

**TRAFFIC ANALYSIS
FOR
ALANIK HOTEL
401-431 S. GULFVIEW BLVD
CLEARWATER, FLORIDA**

PREPARED FOR:
OCEAN PROPERTIES, LLC

PREPARED BY:
GULF COAST CONSULTING, INC.
FEBRUARY 2022



Robert Pergolizzi, AICP / PTP
AICP #9023 / PTP #133

I. INTRODUCTION

The applicant is proposing to redevelop their property on Clearwater Beach into a 248 room resort hotel. This hotel and ancillary retail space was previously approved by HDA2015-06001 and FLD2015-09036A) as part of a Development Agreement granting rooms from the Hotel Density Reserve. Prior approvals were based on a Traffic Analysis prepared by Gulf Coast Consulting, Inc. revised in November 2015 and July 2019, the latter of which analyzed the new hotel to include property located at 431 S. Gulfview Boulevard (Post Corner Pizza).

This new hotel will replace two existing smaller hotels, a T-shirt shop that currently exist at along S. Gulfview Boulevard, and the Post Corner Pizza. **This analysis is based on the previously approved 248 room hotel project, but is adjusted to account for proposed modifications to the driveways.** The new hotel will be located between S. Gulfview Boulevard and Coronado Drive along the south side of 5th Street. (See Figure 1) Prior to completing this Traffic Analysis the methodology was established with City of Clearwater Traffic Engineering staff at a meeting on February 2, 2022. This application is the subject of a Minor Amendment to the previously approved project. This application requires an assessment of the traffic impacts at the driveways and adjacent intersections only.

II. EXISTING TRAFFIC CONDITIONS

The Alanik hotel property has frontage on Coronado Drive, 5th Street and south Gulfview Boulevard. South Gulfview Boulevard is a two-lane collector roadway with on-street parking running along Clearwater Beach. Coronado Drive is a three-lane roadway with on-street parking in the vicinity of the project, and 5th Street is a two-lane local roadway controlled by stop signs at Coronado Drive and S Gulfview Blvd.

Per the methodology traffic counts that were conducted on in July 2021 for the #405 Coronado Drive hotel project and traffic counts conducted in December 2021 for the #325 S Gulfview Blvd project were used as the basis for this study. These counts were collected at the following intersections during the weekday PM peak period of 2:30 – 4:30 PM.

S. Gulfview Blvd. / Hamden Drive (signal)
Coronado Drive / Hamden Drive
Coronado Drive / 5th Street
S. Gulfview Blvd. / Coronado Drive (signal)
Hamden Drive / Bayside Drive
Hamden Drive / 5th Street
Coronado Drive / Brightwater Drive
Coronado Drive / Third Street



PROJECT LOCATION - ALANIK HOTEL 401-431 S. GULFVIEW BLVD

PROJECT NO:
14-032.01



Gulf Coast Consulting, Inc.
Land Development Consulting

DATE:
2/2022

DRAWN BY:
GJS

FIGURE:

1

All traffic counts were converted to annual average equivalents using FDOT seasonal adjustment factors. Existing traffic volumes are shown in Figure 2. Existing intersections were analyzed using the SYNCHRO software. The SYNCHRO printouts are included in Appendix A.

Presently the signalized intersection at S. Gulfview Boulevard / Hamden Drive operates at LOS B with average delay being 11.7 seconds per vehicle with ICU of 62.2%. The maximum v/c ratio is 0.64.

At the intersection of Hamden Drive / Coronado Drive the primary movements are southbound on Coronado Drive (slight right) and northbound-on Hamden-Coronado, whereas the southwestbound approach (Hamden Drive) is stop controlled. The SYNCHRO analysis shows the stop-controlled movements on Hamden Drive operate at LOS B with delay of 12.9 seconds per vehicle and a v/c ratio of 0.113.

At the Coronado Drive / 5th Street intersection, 5th Street is the stop-controlled minor street. Southbound left turns operate at LOS A with average delay of 8.4 seconds and a v/c ratio of 0.035, the eastbound approach operates at LOS E with average delay of 38.5 seconds and a v/c ratio of 0.46, and the westbound approach operates at LOS B with average delay of 14.8 seconds with a v/c ratio of 0.114.

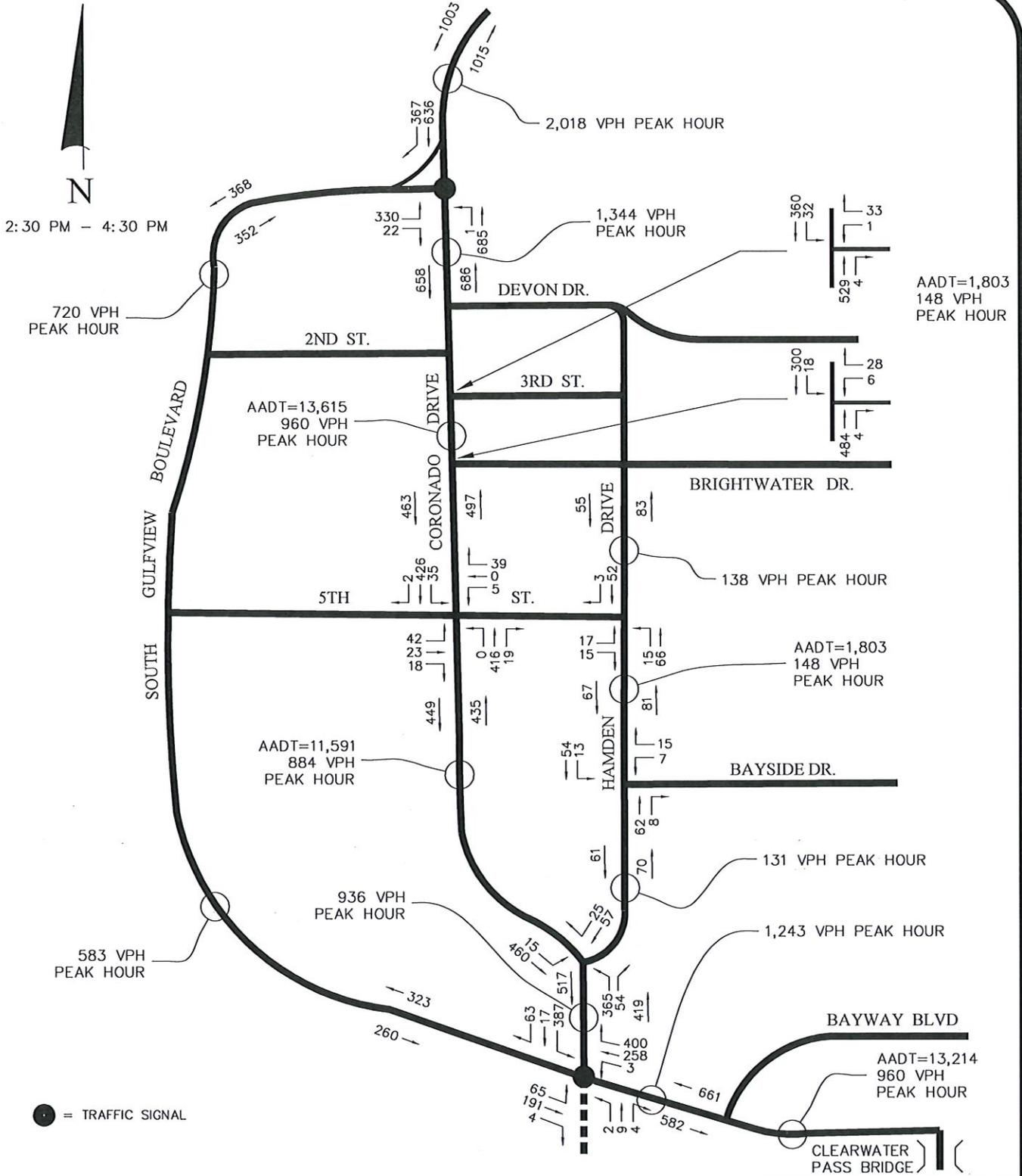
Presently the signalized intersection at S. Gulfview Boulevard / Coronado Drive operates at LOS A with average delay being 6.9 seconds per vehicle and an intersection capacity utilization (ICU) of 51.3%. The maximum v/c ratio is 0.44.

Coronado Drive is the main roadway through south Clearwater Beach providing vehicular access to most beachfront hotels and parking garages. The segment of Coronado Drive between the two traffic signals (S. Gulfview on the south end and S. Gulfview on the north end) is approximately ½ mile in length with a posted speed limit of 25 MPH. Coronado Drive functions as a class IV minor arterial per HCM criteria. The segment of Coronado Drive between the two traffic signals (S Gulfview to S Gulfview) was analyzed using the SYNCHRO and HCS software and presently operates at LOS B in the northbound (NB) direction and LOS C in the southbound (SB) direction.

South Gulfview Boulevard functions as a collector roadway and according to FDOT 2012 QLOS Handbook capacity tables has a LOS D capacity of 1,330 vehicles per hour on the undivided segment. The segment south of 5th Street operates at LOS C carrying 583 vph and the segment north of 5th Street operates at LOS D carrying 720 vph.

III. FUTURE TRAFFIC CONDITIONS

Background Traffic



EXISTING PM PEAK HOUR TRAFFIC (2021)

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12/2021

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FIGURE:
2

The build-out year of the hotel is 2025. As per the agreed methodology, existing traffic was adjusted by a 2% annual growth rate to the expected build-out year + 4 years beyond to 2029 to account for background traffic from other nearby redevelopment projects. Traffic from #405 Coronado Drive and #325 S Gulfview Blvd. were also added as background traffic. Background traffic volumes for 2029 are shown in Figure 3. Growth rate data is shown in Appendix B.

