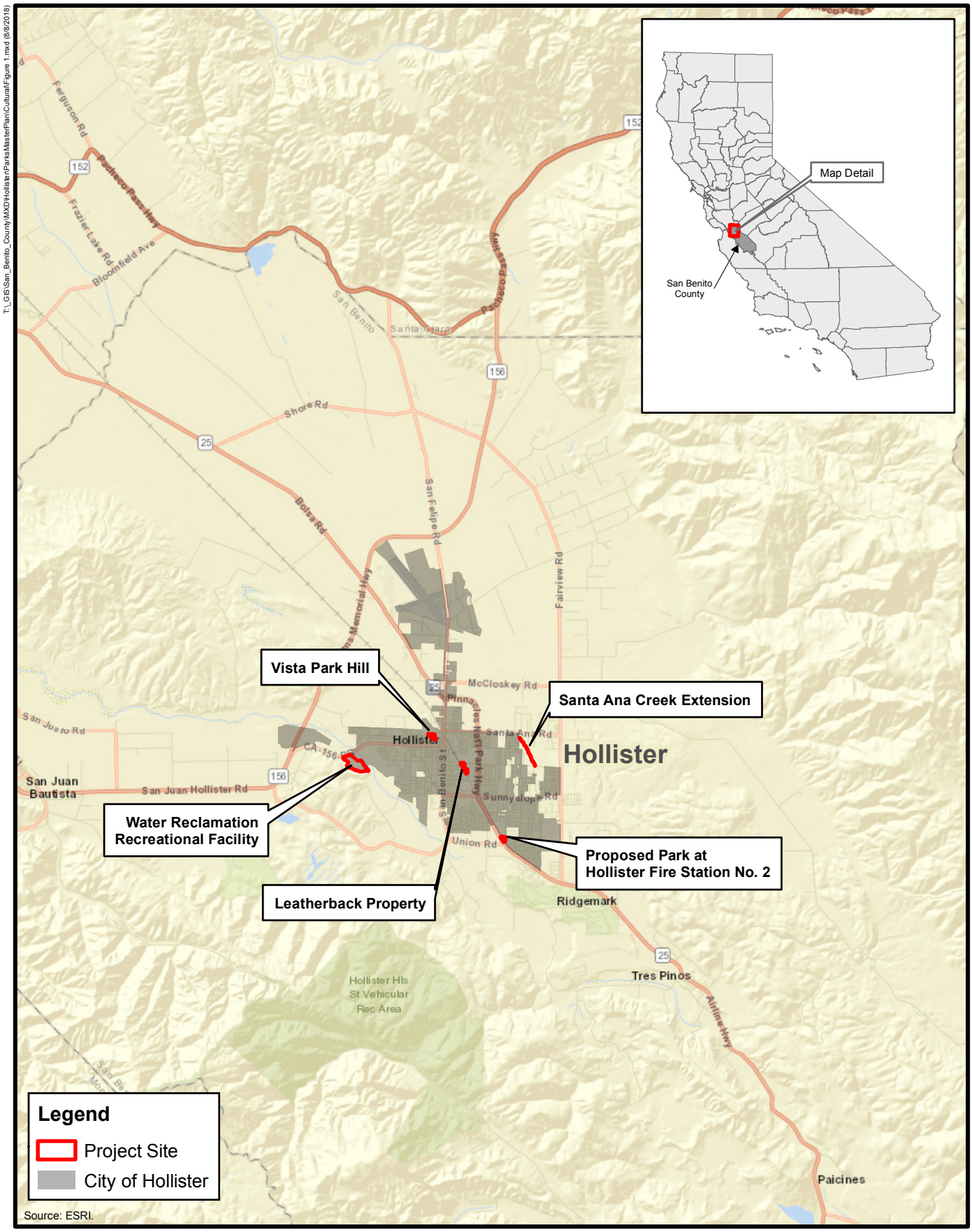


FIGURE 1

Regional Vicinity

Michael Baker INTERNATIONAL

T:_GIS\San_Benito_County\MXD\Hollister\ParksMasterPlan\Cultural\Figure 2 Project Location.mxd (8/8/2018)

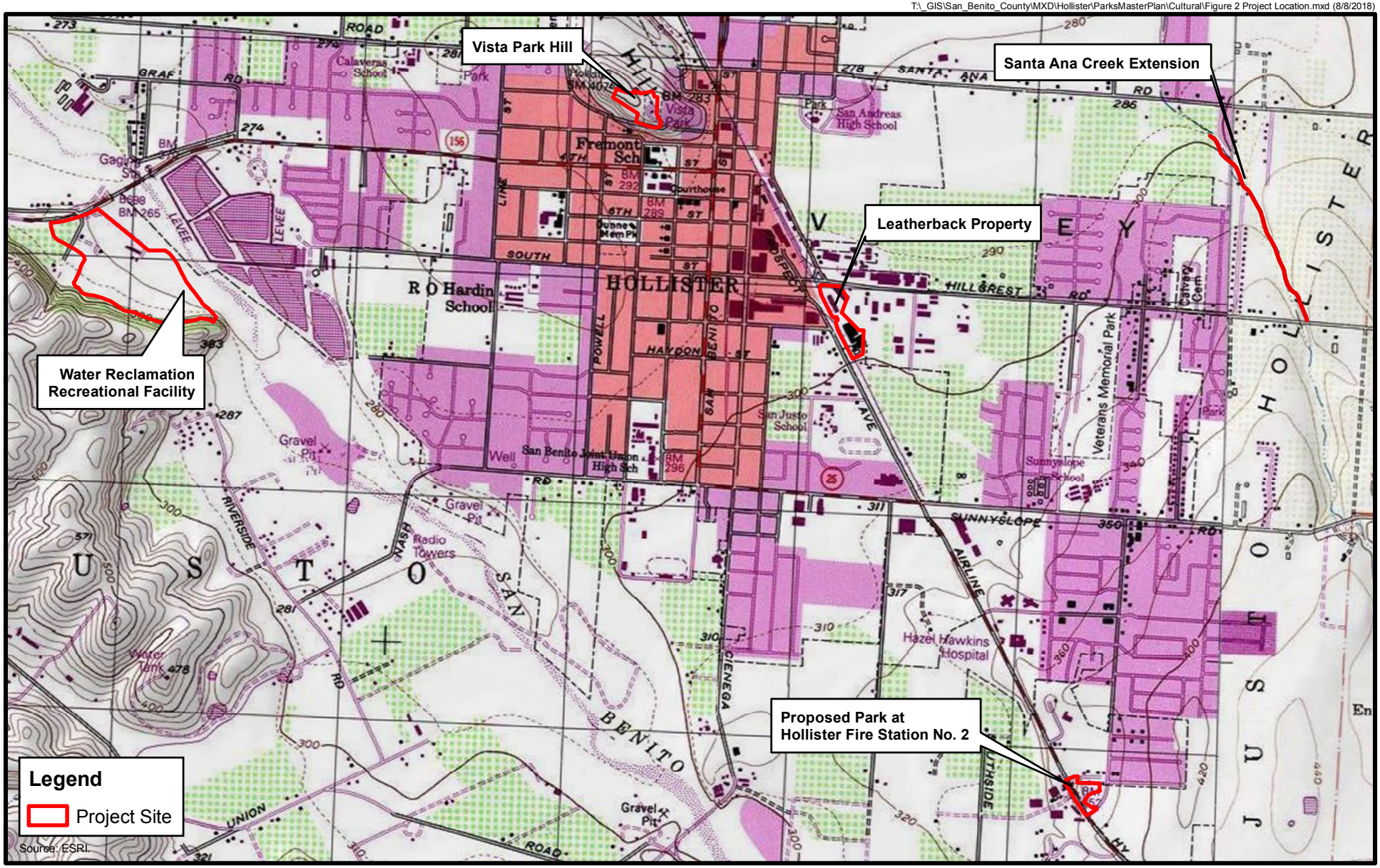


FIGURE 2
Project Location

Michael Baker INTERNATIONAL

T:_GIS\San_Benito_County\MXD\Hollister\ParksMasterPlan\Cultural\Figure 3.mxd (8/8/2018)

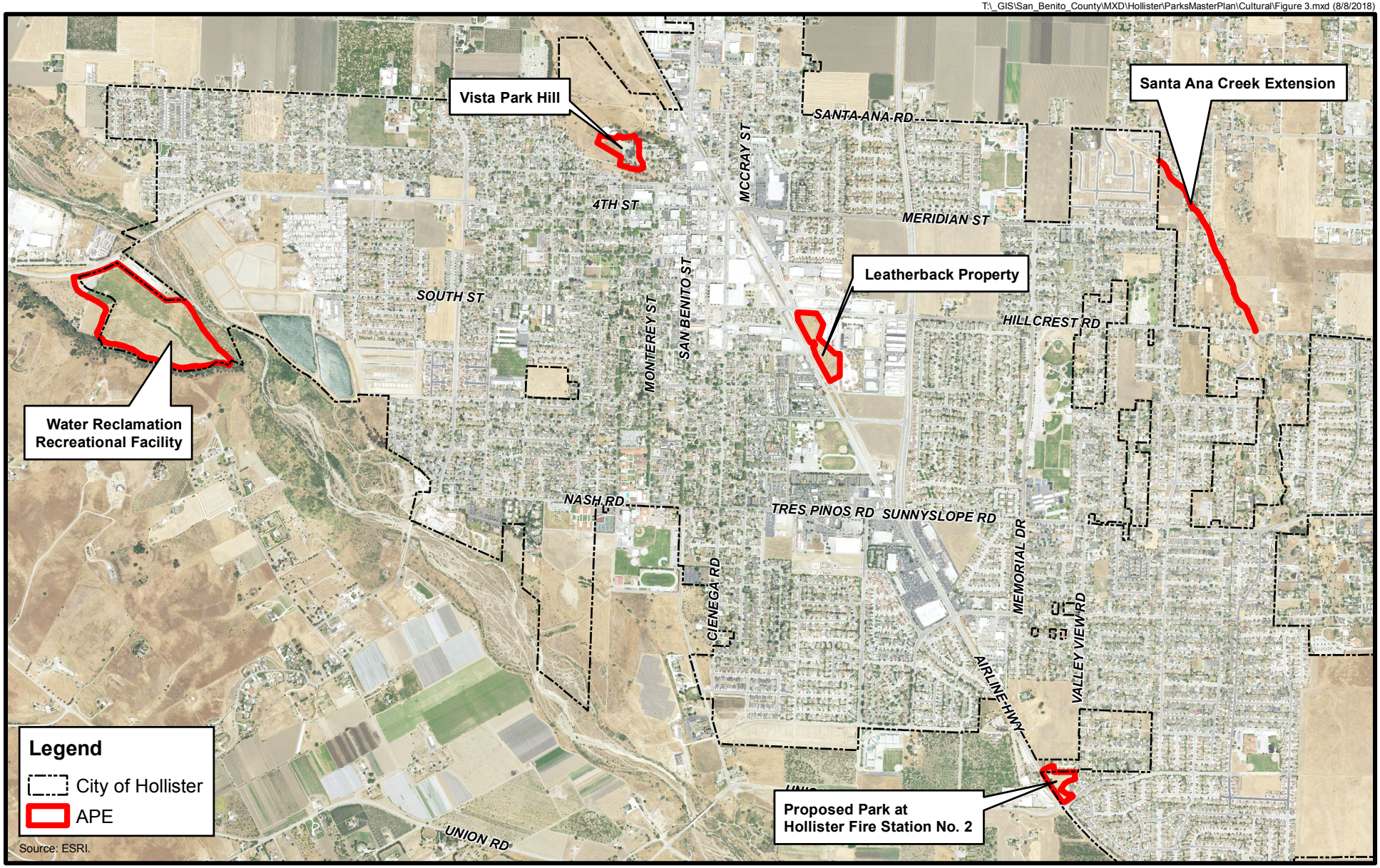


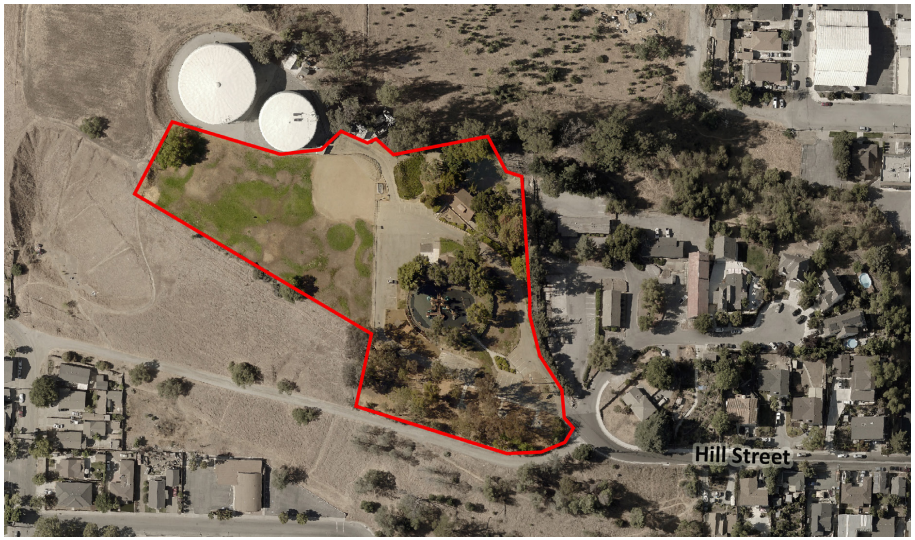
FIGURE 3
Project Areas

Michael Baker INTERNATIONAL

Source: O'Dell Engineering; 2018, Michael Baker International; 2018

FIGURE 4
Water Reclamation Recreational Facility

Michael Baker INTERNATIONAL



Source: O'Dell Engineering; 2018, Michael Baker International; 2018

FIGURE 5
Vista Park Hill

Michael Baker
INTERNATIONAL

Source: O'Dell Engineering; 2018, Michael Baker International; 2018

FIGURE 6
Leatherback Property

Michael Baker
INTERNATIONAL

T:_CS\Work\Hollister, City of\2018 Park Facilities Master Plan\Figures

Source: O'Dell Engineering; 2018, Michael Baker International; 2018

FIGURE 7
Hollister Fire Station No. 2

Michael Baker
INTERNATIONAL

Source: O'Dell Engineering; 2018, Michael Baker International; 2018

FIGURE 8
Santa Ana Creek Extension Area

Michael Baker
INTERNATIONAL

T:_CS\Work\Hollister, City of\2018 Park Facilities Master Plan\Figures

Source: City of Hollister; 2018

FIGURE 9

Not To Scale

Proposed Water Reclamation Recreational Facility Site Plan

Michael Baker INTERNATIONAL

FIGURE 10
Resource Location

Michael Baker INTERNATIONAL

Attachment 2

DPR Forms

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

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

 ***Resource Name or #:** MR 1

P1. Other Identifier: APN 021-040-017-000

***P2. Location:** ☒ **Unrestricted**

***a. County** San Benito **and**

***b. USGS 7.5' Quad** Hollister, *Calif.* **Date** 1955 **T** 12S; **R** 5E; Rancho San Justo Land Grant M.D.B.M

c. Address N/A City Hollister Zip 95023

d. UTM: Zone 10 N, 639725mN, 4079090mE

e. Other Locational Data: Brigantino Park

***P3a. Description:**

Artifacts observed are consistent with a historic-period residence that was constructed in 1919. All artifacts are fragmented and consist of clear, lime green, cobalt, amethyst, brown, and light blue bottle glass, window glass, bone, buttons, freshwater shell, white earthenware, porcelain, coal, and ferrous metal.

In 1891 and 1907, this site was owned by L. Scherer as part of a 122-acre farm (Vic. T. & W. McCray 1891; A. M. McCray 1907). The only known L. Scherer in Hollister during this time was Louis Scherer, born circa 1838 in Bavaria, or current-day Germany. He was a saddler and capitalist (Ancestry 2018b, 2018c). It is unclear if Louis lived on the property because no buildings are depicted on property ownership maps dated 1891 and 1907. By 1910, Louis had relocated to Minnesota (Ancestry.com 2018d). He likely sold the property prior to his relocation; ownership of the property is unknown after that point.

The first known buildings on the Scherer farm are depicted on the 1919 USGS map. One residence is depicted outside the park and is extant. A second residence was located roughly in the area where artifacts were observed at MR 1 (USGS 1919). This residence is also pictured in a 1953 aerial photograph; it was demolished between 1974 and 1998 (USGS 1953a, 1953b, 1974a, 1974b; Google Earth 2018).

***P3b. Resource Attributes:** AH4. Privies/ Dumps/ Trash Scatter, AH16. Other

***P4. Resources Present:** ☒ Site

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: Photograph 1: Site overview at corner of park, view north-northeast.

P6. Date Constructed/Age and Source:
☒ Historic
Circa 1919

***P7. Owner and Address:**
City of Hollister
375 5th Street
Hollister, CA 95023

***P8. Recorded by:**
Nichole Davis and Margo Nayyar
Michael Baker International
2729 Prospect Park Drive, #220
Rancho Cordova, CA 95670

***P9. Date Recorded:**
August 28, 2018

***P10. Survey Type:** Intensive

***P11. Report Citation:** Davis, Nichole, and Margo Nayyar. *Cultural and Paleontological Resources Identification for Hollister Parks Master Plan Project, City of Hollister, San Benito County, California*. Michael Baker International. Prepared for the City of Hollister.

***Attachments:** ☒Location Map ☒Continuation Sheet

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

LOCATION MAP

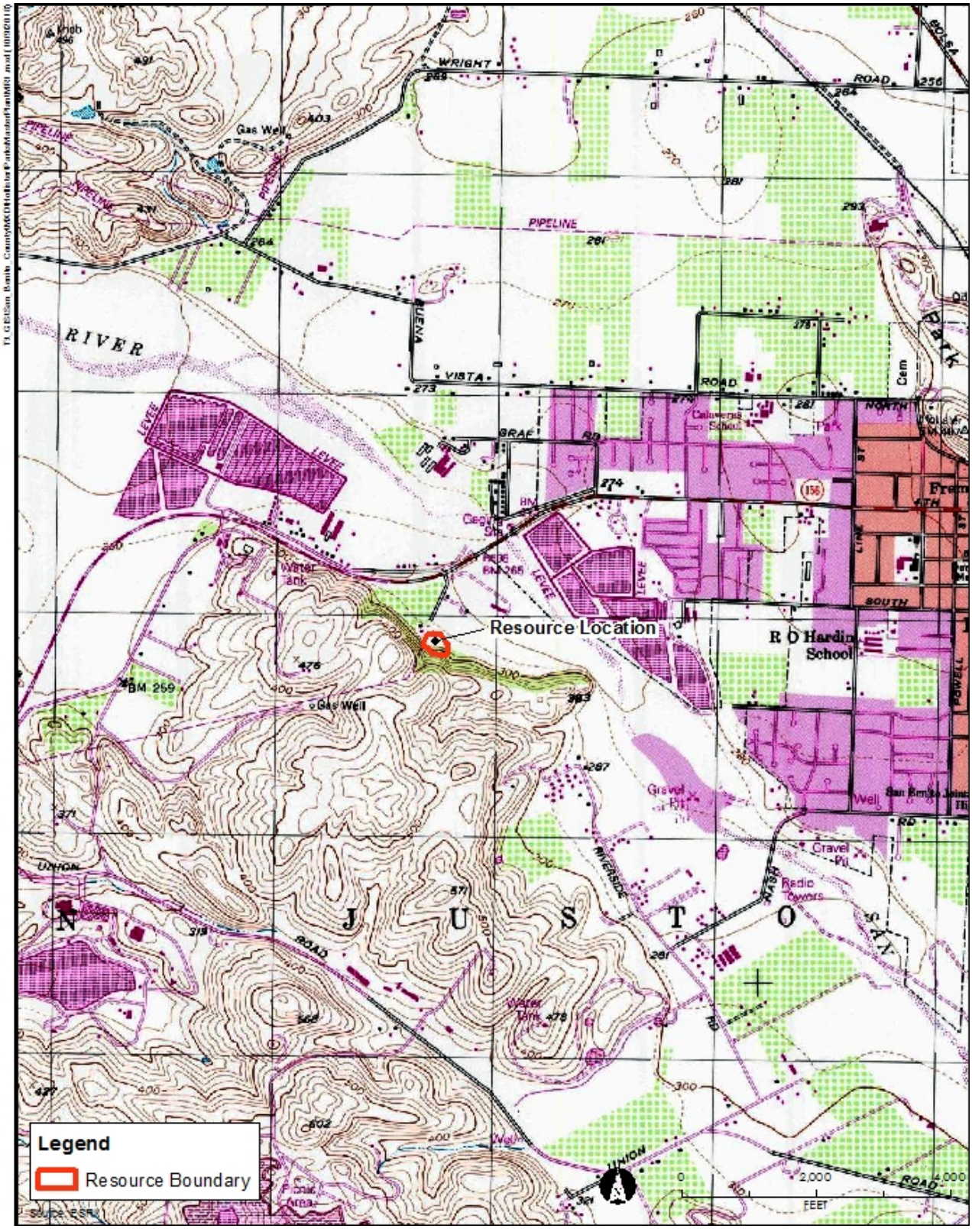
Primary #
HRI#
Trinomial

***Resource Name or #** MR 1

***Map Name:** *Hollister, Calif.*

***Scale:** 1:24,0000

***Date of map:** 1995



***P5. Photograph (continued):**

Photograph 2. Close-up of selection of artifacts observed

References

Ancestry.com. 2018a. Electronic database, www.ancestry.com, accessed multiple.

———. 2018b. 1880 United States Census. Electronic database, https://www.ancestry.com/interactive/6742/4239984-00028?pid=20492995&treeid=&personid=&usePUB=true&_phsrc=xMg247&_phstart=successSource, accessed October 5, 2018.

———. 2018c. 1900 United States Census. Electronic database, https://www.ancestry.com/interactive/7602/4118439_00185?pid=20779197&backurl=https://search.ancestry.com/cgi-bin/sse.dll?indiv%3D1%26dbid%3D7602%26h%3D20779197%26tid%3D%26pid%3D%26usePUB%3Dtrue%26_phsrc%3DxMg251%26_phstart%3DsuccessSource&treeid=&personid=&hintid=&usePUB=true&_phsrc=xMg251&_phstart=successSource&usePUBJs=true, accessed October 5, 2018.

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———. 1953b. Aerial single-frame photograph AR1YF0000010074. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

———. 1974a. Aerial single-frame photograph 1SFB000120085. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

———. 1974b. Aerial single-frame photograph AR1SFB000120134. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

State of California - The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**

PRIMARY RECORD

Trinomial
NRHP Status Code

Other Listings
Review Code Reviewer Date

 ***Resource Name or #:** MR 2

P1. Other Identifier: APN 021-040-018-000

***P2. Location:** ☒ **Unrestricted**

***a. County** San Benito **and**

***b. USGS 7.5' Quad** Hollister, *Calif.* **Date** 1955 **T** 12S; **R** 5E; Rancho San Justo Land Grant M.D.B.M

c. Address N/A City Hollister Zip 95023

d. UTM: Zone 10 N, 639942mN, 4079140mE

e. Other Locational Data: Brigantino Park

***P3a. Description:**

Artifacts observed are consistent with a historic-period residence and ancillary structures that were constructed from 1919 to 1953. All artifacts are fragmented and consist of clear, lime green, cobalt, amethyst, brown, and light blue bottle glass, window glass, bone, buttons, freshwater shell, white earthenware, porcelain, and ferrous metal.

In 1891 and 1907, this site was owned by L. Scherer as part of a 122-acre farm (Vic. T. & W. McCray 1891; A. M. McCray 1907). The only known L. Scherer in Hollister during this time was Louis Scherer, born circa 1838 in Bavaria, or current-day Germany. He was a saddler and capitalist (Ancestry 2018b, 2018c). It is unclear if Louis lived on the property because no buildings are depicted on property ownership maps dated 1891 and 1907. By 1910, Louis had relocated to Minnesota (Ancestry.com 2018d). He likely sold the property prior to his relocation; ownership of the property is unknown after that point.

***P3b. Resource Attributes:** AH4. Privies/ Dumps/ Trash Scatter, AH16. Other

***P4. Resources Present:** ☒ Site

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo:
Photograph 1: Overview taken from site center at 2.5-foot DBH pine tree, view west of extant 1919 residence.

P6. Date Constructed/Age and Source:
☒ Historic
Circa 1919-1953

***P7. Owner and Address:**
City of Hollister
375 5th Street
Hollister, CA 95023

***P8. Recorded by:**
Nichole Davis and Margo Nayyar
Michael Baker International
2729 Prospect Park Drive, #220
Rancho Cordova, CA 95670

***P9. Date Recorded:**
August 28, 2018

***P10. Survey Type:** Intensive

***P11. Report Citation:** Davis, Nichole, and Margo Nayyar. *Cultural and Paleontological Resources Identification for Hollister Parks Master Plan Project, City of Hollister, San Benito County, California.* Michael Baker International. Prepared for the City of Hollister.

***Attachments:** ☒Location Map ☒Continuation Sheet

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

LOCATION MAP

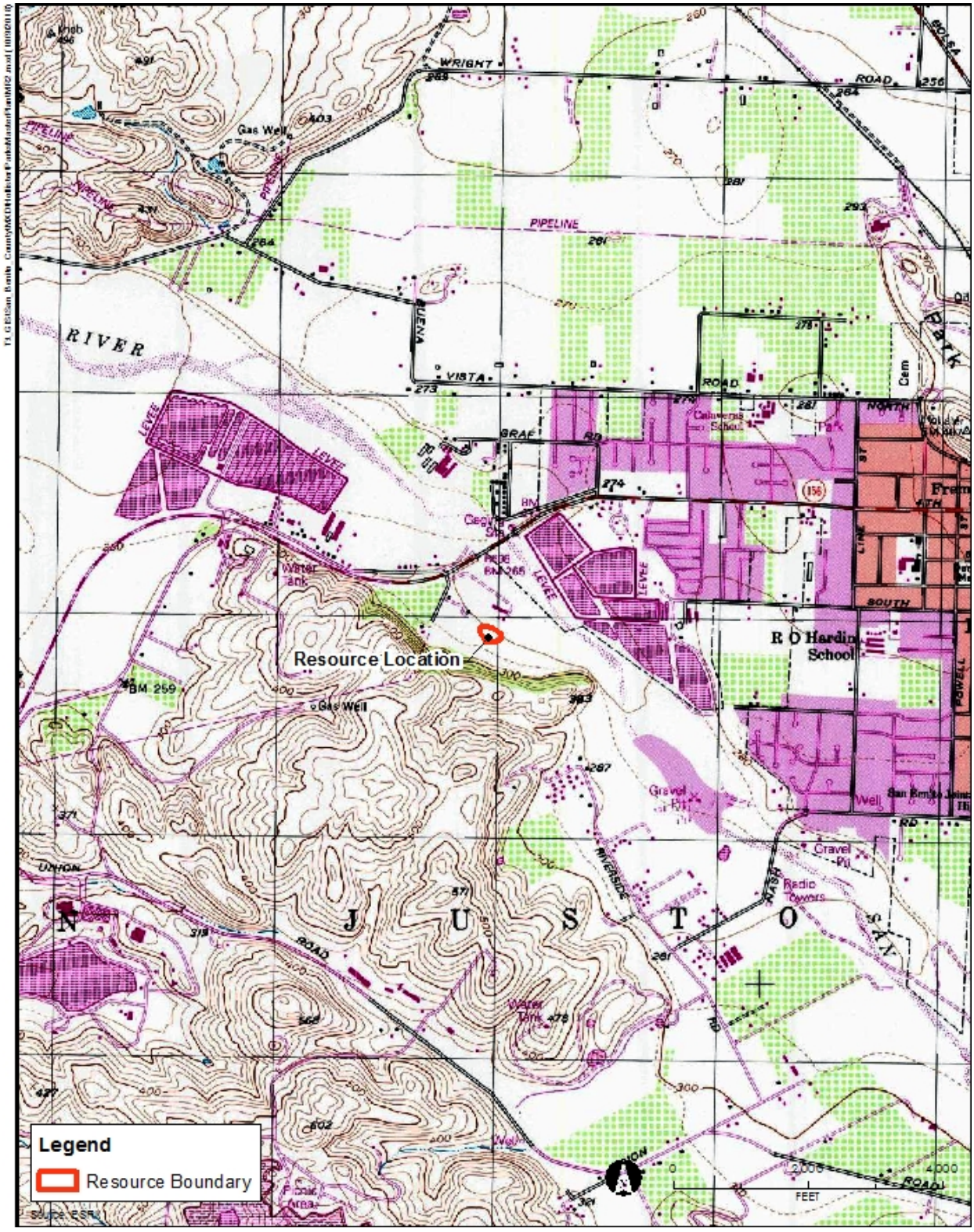
Primary #
HRI#
Trinomial

***Resource Name or #** MR 2

***Map Name:** *Hollister, Calif.*

***Scale:** 1:24,0000

***Date of map:** 1995



*** P3a (continued):**

The first known depiction of buildings on the Scherer farm is in 1919 when the one residence, which is extant and outside the park, is shown. A 1953 aerial photograph depicts at least 10 additional buildings constructed between 1919 and 1953. One residence appears to be the Riverside Park Farmstead, previously recorded in 2007 by AES in support of the City of Hollister Reclaimed Water Project Environmental Impact Report (2008) and recommended ineligible for the California Register; it was demolished circa 2008 (USGS 1953a, 1953b; Google Earth 2018). On a 1955 map, another residence is depicted close to a cluster of nine buildings that appear on a 1953 aerial and on the 1955 map (USGS 1955). The buildings appear to be ancillary in nature and likely aided in orchard operations. This former residence and ancillary structures were located in the area where artifacts were observed at MR 2. The area appears largely unchanged in 1974, with the exception of an additional residence constructed between 1953 and 1974 that was demolished circa 2008 (USGS 1974a, 1974b; Google Earth 2018). By 1998, the orchard had been removed, and by circa 2008, the property appears to have been converted for park use and cleared of built environment resources.

