TRAFFIC REPORT

COBB ROAD (CR 485) / US 98 PD&E STUDY

From SR 50 to Suncoast Parkway in Hernando County, Florida WPI Nos. 257299 1 & 405017 1; FAP Nos: 2891 007 P & 2891 008 P





TRAFFIC REPORT

Cobb Road (CR 485) / US 98 Project Development and Environment Study

Cobb Road (CR 485), from SR 50 to US 98 and US 98, from Cobb Road to Suncoast Parkway Hernando County, Florida

WPI Segment Nos.: 257299 1 & 405017 1 FAP Nos.: 2891 007 P & 2891 008 P

This proposed action consists of capacity and safety improvements to Cobb Road (CR 485), a two-lane undivided arterial, from SR 50 to US 98 and US 98, a two-lane undivided arterial, from Cobb Road to Suncoast Parkway

FLORIDA DEPARTMENT OF TRANSPORTATION District Seven

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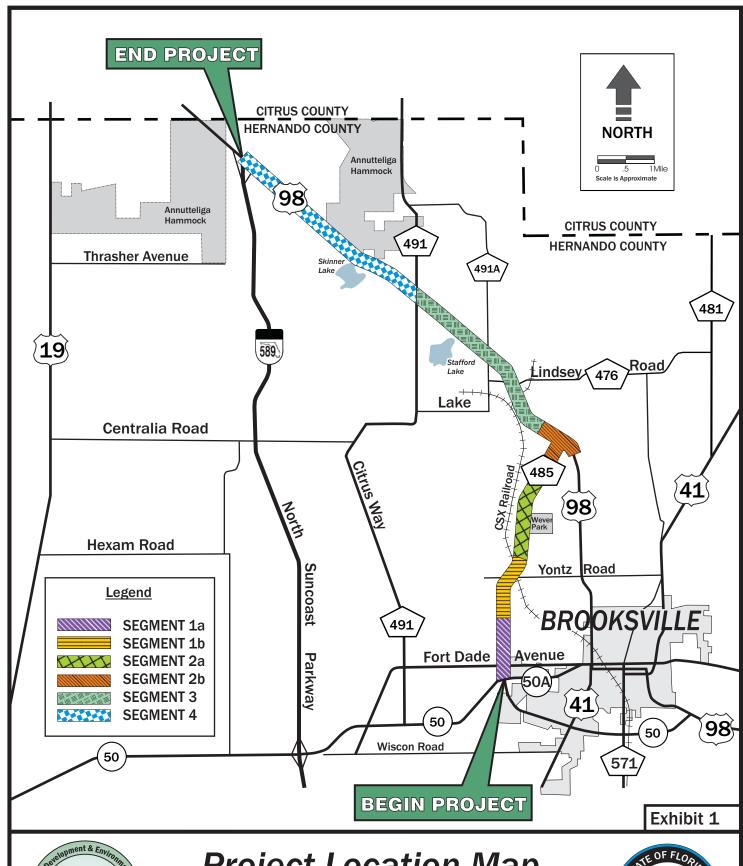
1. INTRODUCTION

1.1 Purpose

This *Traffic Report* has been prepared as part of a Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Study for the planned improvements to Cobb Road (CR 485) and US 98 located in Hernando County. The objective of the PD&E Study is to provide documented environmental and engineering analyses that will assist the FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the location and conceptual design for improvements to Cobb Road and US 98. The No-Build Alternative remained a viable alternative throughout the duration of the PD&E Study. This particular report documents the existing traffic conditions; validation of the 1999 Tampa Bay Regional Planning Model (TBRPM) for use in the corridor study area; the development of the design year 2025 projected annual average daily traffic (AADT); the development of traffic parameters for the estimation of design hour volumes (DHV) and capacity and Level of Service (LOS) analysis of the design alternatives for the Cobb Road (CR 485) / US 98 PD&E Study in Hernando County, Florida.

1.2 Project Description

The planned project will improve the capacity and safety of the existing two-lane Cobb Road (CR 485) and a portion of US 98 in Hernando County, Florida. The project study area begins on Cobb Road at SR 50 in the City of Brooksville and extends northward 4.5 miles to US 98. The study area then proceeds 7 miles westward along US 98 to the Suncoast Parkway. These segments of Cobb Road and US 98 are currently two-lane undivided rural arterials. The total length of the planned project is approximately 11.5 miles. The project has been divided into six segments (Segments 1a, 1b, 2a, 2b, 3 and 4) for purposes of analysis throughout this study. The project segmentation is shown on the Project Location Map in Exhibit 1.





Project Location Map

Cobb Road (CR 485) / US 98 PD&E Study

WPI Segment Nos: 257299 1 & 405017 1 FAP Nos: 2891 007 P & 2891 008 P



The existing Cobb Road / US 98 corridor provides traffic flow around the west side of the City of Brooksville, ultimately connecting SR 50 with the Suncoast Parkway (SR 589). Traffic growth in Hernando County and in the vicinity of the City of Brooksville will cause Cobb Road and US 98 to become congested if traffic capacity is not added to the system. The need to provide a safer designated bypass route around the City of Brooksville is vital, particularly for the large volume of truck traffic associated with three major rock mines and other industrial facilities situated along the project corridor. The Cobb Road / US 98 corridor also serves as a school bus route for Parrott Middle School.

Capacity and safety improvements to Cobb Road and US 98, along with the designation of Cobb Road as US 98, represents a long-standing goal of the City of Brooksville and Hernando County. This goal has been incorporated into the Hernando County Metropolitan Planning Organization (MPO) 2025 Long Range Transportation Plan (LRTP), which calls for widening the existing roadways to a continuous four-lane divided, controlled access facility.

1.3 Scope of Work

The traffic analysis conducted for this Cobb Road and US 98 PD&E Study included existing traffic analysis, the modeling effort for the development of design traffic for the alternatives, traffic data for the screening of preliminary alternatives and the evaluation of viable alternatives. The existing traffic analysis included the collection of traffic count data and the level of service analysis of roadway segments and intersections. Design alternatives were developed for the study corridor to serve the projected traffic.

Projected design hour traffic volumes were developed for existing year (2001) opening year (2005) and design year (2025) for the design alternatives. Design hour volumes for the viable alternatives were developed utilizing FDOT's 1996 Traffic Design Handbook and approved methodologies. Traffic operational analyses of each viable alternative, including mainline and intersections, were conducted and evaluated using appropriate methods.

2. EXISTING CONDITIONS

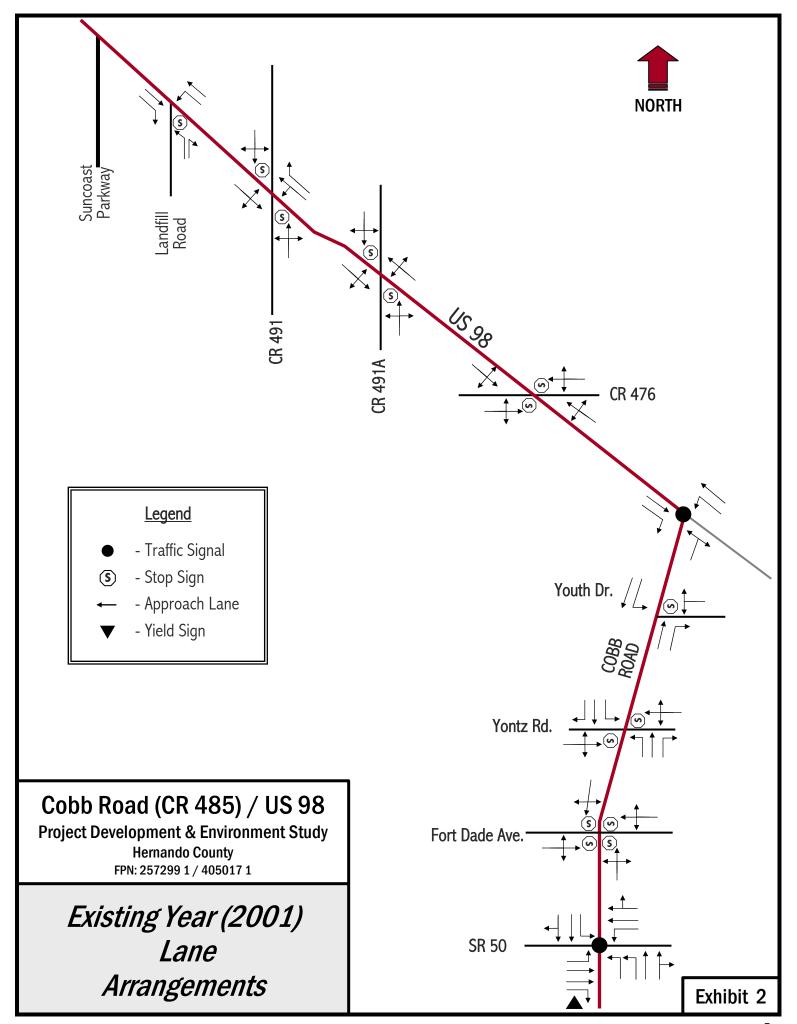
Existing roadway and intersection characteristics of Cobb Road and the US 98 corridor, historical traffic data from FDOT count stations, traffic data from Hernando County count stations and 2001 field daily traffic counts and 8-hour turning movement counts at various corridor locations and intersections were collected.