Project Traffic of Alanik Hotel

The site will be developed as a 248 room resort hotel. Using Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition rates for Resort Hotel (LUC 330), the amount of new trips was calculated and estimates are shown below:

TRIP GENERATION ESTIMATES

<u>Land Use</u>	<u>Amount</u>	<u>Daily Trips</u>	<u>PM Peak Trip</u>
Resort Hotel	248 Rooms	1,982	102 (44/58)

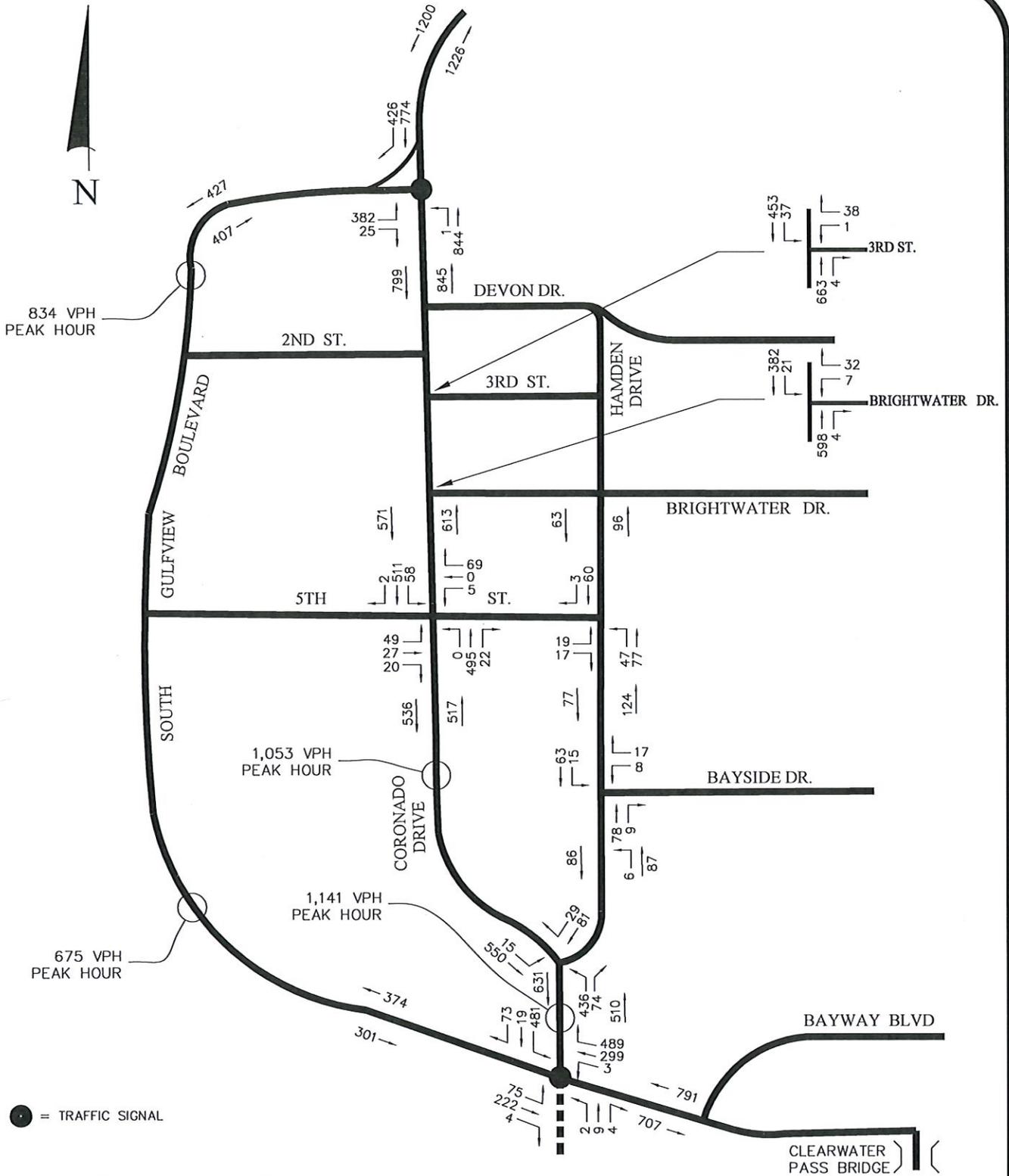
The modified hotel will replace two existing hotels, a retail shop, and the free-standing Post Corner Pizza restaurant. **In addition, the elimination of existing back-out parking on Coronado Drive and on 5th Street will provide a substantial safety improvement to an existing unsafe situation.** Per the agreed methodology the hotel traffic was distributed as follows:

- 60% north (61 peak hour trips)
- 40% south (41 peak hour trips)

The modified access will include a porto-cochere drop-off/check-in ramp along Coronado Drive that will accommodate guests at check-in. There will be an “exit only” driveway from the parking garage onto 5th Street, a full access driveway from the garage to Coronado Drive at the south end of the site, and a full access driveway to S Gulfview Boulevard.

Project traffic impacts will be primarily to Coronado Drive. Project traffic was added to accumulated background traffic for an analysis year of 2029. All intersections, roadway segments and project driveways were analyzed for future conditions. Future traffic volumes are shown in Figure 5, and the SYNCHRO printouts are included in Appendix B.

The signalized intersection at S. Gulfview Boulevard / Hamden Drive would operate at LOS B with average delay being 13.9 seconds per vehicle with ICU of 68.4%. The maximum v/c ratio would be 0.73.



BACKGROUND PM PEAK HOUR TRAFFIC (2029)

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FIGURE:

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At the intersection of Hamden Drive / Coronado Drive, the analysis shows the stop-controlled movements on Hamden Drive would operate at LOS B with delay of 14.9 seconds per vehicle. The v/c ratio would be 0.186.

At the Coronado Drive / 5th Street intersection, and southbound left turns would operate at LOS A with a v/c ratio of 0.063, the eastbound approach would operate at LOS F with average delay of 128.4 seconds and a v/c ratio of 0.914, and the westbound approach would operate at LOS C with average delay of 17.5 seconds and a v/c ratio of 0.217. Overall intersection delays are 11.5 seconds/vehicle.

The signalized intersection at S. Gulfview Boulevard / Coronado Drive would continue to operate at LOS A with average delay of 8.1 seconds per vehicle and an intersection capacity utilization (ICU) of 60.8%. The maximum v/c ratio would be 0.52.

Driveway Analysis

At 5th Street/ Drive A (Garage Exit only) the NB approach exiting the garage would operate at LOS B with 11.1 seconds average delay and a v/c ratio of 0.01.

At Coronado Drive / Drive B (drop-off) the EB approach exiting the site would operate at LOS B with 13.4 seconds average delay and a v/c ratio of 0.01.

At Coronado Drive / Drive C, NB left turns entering the garage would operate at LOS A with 9.2 seconds average delay and a v/c ratio of 0.01, the EB approach exiting the garage would operate at LOS C with 16.2 seconds average delay and a maximum v/c ratio of 0.06. The garage would have 2 exiting lanes to separate left and right turns.

At S. Gulfview Blvd/Drive D, SB left turns entering the garage would operate at LOS A with 9.0 seconds average delay and a v/c ratio of 0.01, the WB approach exiting the garage would operate at LOS C with 18.5 seconds average delay and a v/c ratio of 0.08.

The table below shows queues at the hotel driveways and the intersection of Coronado Drive/5th Street near the hotel garage driveway “A” on 5th Street.

INTERSECTION	APPROACH	QUEUE (VEH)	QUEUE (FEET)	AVAILABLE DISTANCE
Coronado Dr./ 5 th Street	EB	5.8	125-150 feet	150 feet from 5 th St to Drive A garage exit

Internal Circulation

The hotel will include parking within a parking garage with internal ramps. Access to Coronado Drive, 5th Street, and S Gulfview Blvd will provide

ingress/egress for vehicles. All internal drive aisles and ramps should be 24 feet wide with appropriate signage. Sight triangles and visibility at the garage exits onto Coronado Drive, 5th Street, and S Gulfview Blvd should provide clear visibility of pedestrians and vehicles along these roads.

Bicycle/Pedestrian Features

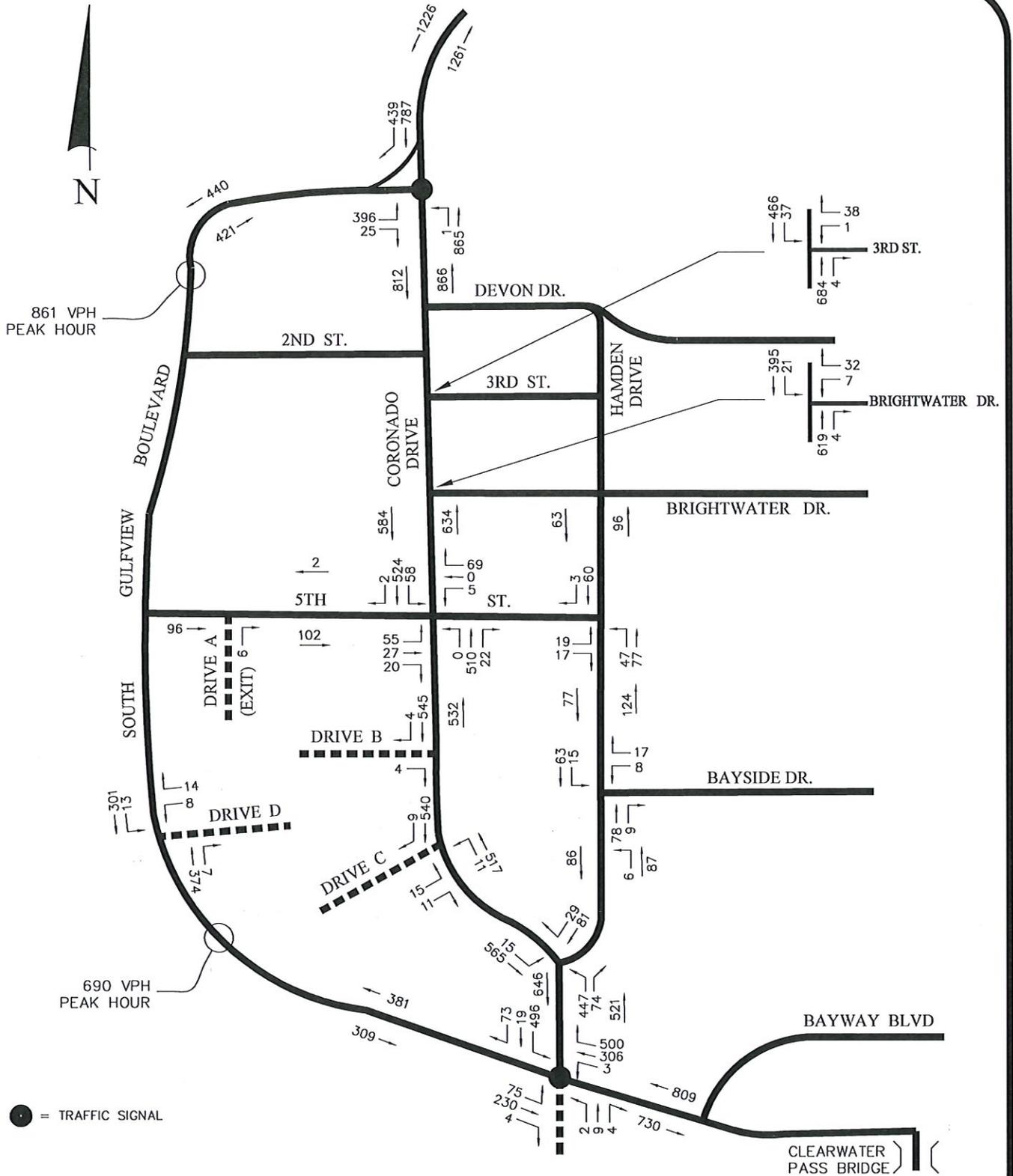
The hotel would include bicycle parking on the ground floor along 5th Street near Drive "A" and along Coronado Drive near Drive "C" and near the "Beachwalk" pedestrian access. **The hotel will also reconstruct some existing sidewalk along the Coronado Drive frontage, 5th Street frontage and S. Gulfview Blvd. The hotel will provide pedestrian access along the western frontage to "Beachwalk" and an overpass over S Gulfview Blvd which will be a major pedestrian feature for the redevelopment of this property.**

IV. CONCLUSION

This analysis addendum was conducted in accordance with a methodology established with City of Clearwater staff. The proposed hotel would generate 1,982 daily trips of which 102 would occur during the PM peak hour. This analysis demonstrates traffic operations at nearby intersections would continue at acceptable levels of service with or without the project impacts. Side street delays along 5th Street (stop-controlled EB approach) are expected to exceed 120 seconds during the afternoon peak hour under full-buildout conditions.