*** P5 Photograph (continued):**

Photograph 2. Close-up of selection of observed artifacts

Photograph 3. Overview from site center toward extant 1919 residence against hills

References

Ancestry.com. 2018a. Electronic database, www.ancestry.com, accessed multiple.

———. 2018b. 1880 United States Census. Electronic database, https://www.ancestry.com/interactive/6742/4239984-00028?pid=20492995&treeid=&personid=&usePUB=true&_phsrc=xMg247&_phstart=successSource, accessed October 5, 2018.

———. 2018c. 1900 United States Census. Electronic database, https://www.ancestry.com/interactive/7602/4118439_00185?pid=20779197&backurl=https://search.ancestry.com/cgi-bin/sse.dll?indiv%3D1%26dbid%3D7602%26h%3D20779197%26tid%3D%26pid%3D%26usePUB%3Dtrue%26_phsrc%3DxMg251%26_phstart%3DsuccessSource&treeid=&personid=&hintid=&usePUB=true&_phsrc=xMg251&_phstart=successSource&usePUBJs=true, accessed October 5, 2018.

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McCray, Vic. T. & W. 1891. Official map of San Benito County, California. Electronic resource, http://digitalcollections.ucsc.edu/cdm/ref/collection/p15130coll3/id/1729, accessed October 5, 2018.

USGS (US Geological Survey). 1919. Hollister, Calif. 1:48,000 topographic quadrangle.

———. 1923. Hollister, Calif. 1:62,500 topographic quadrangle.

———. 1953a. Aerial single-frame photograph 1YF0000010072. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

———. 1953b. Aerial single-frame photograph AR1YF0000010074. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

———. 1955. Hollister, Calif. 7.5-minute topographic quadrangle. Photo revised 1956.

———. 1971. Hollister, Calif. 15-minute topographic quadrangle.

———. 1974a. Aerial single-frame photograph 1SFB000120085. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

———. 1974b. Aerial single-frame photograph AR1SFB000120134. Electronic resource, www.earthexplorer.com, accessed October 8, 2018.

Attachment 3

Los Angeles Natural History Museum Records Search

Natural History Museum
of Los Angeles County
900 Exposition Boulevard
Los Angeles, CA 90007

tel 213.763.DINO
www.nhm.org

NATURAL HISTORY MUSEUM
LOS ANGELES COUNTY

Vertebrate Paleontology Section
Telephone: (213) 763-3325

e-mail: smcleod@nhm.org

6 September 2018

Michael Baker International
2729 Prospect Park Drive, Suite 220
Rancho Cordova, CA 95670

Attn: Nichole Davis, Senior Cultural Resources Manager

re: Vertebrate Paleontology Records Check for paleontological resources for the proposed Hollister Parks Project, in the City of Hollister, San Benito County, project area

Dear Nichole:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for the proposed Hollister Parks Project, in the City of Hollister, San Benito County, project area as outlined on the portions of the Hollister and Tres Pinos USGS topographic quadrangle maps that you sent to me via e-mail on 23 August 2018. We do not have any vertebrate fossil localities that lie directly within the proposed project area boundaries, but we do have localities somewhat nearby from the same sedimentary deposits that occur in the proposed project area.

On the southern margin of the Water Reclamation Recreation Facility proposed project area site there are exposures of unnamed Pliocene deposits geologically mapped as equivalent to the Ora Loma Formation. Our closest Ora Loma Formation localities are LACM 7664-7667, quite to the east-southeast on Monocline Ridge in the Ciervo Hills in Fresno County. These Oro Loma localities produced fossil specimens of horses, *Dinohippus*, *Hipparion tehonense*, and *Neohipparion leptode*, as well as camel, *Alforjas*. Almost all of the Water Reclamation Recreation Facility proposed project area site though has surface deposits composed of younger Quaternary Alluvium, derived as fluvial overbank deposits from the San Benito River that currently flows adjacent to the northeast. Similar younger Quaternary deposits occur at the surface at the Leatherback Property proposed project area site, to the east, although alluvial fan

deposits derived from more elevated terrain to the east may contribute more to the surface deposits there. These younger Quaternary deposits typically do not contain significant vertebrate fossils in the uppermost layers, but older sedimentary deposits at relatively shallow depth may well contain significant fossil vertebrate remains.

Older Quaternary deposits, derived as alluvial fan deposits from the more elevated terrain to the east and south, occupy the surface at the Proposed Park at Hollister Fire Station No. 2 and the Santa Ana Creek Extension proposed project area sites. These older Quaternary deposits always have the potential to produce significant vertebrate fossils, although our closest older Quaternary locality is LACM 7254, quite to the east-northeast of the proposed project area just northeast of Chowchilla on the south side of Ash Slough, that produced a fossil specimen of elephantoid, Proboscidea. At the Vista Park Hill proposed project area site there are exposures of the Plio-Pleistocene Santa Clara Formation. We do not have any Santa Clara Formation localities, but it has produced vertebrate fossils.

Shallow excavations in the younger Quaternary Alluvium found at the surface at the Water Reclamation Recreation Facility and the Leatherback Property proposed project area sites are unlikely to uncover significant vertebrate fossils. Deeper excavations at those sites that extend down into older sedimentary deposits, as well as any excavations in the older Quaternary deposits at the Proposed Park at Hollister Fire Station No. 2 and Santa Ana Creek Extension proposed project area sites, the Santa Clara Formation exposed at the Vista Park Hill proposed project area site, or the unnamed Pliocene deposits on the southern margin of the Water Reclamation Recreation Facility proposed project area site, however, may well encounter significant fossil vertebrate remains. Any substantial excavations in the proposed project area, therefore, should be monitored closely to quickly and professionally recover any fossil remains discovered while not impeding development. Sediment samples should also be collected from the sedimentary deposits in the proposed project area and processed to determine their small fossil potential. Any fossils recovered during mitigation should be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

This records search covers only the vertebrate paleontology records of the Natural History Museum of Los Angeles County. It is not intended to be a thorough paleontological survey of the proposed project area covering other institutional records, a literature survey, or any potential on-site survey.

Sincerely,

Samuel A. McLeod

Samuel A. McLeod, Ph.D.
Vertebrate Paleontology

APPENDIX TRAF: TRAFFIC IMPACT ANALYSIS REPORT

Michael Baker
INTERNATIONAL

TRAFFIC IMPACT ANALYSIS

Hollister Park Facility Master Plan

Prepared for: City of Hollister
375 Fifth Street
Hollister, CA 95023

December 12, 2018

5050 Avenida Encinas, Suite 260, Carlsbad, CA 92008
Office: 858-810-1444
Contact: Jacob.Swim@mbakerintl.com
JN 167029

TABLE OF CONTENTS

LIST OF EXHIBITS

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Appendix B: Water Reclamation Recreational Facility Park Worksheets

Appendix C: Traffic Signal Warrants

Appendix D: Leatherback Property Park Worksheets

1 INTRODUCTION

This study assesses the estimated traffic conditions associated with five park sites within the City of Hollister, San Benito County. State Route (SR) 25 extends from northwest to southeast through the City and SR-156 skirts the western and northern portions of Hollister. Highway 156B extends through the City, entering from the east and north within the City limits. **Exhibit 1** shows the projects regional location.

The City has prepared the 2018 Hollister Park Facility Master Plan to recommend upgrades, expansions, and new park facilities to meet City residents' needs. Hollister has 25 existing parks, located either in the City, in the City's sphere of influence, or in unincorporated San Benito County. The plan includes an inventory of existing facilities, a needs assessment, and recommendations for park improvements, including two new parks. It recommends a wide range of amenities such as picnic area improvements, security lighting, basketball and tennis courts, softball and soccer fields, gardens, public art exhibits, walking paths, dog parks, playground equipment, and adult exercise equipment at existing parks.

The focus of this analysis is on five park sites within the Park Facility Master Plan that are planning significant improvements with the potential to impact access and circulation. These five park sites include:

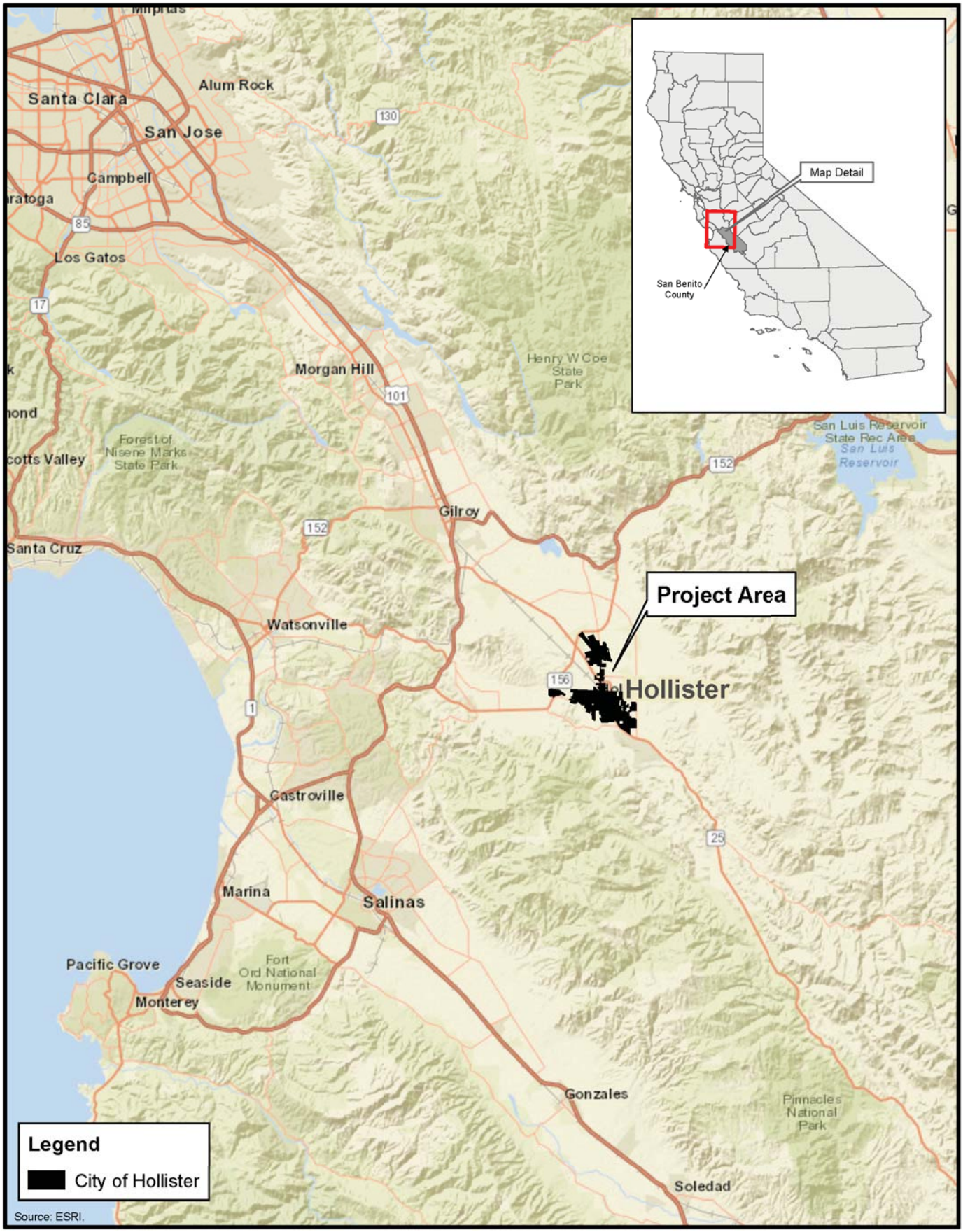
1.) Water Reclamation Recreational Facility Park (existing)
2.) Vista Park Hill Park (existing)
3.) Leatherback Property Park (new)
4.) Hollister Fire Station No. 2 Park (new)
5.) Santa Ana Creek Trail (existing)

Exhibit 2 shows the location of each of the parks evaluated in this report. The Leatherback Property Park and Hollister Fire Station No. 2 Park are new park sites proposed by the City. The Water Reclamation Recreational Facility Park, Vista Park Hill Park and Santa Ana Creek Trail are existing park sites that are planned for expansion.

It should be noted that the remaining parks identified in the Park Facility Master Plan will undergo minor improvements, however these parks are not expected to significantly impact vehicular traffic.

Daily traffic generated by the Water Reclamation Recreational Facility Park during the weekday and weekend is assumed to be the maximum number of attendees based on the tentative events listed in Table 3 and general park use based on 49.72 acres. Based on those events, the Water Reclamation Recreational Facility Park is expected to generate approximately 304 daily trips with 7 AM and 132 PM peak hour trips during the weekday. On a Saturday, the site would generate approximately 1,027 daily trips with 288 Midday peak hour trips. The intersection of San Juan Road / Park Driveway was analyzed to determine if any significant traffic-related impacts occurred as a result of the events. The analysis showed San Juan Road/Park Driveway is forecast to operate at a deficient LOS D in the Existing Plus Project condition and LOS F in the Forecast Year 2035 With Project condition. Recommended mitigation at this location is the installation of a traffic signal or a single-lane roundabout.

The Vista Park Hill Park site is currently developed as a 5-acre park with plans to expand the park by an additional 14-acres, creating a 19-acre park. The improvements would be constructed in three phases. The park expansion is expected to generate approximately 11 daily trips with 1 AM and 2 PM peak hour trips during the weekday. On a Saturday, the site would generate approximately 28 daily trips with 4



Not to Scale

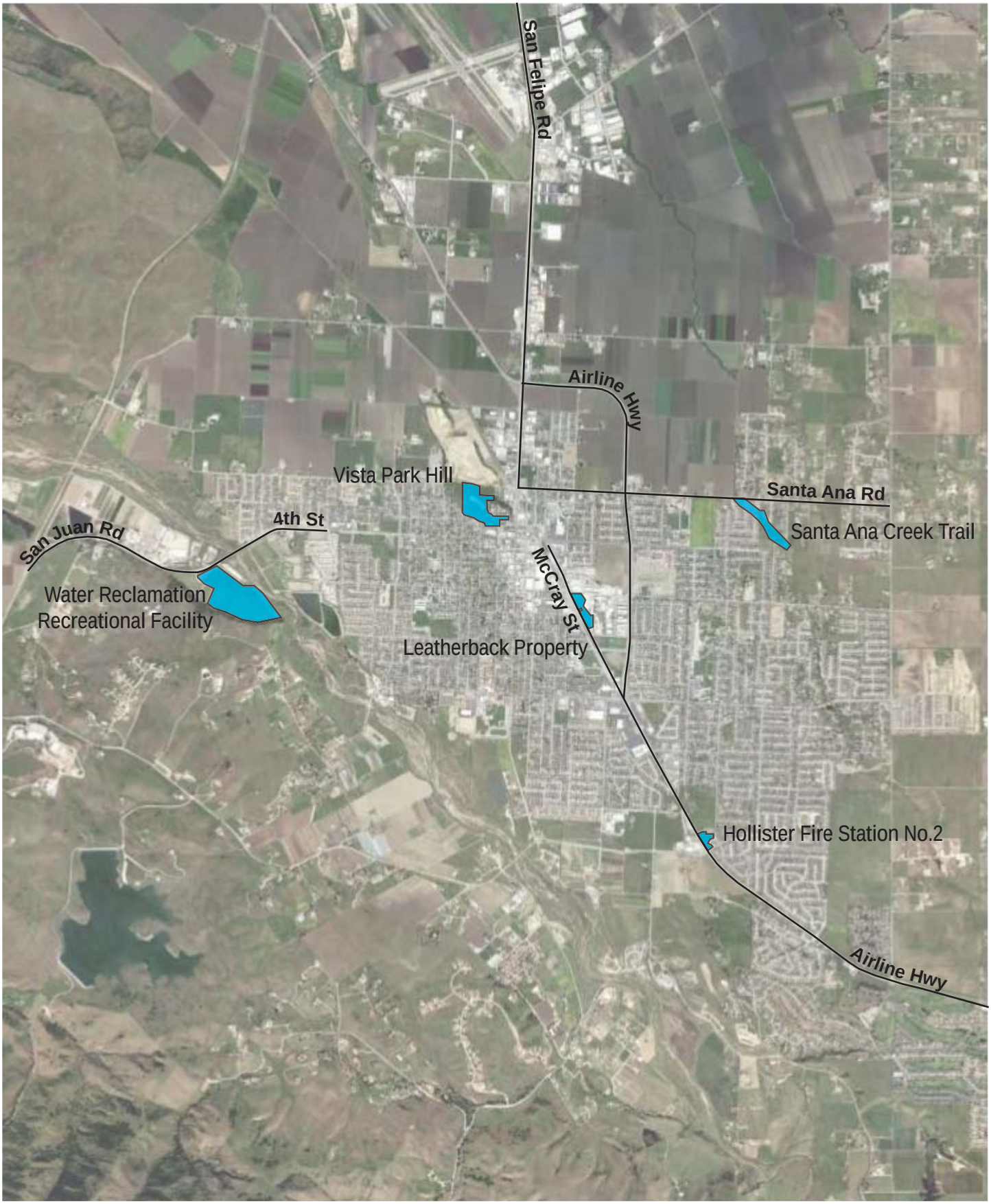
Regional Location Map

Exhibit 1

Michael Baker INTERNATIONAL

SEP2018

H:\PDATA\167029_Hollister Parks Facilities Master Plan\Traffic\Exhibits



Not to Scale

Michael Baker INTERNATIONAL

SEP2018

H:\PDATA\167029_Hollister Parks Facilities Master Plan\Traffic\Exhibits

Park Location Map

Exhibit 2

Midday peak hour trips. The vehicle trips associated with this park expansion are not expected to impact the City's circulation system and therefore, impacts are considered less than significant.

The Leatherback Property Park is mostly undeveloped and would include a recreational community center, softball and soccer fields, basketball and tennis courts, a walking loop around the perimeter, and a barbecue/picnic area. The 6.51-acre park is expected to generate 1,015 daily trips with 63 AM and 82 PM peak hour trip during the weekday. On a Saturday, the park is expected to generate approximately 332 daily trips with 40 Midday peak hour trips. The number of project trips associated with this new park are not expected to significantly impact nearby study intersections. Therefore, traffic-related impacts associated with the proposed Leatherback Property Park are considered less than significant.

Hollister Fire Station No. 2 Park would be a new park site at the corner of Airline Highway and Union Road. The park is expected to generate approximately 3 daily trips on a weekday and 7 daily trips on a weekend with 1 trip during the AM, Midday, and PM peak hours. Traffic-related impacts are considered less than significant due to the minor amount of traffic generated by this site.

The Santa Ana Creek Trail would extend the existing paved trail from its existing southern terminus near Cielo Court to Hillcrest Road. The proposed improvements to the trail are expected to generate 3 daily trips on a weekday and 6 daily trips on a weekend. The number of project trips associated with this trail extension are not expected to alter the areas transportation network and operations. Therefore, impacts are considered less than significant.

2 PROJECT DESCRIPTION

Proposed project components of the five park sites evaluated in this study are discussed below.

Water Reclamation Recreational Facility Park

The Water Reclamation Recreational Facility Master Plan is the largest of the proposed park sites and proposes development to support a variety of activities and events. The facility would include two dog parks (for small and large dogs); water play areas; two age-restricted playgrounds; softball and soccer fields; basketball and tennis courts; an amphitheater; multi-use trails; and a bicycle and pedestrian bridge across the San Benito River. The facility would also include a 4,500 square-foot building that will accommodate offices and meeting rooms for City maintenance and recreation staff. The park would provide 275 parking spaces, restrooms, signage, sidewalks, landscaping, fencing, and storm water retention features. The City would use this site to host sporting events, special events, and a variety of programs. Facilities would be available for rent by vendors, groups, and the public. The sport courts and fields would be lit at night. The amphitheater would hold between 750 and 1,000 people and would include amplified sound. **Exhibit 3** shows the master plan for this park.

Vista Park Hill Park

The Vista Park Hill Master Plan proposes development of 14-acres of City-owned parkland immediately surrounding the park, creating a 19-acre park in central Hollister. The improvements would be phased, beginning with Phase 1-A to improve circulation, accessibility, and amenities within the existing 5-acre park area. Phase 1-B would include the construction of a road connection to North Street (Buena Vista Road) to improve overall park access and circulation. Phase 2 would extend improvements to the area surrounding the existing softball diamond. Phase 3 would improve most of the new acreage added to the park's usable recreation area, include a network of walking trails, and add active and passive recreational areas. The final component would be the Phase 3 expansion, which would extend park improvements to the northeast toward North Street. **Exhibit 4** shows the various components planned for this park.

Leatherback Property Park

The Leatherback property would be developed as a City recreation facility in the downtown area. The City has not prepared a site plan for improvements on the site, but conceptual improvements would include a community recreation center with youth and/or senior facilities, softball and soccer fields, basketball and tennis courts, a walking loop along the perimeter, and a barbecue/picnic area. For purposes of this analysis, a 35,000 square foot community recreation center is assumed on this site.

Source: City of Hollister; 2018

Not to Scale

Michael Baker INTERNATIONAL

Water Reclamation Recreational Facility Master Plan

SEP2018
H:\PDATA\167029_Hollister Parks Facilities Master Plan\Traffic\Exhibits

Exhibit 3

A MAIN PARK ENTRANCE WITH MONUMENT SIGNAGE (SEE SHEET 12)

B ADA MULTI-USE ASPHALT TRAIL (10' WIDE) WITH LANE STRIPING (SEE SHEET12)

C HIKING TRAIL (3' WIDE) STABILIZED WITH PRODUCT SUCH AS TERRA-PAVE

D ADA DECOMPOSED GRANITE PEDESTRIAN PATH (6' WIDE)

E EXISTING EMERGENCY ACCESS ROAD TO BE STABILIZED WITH PRODUCT SUCH AS TERRA PAVE & TO BE USED AS A PEDESTRIAN TRAIL

F ACCESS STEPS

G MAIN ENTRY DRIVE WITH STREET LIGHTS

H TRAFFIC ROUND-ABOUT TO REDUCE TRAFFIC FLOW DOWN HILL STREET & PROVIDE EMERGENCY VEHICLE TURN AROUND - HILL STREET TO BECOME 'RESIDENTS ONLY' STREET - PARK TRAFFIC TO USE MAIN ENTRY DRIVE

I DISC GOLF COURSE - 9 HOLES

J PARKING

K EXISTING RESTROOM BUILDING

L RELOCATED & REFURBISHED PICNIC KITCHEN BUILDING

M PICNIC AREA WITH TABLES, BBQS & SHELTERS

N TODDLER PLAY AREA (INFANT AGES) (SEE SHEET 12)

O EARLY CHILDHOOD PLAY AREA (AGES 2-5) (UPPER TERRACE)

P SCHOOL AGE PLAY AREA (AGES 5-12) (LOWER TERRACE)

Q AMPHITHEATER WITH ADA RAMP ACCESS & VEHICULAR LOADING ACCESS

R OVERLOOK PLATFORM WITH BENCHES, INTERPRETIVE SIGNAGE & MAPS OF VIEW

S GAZEBO SHELTER PLATFORM

T OPEN TURF PLAY AREA

U HALF COURT BASKET BALL

V FENCED DOG PARK WITH KIOSK & AMENITIES

W NATIVE PLANTING & WATER CONSERVATION DEMONSTRATION GARDEN

X WIND SCULPTURES (SEE SHEET 13)

Y OPEN PLAY AREA WITH NATIVE GRASS PLANTINGS - ACTIVITIES INCLUDE KITE FLYING, CASUAL PICNICKING & EDUCATIONAL OPPORTUNITIES

Z WATER TANK MURAL & MOVIES IN THE PARK SCREEN LOCATION

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Vista Park Hill Development Plan

Exhibit 4

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Hollister Fire Station No. 2 Park

The City has not prepared a site plan for improvements on this site. Conceptual improvements would include a local neighborhood serving outdoor fitness equipment circuit, a walking loop along the perimeter, group and/or individual barbecue and shaded picnic areas, basketball courts, and public art along Airline Highway.

Santa Ana Creek Trail

The Santa Ana Creek Trail would extend the existing paved trail from its existing southern terminus near Cielo Court and Clenheim Drive to Hillcrest Road. The trail would include an 8-foot wide traditional or pervious concrete trail surface, regulatory and educational signage, benches, landscaping, small shade structures, and wayfinding signage at access points and trailheads. The City has not prepared a site plan for improvements on this site.

3 ANALYSIS METHODOLOGY

3.1 INTERSECTION ANALYSIS METHODOLOGY

Level of Service (LOS) is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. The Highway Capacity Manual (HCM) 2010 analysis methodology is utilized to determine the operation LOS of the study intersections. The *HCM* analysis methodology describes the operation of an intersection using a range of level of service from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for study intersections as shown in **Table 1**.

TABLE 1 - LEVEL OF SERVICE & DELAY RANGE

Level of Service	Description	Control Delay (seconds/vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Operates with very low delay and most vehicles do not stop.	≤ 10.0	≤ 10.0
B	Operates with very high progression and short cycle length. Few vehicles experience delays.	10.1 - 20.0	10.0 - 15.0
C	Operates at a moderate cycle length with significant number of vehicles stopping.	21.1 - 35.0	15.1 - 25.0
D	Operates with noticeable congestion and long cycle lengths. Vechicles experience longer delays and many vehicles stop.	35.1 - 55.0	25.1 - 35.0
E	Operates with significant delay, extensive queuing and unfavorable progression.	55.1 - 80.0	35.1 - 50.0
F	Operates with long cycle length very poor progression. Arrival rates exceed capacity of the intersection. Extensive queuing occurs.	> 80.0	> 50.0

Source: 2010 Highway Capacity Manual (HCM)

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

A computer software program called *Synchro* v. 9.2 is a direct application of HCM methodology and was used to analyze the study intersections.