2.1 Roadway and Intersection Characteristics

The existing Cobb Road at the SR 50 intersection is a 4-lane divided facility, with a 24 foot (ft.) raised median, 12-ft. inside lanes, 14-ft. outside lanes, and 5-ft. sidewalks. From north of SR 50 to US 98, the existing Cobb Road is a 2-lane rural facility with 12-ft. lanes and 10-ft. shoulders, 4 feet of which are paved. The existing US 98 from Cobb Road to the Suncoast Parkway is a 2-lane rural facility with 12-ft lanes and 8-ft. shoulders, 4 feet of which are paved. Both Cobb Road and US 98 have open drainage ditches. The existing laneage and type of traffic control at major study area intersections are shown in Exhibit 2. The speed limit on Cobb Road is 35 mph between SR 50 and Fort Dade Avenue, and 55 mph between Fort Dade Avenue and US 98. In the vicinity of the Yontz Road intersection the speed limit is 45 mph. The speed limit on US 98 is 60 mph.

2.2 Collection of Traffic Data

Field traffic counts collected for this project include 7-day tube counts, 72-hour intersection approach tube counts and 8-hour manual turning movement counts. The counts were conducted during June 2001. The 8-hour manual turning movement counts were conducted for AM, PM and Mid-Day peak hours. Intersection peak hours were selected based on 72-hour intersection approach tube counts. Traffic count data collected was used in evaluating the existing level of service, and adjustment of traffic projections. Counts were made at the following locations for this project:

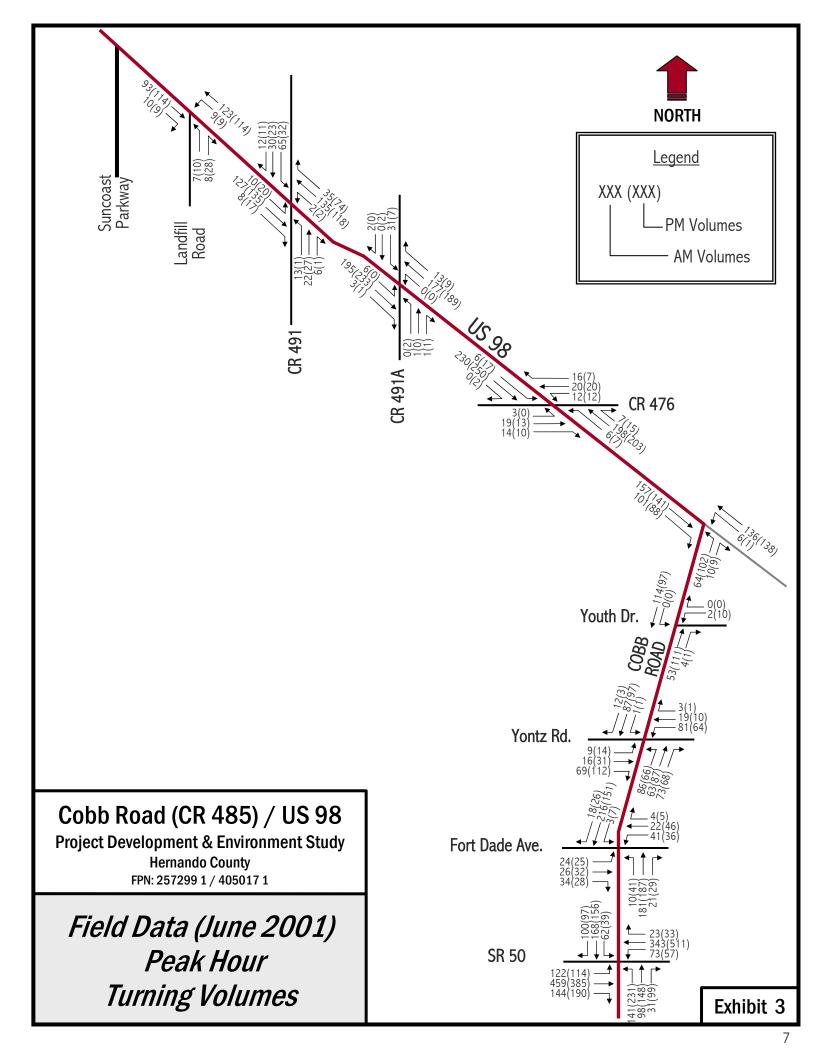


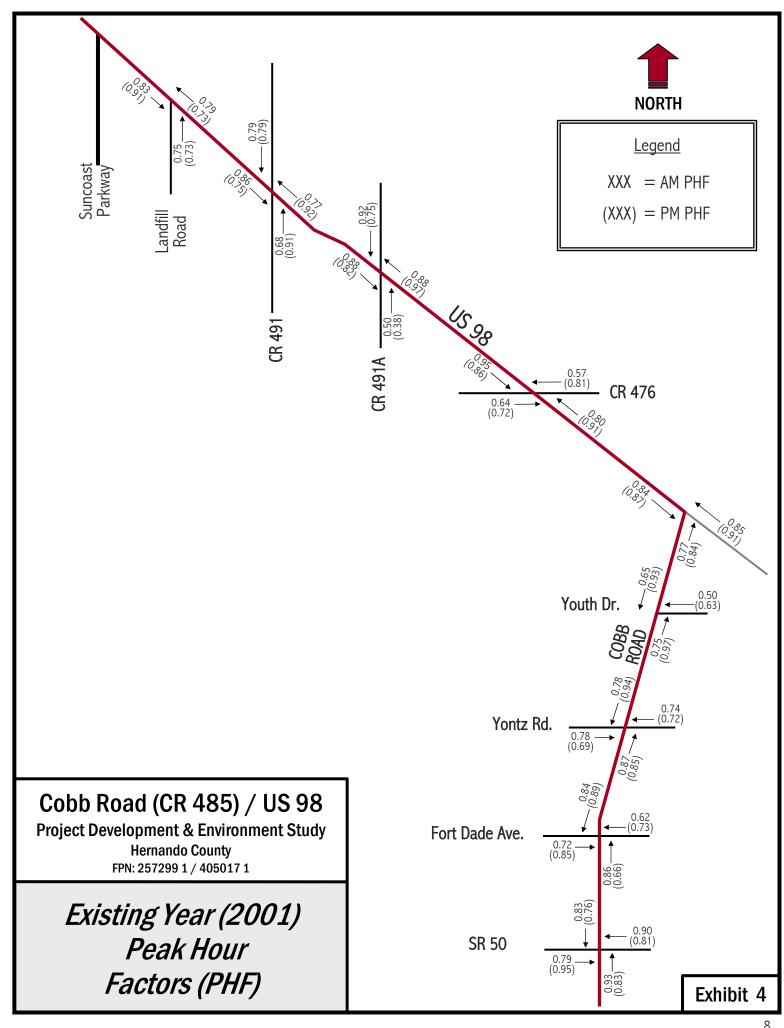
- > 7-Day Tube Counts (in 15-minute increments):
 - 1. On SR 50 South of SR 50A.
 - 2. On US 98 East of Cobb Road.
 - 3. On US 98 West of Suncoast Parkway.
- ➤ 8-Hour Manual Turning Movement Counts and 72-Hour Intersection Approach Tube Counts (in 15-minute increments):
 - 1. SR 50 with Cobb Road.
 - 2. Fort Dade Avenue with Cobb Road.
 - 3. Yontz Road with Cobb Road.
 - 4. Youth Drive with Cobb Road.
 - 5. Cobb Road with US 98.
 - 6. Lake Lindsey Road (CR 476) with US 98.
 - 7. Brittle Road (CR 491A) with US 98.
 - 8. Citrus Way (CR 491) with US 98.
 - 9. Landfill Road with US 98.