The following recommendations are for consideration by the City of Clearwater.

1. At the Coronado Drive/5th Street intersection, conduct annual monitoring of traffic volumes for possible signalization of this intersection to reduce 5th Street delays/queues that may occur during peak hours.



FUTURE PM PEAK HOUR TRAFFIC WITH PROJECT (2029)

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2/2022

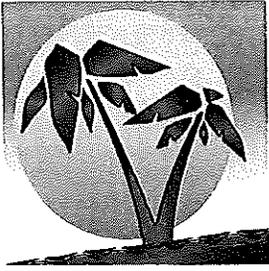
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FIGURE:

5

APPENDIX A



Gulf Coast Consulting, Inc.

Land Development Consulting

Engineering • Planning • Transportation • Permitting

ICOT Center

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Clearwater, FL 33760

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January 24, 2022

Mr. Bennett Elbo, Sr. Engineering Specialist
City of Clearwater Traffic Operations Division
100 S. Myrtle Avenue, 2nd Floor (220)
Clearwater, FL 33756

Via email: Bennett.Elbo@myclearwater.com

Re: Alanik Hotel 401-431 S Gulfview Blvd – MINOR REVISION to FLD2015-09036A

Dear Bennett:

We will be conducting a traffic evaluation for the minor revision to the Alanik hotel at the above-referenced address. I had originally done a study for this project in 2015, and an addendum in 2019 which was ultimately approved in June 2020 as FLD2015-09036A. The project is still 248 rooms and vehicle access would be from Coronado Drive, 5th Street, and S. Gulfview Blvd. Using ITE Trip Generation, 11th Edition rates, the hotel project would generate 1,982 daily trips of which 102 would occur during the PM peak hour.

As was done with my recently completed studies for 405 Coronado Drive and 325 S Gulfview Blvd we will use the recently collected peak period counts from 2:30 – 4:30 PM at several local intersections analyzed in these recent studies.

Background Traffic Growth

Background traffic will be calculated using a 2% annual growth rate as done in previous studies. Documentation of FDOT data is provided that shows count stations on and near the beach have had little or no growth. Much of Pinellas County has had no traffic growth. Therefore, a 2% annual growth rate is very reasonable for the beach.

Although the expected build-out date is 2025, we will calculate background traffic to 2029 as was done for the recently completed 405 Coronado Drive and 325 S Gulfview traffic studies. This is 4 years beyond expected buildout.

Future Conditions With Project

Project traffic will be added to the 2029 background traffic volumes. As was previously approved, and done for the recent 405 Coronado Drive and 325 S Gulfview Blvd studies the distribution is proposed as:

60% north (61 trips)
40% south (41 trips)

We will reanalyze the nearby intersections, project driveways and roadways using SYNCHRO & HCS software and FDOT Generalized Tables. Please note Coronado Drive is a 3-lane roadway with a continuous center left turn lane that separates left turns from the through traffic stream. We will also evaluate queues at the project driveways to Coronado Drive, S Gulfview and 5th Street (exit only). A written report will be submitted for review with the Minor Revision application package.

We look to have the report completed for submittal as soon as possible. Please contact me if you have any questions.

Sincerely,



Robert Pergolizzi, AICP/PTP
Principal

Cc: Nick Napolitano
Katie Cole
14-032.01

Hotel (310)

Vehicle Trip Ends vs: Rooms
On a: Weekday

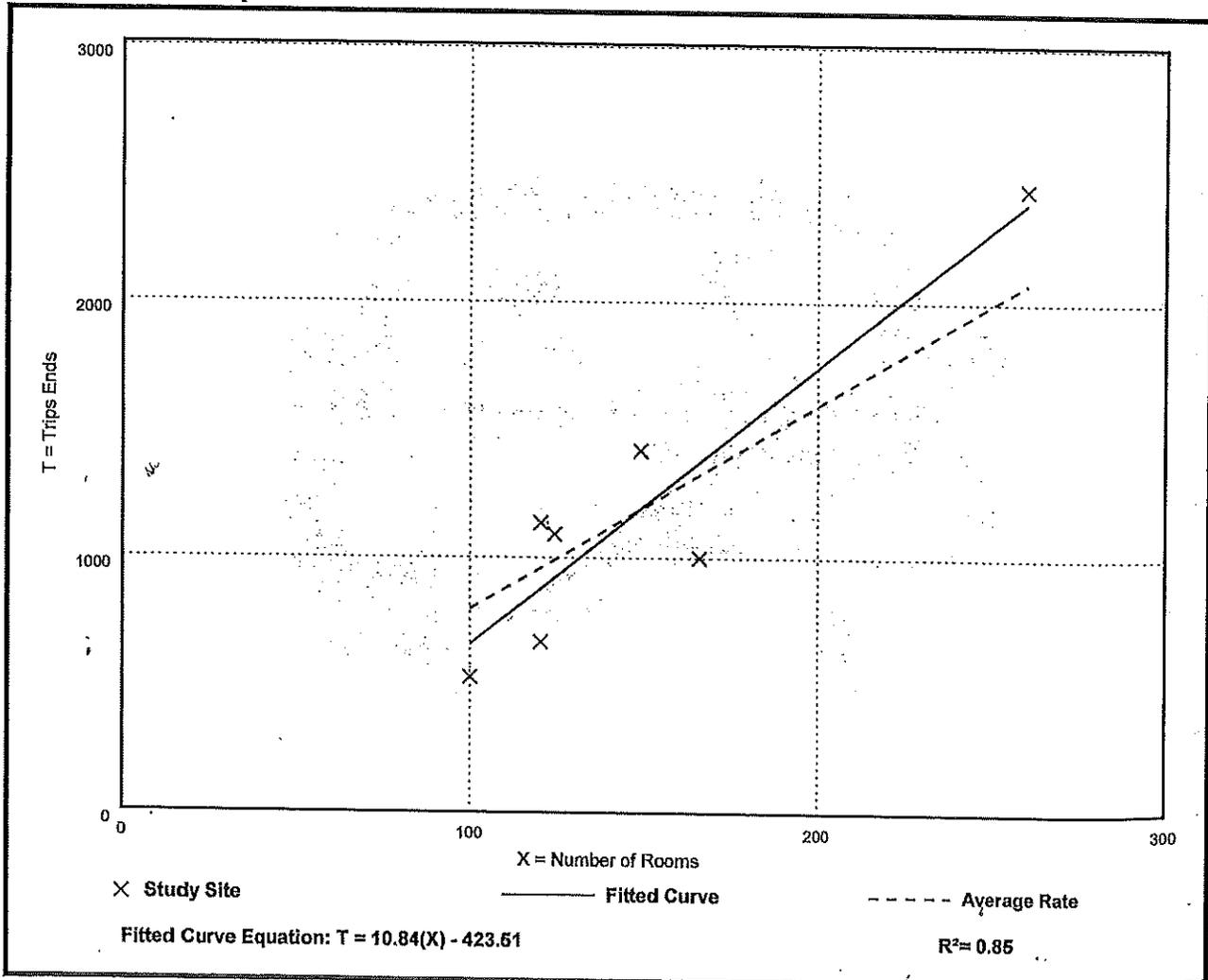
Setting/Location: General Urban/Suburban
Number of Studies: 7
Avg. Num. of Rooms: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
7.99	5.31 - 9.53	1.92

Data Plot and Equation

$$248 * 7.99 = 1982 \text{ daily trips}$$



Resort Hotel (330)

Vehicle Trip Ends vs: Rooms

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 9

Avg. Num. of Rooms: 507

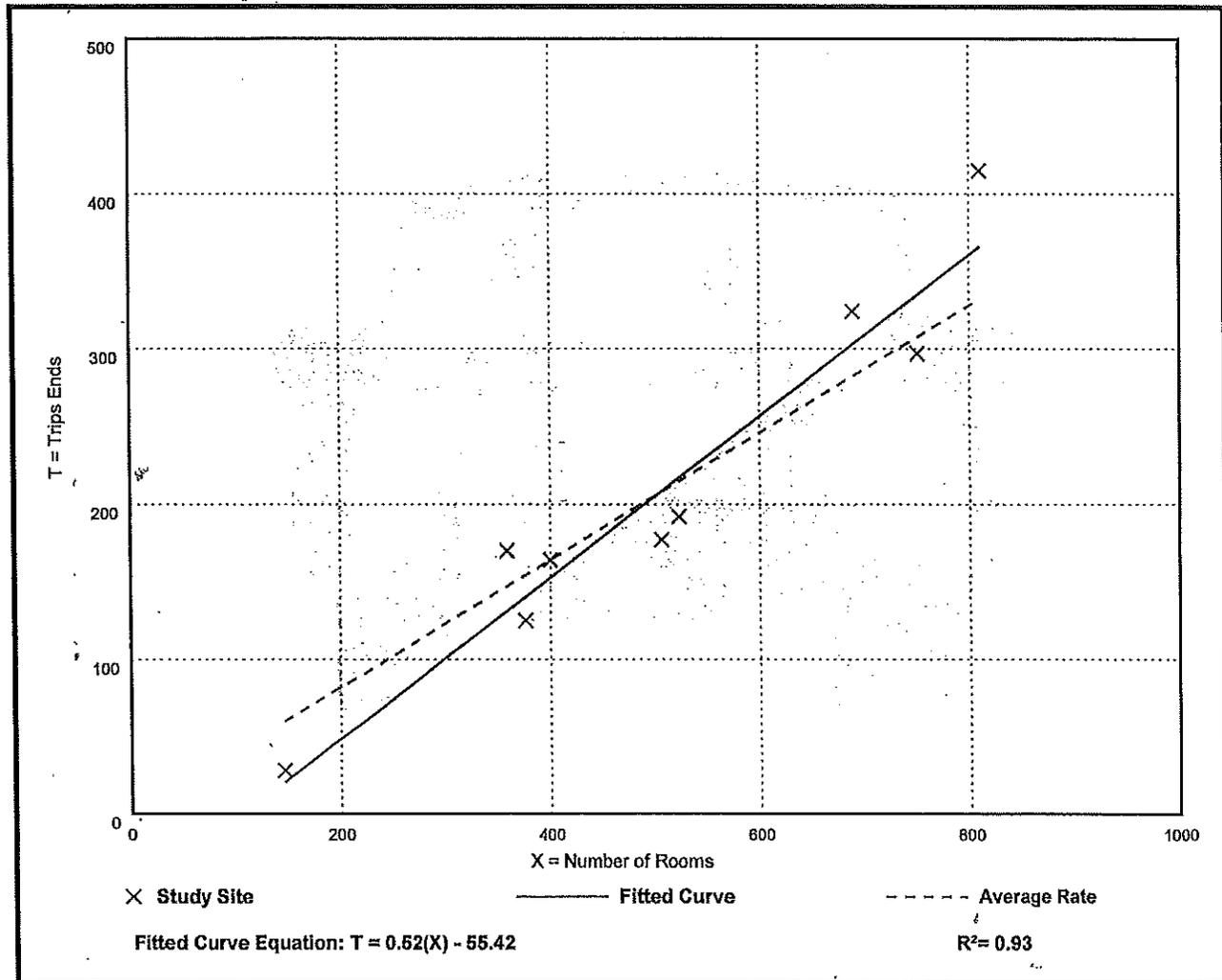
Directional Distribution: 43% entering, 57% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.41	0.19 - 0.51	0.08

Data Plot and Equation

$$248 \times 0.41 = 102 (44/58)$$



Lanes, Volumes, Timings

1: Hotel driveway/Hamden & S Gulfview Blvd/S Gulfview Blvd.