Roundabouts were evaluated at the study intersection of San Juan Road / Park Driveway using *Sidra Version 7* software to calculate delays and LOS. The HCM 6th Edition for roundabouts was used to determine the operating LOS. **Table 1** shows the corresponding control delays and LOS for roundabout found in Chapter 21 of the 2010 HCM.

3.2 THRESHOLDS OF SIGNIFICANCE

In accordance with the 2005-2023 City of Hollister General Plan, level of service C or better is considered acceptable operating conditions for intersections during peak hours. For purposes of this analysis, the following significance criteria was used to determine significant impacts at study intersections.

For signalized intersections, a significant adverse impact on traffic conditions would occur if for any peak hour:

- The LOS at the intersection degrades from an acceptable LOS C or better under baseline conditions to an unacceptable LOS D, E or F under project conditions; or
- The intersection is already operating at an unacceptable LOS D, E or F under baseline conditions and the addition of project traffic causes the average intersection delay to increase by more than four seconds beyond what it was without the project.

For unsignalized intersections, a significant adverse impact on traffic conditions would occur if for any peak hour:

- *All-Way Stop*: The average overall LOS at the intersection degrades from an acceptable LOS C or better under baseline conditions to an unacceptable LOS D, E or F under project conditions; or
- *All-Way Stop*: The average overall intersection LOS is already at an unacceptable LOS D, E or F under baseline conditions and the addition of project traffic causes the average overall delay to increase by more than four seconds beyond what it was without the project; or
- *One-or-Two-Way Stop*: The delay on the worst approach at a one-or two-way stop-controlled intersection degrades from an acceptable LOS C or better under baseline conditions to an unacceptable LOS D, E or F under project conditions and the traffic volumes at the intersection under project conditions are high enough to satisfy the peak hour volume traffic signal warrant adopted by Caltrans; or
- *One-or-Two-Way Stop*: The delay on the worst approach at a one-or two-way stop-controlled intersection is already at an unacceptable LOS D, E or F under baseline conditions and traffic volumes at the intersection under project conditions are high enough to satisfy the peak hour volume traffic signal warrant adopted by Caltrans, and the addition of project traffic causes the delay on the worst stop-controlled approach to increase by more than four seconds beyond what it was without the project.

4 WATER RECLAMATION RECREATIONAL FACILITY PARK

This section of the report evaluates the potential traffic-related impacts associated with the improvements to the Water Reclamation Recreational Facility Park. The Water Reclamation Recreational Facility Master Plan is located south of San Juan Road and proposes development to support a variety of activities and events. The facility would include two dog parks (for small and large dogs); water play areas; two age-restricted playgrounds; softball and soccer fields; basketball and tennis courts; an amphitheater; multi-use trails; and a bicycle and pedestrian bridge across the San Benito River. The facility would also include a 4,500 square-foot building housing offices and meeting rooms for City maintenance and recreation staff. The park would provide 275 parking spaces, restrooms, signage, sidewalks, landscaping, fencing, and storm water retention features. The City would use this site to host sporting events, special events, and a variety of programs throughout the year. Facilities would be available for rent by vendors, groups, and the public. The sport courts and fields would be lit at night. The amphitheater would hold between 750 and 1,000 people and would include amplified sound.

4.1 EXISTING CONDITIONS

To determine the existing intersection operations of San Juan Road / Park Driveway, peak hour intersection turn movement counts were collected on Wednesday September 19, 2018 and on Saturday, September 22, 2018. During the weekday, AM peak period counts were generally collected between 7:00 AM to 9:00 AM and PM peak period counts were generally collected from 4:00 PM to 6:00 PM. On Saturday, midday peak period counts were generally collected between 11:00 AM and 1:00 PM. To be conservative, weekend counts were collected on a Saturday rather than on Sunday since the proposed improvements to the park and proposed sporting events are anticipated to generate higher amounts of traffic on Saturday versus Sunday. A variety of sporting events have been preliminarily planned throughout the year by City staff and are discussed later in this section of the report. Traffic counts used in this analysis were taken from the highest hour within the peak periods counted at the study intersection. Detailed traffic count data is contained in **Appendix A**.

Exhibit 5 shows the Existing study intersection lane geometry and the AM and PM peak hour volumes at San Juan Road / Park Driveway. **Table 2** summarizes existing conditions intersection operations at San Juan Road / Park Driveway during a typical weekday and weekend (Saturday) as a one-way stop-controlled intersection. As shown, the study intersection is operating at acceptable levels of service (C or better) during the weekday and Saturday. Detailed analysis sheets are contained in **Appendix B**.

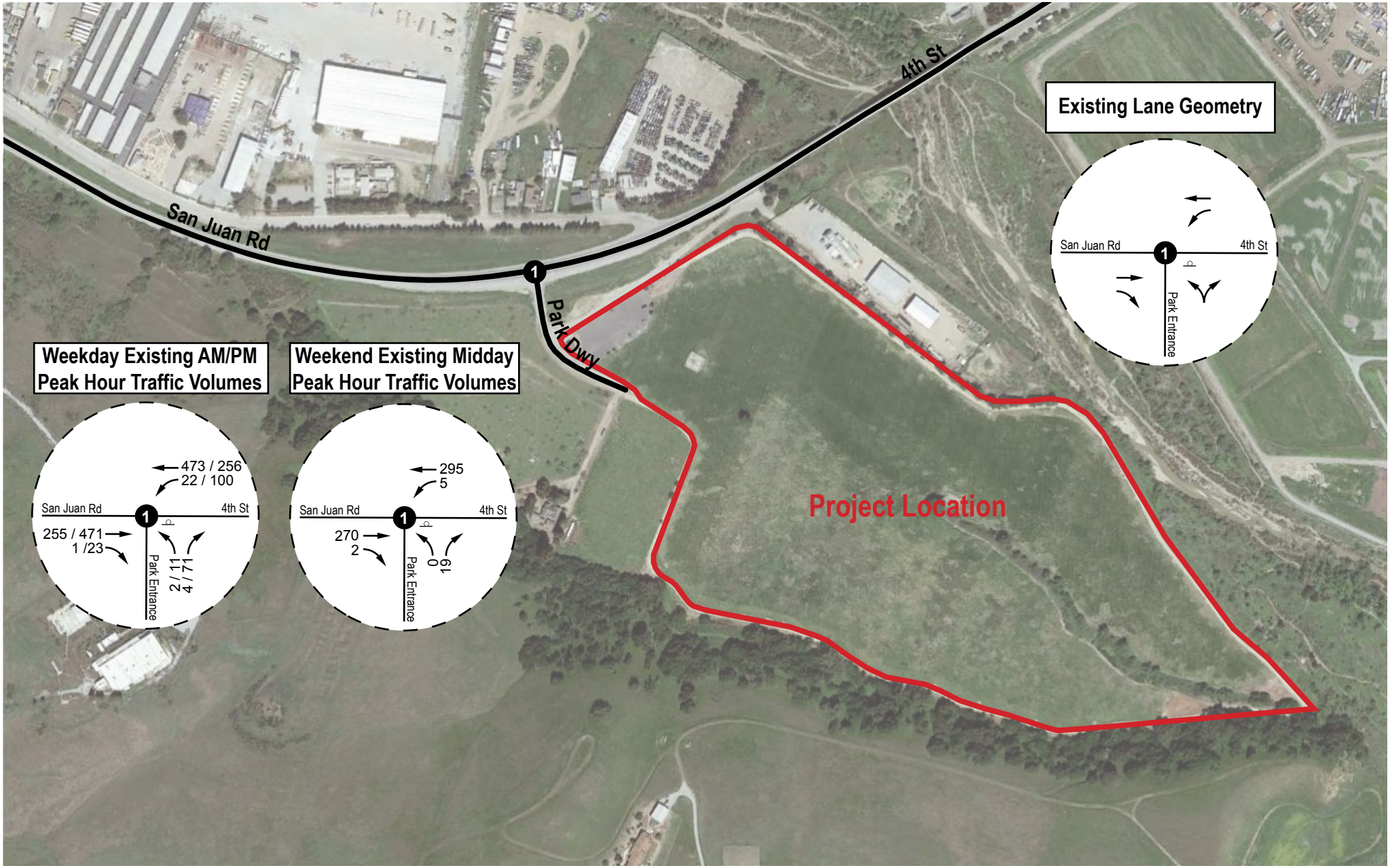
TABLE 2, EXISTING PEAK HOUR INTERSECTION LOS

Study Intersection	Traffic Control	Existing Conditions (Weekday)		Existing Conditions (Saturday)
		AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS
1 - San Juan Road / Park Driveway	OWSC	12.1 - B	20.3 - C	10.2 - B

[1] Average seconds of delay per vehicle.

LOS = level of service.

OWSC = One-Way Stop Control, worst approach delay & LOS reported.



Not to Scale

Legend:

= Study Intersection

XXX = Peak Hour Volumes

⊣ = Stop Controlled Intersection

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Water Reclamation Recreational Facility Park
Existing Lane Geometry and Peak Hour Traffic Volumes

SEP2018

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Exhibit 5

San Juan Road is an east/west two-lane Major Collector that begins to the west at its intersection with SR-156 and extends eastward transitioning into Fourth Street at Line Street. The posted speed limit on San Juan Road is 45 miles per hour. Class II bike lanes and sidewalks near the park site are not provided on either side of this roadway. At the park driveway in the eastbound direction, a dedicated right-turn lane and acceleration lane is provided.

4.2 TRIP GENERATION

This park site is being developed to support a variety of activities and events. **Table 3** summarizes the type of activity/events, time of year and day, usage and estimated attendees. Peak traffic conditions during the weekend (not including festivals) occur on the third Saturday in July from 8:00 AM to 1:00 PM with an estimated 930 attendees. During the weekday, peak traffic conditions are anticipated to occur on Mondays and Wednesdays in July from 5:00 PM to 8:00 PM with an estimated 240 attendees; and Tuesdays and Thursdays from 6:00 PM to 8:00 PM with an estimated 265 attendees. To estimate the number of trips during the weekday, the 265 attendees were used in this analysis.

TABLE 3, WATER RECLAMATION RECREATIONAL FACILITY EVENTS

Type of Activity/Event	Time of Year	Time of Day	Usage	Estimated Attendees
Adult Softball Leagues	March-November	6-10 pm	2-3 fields Monday through Friday	60 each night
Junior Giants Program	June-August	Weekdays 5-8 pm Saturday 8-3 pm	1 field Monday through Friday 3 fields on Saturdays	60 each night Saturday 400
Run Club	April-July	4-6 pm	Mondays and Wednesdays	60 each night
Youth Flag Football	June-July	Weekdays 5-8 pm Saturday 8-1 pm	Monday through Friday, Saturday	60 each night Saturday 200
Youth Soccer	July-September	Weekdays 5-8 pm Saturday 8-1 pm	Monday through Friday	60 each night Saturday 300
South Bay Soaring	Year-Round	Sunday 7:30 am-3 pm	1st and 3rd Sunday of every month	30 each day
Monterey Bay Coursing (Dog agility training)	Year-Round	Saturday/Sunday 7:30 am-3 pm	Every other month on the third weekend	30 each day
Youth Tennis	April-May, June-August, Sept-Oct	4-5:30 pm	Tuesday/Thursday	25 each day
Festivals	Year-Round		Weekends, 3-4 festivals per year	750-1,000

For trip generation purposes and to provide a conservative analysis, the daily traffic generated by the park site during the weekday and weekend is assumed to be the maximum number of attendees based on the tentative events listed in **Table 3** and general park use based on 49.72 acres. AM peak hour traffic during the weekday is based on trip rates from the ITE Trip Generation, 10th Edition provided in **Table 4** since there are no events that occur during the morning peak hours. PM peak hour traffic during the weekday is based on peak events that occur from 6:00 PM to 8:00 PM (265 attendees divided by two hours equals 132 PM peak hour vehicle trips). This assumes an occupancy of 1 person per vehicle which is conservative. The inbound and outbound splits during the AM, Midday and PM peak hour are based on the ITE Trip Generation rates.

Table 5 summarizes the trip generation assumed in this analysis for the Water Reclamation Recreational Facility Park. It should be noted that special events listed in Table 3 are not accounted for in this trip generation since they only occur a few times throughout the year. As shown, the park would generate approximately 304 daily trips with 7 AM peak hour trips and 132 PM peak hour trips on a typical weekday. During the weekend (Saturday), the park would generate approximately 1,027 daily trips with 288 Midday peak hour trips. Midday in this analysis refers to 12:00 to 1:00 PM based on count data.

TABLE 4, TRIP GENERATION RATES

Land Use	Daily Trip Rate	AM Peak Hour		PM Peak Hour	
		Total	In : Out	Total	In : Out
Public Park (411) Weekday	0.78 / Acres	2%	59% : 41%	11%	55% : 45%
		Midday Peak Hour		-	
Public Park (411) Saturday	1.96 / Acres	28%	55% : 45%	-	

* Rates derived from *ITE Trip Generation Manual 10th Edition. These rates do not include trips associated with the events.*

TABLE 5, WATER RECLAMATION RECREATIONAL FACILITY PARK TRIP GENERATION

Land Use	Day	ADT	AM Peak Hour[3]			PM Peak Hour[3]		
			Total	In	Out	Total	In	Out
Public Park	Weekday[1]	304	7	5	2	132	73	59
			Midday Peak Hour[3]			-		
	Weekend[2]	1,027	288	159	129	-		

[1] On a weekday, the 304 ADT is based on the 265 attendees (maximum) that occurs on Tuesdays and Thursdays during the PM peak hour in July and general park use based on 49.72 acres.

[2] On a weekend, the 1,027 ADT is based on the 930 attendees (maximum) that occurs on the third Saturday during the Midday peak hour in July and general park use based on 49.72 acres.

[3] Peak Hour splits are derived from the *ITE Trip Generation 10th Edition* for recreational parks (Land-Use Code 411).

4.3 EXISTING PLUS PROJECT CONDITIONS

Existing Plus Project traffic volumes were derived by adding the estimated project trips to existing weekday and weekend traffic volumes. Project traffic generated by the park was distributed to the road network based on existing travel patterns using existing count data. **Exhibit 6** shows the project distribution, project only traffic volumes, and forecast Existing Plus Project conditions weekday and mid-day (Saturday) peak hour traffic volumes at San Juan Road / Park Driveway. **Table 6** summarizes Existing Plus Project conditions weekday AM and PM peak hour and midday (Saturday) peak hour level of service of San Juan Road / Park Driveway compared to Existing Conditions. Detailed LOS analysis sheets are contained in **Appendix B**.

TABLE 6, EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE

Study Intersection	Traffic Control	Existing Conditions			Existing Plus Project Conditions			Weekday Significant Impact?		Saturday Significant Impact?	
		Weekday		Saturday	Weekday		Saturday				
		AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM	PM	AM	PM
1 - San Juan Road / Park Driveway	OWSC	12.1 - B	20.3 - C	10.2 - B	11.8 - B	**31.6 - D**	14.8 - B	No	Yes	No	No

[1] Seconds of delay per vehicle.

LOS = level of service.

Bold font indicates deficient level of service.

OWSC = One-Way Stop Control, worst approach delay & LOS reported

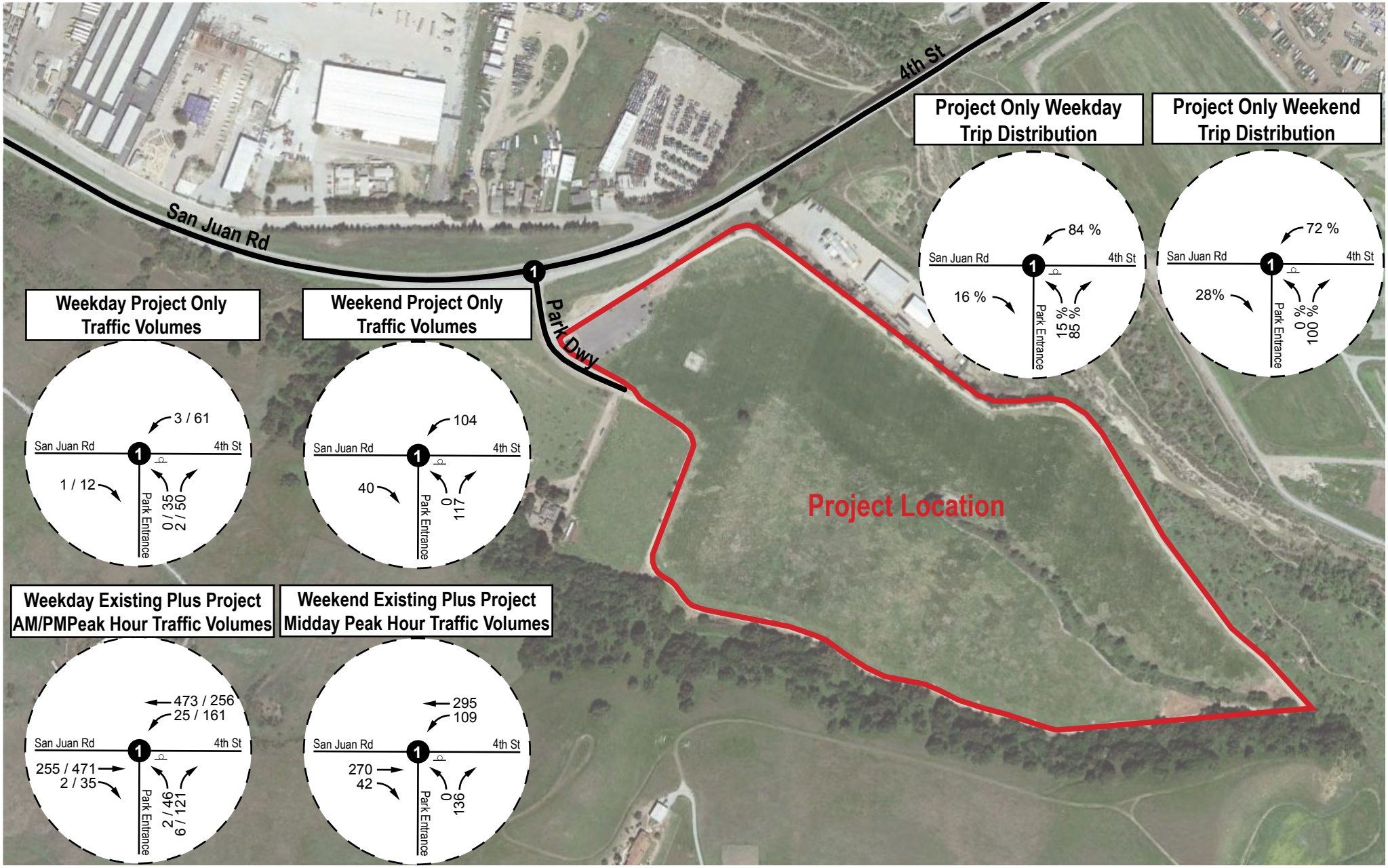
As shown, San Juan Road / Park Driveway is forecast to operate at an acceptable level of service (C or better) with project traffic on a weekday during the AM peak hour and on a weekend. However, on a weekday during the PM peak hour, the main entrance to the park is anticipated to operate at a deficient level of service "D". Since the intersection is degraded from an acceptable LOS C under existing conditions to an unacceptable LOS D under project conditions, the intersection is considered significantly impacted by the project and mitigation measures are required.

SIGNAL WARRANT:

Under Existing Plus Project conditions, PM peak hour traffic volumes at the intersection satisfy the peak hour volume traffic signal warrant (Warrant #3) in accordance with the California Manual on Traffic Control Devices (2014 CA MUTCD). Under Existing Plus Project conditions, a traffic signal would allow the intersection to operate at 12.8 seconds of delay LOS B during the PM peak hour on a weekday. Therefore, the installation of a traffic signal at this location would fully mitigate the impact. **Appendix C** contains the traffic signal warrants.

ROUNDABOUT CONCEPT:

As an alternative to a traffic signal at San Juan Road / Park Driveway, the City requested a roundabout be evaluated at this location. A preliminary design concept was developed for a single-lane yield controlled roundabout alternative based on geometric design standards outlined in the *National Cooperative Highway Research Program (HCHRP Report 672).* As shown in **Exhibit 7**, a single-lane yield controlled roundabout would require an inscribed diameter (representing the raised median and all travel lanes) of approximately 130 feet with one travel lane entering and exiting the roundabout. The roundabout is designed to accommodate a California Legal 65 design vehicle. In addition, a single-lane roundabout at this location could most likely be constructed within the public right-of-way.



Not to Scale

Legend:

- # = Study Intersection
- XXX = Peak Hour Volumes
- ⊣ = Stop Controlled Intersection
- XX % = Trip Distribution Percentage

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Water Reclamation Recreational Facility Park
Existing Plus Project Peak Hour Traffic Volumes

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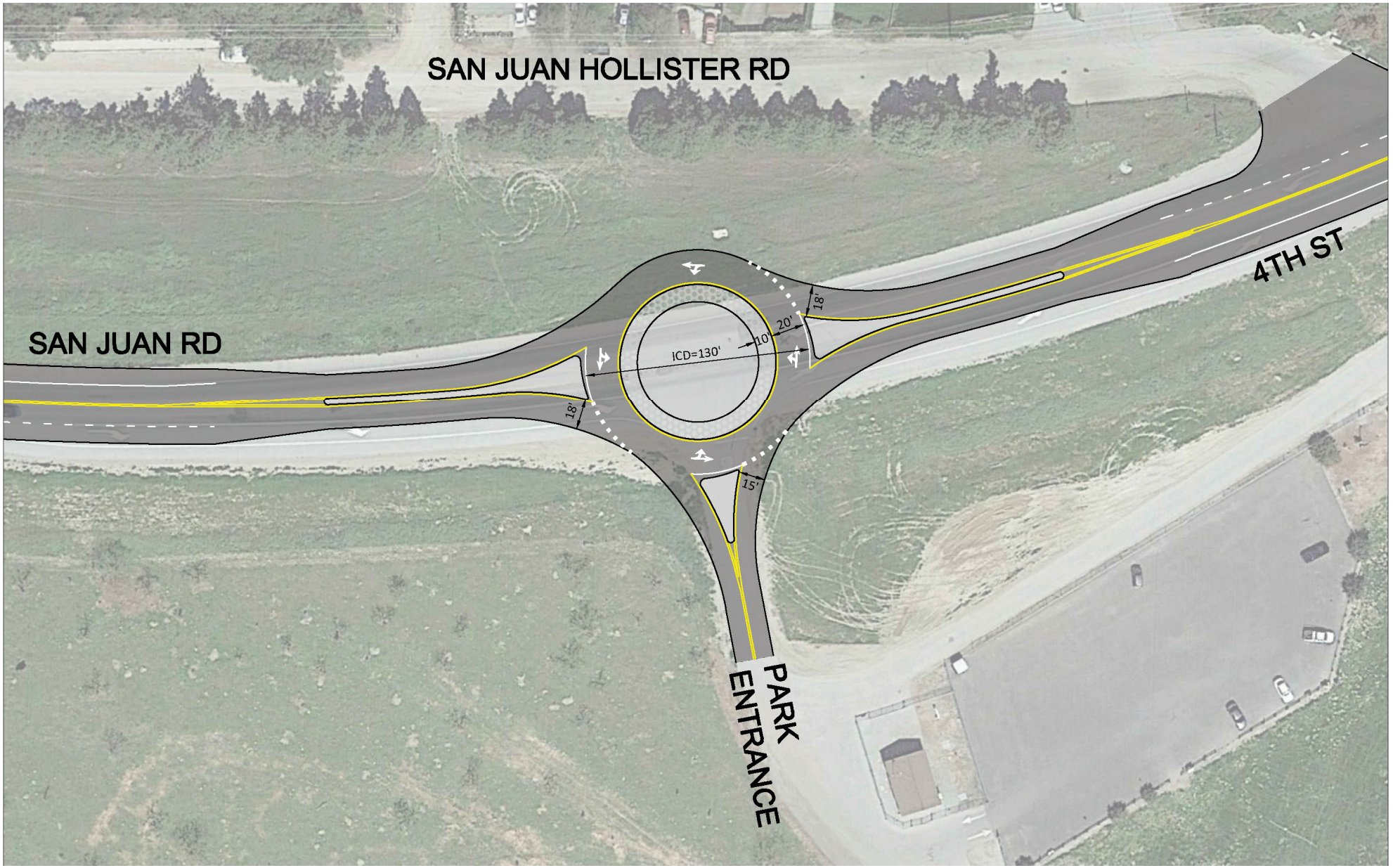
Exhibit 6



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Roundabout Concept

Exhibit 7

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The roundabout at San Juan Road / Park Driveway was evaluated using *Sidra Version 7* software to calculate delays and LOS. The HCM 6th Edition for roundabouts was used to determine the operating LOS. **Table 7** includes the roundabout analysis under Existing and Existing Plus Project conditions. Under Existing Plus Project, a single-lane roundabout operates at an acceptable level of service (LOS C or better).

TABLE 7, EXISTING & EXISTING PLUS PROJECT ROUNDABOUT LEVEL OF SERVICE

Study Intersection	Traffic Control	Existing Conditions			Existing Plus Project Conditions			Weekday Significant Impact?		Saturday Significant Impact?	
		Weekday		Saturday	Weekday		Saturday				
		AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM	PM	AM	PM
1- San Juan Road / Park Driveway	Roundabout	6.1 - A	8.0 - A	4.6 - A	6.1 - A	10.7 - B	6.7 - A	No	No	No	No

[1] Seconds of delay per vehicle.

LOS = level of service.

4.4 FORECAST YEAR 2035 WITH & WITHOUT PROJECT CONDITIONS

This section summarizes the operating conditions of the study intersection for the Forecast Year 2035 conditions with and without the proposed improvements to the Water Reclamation Recreational Facility Park. No changes to the existing roadway network was assumed for the Forecast Year 2035 conditions.

Forecast Year 2035 without project traffic volumes were developed by applying a growth factor to the existing traffic volumes. According to the 2018 Regional Growth Forecast adopted June 13, 2018 by the Association of Monterey Bay Area Governments (AMBAG), the employment and population forecast in the City of Hollister is estimated to increase from year 2015 to 2040 by 24% and 27%, respectively. This translates to a growth rate of 0.96% per year for employment and 1.08% per year for population with an average of 1.02% per year for both employment and population. The average growth rate (1.02%/year) was applied to the existing AM, PM and midday (Sat) peak hour traffic volumes for a 17-year period (forecast year 2035 minus year 2018 when traffic counts were collected). To be conservative, this growth rate was applied to all turn movements at the study intersection. For purposes of this analysis, year 2035 was used as the forecast year to estimate future traffic conditions at the study intersection. **Exhibit 8** shows the Forecast Year 2035 With and Without Project peak hour traffic volumes during the weekday and weekend (Saturday) at San Juan Road / Park Driveway.

Table 8 summarizes Forecast Year 2035 With and Without Project conditions weekday AM and PM peak hour and midday (Saturday) peak hour level of service of San Juan Road / Park Driveway. Detailed LOS analysis sheets are contained in **Appendix B**.