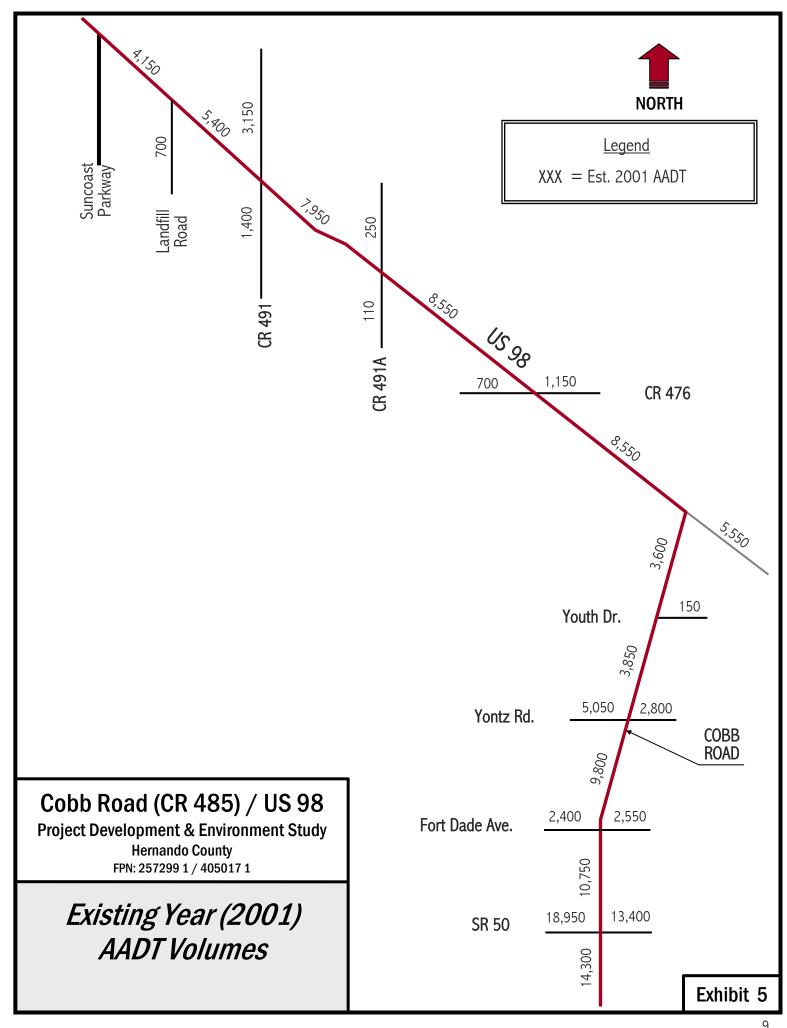
Additional data collected for use in the traffic analysis includes:

- > Year 1999, 2025 Tampa Bay Regional Planning Model Data
- Year 1999, 2000 Florida Department of Transportation Traffic Information
- Year 1999 Hernando County Traffic Information

The AM peak and PM peak hour manual turning movement count data collected at intersections within the study area during June 2001 are shown in Exhibit 3. These volumes represent the peak hour volume at each intersection, which is not necessarily the same peak hour for all intersections. The estimated peak hour factors at intersection approaches are shown in Exhibit 4. The estimated existing year (2001) average annual daily traffic (AADT) at roadway segments are shown in Exhibit 5. The existing year AADT was estimated by multiplying the collected tube counts by the axle factor of 0.92 and by the historical seasonal factor of 1.1 for the Hernando County area.







2.3 Traffic Parameters

The existing year (2001), opening year (2005) and design year (2025) design hour volumes were estimated in sections 2.4 and 4.1 respectively, using the 30^{th} highest hour K and D (K₃₀ and D₃₀) factors. The K, D, and T factors were estimated based on the procedure outlined in the FDOT's Design Traffic Handbook, 1996. The K, D, and T traffic factors collected during the past three years from FDOT count stations in the Cobb Road & US 98 study area are shown in Table 1.

Table 1
TRAFFIC CHARACTERISTICS FOR THE COBB ROAD & US 98 STUDY AREA

Count Station	Location	Facility Type	Year	K30	D30	Daily Truck %	Design Hour Truck %
0011	SR 700/US 98,	Rural	2000	9.85	53.34	31.58	15.79
	Southeast of CR 491	Arterial	1999	9.95	53.49	31.05	15.52
			1998	9.73	57.07	8.12	4.06
5308	SR 700/US 98,	Rural	2000	9.85	53.34	22.51	11.25
	South of Citrus County	Arterial	1999	9.95	53.49	20.79	10.39
			1998	9.73	57.07	15.01	7.50
0010	SR 700/US 98,	Rural	2000	9.85	53.34	6.15	3.08
	North of CR 485B/Yontz Rd	Arterial	1999	9.95	53.49	24.60	12.30
			1998	9.73	57.07	15.81	7.90
0047	SR 50/Cortez Blvd,	Rural	2000	9.85	53.34	13.58	6.79
	West of CR 485/Cobb Road	Arterial	1999	9.95	53.49	10.33	5.16
			1998	9.73	57.07	20.50	10.25

All the FDOT count stations in the study area give the same traffic factors for the past three years. These factors are compared with the State and National data in Table 2.

15.6

62.0

79.6

FDOT SITE DATA STATE DATA* NATIONAL DATA* \mathbf{D}_{30} K_{30} \mathbf{D}_{30} K_{30} \mathbf{D}_{30} K_{30} Observed Minimum 9.73 9.4 53.34 15.0 51.1 54.0

Table 2: Comparison of Site Specific Data with State and National Data For Rural \
Arterials

57.07

9.95

Observed Maximum

Based on the these data the following K and D factors are recommended to develop the design hour traffic characteristics in the level of service analyses for existing year (2001), opening year (2005) and design year (2025).

20.0

- \rightarrow K = 9.9 percent
- \triangleright D = 54 percent

As shown in Table 1, the daily (24-hour) truck factor and design hour truck factor varies widely with respect to count station and year. At Count Station 0011, nearest to the project site, the daily truck factor ranged from 8 percent in 1998 to over 31 percent in both 1999 and 2000. Truck factors also vary widely throughout the corridor with variation on individual approaches ranging from less than 15 percent to more than 50 percent based on the existing year (2001) field counts. Much of this variation, as well as the high truck percentages, can be attributed to the quarry operations proximate to the study corridor. In order to estimate a single truck factor representative of the corridor, truck percentages and overall volumes were reviewed at each major intersection. A "weighted" average was then developed for a total of 18 locations along the corridor. These results, ranging from 30.6 percent to 36.4 percent were then averaged, resulting in a percentage of 33.5 percent. Based on the above data and this analysis, the following truck factors are recommended for the level of service (LOS) analysis for the existing year (2001), opening year (2005) and design year (2025).

- ➤ Daily Truck Factor = 33.5 percent
- ➤ Design Hour Truck Factor = 16.75 percent

^{*} Source: FDOT Design Traffic Handbook, 1996.

Based on the existing field traffic counts the peak hour factors (PHF), as shown in Exhibit 4, along Cobb Road and US 98 during the AM peak hour ranged from 0.65 to 0.95 and during the PM peak hour ranged from 0.66 to 0.97. For the existing year (2001), opening year (2005) and design year (2025) operational analysis, the following peak hour factor is recommended.

 \triangleright PHF = 90 percent

The recommended Traffic Parameters K, D and T were approved by FDOT on October 17, 2001.

2.4 Intersection Level of Service Analysis

Intersection levels of service were estimated using the Highway Capacity Software (HCS) 2000. In the analysis, existing year (2001) geometric conditions and design hour turning movement traffic volumes with respect to individual intersections were used. Design hour turning movement traffic volumes were developed by applying the K and D factors developed in section 2.2 to the existing year average annual daily traffic (AADT) and balancing the turning movement volumes at each intersection. The developed existing year (2001) design hour turning movement traffic volumes are shown in Exhibit 6. The analysis results for signalized and unsignalized intersections are shown in Table 3 and Table 4, respectively.

Table 3
EXISTING YEAR 2001 LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Intersections	Level of Service				
Three sections	AM Peak	PM Peak			
SR 50 with Cobb Road	C	C			
NB Approach - SR 50	C	С			
SB Approach - Cobb Road	C	С			
EB Approach - SR 50	C	В			
WB Approach - SR 50A	С	С			
Cobb Road with US 98	A	A			
NB Approach - Cobb Road	В	В			
EB Approach – US 98	A	A			
WB Approach – US 98	A	A			