8/10/2021

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	2	9	4	387	17	63	65	191	4	3	258	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	202		550	355		355	800		409
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96		0.99	0.89		0.79	0.99			1.00	0.60
Frt		0.964			0.959			0.997				0.850
Flt Protected		0.993		0.950	0.968		0.950				0.999	
Satd. Flow (prot)	0	1802	0	1715	1503	0	1736	1800	0	0	1861	1583
Flt Permitted		0.993		0.950	0.968		0.571				0.997	
Satd. Flow (perm)	0	1739	0	1689	1488	0	829	1800	0	0	1849	950
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			18			1				412
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		287			565			611			887	
Travel Time (s)		7.8			15.4			16.7			24.2	
Confl. Peds. (#/hr)	120		5	5		120	126		289	289		126
Confl. Bikes (#/hr)									9			4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	4%	4%	2%	2%	2%
Adj. Flow (vph)	2	9	4	399	18	65	67	197	4	3	266	412
Shared Lane Traffic (%)				39%								
Lane Group Flow (vph)	0	15	0	243	239	0	67	201	0	0	269	412
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	2	2		6	6			4			4	
Permitted Phases							4			4		4
Detector Phase	2	2		6	6		4	4		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		30.0	30.0		25.0	25.0		25.0	25.0	25.0
Total Split (s)	25.0	25.0		40.0	40.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	22.7%	22.7%		36.4%	36.4%		40.9%	40.9%		40.9%	40.9%	40.9%
Maximum Green (s)	21.0	21.0		36.0	36.0		41.0	41.0		41.0	41.0	41.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		Min	Min		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		6.9		13.9	13.9		18.0	18.0			18.0	18.0
Actuated g/C Ratio		0.16		0.33	0.33		0.42	0.42			0.42	0.42
v/c Ratio		0.05		0.44	0.48		0.19	0.26			0.34	0.64

Lanes, Volumes, Timings

1: Hotel driveway/Hamden & S Gulfview Blvd/S Gulfview Blvd.

8/10/2021



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Control Delay		22.5		16.8	16.9		11.0	10.2			10.8	6.9
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		22.5		16.8	16.9		11.0	10.2			10.8	6.9
LOS		C		B	B		B	B			B	A
Approach Delay		22.5	Hotel		16.9	Hamden		10.4	S. Gulfview		8.4	
Approach LOS		C			B			B			A	
Queue Length 50th (ft)		2		36	33		7	22			31	0
Queue Length 95th (ft)		23		175	168		46	105			140	65
Internal Link Dist (ft)		207			485			531			807	
Turn Bay Length (ft)				202			355					409
Base Capacity (vph)		1062		1472	1293		741	1610			1654	893
Starvation Cap Reductn		0		0	0		0	0			0	0
Spillback Cap Reductn		0		0	0		0	0			0	0
Storage Cap Reductn		0		0	0		0	0			0	0
Reduced v/c Ratio		0.01		0.17	0.18		0.09	0.12			0.16	0.46

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 42.6

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 11.7

Intersection Capacity Utilization: 62.2%

Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service B

Splits and Phases: 1: Hotel driveway/Hamden & S Gulfview Blvd/S Gulfview Blvd.



Intersection

Int Delay, s/veh 0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Vol, veh/h	365	54	15	460	57	25
Conflicting Peds, #/hr	0	0	14	0	0	14
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	0	75	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	372	55	15	469	58	26

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	386
Stage 1	-	-	14
Stage 2	-	-	500
Critical Hdwy	-	-	6.4
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	5.4
Follow-up Hdwy	-	-	3.5
Pot Cap-1 Maneuver	-	-	524
Stage 1	-	-	-
Stage 2	-	-	613
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	514
Mov Cap-2 Maneuver	-	-	514
Stage 1	-	-	-
Stage 2	-	-	609

Approach	NB	SB	SW
HCM Control Delay, s	0		
HCM LOS			

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1	SWLn2
Capacity (veh/h)	-	-	-	-	514	-
HCM Lane V/C Ratio	-	-	-	-	0.113	-
HCM Control Delay (s)	-	-	-	-	12.9	-
HCM Lane LOS	-	-	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	-	0.4	-

SW BOUND (HAMDEN) (STOP) APPROACH

Intersection

Int Delay, s/veh 4 **OVERALL DELAY**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	42	23	18	5	0	39	0	416	19	35	426	2
Conflicting Peds, #/hr	68	0	68	8	0	8	199	0	199	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	300	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	2	2	2	2	2	1	1	1
Mvmt Flow	45	25	19	5	0	42	0	447	20	38	458	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1088	1078	726	1090	1069	473	528	0	0	476	0	0
Stage 1	602	602	-	466	466	-	-	-	-	-	-	-
Stage 2	486	476	-	624	603	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.52	6.22	4.12	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4.018	3.318	2.218	-	-	2.209	-	-
Pot Cap-1 Maneuver	195	220	428	193	221	591	1039	-	-	1091	-	-
Stage 1	490	492	-	577	562	-	-	-	-	-	-	-
Stage 2	566	560	-	473	488	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	164	197	324	128	198	583	842	-	-	1084	-	-
Mov Cap-2 Maneuver	164	197	-	128	198	-	-	-	-	-	-	-
Stage 1	458	444	-	573	558	-	-	-	-	-	-	-
Stage 2	522	556	-	328	440	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.5	14.8	0	0.6
HCM LOS	E	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	842	-	-	194	415	1084	-	-
HCM Lane V/C Ratio	-	-	-	0.46	0.114	0.035	-	-
HCM Control Delay (s)	0	-	-	38.5	14.8	8.4	-	-
HCM Lane LOS	A	-	-	E	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2.2	0.4	0.1	-	-

WB

SBL7 CORONADO DR.

Lanes, Volumes, Timings
17: Coronado Dr & Gulfview Dr.

8/10/2021



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑↑↑			↑↑	↑↑	↑
Volume (vph)	330	22	1	685	636	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	291	0	400			200
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor	1.00			1.00		0.88
Flt	0.991					0.850
Flt Protected	0.955					
Satd. Flow (prot)	3306	0	0	3421	3421	1531
Flt Permitted	0.955			0.954		
Satd. Flow (perm)	3297	0	0	3264	3421	1343
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	6					386
Link Speed (mph)	25			25	25	
Link Distance (ft)	435			400	542	
Travel Time (s)	11.9			10.9	14.8	
Confl. Peds. (#/hr)	1		34			34
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	23	1	721	669	386
Shared Lane Traffic (%)						
Lane Group Flow (vph)	370	0	0	722	669	386
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Detector Phase	4		2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	30.0		80.0	80.0	80.0	80.0
Total Split (%)	27.3%		72.7%	72.7%	72.7%	72.7%
Maximum Green (s)	26.0		76.0	76.0	76.0	76.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Min	Min	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	9.6			18.8	18.8	18.8
Actuated g/C Ratio	0.26			0.51	0.51	0.51
v/c Ratio	0.42			0.43	0.38	0.44



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	13.8			6.5	6.1	2.5
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	13.8			6.5	6.1	2.5
LOS	B			A	A	A
Approach Delay	13.8			6.5	4.8	
Approach LOS	B			A	A	
Queue Length 50th (ft)	29			38	34	0
Queue Length 95th (ft)	74			76	68	26
Internal Link Dist (ft)	355			320	462	
Turn Bay Length (ft)	291					200
Base Capacity (vph)	2429			3264	3421	1343
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.15			0.22	0.20	0.29

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 36.7
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.44
 Intersection Signal Delay: 6.9
 Intersection Capacity Utilization: 51.3%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 17: Coronado Dr & Gulfview Dr.

↑ p2	↘ p4
80 s	30 s
↓ p6	
80 s	

AASHTO's functional classes are based on travel volume, mileage, and the characteristic of service the urban street is intended to provide. The analysis method in this manual makes use of the AASHTO distinction between principal arterial and minor arterial. But a second classification step is used herein to determine the appropriate design category for the arterial. The design category depends on the posted speed limit, signal density, driveway/access-point density, and other design features. The third step is to determine the appropriate urban street class on the basis of a combination of functional category and design category. Exhibits 10-3 and 10-4 are useful for establishing urban street class.

Four urban street classes are defined in this manual. The classes are designated by number (i.e., I, II, III, and IV) and reflect unique combinations of street function and design, as shown in Exhibit 10-3. The functional component is separated into two categories: principal arterial and minor arterial. The design component is separated into four categories: high-speed, suburban, intermediate, and urban. The characteristics associated with each category are described in the remainder of this section. Exhibit 10-4 summarizes these characteristics.

EXHIBIT 10-3. URBAN STREET CLASS BASED ON FUNCTIONAL AND DESIGN CATEGORIES

Design Category	Functional Category	
	Principal Arterial	Minor Arterial
High-Speed	I	N/A
Suburban	II	II
Intermediate	II	III or IV
Urban	III or IV	IV

EXHIBIT 10-4. FUNCTIONAL AND DESIGN CATEGORIES

Criterion	Functional Category	
	Principal Arterial	Minor Arterial
Mobility function	Very important	Important
Access function	Very minor	Substantial
Points connected	Freeways, important activity centers, major traffic generators	Principal arterials
Predominant trips served	Relatively long trips between major points and through-trips entering, leaving, and passing through the city	Trips of moderate length within relatively small geographical areas

Criterion	Design Category			
	High-Speed	Suburban	Intermediate	Urban
Driveway/access density	Very low density	Low density	Moderate density	High density
Arterial type	Multilane divided; undivided or two-lane with shoulders	Multilane divided; undivided or two-lane with shoulders	Multilane divided or undivided; one-way, two-lane	Undivided one-way, two-way, two or more lanes
Parking	No	No	Some	Significant
Separate left-turn lanes	Yes	Yes	Usually	Some
Signals/mi	0.5-2	1-5	4-10	6-12
Speed limit	45-55 mi/h	40-45 mi/h	30-40 mi/h	25-35 mi/h
Pedestrian activity	Very little	Little	Some	Usually
Roadside development	Low density	Low to medium density	Medium to moderate density	High density

A principal arterial serves major through movements between important centers of activity in a metropolitan area and a substantial portion of trips entering and leaving the area. It also connects freeways with major traffic generators. In smaller cities

(population under 50,000), its importance is derived from the service provided to traffic passing through the urban area. Service to abutting land is subordinate to the function of moving through traffic.

