QUALITATIVE ASSESSMENT For SR 44 at Continental Boulevard

Sumter County Section 1807000 Mile Post 15.938

Prepared for:

THE FLORIDA DEPARTMENT OF TRANSPORTATION DISTRICT 5 TRAFFIC OPERATIONS

719 South Woodland Boulevard DeLand, Florida 32720



Continuing Services Contract for Traffic Operations Financial Project No. 237988-1-32-11 Contract C-9R60 Work Order No. 54 Study 3

Prepared by:

Vanasse Hangen Brustlin, Inc. 225 East Robinson Street, Suite 300 Orlando, FL 32801

April 2020

Qualitative Assessment For SR 44 at Continental Boulevard Financial Project No. 237988-1-32-11 Contract C-9R60 Work Order No. 54 Study 3

This item has been digitally Signed and Sealed by Vinod Vishwanatha on the date adjacent to the seal.

Printed Copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Vanasse Hangen Brustlin, Inc. 225 E. Robinson Street, Suite 300 Orlando, FL – 32801 Certificate of Authorization 3932



Figure 1 - Location Map

SR 44 at Continental Boulevard

Sumter County Section: 1807000 Mile Post: 15.938

EXISTING CONDITION

The characteristics of the study intersection of SR 44 at Continental Boulevard located in Sumter County, Florida are summarized below. An intersection condition diagram and photographs of each respective approach are provided in the following pages.

Features	Description
Main Street	SR 44 oriented east-west; four-lane urban principal arterial
Minor Street	Continental Boulevard oriented north-south approaching SR 44 from the south
Number of Intersection Approach Lanes	EB Approach: one left-turn lane, two through and one right-turn lane WB Approach: one left-turn lane, two through lanes NB Approach: one left-turn lane and one right-turn lane
Traffic Control	Unsignalized (NB approach controlled by Stop Sign)
Posted Speeds	SR 44: 55 mph Continental Boulevard: Not Posted
SIS/NHS Designation	SR 44: None Continental Boulevard: None
Sidewalks	No sidewalks present along SR 44 and Continental Boulevard
Pedestrian/Bicycle Generators	Continental Country Club - Residential Golfing Community
Nearest Signalized Intersections	0.7 miles to the east along SR 44 intersecting CR 468 (Morse Boulevard); 2.2 miles to the west along SR 44 intersecting Buena Vista Boulevard; None to the south
Roadway Lighting	Street lighting present along Continental Boulevard None along SR 44
Surrounding Development	SR 44: medium density residential Continental Boulevard: residential and restaurant
Pavement, Signing & Marking Condition	Pavement markings and signage are in good condition.

SR 44 at Continental Boulevard East Approach



Exhibit 1: Looking west into the intersection along SR 44



Exhibit 2: Looking east from the intersection along SR 44

SR 44 at Continental Boulevard West Approach



Exhibit 3: Looking east into the intersection along SR 44



Exhibit 4: Looking west from the intersection along SR 44

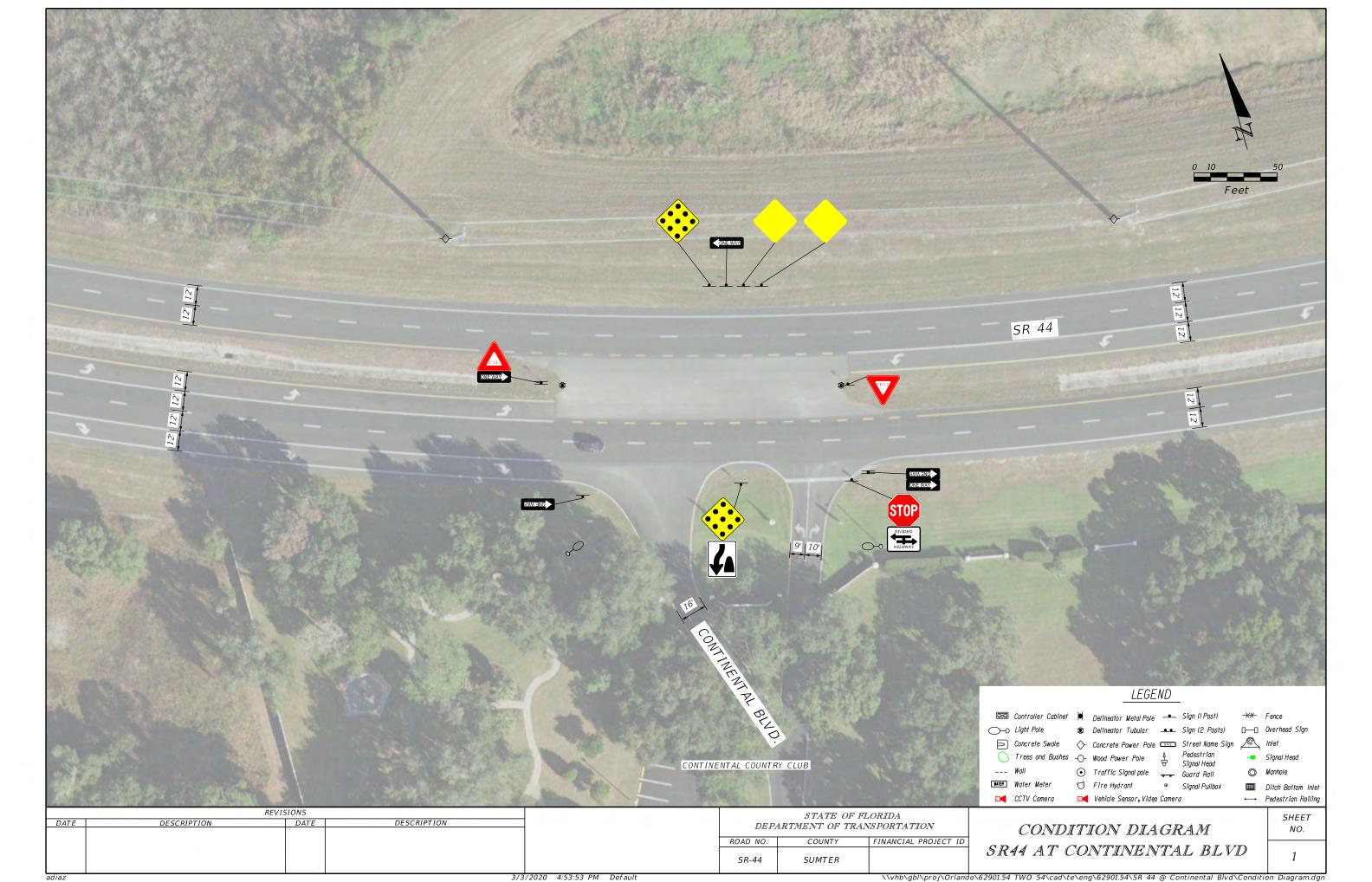
SR 44 at Continental Boulevard South Approach