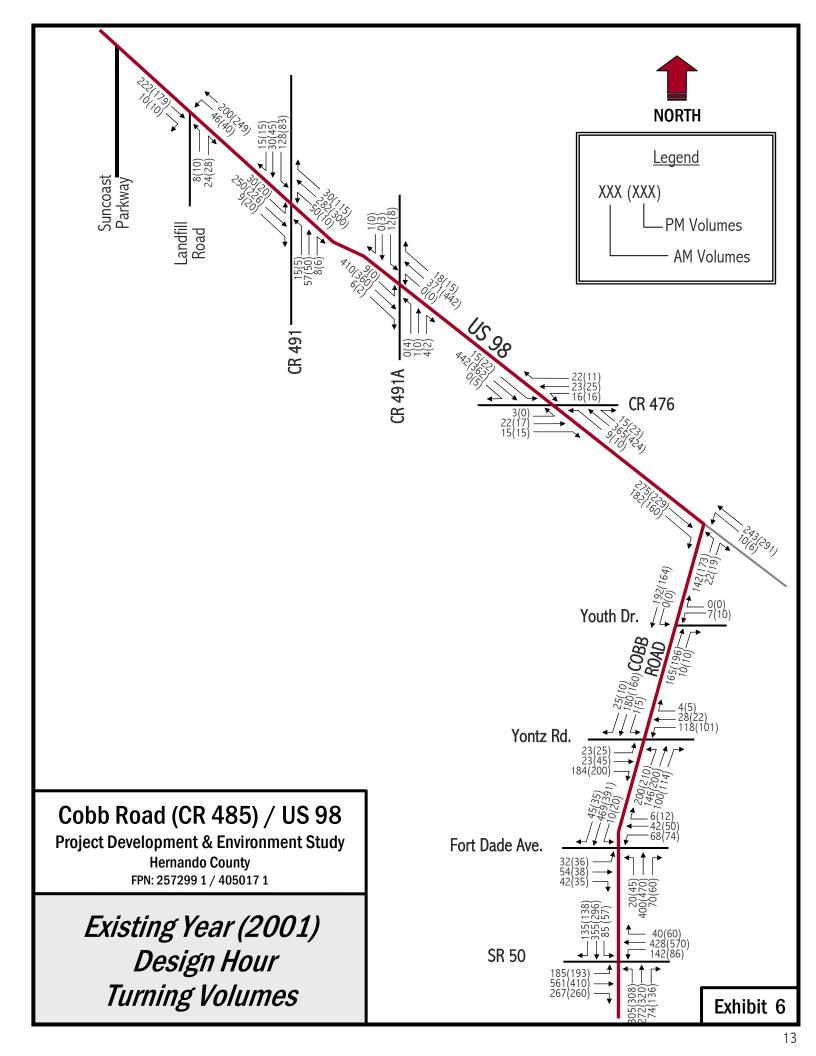


Table 4
EXISTING YEAR 2001 LEVELS OF SERVICE AT UNSIGNALIZED INTERSECTIONS

Tudawaadiawa	Level	of Service
Intersections	AM Peak	PM Peak
Fort Dade Avenue with Cobb Road (All Way Stop)	F	F
NB Approach - Cobb Road	F	F
SB Approach - Cobb Road	F	Е
EB Approach - Fort Dade Avenue	В	В
WB Approach - Fort Dade Avenue	В	В
Yontz Road with Cobb Road (Two Way Stop)		
NB Approach - Cobb Road Left Turn	A	A
SB Approach - Cobb Road Left Turn	A	A
EB Approach - Yontz Road	C	D
WB Approach - Yontz Road	D	D
Youth Drive with Cobb Road (Two Way Stop)		
SB Approach - Cobb Road Left Turn	A	A
WB Approach - Youth Drive	A	A
CR 476 with US 98 (Two Way Stop)		
NB Approach - US 98 Left Turn	A	A
SB Approach - US 98 Left Turn	A	A
EB Approach - CR 476	A	A
WB Approach - CR 476	A	A
CR 491A with US 98 (Two Way Stop)		
NB Approach - CR 491A	A	A
SB Approach - CR 491A	A	A
EB Approach - US 98 Left Turn	A	A
WB Approach - US 98 Left Turn	A	A
CR 491 with US 98 (Two Way Stop)		
NB Approach - CR 491	В	A
SB Approach - CR 491	В	В
EB Approach - US 98 Left Turn	A	A
WB Approach - US 98 Left Turn	A	A
Land fill Road with US 98 (Two Way Stop)		
NB Approach – Landfill Road	В	В
WB Approach - US 98 Left Turn	A	A

Note: LOS ratings for Two Way stop controlled intersections reflect the minor street approach LOS and major street left turning movement LOS only.

The HCS intersection LOS analysis sheets for the existing conditions are included in Appendix A.

2.5 Highway Segment Level of Service Analysis

The existing year (2001) highway segment level of service analyses for Cobb Road and US 98 roadway segments within the study area were conducted using the estimated existing year (2001) design hour volumes. The level of service analysis was conducted using the Highway Capacity Software (HCS) 2000. In the analysis, existing geometric conditions and traffic characteristics with respect to individual road segments were used. The results of this roadway segment level of service analysis for the existing conditions are summarized in Table 5. The HCS Two-way Two-lane highway segment LOS analysis sheets for the existing conditions are included in Appendix B.

Table 5
EXISTING YEAR 2001 LEVEL OF SERVICE ON HIGHWAY SEGMENTS

Arterial Segments	Design Hour LOS							
Cobb Road								
SR 50 to Fort Dade Avenue	E							
Fort Dade Avenue to Yontz Road	D							
Yontz Road to Youth Drive	C							
Youth Drive to US 98	C							
US 98								
Cobb Road to CR 476	C							
CR 476 to CR 491A	C							
CR 491A to CR 491	C							
CR 491 to Landfill Road	С							
Landfill Road to Suncoast Parkway	С							

2.6 Transit Considerations

Review of available data indicated that no regularly scheduled public transit service currently exists within the project corridor. The Hernando County MPO 2025 Cost Affordable Plan proposes only limited transit service in the Brooksville area and does not include any transit

service along the Cobb Road and US 98 corridor. Local bus service is proposed along US 98 between SR 50 in downtown Brooksville and the area of the existing US 98 and Cobb Road intersection.

2.7 Safety Considerations

Crash data was analyzed for the corridor in two segments: US 98 and Cobb Road. This was done as a consequence of data coming from two different data bases containing two somewhat different levels of detail. For US 98, the state FDOT crash record system was accessed. For Cobb Road, Hernando County's CARS 2000 (Computerized Accident Record System 2000) was utilized.

2.7.1 US 98 Segment - Summary crash data was obtained from the FDOT for the 5-year period of 1995 to 1999. It should be noted that only the crashes which involve injuries, fatalities, or major property damage on roadways with a designated state and/or U.S. route number, are included in the FDOT crash database. The detailed FDOT crash data contains different information on each crash reported such as location, date, time, contributing causes, harmful events, fatalities, injuries, etc. The crash data in summary format for a roadway segment includes total fatalities, injuries, day of week analysis, actual crash ratio, critical crash ratio, safety ratio, economic loss, etc.

The crash records indicated that 48 crashes occurred within the US 98 portion (Suncoast Parkway to Cobb Road) of the project area over the five-year period between 1995 and 1999. This accounts for approximately 10 crashes per year. In addition, during the five-year period, there were two fatalities and 68 injuries. The total crashes for the five-year period accounted for an economic loss of approximately \$10,240,400. By far, the highest frequency of crashes during the five-year period was by influence of an intersection (64.6%). More crashes occurred northwest bound (54.2%) than southeast bound (37.5%), although directions for 8.3% of crashes were not reported. Tables 6 through 10 summarize the crash data.

Table 6
CRASH HISTORY OVERVIEW - US 98 SEGMENT

Years	1995	1996	1997	1998	1999	5 Year Total	Average Per Year
Number of Fatalities	1	0	0	1	0	2	0.4
Number of Injuries	25	10	10	13	10	68	13.6
Property Damage Only	2	1	3	3	4	13	2.6
Total Crashes	12	9	8	10	9	48	9.6

As indicated in Table 6, the number of crashes per year, as well as by severity, have held relatively constant over the five-year study period. The one exception, the 25 injuries in 1995, reflects 2 crashes involving 5 and 6 injuries respectively.

Table 7

AVERAGE DAILY TRAFFIC AND CRASH RATES – US 98 SEGMENT

Years	1995	1996	1997	1998	1999	5 Year Total	Average Per Year
ADT	5525	5467	4800	4170	6300	n/a	5252
Actual Crash Rate	.829	.587	.680	.855	.509	n/a	.692
Critical Crash Rate	1.03	1.09	1.12	1.11	.996	n/a	n/a
A/C Ratio	.805	.541	.604	.768	.511	n/a	n/a

Table 7 shows that the average / critical crash rate ratio has remained consistently below one. This indicates that the section of highway has a crash rate somewhat below the statewide average for similar highway types and volumes.

Table 8
CRASH DIAGNOSTICS – US 98 SEGMENT

Years	1995	1996	1997	1998	1999	5 Year Total	Percent of 5 Year Total Crashes
Wet or Slippery	1	1	0	0	2	4	8.3%
Careless Driving	2	3	2	4	2	13	27.1%
Failed to Yield ROW	2	3	3	2	3	13	27.1%
Improper Lane Change	0	0	0	0	0	0	0%
Under the Influence (alcohol/drugs)	0	0	0	1	2	3	6.3%
Disregarded Safety Signal	2	0	1	1	1	5	10.4%
Other	6	3	2	2	1	14	29.2%
Truck	1	1	2	1	1	6	12.5%
At/Infl'd by Intersection	6	6	6	6	7	31	64.6%
Daylight	7	7	5	4	5	28	58.3%
Dusk/Dawn	1	1	0	1	0	3	6.3%
Dark (w/ & w/o street lights)	4	1	3	5	4	17	35.4%
7:00 a.m. to 9:59 a.m.	1	1	2	0	2	6	12.5%
Other a.m.	3	1	2	5	4	15	31.3%
3:00 p.m. to 5:59 p.m.	0	3	3	1	0	7	14.6%
Other p.m.	8	4	1	4	3	20	41.7%
Resident of County	8	8	3	8	6	33	35.5%
Non-Resident of County	18	8	11	11	12	60	64.5%
Direction Northwest bound	6	6	6	2	6	26	54.2%
Direction Southeast bound	6	3	2	5	2	18	37.5%
Direction not Stated	0	0	0	3	1	4	8.3%

Table 8 indicates nearly 65 percent of crashes occurring at or near intersections. Further review found the highest concentrations of crashes to be at the Lake Lindsey Road (CR 476) and Brittle Road (CR 491A) intersections, at the two most significant curves in the study section. Drivers whose residence was outside of Hernando County were represented disproportionably compared to local drivers (65% to 35%). This suggests that local drivers may be more aware of problem areas and adjust their driving accordingly, while more non-local drivers are unfamiliar with, for example, the two intersections located on curves.

