RKH

Civil and Transportation Engineering

TRAFFIC IMPACT ANALYSIS

1390 MAIN STREET
MONTARA, CALIFORNIA

August 10, 2022

Prepared for -
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I. EXECUTIVE SUMMARY

STUDY PURPOSE

The purpose of this study is to quantify and analyze the traffic impacts of a proposed 22 room hotel in unincorporated Montara, California.

SITE LOCATION AND STUDY AREA

The project is located at 1390 Main Street in incorporated Montara in San Mateo County, California. The study area includes Main Street between 8th Street and 6th Street and 7th Street between Main Street and State Route 1. One intersection is included in the study area, Main Street & 7th Street. The project will replace two single family attached dwelling units

DEVELOPMENT DESCRIPTION

The project consists of a 22 room hotel on two floors above a 15 car underground parking garage. Fifteen covered parking spaces are provided in the basement level with access from a driveway off of 7th Street. Perpendicular parking is double loaded on the single 2-way aisle. One handicap parking spaces is required and one is provided. The project will replace two existing single family dwelling units.

PRINCIPAL FINDINGS

The mixed use project is estimated to generate 16 net new vehicle trips during the morning street peak hour and 18 net new vehicle trips during the afternoon street peak traffic hour of an average weekday.

Site Accessibility. Access to the site is by one 2-way driveway off of 7th Street. Site circulation is provided at grade and in the garage level by a single 2-way aisle serving perpendicular parking on both sides of the aisle.

Roadway Improvements. No off-site improvements are needed to accommodate project generated traffic.

CONCLUSIONS

The project will not create a significant impact at the study area intersection.

RECOMMENDATIONS

Within the driveway corner sight triangles there should be no fencing or signs that would obstruct visibility. Trees should be planted so as to not create a "wall" effect when viewed at a shallow angle. The type of vegetative material planted within the triangles should be such that it will grow no higher than three feet above the adjacent roadway surface. Trees planted within the sight triangle areas should be large enough that the lowest limbs are at least seven feet above the surface of the adjacent roadway.

II. PROPOSED DEVELOPMENT

PROJECT DESCRIPTION

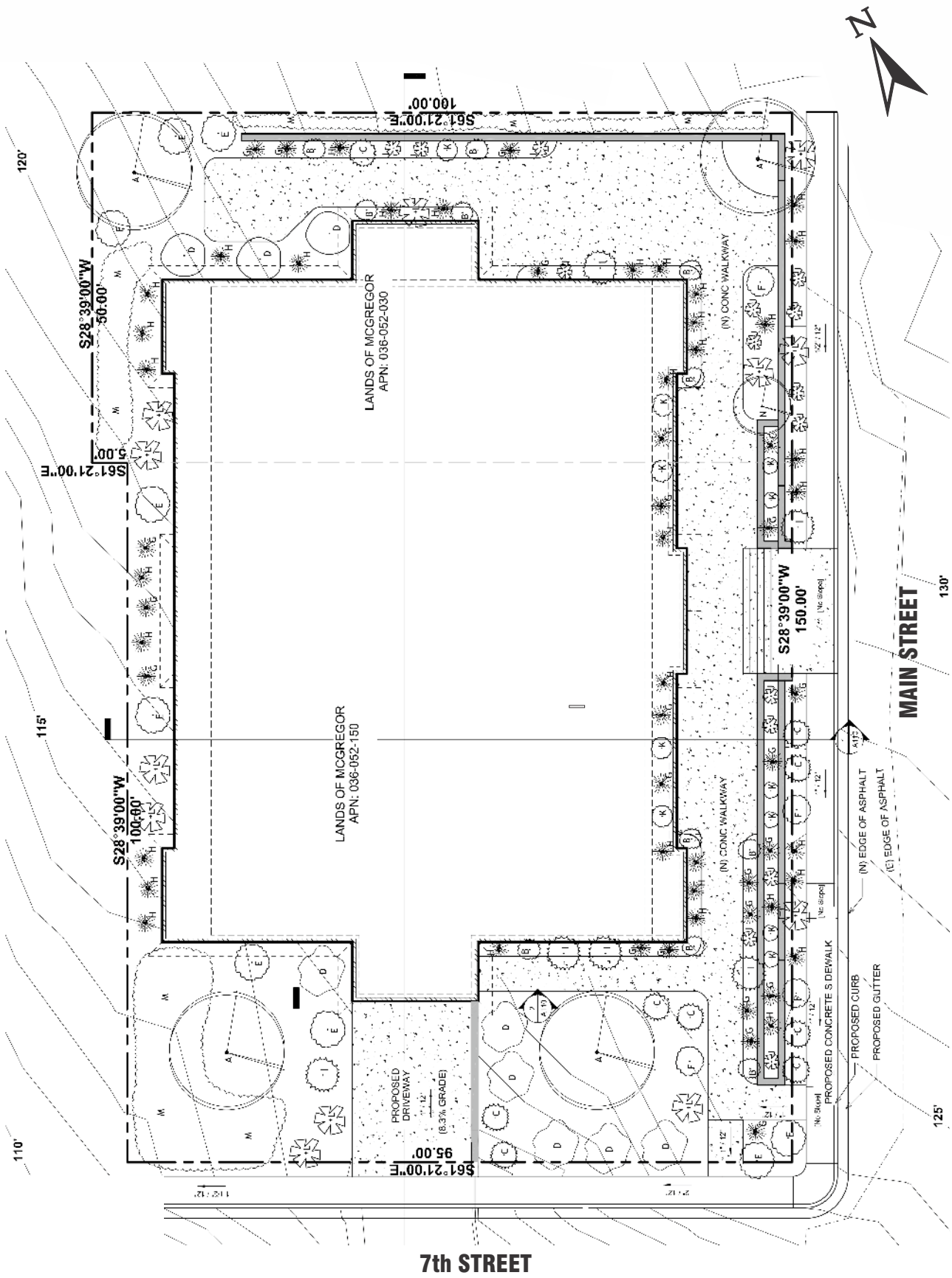
The project is located at 1390 Main Street in the unincorporated community of Montara and consists of a 22 room, two story hotel. The 14,500 square foot site (0.33 acre) is presently occupied by two single family detached housing units.

The proposed project is shown on Figure 1, Site Plan, page 3 and on Figure 2, Location Map, page 4.

The lot is zoned C-1/S-3/DR (Administrative)/CD. The zoning map is shown on Figure 3, page 5.

No off-site development is proposed for the project.

It is anticipated that the project will be completed in 2025.