Exhibit 5: Looking north into the intersection along Continental Boulevard



Exhibit 6: Looking south from the intersection along Continental Boulevard



COLLISION ANALYSIS

According to crash records obtained by VHB from Signal4Analytics and CARS, there were seven reported crashes in the latest 36-month period from January 01, 2017 to December 31st, 2019. The total property damage of these crashes was estimated at \$45,900. Three of the crashes were angle type, one rear-end, one sideswipe, one right-turn and one hit a utility pole. No bicycle or pedestrian crashes were reported.

The number of crashes by types are as follows:

•	Angle	3 (42.8%)
•	Rear-End	1 (14.3%)
•	Sideswipe	1 (14.3%)
•	Right-turn	1 (14.3%)
•	Hit Utility Pole	1 (14.3%)

The number of crashes by contributing cause are as follows:

•	Failure to Yield ROW	4 (57.1%)
•	Followed too Closely	1 (14.3%)
•	Improper Backing	1 (14.3%)
•	Improper Lane Change	1 (14.3%)

The number of crashes by lighting condition are as follows:

•	Daylight	6 (85.7%)
•	Dark - Not Lighted	1 (14.3%)

There were five Property Damage Only (PDO) crashes of the seven reported crashes. These seven crashes resulted in a total of five injuries and zero fatalities. The three angle crashes involved a northbound vehicle performing a left-turn maneuver on to SR 44 to travel west. The contributing cause for all the three angle type crashes was failure to yield right-of-way.

The three angle crashes recorded over a three-year period are considered susceptible to correction by a traffic signal. The peak year with the highest incidence of angle crashes was in 2018 with two crashes which is lower than the five crashes required to satisfy the MUTCD crash warrant criteria.

The rear-end crash occurred along Continental Boulevard in the northbound left-turn, where the vehicle at fault followed too closely to the vehicle waiting to perform a northbound left-turn maneuver. The sideswipe crash occurred along eastbound SR 44 when a vehicle in the inside through lane changed lanes into the outside through lane. The hit a utility pole crash type occurred along Continental Boulevard, when the vehicle at fault realized he was traveling north on the southbound lanes and started to back out and hit a light pole. The right turn crash type occurred when northbound right turning vehicle failed to yield the right-of-way to the eastbound through vehicle.

CRASH SUMMARY

MAJOR ROUTE: SR 44

INTERSECTING ROUTE: Continental Boulevard

COUNTY: Sumter CITY: Wildwood

STUDY PERIOD: 1/1/2017 to 12/31/2019

ENGINEERS: VV

CRASH REF. NO.	HSMV NO.	DATE	DAY	TIME	DOB	AGE	PED/BIKE /MOTORCYCLE	ALCOHOL/ DRUGS	CRASH TYPE	FATAL	INJURY	PROPERTY DAMAGE	LIGHTING CONDITION	PAVEMENT CONDITIONS	CONTRIBUTING CAUSE
1	86799456	1/16/2017	Monday	10:50 AM	8/1/1960	56	Vehicle	No	Hit Utility Pole	0	0	\$800	Daylight	Dry	IMPROPER BACKING
2	87691174	3/30/2018	Friday	8:36 AM	11/25/1932	85	Vehicle	No	Angle	0	2	\$12,000	Daylight	Dry	FAILED TO YIELD RIGHT OF WAY
3	84810808	9/28/2018	Friday	1:09 PM	1/12/1954	65	Vehicle	No	Rear End	0	0	\$1,100	Daylight	Dry	FOLLOWED TOO CLOSELY
4	87964850	11/22/2018	Thursday	1:20 PM	9/22/1930	88	Vehicle	No	Angle	0	0	\$12,000	Daylight	Dry	FAILED TO YIELD RIGHT OF WAY
5	87964851	11/22/2018	Thursday	2:16 PM	8/24/1998	20	Vehicle	No	Sideswipe	0	0	\$4,000	Daylight	Dry	IMPROPER LANE CHANGE
6	87690659	1/11/2019	Friday	7:48 PM	4/24/1945	74	Vehicle	No	Right Turn	0	0	\$4,000	Dark - Not Lighted	Dry	FAILED TO YIELD RIGHT OF WAY
7	88931884	10/11/2019	Friday	4:54 PM	8/9/1995	24	Vehicle	No	Angle	0	3	\$12,000	Daylight	Dry	FAILED TO YIELD RIGHT OF WAY
Total										0	5	\$45,900			