TABLE 8, FORECAST YEAR 2035 WITH & WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

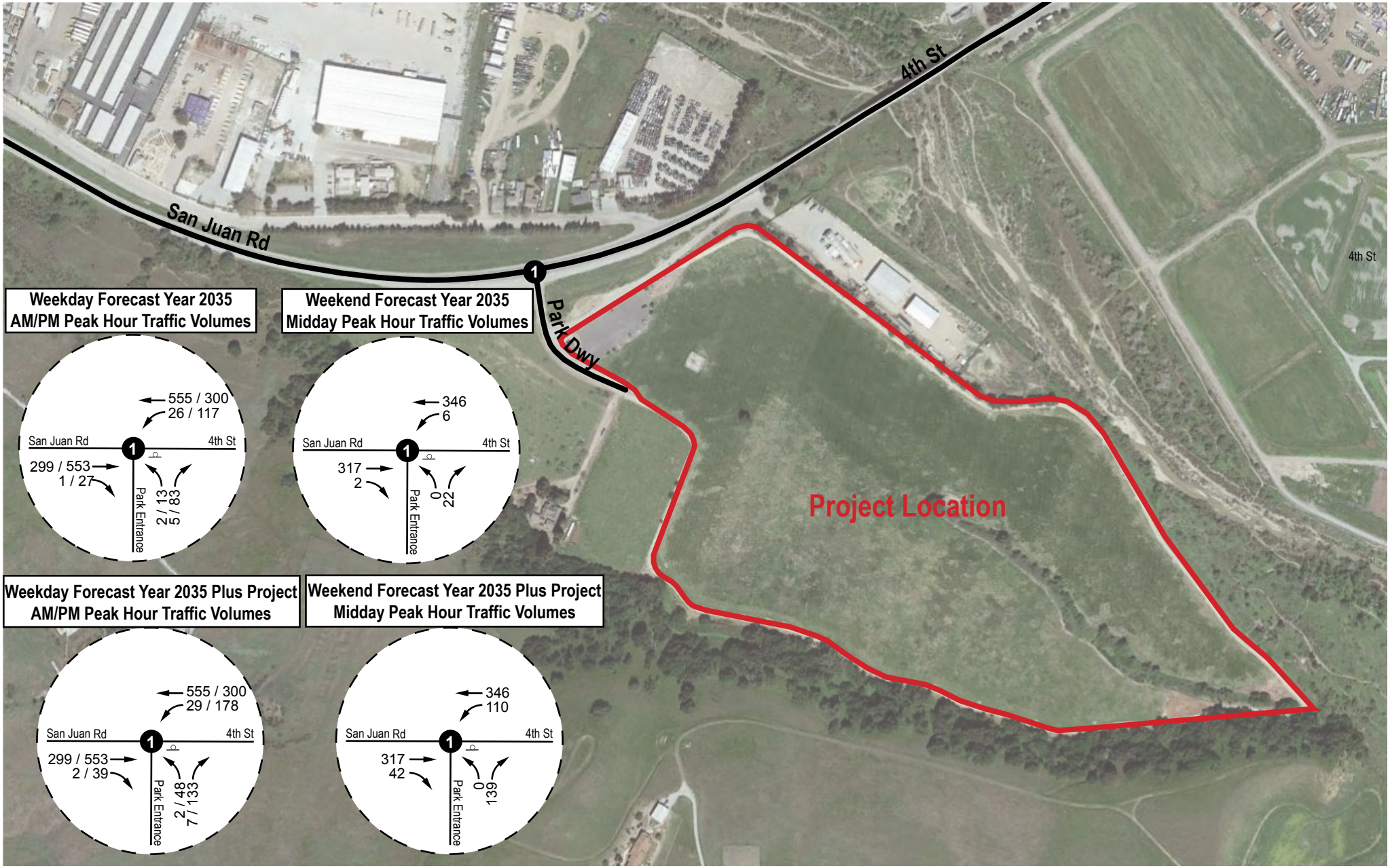
Study Intersection	Traffic Control	Forecast Year 2035 Without Project Conditions			Forecast Year 2035 With Project Conditions			Weekday Significant Impact?		Saturday Significant Impact?	
		Weekday		Saturday	Weekday		Saturday				
		AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM	PM	AM	PM
1 - San Juan Road / Park Driveway	OWSC	12.8 - B	20.3 - C	10.7 - B	12.3 - B	**120.2 - F**	16.6 - C	No	Yes	No	No

[1] Seconds of delay per vehicle.

LOS = level of service.

Bold font indicates deficient level of service.

OWSC = One-Way Stop Control, worst approach delay & LOS reported.



Not to Scale

Legend:

- # = Study Intersection
- XXX = Peak Hour Volumes
- ⊣ = Stop Controlled Intersection
- XX % = Trip Distribution Percentage

Water Reclamation Recreational Facility Park Forecast Year 2035 With & Without Project Peak Hour Traffic Volumes

Exhibit 8

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As shown, San Juan Road / Park Driveway is forecast to operate at an acceptable level of service (C or better) with project traffic on a weekday during the AM peak hour and on a Saturday. However, on a weekday during the PM peak hour, the main entrance to the park is anticipated to operate at a deficient level of service "F". Since the intersection is degraded from an acceptable LOS C under Forecast Year 2035 Without Project conditions to an unacceptable LOS F with the addition of project traffic, the intersection is considered significantly impacted by the project and mitigation measures are required.

PROPOSED MITIGATION:

Mitigation at this location could be either the installation of a traffic signal or a single-lane roundabout to improve the operations of the intersections, specifically during the PM peak hour on a typical weekday. Under Forecast Year 2035 With Project conditions, the installation of a traffic signal at San Juan Road / Park Driveway would improve operations to a delay of 13.6 seconds LOS B during the PM peak hour (critical peak). Since a signal would allow the intersection to operate at an acceptable LOS (C or better), the impact at this location would be considered mitigated to below a level of significance. Detailed LOS analysis worksheets with mitigation are contained in **Appendix B**.

As previously discussed, an alternative mitigation option to the traffic signal is a single-lane yield controlled roundabout. **Table 9** shows the roundabout operations under Forecast Year 2035 Without and With Project conditions. As shown, a single-lane roundabout continues to operate at acceptable levels of service (LOS C or better) which would fully mitigate the impact at this location. Detailed LOS analysis worksheets for the roundabout are contained in **Appendix B**.

TABLE 9, FORECAST YEAR 2035 WITH & WITHOUT PROJECT ROUNDABOUT LEVEL OF SERVICE

Study Intersection	Traffic Control	Forecast Year 2035 Without Project Conditions			Forecast Year 2035 With Project Conditions			Weekday Significant Impact?		Saturday Significant Impact?	
		Weekday		Saturday	Weekday		Saturday				
		AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM	PM	AM	PM
1- San Juan Road / Park Driveway	Roundabout	6.9 - A	10.1 - A	5.0 - A	7.0 - A	14.4 - B	7.3 - A	No	No	No	No

[1] Seconds of delay per vehicle.

LOS = level of service.

A roundabout at this location could improve safety to motorists, pedestrians and bicyclists by eliminating or altering conflict points, by reducing speed differentials at intersections, and by forcing drivers to decrease speeds as they proceed into and through the intersection. At a "T" intersection such as San Juan Road / Park Driveway, the number of vehicle-to-vehicle conflict points for roundabouts decreases from nine conflict points at a conventional intersection to six conflict points at a roundabout. Minimizing the number of conflict points and speeds should help reduce the multiple vehicle crash rate and severity. Lower speeds will also assist in pedestrian and bicycle safety along San Juan Road. Therefore, a roundabout at San Juan Road / Park Driveway could potentially improve the safety of motorists, pedestrians and bicyclists compared to a conventional signalized intersection.

4.5 NON-AUTO FACILITIES

On San Juan Road near the park site, there are currently no pedestrian or bicycle facilities provided. The City's General Plan mentions the primary function of a Major Collector, such as San Juan Road, is to serve longer trips within the urban area elements such as the Downtown Central Business District, industrial facilities, large urban and suburban commercial centers, major residential areas, and other key activity centers. Although the General Plan shows a typical cross section for a Major Collector which includes sidewalks on both side of the road, there is limited information regarding future improvements to pedestrian or bicycle facilities on these types of roadways. According to the General Plan, most bicycling is done on roadway shoulders, which are not striped for bike lanes. To encourage alternative modes of transportation such as walking and biking, sidewalks and Class I or Class II bikes lanes along San Juan Road are recommended.

San Benito County Express Transit System provides public bus service to the communities of Hollister. There are three fixed-route bus lines in Hollister on weekdays between 7 AM to 6 PM. All three lines connect at Fourth and San Benito Street, which is also the transfer point for inter-county service. The closest bus stop is located at the intersection of 4th Street / Miller Road which is approximately ¾ of a mile away from the park site.

5 VISTA PARK HILL PARK

This section of the report assesses the potential traffic-related impacts associated with the improvements to Vista Park Hill Park located at the end of Hill Court, atop a hill north of the downtown area. The park is accessed via Hill Street or the unpaved Locust Avenue. The site is currently developed as a 5-acre park.

The Vista Park Hill Master Plan proposes development of 14 additional acres of City-owned parkland immediately surrounding the park, creating a 19-acre park in central Hollister. The improvements would be phased, beginning with Phase 1-A to improve access and circulation, and amenities within the existing 5-acre park area. Phase 1-B would include the construction of a road connection to North Street (Buena Vista Road) to improve overall park circulation and accessibility. Phase 2 would extend improvements to the area of the existing softball diamond. Phase 3 would improve most of the new acreage added to the park's usable recreation area, include a network of walking trails, and add active and passive recreational areas. The final component would be the Phase 3 expansion, which would extend park improvements to the northeast toward North Street. Exhibit 4 in this report illustrates the various components of the Vista Park Hill master plan.

5.1 TRIP GENERATION

In order to calculate vehicle trips forecast to be generated by Vista Park Hill Park, the *Institute of Transportation Engineers (ITE) 10th Edition Trip Generation Manual* trip generation rates were utilized (refer to Table 4 in this report). **Table 10** shows the estimated trips generated by the Vista Park Hill Park improvements. Using the number of acres for the park site, Vista Park Hill Park is estimated to generate approximately 11 daily trips on a weekday and 28 daily trips on a weekend. In addition to new vehicular trips, pedestrian and bicycle trips are anticipated to increase with the proposed expansion of Vista Park Hill Park. The park is surrounded by a residential community that would benefit from the amenities proposed in the expansion. A 5-foot sidewalk is currently provided on the north side of Hill Street that leads to the existing park site. The master plan also proposes to provide a 1,000 square foot outdoor amphitheater with a maximum capacity of 100 people. These events would most likely be scheduled during off-peak periods to avoid traffic congestion.

TABLE 10, VISTA PARK HILL PARK TRIP GENERATION TABLE

Land Use	Intensity	ADT	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Vista Park Hill (Weekday)	14.00 Acres	11	1	1	0	2	2	0
			Midday Peak Hour			N/A		
Vista Park Hill (Weekend)		28	4	2	2	N/A		

The primary roadway that would be affected by the park expansion is Hill Court and North Street (new access), both two-lane roads in a residential community designated to carry relatively low levels of vehicular traffic. The number of new trips associated with the project does not warrant a detailed traffic analysis and would not significantly alter the area's transportation network and operations. The project is would not create conflicts with applicable plans, ordinance, or policies related to the City's circulation system. Therefore, impacts will be less than significant.

6 LEATHERBACK PROPERTY PARK

This section of the report evaluates the potential traffic-related impacts associated with the improvements to the Leatherback Property Park. The Leatherback Property Park is located at the intersection of Hillcrest Road and McCray Street. The property is in the shape of an hourglass and includes properties between 111 Hillcrest Road and 901 McCray Street. The site would be developed as a centralized City recreation facility. The City has not prepared a site plan for improvements, but conceptual improvements would include a recreational community center with youth and/or senior facilities, softball and soccer fields, basketball and tennis courts, a walking loop along the perimeter, and a barbecue/picnic area. For purposes of this analysis, a 35,000 square foot recreational community center is assumed to be constructed on the park site with the other park amenities.

6.1 EXISTING CONDITIONS

The primary roadways that would most likely be affected by the proposed park is McCray Street and Hillcrest Road. Both of these roadways are classified as Major Collectors in an industrial area. The intersection of Hillcrest Road / McCray Street was selected as a study location to determine the current and future operations of the intersection with and without the proposed park site. The other location that was evaluated at this site was the full access driveway on McCray Street that exists today. The site is currently vacant and un-developed, however, an access point on McCray Street with turn pockets is provided and assumed in this analysis as the primary access point for the Leatherback Property Park.

To determine the intersection operations of Hillcrest Road / McCray Street, peak hour intersection turn movement counts were collected on Tuesday October 16, 2018 and on Saturday, October 13, 2018. During the weekday, AM peak period counts were generally collected between 7:00 AM to 9:00 AM and PM peak period counts were generally collected from 4:00 PM to 6:00 PM. On Saturday, midday peak period counts were generally collected between 11:00 AM and 1:00 PM. Traffic counts (**Appendix A**) used in this analysis were taken from the highest hour within the peak periods counted at the study intersection.

Exhibit 9 shows the Existing study intersection lane geometry and the AM and PM peak hour volumes at Hillcrest Road / McCray Street and McCray Street / Future Park Access. **Table 11** summarizes existing conditions intersection operations at both study intersections during a typical weekday and weekend (Saturday). As shown, the study intersections are operating at acceptable levels of service (C or better) during the weekday and Saturday. Detailed analysis sheets are contained in **Appendix D**.

TABLE 11, EXISTING PEAK HOUR INTERSECTION LOS

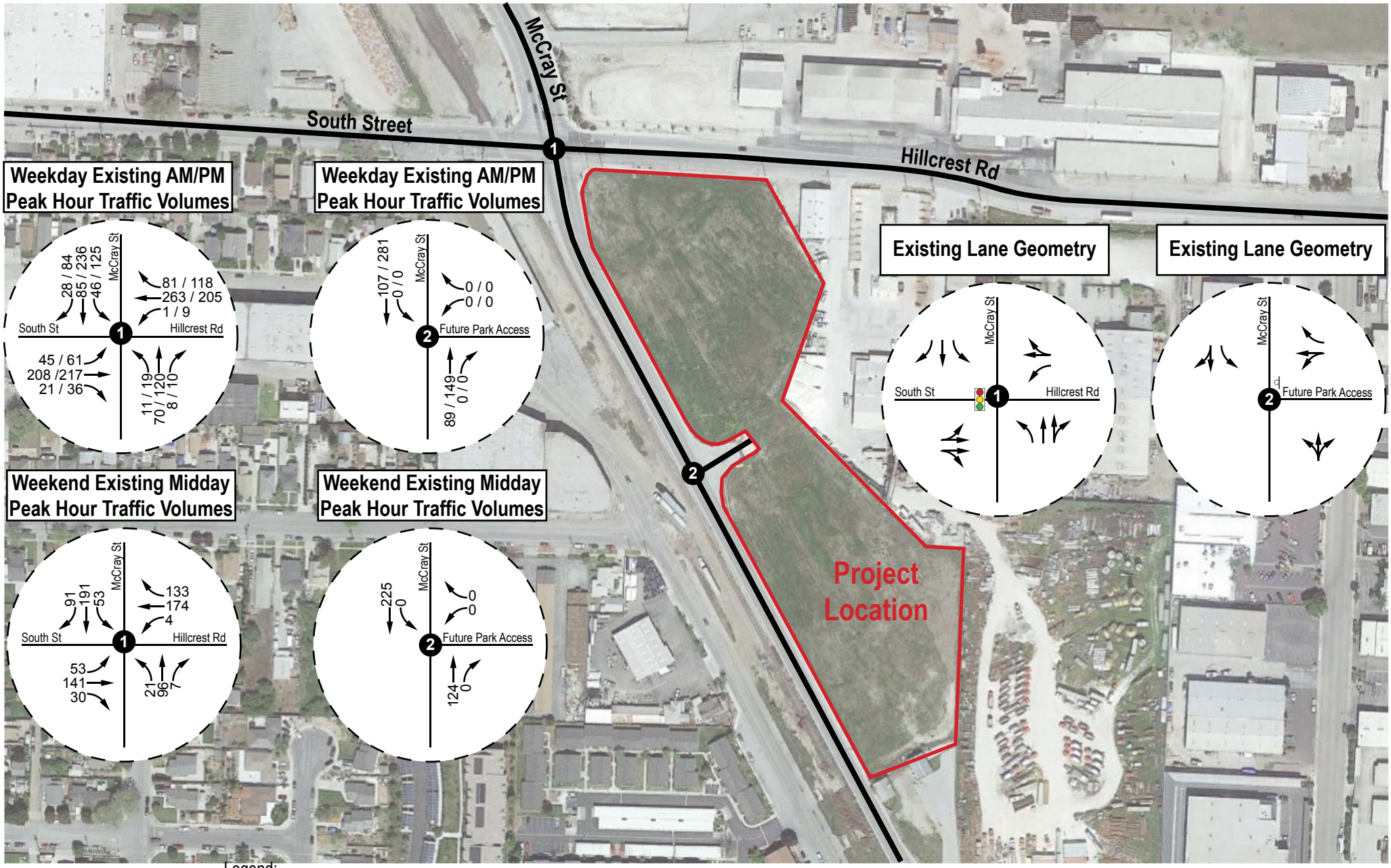
Study Intersection	Traffic Control	Existing Conditions (Weekday)		Existing Conditions (Saturday)
		AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS
1 - Hillcrest Road / McCray Street	Signal	18.4 - B	22.1 - C	21.9 - C
2 - McCray Street / Future Park Access	OWSC	(2)	(2)	(2)

[1] Average seconds of delay per vehicle.

LOS = level of service.

OWSC = One Way Stop Control

(2) = This driveway is not utilized today since the site is currently vacant and undeveloped.



Legend:

- ● = Study Intersection
- XXX = Peak Hour Volumes
- ⊣ = Stop Controlled Intersection
- = Signalized Intersection

Not to Scale

Michael Baker INTERNATIONAL

Leatherback Property Park

Existing Lane Geometry and Peak Hour Traffic Volumes

Exhibit 9

OCT2018

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6.2 TRIP GENERATION

In order to calculate vehicle trips forecast to be generated by the proposed Leatherback Property, the *Institute of Transportation Engineers (ITE) 10th Edition Trip Generation Manual* trip generation rates were utilized as shown in **Table 12**. A summary of the trips expected to be generated by the Leatherback Property Park is provided in **Table 13**. The proposed park site is estimated to generate approximately 1,015 daily trips during the weekday and approximately 332 daily trips on a weekend based on the acreage of the site. The highest peak hour trips are expected to occur on a weekday with 82 (46 inbound and 36 outbound) PM peak hour trips.

TABLE 12, LEATHERBACK PROPERTY PARK TRIP GENERATION RATES

ITE Trip Generation Rates

Land Use	Daily Trip Rate	AM Peak Hour		PM Peak Hour	
		Total	In : Out	Total	In : Out
Public Park (411) Weekday	0.78 / Acres	0.02	59% : 41%	0.11	55% : 45%
Recreational Community Center (495) Weekday	28.8 / KSF	1.76	66% : 34%	2.31	47% : 53%
		Midday Peak Hour		-	
Public Park (411) Saturday	1.96 / Acres	0.28	55% : 45%	-	
Recreational Community Center (495) Saturday	9.1 / KSF	1.07	54% : 46%	-	

* Rates derived from *ITE Trip Generation Manual 10th Edition.*

TABLE 13, LEATHERBACK PROPERTY PARK TRIP GENERATION

Land Use	Intensity	ADT	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Weekday								
Leatherback Property (Park)	6.51 Acres	6	1	1	0	1	1	0
Leatherback Property (Recreational Center)	35.00 KSF	1,009	62	37	25	81	45	36
Total		**1,015**	**63**	**38**	**25**	**82**	**46**	**36**
Weekend								
			Midday Peak Hour			N/A		
Leatherback Property (Park)	6.51 Acres	13	2	1	1	N/A		
Leatherback Property (Recreational Center)	35.00 KSF	319	38	21	17	N/A		
Total		**332**	**40**	**22**	**18**	N/A		

In addition to vehicular trips generated by the new park site, pedestrians and bicyclists would also be attracted to this site that don't exist today. Sidewalks are provided on Hillcrest Road, but not on McCray Street along the frontage of the proposed park site. To accommodate pedestrians and bicyclists traveling to and from the new park, pedestrian and bicycle facilities should be incorporated into the design of the park where feasible, specifically along McCray Street and Hillcrest Road.

6.3 EXISTING PLUS PROJECT CONDITIONS

Existing Plus Project traffic volumes were derived by adding the estimated project trips to existing weekday and weekend traffic volumes. Project traffic generated by the park was distributed to the road network based on existing travel patterns using existing count data. **Exhibit 10** shows the project distribution, project only traffic volumes, and forecast Existing Plus Project conditions weekday and mid-day (Saturday) peak hour traffic volumes at Hillcrest Road / McCray Street and McCray Street / Future Park Access Road.

Table 14 summarizes Existing Plus Project conditions weekday AM and PM peak hour and midday (Saturday) peak hour level of service of Hillcrest Road / McCray Street compared to Existing Conditions. Detailed LOS analysis sheets are contained in **Appendix D**.

TABLE 14, EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE

Study Intersection	Existing Conditions			Existing Plus Project Conditions			Weekday Significant Impact?		Saturday Significant Impact?	
	Weekday		Saturday	Weekday		Saturday				
	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM	PM	AM	PM
1 - Hillcrest Road / McCray Street	18.4 - B	22.1 - C	21.9 - C	18.6 - B	22.4 - C	22.0 - C	No	No	No	No
2 - McCray Street / Future Park Access	(2)	(2)	(2)	9.7 - A	11.5 - B	10.4 - B	No	No	No	No

[1] Seconds of delay per vehicle.

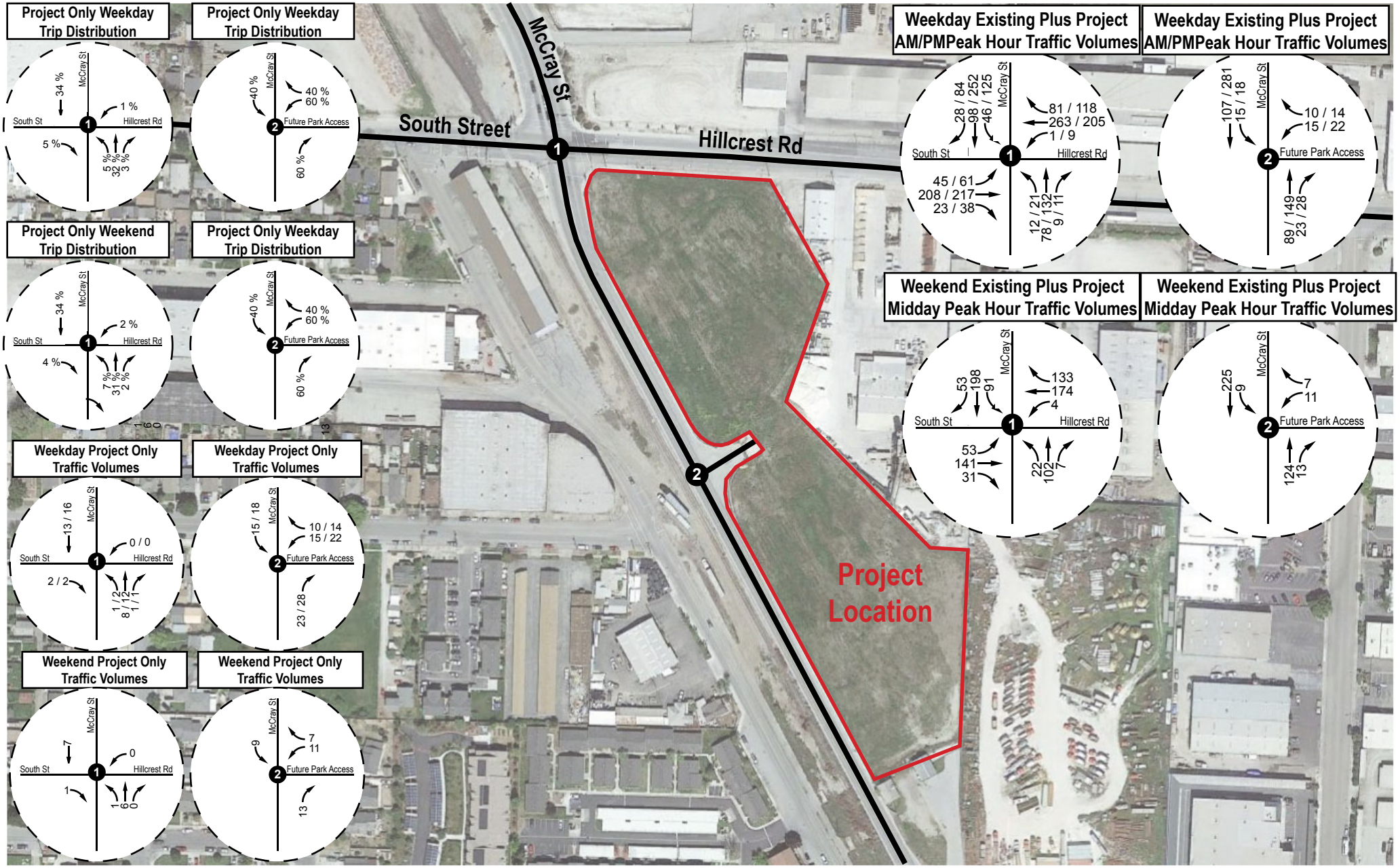
LOS = level of service.

(2) = This driveway is not utilized today since the site is currently vacant and undeveloped.

As shown, both study intersections are forecast to operate at acceptable levels of service (C or better) with project traffic on a weekday during the AM and PM peak hour and on a weekend. Since the intersections are shown to operate at acceptable LOS C or better with the proposed park site, impacts at the study intersections are considered less than significant. Therefore, no mitigation measures are required under the Existing Plus Project scenario.

6.4 FORECAST YEAR 2035 WITH & WITHOUT PROJECT CONDITIONS

This section summarizes the operating conditions of the study intersection for the Forecast Year 2035 conditions with and without the proposed improvements to the Leatherback Property Park. No changes to the existing roadway network was assumed for the Forecast Year 2035 conditions. Forecast Year 2035 without project traffic volumes were developed by applying a growth factor to the study intersections as discussed previously (refer to Section 4.4 in this report). **Exhibit 11** shows the Forecast Year 2035 With and Without Project AM and PM peak hour during the weekday and midday (Sat) peak hour traffic volumes at both study intersections.