SITE PLAN
FIGURE 1

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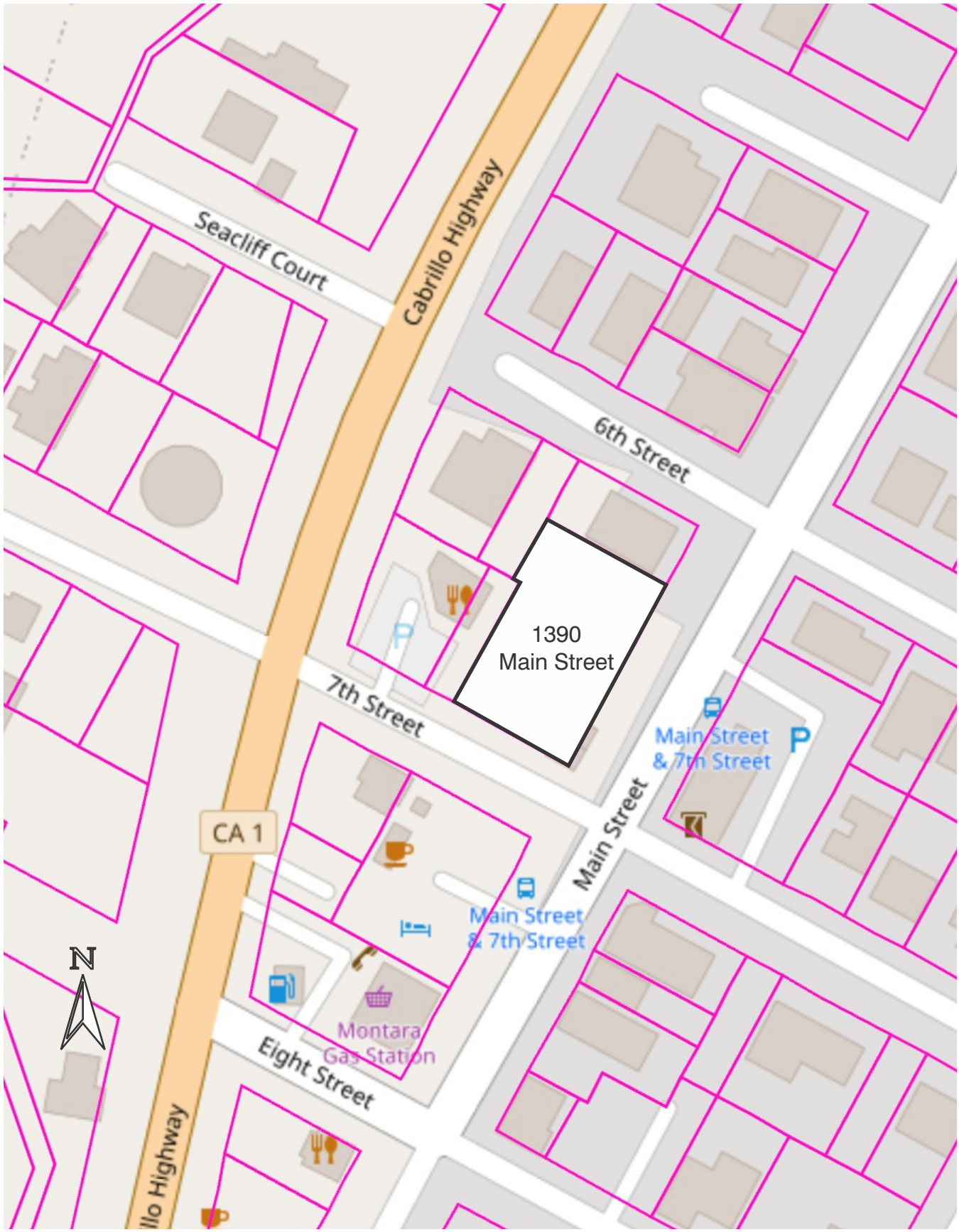

Base map SMCo GIS

0 50 100 150

Scale in Feet

LOCATION MAP
FIGURE 2

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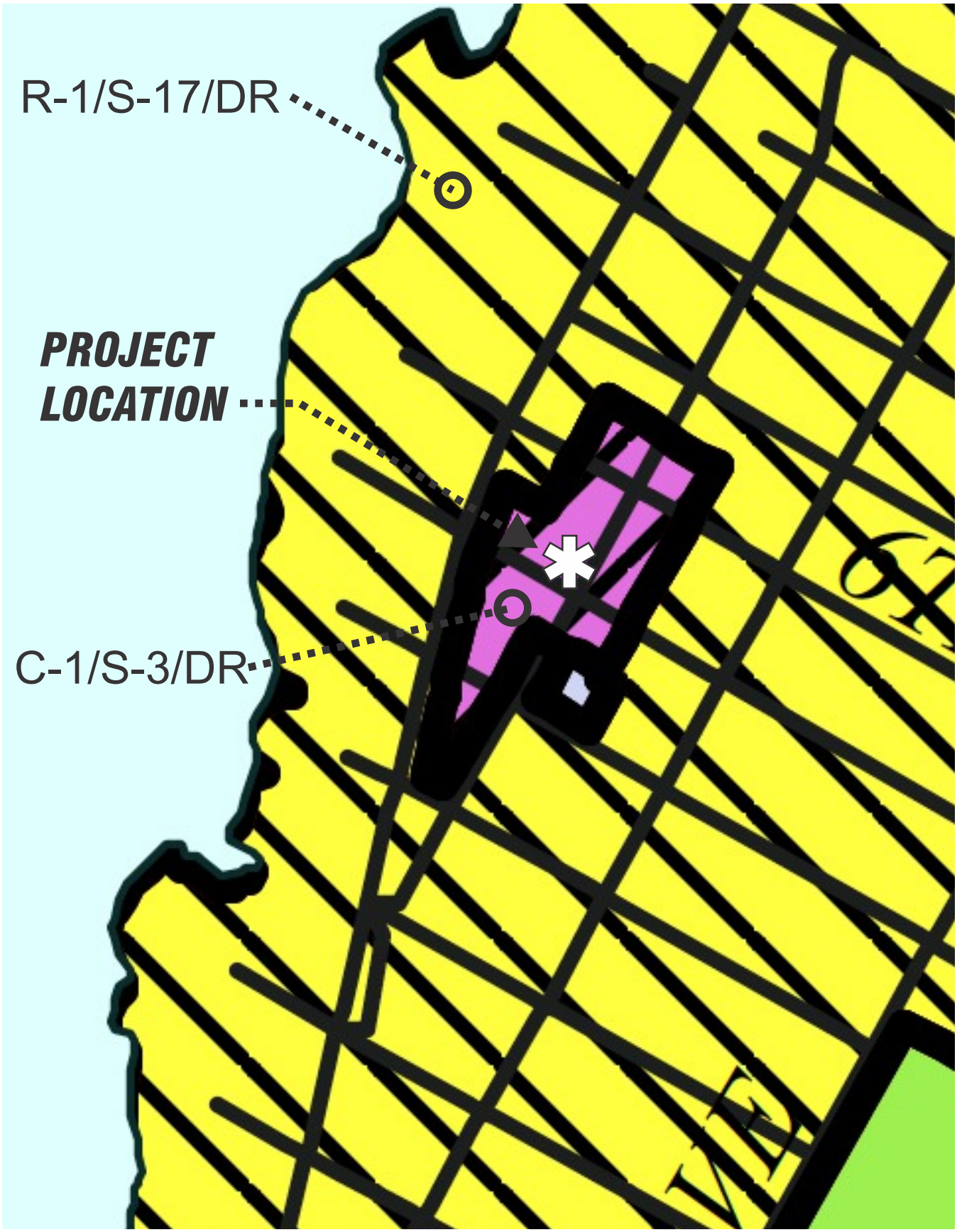

ZONING MAP
FIGURE 3

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III. EXISTING CONDITIONS

STUDY AREA

The study area includes Main Street between 8th Street and 6th Street, 7th Street between Main Street and State Route 1, and one intersection as shown on Study Area, Figure 4, page 7. The study area intersection lane configurations and controls and street characteristics are also shown on Figure 4.