A **minor arterial** connects and augments the principal arterial system. Although its main function is traffic mobility, it performs this function at a lower level and **places more emphasis on land access than does the principal arterial**. A system of minor arterials serves trips of moderate length and distributes travel to geographical areas smaller than those served by the principal arterial.

The urban street is further classified by its design category. Exhibit 10-3 shows urban street classes based on functional and design categories.

High-speed design represents an urban street with a very low driveway/access-point density, separate left-turn lanes, and no parking. It may be multilane divided or undivided or a two-lane facility with shoulders. Signals are infrequent and spaced at long distances. Roadside development is low density, and the speed limit is typically 45 to 55 mi/h. This design category includes many urban streets in suburban settings.

Suburban design represents a street with a low driveway/access-point density, separate left-turn lanes, and no parking. It may be multilane divided or undivided or a two-lane facility with shoulders. Signals are spaced for good progressive movement (up to five signals per mile). Roadside development is low to medium density, and speed limits are usually 40 to 45 mi/h.

Intermediate design represents an urban street with a moderate driveway/access-point density. It may be a multilane divided, an undivided one-way, or a two-lane facility. It may have some separate or continuous left-turn lanes and some portions where parking is permitted. It has a higher density of roadside development than the typical suburban design and usually has four to ten signals per mile. Speed limits are typically 30 to 40 mi/h.

Urban design represents an urban street with a high driveway/access-point density. It frequently is an undivided one-way or two-way facility with two or more lanes. **Parking is usually permitted. Generally, there are few separate left-turn lanes, and some pedestrian interference is present.** It commonly has six to twelve signals per mile. Roadside development is dense with commercial uses. **Speed limits range from 25 to 35 mi/h.**

In addition to the above definitions, Exhibit 10-4 can be used as an aid in the determination of functional and design categories. Once the functional and design categories have been determined, the urban street classification may be established by referring to Exhibit 10-3.

In practice, there are sometimes ambiguities in determining the proper categories. The measurement or estimation of the free-flow speed is a great aid in this determination, because each urban street class has a characteristic range of free-flow speeds, as shown in Chapter 15.

Length

The portion of the urban street being analyzed should be at least 1 mi long in a downtown area and 2 mi long elsewhere for the LOS speed criteria to be meaningful. Study lengths shorter than 1 mi should be analyzed as individual intersections and the LOS assessed according to individual intersection criteria.

Free-Flow Speed

The free-flow speed is used to determine the urban street class and to estimate the segment running time. If FFS cannot be measured in the field, the analyst should attempt to take measurements on a similar facility in the same area or should resort to established local policies. Lacking any of these options, the analyst might rely on the posted speed limit (or some value around that limit) or on default values in this manual.

High-speed design defined

Suburban design defined

Intermediate design defined

Urban design defined

Measure free-flow speed as far as possible from nearest signal or stop-controlled intersection and at flows < 200 veh/h/ln

other hand, longer urban street segments comprising heavily loaded intersections can provide reasonably good LOS, although an individual signalized intersection might be operating at a lower level. The term through vehicle refers to all vehicles passing directly through a street segment and not turning.

Exhibit 15-2 lists urban street LOS criteria based on average travel speed and urban street class. It should be noted that if demand volume exceeds capacity at any point on the facility, the average travel speed might not be a good measure of the LOS. The street classifications identified in Exhibit 15-2 are defined in the next section.

EXHIBIT 15-2. URBAN STREET LOS BY CLASS

Urban Street Class	I	II	III	IV
Range of free-flow speeds (FFS)	55 to 45 mi/h	45 to 35 mi/h	35 to 30 mi/h	35 to 25 mi/h
Typical FFS	50 mi/h	40 mi/h	35 mi/h [~]	30 mi/h
LOS	Average Travel Speed (mi/h)			
A	> 42	> 35	> 30	> 25
B	> 34-42	> 28-35	> 24-30	> 19-25
C	> 27-34	> 22-28	> 18-24	> 13-19
D	> 21-27	> 17-22	> 14-18	> 9-13
E	> 16-21	> 13-17	> 10-14	> 7-9
F	≤ 16	≤ 13	≤ 10	≤ 7

Travel speed defines LOS on urban streets

DETERMINING URBAN STREET CLASS

The first step in the analysis is to determine the urban street's class. This can be based on direct field measurement of the FFS or on an assessment of the subject street's functional and design categories. A procedure for measuring the FFS is described in Appendix B.

If the FFS measurements are not available, the street's functional and design categories must be used to identify its class. The functional category is identified first, followed by the design category. This identification uses the definitions provided in Chapter 10 and Exhibit 10-4. After determining the functional and design categories, the urban street class can be established using Exhibit 10-3.

DETERMINING RUNNING TIME

There are two principal components of the total time that a vehicle spends on a segment of an urban street: running time and control delay at signalized intersections. To compute the running time for a segment, the analyst must know the street's classification, its segment length, and its FFS. The segment running time then can be found by using Exhibit 15-3.

Within each urban street class there are several influences on actual running time. Exhibit 15-3 shows the effect of street length. In addition, the presence of parking, side friction, local development, and street use can affect running time. In this chapter, these also are assumed to influence the FFS. Direct observation of the FFS, therefore, includes the effect of these factors and, by implication, their effect on the running speed.

If it is not possible to observe the FFS on the actual or a comparable facility, default values are given in a note to Exhibit 15-3.

DETERMINING DELAY

Computing the urban street or section speed requires the intersection control delays. Because the function of an urban street is to serve through traffic, the lane group for through traffic is used to characterize the urban street.

Running time is estimated using FFS, urban street classification, and arterial segment length

URBAN STREET WORKSHEET #1								
General Information				Site Information				
Analyst	RP	Urban Street	CORONADO DRIVE					
Agency/Co.	GCC	Direction of Travel	North-bound					
Date Performed	12/22/2021	Jurisdiction	CLEARWATER					
Time Period	AFTERNOON PEAK HOUR	Analysis Year	2021					
Project Description: EXISTING CONDITIONS - CORONADO/HAMDEN NB								
Input Parameters								
Analysis Period(h) T = 0.25	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)	110.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Eff. green to cycle ratio, g/C	0.550	0.700	0.700	0.700	0.700	0.700	0.700	0.700
v/c ratio for lane group, X	0.430	0.600	0.600	0.600	0.600	0.600	0.600	0.600
Cap of lane group, c (veh/h)	3264	600	600	600	600	600	600	600
Pct Veh on Grn., PVG								
Arrival type, AT	3	4	4	4	4	4	4	4
Unit extension, UE (sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Length of segment, L (mi)	0.53							
Initial queue, Q _b (veh)	0	0	0	0	0	0	0	0
Urban street class, SC	4	4	4	4	4	4	4	4
Free-flow speed, FSS (mi/h)	25	30	30	30	30	30	30	30
Running time, TR (s)	76.3							
Other delay, (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Computation								
Uniform delay, d ₁ (s)	14.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Incremental delay adj, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Upstream filtering adj factor, l	1.000	0.865	0.769	0.769	0.769	0.769	0.769	0.769
Incremental delay, d ₂ (s)	0.4	3.8	3.4	3.4	3.4	3.4	3.4	3.4
Initial queue delay, d ₃ (s)	0	0	0	0	0	0	0	0
Progression adj factor, PF	1.000	0.256	0.256	0.256	0.256	0.256	0.256	0.256
Control delay, d (s)	15.0	5.2	4.8	4.8	4.8	4.8	4.8	4.8
Segment LOS Determination								
Travel time, ST (s)	91.3							
Travel speed, SA (mi/h)	20.9							
Segment LOS	B							
Urban Street LOS Determination								
Total travel time (s)	91.3							
Total length (mi)	0.53							
Total travel speed, SA (mi/h)	20.9							
Total urban street LOS	B							

URBAN STREET WORKSHEET #1								
General Information				Site Information				
Analyst	RP			Urban Street	CORONADO/HAMDEN			
Agency/Co.	GCC			Direction of Travel	South-bound			
Date Performed	12/22/21			Jurisdiction	CLEARWATER			
Time Period	AFTERNOON PEAK HR			Analysis Year	2021			
Project Description: EXISTING CONDITIONS - CORONADO/HAMDEN SB								
Input Parameters								
Analysis Period(h) T = 0.25	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)	110.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Eff. green to cycle ratio, g/C	0.360	0.700	0.700	0.700	0.700	0.700	0.700	0.700
v/c ratio for lane group, X	0.440	0.600	0.600	0.600	0.600	0.600	0.600	0.600
Cap of lane group, c (veh/h)	1472	600	600	600	600	600	600	600
Pct Veh on Grn., PVG								
Arrival type, AT	3	4	4	4	4	4	4	4
Unit extension, UE (sec)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Length of segment, L (mi)	0.53							
Initial queue, Q _b (veh)	0	0	0	0	0	0	0	0
Urban street class, SC	4	4	4	4	4	4	4	4
Free-flow speed, FSS (mi/h)	25	30	30	30	30	30	30	30
Running time, TR (s)	76.3							
Other delay, (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Computation								
Uniform delay, d ₁ (s)	26.8	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Incremental delay adj, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Upstream filtering adj factor, l	1.000	0.899	0.769	0.769	0.769	0.769	0.769	0.769
Incremental delay, d ₂ (s)	1.0	4.0	3.4	3.4	3.4	3.4	3.4	3.4
Initial queue delay, d ₃ (s)	0	0	0	0	0	0	0	0
Progression adj factor, PF	1.000	0.256	0.256	0.256	0.256	0.256	0.256	0.256
Control delay, d (s)	27.7	5.4	4.8	4.8	4.8	4.8	4.8	4.8
Segment LOS Determination								
Travel time, ST (s)	104.0							
Travel speed, SA (mi/h)	18.3							
Segment LOS	C							
Urban Street LOS Determination								
Total travel time (s)	104.0							
Total length (mi)	0.53							
Total travel speed, SA (mi/h)	18.3							
Total urban street LOS	C							

Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas¹

TABLE 4

12/18/12

INTERRUPTED FLOW FACILITIES						UNINTERRUPTED FLOW FACILITIES					
STATE SIGNALIZED ARTERIALS						FREEWAYS					
Class I (40 mph or higher posted speed limit)						Lanes					
Lanes	Median	B	C	D	E	B	C	D	E		
2	Undivided	*	1,510	1,600	**	4	4,120	5,540	6,700	7,190	
4	Divided	*	3,420	3,580	**	6	6,130	8,370	10,060	11,100	
6	Divided	*	5,250	5,390	**	8	8,230	11,100	13,390	15,010	
8	Divided	*	7,090	7,210	**	10	10,330	14,040	16,840	18,930	
						12	14,450	18,880	22,030	22,860	
Class II (35 mph or slower posted speed limit)						Freeway Adjustments					
Lanes	Median	B	C	D	E	Auxiliary Lanes		Ramp			
2	Undivided	9,600	660	1,330	1,410	Present in Both Directions		Metering			
4	Divided	Coronado 4LD	1,310	2,920	3,040	+ 1,800		+ 5%			
6	Divided	*	2,090	4,500	4,590	S. Gulfview (S of Coronado) D					
8	Divided	*	2,880	6,060	6,130	2LU 660 1330					
Non-State Signalized Roadway Adjustments						Coronado Hamilton 2LD 690 1390					
(Alter corresponding state volumes by the indicated percent)						+ 5%					
Non-State Signalized Roadways - 10%											
Hamden 2LU 70% 460 930											
Median & Turn Lane Adjustments						UNINTERRUPTED FLOW HIGHWAYS					
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors		Lanes	Median	B	C	D	E
2	Divided	Yes	No	+5%		2	Undivided	770	1,530	2,170	2,990
2	Undivided	No	No	-20%		4	Divided	3,300	4,660	5,900	6,530
Multi	Undivided	Yes	No	-5%		6	Divided	4,950	6,990	8,840	9,790
Multi	Undivided	No	No	-25%		Uninterrupted Flow Highway Adjustments					
			Yes	+5%		Lanes	Median	Exclusive left lanes		Adjustment factors	
One-Way Facility Adjustment						2	Divided	Yes		+5%	
Multiply the corresponding two-directional volumes in this table by 0.6						Multi	Undivided	Yes		-5%	
						Multi	Undivided	No		-25%	
BICYCLE MODE²						Values shown are presented as peak hour two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.					
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)						² Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.					
Paved Shoulder/Bicycle						³ Buses per hour shown are only for the peak hour in the single direction of the highest traffic flow.					
Lane Coverage	B	C	D	E		* Cannot be achieved using table input value defaults.					
0-49%	*	260	680	1,770		** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including B) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.					
50-84%	190	600	1,770	>1,770							
85-100%	830	1,770	>1,770	**							
PEDESTRIAN MODE²											
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)											
Sidewalk Coverage	B	C	D	E							
0-49%	*	*	250	850							
50-84%	*	150	780	1,420							
85-100%	340	960	1,560	>1,770							
BUS MODE (Scheduled Fixed Route)³											
(Buses in peak hour in peak direction)											
Sidewalk Coverage	B	C	D	E							
0-84%	>5	≥4	≥3	≥2							
85-100%	>4	≥3	≥2	≥1							
Source:						Florida Department of Transportation					
						Systems Planning Office					
						www.dot.state.fl.us/planning/systems/smi/ios/default.shtml					

APPENDIX B

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2020 HISTORICAL AADT REPORT

COUNTY: 15 - PINELLAS

SITE: 9188 - CORONADO DR, N OF GULFVIEW BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	8500 X	0	0	9.00	55.30	3.40
2019	9100 X	0	0	9.00	55.70	3.30
2018	9000 X	0	0	9.00	55.50	3.20
2017	8900 6	0	0	9.00	54.50	2.90
2016	8700 V	0	0	9.00	55.90	2.90
2015	8500 R	0	0	9.00	55.00	2.90
2014	8300 T	0	0	9.00	55.40	3.20
2013	8200 S	0	0	9.00	55.20	3.00
2012	8200 F	0	0	9.00	55.00	2.80
2011	8200 C	N	S	9.00	56.50	3.10

2011 - 2020 = 3.6% in 9 years 0.41%/year

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2020 HISTORICAL AADT REPORT

COUNTY: 15 - PINELLAS

SITE: 9168 - MEMORIAL CAUSEWAY, E OF ROUNDABOUT (HPMS)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	24500 C	E 12000	W 12500	9.00	55.30	3.40
2019	29000 X	0	0	9.00	55.70	3.30
2018	29000 X	0	0	9.00	55.50	3.20
2017	29000 X	0	0	9.00	54.50	2.90
2016	28500 E	0	0	9.00	55.90	2.90
2015	28000 E	0	0	9.00	55.00	2.90
2014	27400 E			9.00	55.40	3.20
2013	27000 S	E 13500	W 13500	9.00	55.20	3.30
2012	27000 F	E 13500	W 13500	9.00	55.00	3.30
2011	27000 C	E 13500	W 13500	9.00	56.50	3.30

2011 - 2020 No Growth

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; G = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2020 HISTORICAL AADT REPORT

COUNTY: 15 - PINELLAS

SITE: 5097 - SR 60/MEMORIAL CSWY, W OF MEMORIAL CSWY BRIDGE 3019

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2020	34000 C	E 17500	W 16500	9.00	55.30	3.20
2019	38500 C	E 19500	W 19000	9.00	55.70	2.90
2018	36500 C	E 18500	W 18000	9.00	55.50	2.80
2017	40500 F	E 20500	W 20000	9.00	54.50	3.20
2016	39500 C	E 20000	W 19500	9.00	55.90	3.20
2015	36500 C	E 18500	W 18000	9.00	55.00	3.10
2014	34500 C	E 17500	W 17000	9.00	55.40	3.30
2013	34500 C	E 17500	W 17000	9.00	55.20	3.00
2012	39500 C	E 20000	W 19500	9.00	55.00	2.60
2011	36500 C	E 18500	W 18000	9.00	56.50	2.70
2010	34000 C	E 17000	W 17000	10.52	55.26	2.60
2009	34500 C	E 17500	W 17000	10.53	55.79	2.60
2008	31000 C	E 15500	W 15500	10.29	58.46	3.20
2007	33000 C	E 16500	W 16500	10.31	56.79	4.10
2006	58000 E	E 29000	W 29000	9.88	58.53	3.80
2005	55500 C	E 27500	W 28000	9.90	58.50	2.70

2011 - 2020 = No Growth

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Hotel (310)

Vehicle Trip Ends vs: Rooms
On a: Weekday

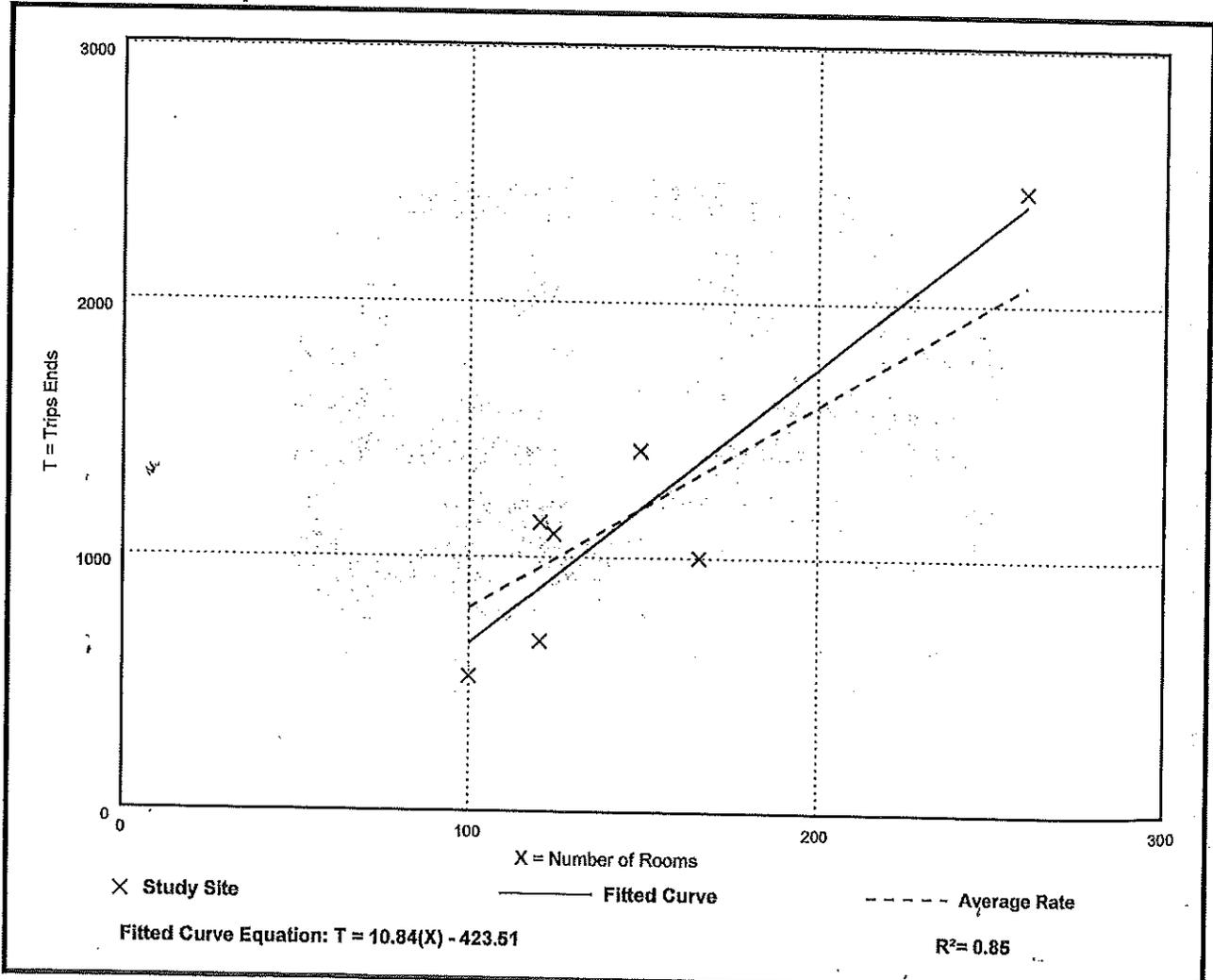
Setting/Location: General Urban/Suburban
Number of Studies: 7
Avg. Num. of Rooms: 148
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
7.99	5.31 - 9.53	1.92

Data Plot and Equation

$$248 * 7.99 = 1982 \text{ daily trips}$$



Resort Hotel (330)