							CRAS	H DESCRIPTION	ON									CRASH TYPE		
	TOTAL	FATAL	INJURY	TOTAL	PROPERTY	PED/BIKE/	ONE VEHICLE			LIGHTING CONDIT	ION		ROADWAY C	ONDITIONS	ANGLE		RIGHT TURN	REAR END	SIDE SWIPE	HEAD ON
	CRASHES	CRASHES	CRASHES	INJURIES	DAMAGE	MOTORCYCLE	ONE VEHICLE	DAYLIGHT	DARK - LIGHTEI	DARK - NOT LIGHTEI	DUSK	DAWN	WET	DRY	ANGLE	LEFT TORN	KIGHI TUKN	KEAK END	SIDESWIFE	HEAD ON
	7	0	2	5	7	0	0	6	0	1	0	0	0	7	3	0	1	1	1	0
		0%	29%	71%	100%	0%	0%	86%	0%	14%	0%	0%	0%	100%	43%	0%	14%	14%	14%	0%
Ī			•								CRASH T	YPE		<u> </u>						
	BACKED INTO	PARKED CAR	COLL. W/ MV ON ROAD	PEDESTRIAN	BIKE	BIKE IN BIKE LANE	MOTORCYCLE / MOPED	TRAIN	ANIMAL	HIT SIGN/SIGN POST	HIT GUARDRAIL	HIT UTILITY POLE	HIT FENCE	HIT CONC BARRIER WALL	HIT BR/PIER/ ABUTT	HIT TREE/ SHRUB	HIT CONST SIGN/BARR/ BR/ PIER	TRAFFIC GATE	CRASH ATTENUATOR	FIXED OBJECT
	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%
							C	RASH TYPE									co	NTRIBUTING CAUSE		
	OTHER FIXED OBJECT	MOVEABLE OBJECT	RAN INTO DITCH/ CULVERT	RAN OFF ROAD	OVERTURNED	OCCUPANT FELL FROM VEHICLE	TRACTOR TRAILER JACKKNIFED	FIRE	EXPLOSION	DOWNHILL RUNAWAY	CARGO LOSS OR SHIFT	SEPARATION OF UNITS	MEDIAN CROSSOVER	ALL OTHER	NO IMPROPER DRIVING	CARELESS DRIVING	FAILED TO YIELD RIGHT OF WAY	IMPROPER BACKING	IMPROPER LANE CHANGE	IMPROPER TURN
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	57%	14%	14%	0%
									C	ONTRIBUTING CAUSE	E									
	ALCOHOL- UNDER INFLUENCE	DRUGS- UNDER INFLUENCE	FOLLOWED TOO CLOSELY	DISREGARDE D TRAFFIC SIGNAL	EXCEEDED SAFE SPEED LIMIT	DISREGARDED STOP SIGN	FAILED TO MAINTAIN VEHICLE	IMPROPER PASSING		EXCEEDED STATED SAFE SPEED LIMIT	OBSTRUCT TRAFFIC	IMPROPER LOAD	DISREGARD OTHER TRAFFIC CONTROL	DRIVING WRONG SIDE/WAY	FLEEING POLICE	VEHICLE MODIFIED	DRIVER DISTRACT- ION	ALL OTHER		
	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		



EIGHT HOUR TURNING MOVEMENT COUNTS

Eight-hour turning movement counts were collected at the intersection of SR 44 at Continental Boulevard from 7:00 - 9:00 a.m., 11:00 a.m. - 1:00 p.m., and 2:00 - 6:00 p.m. during a typical weekday. The traffic counts along SR 44 revealed a balanced east-west directional flow during both the a.m. and p.m. peak periods, and a peak eastbound directional flow during the mid-day. Hourly directional traffic volumes on eastbound SR 44 range from 809 vehicles per hour (vph) in the a.m. period, to 1,120 vph during the mid-day, to 1,144 vph in the p.m. period. Westbound SR 44 directional traffic volumes range from 745 vph in the a.m. period, to 935 vph in the mid-day peak and 1,095 vhp in the p.m. peak. Northbound Continental Boulevard directional traffic volumes range from 62 vph in the a.m. peak, to 92 vph during the mid-day and 76 vph during the p.m. period. The traffic movement distributions along each approach are listed below.

	NB	EB	WB
Left-Turn/U-turn	46.6%	0.0%	4.9%
Through	0.0%	96.7%	95.1%
Right Turn	53.4%	3.3%	0.0%

Heavy vehicles accounted for approximately 6.8% of the total traffic on SR 44 and 2.0% of traffic on Continental Boulevard. The heavy vehicle percentage for each individual movement during the eight-hour turning movement count period are summarized below.

	NB	EB	WB
Left-Turn/U-turn	2.0%	50.0%	3.0%
Through	0.0%	6.6%	7.4%
Right Turn	2.1%	1.1%	0.0%

No pedestrian and bicycles were recorded during the turning movement counts. Turning movement and pedestrian counts are provided in the Appendix section of this report.

A cursory review of the minor street approach traffic volumes revealed that the northbound left-turn movement recorded an hourly volume range of 23 vph to a high of 52 vph during the 8-hour count period. The right-turn movement recorded a range of 19 vph to 51 vph. The hourly volumes on Continental Boulevard, particularly the left-turn lane movement, do not meet the minimum thresholds for meeting the applicable MUTCD 8-hour and 4-hour traffic volume signal warrants.