STUDY AREA LAND USE

The study area is typified by single family detached housing units and some multiple unit residential housing and some commercial development along Main Street.

The existing zoning is shown on Figure 3, Zoning Map, page 5. No changes in existing zoning is proposed.

There are no developments within the study area under construction.

SITE ACCESSIBILITY

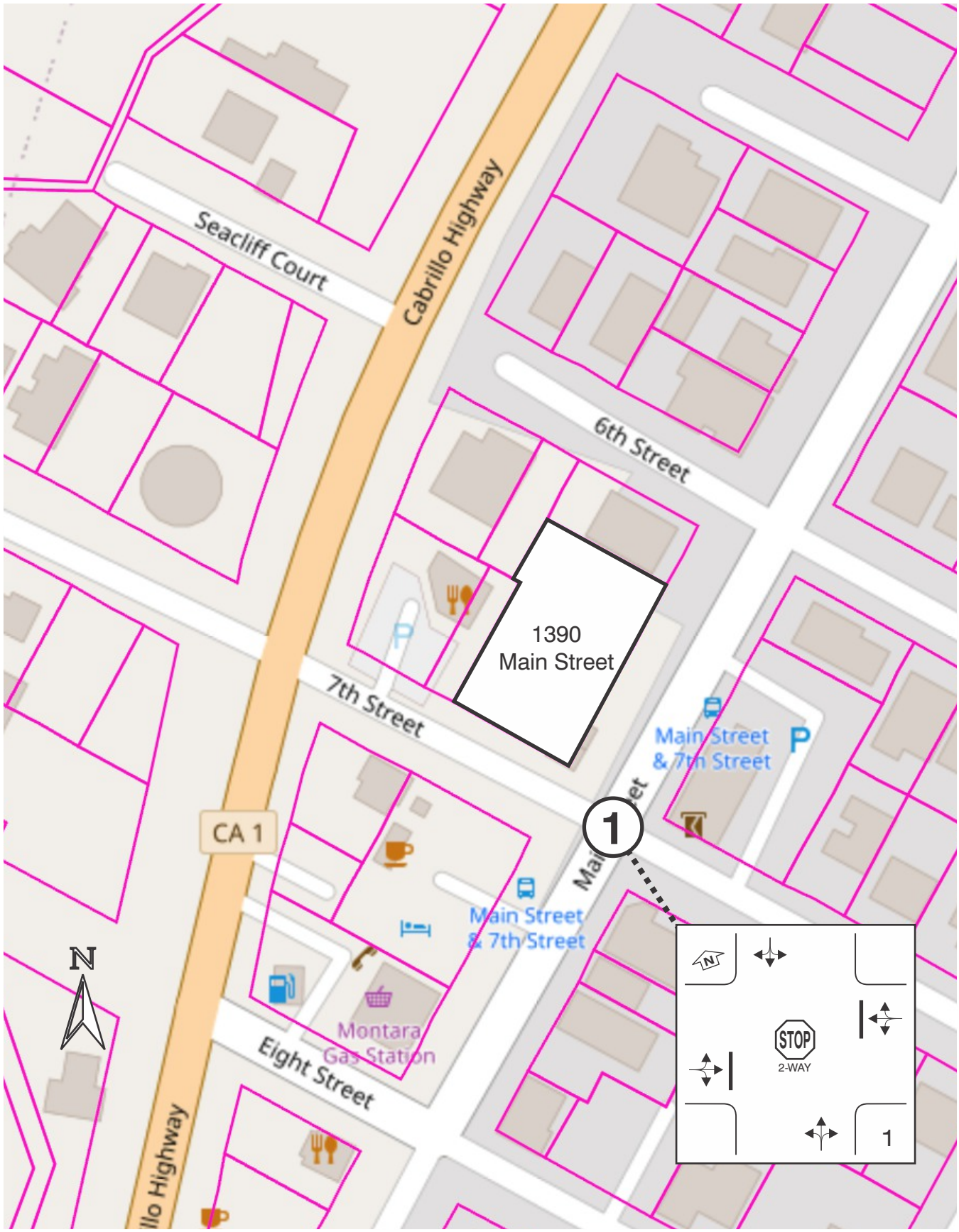
The proposed project is situated on the northwest corner of the intersection of Main Street and 7th Street. The site will have direct access off of 7th Street from a single driveway. All of the streets within the study area are classified as local streets with the exception of Route 1 which is classified as an arterial highway in the San Mateo County General Plan on Map 12.1M, Existing Road System.

Existing Traffic Conditions. Peak period traffic counts were collected at the study area intersection in November, 2021. The existing peak hour traffic volumes are shown on Figure 5, Existing Peak Hour Traffic Volumes, page 8. The study area intersection has been analyzed according to the methodologies contained in the 2000 edition of the *Highway Capacity Manual.*[1] Using the VISTRO[2] network modeling program a traffic network model was created to determine changes in traffic volumes at the study area intersections. Levels of Service at the intersection was done using the Synchro program.[3] Levels of Service define how well or how poorly a traffic facility (a street or an intersection) is operating. There are by definition six Levels of Service. These definitions are presented in Table A on page 9.

[1] Transportation Research Board, *Highway Capacity Manual*, © 1998

[2] PTV Vistro 2022. ©2022

[3] Trafficware Corporation, Synchro 6 (Build 610) © 2003



Base map SMCo GIS

STUDY AREA
FIGURE 4

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Base map SMCo GIS

KEY:
000(000) = AM(PM) Peak Hour Traffic Volumes
AM Midweek Peak Hour Between 6 and 9 AM
PM Midweek Peak Hour Between 4 and 7 PM

EXISTING PEAK HOUR TRAFFIC VOLUMES
FIGURE 5

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TABLE A: Levels of Service Definitions for 2-Way and All-Way STOP Controlled Intersections	
Level of Service	Traffic Conditions
A	Very low delay, less than or equal to10.0 seconds of average control delay per vehicle.
B	Average control delay in the range of 10.1 to 15.0 seconds per vehicle
C	Average control delay in the range of 15.1 to 25.0 seconds per vehicle
D	Average control delay in the range of 25.1 to 35.0 seconds per vehicle
E	Average control delay in the range of 35.1 to 50.0 seconds per vehicle
F	Average control delay in excess of 50 seconds per vehicle.

Reference: *Highway Capacity Manual*, Chapter 17, HCM2000.

Levels of Service Standards. The San Mateo County Congestion Management Program has set Levels of Service standards for major roadways and intersections within the County. Route 1 through Montara is a designated CMP roadway. The CMP designated LOS standard for Route 1 in Montara is E. The LOS standards as set forth in the County's General Plan call for a planning standard LOS of C, and in the Local Coastal Program area a LOS of D during commute peak hours and LOS of E during peak recreational periods. (Section A.1.d.(2), pg. 12.8)

Existing Conditions Intersection Levels of Service. The LOS calculations reflect traffic conditions existing in the fall of 2021. The results of the LOS calculations are summarized in Table B below. The calculation worksheets are provided in Appendix B.