Not to Scale

Legend:

= Study Intersection

XXX = Peak Hour Volumes

XX % = Trip Distribution Percentage

Leatherback Property Park Project Only And Existing Plus Project and Peak Hour Traffic Volumes

Exhibit 10

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OCT2018

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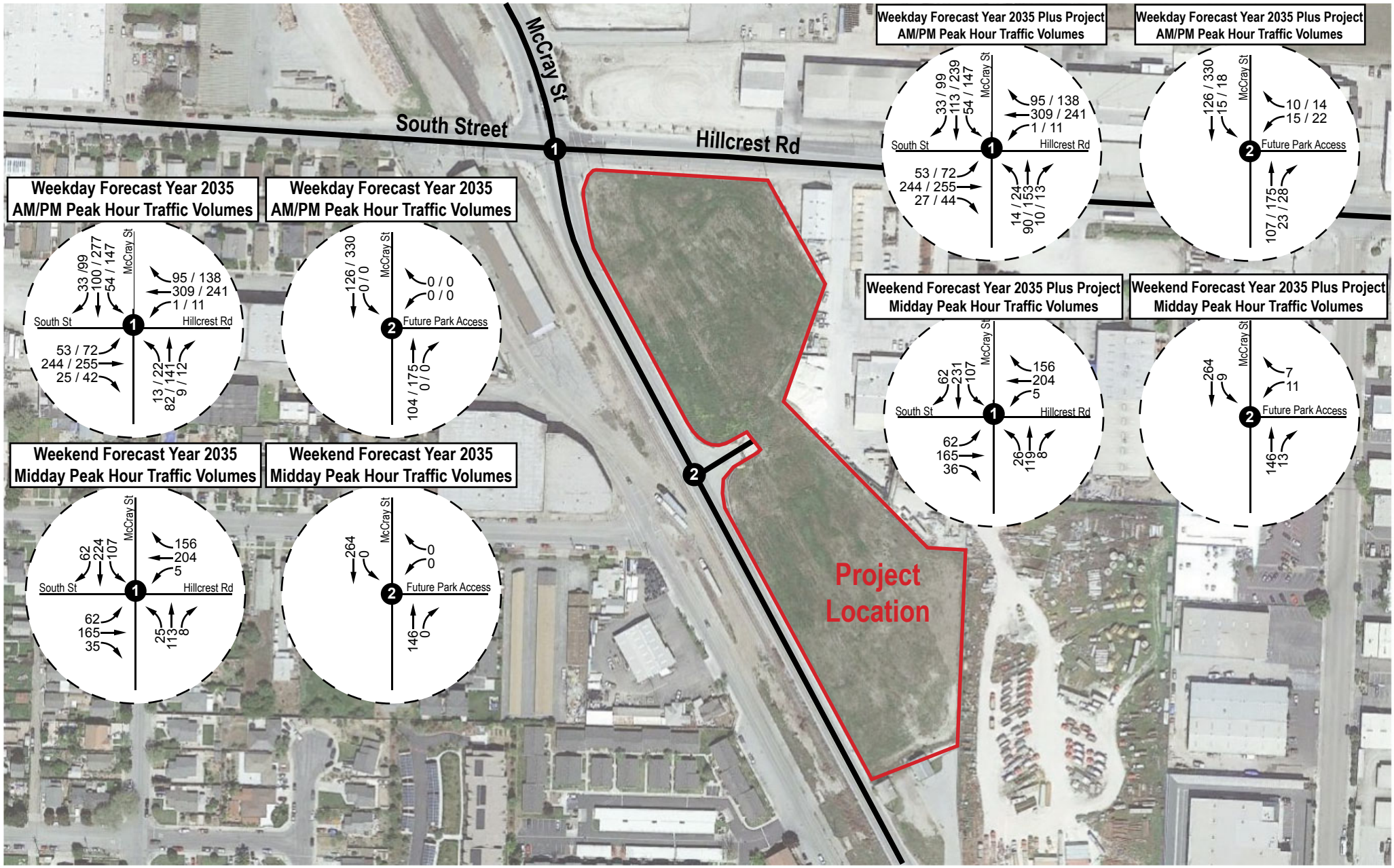

Legend:

= Study Intersection

XXX = Peak Hour Volumes

Not to Scale

Michael Baker INTERNATIONAL

Leatherback Property Park Forecast Year 2035 With & Without Project Peak Hour Traffic Volumes

OCT2018

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Exhibit 11

Table 15 summarizes Forecast Year 2035 With and Without Project levels of service at the study intersections during the weekday AM and PM peak hour and midday (Saturday) peak hour. Detailed LOS analysis sheets are contained in **Appendix D**.

TABLE 15, FORECAST YEAR 2035 WITH & WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

Study Intersection	Forecast Year 2035 Without Project Conditions			Forecast Year 2035 Plus Project Conditions			Weekday Significant Impact?		Saturday Significant Impact?	
	Weekday		Saturday	Weekday		Saturday				
	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM Delay[1] - LOS	PM Delay[1] - LOS	Midday Delay[1] - LOS	AM	PM	AM	PM
1 - Hillcrest Road / McCray Street	18.8 - B	23.6 - C	22.7 - C	19.0 - B	23.8 - C	22.8 - C	No	No	No	No
2 - McCray Street / Future Park Access	(2)	(2)	(2)	9.9 - A	12.1 - B	10.9 - B	No	No	No	No

[1] Seconds of delay per vehicle.

LOS = level of service.

(2) = This driveway is assumed to be unutilized without the proposed park project.

As shown, both study intersections are forecast to operate at acceptable levels of service (C or better) with project traffic on a weekday during the AM and PM peak hour and on a weekend. Since the intersections are shown to operate at acceptable LOS C or better with the proposed park site, impacts at the study intersections are considered less than significant. Therefore, no mitigation measures are required under the Forecast Year 2035 With Project scenario.

7 HOLLISTER FIRE STATION NO. 2 PARK

This section of the report evaluates the potential traffic-related impacts associated with the improvements to the Hollister Fire Station No.2 Park site located on the northeast corner of Airline Highway and Union Road. The proposed park portion of the site is undeveloped. The City has not prepared a site plan for improvements on this site. Conceptual improvements would include an outdoor fitness equipment circuit, a walking loop along the perimeter, group and/or individual barbecue and shaded picnic areas, basketball courts, and public art along Airline Highway.

7.1 TRIP GENERATION

In order to calculate vehicle trips forecast to be generated by the proposed Hollister Fire Station No. 2 Park, the *Institute of Transportation Engineers (ITE) 10th Edition Trip Generation Manual* trip generation rates were utilized based on acreage of the site. **Table 16** summarizes the trip generation for the Hollister Fire Station No. 2 Park. As shown in the table, the new park would generate approximately 3 daily trips during the weekday and 7 daily trips on the weekend. It should be noted these trips do not include person trips from the nearby residential neighborhoods that would be generated by the new park. Sidewalks are currently provided on Valley View Road and Union Road connecting the new park site to nearby neighborhoods. However, sidewalks on Airline Highway adjacent to the new park site is not provided. Sidewalks along Airline Highway are recommended as an element to the park design.

TABLE 16, HOLLISTER PARK FIRE STATION NO. 2 PARK TRIP GENERATION

Land Use	Intensity	ADT	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Hollister Fire Station No.2 (Weekday)	3.22 Acres	3	1	1	0	1	1	0
			Midday Peak Hour			N/A		
Hollister Fire Station No.2 (Weekend)		7	1	1	0	N/A		

The primary roadways that would be affected by the new park site is Airline Highway and Union Road. Airline Highway fronting the proposed park site is a two-lane roadway that is classified in the City's General Plan as a Major Thoroughfare. Union Road fronting the park site is classified as a Collector with three-lanes (two eastbound and one westbound). The number of project trips associated with the new park does not warrant a detailed traffic analysis and would not significantly alter the area's transportation network and operations. The project would not create conflicts with applicable plans, ordinance, or policies related to the City's circulation system. Therefore, impacts are considered less than significant.

8 SANTA ANA CREEK TRAIL

This section of the report evaluates the potential traffic-related impacts associated with the improvements to the Santa Ana Creek Trail site. The Santa Ana Creek Trail would extend the existing paved trail from its existing southern terminus near Cielo Court and Blenheim Court to Hillcrest Road. The trail would include an 8-foot wide traditional or pervious concrete trail surface, regulatory and educational signage, benches, landscaping, small shade structures, and wayfinding signage at access points and trailheads. The City has not prepared a site plan for improvements to the trail.

8.1 TRIP GENERATION

In order to calculate vehicle trips forecast to be generated by the Santa Ana Creek Trail, the *Institute of Transportation Engineers (ITE) 10th Edition Trip Generation Manual* trip generation rates were utilized based on acreage of the site. **Table 17** summarizes the trip generation for the Santa Ana Creek Trail. As shown, the future extension would generate approximately 3 daily trips during the weekday and 6 daily trips on a weekend with 1 trip during the AM, Midday and PM peak hours.

TABLE 17, SANTA ANA CREEK TRAIL TRIP GENERATION

Land Use	Intensity	ADT	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Santa Ana Creek Trail (Weekday)	3.00 Acres	3	1	1	0	1	1	0
			Midday Peak Hour			N/A		
Santa Ana Creek Trail (Weekend)		6	1	1	0	N/A		

The number of project trips associated with the trail extension does not warrant a detailed traffic analysis and would not significantly alter the area's transportation network and operations. The project would not create conflicts with applicable plans, ordinance, or policies related to the City's circulation system. Therefore, impacts are considered less than significant.

9 CONCLUSIONS & RECOMMENDATIONS

This study assesses the projected traffic conditions associated with five park sites within the City of Hollister, San Benito County. These parks include the Water Reclamation Recreational Facility Park, Vista Park Hill Park, Leatherback Property Park, Hollister Fire Station No. 2 Park and Santa Ana Creek Trail. Proposed project components for the five parks include a wide range of amenities such as picnic area improvements, security lighting, basketball and tennis courts, softball and soccer fields, gardens, public art exhibits, walking paths, dog parks, playground equipment, and adult exercise equipment. Improvements to the remaining park sites within the Hollister Park Facility Master Plan are considered minor and are not expected to significantly impact vehicular traffic.

Daily traffic generated by the Water Reclamation Recreational Facility Park during the weekday and weekend is assumed to be the maximum number of attendees based on the tentative events listed in Table 3 and general park use based on 49.72 acres. Based on those events, the Water Reclamation Recreational Facility Park is expected to generate approximately 304 daily trips with 7 AM and 132 PM peak hour trips during the weekday. On a Saturday, the site would generate approximately 1,027 daily trips with 288 Midday peak hour trips. The intersection of San Juan Road / Park Driveway was analyzed to determine if any significant traffic-related impacts occurred as a result of the events. The analysis showed San Juan Road/Park Driveway is forecast to operate at a deficient LOS D in the Existing Plus Project condition and LOS F in the Forecast Year 2035 With Project condition. Proposed mitigation at this location is the installation of a traffic signal or a single-lane roundabout to the satisfaction of the City Engineer.

The Vista Park Hill Park site is currently developed as a 5-acre park with plans to expand the park by an additional 14-acres, creating a 19-acre park. The improvements would be constructed in three phases. The park expansion is expected to generate approximately 11 daily trips with 1 AM and 2 PM peak hour trips during the weekday. On a Saturday, the site would generate approximately 28 daily trips with 4 Midday peak hour trips. The vehicle trips associated with this park expansion are not expected to impact the City's circulation system and therefore, impacts are considered less than significant.

The Leatherback Property Park is mostly undeveloped and would include a recreational community center, softball and soccer fields, basketball and tennis courts, a walking loop around the perimeter, and a barbecue/picnic area. The 6.51-acre park is expected to generate 1,015 daily trips with 63 AM and 82 PM peak hour trip during the weekday. On a Saturday, the park is expected to generate approximately 332 daily trips with 40 Midday peak hour trips. The number of project trips associated with this new park are not expected to significantly impact nearby study intersections. Therefore, traffic-related impacts associated with the proposed Leatherback Property Park are considered less than significant.

Hollister Fire Station No. 2 Park would be a new park site at the corner of Airline Highway and Union Road. The park is expected to generate approximately 3 daily trips on a weekday and 7 daily trips on a weekend with 1 trip during the AM, Midday, and PM peak hours. Traffic-related impacts are considered less than significant due to the minor amount of traffic generated by this site.

The Santa Ana Creek Trail would extend the existing paved trail from its existing southern terminus near Cielo Court to Hillcrest Road. The proposed improvements to the trail are expected to generate 3 daily trips on a weekday and 6 daily trips on a weekend. The number of project trips associated with this trail extension are not expected to alter the areas transportation network and operations. Therefore, impacts are considered less than significant.

Michael Baker
INTERNATIONAL

Appendix A: Count Data

National Data & Surveying Services

Intersection Turning Movement Count

Location: Park Entrance & San Juan Rd
City: Hollister
Control: 1-Way Stop (NB)

Project ID: 18-08470-001
Date: 2018-09-22

Total

NS/EW Streets:	Park Entrance				Park Entrance				San Juan Rd				San Juan Rd				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
11:00 AM	1	0	5	0	0	0	0	0	0	50	0	0	3	60	0	0	119
11:15 AM	0	0	3	0	0	0	0	0	0	69	0	0	1	79	0	0	152
11:30 AM	0	0	1	0	0	0	0	0	0	60	0	0	1	68	0	0	130
11:45 AM	0	0	0	0	0	0	0	0	0	59	1	0	0	72	0	0	132
12:00 PM	0	0	13	0	0	0	0	0	0	64	0	0	2	67	0	0	146
12:15 PM	0	0	1	0	0	0	0	0	0	71	0	0	1	75	0	0	148
12:30 PM	0	0	1	0	0	0	0	0	0	60	1	0	0	78	0	0	140
12:45 PM	0	0	4	0	0	0	0	0	0	75	1	0	2	75	0	0	157
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	28	0	0	0	0	0	0	508	3	0	10	574	0	0	1124
APPROACH %'s :	3.45%	0.00%	96.55%	0.00%					0.00%	99.41%	0.59%	0.00%	1.71%	98.29%	0.00%	0.00%	
PEAK HR :	12:00 PM - 01:00 PM																TOTAL
PEAK HR VOL :	0	0	19	0	0	0	0	0	0	270	2	0	5	295	0	0	591
PEAK HR FACTOR :	0.000	0.000	0.365	0.000	0.000	0.000	0.000	0.000	0.000	0.900	0.500	0.000	0.625	0.946	0.000	0.000	0.941
	0.365								0.895				0.962				

Prepared by National Data & Surveying Services

Park Entrance & San Juan Rd

Peak Hour Turning Movement Count

ID: 18-08470-001
City: Hollister

Day: Saturday
Date: 09/22/2018

PEAK HOURS

AM	NONE
NOON	12:00 PM - 01:00 PM
PM	NONE

COUNT PERIODS

AM	NONE
NOON	11:00 AM - 01:00 PM
PM	NONE

Park Entrance

SOUTHBOUND

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

San Juan Rd

EASTBOUND

AM	NOON	PM	
0	295	0	
0	0	0	0
0	0	0	0
0	270	0	1
0	2	0	1

WESTBOUND

PM	NOON	AM	
0	0	0	0
0	295	0	1
0	5	0	1
0	0	0	0
0	289	0	

San Juan Rd

CONTROL

1-Way Stop (NB)

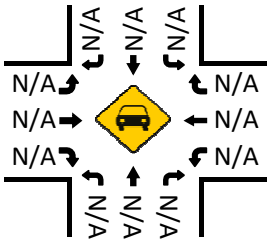
	AM	NOON	PM
TEV	0	591	0
PHF		0.94	

PM	0	0	0	0	0	PM
NOON	7	0	0	0	19	NOON
AM	0	0	0	0	0	AM

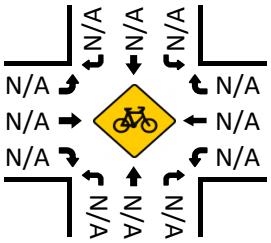
NORTHBOUND

Park Entrance

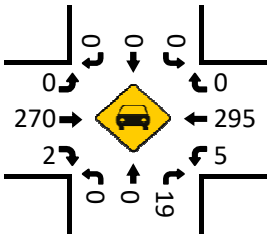
Total Vehicles (AM)



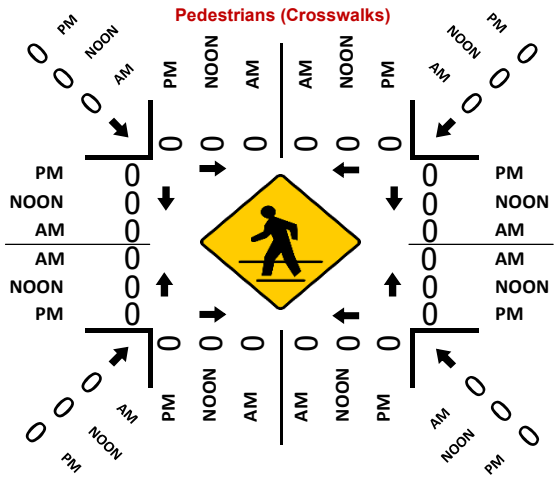
Bikes (AM)



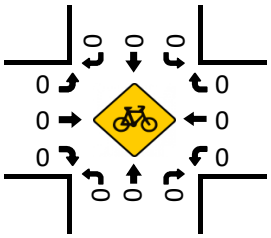
Total Vehicles (Noon)



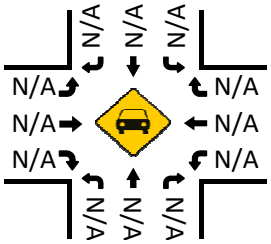
Pedestrians (Crosswalks)



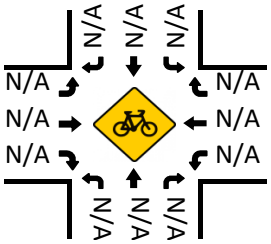
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Park Entrance & San Juan Rd
City: Hollister
Control: 1-Way Stop (NB)

Project ID: 18-08470-001
Date: 9/19/2018

Total

NS/EW Streets:	Park Entrance				Park Entrance				San Juan Rd				San Juan Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	0	0	0	0	0	0	0	0	68	0	0	4	118	0	0	191
7:15 AM	0	0	0	0	0	0	0	0	0	45	0	0	4	133	0	0	182
7:30 AM	0	0	2	0	0	0	0	0	0	71	0	0	3	118	0	0	194
7:45 AM	1	0	2	0	0	0	0	0	0	71	1	0	11	104	0	0	190
8:00 AM	0	0	4	0	0	0	0	0	0	67	1	0	8	65	0	0	145
8:15 AM	0	0	2	0	0	0	0	0	0	51	0	0	3	82	0	0	138
8:30 AM	0	0	6	0	0	0	0	0	0	55	1	0	2	67	0	0	131
8:45 AM	3	0	4	0	0	0	0	0	0	48	0	0	2	73	0	0	130
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	0	20	0	0	0	0	0	0	476	3	0	37	760	0	0	1301
APPROACH %'s :	20.00%	0.00%	80.00%	0.00%					0.00%	99.37%	0.63%	0.00%	4.64%	95.36%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	0	4	0	0	0	0	0	0	255	1	0	22	473	0	0	757
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.898	0.250	0.000	0.500	0.889	0.000	0.000	0.976
	0.500								0.889				0.903				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	0	4	0	0	0	0	0	0	95	1	0	1	73	0	0	175
4:15 PM	0	0	1	0	0	0	0	0	0	92	1	0	5	89	0	0	188
4:30 PM	0	0	14	0	0	0	0	0	0	122	4	0	3	54	0	0	197
4:45 PM	1	0	2	0	0	0	0	0	0	113	2	0	7	66	0	0	191
5:00 PM	2	0	16	0	0	0	0	0	0	107	9	0	20	76	0	0	230
5:15 PM	5	0	26	1	0	0	0	0	0	110	12	0	53	60	0	0	267
5:30 PM	1	0	19	0	0	0	0	0	0	120	1	0	17	65	0	0	223
5:45 PM	2	0	10	0	0	0	0	0	0	134	1	0	10	55	0	0	212
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	12	0	92	1	0	0	0	0	0	893	31	0	116	538	0	0	1683
APPROACH %'s :	11.43%	0.00%	87.62%	0.95%					0.00%	96.65%	3.35%	0.00%	17.74%	82.26%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	10	0	71	1	0	0	0	0	0	471	23	0	100	256	0	0	932
PEAK HR FACTOR :	0.500	0.000	0.683	0.250	0.000	0.000	0.000	0.000	0.000	0.879	0.479	0.000	0.472	0.842	0.000	0.000	0.873
	0.641								0.915				0.788				

Prepared by National Data & Surveying Services

Park Entrance & San Juan Rd

Peak Hour Turning Movement Count

ID: 18-08470-001
City: Hollister

Day: Wednesday
Date: 09/19/2018

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

SOUTHBOUND (Park Entrance)

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

EASTBOUND (San Juan Rd)

AM	NOON	PM	
475	0	266	
0	0	0	0
0	0	0	0
255	0	471	1
1	0	23	1
AM	NOON	PM	

WESTBOUND (San Juan Rd)

PM	NOON	AM	
0	0	0	0
256	0	473	1
100	0	22	1
0	0	0	0
542	0	259	
PM	NOON	AM	

NORTHBOUND (Park Entrance)

PM	124	1	10	0	71	PM
NOON	0	0	0	0	0	NOON
AM	23	0	2	0	4	AM

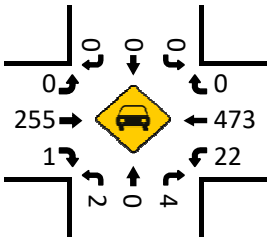
	0	0	1	0

CONTROL

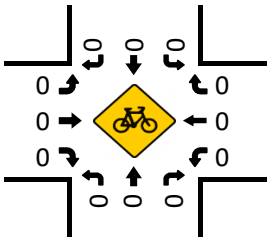
1-Way Stop (NB)

TEV	757	0	932
	AM	NOON	PM
PHF	0.98		0.87

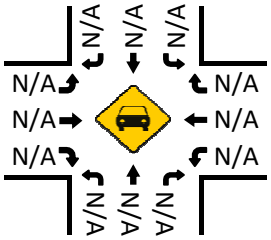
Total Vehicles (AM)



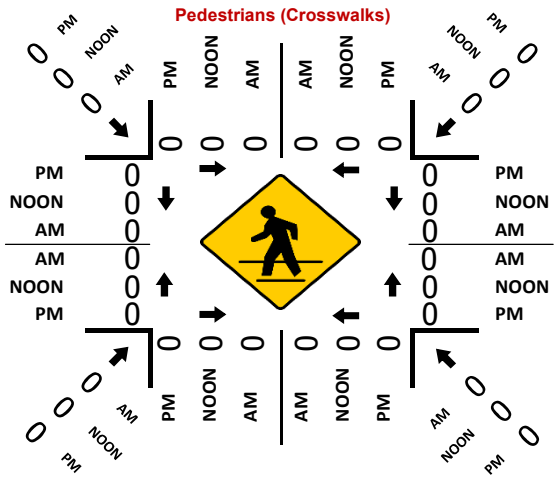
Bikes (AM)



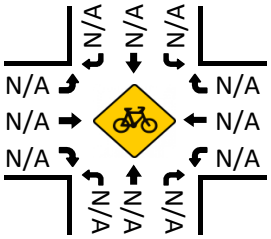
Total Vehicles (Noon)



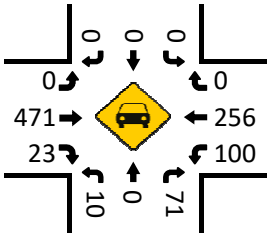
Pedestrians (Crosswalks)



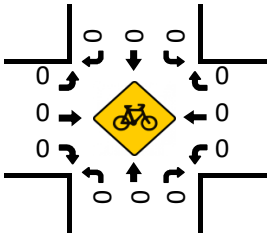
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Hollister
N/S: McCray Street
E/W: South Street / Hillcrest Road
Weather: Clear

File Name : HTR_McCray_South-Hillcrest_AM
Site Code : 12218776
Start Date : 10/16/2018
Page No : 1

Groups Printed- Total Volume

	McCray Street Southbound				Hillcrest Road Westbound				McCray Street Northbound				South Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	7	3	19	0	37	13	50	0	3	0	3	5	24	3	32	104
07:15 AM	8	6	5	19	0	70	12	82	1	8	1	10	6	29	0	35	146
07:30 AM	15	13	6	34	1	65	24	90	1	4	0	5	12	61	4	77	206
07:45 AM	16	16	3	35	0	74	17	91	0	19	1	20	7	56	4	67	213
Total	48	42	17	107	1	246	66	313	2	34	2	38	30	170	11	211	669
08:00 AM	8	20	6	34	0	55	13	68	4	16	2	22	12	37	5	54	178
08:15 AM	12	28	13	53	0	53	30	83	4	22	3	29	18	68	9	95	260
08:30 AM	10	21	6	37	1	81	21	103	3	13	2	18	8	47	3	58	216
08:45 AM	11	18	5	34	1	49	17	67	6	11	3	20	7	28	6	41	162
Total	41	87	30	158	2	238	81	321	17	62	10	89	45	180	23	248	816
Grand Total	89	129	47	265	3	484	147	634	19	96	12	127	75	350	34	459	1485
Apprch %	33.6	48.7	17.7		0.5	76.3	23.2		15	75.6	9.4		16.3	76.3	7.4		
Total %	6	8.7	3.2	17.8	0.2	32.6	9.9	42.7	1.3	6.5	0.8	8.6	5.1	23.6	2.3	30.9	

	McCray Street Southbound				Hillcrest Road Westbound				McCray Street Northbound				South Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**16**	16	3	35	0	74	17	91	0	19	1	20	7	56	4	67	213
08:00 AM	8	20	6	34	0	55	13	68	**4**	16	2	22	12	37	5	54	178
08:15 AM	12	**28**	**13**	**53**	0	53	**30**	83	4	**22**	**3**	**29**	**18**	**68**	**9**	**95**	**260**
08:30 AM	10	21	6	37	**1**	**81**	21	**103**	3	13	2	18	8	47	3	58	216
Total Volume	46	85	28	159	1	263	81	345	11	70	8	89	45	208	21	274	867
% App. Total	28.9	53.5	17.6		0.3	76.2	23.5		12.4	78.7	9		16.4	75.9	7.7		
PHF	.719	.759	.538	.750	.250	.812	.675	.837	.688	.795	.667	.767	.625	.765	.583	.721	.834

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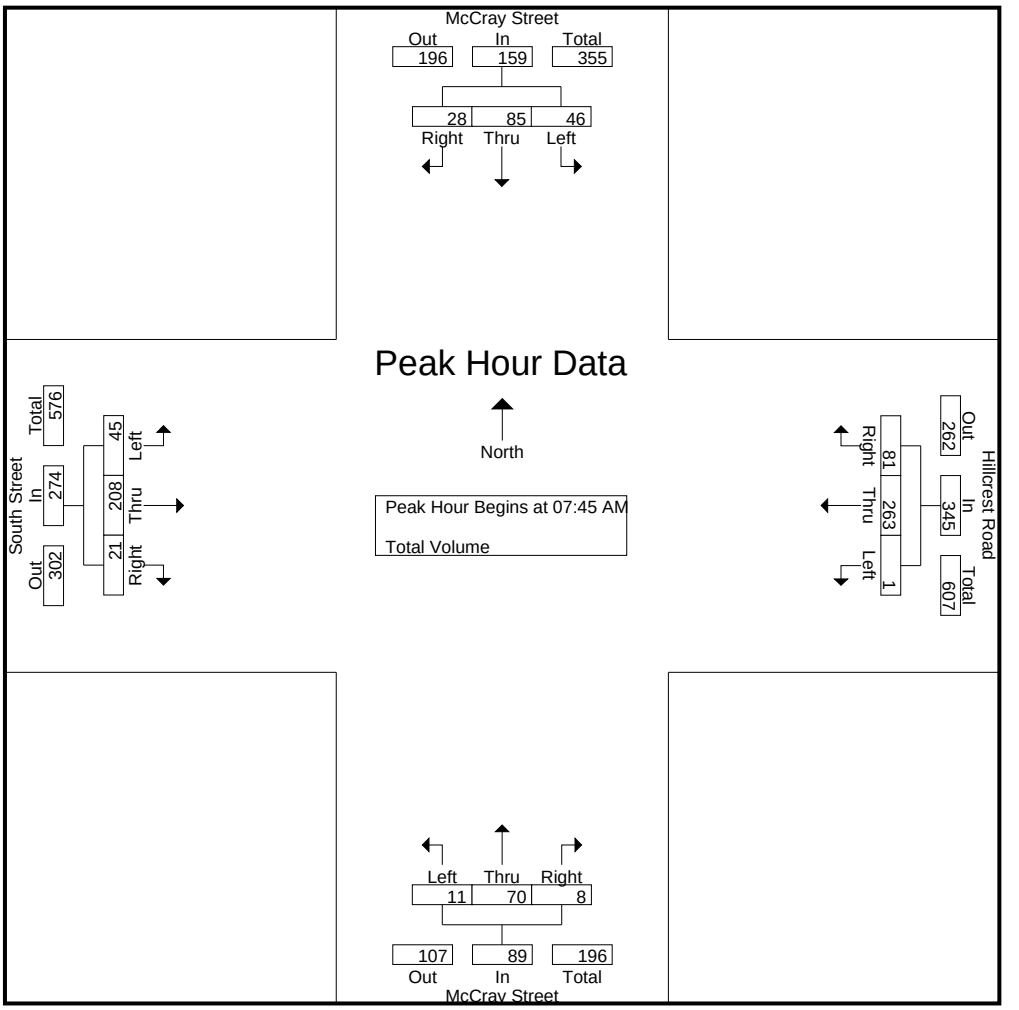
City of Hollister
N/S: McCray Street
E/W: South Street / Hillcrest Road
Weather: Clear