QUALITATIVE ASSESSMENT

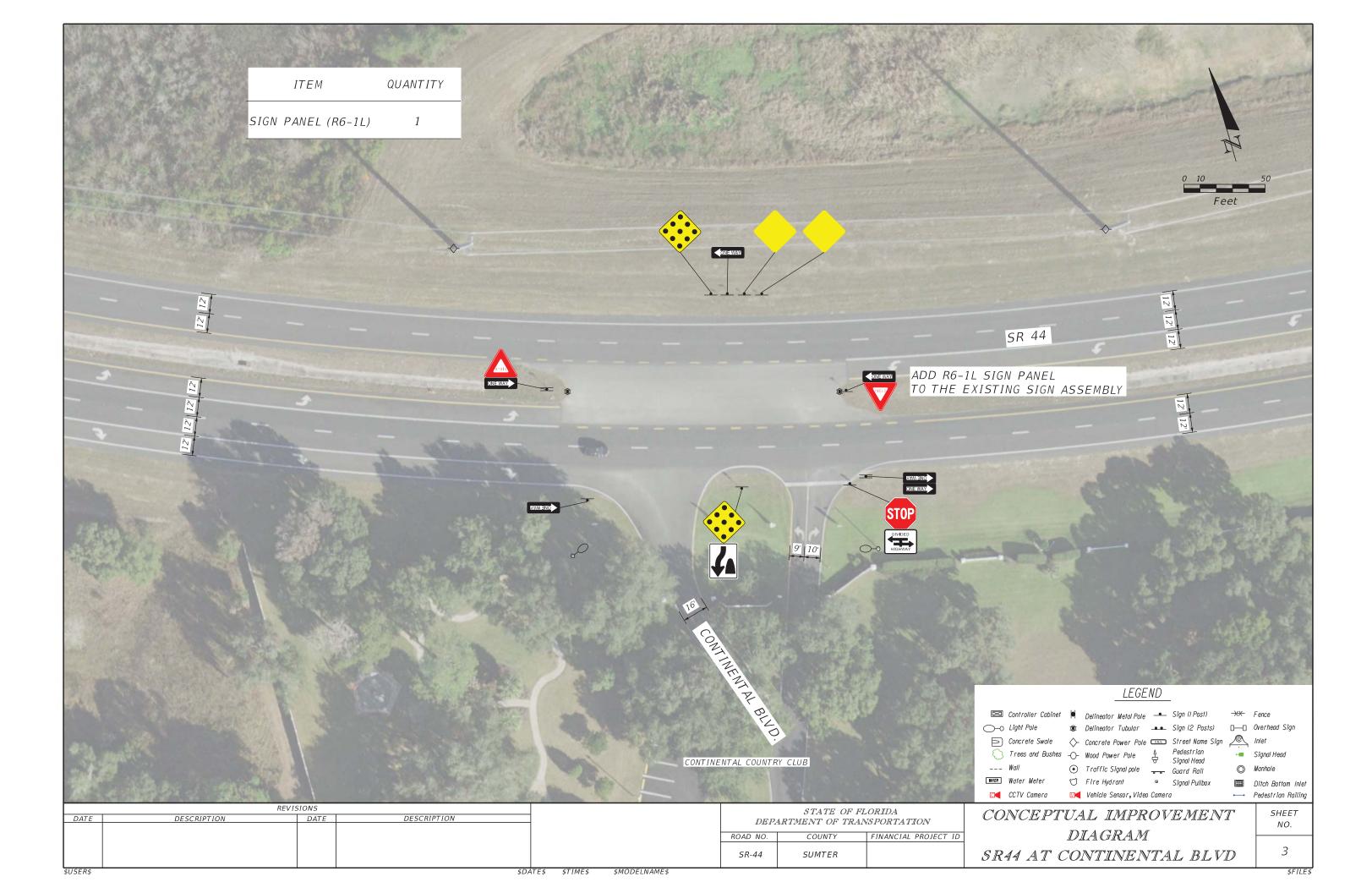
A qualitative assessment based on field observations was performed by a registered engineer during the peak period (i.e., highest mainline volume and highest side street volumes) at the study intersection of SR 44 at Continental Boulevard. The purpose of the qualitative assessment was to evaluate prevailing operating traffic flow conditions and identify areas where improvements would be potentially beneficial for safety and efficiency.

- 1. The intersection of SR 44 at Continental Boulevard is a three-legged (T-shaped) intersection with the northbound approach being controlled with a STOP sign. The intersection is located at the apex point of a horizontal curve alignment (i.e., concave to the north) on SR 44. As such, the eastbound and westbound lanes of SR 44 are super-elevated with Continental Boulevard approaching SR 44 on a slight upslope. The median opening provides a vertical transition to match the elevation difference between the eastbound and westbound lanes.
- 2. The horizontal curve on SR 44 provides a clear view of the intersection from all approaches.
- 3. The eastbound and westbound travel lanes along SR 44 are separated by a 40-foot grass median and a 28-foot median where left turn lanes are provided at the median opening.
- 4. During the peak period, the northbound left turn volumes was observed to be higher than the northbound right turn volume. The northbound left-turning vehicles were observed to use the median as a staging area to find an adequate gap along the westbound traffic volume to complete the left-turn maneuver.
- 5. During the peak period, a maximum queue length of three vehicles were observed in the northbound left turn lane and a maximum queue length of two vehicles were observed in the northbound right turn lane.
- 6. During the peak period, the delay experienced by the northbound left turning vehicles ranged from five to 15 seconds.
- 7. During the peak period, the eastbound approach was observed to consist of a higher percentage of heavy vehicles in comparison to the westbound approach.
- 8. Vehicles arrived in platoons along the eastbound and westbound approaches, while the northbound approach has a sporadic arrival.
- 9. During the peak period, a maximum queue length of two vehicles was observed in the eastbound left turn lane (making a U-Turn). The delay experienced by the eastbound U-turning vehicles was observed to be less than 10 seconds.
- 10. During the peak period, a maximum queue length of three vehicles was observed in the westbound left turn lane. The delay experienced by the westbound left turning vehicles was observed to be less than 10 seconds.
- 11. The Stop sign pole located in the southeast quadrant of the study intersection is slightly bent such that the face of the stop sign is not frontally facing the northbound travel way.
- 12. Existing signing and pavement markings comply with the traffic controls for street terminations per the FDOT Standard Plans.
- 13. A cursory review of the MUTCD traffic signal warrants reveals the intersection failed to meet traffic volume and crash warrants for signalization at this time. The applicable MUTCD signal warrant worksheets are provided in the Appendix.

RECOMMENDATIONS

Based on observations of traffic flow patterns and demand, vehicle traffic counts and vehicle composition, crash records, qualitative assessment of the intersection operation, and consideration of potential improvement options, this study recommends maintaining the existing stop-sign facing the northbound approach.

As a maintenance recommendation, add a one-way sign panel (R6-1L) to the existing Yield sign assembly located on the median as shown in the Conceptual Improvement Diagram in accordance with the Florida Design Manual (FDM) Chapter 230.



Appendix

VEHICLE TURNING MOVEMENT COUNT

CITY: Wildwood Continental Bllvd

SECTION: STATE ROUTE:

OBSERVER:

WEATHER:

1807000

SR 44

VHB

Good

INTERSECTING ROUTE: DATE OF COUNT: 1/19/20 ROAD CONDITION: Good

COUNT PERIODS: 7:00 - 9:00; 11:00 - 13:00 and 14:00 - 18:00 COUNTY:

MILEPOST:

COMPLETED BY: DATE COMPLETED:

Sumter

15.938

2/25/20

VV

ALL VEHICLES / ALL MOVEMENTS

												ALL VE	HICLES / F	ALL IVIOV	EIVIEN 13												
Direction			North	bound					South	bound						East	oound					West	bound				
Start Time	NBU	NBL	NBT	NBR	NBRTOR	Total	SBU	SBL	SBT	SBR	SBRTOR	Total	NS Total	EBU	EBL	EBT	EBR	EBRTOR	Total	WBU	WBL	WBT	WBR	WBRTOR	Total	EW Total	Grand Total
7:00 AM	0	2	0	3	0	5	0	0	0	0	0	0	5	1	0	188	1	0	190	1	2	137	0	0	140	330	335
7:15 AM	0	3	0	3	0	6	0	0	0	0	0	0	6	0	0	196	1	0	197	2	1	163	0	0	166	363	369
7:30 AM	0	11	0	8	0	19	0	0	0	0	0	0	19	0	0	217	1	0	218	0	6	165	0	0	171	389	408
7:45 AM	0	7	0	5	0	12	0	0	0	0	0	0	12	0	0	198	6	0	204	6	12	206	0	0	224	428	440
Total	0	23	0	19	0	42	0	0	0	0	0	0	42		0	799	9	0	809	9	21	671	0	0	701	1,510	1,552
8:00 AM	0	6	0	7	0	13	0	0	0	0	0	0	13	0	0	191	2	0	193	1	10	177	0	0	188	381	394
8:15 AM	0	11	0	8	0	19	0	0	0	0	0	0	19	0	0	184	7	0	191	1	4	168	0	0	173	364	383
8:30 AM	0	3	0	14	0	17	0	0	0	0	0	0	17	0	0	214	3	0	217	2	8	195	0	0	205	422	439
8:45 AM	0	6	0	7	0	13	0	0	0	0	0	0	13	0	0	190	4	0	194	0	5	174	0	0	179	373	386
Total	0	26	0	36	0	62	0	0	0	0	0	0	62	0	0	779	16	0	795	4	27	714	0	0	745	1,540	1,602
11:00 AM	0	6	0	10	0	16	0	0	0	0	0	0	16	0	0	282	4	0	286	1	11	204	0	0	216	502	518
11:15 AM	0	11	0	18	0	29	0	0	0	0	0	0	29	0	0	278	9	0	287	0	11	257	0	0	268	555	584
11:30 AM	0	3	0	8	0	11	0	0	0	0	0	0	11	0	0	232	7	0	239	1	10	218	0	0	229	468	479
11:45 AM	0	9	0	15	0	24	0	0	0	0	0	0	24	0	0	251	10	0	261	1	10	211	0	0	222	483	507
Total	0	29	0	51	0	80	0	0	0	0	0	0	80	0	0	1,043	30	0	1,073	3	42	890	0	0	935	2,008	2,088
12:00 PM	0	12	0	14	0	26	0	0	0	0	0	0	26	0	0	272	6	0	278	1	9	196	0	0	206	484	510
12:15 PM	0	7	0	9	0	16	0	0	0	0	0	0	16	0	0	258	11	0	269	3	13	215	0	0	231	500	516
12:30 PM	0	25	0	4	0	29	0	0	0	0	0	0	29	0	0	272	12	0	284	2	16	216	0	0	234	518	547
12:45 PM	0	8	0	13	0	21	0	0	0	0	0	0	21	0	0	278	11	0	289	1	9	206	0	0	216	505	526
Total	0	52	0	40	0	92	0	0	0	0	0	0	92	0	0	1,080	40	0	1,120	7	47	833	0	0	887	2,007	2,099
2:00 PM	0	7	0	13	0	20	0	0	0	0	0	0	20	2	0	306	11	0	319	2	15	225	0	0	242	561	581
2:15 PM	0	8	0	16	0	24	0	0	0	0	0	0	24	0	0	300	20	0	320	1	7	206	0	0	214	534	558
2:30 PM	0	6	0	3	0	9	0	0	0	0	0	0	9	0	0	257	12	0	269	1	10	231	0	0	242	511	520
2:45 PM	0	11	0	8	0	19	0	0	0	0	0	0	19	0	0	262	10	0	272	2	21	222	0	0	245	517	536
Total	0	32	0	40	0	72	0	0	0	0	0	0	72	2	0	1,125	53	0	1,180	6	53	884	0	0	943	2,123	2,195
3:00 PM	0	13	0	14	0	27	0	0	0	0	0	0	27	0	0	267	9	0	276	2	2	218	0	0	222	498	525
3:15 PM	0	7	0	7	0	14	0	0	0	0	0	0	14	0	0	265	9	0	274	0	15	248	0	0	263	537	551
3:30 PM	0	5	0	8	0	13	0	0	0	0	0	0	13	0	0	284	7	0	291	2	12	278	0	0	292	583	596
3:45 PM	0	8	0	14	0	22	0	0	0	0	0	0	22	0	0	285	14	0	299	2	15	267	0	0	284	583	605
Total	0	33	0	43	0	76	0	0	0	0	0	0	76	0	0	1,101	39	0	1,140	6	44	1,011	0	0	1,061	2,201	2,277
4:00 PM	0	3	0	8	0	11	0	0	0	0	0	0	11	1	0	271	10	0	282	0	13	226	0	0	239	521	532
4:15 PM	0	9	0	7	0	16	0	0	0	0	0	0	16	0	0	317	17	0	334	2	8	258	0	0	268	602	618
4:30 PM	0	6	0	11	0	17	0	0	0	0	0	0	17	0	0	271	8	0	279	0	14	275	0	0	289	568	585
4:45 PM	0	8	0	8	0	16	0	0	0	0	0	0	16	0	0	238	11	0	249	1	14	284	0	0	299	548	564
Total	0	26	0	34	0	60	0	0	0	0	0	0	60	1	0	1,097	46	0	1,144	3	49	1,043	0	0	1,095	2,239	2,299
5:00 PM	0	2	0	9	0	11	0	0	0	0	0	0	11	0	0	251	7	0	258	3	17	260	0	0	280	538	549
5:15 PM	0	2	0	6	0	8	0	0	0	0	0	0	8	0	0	263	15	0	278	2	11	285	0	0	298	576	584
5:30 PM	0	12	0	6	0	18	0	0	0	0	0	0	18	0	0	236	8	0	244	2	5	244	0	0	251	495	513
5:45 PM	0	14	0	4	0	18	0	0	0	0	0	0	18	0	0	198	6	0	204	0	6	235	0	0	241	445	463
Total	0	30	0	25	0	55	0	0	0	0	0	0	55	0	0	948	36	0	984	7	39	1.024	0	0	1.070	2.054	2.109

VEHICLE TURNING MOVEMENT COUNT

CITY: Wildwood Continental Bllvd

SECTION: STATE ROUTE: OBSERVER:

WEATHER:

1807000

SR 44

VHB

Good

INTERSECTING ROUTE: DATE OF COUNT: 1/19/20 ROAD CONDITION: Good

COUNTY: Sumter MILEPOST: 15.938 COMPLETED BY: DATE COMPLETED: VV 2/25/20

COUNT PERIODS: 7:00 - 9:00; 11:00 - 13:00 and 14:00 - 18:00

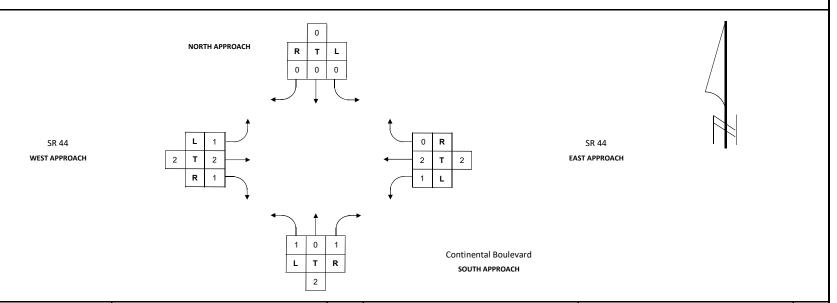
HEAVY VEHICLES (TRUCKS + BUSSES)

												HEAVY V	EHICLES (TRUCKS	+ BUSSE:	S)											
Direction			North	bound					South	bound						Eastb	ound					West	tbound			1	
Start Time	NBU	NBL	NBT	NBR	NBRTOR	Total	SBU	SBL	SBT	SBR	SBRTOR	Total	NS Total	EBU	EBL	EBT	EBR	EBRTOR	Total	WBU	WBL	WBT	WBR	WBRTOR	Total	EW Total	Grand Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	16	0	0	17	0	0	8	0	0	8	25	25
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	15	0	0	9	0	0	9	24	24
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	8	0	0	8	18	18
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	0	18	0	0	18	32	32
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	55	0	0	56	0	0	43	0	0	43	99	99
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	13	0	0	13	23	23
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	18	0	0	10	0	0	10	28	28
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	22	0	1	11	0	0	12	34	34
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	7	0	0	7	17	17
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	0	0	60	0	1	41	0	0	42	102	102
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	21	0	3	29	0	0	32	53	53
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	21	0	0	20	0	0	20	41	41
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	0	17	0	0	17	31	31
11:45 AM Total	0	0	0	2	0	2	0	0	0	0	0	0	2	0	0	17	2	0	19 75	0	0	16 82	0	0	16 85	35 160	37 162
			0		0	_	0	0	0	0	_	0	3	0	0	73		-		0	0		0	0			
12:00 PM 12:15 PM	0	0	0	1	0	3	0	0	0	0	0	0	- 3	0	0	15 26	0	0	15 26	0	0	25 15	0	0	25 15	40 41	43 42
12:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	28	0	0	28	0	0	12	0	0	12	40	42
12:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	30	0	0	30	0	1	13	0	0	14	44	45
Total	0	4	0	3	0	7	0	0	0	0	0	0	7	0	0	99	0	0	99	0	1	65	0	0	66	165	172
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	0	0	34	0	1	15	0	0	16	50	50
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20	1	0	14	0	0	15	35	35
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	20	0	0	12	0	0	12	32	32
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	1	16	0	0	17	30	30
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	0	0	87	1	2	57	0	0	60	147	147
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	18	0	0	25	0	0	25	43	43
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16	0	1	16	0	0	17	33	33
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	1	0	12	0	0	13	25	25
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	21	0	0	23	0	0	23	44	44
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0	0	67	1	1	76	0	0	78	145	145
4:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	1	1	0	5	1	0	7	0	0	19	0	0	19	26	27
4:15 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	20	0	0	20	0	0	11	0	0	11	31	32
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	13	0	0	20	0	0	20	33	33
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	0	13	0	0	13	20	20
Total	0	1	0	1	0	2	0	0	0	0	0	0	2	1	0	45	1	0	47	0	0	63	0	0	63	110	112
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	9	0	0	12	0	0	12	21	21
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	0	0	27	0	0	27	33	33
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	12	0	0	29	0	0	29	41	41
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	1	27	0	0	28	38	38
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	0	37	0	1	95	0	0	96	133	133

FLORIDA DEPARTMENT OF TRANSPORTATION SUMMARY OF VEHICLE MOVEMENTS

1807000 Wildwood SECTION: CITY: COUNTY: Sumter STATE ROUTE: SR 44 Continental Bllvd 15.938 INTERSECTING ROUTE: MILEPOST: OBSERVER: VHB DATE: 1/19/20 COMPLETED BY: VV WEATHER: Good ROAD CONDITION: Good DATE COMPLETED: 2/25/20

REMARKS:



TIME			NORTH	BOUND					SOUTH	IBOUND			TOTAL			EASTE	BOUND					WESTI	BOUND			TOTAL
BEGIN/END	U	L	Т	R	RTOR	тот	U	L	Т	R	RTOR	тот	N/S	U	L	Т	R	RTOR	тот	U	L	Т	R	RTOR	тот	E/W
7:00 - 8:00	0	23	0	19	0	42	0	0	0	0	0	0	42	1	0	799	9	0	809	9	21	671	0	0	701	1,510
8:00 - 9:00	0	26	0	36	0	62	0	0	0	0	0	0	62	0	0	779	16	0	795	4	27	714	0	0	745	1,540
11:00 - 12:00	0	29	0	51	0	80	0	0	0	0	0	0	80	0	0	1,043	30	0	1,073	3	42	890	0	0	935	2,008
12:00 - 13:00	0	52	0	40	0	92	0	0	0	0	0	0	92	0	0	1,080	40	0	1,120	7	47	833	0	0	887	2,007
14:00 - 15:00	0	32	0	40	0	72	0	0	0	0	0	0	72	2	0	1,125	53	0	1,180	6	53	884	0	0	943	2,123
15:00 - 16:00	0	33	0	43	0	76	0	0	0	0	0	0	76	0	0	1,101	39	0	1,140	6	44	1,011	0	0	1,061	2,201
16:00 - 17:00	0	26	0	34	0	60	0	0	0	0	0	0	60	1	0	1,097	46	0	1,144	3	49	1,043	0	0	1,095	2,239
17:00 - 18:00	0	30	0	25	0	55	0	0	0	0	0	0	55	0	0	948	36	0	984	7	39	1,024	0	0	1,070	2,054
TOTAL	0	251	0	288	0	539	0	0	0	0	0	0	539	4	0	7,972	269	0	8,245	45	322	7,070	0	0	7,437	15,682