Vehicle Trip Ends vs: Rooms

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 9

Avg. Num. of Rooms: 507

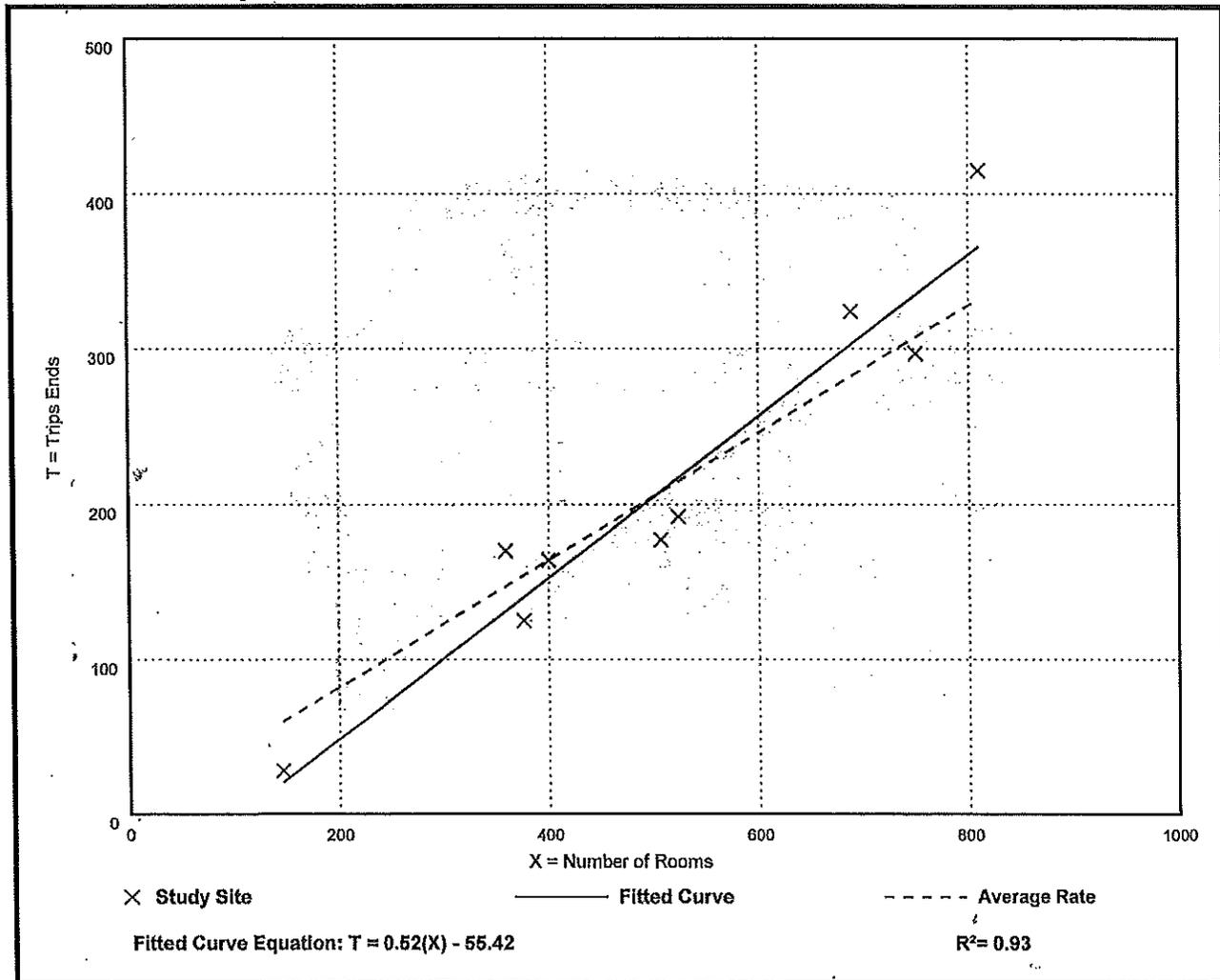
Directional Distribution: 43% entering, 57% exiting

Vehicle Trip Generation per Room

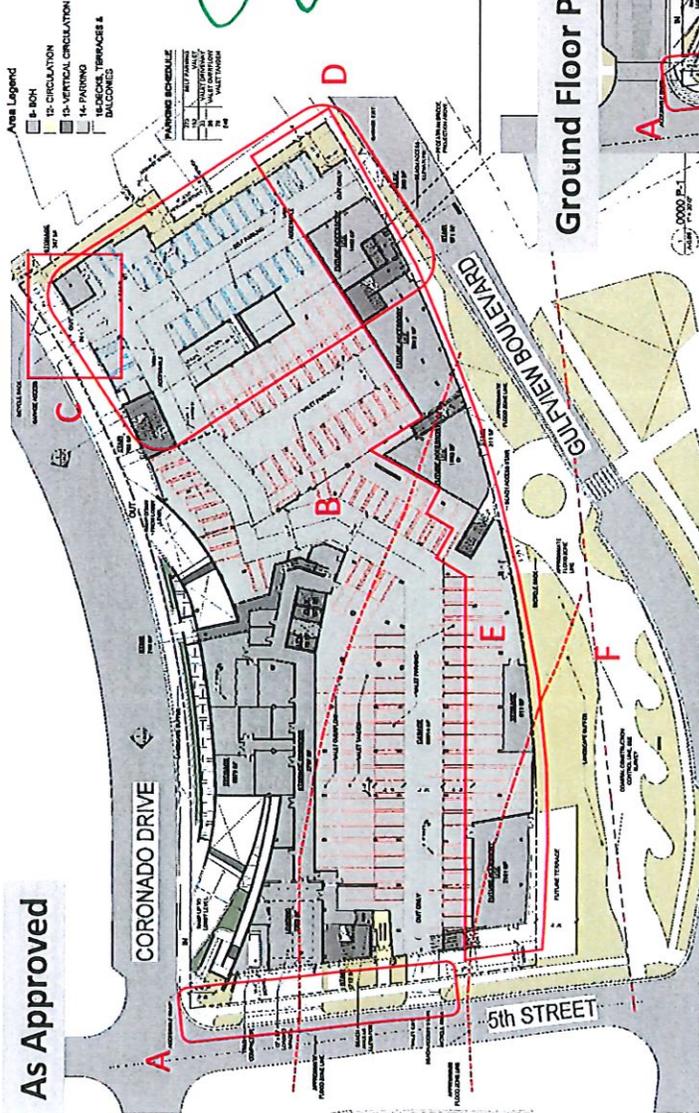
Average Rate	Range of Rates	Standard Deviation
0.41	0.19 - 0.51	0.08

Data Plot and Equation

$$248 \times 0.41 = 102 (44/58)$$



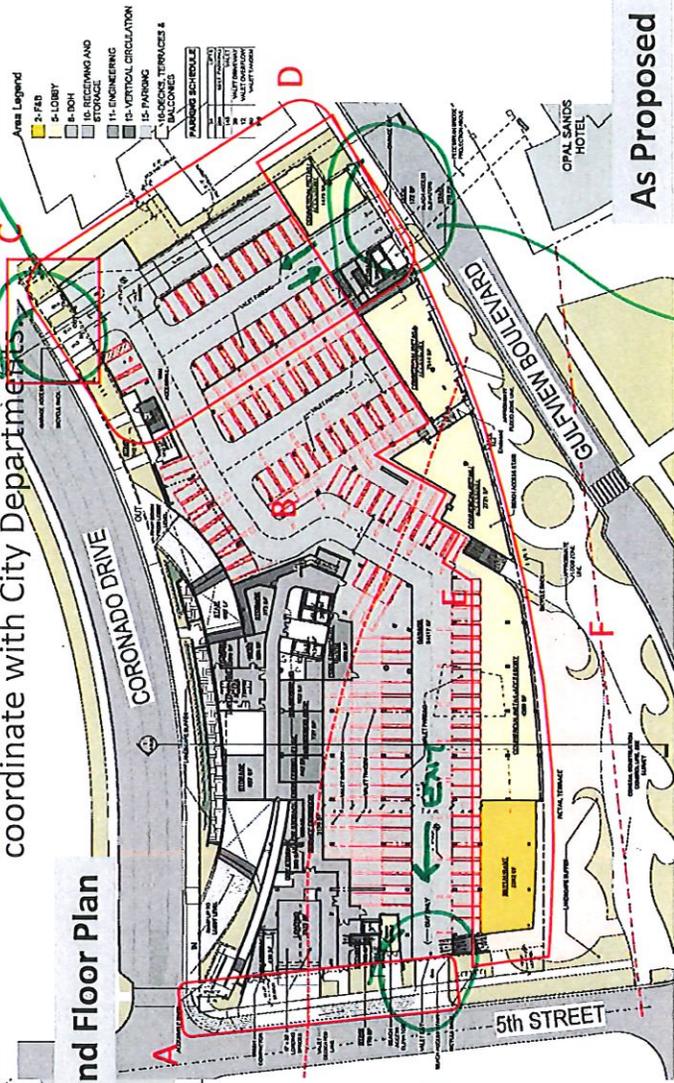
As Approved



Modifications:

- A. Add valet lane in public right of way to reduce traffic conflicts.
- B. Make first floor valet only
- C. Reconfigure vehicular entrance on Coronado Drive. *Two control points to expedite traffic flow.*
- D. Reconfigure garage layout (Improved functionality)
- E. Accommodate accessory retail along Beach Walk as stated in original application. *Beach*
- F. Modify landscape areas on Boardwalk. Will *Two-way* coordinate with City Departments

Ground Floor Plan



Two-way!

Lanes, Volumes, Timings

1: Hotel driveway/Hamden & S Gulfview Blvd/S Gulfview Blvd.

2/7/2022

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	2	9	4	496	19	73	75	230	4	3	306	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	202		550	355		355	800		409
Storage Lanes	0		0	1		0	1		0	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96		0.99	0.90		0.83	0.99			1.00	0.60
Frt		0.964			0.962			0.998				0.850
Flt Protected		0.993		0.950	0.967		0.950					
Satd. Flow (prot)	0	1802	0	1715	1519	0	1736	1805	0	0	1863	1583
Flt Permitted		0.993		0.950	0.967		0.502				0.998	
Satd. Flow (perm)	0	1744	0	1689	1504	0	758	1805	0	0	1853	950
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			16			1				515
Link Speed (mph)		25			25			25				25
Link Distance (ft)		287			709			611				887
Travel Time (s)		7.8			19.3			16.7				24.2
Confl. Peds. (#/hr)	120		5	5		120	126		289	289		126
Confl. Bikes (#/hr)									9			4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	4%	4%	2%	2%	2%
Adj. Flow (vph)	2	9	4	511	20	75	77	237	4	3	315	515
Shared Lane Traffic (%)				40%								
Lane Group Flow (vph)	0	15	0	307	299	0	77	241	0	0	318	515
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	Perm
Protected Phases	2	2		6	6			4			4	
Permitted Phases							4			4		4
Detector Phase	2	2		6	6		4	4		4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	25.0	25.0		30.0	30.0		25.0	25.0		25.0	25.0	25.0
Total Split (s)	25.0	25.0		40.0	40.0		45.0	45.0		45.0	45.0	45.0
Total Split (%)	22.7%	22.7%		36.4%	36.4%		40.9%	40.9%		40.9%	40.9%	40.9%
Maximum Green (s)	21.0	21.0		36.0	36.0		41.0	41.0		41.0	41.0	41.0
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)		4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		Min	Min		None	None		None	None	None
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	0
Act Effct Green (s)		7.0		18.0	18.0		22.5	22.5			22.5	22.5
Actuated g/C Ratio		0.14		0.35	0.35		0.44	0.44			0.44	0.44
v/c Ratio		0.06		0.51	0.55		0.23	0.30			0.39	0.73

Lanes, Volumes, Timings

1: Hotel driveway/Hamden & S Gulfview Blvd/S Gulfview Blvd.

2/7/2022



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Control Delay		27.4		19.0	19.5		13.6	12.1			12.9	8.8
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	0.0
Total Delay		27.4		19.0	19.5		13.6	12.1			12.9	8.8
LOS		C		B	B		B	B			B	A
Approach Delay		27.4			19.3			12.5			10.3	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)		3		62	57		11	36			49	0
Queue Length 95th (ft)		26		233	227		61	145			192	101
Internal Link Dist (ft)		207			629			531			807	
Turn Bay Length (ft)				202			355					409
Base Capacity (vph)		881		1315	1169		620	1477			1516	871
Starvation Cap Reductn		0		0	0		0	0			0	0
Spillback Cap Reductn		0		0	0		0	0			0	0
Storage Cap Reductn		0		0	0		0	0			0	0
Reduced v/c Ratio		0.02		0.23	0.26		0.12	0.16			0.21	0.59

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 51.3
 Natural Cycle: 80
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 13.9
 Intersection Capacity Utilization: 68.4%
 Analysis Period (min): 15

Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 1: Hotel driveway/Hamden & S Gulfview Blvd/S Gulfview Blvd.