File Name : HTR_McCray_South-Hillcrest_AM
Site Code : 12218776
Start Date : 10/16/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:30 AM			
+0 mins.	**16**	16	3	35	0	74	17	91	0	19	1	20	12	61	4	77
+15 mins.	8	20	6	34	0	55	13	68	**4**	16	2	22	7	56	4	67
+30 mins.	12	**28**	**13**	**53**	0	53	**30**	83	4	**22**	**3**	**29**	12	37	5	54
+45 mins.	10	21	6	37	**1**	**81**	21	**103**	3	13	2	18	**18**	**68**	**9**	**95**
Total Volume	46	85	28	159	1	263	81	345	11	70	8	89	49	222	22	293
% App. Total	28.9	53.5	17.6		0.3	76.2	23.5		12.4	78.7	9		16.7	75.8	7.5	
PHF	.719	.759	.538	.750	.250	.812	.675	.837	.688	.795	.667	.767	.681	.816	.611	.771

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City of Hollister
N/S: McCray Street
E/W: South Street / Hillcrest Road
Weather: Clear

File Name : HTR_McCray_South-Hillcrest_PM
Site Code : 12218776
Start Date : 10/16/2018
Page No : 1

Groups Printed- Total Volume

	McCray Street Southbound				Hillcrest Road Westbound				McCray Street Northbound				South Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	36	56	18	110	1	47	22	70	3	31	1	35	16	64	10	90	305
04:15 PM	26	47	16	89	7	46	36	89	2	30	2	34	11	40	3	54	266
04:30 PM	21	47	29	97	1	42	26	69	7	27	1	35	18	54	4	76	277
04:45 PM	30	53	36	119	1	47	29	77	5	29	5	39	26	73	16	115	350
Total	113	203	99	415	10	182	113	305	17	117	9	143	71	231	33	335	1198
05:00 PM	39	66	15	120	3	59	23	85	9	35	1	45	6	60	9	75	325
05:15 PM	23	53	18	94	3	50	34	87	1	26	3	30	11	41	6	58	269
05:30 PM	33	64	15	112	2	49	32	83	4	30	1	35	18	43	5	66	296
05:45 PM	15	45	15	75	4	48	45	97	3	42	0	45	12	40	2	54	271
Total	110	228	63	401	12	206	134	352	17	133	5	155	47	184	22	253	1161
Grand Total	223	431	162	816	22	388	247	657	34	250	14	298	118	415	55	588	2359
Apprch %	27.3	52.8	19.9		3.3	59.1	37.6		11.4	83.9	4.7		20.1	70.6	9.4		
Total %	9.5	18.3	6.9	34.6	0.9	16.4	10.5	27.9	1.4	10.6	0.6	12.6	5	17.6	2.3	24.9	

	McCray Street Southbound				Hillcrest Road Westbound				McCray Street Northbound				South Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	30	53	**36**	119	1	47	29	77	5	29	**5**	39	**26**	**73**	**16**	**115**	**350**
05:00 PM	**39**	**66**	15	**120**	**3**	**59**	23	85	**9**	**35**	1	**45**	6	60	9	75	325
05:15 PM	23	53	18	94	3	50	**34**	**87**	1	26	3	30	11	41	6	58	269
05:30 PM	33	64	15	112	2	49	32	83	4	30	1	35	18	43	5	66	296
Total Volume	125	236	84	445	9	205	118	332	19	120	10	149	61	217	36	314	1240
% App. Total	28.1	53	18.9		2.7	61.7	35.5		12.8	80.5	6.7		19.4	69.1	11.5		
PHF	.801	.894	.583	.927	.750	.869	.868	.954	.528	.857	.500	.828	.587	.743	.563	.683	.886

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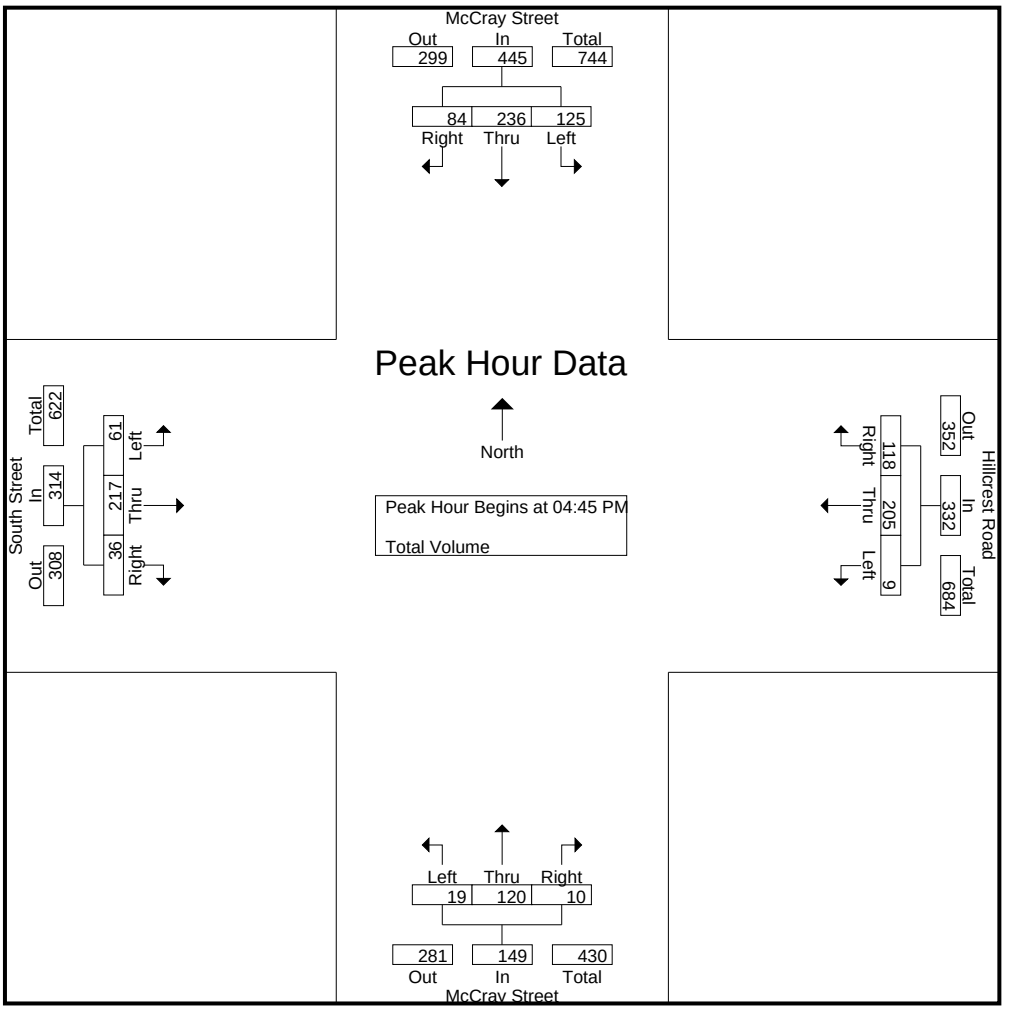
City of Hollister
N/S: McCray Street
E/W: South Street / Hillcrest Road
Weather: Clear

File Name : HTR_McCray_South-Hillcrest_PM
Site Code : 12218776
Start Date : 10/16/2018



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				04:00 PM			
+0 mins.	30	53	**36**	119	3	**59**	23	85	**9**	35	1	**45**	16	64	10	90
+15 mins.	**39**	**66**	15	**120**	3	50	34	87	1	26	**3**	30	11	40	3	54
+30 mins.	23	53	18	94	2	49	32	83	4	30	1	35	18	54	4	76
+45 mins.	33	64	15	112	**4**	48	**45**	**97**	3	**42**	0	45	**26**	**73**	**16**	**115**
Total Volume	125	236	84	445	12	206	134	352	17	133	5	155	71	231	33	335
% App. Total	28.1	53	18.9		3.4	58.5	38.1		11	85.8	3.2		21.2	69	9.9	
PHF	.801	.894	.583	.927	.750	.873	.744	.907	.472	.792	.417	.861	.683	.791	.516	.728

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City of Hollister
N/S: McCray Street
E/W: South Street / Hillcrest Road
Weather: Clear

File Name : HTR_McCray_South-Hillcrest_SAT
Site Code : 12218776
Start Date : 10/13/2018
Page No : 1

Groups Printed- Total Volume

	McCray Street Southbound				Hillcrest Road Westbound				McCray Street Northbound				South Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	18	25	15	58	2	40	26	68	6	26	5	37	11	38	5	54	217
11:15 AM	17	43	15	75	2	37	38	77	5	20	0	25	10	37	10	57	234
11:30 AM	20	40	11	71	3	40	31	74	3	17	1	21	7	32	4	43	209
11:45 AM	20	40	14	74	0	46	31	77	2	33	2	37	18	32	5	55	243
Total	75	148	55	278	7	163	126	296	16	96	8	120	46	139	24	209	903
12:00 PM	31	49	13	93	2	46	38	86	7	17	1	25	12	28	6	46	250
12:15 PM	22	37	11	70	0	43	37	80	8	19	2	29	12	38	10	60	239
12:30 PM	18	65	15	98	2	39	27	68	4	27	2	33	11	43	9	63	262
12:45 PM	22	44	9	75	2	38	24	64	12	12	1	25	6	31	6	43	207
Total	93	195	48	336	6	166	126	298	31	75	6	112	41	140	31	212	958
Grand Total	168	343	103	614	13	329	252	594	47	171	14	232	87	279	55	421	1861
Apprch %	27.4	55.9	16.8		2.2	55.4	42.4		20.3	73.7	6		20.7	66.3	13.1		
Total %	9	18.4	5.5	33	0.7	17.7	13.5	31.9	2.5	9.2	0.8	12.5	4.7	15	3	22.6	

	McCray Street Southbound				Hillcrest Road Westbound				McCray Street Northbound				South Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:45 AM																	
11:45 AM	20	40	14	74	0	**46**	31	77	2	**33**	**2**	**37**	**18**	32	5	55	243
12:00 PM	**31**	49	13	93	**2**	46	**38**	**86**	7	17	1	25	12	28	6	46	250
12:15 PM	22	37	11	70	0	43	37	80	**8**	19	2	29	12	38	**10**	60	239
12:30 PM	18	**65**	**15**	**98**	2	39	27	68	4	27	2	33	11	**43**	9	**63**	**262**
Total Volume	91	191	53	335	4	174	133	311	21	96	7	124	53	141	30	224	994
% App. Total	27.2	57	15.8		1.3	55.9	42.8		16.9	77.4	5.6		23.7	62.9	13.4		
PHF	.734	.735	.883	.855	.500	.946	.875	.904	.656	.727	.875	.838	.736	.820	.750	.889	.948

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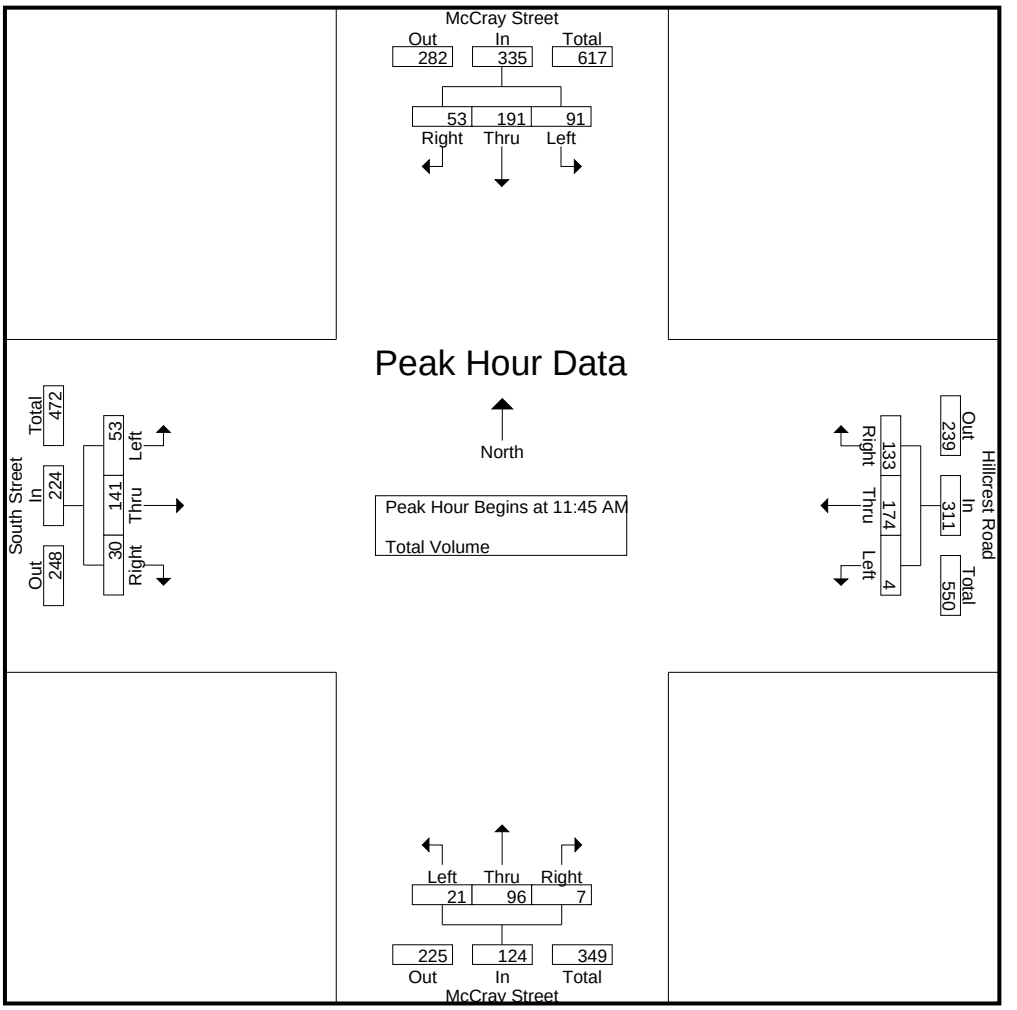
City of Hollister
N/S: McCray Street
E/W: South Street / Hillcrest Road
Weather: Clear

File Name : HTR_McCray_South-Hillcrest_SAT
Site Code : 12218776
Start Date : 10/13/2018
Page No : 2



Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:00 PM				11:30 AM				11:45 AM				11:45 AM			
+0 mins.	**31**	49	13	93	**3**	40	31	74	2	**33**	**2**	**37**	**18**	32	5	55
+15 mins.	22	37	11	70	0	**46**	31	77	7	17	1	25	12	28	6	46
+30 mins.	18	**65**	**15**	**98**	2	46	**38**	**86**	**8**	19	2	29	12	38	**10**	60
+45 mins.	22	44	9	75	0	43	37	80	4	27	2	33	11	**43**	9	**63**
Total Volume	93	195	48	336	5	175	137	317	21	96	7	124	53	141	30	224
% App. Total	27.7	58	14.3		1.6	55.2	43.2		16.9	77.4	5.6		23.7	62.9	13.4	
PHF	.750	.750	.800	.857	.417	.951	.901	.922	.656	.727	.875	.838	.736	.820	.750	.889

Location: Hollister
N/S: McCray Street
E/W: South St / Hillcrest Rd

Date: 10/16/2018
Weather: Clear

PEDESTRIANS

	North Leg McCray Street Pedestrians	East Leg South St / Hillcrest Rd Pedestrians	South Leg McCray Street Pedestrians	West Leg South St / Hillcrest Rd Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	1	0	0	0	1
8:30 AM	3	0	0	0	3
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	5	0	0	1	6

	North Leg McCray Street Pedestrians	East Leg South St / Hillcrest Rd Pedestrians	South Leg McCray Street Pedestrians	West Leg South St / Hillcrest Rd Pedestrians	
4:00 PM	3	2	3	0	8
4:15 PM	0	4	0	0	4
4:30 PM	0	1	2	0	3
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	1	0	0	1
5:45 PM	3	0	0	0	3
TOTAL VOLUMES:	7	8	5	1	21

Date: 10/13/2018
Weather: Clear

	North Leg McCray Street Pedestrians	East Leg South St / Hillcrest Rd Pedestrians	South Leg McCray Street Pedestrians	West Leg South St / Hillcrest Rd Pedestrians	
11:00 AM	0	0	0	0	0
11:15 AM	0	0	0	0	0
11:30 AM	0	0	1	0	1
11:45 AM	0	0	0	0	0
12:00 PM	0	0	0	0	0
12:15 PM	4	0	0	0	4
12:30 PM	0	0	0	0	0
12:45 PM	0	0	1	0	1
TOTAL VOLUMES:	4	0	2	0	6

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Location: Hollister
N/S: McCray Street
E/W: South St / Hillcrest Rd

Date: 10/16/2018
Weather: Clear

BICYCLES

	Southbound McCray Street			Westbound South St / Hillcrest Rd			Northbound McCray Street			Eastbound South St / Hillcrest Rd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound McCray Street			Westbound South St / Hillcrest Rd			Northbound McCray Street			Eastbound South St / Hillcrest Rd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	1	0	1	0	0	0	0	0	1	0	3
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	2	0	0	3
TOTAL VOLUMES:	0	0	4	0	2	0	0	1	0	3	2	0	12

Date: 10/13/2018
Weather: Clear

	Southbound McCray Street			Westbound South St / Hillcrest Rd			Northbound McCray Street			Eastbound South St / Hillcrest Rd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	1	0	0	0	0	1	0	0	0	0	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	1	0	0	0	0	1	1	0	0	0	1	0	4
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	2	0	2	0	0	2	1	0	0	0	2	0	9

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Michael Baker
INTERNATIONAL

Appendix B:
Water Reclamation Recreational Facility Park Synchro Worksheets

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	255	1	22	473	2	4
Future Vol, veh/h	255	1	22	473	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	90	90	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	1	24	526	4	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	288	0	861	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	574	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1274	-	326	752
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1274	-	320	752
Mov Cap-2 Maneuver	-	-	-	-	320	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	563	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	519	-	-	1274	-
HCM Lane V/C Ratio	0.023	-	-	0.019	-
HCM Control Delay (s)	12.1	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	553	27	117	300	13	83
Future Vol, veh/h	553	27	117	300	13	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	601	29	148	380	20	130

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	630	0	1277	601
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	676	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	952	-	184	500
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	952	-	155	500
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	20.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	384	-	-	952	-
HCM Lane V/C Ratio	0.391	-	-	0.156	-
HCM Control Delay (s)	20.3	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	270	2	5	295	0	19
Future Vol, veh/h	270	2	5	295	0	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	36	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	300	2	5	307	0	53

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	302	0	617	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	317	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1259	-	453	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1259	-	451	740
Mov Cap-2 Maneuver	-	-	-	-	451	-
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	738	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	740	-	-	1259	-
HCM Lane V/C Ratio	0.071	-	-	0.004	-
HCM Control Delay (s)	10.2	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	255	2	25	473	2	6
Future Vol, veh/h	255	2	25	473	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	90	90	30	30
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	2	28	526	7	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	289	0	869	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	582	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1273	-	322	752
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	559	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1273	-	315	752
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	558	-	-	1273	-
HCM Lane V/C Ratio	0.048	-	-	0.022	-
HCM Control Delay (s)	11.8	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	6.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	471	35	161	256	46	121
Future Vol, veh/h	471	35	161	256	46	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	79	79	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	512	38	204	324	54	142

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	550	0	1244	512
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	732	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1020	-	192	562
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	476	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1020	-	154	562
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	482	-
Stage 2	-	-	-	-	476	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	31.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	325	-	-	1020	-
HCM Lane V/C Ratio	0.605	-	-	0.2	-
HCM Control Delay (s)	31.6	-	-	9.4	-
HCM Lane LOS	D	-	-	A	-
HCM 95th %tile Q(veh)	3.7	-	-	0.7	-

Intersection	
Int Delay, s/veh	5.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	270	42	109	295	0	136
Future Vol, veh/h	270	42	109	295	0	136
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	36	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	300	47	114	307	0	378

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	347	0	835	300
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1212	-	338	740
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1212	-	306	740
Mov Cap-2 Maneuver	-	-	-	-	306	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.2	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	740	-	-	1212	-
HCM Lane V/C Ratio	0.511	-	-	0.094	-
HCM Control Delay (s)	14.8	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	2.9	-	-	0.3	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	299	1	26	555	2	5
Future Vol, veh/h	299	1	26	555	2	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	90	90	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	336	1	29	617	4	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	337	0	1011	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	675	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1222	-	265	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1222	-	259	706
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	506	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	473	-	-	1222	-
HCM Lane V/C Ratio	0.03	-	-	0.024	-
HCM Control Delay (s)	12.8	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	553	27	117	300	13	83
Future Vol, veh/h	553	27	117	300	13	83
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	601	29	148	380	20	130

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	630	0	1277	601
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	676	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	952	-	184	500
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	952	-	155	500
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	20.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	384	-	-	952	-
HCM Lane V/C Ratio	0.391	-	-	0.156	-
HCM Control Delay (s)	20.3	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.8	-	-	0.6	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	317	2	6	346	0	22
Future Vol, veh/h	317	2	6	346	0	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	36	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	352	2	6	360	0	61

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	354	0	724	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1205	-	393	692
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	697	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	391	692
Mov Cap-2 Maneuver	-	-	-	-	391	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	697	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	692	-	-	1205	-
HCM Lane V/C Ratio	0.088	-	-	0.005	-
HCM Control Delay (s)	10.7	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	299	2	29	555	2	7
Future Vol, veh/h	299	2	29	555	2	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	90	90	50	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	336	2	32	617	4	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	338	0	1017	336
Stage 1	-	-	-	-	336	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1221	-	263	706
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1221	-	256	706
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	705	-
Stage 2	-	-	-	-	503	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	508	-	-	1221	-
HCM Lane V/C Ratio	0.035	-	-	0.026	-
HCM Control Delay (s)	12.3	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	23.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	553	39	178	300	48	133
Future Vol, veh/h	553	39	178	300	48	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	79	79	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	601	42	225	380	75	208

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	643	0	1431	601
Stage 1	-	-	-	-	601	-
Stage 2	-	-	-	-	830	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	942	-	148	500
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	428	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	942	-	113	500
Mov Cap-2 Maneuver	-	-	-	-	113	-
Stage 1	-	-	-	-	416	-
Stage 2	-	-	-	-	428	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	120.2
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	262	-	-	942	-
HCM Lane V/C Ratio	1.079	-	-	0.239	-
HCM Control Delay (s)	120.2	-	-	10	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	11.7	-	-	0.9	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	317	42	110	346	0	139
Future Vol, veh/h	317	42	110	346	0	139
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	320	330	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	96	96	36	36
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	352	47	115	360	0	386

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	399	0	942	352
Stage 1	-	-	-	-	352	-
Stage 2	-	-	-	-	590	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1160	-	292	692
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	554	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1160	-	263	692
Mov Cap-2 Maneuver	-	-	-	-	263	-
Stage 1	-	-	-	-	642	-
Stage 2	-	-	-	-	554	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	692	-	-	1160	-
HCM Lane V/C Ratio	0.558	-	-	0.099	-
HCM Control Delay (s)	16.6	-	-	8.4	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	3.5	-	-	0.3	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	471	35	161	256	46	121
Future Volume (veh/h)	471	35	161	256	46	121
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	523	39	179	284	51	134
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	696	590	237	1128	76	199
Arrive On Green	0.37	0.37	0.13	0.60	0.17	0.17
Sat Flow, veh/h	1870	1585	1781	1870	449	1178
Grp Volume(v), veh/h	523	39	179	284	186	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1636	0
Q Serve(g_s), s	9.9	0.6	3.9	2.9	4.3	0.0
Cycle Q Clear(g_c), s	9.9	0.6	3.9	2.9	4.3	0.0
Prop In Lane		1.00	1.00		0.27	0.72
Lane Grp Cap(c), veh/h	696	590	237	1128	276	0
V/C Ratio(X)	0.75	0.07	0.76	0.25	0.67	0.00
Avail Cap(c_a), veh/h	1686	1429	656	2559	1004	0
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	11.1	8.2	17.0	3.8	15.9	0.0
Incr Delay (d2), s/veh	1.7	0.0	4.9	0.1	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.2	1.6	0.3	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.8	8.3	21.9	3.9	18.8	0.0
LnGrp LOS	B	A	C	A	B	A
Approach Vol, veh/h	562			463	186	
Approach Delay, s/veh	12.5			10.9	18.8	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	9.4	20.4				29.9	10.9
Change Period (Y+Rc), s	4.0	5.3				5.3	4.0
Max Green Setting (Gmax), s	15.0	36.7				55.7	25.0
Max Q Clear Time (g_c+I1), s	5.9	11.9				4.9	6.3
Green Ext Time (p_c), s	0.3	3.2				1.6	0.5

Intersection Summary		
HCM 6th Ctrl Delay		12.8
HCM 6th LOS		B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	553	39	178	300	48	133
Future Volume (veh/h)	553	39	178	300	48	133
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	582	41	187	316	51	140
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	740	627	251	1170	73	200
Arrive On Green	0.40	0.40	0.14	0.63	0.17	0.17
Sat Flow, veh/h	1870	1585	1781	1870	434	1192
Grp Volume(v), veh/h	582	41	187	316	192	0
Grp Sat Flow(s),veh/h/ln	1870	1585	1781	1870	1634	0
Q Serve(g_s), s	12.3	0.7	4.5	3.4	5.0	0.0
Cycle Q Clear(g_c), s	12.3	0.7	4.5	3.4	5.0	0.0
Prop In Lane		1.00	1.00		0.27	0.73
Lane Grp Cap(c), veh/h	740	627	251	1170	274	0
V/C Ratio(X)	0.79	0.07	0.75	0.27	0.70	0.00
Avail Cap(c_a), veh/h	1444	1224	595	2235	982	0
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	11.9	8.4	18.5	3.8	17.6	0.0
Incr Delay (d2), s/veh	1.9	0.0	4.4	0.1	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.2	1.8	0.5	1.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.8	8.5	22.9	3.9	20.9	0.0
LnGrp LOS	B	A	C	A	C	A
Approach Vol, veh/h	623			503	192	
Approach Delay, s/veh	13.5			11.0	20.9	
Approach LOS	B			B	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.3	23.1				33.4	11.5
Change Period (Y+Rc), s	4.0	5.3				5.3	4.0
Max Green Setting (Gmax), s	15.0	34.7				53.7	27.0
Max Q Clear Time (g_c+I1), s	6.5	14.3				5.4	7.0
Green Ext Time (p_c), s	0.3	3.5				1.8	0.5

Intersection Summary		
HCM 6th Ctrl Delay		13.6
HCM 6th LOS		B

MOVEMENT SUMMARY

Site: 101 [1. Existing Weekday AM San Juan Rd & Park Entrance]