Table 9
CRASHES BY HARMFUL EVENT – US 98 SEGMENT

Years	1995	1996	1997	1998	1999	5 Year Total	Percent of 5 Year Total Crashes
Rear End	1	3	0	1	1	6	12.5%
Head On	3	1	0	0	1	5	10.4%
Angle	5	3	5	3	3	19	39.6%
Left Turn	0	0	0	0	1	1	2.1%
Right Turn	0	0	0	0	0	0	0%
Sideswipe	0	0	0	0	0	0	0%
Backed Into	0	0	0	0	0	0	0%
Parked Car	0	0	0	0	0	0	0%
MV Other Road	0	0	0	0	0	0	0%
Pedestrian	0	0	0	0	0	0	0%
Bicycle	0	0	0	0	0	0	0%
Moped	0	0	0	0	0	0	0%
Train	0	0	0	0	0	0	0%
Animal	0	1	0	1	0	2	4.2%
Sign	2	0	0	0	1	3	6.3%
Utility Pole	0	0	0	1	0	1	2.1%
Guardrail	0	0	0	0	0	0	0%
Fence	0	0	0	0	0	0	0%
Bridge/Barrier Wall	0	0	0	0	0	0	0%
Tree/Shrub	0	0	0	1	0	1	2.1%
Const Barricade/Sign	0	0	0	0	0	0	0%
Traffic Gate	0	0	0	0	0	0	0%
Attenuator	0	0	0	0	0	0	0%
Other Fixed Object	0	0	1	0	0	1	2.1%
Ran Into Ditch	0	1	0	1	1	3	6.3%
Ran Off Road	0	0	0	0	0	0	0%
Overturned	1	0	2	1	1	5	10.4%
All Others	0	0	0	1	0	1	2.1%
Total of Overturned and All Run Off Road Types	1	1	2	3	2	9	18.8%

Angle crashes are clearly the most predominant crash type (as shown in Table 9) with 39.6 percent of all crashes. This statistic is consistent with the crash concentration at the two unsignalized intersections. Economic losses associated with these crashes are summarized in Table 10.

Table 10

CRASH COST ANALYSIS – US 98 SEGMENT

Year	Economic Loss
1995	\$2,493,400
1996	\$1,970,100
1997	\$1,684,500
1998	\$2,189,000
1999	\$1,903,400
AVERAGE CRASH \$ LOST PER YEAR	\$2,048,000
AVERAGE COST / CRASH	\$ 213,300

2.7.2 Cobb Road Segment – Crash records from Hernando County indicate that 53 crashes occurred within the Cobb Road portion of the project study area over the five-year period between 1995 and 1999. This accounts for approximately 10 crashes per year. In addition, during the five-year period, there were 12 injuries and no fatalities. Table 11 indicates that the predominant crashes on Cobb Road involve only property damage (PDO).

Table 11
CRASH HISTORY OVERVIEW – COBB ROAD SEGMENT

Years	1995	1996	1997	1998	1999	5 Year Total	Average Per Year
Number of Fatalities	0	0	0	0	0	0	0
Number of Injuries	3	3	0	2	4	12	2.4
Property Damage Only	12	8	7	8	6	41	8.2
Total Crashes	15	11	7	10	10	53	10.6

Table 12
CRASH DIAGNOSTICS – COBB ROAD SEGMENT

Years	1995	1996	1997	1998	1999	3 Year Total (27)	Percent of 3 Year Total Crashes
No Improper Driving Action	0	0	2	1	1	4	14.8 %
Careless Driving	0	0	2	3	4	9	33.3 %
Failed to Yield Right-of-	0	0	0	1	4	5	18.5 %
Way							
Improper Backing	0	0	0	0	1	1	3.7 %
Improper Turn	0	0	1	1	0	2	7.4 %
Disregarded Stop Sign	0	0	0	1	0	1	3.7 %
Failed to Maintain	0	0	1	0	0	1	3.7 %
Equipment / Vehicle							
Unknown	15	11	1	3	0	4	14.8 %
Daylight	0	0	3	6	8	17	63.0 %
Dark (Street Light)	0	0	0	0	1	1	3.7 %
Dark (No Street Light)	0	0	3	1	1	5	18.5 %
Unknown	15	11	1	3	0	4	14.8 %
Dry	0	0	6	7	7	20	37.7 %
Wet	0	0	0	0	3	3	5.7 %
Unknown	15	11	1	3	0	4	14.8 %

Many unknowns were reported for Contributing Cause, Lighting Condition and Roadway Surface Condition in the years 1995 and 1996. Therefore, a three-year average (1997, 1998 and 1999) was used for those parameters, based on a total of 27 crashes. Based on the three-year averages, crashes on Cobb Road are most frequently a result of careless driving in the daylight and in dry conditions.

Table 13
CRASHES BY HARMFUL EVENT – COBB ROAD SEGMENT

Years	1995	1996	1997	1998	1999	5 Year Total	Percent of 5 Year Total Crashes
Rear End Collision	2	1	0	3	1	7	13.2 %
Right Angle Collision	9	5	1	4	2	21	39.6 %
Left Turn Collision	0	0	1	0	1	2	3.8 %
Right Turn Collision	0	0	0	1	1	2	3.8 %
Sideswipe Collision	0	0	0	1	0	1	1.9 %
Backed into Collision	0	0	1	0	1	2	3.8 %
Collision w/ Pedestrian	0	0	0	0	1	1	1.9 %
Collision w/ Animal	1	1	0	0	0	2	3.8 %
MV Hit Utility / Light Pole	0	0	0	0	1	1	1.9 %
MV Hit Fence	1	0	1	0	0	2	3.8 %
MV Hit Crash Attenuator	0	0	0	0	1	1	1.9 %
MV Hit Other Fixed Object	1	0	0	0	0	1	1.9 %
MV Hit Movable Object in	0	0	1	0	0	1	1.9 %
Road							
MV Ran Into Ditch / Culvert	0	0	1	0	0	1	1.9 %
MV Overturned	0	1	1	0	1	3	5.7 %
All Other	1	3	0	1	0	5	9.4 %

Table 13 shows the most significant crash type to be right angles followed by rear end crashes. Further review of the crash detail lists found that, of the 53 total crashes, 39 occurred at 3 locations: Yontz Road (13), SR 50 Road (13) and Fort Dade Road (13). No other crash type stands out as significant.

Economic losses associated with these crashes along Cobb Road for the analysis period are shown in Table 14.

Table 14
CRASH COST ANALYSIS – COBB ROAD SEGMENT

Year	Economic Loss
1995	\$35,700
1996	\$31,180
1997	\$21,450
1998	\$56,875
1999	\$39,250
AVERAGE CRASH \$ LOST PER YEAR	\$36,891
AVERAGE COST / CRASH	\$ 3,480

Comparison of Tables 10 and 14 shows major differences in economic losses for US 98 and Cobb Road. This is due to the fact that the two crash reporting systems calculated economic loss very differently. The state system is based on statewide averages for types of crashes (PDO, injury and fatalities) including medical and other societal costs, whereas the CARS 2000 system lists only the vehicle damage estimates included in the crash report completed by law enforcement personnel.

2.7.3 Other Safety Considerations

There are two railroad crossings within the project corridor: an abandoned crossing south of Lake Lindsey Road and an active crossing immediately north of Yontz Road. School buses associated with the nearby Parrott Middle School (and potentially others) use this crossing daily.

3. DEVELOPMENT OF FUTURE TRAFFIC

The Tampa Bay Regional Planning Model (TBRPM) Version 4.0 was used as a baseline to forecast travel demand for the Cobb Road (CR 485) / US 98 PD&E Project, from SR 50 to the Suncoast Parkway, Hernando County. The TBRPM is a travel demand model used to forecast long-term travel demand for highways and transit facilities in Hillsborough, Pinellas, Pasco, Hernando, and Citrus Counties. It also includes Lakeland and Port Manatee areas to show the trip interchange between these areas and the Tampa Bay Region. The TBRPM was developed by the FDOT District Seven in cooperation with the Hillsborough County, Pinellas County, Pasco County, and Hernando County MPOs. The model was designed to be sensitive to changes in land use and transportation characteristics.