TABLE B: Intersection Levels of Service Existing Conditions				
STOP Controlled Intersection	Controlled Approach	Peak Hour	Delay	LOS
Main Street & 7th Street	Eastbound 7th Street	AM	9.9	A
		PM	9.6	A
	Westbound 7th Street	AM	10.0	A
		PM	10.1	B

Delay is average control delay in seconds per vehicle.
LOS is Level of Service. See Tables A for definitions.

The intersection operates well within the County's LOS standards during the peak traffic hours of the average weekday.

IV. EXISTING + PROJECT CONDITIONS

SITE TRAFFIC

Trip Generation. Vehicle trip generation is estimated using the data in *Trip Generation*.[4] The vehicle trip generation projections are shown in Table C below. A detailed trip generation table is provided in Appendix C. The project consists of a 22 room hotel which replaces two existing single family detached residential units. While the project is described as a hotel, its trip generation characteristics are more closely aligned to that of a motel. See Appendix C for descriptions of motel and hotel characteristics taken directly from the ITE's *Trip Generation,* 11th Edition. For trip generation purposes in this analysis the project is considered a motel pursuant to the ITE descriptions.

TABLE C: Vehicle Trip Generation

Land Use	LU Code	Size	Units	AM Peak Hour			PM Peak Hour			AWDT
Hotel (Motel)	320	22	RM	3	5	8	4	4	8	74
SFA	215	-4	DU	-1	-1	-2	-1	-1	-2	-29
Net Total:				2	4	6	3	3	6	45

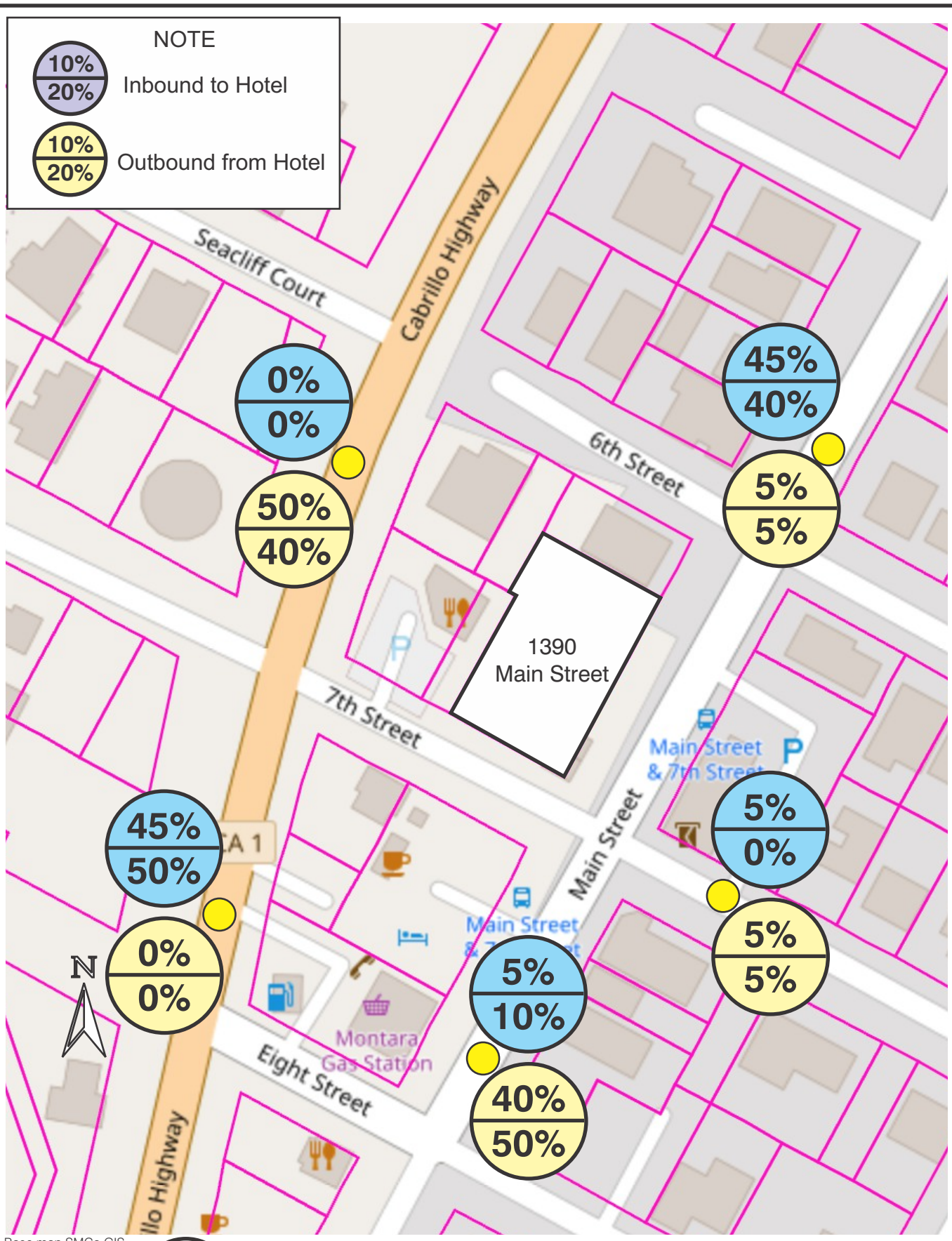
AWDT = Average Weekday Traffic (24 hr.) SFA = Single Family Attached. NOTE: numbers may not add due to rounding

Trip Distribution. Vehicle trips to and from the site will come almost exclusively from Route 1 in an estimated 50/50 split, north and south. Distribution of vehicle trips on the study area network is shown on Figure 6, Vehicle Trip Distribution, page 11.

Modal Split. A number of factors affect the travel mode split including size of the facility, number of occupants, location, availability of transit service, income, etc. Because of its small size, 22 guest rooms, the mode of travel will likely be virtually all by private vehicle. While there is transit service available on Route 1 and in Montara on school days, the number of person-trips by guests and employees to the site by transit will likely be less than five per day, probably closer to none. Ride sharing by guests and employees could further reduce vehicle person-trips and parking generation. Bicycle trips by local employees could also reduce vehicle person-trips and parking generation.

Trip Assignment. Project generated vehicle trips have been assigned to the VISTRO traffic model network according to the trip distribution assumptions stated above. Trips to the north and south will be via State Route 1. Trips to the east will be via 7th Street to destinations within Montara.

[4] Institute of Transportation Engineers, 11th Edition, © 2021



Base map SMCo GIS

10% / 20% ..... AM Peak Hour
PM Peak Hour

VEHICLE TRIP DISTRIBUTION
FIGURE 6

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Existing + Project Scenario Traffic. The combination of existing traffic and project generated traffic is shown on Figure 7, Existing + Project Conditions Peak Hour Traffic Volumes, page 13. The impacts of project generated traffic are shown in Table D below.

TABLE D: Intersection Levels of Service
Existing + Project Conditions

Signalized Intersection	STOP Controlled Intersection	Peak Hour	Existing Conditions		Existing + Project Conditions	
			Delay	LOS	Delay	LOS
Main Street & 7th Street	Eastbound 7th Street	AM	9.9	A	9.6	A
		PM	9.6	A	9.3	A
	Westbound 7th Street	AM	10.0	A	10.0	A
		PM	10.1	B	10.2	B

Delay is average control delay in seconds per vehicle. V/C is critical volume-to-capacity ratio.
LOS is Level of Service. See Tables A and A1 for definitions.