1. Existing Weekday AM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	4	2.0	0.012	3.7	LOS A	0.0	1.2	0.39	0.22	34.2
18	R2	8	2.0	0.012	3.7	LOS A	0.0	1.2	0.39	0.22	32.8
Approach		12	2.0	0.012	3.7	LOS A	0.0	1.2	0.39	0.22	33.3
East: 4th Street											
1	L2	44	2.0	0.428	6.8	LOS A	3.0	76.7	0.06	0.01	29.9
6	T1	532	2.0	0.428	6.8	LOS A	3.0	76.7	0.06	0.01	36.1
Approach		576	2.0	0.428	6.8	LOS A	3.0	76.7	0.06	0.01	35.8
West: San Juan Road											
2	T1	284	2.0	0.223	4.7	LOS A	1.2	29.2	0.17	0.07	37.6
12	R2	4	2.0	0.223	4.7	LOS A	1.2	29.2	0.17	0.07	32.2
Approach		288	2.0	0.223	4.7	LOS A	1.2	29.2	0.17	0.07	37.5
All Vehicles		876	2.0	0.428	6.1	LOS A	3.0	76.7	0.10	0.03	36.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. Existing Weekday PM San Juan Rd & Park Entrance]

1. Existing Weekday PM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	22	2.0	0.163	6.4	LOS A	0.7	17.2	0.57	0.53	32.5
18	R2	104	2.0	0.163	6.4	LOS A	0.7	17.2	0.57	0.53	31.2
Approach		126	2.0	0.163	6.4	LOS A	0.7	17.2	0.57	0.53	31.4
East: 4th Street											
1	L2	212	2.0	0.390	6.4	LOS A	2.6	64.9	0.15	0.04	29.0
6	T1	304	2.0	0.390	6.4	LOS A	2.6	64.9	0.15	0.04	35.3
Approach		516	2.0	0.390	6.4	LOS A	2.6	64.9	0.15	0.04	33.3
West: San Juan Road											
2	T1	536	2.0	0.538	9.8	LOS A	3.7	94.3	0.58	0.43	34.6
12	R2	48	2.0	0.538	9.8	LOS A	3.7	94.3	0.58	0.43	28.4
Approach		584	2.0	0.538	9.8	LOS A	3.7	94.3	0.58	0.43	34.3
All Vehicles		1226	2.0	0.538	8.0	LOS A	3.7	94.3	0.40	0.28	33.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. Existing Weekend MD San Juan Rd & Park Entrance]

1. Existing Weekend MD San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	3	2.0	0.055	4.1	LOS A	0.2	5.7	0.41	0.28	35.1
18	R2	52	2.0	0.055	4.1	LOS A	0.2	5.7	0.41	0.28	33.6
Approach		55	2.0	0.055	4.1	LOS A	0.2	5.7	0.41	0.28	33.7
East: 4th Street											
1	L2	8	2.0	0.237	4.7	LOS A	1.3	32.2	0.03	0.00	31.7
6	T1	312	2.0	0.237	4.7	LOS A	1.3	32.2	0.03	0.00	37.5
Approach		320	2.0	0.237	4.7	LOS A	1.3	32.2	0.03	0.00	37.4
West: San Juan Road											
2	T1	300	2.0	0.227	4.6	LOS A	1.2	30.3	0.06	0.01	37.6
12	R2	4	2.0	0.227	4.6	LOS A	1.2	30.3	0.06	0.01	32.3
Approach		304	2.0	0.227	4.6	LOS A	1.2	30.3	0.06	0.01	37.6
All Vehicles		679	2.0	0.237	4.6	LOS A	1.3	32.2	0.08	0.03	37.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. Existing + P Weekday AM San Juan Rd & Park Entrance]

1. Existing + P Weekday AM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	4	2.0	0.016	3.7	LOS A	0.1	1.6	0.39	0.23	34.6
18	R2	12	2.0	0.016	3.7	LOS A	0.1	1.6	0.39	0.23	33.1
Approach		16	2.0	0.016	3.7	LOS A	0.1	1.6	0.39	0.23	33.5
East: 4th Street											
1	L2	50	2.0	0.432	6.8	LOS A	3.1	78.1	0.06	0.01	29.8
6	T1	532	2.0	0.432	6.8	LOS A	3.1	78.1	0.06	0.01	36.0
Approach		582	2.0	0.432	6.8	LOS A	3.1	78.1	0.06	0.01	35.7
West: San Juan Road											
2	T1	284	2.0	0.227	4.8	LOS A	1.2	29.9	0.19	0.07	37.5
12	R2	8	2.0	0.227	4.8	LOS A	1.2	29.9	0.19	0.07	32.1
Approach		292	2.0	0.227	4.8	LOS A	1.2	29.9	0.19	0.07	37.4
All Vehicles		890	2.0	0.432	6.1	LOS A	3.1	78.1	0.11	0.03	36.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. Existing + P Weekday PM San Juan Rd & Park Entrance]

1. Existing + P Weekday PM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	92	2.0	0.347	8.8	LOS A	1.6	41.4	0.64	0.64	29.9
18	R2	177	2.0	0.347	8.8	LOS A	1.6	41.4	0.64	0.64	28.8
Approach		269	2.0	0.347	8.8	LOS A	1.6	41.4	0.64	0.64	29.2
East: 4th Street											
1	L2	341	2.0	0.525	8.7	LOS A	4.0	101.6	0.40	0.22	27.2
6	T1	304	2.0	0.525	8.7	LOS A	4.0	101.6	0.40	0.22	33.8
Approach		645	2.0	0.525	8.7	LOS A	4.0	101.6	0.40	0.22	30.9
West: San Juan Road											
2	T1	536	2.0	0.642	13.5	LOS B	7.6	194.0	0.76	0.85	32.8
12	R2	73	2.0	0.642	13.5	LOS B	7.6	194.0	0.76	0.85	26.1
Approach		609	2.0	0.642	13.5	LOS B	7.6	194.0	0.76	0.85	32.2
All Vehicles		1523	2.0	0.642	10.7	LOS B	7.6	194.0	0.59	0.55	31.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. Existing + P Weekend MD San Juan Rd & Park Entrance]

1. Existing + P Weekend MD San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	3	2.0	0.379	7.7	LOS A	2.0	51.9	0.55	0.45	32.0
18	R2	373	2.0	0.379	7.7	LOS A	2.0	51.9	0.55	0.45	30.7
Approach		375	2.0	0.379	7.7	LOS A	2.0	51.9	0.55	0.45	30.7
East: 4th Street											
1	L2	174	2.0	0.360	6.0	LOS A	2.3	58.2	0.04	0.01	29.5
6	T1	312	2.0	0.360	6.0	LOS A	2.3	58.2	0.04	0.01	35.7
Approach		486	2.0	0.360	6.0	LOS A	2.3	58.2	0.04	0.01	34.0
West: San Juan Road											
2	T1	300	2.0	0.340	6.5	LOS A	1.9	48.0	0.42	0.28	36.5
12	R2	84	2.0	0.340	6.5	LOS A	1.9	48.0	0.42	0.28	30.7
Approach		384	2.0	0.340	6.5	LOS A	1.9	48.0	0.42	0.28	35.6
All Vehicles		1246	2.0	0.379	6.7	LOS A	2.3	58.2	0.31	0.22	33.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. HY Weekday AM San Juan Rd & Park Entrance]

1. HY Weekday AM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	4	2.0	0.015	3.9	LOS A	0.1	1.5	0.42	0.26	34.2
18	R2	10	2.0	0.015	3.9	LOS A	0.1	1.5	0.42	0.26	32.8
Approach		14	2.0	0.015	3.9	LOS A	0.1	1.5	0.42	0.26	33.2
East: 4th Street											
1	L2	52	2.0	0.502	7.8	LOS A	4.0	102.8	0.07	0.01	29.1
6	T1	624	2.0	0.502	7.8	LOS A	4.0	102.8	0.07	0.01	35.5
Approach		676	2.0	0.502	7.8	LOS A	4.0	102.8	0.07	0.01	35.2
West: San Juan Road											
2	T1	333	2.0	0.263	5.1	LOS A	1.4	36.1	0.20	0.08	37.3
12	R2	4	2.0	0.263	5.1	LOS A	1.4	36.1	0.20	0.08	31.8
Approach		337	2.0	0.263	5.1	LOS A	1.4	36.1	0.20	0.08	37.3
All Vehicles		1027	2.0	0.502	6.9	LOS A	4.0	102.8	0.11	0.04	35.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. HY Weekday PM San Juan Rd & Park Entrance]

1. HY Weekday PM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	26	2.0	0.210	7.5	LOS A	0.9	22.2	0.62	0.62	31.5
18	R2	122	2.0	0.210	7.5	LOS A	0.9	22.2	0.62	0.62	30.3
Approach		148	2.0	0.210	7.5	LOS A	0.9	22.2	0.62	0.62	30.5
East: 4th Street											
1	L2	248	2.0	0.459	7.3	LOS A	3.3	85.0	0.18	0.06	28.4
6	T1	356	2.0	0.459	7.3	LOS A	3.3	85.0	0.18	0.06	34.8
Approach		604	2.0	0.459	7.3	LOS A	3.3	85.0	0.18	0.06	32.8
West: San Juan Road											
2	T1	629	2.0	0.656	13.0	LOS B	8.5	216.5	0.72	0.71	33.0
12	R2	56	2.0	0.656	13.0	LOS B	8.5	216.5	0.72	0.71	26.4
Approach		685	2.0	0.656	13.0	LOS B	8.5	216.5	0.72	0.71	32.6
All Vehicles		1437	2.0	0.656	10.1	LOS B	8.5	216.5	0.48	0.43	32.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. HY Weekend MD San Juan Rd & Park Entrance]

1. HY Weekend MD San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	3	2.0	0.067	4.5	LOS A	0.3	7.0	0.45	0.33	34.8
18	R2	60	2.0	0.067	4.5	LOS A	0.3	7.0	0.45	0.33	33.4
Approach		63	2.0	0.067	4.5	LOS A	0.3	7.0	0.45	0.33	33.4
East: 4th Street											
1	L2	10	2.0	0.278	5.1	LOS A	1.6	39.9	0.04	0.00	31.3
6	T1	366	2.0	0.278	5.1	LOS A	1.6	39.9	0.04	0.00	37.3
Approach		375	2.0	0.278	5.1	LOS A	1.6	39.9	0.04	0.00	37.2
West: San Juan Road											
2	T1	352	2.0	0.266	5.0	LOS A	1.5	37.4	0.08	0.02	37.4
12	R2	4	2.0	0.266	5.0	LOS A	1.5	37.4	0.08	0.02	31.9
Approach		356	2.0	0.266	5.0	LOS A	1.5	37.4	0.08	0.02	37.4
All Vehicles		795	2.0	0.278	5.0	LOS A	1.6	39.9	0.09	0.04	37.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. HY + P Weekday AM San Juan Rd & Park Entrance]

1. HY + P Weekday AM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	4	2.0	0.019	3.9	LOS A	0.1	1.9	0.42	0.27	34.5
18	R2	14	2.0	0.019	3.9	LOS A	0.1	1.9	0.42	0.27	33.0
Approach		18	2.0	0.019	3.9	LOS A	0.1	1.9	0.42	0.27	33.4
East: 4th Street											
1	L2	58	2.0	0.506	7.9	LOS A	4.1	104.7	0.07	0.01	29.1
6	T1	624	2.0	0.506	7.9	LOS A	4.1	104.7	0.07	0.01	35.4
Approach		682	2.0	0.506	7.9	LOS A	4.1	104.7	0.07	0.01	35.1
West: San Juan Road											
2	T1	333	2.0	0.268	5.2	LOS A	1.5	36.8	0.22	0.09	37.3
12	R2	8	2.0	0.268	5.2	LOS A	1.5	36.8	0.22	0.09	31.8
Approach		341	2.0	0.268	5.2	LOS A	1.5	36.8	0.22	0.09	37.2
All Vehicles		1041	2.0	0.506	7.0	LOS A	4.1	104.7	0.12	0.04	35.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. HY + P Weekday PM San Juan Rd & Park Entrance]

1. HY + P Weekday PM San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	96	2.0	0.413	10.7	LOS B	2.3	57.7	0.70	0.78	28.6
18	R2	195	2.0	0.413	10.7	LOS B	2.3	57.7	0.70	0.78	27.6
Approach		291	2.0	0.413	10.7	LOS B	2.3	57.7	0.70	0.78	27.9
East: 4th Street											
1	L2	377	2.0	0.599	10.2	LOS B	5.2	131.7	0.46	0.26	26.4
6	T1	356	2.0	0.599	10.2	LOS B	5.2	131.7	0.46	0.26	33.1
Approach		733	2.0	0.599	10.2	LOS B	5.2	131.7	0.46	0.26	30.2
West: San Juan Road											
2	T1	629	2.0	0.778	20.1	LOS C	14.1	357.2	0.92	1.23	29.9
12	R2	81	2.0	0.778	20.1	LOS C	14.1	357.2	0.92	1.23	23.0
Approach		711	2.0	0.778	20.1	LOS C	14.1	357.2	0.92	1.23	29.3
All Vehicles		1735	2.0	0.778	14.4	LOS B	14.1	357.2	0.69	0.74	29.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

MOVEMENT SUMMARY

Site: 101 [1. HY + P Weekend MD San Juan Rd & Park Entrance]

1. HY + P Weekend MD San Juan Rd & Park Entrance
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Park Entrance											
3	L2	3	2.0	0.409	8.5	LOS A	2.2	56.0	0.60	0.52	31.3
18	R2	381	2.0	0.409	8.5	LOS A	2.2	56.0	0.60	0.52	30.1
Approach		384	2.0	0.409	8.5	LOS A	2.2	56.0	0.60	0.52	30.1
East: 4th Street											
1	L2	176	2.0	0.402	6.5	LOS A	2.7	69.1	0.04	0.01	29.2
6	T1	366	2.0	0.402	6.5	LOS A	2.7	69.1	0.04	0.01	35.5
Approach		542	2.0	0.402	6.5	LOS A	2.7	69.1	0.04	0.01	34.0
West: San Juan Road											
2	T1	352	2.0	0.387	7.1	LOS A	2.3	57.6	0.44	0.30	36.1
12	R2	84	2.0	0.387	7.1	LOS A	2.3	57.6	0.44	0.30	30.2
Approach		436	2.0	0.387	7.1	LOS A	2.3	57.6	0.44	0.30	35.3
All Vehicles		1362	2.0	0.409	7.3	LOS A	2.7	69.1	0.33	0.24	33.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.

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INTERNATIONAL

Appendix C:
Traffic Signal Warrants

EXISTING PLUS PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: PM

Major Street: San Juan Road

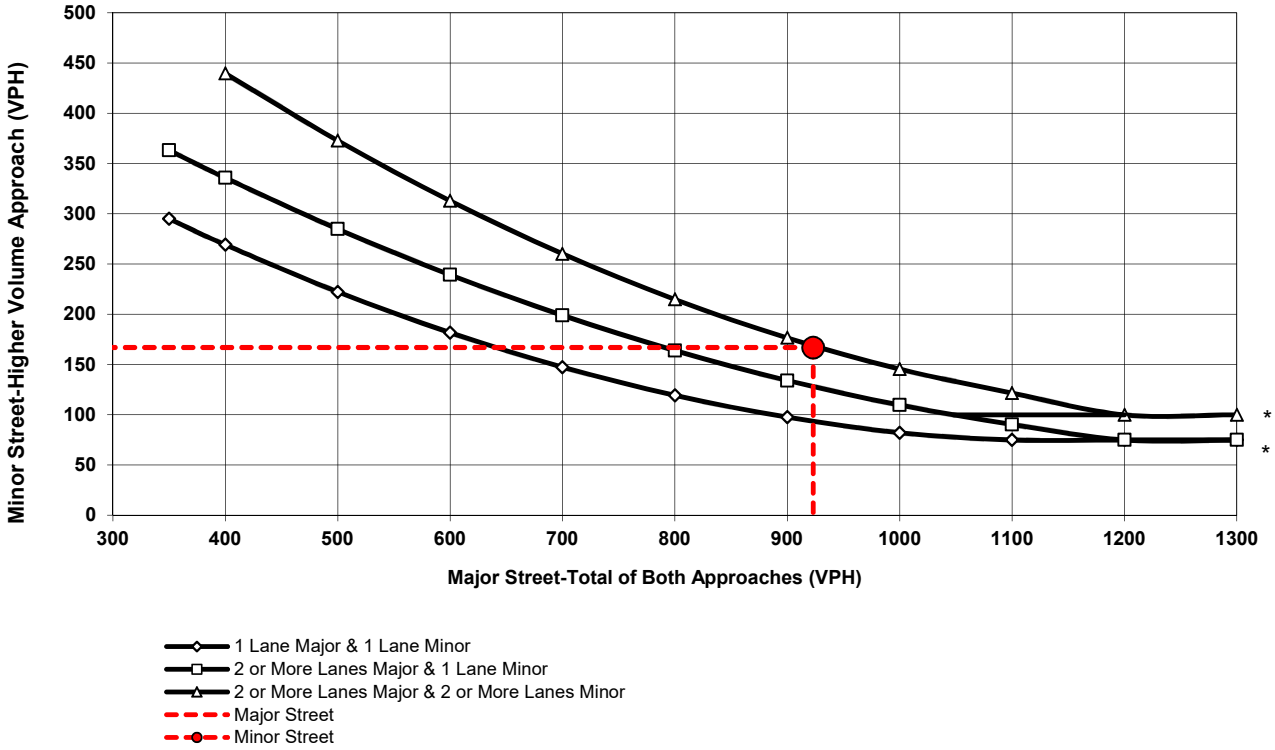
Total of Both Approaches (VPH): 923
Number of Approach Lanes: 1

Minor Street: Park Driveway

Higher Volume Approach (VPH): 167
Number of Approach Lanes: 1

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

EXISTING PLUS PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
RURAL CONDITIONS

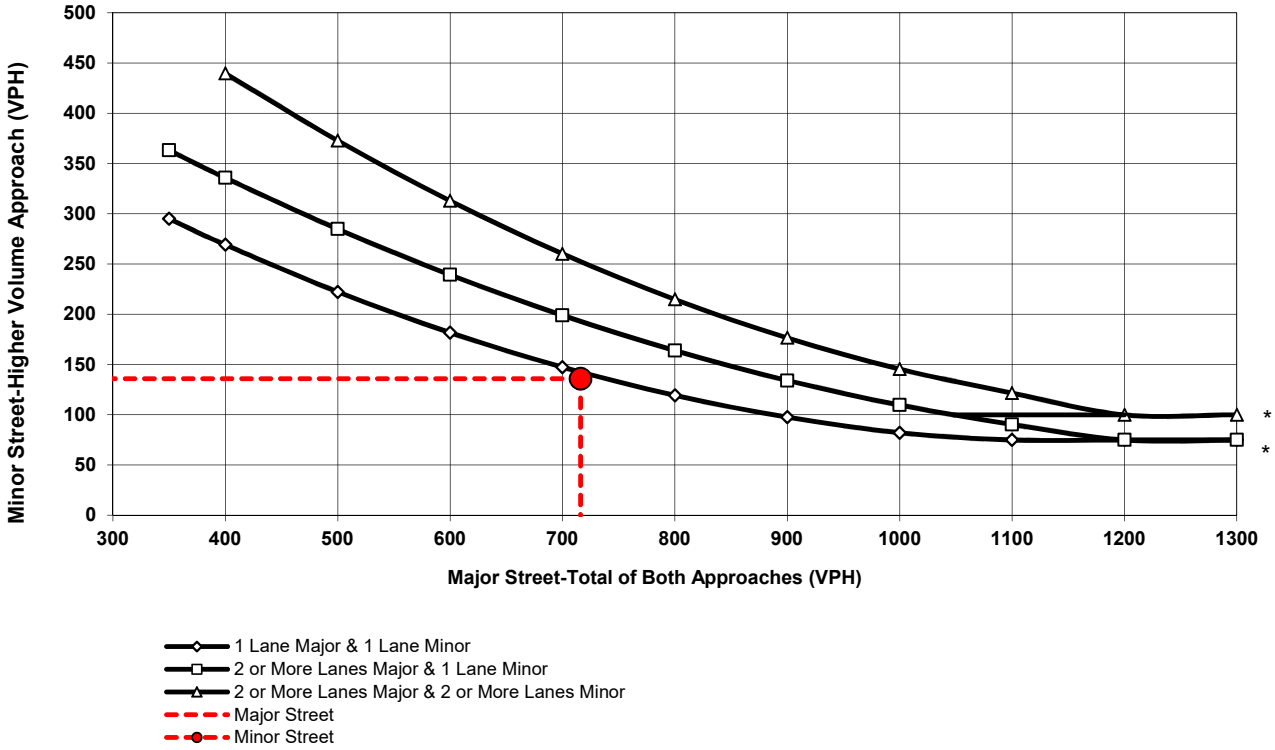
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: Noon on a Weekend (Saturday)

Major Street:	San Juan Road	**Minor Street:**	Park Driveway
Total of Both Approaches (VPH):	716	Higher Volume Approach (VPH):	136
Number of Approach Lanes:	1	Number of Approach Lanes:	1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:
100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

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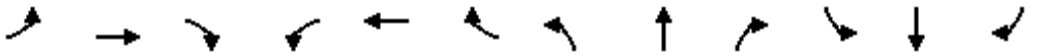
Appendix D:
Leatherback Property Park
Synchro Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	208	21	1	263	81	11	70	8	46	85	28
Future Volume (veh/h)	45	208	21	1	263	81	11	70	8	46	85	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	289	29	1	313	96	14	91	10	61	113	37
Peak Hour Factor	0.72	0.72	0.72	0.84	0.84	0.84	0.77	0.77	0.77	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	1204	125	2	762	234	29	862	93	79	551	462
Arrive On Green	0.51	0.51	0.51	0.00	0.56	0.56	0.02	0.27	0.27	0.04	0.29	0.29
Sat Flow, veh/h	400	2362	246	1781	1372	421	1781	3234	350	1781	1870	1569
Grp Volume(v), veh/h	185	0	195	1	0	409	14	49	52	61	113	37
Grp Sat Flow(s),veh/h/ln	1351	0	1656	1781	0	1793	1781	1777	1807	1781	1870	1569
Q Serve(g_s), s	1.7	0.0	5.9	0.1	0.0	11.8	0.7	1.9	1.9	3.0	4.1	1.5
Cycle Q Clear(g_c), s	9.4	0.0	5.9	0.1	0.0	11.8	0.7	1.9	1.9	3.0	4.1	1.5
Prop In Lane	0.34		0.15	1.00		0.23	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	742	0	844	2	0	996	29	474	482	79	551	462
V/C Ratio(X)	0.25	0.00	0.23	0.41	0.00	0.41	0.48	0.10	0.11	0.77	0.21	0.08
Avail Cap(c_a), veh/h	742	0	844	178	0	996	198	474	482	277	582	488
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	12.3	44.9	0.0	11.5	43.9	24.9	24.9	42.5	23.8	22.9
Incr Delay (d2), s/veh	0.2	0.0	0.1	83.8	0.0	1.3	11.7	0.4	0.4	14.5	0.2	0.1
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	0.0	2.1	0.1	0.0	4.7	0.4	0.8	0.9	1.6	1.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	0.0	12.4	128.7	0.0	12.8	55.5	25.3	25.4	57.0	24.0	23.0
LnGrp LOS	B	A	B	F	A	B	E	C	C	E	C	C
Approach Vol, veh/h		380			410			115			211	
Approach Delay, s/veh		12.5			13.1			29.0			33.4	
Approach LOS		B			B			C			C	

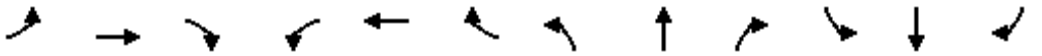
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.1	49.9	5.5	30.5		54.0	8.0	28.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	37.0	10.0	28.0		50.0	14.0	24.0				
Max Q Clear Time (g_c+I1), s	2.1	11.4	2.7	6.1		13.8	5.0	3.9				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.7		2.9	0.1	0.4				

Intersection Summary												
HCM 6th Ctrl Delay			18.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	217	36	9	205	118	19	120	10	125	236	84
Future Volume (veh/h)	61	217	36	9	205	118	19	120	10	125	236	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.98	1.00		0.97	1.00		0.96
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	319	53	9	216	124	23	145	12	134	254	90
Peak Hour Factor	0.68	0.68	0.68	0.95	0.95	0.95	0.83	0.83	0.83	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	1002	171	20	580	333	43	816	67	169	592	483
Arrive On Green	0.47	0.47	0.47	0.01	0.53	0.53	0.02	0.25	0.25	0.09	0.32	0.32
Sat Flow, veh/h	493	2136	364	1781	1105	635	1781	3318	271	1781	1870	1526
Grp Volume(v), veh/h	225	0	237	9	0	340	23	77	80	134	254	90
Grp Sat Flow(s),veh/h/ln	1369	0	1624	1781	0	1740	1781	1777	1812	1781	1870	1526
Q Serve(g_s), s	5.3	0.0	8.1	0.4	0.0	10.3	1.1	3.1	3.1	6.6	9.6	3.8
Cycle Q Clear(g_c), s	10.6	0.0	8.1	0.4	0.0	10.3	1.1	3.1	3.1	6.6	9.6	3.8
Prop In Lane	0.40		0.22	1.00		0.36	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	699	0	762	20	0	914	43	437	445	169	592	483
V/C Ratio(X)	0.32	0.00	0.31	0.45	0.00	0.37	0.53	0.18	0.18	0.79	0.43	0.19
Avail Cap(c_a), veh/h	699	0	762	159	0	914	179	437	445	378	669	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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.3	0.0	14.8	44.0	0.0	12.5	43.2	26.6	26.6	39.6	24.2	22.2
Incr Delay (d2), s/veh	0.3	0.0	0.2	15.1	0.0	1.2	9.7	0.9	0.9	8.1	0.5	0.2
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	2.9	0.0	2.9	0.3	0.0	4.1	0.6	1.4	1.4	3.2	4.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	0.0	15.0	59.1	0.0	13.7	52.9	27.5	27.5	47.7	24.7	22.4
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		462			349			180			478	
Approach Delay, s/veh		15.3			14.9			30.7			30.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	5.0	46.0	6.2	32.3		51.0	12.5	26.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	35.0	9.0	32.0		47.0	19.0	22.0				
Max Q Clear Time (g_c+I1), s	2.4	12.6	3.1	11.6		12.3	8.6	5.1				
Green Ext Time (p_c), s	0.0	3.0	0.0	1.7		2.4	0.2	0.7				