3.1 1999 Model Validation

At a system level, FDOT has requested that the TBRPM Version 4.0, as validated for use in long range transportation planning, be used for this study to ensure the coordination of this project with other area PD&E projects, such as the Suncoast Parkway Project 2 and the widening of US 19 in Citrus County. FDOT has certified that the TBRPM Version 4.0 is validated for use in long range transportation planning. As a result, there was no need to adjust the systemwide parameters of the model for this study.

The next step in model validation for this corridor project was to review the model performance in the study area. As part of this study, the model performance in Hernando County was reviewed to determine if the model reproduced traffic demand for selected individual roadways in the study area. For this process, 1999 model traffic results were adjusted from peak season (January – April) traffic to annual average daily traffic (AADT) and compared with observed 1999 traffic counts at various FDOT count stations and Hernando County counts.

A comparison of the 1999 TBRPM model results with the observed 1999 AADT counts is presented in Table 15. From a review of this data, one Cobb Road (CR 485) count location has

lower model estimated volumes than the actual counts. However, the 1999 TBRPM seems to slightly overestimate traffic at several other count locations.

Table 15. 1999 AADT Comparison of TBRPM Forecast Volumes with 1999 Observed Traffic Counts

Road Count Location	Number of Lanes	Model 1999 Volumes	1999 Traffic Counts	Volume Difference	Model Volume/Count Ratio	
US 98 / SR 700						
South of Citrus County Line	2	4,250	3,400	850	1.25	
SE of CR 491/Citrus Way	2	8,700	6,100	2,600	1.43	
North of Yontz Road	2	6,200	5,700	500	1.09	
Cobb Road / CR 485						
North of Yontz Road ¹	2	3,350	3,100	250	1.08	
North of Ft. Dade Ave. ¹	2	5,500	7,100	(1,600)	0.77	
SR 50 / Cortez Blvd.						
West of Cobb Road/CR 485	2	15,700	14,500	1,200	1.08	
Citrus Way / CR 491						
North of US 981	2	5,050	3,700	1,350	1.36	
South of US 98 ¹	2	1,900	1,000	900	1.90	
Lake Lindsey Road / CR 476						
West of US 98	2	1,250	700	550	1.79	
East of US 981	2	1,900	1,250	650	1.52	
Yontz Road						
Cobb Road to US 981	2	2,600	2,750	(150)	0.95	
Fort Dade Avenue						
Citrus Way to Cobb Road ¹	2	2,700	2,300	400	1.17	

Note: 1999 County count volumes were estimated based on actual 1998 and 2000 counts.

Based on this comparison, the model volumes compare reasonable well. Although some percentages seem high, the absolute volume differences are generally less 1,600 trips a day or less than 160 trips during the peak hour.

There are some minor network adjustments needed to better match existing conditions and centroid loadings. As part of this refinement, network adjustments from the 2025 long range plan in Hernando County were reviewed as well as centroid locations and loading points. Based on these reviews, the following adjustments to the base 1999 model network were made:

- ➤ The centroid connector for traffic analysis zone (TAZ) 1822 from the mining area west of Cobb Road is moved to the Yontz Road node to represent the main access point to this area. The connector to CR 476 is also relocated to reflect existing access locations.
- ➤ A new centroid connector for TAZ 1834 from the rock mine northeast of US 98 is added and connected to the Brittle Road / US 98 intersection to better represent access from this centroid.
- ➤ The centroid for TAZ 1816, located west of CR 491 and south of US 98, and its centroid connectors are relocated to better reflect existing access to US 98, CR 491 and Centralia Road for area businesses and residents.
- ➤ The centroid for TAZ 1823, located east of Cobb Road, west of US 98 and north of Yontz Road is relocated to better reflect loadings from the Dolores S. Parrott Middle School, the Pasco-Hernando Community College and area businesses and residents.
- ➤ The area type (AT) on Cobb Road south of the Dolores S. Parrott Middle School and Yontz Road is changed from AT 52 (undeveloped rural areas) to AT 51 (developed rural areas).
- ➤ The facility type (FT) on Cobb Road from US 98 to SR 50 is changed from FT 43 (Collector Major Local Undivided) to FT 32 (Undivided Arterial Bays Urban Class 1a) to reflect the truck route nature on the existing roadway.
- ➤ CR 491A and CR 476 in the vicinity of US 98 were relocated to better match existing alignment and the 2025 network.

By applying these network changes, the revised 1999 TBRPM reasonably matched the 1999 observed traffic counts. A comparison of the revised 1999 model results with the observed 1999 traffic counts is presented in Table 16. This table shows that although some percentage differences seem high, the absolute volume differences again are generally less than 1,600 trips a day or less than 160 trips during the peak hour. Also from a review of the 1997 to 2001 traffic data along US 98 near CR 491, the traffic volumes vary by about 2,000 vehicles per day with counts of 8,100 vehicles in 1998, 6,100 vehicles in 1999, 6,400 vehicles in 2000 and estimated at 7,900 vehicles in 2001. Similarly for US 98 north of Yontz Road, there is a 1,500 vehicles difference between the 1998 volume count of 7,200 vehicles and a 1999 volume count of 5,700

vehicles. Based on this review, the modified 1999 model seems to reasonably reflect existing conditions.

Table 16. 1999 AADT Comparison of the Revised TBRPM Forecast Volumes with the 1999 Observed Traffic Counts

1777 Obsciveu	1141110 0					
Road Count Location	Number of Lanes	Revised 1999 Model Volumes	1999 Traffic Counts	Volume Difference	Model Volume/Count Ratio	
US 98 / SR 700						
South of Citrus County Line	2	4,400	3,400	1,000	1.29	
SE of CR 491/Citrus Way	2	8,900	6,100	2,800	1.46	
North of Yontz Road	2	7,300	5,700	1,600	1.28	
Cobb Road / CR 485						
North of Yontz Road ¹	2	2,550	3,100	500	0.82	
North of Ft. Dade Ave. 1	2	6,850	7,100	(250)	0.96	
SR 50 / Cortez Blvd.						
West of Cobb Road/CR 485	2	16,000	14,500	1,500	1.10	
Citrus Way / CR 491						
North of US 981	2	4,950	3,700	1,250	1.34	
South of US 98 ¹	2	850	1,000	(150)	0.85	
Lake Lindsey Road / CR 476						
West of US 98	2	1,600	700	900	2.29	
East of US 98 ¹	2	1,850	1,250	600	1.48	
Yontz Road						
Cobb Road to US 981	2	2,800	2,750	(50)	1.02	
Fort Dade Avenue						
Citrus Way to Cobb Road ¹	2	2,550	2,300	250	1.11	

Note: 1 1999 County count volumes were estimated based on actual 1998 and 2000 counts.

3.2 Future Year 2025 Model Review

The model review process for corridor analysis is not complete without a review of the historical traffic growth along the corridor and a review of the baseline future year model forecasts to ensure that the model will act properly with future year socio-economic activity levels.

3.2.1 Historical Traffic Growth along the Corridor – The historical growth was estimated at the four FDOT count stations within the study area. The 6-year and 12-year average traffic growth rates were calculated by averaging the three-year volumes around 1999, 1993 and 1987 where data is available. The compounded average annual traffic growth rates for each period were also calculated.

The results of this analysis are shown in Table 17. From a review of the data, growth on the state highways in the study area has been fluctuating with increased volumes for some years and decreased volumes in others. Overall, the average traffic growth rates at the count stations have been showing a decrease. However, this historical count data was taken prior to the opening of the Suncoast Parkway Section One. Forecast of socio-economic variables in the area indicate modest area growth in future years that will also add to increased traffic in the area.

3.2.2 Future Year 2025 Volumes - To determine if the model will forecast reliable future year volumes, estimates of the future 2025 traffic volumes were made using the 2025 socio-economic data and the 2025 cost-affordable, long range transportation network. The Hernando County MPO developed this information in conjunction with FDOT.

The 2025 model network was revised to include the same refinements that were made for the 1999 corridor validation effort. In addition, the following refinements were made to reflect the Cobb Road / US 98 no-build conditions in the project area:

- ➤ US 98 from the Suncoast Parkway to Cobb Road was changed to reflect existing 1999 conditions.
- ➤ Cobb Road from US 98 to SR 50 was changed to reflect existing 1999 conditions.
- ➤ The US 98/Suncoast Parkway interchange was revised to reflect current conditions and appropriate turn prohibitors were added.