Base map SMCo GIS

KEY:
000(000) = AM(PM) Peak Hour Traffic Volumes
AM Midweek Peak Hour Between 6 and 9 AM
PM Midweek Peak Hour Between 4 and 7 PM

EXISTING + PROJECT PEAK HOUR TRAFFIC VOLUMES
FIGURE 7

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V. CUMULATIVE CONDITIONS

Future Development. For purposes of this study the horizon year for cumulative conditions traffic is 2045, 20 years from project completion. The potential for other developments within the project study area is minimal.

Background Growth. A review of published traffic volume data for Route 1 between Vallemar/Etheldore Streets in Moss Beach and San Pedro Avenue in Pacifica from 2009 to 2019 found that growth in average annual daily traffic to be 2.4%. A review of population changes in Montara census data from 2011 to 2019 found a 9% decrease in population. For purposes of this study an annual background growth rate of 1.0% in traffic for the study area intersection has been used.

Cumulative Conditions Traffic. Traffic volumes through the study area intersection at the horizon year 2045 are shown on Figure 8, Cumulative Conditions Peak Hour Traffic Volumes, page 15. With the project traffic added, the Cumulative + Project Peak Hour Traffic Volumes are shown on Figure 9, page 16. Levels of service for the two cumulative scenarios are shown in Table E below.

TABLE E: Intersection Levels of Service
Cumulative + Project Conditions

Signalized Intersection	STOP Controlled Intersection	Peak Hour	Cumulative Conditions		Cumulative + Project Conditions	
			Delay	LOS	Delay	LOS
Main Street & 7th Street	Eastbound 7th Street	AM	10.2	B	10.0	A
		PM	9.9	A	9.6	A
	Westbound 7th Street	AM	10.4	B	10.4	B
		PM	10.7	B	10.7	B

Delay is average control delay in seconds per vehicle. V/C is critical volume-to-capacity ratio.
LOS is Level of Service. See Tables A and A1 for definitions.

Base map SMCo GIS

KEY:
000(000) = AM(PM) Peak Hour Traffic Volumes
AM Midweek Peak Hour Between 6 and 9 AM
PM Midweek Peak Hour Between 4 and 7 PM

CUMULATIVE CONDITIONS PEAK HOUR TRAFFIC VOLUMES
FIGURE 8

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Base map SMCo GIS

KEY:
000(000) = AM(PM) Peak Hour Traffic Volumes
AM Midweek Peak Hour Between 6 and 9 AM
PM Midweek Peak Hour Between 4 and 7 PM

CUMULATIVE + PROJECT PEAK HOUR TRAFFIC VOLUMES
FIGURE 9

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VI. SITE-SPECIFIC TRAFFIC ANALYSIS

SITE ACCESS

The site is served by a single driveway off of 7th Street. The driveway is to be 17 feet wide. The driveway throat length is approximately 23 feet, adequate for one vehicle length.

Driveway Corner Sight Distance. Vehicles exiting the site onto 7th Street should have adequate sight distance to approaching vehicles from either direction on the street. For the 25 mph speed limit on the street the corner sight distance for the driveway should be as shown in Figure 10 below. Within the sight triangles there should be no fencing, signs, posts, shrubs or trees that would obstruct the vision of the driver exiting the site.

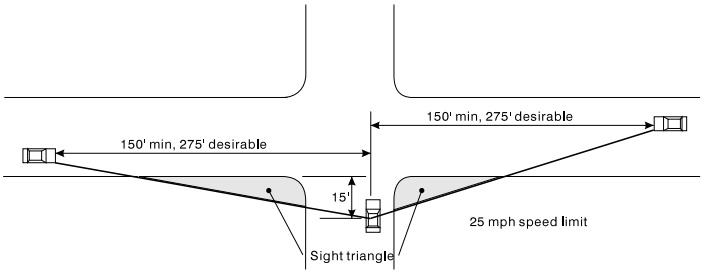


Figure 10

SITE CIRCULATION

Fifteen covered parking spaces are provided in the basement level with access from a single driveway off of 7th Street. Perpendicular parking is double loaded on the single 2-way aisle. One handicap parking space is required and one is provided.

Parking Demand. The peak parking demand for the hotel (motel) use at the 85th percentile confidence level is 19 spaces.[5] Overflow parking is available on the surrounding streets. A parking occupancy survey was conducted on November 17, 2021 at 9:00 p.m. The survey was for Main Street, 8th Street to 6th Street, and 7th Street, Main Street to Route 1. The survey found that there were a total of 44 parking spaces available in the survey area and that there were only nine spaces occupied (20%). Details of the survey are provided in Appendix C. Based on the findings of the survey there should be more than ample on-street parking available to accommodate the limited overflow parking from the hotel.

[5] Institute of Transportation Engineers, *Parking Generation*, 5th Edition, © 2021

IX. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Findings. The hotel (motel) project is estimated to generate 8 new vehicle trip ends during the morning and 8 new vehicle trip ends during the afternoon street peak traffic hours of an average weekday. The new vehicle trip generation will be offset by the reduction in occupancy of the two single family attached housing units which are estimated to generate 2 vehicle trip ends during each of the peak traffic hours resulting in 6 net new vehicle trip ends during the peak traffic hours. The project will not create a significant impact at the study area intersection.

Site Accessibility. Access to the site is by one 2-way driveway off of 7th Street. Site circulation is provided at grade in the garage level by a single 2-way aisle serving perpendicular parking on both sides of the aisle.

Roadway Improvements. No off-site roadway improvements are needed to accommodate project generated traffic.

RECOMMENDATIONS

Off-site:

None.

On-site:

Within the driveway corner sight triangles there should be no fencing or signs that would obstruct visibility. Trees should be planted so as to not create a "wall" effect when viewed at a shallow angle. The type of vegetative material planted within the triangles should be such that it will grow no higher than three feet above the adjacent roadway surface. Trees planted within the sight triangle areas should be large enough that the lowest limbs are at least seven feet above the surface of the adjacent roadway.