Percentage	0.0%	46.6%	0.0%	53.4%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	N/A	0.0%	0.0%	96.7%	3.3%	0.0%	100.0%	0.6%	4.3%	95.1%	0.0%	0.0%	100.0%	N/A
Maximum	0	52	0	51	0	92	0	0	0	0	0	0	92	2	0	1,125	53	0	1,180	9	53	1,043	0	0	1,095	2,239
Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Heavy Veh		5	0	6	0	11	()	0	0	0	0	11	2	2	523	3	0	528	1	11	522	0	0	533	1,061
% Heavy Veh	2.	0%	0.0%	2.1	1%	2.0%	0.0)%	0.0%	0.0	0%	0.0%	2.0%	50.	0%	6.6%	1.3	1%	6.4%	3.	0%	7.4%	0.0	0%	7.2%	6.8%

FLORIDA DEPARTMENT OF TRANSPORTATION

PEDESTRIAN MOVEMENT SUMMARY

SECTION 1807000 STATE ROUTE SR 44 OBSERVER VHB

COUNTY Sumter MILEPOST 15.938

COUNT HOURS 7:00 - 9:00; 11:00 - 13:00 and 14:00 - 18:00

CITY

DATE

Wildwood

Continental Bllvd

INTERSECTING ROUTE
DATE OF COUNT

1/19/20

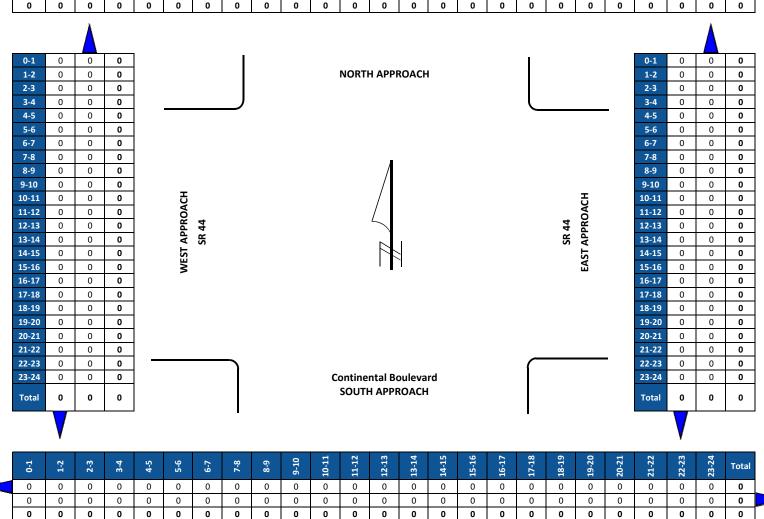
WEATHER

Good

COMPLETED BY

VV 2/25/20

0-1	1-2	2-3	3.4	4-5	9-5	2-9	7-8	6-8	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	Total
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



FLORIDA DEPARTMENT OF TRANSPORTATION BICYCLE MOVEMENT SUMMARY

 SECTION
 1807000

 STATE ROUTE
 SR 44

 OBSERVER
 VHB

 COUNTY
 Sumter

MILEPOST 15.938

COUNT HOURS 7:00 - 9:00; 11:00 - 13:00 and 14:00 - 18:00

CITY Wildwood

INTERSECTING ROUTE Continental Bllvd

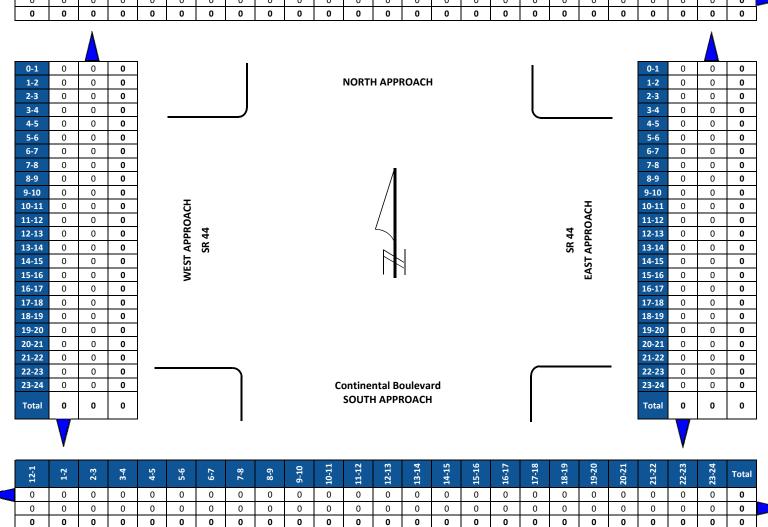
 DATE OF COUNT
 1/19/20

 WEATHER
 Good

 COMPLETED BY
 VV

 DATE
 2/25/20

12-1	1-2	2-3	3.4	4-5	9-9	2-9	7-8	6-8	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22		23-24	Total
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