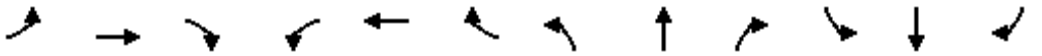
Intersection Summary												
HCM 6th Ctrl Delay			22.1									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	141	30	4	174	133	21	96	7	91	191	53
Future Volume (veh/h)	53	141	30	4	174	133	21	96	7	91	191	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.97
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	158	34	4	193	148	25	114	8	107	225	62
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	873	199	9	504	387	46	910	63	138	601	495
Arrive On Green	0.47	0.47	0.47	0.01	0.52	0.52	0.03	0.27	0.27	0.08	0.32	0.32
Sat Flow, veh/h	559	1869	425	1781	975	747	1781	3370	234	1781	1870	1540
Grp Volume(v), veh/h	123	0	129	4	0	341	25	60	62	107	225	62
Grp Sat Flow(s),veh/h/ln	1241	0	1612	1781	0	1722	1781	1777	1828	1781	1870	1540
Q Serve(g_s), s	2.2	0.0	4.1	0.2	0.0	10.6	1.2	2.3	2.3	5.2	8.2	2.5
Cycle Q Clear(g_c), s	8.3	0.0	4.1	0.2	0.0	10.6	1.2	2.3	2.3	5.2	8.2	2.5
Prop In Lane	0.49		0.26	1.00		0.43	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	640	0	753	9	0	891	46	480	493	138	601	495
V/C Ratio(X)	0.19	0.00	0.17	0.42	0.00	0.38	0.54	0.12	0.13	0.78	0.37	0.13
Avail Cap(c_a), veh/h	640	0	753	180	0	891	200	480	493	361	673	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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	13.7	44.1	0.0	12.9	42.8	24.5	24.5	40.2	23.3	21.3
Incr Delay (d2), s/veh	0.1	0.0	0.1	27.5	0.0	1.2	9.5	0.5	0.5	9.0	0.4	0.1
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	1.5	0.0	1.5	0.2	0.0	4.1	0.7	1.0	1.0	2.6	3.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	0.0	13.8	71.6	0.0	14.1	52.3	25.0	25.0	49.2	23.6	21.4
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		252			345			147			394	
Approach Delay, s/veh		14.2			14.8			29.7			30.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.5	45.5	6.3	32.6		50.0	10.9	28.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	33.0	10.0	32.0		46.0	18.0	24.0				
Max Q Clear Time (g_c+I1), s	2.2	10.3	3.2	10.2		12.6	7.2	4.3				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.4		2.4	0.2	0.5				

Intersection Summary			
HCM 6th Ctrl Delay		21.9	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	208	23	1	263	81	12	78	9	46	98	28
Future Volume (veh/h)	45	208	23	1	263	81	12	78	9	46	98	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	289	32	1	313	96	16	101	12	61	131	37
Peak Hour Factor	0.72	0.72	0.72	0.84	0.84	0.84	0.77	0.77	0.77	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	1194	137	2	762	234	33	855	100	79	548	459
Arrive On Green	0.51	0.51	0.51	0.00	0.56	0.56	0.02	0.27	0.27	0.04	0.29	0.29
Sat Flow, veh/h	397	2343	269	1781	1372	421	1781	3205	375	1781	1870	1569
Grp Volume(v), veh/h	186	0	197	1	0	409	16	55	58	61	131	37
Grp Sat Flow(s),veh/h/ln	1356	0	1652	1781	0	1793	1781	1777	1802	1781	1870	1569
Q Serve(g_s), s	1.7	0.0	6.0	0.1	0.0	11.8	0.8	2.1	2.2	3.0	4.8	1.5
Cycle Q Clear(g_c), s	9.4	0.0	6.0	0.1	0.0	11.8	0.8	2.1	2.2	3.0	4.8	1.5
Prop In Lane	0.33		0.16	1.00		0.23	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	745	0	842	2	0	996	33	474	481	79	548	459
V/C Ratio(X)	0.25	0.00	0.23	0.41	0.00	0.41	0.49	0.12	0.12	0.77	0.24	0.08
Avail Cap(c_a), veh/h	745	0	842	178	0	996	178	474	481	277	603	506
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	12.3	44.9	0.0	11.5	43.8	25.0	25.0	42.5	24.2	23.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	83.8	0.0	1.3	10.9	0.5	0.5	14.5	0.2	0.1
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	0.0	2.1	0.1	0.0	4.7	0.4	0.9	1.0	1.6	2.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	0.0	12.4	128.7	0.0	12.8	54.7	25.5	25.5	57.0	24.4	23.1
LnGrp LOS	B	A	B	F	A	B	D	C	C	E	C	C
Approach Vol, veh/h		383			410			129			229	
Approach Delay, s/veh		12.5			13.1			29.1			32.9	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.1	49.9	5.6	30.4		54.0	8.0	28.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	37.0	9.0	29.0		50.0	14.0	24.0				
Max Q Clear Time (g_c+I1), s	2.1	11.4	2.8	6.8		13.8	5.0	4.2				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.8		2.9	0.1	0.5				

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

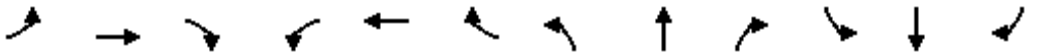
Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	10	89	23	15	107
Future Vol, veh/h	15	10	89	23	15	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	11	99	26	17	119

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	265	112	0	0	125	0
Stage 1	112	-	-	-	-	-
Stage 2	153	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	724	941	-	-	1462	-
Stage 1	913	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	715	941	-	-	1462	-
Mov Cap-2 Maneuver	715	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.9
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	791	1462	-
HCM Lane V/C Ratio	-	-	0.035	0.011	-
HCM Control Delay (s)	-	-	9.7	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	217	38	9	205	118	21	132	11	125	252	84
Future Volume (veh/h)	61	217	38	9	205	118	21	132	11	125	252	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.98	1.00		0.97	1.00		0.96
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	90	319	56	9	216	124	25	159	13	134	271	90
Peak Hour Factor	0.68	0.68	0.68	0.95	0.95	0.95	0.83	0.83	0.83	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	279	970	175	20	568	326	46	854	69	169	610	498
Arrive On Green	0.46	0.46	0.46	0.01	0.51	0.51	0.03	0.26	0.26	0.09	0.33	0.33
Sat Flow, veh/h	485	2117	381	1781	1105	634	1781	3321	269	1781	1870	1527
Grp Volume(v), veh/h	227	0	238	9	0	340	25	84	88	134	271	90
Grp Sat Flow(s),veh/h/ln	1364	0	1620	1781	0	1740	1781	1777	1813	1781	1870	1527
Q Serve(g_s), s	5.5	0.0	8.3	0.4	0.0	10.6	1.2	3.3	3.4	6.6	10.2	3.8
Cycle Q Clear(g_c), s	11.1	0.0	8.3	0.4	0.0	10.6	1.2	3.3	3.4	6.6	10.2	3.8
Prop In Lane	0.40		0.24	1.00		0.36	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	681	0	742	20	0	894	46	457	466	169	610	498
V/C Ratio(X)	0.33	0.00	0.32	0.45	0.00	0.38	0.54	0.18	0.19	0.79	0.44	0.18
Avail Cap(c_a), veh/h	681	0	742	159	0	894	179	457	466	378	690	563
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	15.4	44.0	0.0	13.1	43.1	25.9	26.0	39.6	23.8	21.6
Incr Delay (d2), s/veh	0.3	0.0	0.2	15.1	0.0	1.2	9.6	0.9	0.9	8.1	0.5	0.2
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	3.0	0.0	3.0	0.3	0.0	4.2	0.7	1.5	1.6	3.2	4.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	0.0	15.7	59.1	0.0	14.4	52.6	26.8	26.9	47.7	24.3	21.8
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		465			349			197			495	
Approach Delay, s/veh		16.0			15.5			30.1			30.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	5.0	45.0	6.3	33.2		50.0	12.5	27.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	34.0	9.0	33.0		46.0	19.0	23.0				
Max Q Clear Time (g_c+I1), s	2.4	13.1	3.2	12.2		12.6	8.6	5.4				
Green Ext Time (p_c), s	0.0	2.9	0.0	1.8		2.3	0.2	0.8				

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

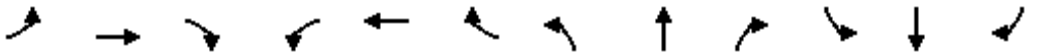
Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	14	149	28	18	281
Future Vol, veh/h	22	14	149	28	18	281
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	16	166	31	20	312

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	534	182	0	0	197	0
Stage 1	182	-	-	-	-	-
Stage 2	352	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	507	861	-	-	1376	-
Stage 1	849	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	499	861	-	-	1376	-
Mov Cap-2 Maneuver	499	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	597	1376	-
HCM Lane V/C Ratio	-	-	0.067	0.015	-
HCM Control Delay (s)	-	-	11.5	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	141	31	4	174	133	22	102	7	91	198	53
Future Volume (veh/h)	53	141	31	4	174	133	22	102	7	91	198	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.97
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	158	35	4	193	148	26	121	8	107	233	62
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	321	869	203	9	504	387	47	914	60	138	600	494
Arrive On Green	0.47	0.47	0.47	0.01	0.52	0.52	0.03	0.27	0.27	0.08	0.32	0.32
Sat Flow, veh/h	558	1861	435	1781	975	747	1781	3385	222	1781	1870	1540
Grp Volume(v), veh/h	124	0	129	4	0	341	26	63	66	107	233	62
Grp Sat Flow(s),veh/h/ln	1243	0	1610	1781	0	1722	1781	1777	1830	1781	1870	1540
Q Serve(g_s), s	2.2	0.0	4.1	0.2	0.0	10.6	1.3	2.4	2.4	5.2	8.6	2.5
Cycle Q Clear(g_c), s	8.3	0.0	4.1	0.2	0.0	10.6	1.3	2.4	2.4	5.2	8.6	2.5
Prop In Lane	0.49		0.27	1.00		0.43	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	641	0	752	9	0	891	47	480	494	138	600	494
V/C Ratio(X)	0.19	0.00	0.17	0.42	0.00	0.38	0.55	0.13	0.13	0.78	0.39	0.13
Avail Cap(c_a), veh/h	641	0	752	180	0	891	200	480	494	361	673	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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	13.7	44.1	0.0	12.9	42.7	24.6	24.6	40.2	23.4	21.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	27.5	0.0	1.2	9.5	0.6	0.6	9.0	0.4	0.1
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	1.5	0.0	1.5	0.2	0.0	4.1	0.7	1.1	1.1	2.6	3.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	0.0	13.8	71.6	0.0	14.1	52.2	25.1	25.1	49.2	23.8	21.5
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		253			345			155			402	
Approach Delay, s/veh		14.2			14.8			29.7			30.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.5	45.5	6.4	32.5		50.0	10.9	28.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	33.0	10.0	32.0		46.0	18.0	24.0				
Max Q Clear Time (g_c+I1), s	2.2	10.3	3.3	10.6		12.6	7.2	4.4				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.5		2.4	0.2	0.6				

Intersection Summary			
HCM 6th Ctrl Delay		22.0	
HCM 6th LOS		C	

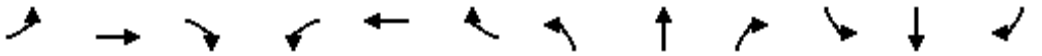
Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	7	124	13	9	225
Future Vol, veh/h	11	7	124	13	9	225
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	138	14	10	250

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	415	145	0	0	152	0
Stage 1	145	-	-	-	-	-
Stage 2	270	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	594	902	-	-	1429	-
Stage 1	882	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	590	902	-	-	1429	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	876	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	682	1429	-
HCM Lane V/C Ratio	-	-	0.029	0.007	-
HCM Control Delay (s)	-	-	10.4	7.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	244	25	1	309	95	13	82	9	54	100	33
Future Volume (veh/h)	53	244	25	1	309	95	13	82	9	54	100	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	339	35	1	368	113	17	106	12	72	133	44
Peak Hour Factor	0.72	0.72	0.72	0.84	0.84	0.84	0.77	0.77	0.77	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	1202	130	2	792	243	34	772	86	94	510	428
Arrive On Green	0.53	0.53	0.53	0.00	0.58	0.58	0.02	0.24	0.24	0.05	0.27	0.27
Sat Flow, veh/h	380	2259	245	1781	1372	421	1781	3223	359	1781	1870	1568
Grp Volume(v), veh/h	211	0	237	1	0	481	17	58	60	72	133	44
Grp Sat Flow(s),veh/h/ln	1228	0	1657	1781	0	1793	1781	1777	1805	1781	1870	1568
Q Serve(g_s), s	3.7	0.0	7.2	0.1	0.0	14.2	0.9	2.3	2.4	3.7	5.1	1.9
Cycle Q Clear(g_c), s	13.8	0.0	7.2	0.1	0.0	14.2	0.9	2.3	2.4	3.7	5.1	1.9
Prop In Lane	0.35		0.15	1.00		0.23	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	706	0	882	2	0	1035	34	426	433	94	510	428
V/C Ratio(X)	0.30	0.00	0.27	0.41	0.00	0.46	0.50	0.14	0.14	0.77	0.26	0.10
Avail Cap(c_a), veh/h	706	0	882	155	0	1035	175	426	433	252	530	444
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	11.7	45.8	0.0	11.2	44.6	27.4	27.5	43.0	26.1	25.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	83.9	0.0	1.5	10.8	0.7	0.7	12.4	0.3	0.1
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	0.0	2.5	0.1	0.0	5.6	0.5	1.1	1.1	1.9	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	0.0	11.9	129.7	0.0	12.7	55.4	28.1	28.1	55.4	26.4	25.1
LnGrp LOS	B	A	B	F	A	B	E	C	C	E	C	C
Approach Vol, veh/h		448			482			135			249	
Approach Delay, s/veh		12.4			13.0			31.6			34.5	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.1	52.9	5.8	29.1		57.0	8.8	26.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	41.0	9.0	26.0		53.0	13.0	22.0				
Max Q Clear Time (g_c+I1), s	2.1	15.8	2.9	7.1		16.2	5.7	4.4				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.8		3.6	0.1	0.5				

Intersection Summary												
HCM 6th Ctrl Delay			18.8									
HCM 6th LOS			B									

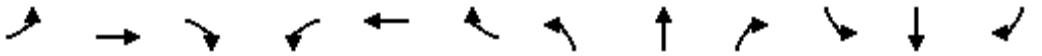
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	255	42	11	241	138	22	141	12	147	277	99
Future Volume (veh/h)	72	255	42	11	241	138	22	141	12	147	277	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.96
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	375	62	12	254	145	27	170	14	158	298	106
Peak Hour Factor	0.68	0.68	0.68	0.95	0.95	0.95	0.83	0.83	0.83	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	953	164	26	578	330	48	793	65	194	600	490
Arrive On Green	0.46	0.46	0.46	0.01	0.52	0.52	0.03	0.24	0.24	0.11	0.32	0.32
Sat Flow, veh/h	458	2055	354	1781	1108	632	1781	3319	270	1781	1870	1527
Grp Volume(v), veh/h	258	0	285	12	0	399	27	90	94	158	298	106
Grp Sat Flow(s),veh/h/ln	1240	0	1626	1781	0	1740	1781	1777	1812	1781	1870	1527
Q Serve(g_s), s	8.5	0.0	10.5	0.6	0.0	13.1	1.4	3.7	3.8	8.0	11.8	4.7
Cycle Q Clear(g_c), s	16.3	0.0	10.5	0.6	0.0	13.1	1.4	3.7	3.8	8.0	11.8	4.7
Prop In Lane	0.41		0.22	1.00		0.36	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	630	0	754	26	0	908	48	425	433	194	600	490
V/C Ratio(X)	0.41	0.00	0.38	0.47	0.00	0.44	0.56	0.21	0.22	0.81	0.50	0.22
Avail Cap(c_a), veh/h	630	0	754	155	0	908	155	425	433	348	650	531
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	16.0	45.0	0.0	13.7	44.2	28.1	28.1	40.1	25.2	22.8
Incr Delay (d2), s/veh	0.4	0.0	0.3	12.8	0.0	1.5	9.8	1.1	1.1	8.0	0.6	0.2
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	3.9	0.0	3.8	0.4	0.0	5.2	0.7	1.7	1.8	3.9	5.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	16.4	57.8	0.0	15.2	54.0	29.2	29.3	48.0	25.9	23.0
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		543			411			211			562	
Approach Delay, s/veh		17.3			16.5			32.4			31.6	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	5.3	46.7	6.5	33.5		52.0	14.0	26.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	36.0	8.0	32.0		48.0	18.0	22.0				
Max Q Clear Time (g_c+I1), s	2.6	18.3	3.4	13.8		15.1	10.0	5.8				
Green Ext Time (p_c), s	0.0	3.4	0.0	2.0		2.8	0.2	0.8				

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

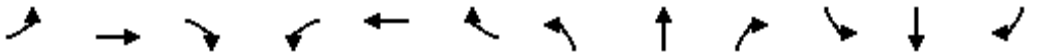
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	165	35	5	204	156	25	113	8	107	224	62
Future Volume (veh/h)	62	165	35	5	204	156	25	113	8	107	224	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.97
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	185	39	6	227	173	30	135	10	126	264	73
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	840	189	14	505	385	52	867	64	160	597	491
Arrive On Green	0.46	0.46	0.46	0.01	0.52	0.52	0.03	0.26	0.26	0.09	0.32	0.32
Sat Flow, veh/h	517	1809	407	1781	978	745	1781	3356	246	1781	1870	1540
Grp Volume(v), veh/h	139	0	155	6	0	400	30	71	74	126	264	73
Grp Sat Flow(s),veh/h/ln	1117	0	1616	1781	0	1723	1781	1777	1825	1781	1870	1540
Q Serve(g_s), s	3.6	0.0	5.1	0.3	0.0	13.0	1.5	2.7	2.8	6.2	10.0	3.0
Cycle Q Clear(g_c), s	11.9	0.0	5.1	0.3	0.0	13.0	1.5	2.7	2.8	6.2	10.0	3.0
Prop In Lane	0.50		0.25	1.00		0.43	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	579	0	750	14	0	890	52	459	472	160	597	491
V/C Ratio(X)	0.24	0.00	0.21	0.43	0.00	0.45	0.57	0.15	0.16	0.79	0.44	0.15
Avail Cap(c_a), veh/h	579	0	750	160	0	890	180	459	472	380	693	571
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	0.0	14.1	44.0	0.0	13.5	42.6	25.5	25.5	39.7	24.0	21.7
Incr Delay (d2), s/veh	0.2	0.0	0.1	20.1	0.0	1.6	9.5	0.7	0.7	8.2	0.5	0.1
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	1.9	0.0	1.8	0.2	0.0	5.1	0.8	1.2	1.3	3.0	4.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	0.0	14.3	64.1	0.0	15.2	52.1	26.2	26.2	47.9	24.6	21.8
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		294			406			175			463	
Approach Delay, s/veh		15.2			15.9			30.7			30.5	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.7	45.3	6.6	32.4		50.0	12.0	27.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	34.0	9.0	33.0		46.0	19.0	23.0				
Max Q Clear Time (g_c+I1), s	2.3	13.9	3.5	12.0		15.0	8.2	4.8				
Green Ext Time (p_c), s	0.0	1.8	0.0	1.7		2.8	0.2	0.6				

Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

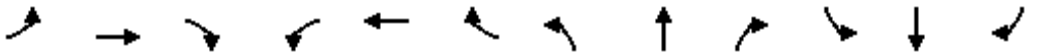
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1022	-	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	1022	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	244	27	1	309	95	14	90	10	54	113	33
Future Volume (veh/h)	53	244	27	1	309	95	14	90	10	54	113	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	339	38	1	368	113	18	117	13	72	151	44
Peak Hour Factor	0.72	0.72	0.72	0.84	0.84	0.84	0.77	0.77	0.77	0.75	0.75	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	1194	141	2	792	243	36	774	85	94	509	426
Arrive On Green	0.53	0.53	0.53	0.00	0.58	0.58	0.02	0.24	0.24	0.05	0.27	0.27
Sat Flow, veh/h	378	2243	264	1781	1372	421	1781	3229	354	1781	1870	1568
Grp Volume(v), veh/h	213	0	238	1	0	481	18	64	66	72	151	44
Grp Sat Flow(s),veh/h/ln	1232	0	1653	1781	0	1793	1781	1777	1806	1781	1870	1568
Q Serve(g_s), s	3.7	0.0	7.2	0.1	0.0	14.2	0.9	2.6	2.7	3.7	5.9	1.9
Cycle Q Clear(g_c), s	13.8	0.0	7.2	0.1	0.0	14.2	0.9	2.6	2.7	3.7	5.9	1.9
Prop In Lane	0.35		0.16	1.00		0.23	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	708	0	880	2	0	1035	36	426	433	94	509	426
V/C Ratio(X)	0.30	0.00	0.27	0.41	0.00	0.46	0.50	0.15	0.15	0.77	0.30	0.10
Avail Cap(c_a), veh/h	708	0	880	155	0	1035	175	426	433	252	530	444
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	11.7	45.8	0.0	11.2	44.5	27.5	27.6	43.0	26.5	25.0
Incr Delay (d2), s/veh	0.2	0.0	0.2	83.9	0.0	1.5	10.6	0.7	0.8	12.4	0.3	0.1
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	0.0	2.6	0.1	0.0	5.6	0.5	1.2	1.2	1.9	2.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	0.0	11.9	129.7	0.0	12.7	55.1	28.3	28.3	55.4	26.8	25.1
LnGrp LOS	B	A	B	F	A	B	E	C	C	E	C	C
Approach Vol, veh/h		451			482			148			267	
Approach Delay, s/veh		12.4			13.0			31.6			34.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.1	52.9	5.8	29.0		57.0	8.8	26.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	41.0	9.0	26.0		53.0	13.0	22.0				
Max Q Clear Time (g_c+I1), s	2.1	15.8	2.9	7.9		16.2	5.7	4.7				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.8		3.6	0.1	0.6				

Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									

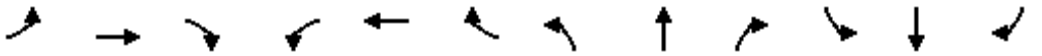
Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	10	104	23	15	126
Future Vol, veh/h	15	10	104	23	15	126
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	11	116	26	17	140

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	303	129	0	0	142	0
Stage 1	129	-	-	-	-	-
Stage 2	174	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	689	921	-	-	1441	-
Stage 1	897	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	681	921	-	-	1441	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	856	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	760	1441	-
HCM Lane V/C Ratio	-	-	0.037	0.012	-
HCM Control Delay (s)	-	-	9.9	7.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	255	44	11	241	138	24	153	13	147	293	99
Future Volume (veh/h)	72	255	44	11	241	138	24	153	13	147	293	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.97	1.00		0.96
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	375	65	12	254	145	29	184	16	158	315	106
Peak Hour Factor	0.68	0.68	0.68	0.95	0.95	0.95	0.83	0.83	0.83	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	947	171	26	578	330	51	789	68	194	598	488
Arrive On Green	0.46	0.46	0.46	0.01	0.52	0.52	0.03	0.24	0.24	0.11	0.32	0.32
Sat Flow, veh/h	456	2042	369	1781	1108	632	1781	3302	284	1781	1870	1527
Grp Volume(v), veh/h	260	0	286	12	0	399	29	98	102	158	315	106
Grp Sat Flow(s),veh/h/ln	1244	0	1623	1781	0	1740	1781	1777	1809	1781	1870	1527
Q Serve(g_s), s	8.5	0.0	10.6	0.6	0.0	13.1	1.5	4.1	4.2	8.0	12.7	4.7
Cycle Q Clear(g_c), s	16.3	0.0	10.6	0.6	0.0	13.1	1.5	4.1	4.2	8.0	12.7	4.7
Prop In Lane	0.41		0.23	1.00		0.36	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	632	0	752	26	0	908	51	425	432	194	598	488
V/C Ratio(X)	0.41	0.00	0.38	0.47	0.00	0.44	0.57	0.23	0.24	0.81	0.53	0.22
Avail Cap(c_a), veh/h	632	0	752	155	0	908	155	425	432	348	650	531
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	16.1	45.0	0.0	13.7	44.2	28.2	28.2	40.1	25.6	22.9
Incr Delay (d2), s/veh	0.4	0.0	0.3	12.8	0.0	1.5	9.8	1.3	1.3	8.0	0.7	0.2
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	3.9	0.0	3.8	0.4	0.0	5.2	0.8	1.9	1.9	3.9	5.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.4	0.0	16.4	57.8	0.0	15.2	53.9	29.5	29.5	48.0	26.3	23.1
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		546			411			229			579	
Approach Delay, s/veh		17.3			16.5			32.6			31.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	5.3	46.7	6.6	33.4		52.0	14.0	26.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	36.0	8.0	32.0		48.0	18.0	22.0				
Max Q Clear Time (g_c+I1), s	2.6	18.3	3.5	14.7		15.1	10.0	6.2				
Green Ext Time (p_c), s	0.0	3.4	0.0	2.1		2.8	0.2	0.9				

Intersection Summary			
HCM 6th Ctrl Delay		23.8	
HCM 6th LOS		C	

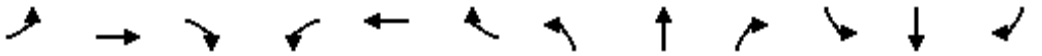
Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	14	175	28	18	330
Future Vol, veh/h	22	14	175	28	18	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	16	194	31	20	367

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	617	210	0	0	225	0
Stage 1	210	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	453	830	-	-	1344	-
Stage 1	825	-	-	-	-	-
Stage 2	672	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	446	830	-	-	1344	-
Mov Cap-2 Maneuver	446	-	-	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	672	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	544	1344	-
HCM Lane V/C Ratio	-	-	0.074	0.015	-
HCM Control Delay (s)	-	-	12.1	7.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	165	36	5	204	156	26	119	8	107	231	62
Future Volume (veh/h)	62	165	36	5	204	156	26	119	8	107	231	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.97
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	185	40	6	227	173	31	142	10	126	272	73
Peak Hour Factor	0.89	0.89	0.89	0.90	0.90	0.90	0.84	0.84	0.84	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	860	198	14	516	393	54	833	58	160	574	473
Arrive On Green	0.48	0.48	0.48	0.01	0.53	0.53	0.03	0.25	0.25	0.09	0.31	0.31
Sat Flow, veh/h	523	1808	416	1781	978	745	1781	3369	235	1781	1870	1539
Grp Volume(v), veh/h	140	0	155	6	0	400	31	74	78	126	272	73
Grp Sat Flow(s),veh/h/ln	1133	0	1614	1781	0	1723	1781	1777	1827	1781	1870	1539
Q Serve(g_s), s	3.4	0.0	5.0	0.3	0.0	12.7	1.5	2.9	3.0	6.2	10.5	3.1
Cycle Q Clear(g_c), s	11.4	0.0	5.0	0.3	0.0	12.7	1.5	2.9	3.0	6.2	10.5	3.1
Prop In Lane	0.50		0.26	1.00		0.43	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	599	0	767	14	0	910	54	439	452	160	574	473
V/C Ratio(X)	0.23	0.00	0.20	0.43	0.00	0.44	0.58	0.17	0.17	0.79	0.47	0.15
Avail Cap(c_a), veh/h	599	0	767	160	0	910	180	439	452	380	672	553
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	0.0	13.6	44.0	0.0	12.9	42.6	26.3	26.3	39.7	25.0	22.4
Incr Delay (d2), s/veh	0.2	0.0	0.1	20.1	0.0	1.5	9.5	0.8	0.8	8.2	0.6	0.2
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	1.8	0.0	1.8	0.2	0.0	5.0	0.8	1.3	1.4	3.0	4.6	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	0.0	13.7	64.1	0.0	14.5	52.1	27.2	27.2	47.9	25.6	22.6
LnGrp LOS	B	A	B	E	A	B	D	C	C	D	C	C
Approach Vol, veh/h		295			406			183			471	
Approach Delay, s/veh		14.5			15.2			31.4			31.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	4.7	46.3	6.7	31.3		51.0	12.0	26.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	35.0	9.0	32.0		47.0	19.0	22.0				
Max Q Clear Time (g_c+I1), s	2.3	13.4	3.5	12.5		14.7	8.2	5.0				
Green Ext Time (p_c), s	0.0	1.8	0.0	1.7		2.9	0.2	0.7				

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	7	146	13	9	264
Future Vol, veh/h	11	7	146	13	9	264
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	180	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	8	162	14	10	293

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	482	169	0	0	176	0
Stage 1	169	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	543	875	-	-	1400	-
Stage 1	861	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	539	875	-	-	1400	-
Mov Cap-2 Maneuver	539	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	741	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	634	1400	-
HCM Lane V/C Ratio	-	-	0.032	0.007	-
HCM Control Delay (s)	-	-	10.9	7.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-