Richard K Hopper

Richard K. Hopper, P.E.
Principal

APPENDICES

A. Traffic Count Data

B. Levels of Service Calculation Worksheets

C. Traffic Analysis Worksheets

A. Traffic Count Worksheets

TRAFFIC COUNTS PLUS
mietekm@comcast.net
925.305.4358

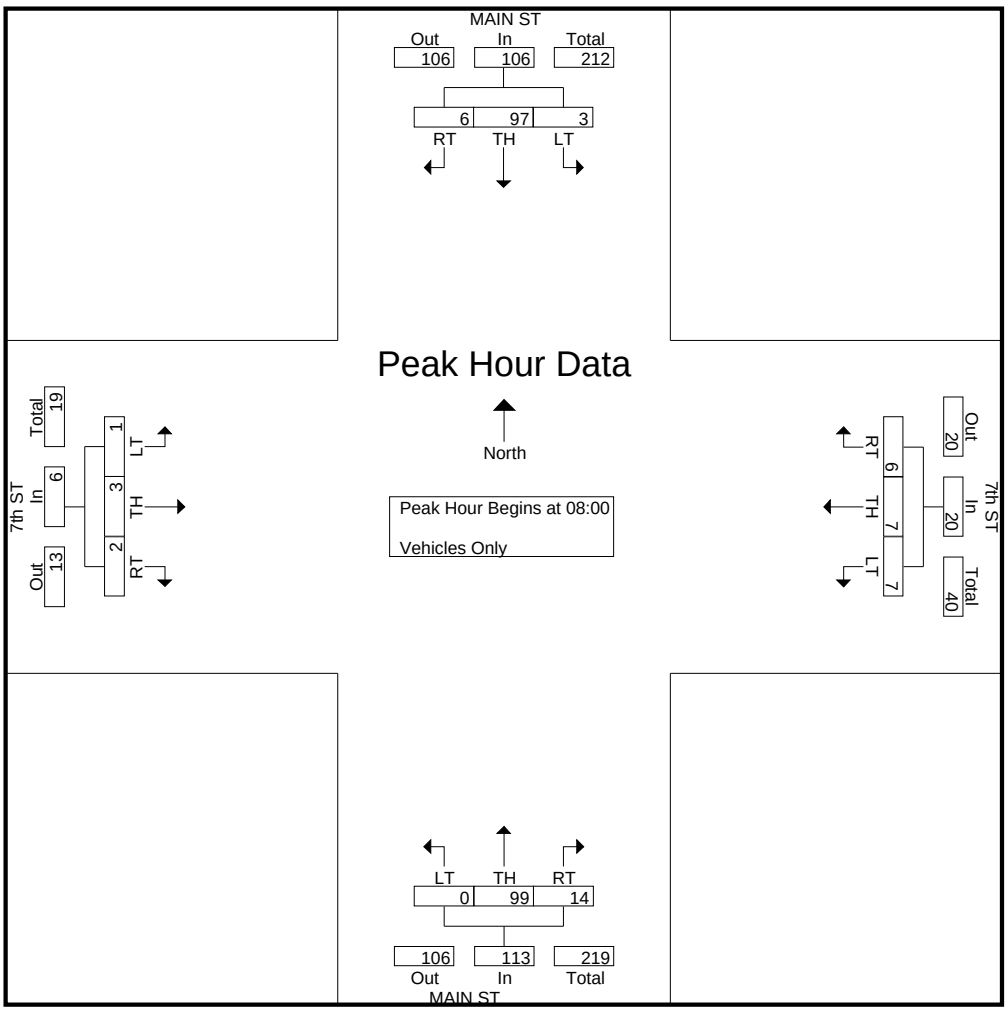
SAN MATEO COUNTY
TOWN OF MONTARA
Latitude: 37.542006
Longitude: -122.515279

File Name : main-7th-a
Site Code : 1
Start Date : 11/30/2021
Page No : 1

Groups Printed- Vehicles Only

	MAIN ST Southbound				7th ST Westbound				MAIN ST Northbound				7th ST Eastbound				
Start Time	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	Int. Total
07:00	1	9	1	11	0	2	1	3	0	3	0	3	0	0	0	0	17
07:15	0	14	1	15	0	0	2	2	0	9	0	9	0	0	0	0	26
07:30	2	30	0	32	1	1	5	7	0	12	0	12	0	0	0	0	51
07:45	1	18	0	19	0	2	5	7	3	11	0	14	1	0	0	1	41
Total	4	71	2	77	1	5	13	19	3	35	0	38	1	0	0	1	135
08:00	2	22	0	24	0	1	1	2	3	27	0	30	1	0	1	2	58
08:15	1	24	1	26	2	3	2	7	3	38	0	41	0	0	0	0	74
08:30	0	31	1	32	3	1	3	7	0	26	0	26	0	0	0	0	65
08:45	3	20	1	24	1	2	1	4	8	8	0	16	1	3	0	4	48
Total	6	97	3	106	6	7	7	20	14	99	0	113	2	3	1	6	245
Grand Total	10	168	5	183	7	12	20	39	17	134	0	151	3	3	1	7	380
Apprch %	5.5	91.8	2.7		17.9	30.8	51.3		11.3	88.7	0		42.9	42.9	14.3		
Total %	2.6	44.2	1.3	48.2	1.8	3.2	5.3	10.3	4.5	35.3	0	39.7	0.8	0.8	0.3	1.8	

	MAIN ST Southbound				7th ST Westbound				MAIN ST Northbound				7th ST Eastbound				
Start Time	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	2	22	0	24	0	1	1	2	3	27	0	30	**1**	0	**1**	2	58
08:15	1	24	**1**	26	2	**3**	2	**7**	3	**38**	0	**41**	0	0	0	0	**74**
08:30	0	**31**	1	**32**	**3**	1	**3**	7	0	26	0	26	0	0	0	0	65
08:45	**3**	20	1	24	1	2	1	4	**8**	8	0	16	1	**3**	0	**4**	48
Total Volume	6	97	3	106	6	7	7	20	14	99	0	113	2	3	1	6	245
% App. Total	5.7	91.5	2.8		30	35	35		12.4	87.6	0		33.3	50	16.7		
PHF	.500	.782	.750	.828	.500	.583	.583	.714	.438	.651	.000	.689	.500	.250	.250	.375	.828