			TRAF	State FIC :			artmen VAR				ARY		TRAFFIC ENG	INEERING 10/15
City:			/ildwoo			 .			Engin			VHB		
County:			- Sumt						-	ate:	M	larch 4, 202	20	
District:			Five											
Major Street: Minor Street:			Contin	SR 44 ental Bo	ulevar	d			Lanes: Lanes:			Approach S		55 25
MUTCD Electron	nic Refer	ence to	Chapter	4: <u>http</u>	o://muto	d.fhwa	.dot.gov	<u>/pdfs/2</u>	<u>009r1r</u>	2/part4	.pdf			
Volume Level C	riteria													
1. Is the pos		ed or 85	th-perce	ntile of n	najor st	reet > 4	10 mph	(70 km	/h)?			✓ Yes	☐ No	
2. Is the inte	ersection	ı in a bui	lt-up are	a of an i	solated	comm	unity wi	tha po	pulatio	on < 10,	000?	Yes	✓ No	
"70%" volun	ne level ı	nay be ເ	used if C	uestion	1 or 2 a	above is	s answe	ered "Ye	es"			√ 70%	100%	
WARRANT 1							5.							
											eight hours.	∐ Yes	✓ No	
(should only											%" satisfied s delay and	Yes	✓ No	
(0				•							problems).			
Condition A	\ - Minin	num Vel	nicular \	/olume								_	_	
Condition A	is intend	led for a	oplicatio	n at loca	tions w	here a	large vo	olume o	f	1009	% Satisfied:	Yes	✓ No	
intersecting	traffic is	the princ	cipal rea	son to co	onsider	installii	ng a tra	ffic con	trol	809	% Satisfied:	Yes	✓ No	
signal.										709	% Satisfied:	Yes	✓ No	
Number of traffic or			ng		per hou t (total pproacl	of both					on minor- ion only)			
Major		Minor	1	00%ª	80%	b (70% ^c	100%	, a o	80% ^b	70% ^c			
1		1		500	400)	350	150)	120	105			
2 or more	•	1		600	480)	420	150)	120	105			
2 or more	9 2	2 or more	9	600	480)	420	200)	160	140			
1		2 or more	Э	500	400)	350	200)	160	140			
^a Basic Minim ^b Used for cor ^c May be used Record 8 high	nbination I when the	of Condit e major-st	treet spe	ed exceed	ls 40 mp	oh or in a	an isolat	ed comn	nunity v	vith a po		ss than 10,00	00	
			Eigh	t Highe	st Hour	rs								
Street	7:00 AM	8:00 AM	11:00 AM	12:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM						
Major	1,510	1,540	2,008	2,007	2,123	2,201	2,239	2,054	Exi	sting V	olumes			

Minor

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

Condition B - Interruption of Continuous Traffic	Applicable:	✓ Yes	☐ No
Condition B is intended for application where Condition A is not satisfied and the	100% Satisfied:	Yes	✓ No
traffic volume on a major street is so heavy that traffic on the minor intersecting	80% Satisfied:	Yes	✓ No
street suffers excessive delay or conflict in entering or crossing the major street.	70% Satisfied:	Yes	✓ No

	nes for moving ch approach	stree	per hour o t (total of b oproaches	ooth	Vehicles per hour on minor- street (one direction only)					
Major Minor		100% ^a	80% ^b	70% ^c	100% ^a	80% ^b	70% ^c			
1	1	750	600	525	75	60	53			
2 or more	1	900	720	630	75	60	53			
2 or more	2 or more	900	720	630	100	80	70			
1 2 or more		750	600	525	100	80	70			

^a Basic Minimum hourly volume

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

		Eiç	ght High	est Hou	ırs			
Street	MA 00:7	8:00 AM	11:00 AM	12:00 PM	Z:00 PM	3:00 PM	4:00 PM	5:00 PM
Major	1,510	1,540	2,008	2,007	2,123	2,201	2,239	2,054
Minor	23	26	29	52	32	33	26	30

Existing Volumes

^b Used for combination of Conditions A and B after adequate trial of other remedial measures

^c May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Wildwood	Engine	er:	VHB	
County:	18 – Sumter	Dat	te:	March 4, 2020	
District:	Five				
Major Street:	SR 44	Lanes:	2	Major Approach Speed:	55
Minor Street:	Continental Bouleva	l anes:	1	Minor Approach Speed:	25

http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf MUTCD Electronic Reference to Chapter 4:

Volume Level Criteria

- 1. Is the posted speed or 85th-percentile of major street > 40 mph (70 km/h)?
- 2. Is the intersection in a built-up area of an isolated community with a population < 10,000?
- "70%" volume level may be used if Question 1 or 2 above is answered "Yes"

WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME

If all four points lie above the appropriate line, then the warrant is satisfied.

✓ Yes No Applicable: Satisfied: Yes Vo

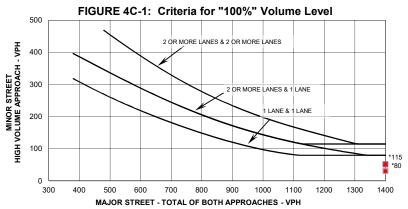
Yes Vo

✓ Yes No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four	Volu	mes
Highest Hours	Major Street	Minor Street
12:00 PM	2007	52
2:00 PM	2123	32
3:00 PM	2201	33
5:00 PM	2054	30

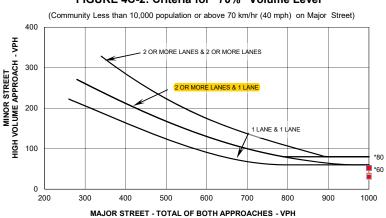


* Note: 115 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 80 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

70% Volume Level

Four	Volu	imes
Highest Hours	Major Street	Minor Street
12:00 PM	2007	52
2:00 PM	2123	32
3:00 PM	2201	33
5:00 PM	2054	30

FIGURE 4C-2: Criteria for "70%" Volume Level



* Note: 80 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 60 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

State of Florida Department of Transportation

Form 750-020-01 TRAFFIC ENGINEERING 10/15

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Wildwood	Engineer:	VHB	
County:	18 – Sumter	Date:	March 4, 2020	
District:	Five	•		
Major Street:	SR 44	Lanes: 2	Major Approach Speed:	55
Minor Street:	Continental Boulevard	Lanes: 1	Minor Approach Speed:	25

WARRANT 7 - CRASH EXPERIENCE

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.

Applicable:
Yes No

		Criteria			Н	our		Vol	ume	Met?		Fulfil	lled?
		Ontena				Jui		Major	Minor	Yes	No	Yes	No
	One of	Warrant 1, Condition A (80% satisfied)									Х		
	the	Warrant 1, Condition B (80% satisfied)									Х		
1.	warrants to the right is met.	Warrant 4, Pedestrian Volume at 80% of volume requirements: # ped/hr for four (4) hours or # ped/hr for one (1) hour.									х		X
2.	•	trial of other remedial measure has failed crash frequency.	Meas tried:	ure				None					Х
3.	Five or more reported crashes, of types susceptible 3. to correction by signal, have occurred within a 12-month period.		Obse Crasl Type	า		Ar	ngle	Number per 12 r		nes	2		Х