Table 17. 1986 – 2001 Historical Traffic Growth Rates at the FDOT Count Stations

Table 1	Traffic Volumes at FDOT Count Stations										
	US 98 S	South of Citr	us Co. Line (S		US 98 South of CR 491 (Sta. 11)						
YEAR	ADT	3-year Average	6 / 12 Year Growth	6/12 Year Annual Growth	ADT	3-year Average	6 / 12 Year Growth	6/12 Year Annual Growth			
2001	3,700				7,900						
2000	3,500				6,400						
1999	3,400	3,400			6,100	6,900					
1998	3,300				8,100						
1997	3,400				7,900						
1996	3,200		3.0%	0.5%	6,600		-9.2%	-1.6%			
1995	3,200		1993- 99	1993- 99	6,400		1993- 99	1993- 99			
1994	3,500		6-year		7,000		6-year	6-year			
1993	3,300	3,300			8,000	7,600		,			
1992	3,100	,			7,800	,					
1991	NA				6,500						
1990	NA				NA		3.0%	0.25%			
1989	NA				NA		1987- 99	1987- 99			
1988	NA				6,800		12-year	12-year			
1987	NA				6,800	6,700	,	,			
1986	NA				6,400	,					
	US 9	8 North of Y	ontz Road (S	ta. 10)	SR 50 West of Cobb Road (Sta. 47)						
YEAR	ADT	3-year Average	6 / 12 Year Growth	6/12 Year Annual Growth	ADT	3-year Average	6 / 12 Year Growth	6/12 Year Annual Growth			
2000	5,900				15,500						
1999	5,700	6,300			14,500	14,100					
1998	7,200				12,300						
1997	6,600				16,300						
1996	6,200		-29.2%	-5.6%	16,100		-2.8%	-0.5%			
1995	5,900		1993- 99	1993- 99	15,800		1993- 99	1993- 99			
1994	6,900		6-year	6-year	15,000		6-year	6-year			
1993	10,000	8,900			14,500	14,500					
1992	9,900				14,000						
1991	12,800				16,900						
1990	NA		-26.7%	-2.6%	NA		-16.6%	-1.5%			
1989	NA		1987- 99	1987- 99	NA		1987- 99	1987- 99			
1988	8,200		12-year	12-year	17,500		12-year	12-year			
1987	8,400	8,600			16,600	16,900					
1986	9,300				16,500						

Using these data sets and the validated TBRPM model including the extension of the Suncoast Parkway Phase 2, 2025 traffic assignments were made to the study area highway network. The 2025 volumes were then compared with the revised 1999 model results to determine future year growth. The total traffic growth rate and the average annual traffic growth rate at the various count locations in the study area are shown in Table 18.

Table 18. 1999 and 2025 AADT Comparison of the Revised TBRPM Forecast Volumes

Road Count Location	Number 2025 of Lanes Model		Revised Model 1999 Growth Model 1999 to Volumes 2025		Percent Growth 1999 – 2025	Average Annual Growth 1999 – 2025	
US 98 / SR 700							
South of Citrus County Line	2	9,850	4,400	5,450	124%	3.2%	
SE of CR 491/Citrus Way	2	10,300	8,900	1,400	16%	0.6%	
North of Yontz Road	2	5,650	7,300	-1,650	-23%	-0.1%	
Cobb Road / CR 485							
North of Yontz Road	2	6,700	2,550	4,150	163%	3.8%	
North of Ft. Dade Ave.	2	10,700	6,850	3,850	56%	1.7%	
SR 50 / Cortez Blvd.							
West of Cobb Road/CR 485.	2	27,100	16,000	11,100	69%	2.0%	
Citrus Way / CR 491							
North of US 98	2	3,500	4,950	-1,450	-29%	-1.3%	
South of US 98	2	1,750	850	900	106%	2.8%	
Lake Lindsey Road / CR 476							
West of US 98	2	2,000	1,600	400	25%	0.9%	
East of US 98	2	3,300	1,850	1,450	78%	2.2%	
Yontz Road							
Cobb Road to US 98	2	3,400	2,800	600	21%	0.7%	
Fort Dade Avenue							
Citrus Way to Cobb Road	2	4,800	2,550	2,250	88%	2.5%	

From a review of these growth rates, traffic on the primary roadways is expected to grow by about an average of 1.6 percent per year through 2025. The projected average annual growth rates at the various count locations are higher than the historical traffic growth rates for the study area. However, modest growths in population and employment are expected to increase the relatively low existing traffic levels. The larger growth rate of US 98 south of the Citrus County Line is caused by the new interchange of the Suncoast Parkway and access to US 19 and US 41.

4. FUTURE CONDITIONS

The future year traffic conditions were developed and analyzed for the study area along US 98 and Cobb Road in Hernando County. Using the validated travel demand model described in the previous section as well as future year socio-economic data and transportation system, the operational conditions for each alternative including the no-build conditions were analyzed. A summary of this information and analyses is presented below.

4.1 Planned Improvements

The current Cost Affordable 2025 LRTP, as developed by the Hernando County MPO and FDOT, was used as the future year base transportation network. This network included the various highway and transit improvements that could be implemented by the various jurisdictions and agencies over the next twenty years. These improvements are documented in the 2025 LRTP for Hernando County.

4.2 No-Build 2025 AADT Volumes and Capacity Analysis

The year 2025 was selected as the design year for future year traffic analysis. The current TBRPM traffic model calculates 2025 peak season traffic volumes. To convert the peak season model results to annual average daily traffic (AADT) volumes, the Hernando countywide model conversion factor (MOCF) of 0.94 was used. Using the current TBRPM traffic model with the 2025 socio-economic data and the base transportation network, the 2025 No-Build Alternative AADT volumes were developed by applying the above adjustment factors.

The base transportation network was developed by including the same refinements that were made for the 1999 corridor validation effort. In addition, the following refinements were made to reflect the no-build conditions along the project corridor:

- ➤ US 98 from the Suncoast Parkway to Cobb Road was changed to reflect existing 1999 conditions.
- ➤ Cobb Road from US 98 to SR 50 was changed to reflect existing 1999 conditions.

➤ The US 98/Suncoast Parkway interchange was revised to reflect current conditions and appropriate turn prohibitors were added.

To examine the effect of the Suncoast Parkway Phase 2 Extension through Citrus County, a second No-Build Alternative was also analyzed that did not include this extension of the Suncoast Parkway. The 2025 AADT volumes and level of service ratings for the two No-Build Alternatives are shown on Exhibit 7.

The level of service ratings for these volumes were developed by comparing the 2025 AADT volumes with the threshold volumes from Table 4-3 of the 2002 FDOT Level of Service Handbook. However, to account for the high truck percentage on the study area roads either the level of service threshold values should be adjusted or the AADT volumes should be adjusted to equivalent passenger cars. To account for the existing average truck percentage of 16.75 percent, as discussed in Section 2.3, the level of service threshold values were adjusted using FDOT's HIGHPLAN version 1.0.2. These adjusted threshold values were used to estimate the level of service ratings.

The comparison of the AADT volumes and level of service ratings for the two No-Build Alternatives are shown in Table 19.

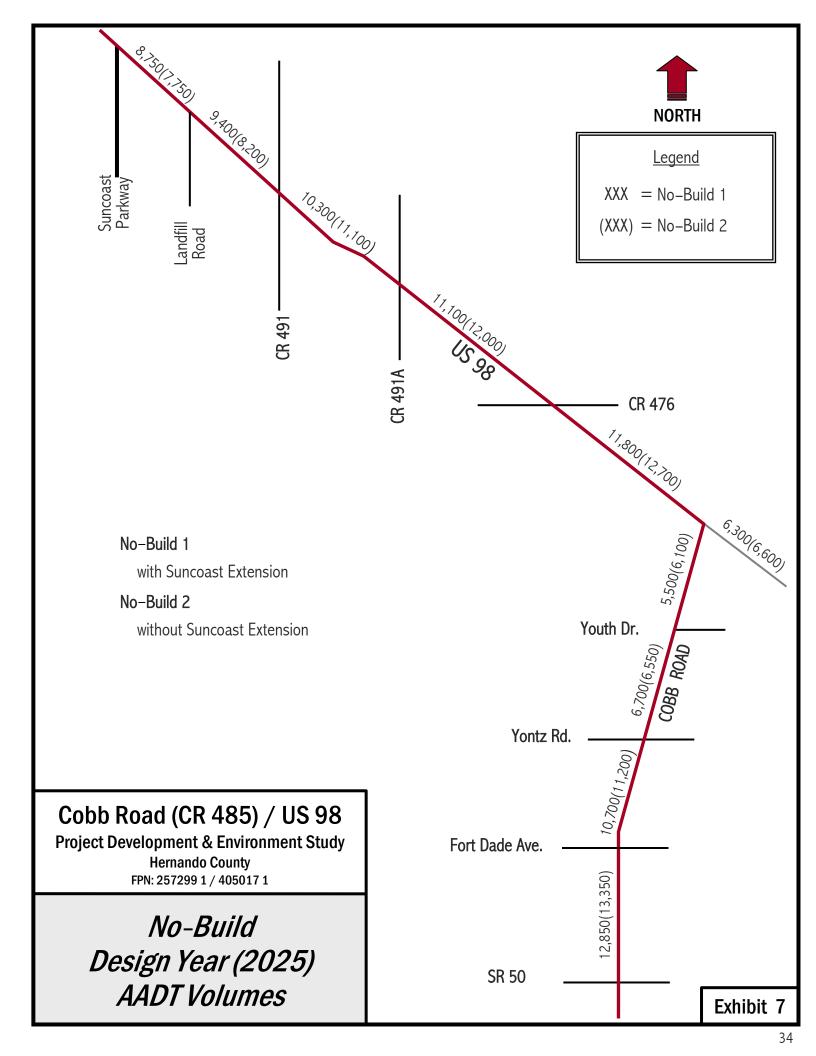


Table 19. Comparison of No-Build Alternatives: 2025 AADT Volumes and Level of Service