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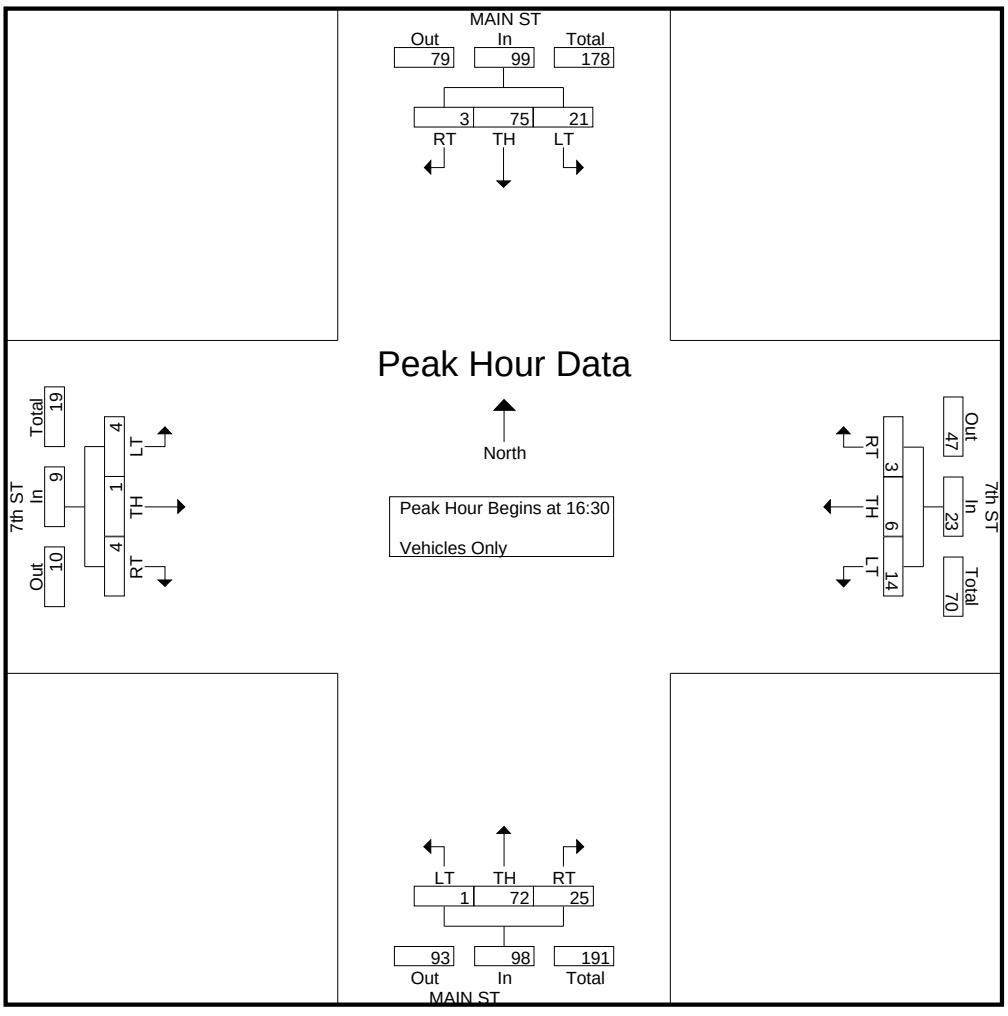
	MAIN ST Southbound				7th ST Westbound				MAIN ST Northbound				7th ST Eastbound				
Start Time	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	Int. Total
16:00	1	20	2	23	2	2	5	9	6	17	1	24	0	0	2	2	58
16:15	0	24	3	27	2	1	2	5	6	14	0	20	0	1	1	2	54
16:30	1	12	5	18	1	1	7	9	6	15	0	21	0	0	1	1	49
16:45	0	14	10	24	1	2	1	4	5	16	0	21	0	1	2	3	52
Total	2	70	20	92	6	6	15	27	23	62	1	86	0	2	6	8	213
17:00	2	30	1	33	1	1	4	6	7	18	1	26	2	0	0	2	67
17:15	0	19	5	24	0	2	2	4	7	23	0	30	2	0	1	3	61
17:30	1	12	4	17	0	0	3	3	4	13	1	18	1	1	0	2	40
17:45	0	8	4	12	0	0	2	2	4	27	2	33	0	0	0	0	47
Total	3	69	14	86	1	3	11	15	22	81	4	107	5	1	1	7	215
Grand Total	5	139	34	178	7	9	26	42	45	143	5	193	5	3	7	15	428
Apprch %	2.8	78.1	19.1		16.7	21.4	61.9		23.3	74.1	2.6		33.3	20	46.7		
Total %	1.2	32.5	7.9	41.6	1.6	2.1	6.1	9.8	10.5	33.4	1.2	45.1	1.2	0.7	1.6	3.5	

	MAIN ST Southbound				7th ST Westbound				MAIN ST Northbound				7th ST Eastbound				
Start Time	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	1	12	5	18	**1**	1	**7**	**9**	6	15	0	21	0	0	1	1	49
16:45	0	14	**10**	24	1	**2**	1	4	5	16	0	21	0	**1**	**2**	**3**	52
17:00	**2**	**30**	1	**33**	1	1	4	6	**7**	18	**1**	26	**2**	0	0	2	**67**
17:15	0	19	5	24	0	2	2	4	7	**23**	0	**30**	2	0	1	3	61
Total Volume	3	75	21	99	3	6	14	23	25	72	1	98	4	1	4	9	229
% App. Total	3	75.8	21.2		13	26.1	60.9		25.5	73.5	1		44.4	11.1	44.4		
PHF	.375	.625	.525	.750	.750	.750	.500	.639	.893	.783	.250	.817	.500	.250	.500	.750	.854



B. Levels of Service Calculation Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	3	2	7	7	6	0	99	14	3	97	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	3	2	8	8	7	0	108	15	3	105	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	241	238	109	234	234	115	112			123		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	241	238	109	234	234	115	112			123		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	99	99	100			100		
cM capacity (veh/h)	701	661	945	715	665	937	1478			1464		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	7	22	123	115
Volume Left	1	8	0	3
Volume Right	2	7	15	7
cSH	743	749	1478	1464
Volume to Capacity	0.01	0.03	0.00	0.00
Queue Length (ft)	1	2	0	0
Control Delay (s)	9.9	10.0	0.0	0.2
Lane LOS	A	A		A
Approach Delay (s)	9.9	10.0	0.0	0.2
Approach LOS	A	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	1	4	14	6	3	1	72	25	21	75	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	4	15	7	3	1	78	27	23	82	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	229	236	83	228	224	92	85			105		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229	236	83	228	224	92	85			105		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	98	99	100	100			98		
cM capacity (veh/h)	709	654	976	714	664	966	1512			1486		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	10	25	107	108
Volume Left	4	15	1	23
Volume Right	4	3	27	3
cSH	799	725	1512	1486
Volume to Capacity	0.01	0.03	0.00	0.02
Queue Length (ft)	1	3	0	1
Control Delay (s)	9.6	10.1	0.1	1.7
Lane LOS	A	B	A	A
Approach Delay (s)	9.6	10.1	0.1	1.7
Approach LOS	A	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	3	4	7	7	6	0	99	14	3	96	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	3	4	8	8	7	0	108	15	3	104	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	240	238	108	236	234	115	112			123		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	240	238	108	236	234	115	112			123		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	99	99	100			100		
cM capacity (veh/h)	702	662	946	711	665	937	1478			1464		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	9	22	123	115
Volume Left	1	8	0	3
Volume Right	4	7	15	8
cSH	785	747	1478	1464
Volume to Capacity	0.01	0.03	0.00	0.00
Queue Length (ft)	1	2	0	0
Control Delay (s)	9.6	10.0	0.0	0.2
Lane LOS	A	A		A
Approach Delay (s)	9.6	10.0	0.0	0.2
Approach LOS	A	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	1	6	14	6	3	1	72	25	21	74	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	1	7	15	7	3	1	78	27	23	80	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	229	236	83	230	226	92	86			105		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	229	236	83	230	226	92	86			105		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	99	98	99	100	100			98		
cM capacity (veh/h)	709	654	976	711	663	966	1510			1486		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	25	107	109
Volume Left	3	15	1	23
Volume Right	7	3	27	5
cSH	840	722	1510	1486
Volume to Capacity	0.01	0.03	0.00	0.02
Queue Length (ft)	1	3	0	1
Control Delay (s)	9.3	10.2	0.1	1.7
Lane LOS	A	B	A	A
Approach Delay (s)	9.3	10.2	0.1	1.7
Approach LOS	A	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	4	3	9	9	8	0	124	18	4	122	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	4	3	10	10	9	0	135	20	4	133	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	304	300	137	296	295	145	141			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	304	300	137	296	295	145	141			154		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	100	98	98	99	100			100		
cM capacity (veh/h)	633	610	912	649	615	903	1442			1426		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	9	28	154	146
Volume Left	1	10	0	4
Volume Right	3	9	20	9
cSH	700	696	1442	1426
Volume to Capacity	0.01	0.04	0.00	0.00
Queue Length (ft)	1	3	0	0
Control Delay (s)	10.2	10.4	0.0	0.2
Lane LOS	B	B		A
Approach Delay (s)	10.2	10.4	0.0	0.2
Approach LOS	B	B		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	1	5	18	8	4	1	91	31	26	94	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	5	20	9	4	1	99	34	28	102	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	288	296	104	285	281	116	107			133		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	288	296	104	285	281	116	107			133		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	97	99	100	100			98		
cM capacity (veh/h)	644	603	950	653	615	937	1484			1452		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	12	33	134	135
Volume Left	5	20	1	28
Volume Right	5	4	34	4
cSH	749	669	1484	1452
Volume to Capacity	0.02	0.05	0.00	0.02
Queue Length (ft)	1	4	0	1
Control Delay (s)	9.9	10.7	0.1	1.7
Lane LOS	A	B	A	A
Approach Delay (s)	9.9	10.7	0.1	1.7
Approach LOS	A	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	4	5	9	9	8	0	124	18	4	121	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	4	5	10	10	9	0	135	20	4	132	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	303	299	136	297	295	145	141			154		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	303	299	136	297	295	145	141			154		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	98	98	99	100			100		
cM capacity (veh/h)	634	611	912	646	615	903	1442			1426		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	11	28	154	146
Volume Left	1	10	0	4
Volume Right	5	9	20	10
cSH	735	695	1442	1426
Volume to Capacity	0.01	0.04	0.00	0.00
Queue Length (ft)	1	3	0	0
Control Delay (s)	10.0	10.4	0.0	0.2
Lane LOS	A	B		A
Approach Delay (s)	10.0	10.4	0.0	0.2
Approach LOS	A	B		