 25 s	 40 s	 45 s
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Intersection

Int Delay, s/veh 0

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Vol, veh/h	447	74	15	565	81	29
Conflicting Peds, #/hr	0	0	14	0	0	14
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	0	75	-	0	40
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	456	76	15	577	83	30

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

Approach	NB	SB	SW
HCM Control Delay, s	0		
HCM LOS			

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1	SWLn2
Capacity (veh/h)	-	-	-	-	445	-
HCM Lane V/C Ratio	-	-	-	-	0.186	-
HCM Control Delay (s)	-	-	-	-	14.9	-
HCM Lane LOS	-	-	-	-	B	-
HCM 95th %tile Q(veh)	-	-	-	-	0.7	-

SW BOUND (HAMDEN) (STOP)

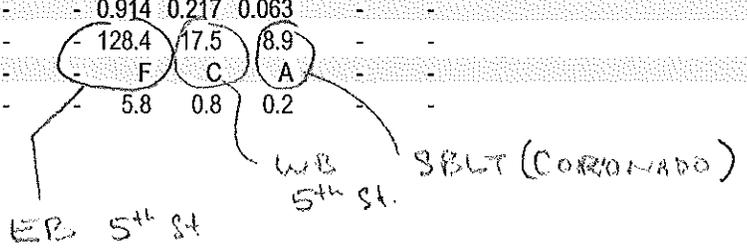
Intersection												
Int Delay, s/veh	11.5 OVERALL DELAY											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	55	27	20	5	0	69	0	510	22	58	524	2
Conflicting Peds, #/hr	68	0	68	8	0	8	199	0	199	7	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	300	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	2	2	2	2	2	1	1	1
Mvmt Flow	59	29	22	5	0	74	0	548	24	62	563	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1362	1337	832	1351	1326	575	634	0	0	580	0	0
Stage 1	757	757	-	568	568	-	-	-	-	-	-	-
Stage 2	605	580	-	783	758	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.52	6.22	4.12	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4.018	3.318	2.218	-	-	2.209	-	-
Pot Cap-1 Maneuver	126	155	372	127	156	518	949	-	-	999	-	-
Stage 1	403	419	-	508	506	-	-	-	-	-	-	-
Stage 2	488	503	-	387	415	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	95	135	282	75	136	511	769	-	-	992	-	-
Mov Cap-2 Maneuver	95	135	-	75	136	-	-	-	-	-	-	-
Stage 1	377	367	-	504	502	-	-	-	-	-	-	-
Stage 2	414	499	-	250	364	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	128.4	17.5	0	0.9
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	769	-	-	120	367	992	-	-
HCM Lane V/C Ratio	-	-	-	0.914	0.217	0.063	-	-
HCM Control Delay (s)	0	-	-	128.4	17.5	8.9	-	-
HCM Lane LOS	A	-	-	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	5.8	0.8	0.2	-	-



Lanes, Volumes, Timings
17: Coronado Dr & Gulfview Dr.

2/7/2022



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙↘			↕	↕	↘
Volume (vph)	396	25	1	865	787	439
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11
Storage Length (ft)	291	0	400			200
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor	1.00			1.00		0.88
Frt	0.991					0.850
Flt Protected	0.955					
Satd. Flow (prot)	3306	0	0	3421	3421	1531
Flt Permitted	0.955			0.955		
Satd. Flow (perm)	3297	0	0	3267	3421	1343
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	6					462
Link Speed (mph)	25			25	25	
Link Distance (ft)	435			400	542	
Travel Time (s)	11.9			10.9	14.8	
Confl. Peds. (#/hr)	1		34			34
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	417	26	1	911	828	462
Shared Lane Traffic (%)						
Lane Group Flow (vph)	443	0	0	912	828	462
Turn Type	Prot		Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases			2			6
Detector Phase	4		2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	30.0		80.0	80.0	80.0	80.0
Total Split (%)	27.3%		72.7%	72.7%	72.7%	72.7%
Maximum Green (s)	26.0		76.0	76.0	76.0	76.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Min	Min	Min	Min
Walk Time (s)	7.0		7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	11.8			25.5	25.5	25.5
Actuated g/C Ratio	0.26			0.56	0.56	0.56
v/c Ratio	0.52			0.50	0.44	0.49

Lanes, Volumes, Timings
 17: Coronado Dr & Gulfview Dr.

2/7/2022



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Control Delay	18.4			7.2	6.6	2.5
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	18.4			7.2	6.6	2.5
LOS	B			A	A	A
Approach Delay	18.4			7.2	5.2	
Approach LOS	B			A	A	
Queue Length 50th (ft)	48			61	52	0
Queue Length 95th (ft)	117			122	105	29
Internal Link Dist (ft)	355			320	462	
Turn Bay Length (ft)	291					200
Base Capacity (vph)	2007			3267	3421	1343
Starvation Cap Reductn	0			0	0	0
Spillback Cap Reductn	0			0	0	0
Storage Cap Reductn	0			0	0	0
Reduced v/c Ratio	0.22			0.28	0.24	0.34

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 45.8
 Natural Cycle: 45
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 8.1
 Intersection Capacity Utilization: 60.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

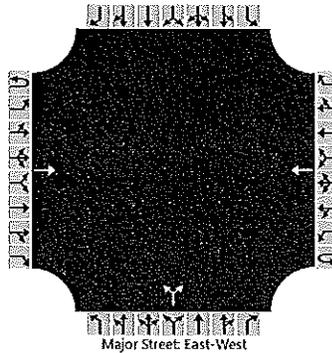
Splits and Phases: 17: Coronado Dr & Gulfview Dr.

p2	p4
80 s	30 s
p6	
80 s	

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	RP	Intersection	5TH ST / DRIVE A (EXIT)
Agency/Co.	GCC	Jurisdiction	CLEARWATER
Date Performed	2/7/2022	East/West Street	5TH STREET
Analysis Year	2029	North/South Street	DRIVE A (EXIT ONLY)
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	ALANIK HOTEL FUTURE WITH PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration			T				T				LR					
Volume (veh/h)			96				2			0		6				
Percent Heavy Vehicles (%)										3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)											7.1		6.2			
Critical Headway (sec)											6.43		6.23			
Base Follow-Up Headway (sec)											3.5		3.3			
Follow-Up Headway (sec)											3.53		3.33			

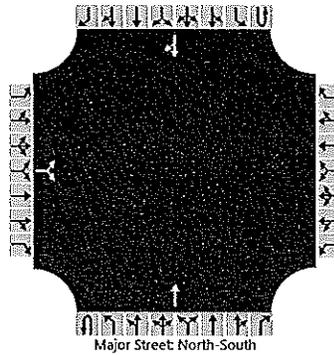
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)											6					
Capacity, c (veh/h)											596					
v/c Ratio											0.01					
95% Queue Length, Q ₉₅ (veh)											0.0					
Control Delay (s/veh)											11.1					
Level of Service (LOS)											B					
Approach Delay (s/veh)											11.1					
Approach LOS											B					

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	RP	Intersection	CORONADO / DRIVE B
Agency/Co.	GCC	Jurisdiction	CLEARWATER
Date Performed	2/7/2022	East/West Street	DRIVE B
Analysis Year	2029	North/South Street	CORONADO DRIVE
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.93
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ALANIK HOTEL FUTURE WITH PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0		
Configuration			LR								T					TR		
Volume (veh/h)		0		4							532				545	4		
Percent Heavy Vehicles (%)		3		3														
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Left Only									1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2												
Critical Headway (sec)		6.43		6.23												
Base Follow-Up Headway (sec)		3.5		3.3												
Follow-Up Headway (sec)		3.53		3.33												

Delay, Queue Length, and Level of Service

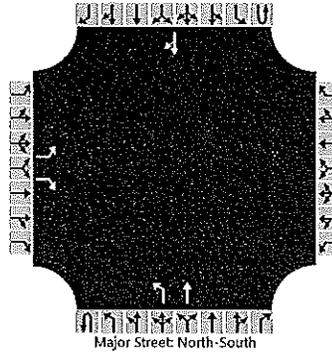
Flow Rate, v (veh/h)			4														
Capacity, c (veh/h)			434														
v/c Ratio			0.01														
95% Queue Length, Q ₉₅ (veh)			0.0														
Control Delay (s/veh)			13.4														
Level of Service (LOS)			B														
Approach Delay (s/veh)		13.4															
Approach LOS		B									C					C	

EB EATC
 PORTIC - COCHERS

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	RP	Intersection	CORONADO DR / DRIVE C
Agency/Co.	GCC	Jurisdiction	CLEARWATER
Date Performed	2/7/2022	East/West Street	DRIVE C (FULL ACCESS)
Analysis Year	2029	North/South Street	CORONADO DR
Time Analyzed	PM PEAK	Peak Hour Factor	0.93
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ALANIK HOTEL FUTURE WITH PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0		
Configuration		L		R						L	T					TR		
Volume (veh/h)		15		11						11	517				540	9		
Percent Heavy Vehicles (%)		3		3						3								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized		No																
Median Type Storage		Left Only									1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		16		12						12						
Capacity, c (veh/h)		289		435						865						
v/c Ratio		0.06		0.03						0.01						
95% Queue Length, Q ₉₅ (veh)		0.2		0.1						0.0						
Control Delay (s/veh)		18.2		13.5						9.2						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		16.2								0.2						
Approach LOS		C								A						

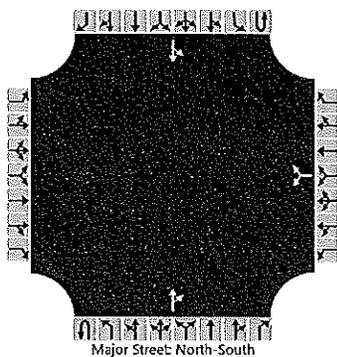
EB EXIT
GARAGE

NBLT
ENTER

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	RP	Intersection	S GULFVIEW BLVD / DRIVE D
Agency/Co.	GCC	Jurisdiction	CLEARWATER
Date Performed	2/7/2022	East/West Street	DRIVE D (FULL ACCESS)
Analysis Year	2029	North/South Street	S GULFVIEW BLVD
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	ALANIK HOTEL FUTURE WITH PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0		0	1	0		0	1	0
Configuration							LR					TR			LT	
Volume (veh/h)						8		14			374	7		13	301	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1	
Critical Headway (sec)						6.43		6.23							4.13	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.23	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						23									13	
Capacity, c (veh/h)						289									917	
v/c Ratio						0.08									0.01	
95% Queue Length, Q ₉₅ (veh)						0.3									0.0	
Control Delay (s/veh)						18.5									9.0	
Level of Service (LOS)						C									A	
Approach Delay (s/veh)					18.5								0.5			
Approach LOS					C											