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	1	7	18	8	4	1	91	31	26	93	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	1	8	20	9	4	1	99	34	28	101	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	288	296	104	287	282	116	108			133		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	288	296	104	287	282	116	108			133		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	99	97	99	100	100			98		
cM capacity (veh/h)	644	603	950	649	614	937	1483			1452		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	13	33	134	136
Volume Left	4	20	1	28
Volume Right	8	4	34	7
cSH	788	666	1483	1452
Volume to Capacity	0.02	0.05	0.00	0.02
Queue Length (ft)	1	4	0	1
Control Delay (s)	9.6	10.7	0.1	1.7
Lane LOS	A	B	A	A
Approach Delay (s)	9.6	10.7	0.1	1.7
Approach LOS	A	B		

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		

C. Traffic Analysis Worksheets

1390 Main Street, Montara, California

Vehicle Trip Generation

July 25, 2022

LAND USE	LU CODE	SIZE	UNITS	TG	TRIP GENERATION RATE*							TRIP GENERATION VOLUME						
					A.M. STREET PEAK HOUR			P.M. STREET PEAK HOUR				A.M. STREET PEAK HOUR			P.M. STREET PEAK HOUR			
					IN	OUT	TOTAL	IN	OUT	TOTAL	AWDT	IN	OUT	TOTAL	IN	OUT	TOTAL	AWDT
Hotel (Motel)	320	22	RM	(1)	0.13	0.22	0.35	0.19	0.17	0.36	3.35	3	5	8	4	4	8	74
Single Family Attached	215	-4	DU	(1)	0.15	0.33	0.48	0.32	0.25	0.57	7.20	-1	-1	-2	-1	-1	-2	-29
											Net Total Trip Ends:	2	4	6	3	3	6	45

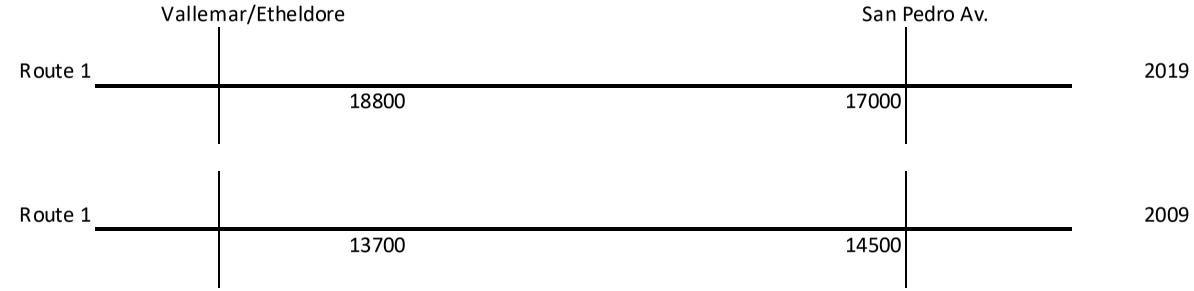
* ITE, Trip Generation, 11th Edition, © 2021

(1) Average Rate. Size outside of range of data.

AWDT = Average Weekday Traffic (24 hr. total)

1390 Main Street, Montara
Background Traffic Growth Analysis

District	Route	Post Mile	Location	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT	
04	001	35.334	VALLEMAR/ETHELDORE STREETS	1900	18000	17000	2100	19000	18800	2019
04	001	40.752	PACIFICA, SAN PEDRO AVENUE	2000	17600	17000	2000	17600	17000	
04	001	35.334	VALLEMAR/ETHELDORE STS	1,250	15,300	14,300	1,250	14,700	13,700	2009
04	001	40.752	PACIFICA, SAN PEDRO AVE	1,300	15,500	14,500	1,300	15,500	14,500	



10-yr. change	0.372		0.172
Annual change rate	1.032	1.024 Average	1.016

22-Room Hotel
1390 Main Street, Montara
On-Street Parking Occupancy Survey

Wednesday, November 17, 2021, 9:00 p.m.

Main Street, 8th Street to 7th Street

	Spaces	Occupancy	% Occupied
West Side	5	0	0%
East Side	9	5	56%

Main Street, 7th Street to 6th Street

	Spaces	Occupancy	% Occupied
West Side	6	2	33%
East Side	8	2	25%

7th Street, Main Street to Route 1

	Spaces	Occupancy	% Occupied
North Side	7	0	0%
South Side	9	0	0%
Total	44	9	20%

Land Use: 320 Motel

Description

A motel is a place of lodging that provides sleeping accommodations and often a restaurant. Motels generally offer free on-site parking and provide little or no meeting space and few (if any) supporting facilities. Exterior corridors accessing rooms—immediately adjacent to a parking lot—commonly characterize motels. Hotel (Land Use 310), all suites hotel (Land Use 311), business hotel (Land Use 312), and resort hotel (Land Use 330) are related uses.

Additional Data

Typically, the average employment at motels is much lower than at hotels. Sixteen studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent. Time-of-day distribution data for this land use are presented in Appendix A. For the four general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 5:30 and 6:30 a.m. and 5:15 and 6:15 p.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Florida, Indiana, New Jersey, New York, Oregon, South Dakota, and Texas.

Land Use: 310 Hotel

Hotel Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

Additional Data

Studies of hotel employment density indicate that, on the average, a hotel will employ 0.9 employees per room.1 Twenty-five studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent. Some properties contained in this land use provide guest transportation services such as airport shuttles, limousine service, or golf course shuttle service, which may have an impact on the overall trip generation rates. Time-of-day distribution data for this land use are presented in Appendix A. For the one center city core site with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 8:30 and 9:30 a.m. and 3:15 and 4:15 p.m., respectively. On Saturday and Sunday, the peak hours were between 5:00 and 6:00 p.m. and 10:15 and 11:15 a.m., respectively.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, District of Columbia, Florida, Georgia, Indiana, Minnesota, New York, Pennsylvania, South Dakota, Texas, Vermont, Virginia, and Washington.