Road Count Location	Number of	No-Build Al (With Suncoa Projec	st Parkway	No-Build Alternative 2 (Without Suncoast Parkway Project 2)			
	Lanes Model Volumes		Level of Service	Model Volumes	Level of Service		
US 98 / SR 700							
South of Suncoast Pkwy.	2	8,750	D	7,750	C		
SE of CR 491/Citrus Way	2	10,300	D	11,100	D		
North of Cobb Road	2	11,800	D	12,700	D		
Cobb Road / CR 485							
North of Yontz Road	2	6,700	C	6,550	C		
North of Ft. Dade Ave	2	10,700	D	11,200	D		
North of SR 50.	2	12,850	D	13,350	D		

This comparison of the two No-Build Alternatives indicates that the extension of the Suncoast Parkway has minimal impact (less than 1,000 two-way vehicle trip increase per day or less than a 100 two-way vehicle trip increase in the peak hour) on the future 2025 traffic volumes on Cobb Road and US 98 in the study area. As a result of this analysis, future comparisons will use the No-Build Alternative with the Suncoast Parkway Phase 2 extension through Citrus County as its base condition to be consistent with the other area planning studies.

The level of service analysis indicates that Cobb Road and US 98 will be experiencing some increased congestion by 2025, especially as Cobb Road approaches Cortez Boulevard (SR 50) and US 98 approaches Cobb Road.

4.3 Build Alternative

Improvements to the existing two-lane rural facilities along US 98 between the Suncoast Parkway and Cobb Road and along Cobb Road from US 98 to SR 50 to a 4-lane divided facility was identified as part of the 2025 Needs Plan in Hernando County. The widening of these

facilities was identified because of the heavy truck activity along the route and increased area development. This Build Alternative also assumes that the Suncoast Parkway will be extended through Citrus County and other planned improvements identified in the County's Cost Affordable Plan have been implemented.

4.4 2025 AADT Volumes and Capacity Analysis for the Preliminary Design Alternative

Using the current TBRPM traffic model with the 2025 socio-economic data, the base transportation network and alternative improvements, the 2025 AADT volumes for the Build Alternative were developed. The 2025 AADT volumes for the Build Alternative are shown in Exhibit 8 and are summarized in Table 20. The No-Build Alternative volumes and level of service ratings are also shown for comparison purposes. The level of service ratings, were developed by comparing the 2025 AADT volumes with the adjusted (to account for the 16.75 percent truck factor) threshold volumes from Table 4-3 of the 2002 FDOT Level of Service Handbook.

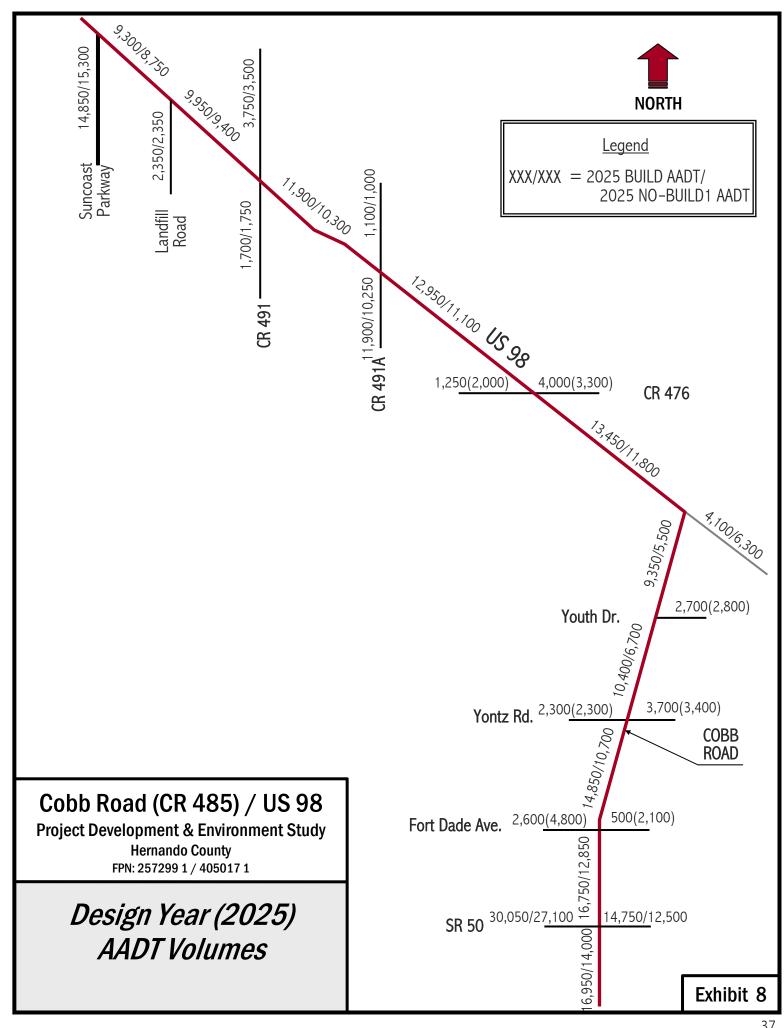


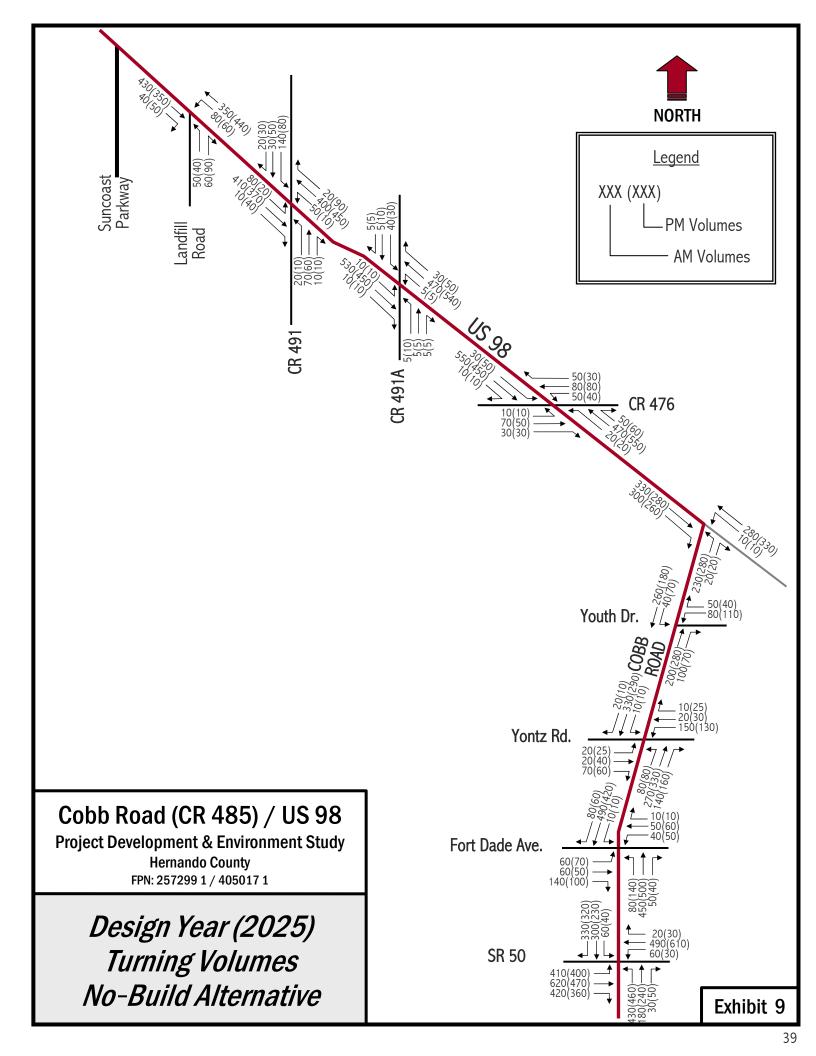
Table 20. Comparison of Build And No-Build Alternative 1: 2025 AADT Volumes and Level of Service

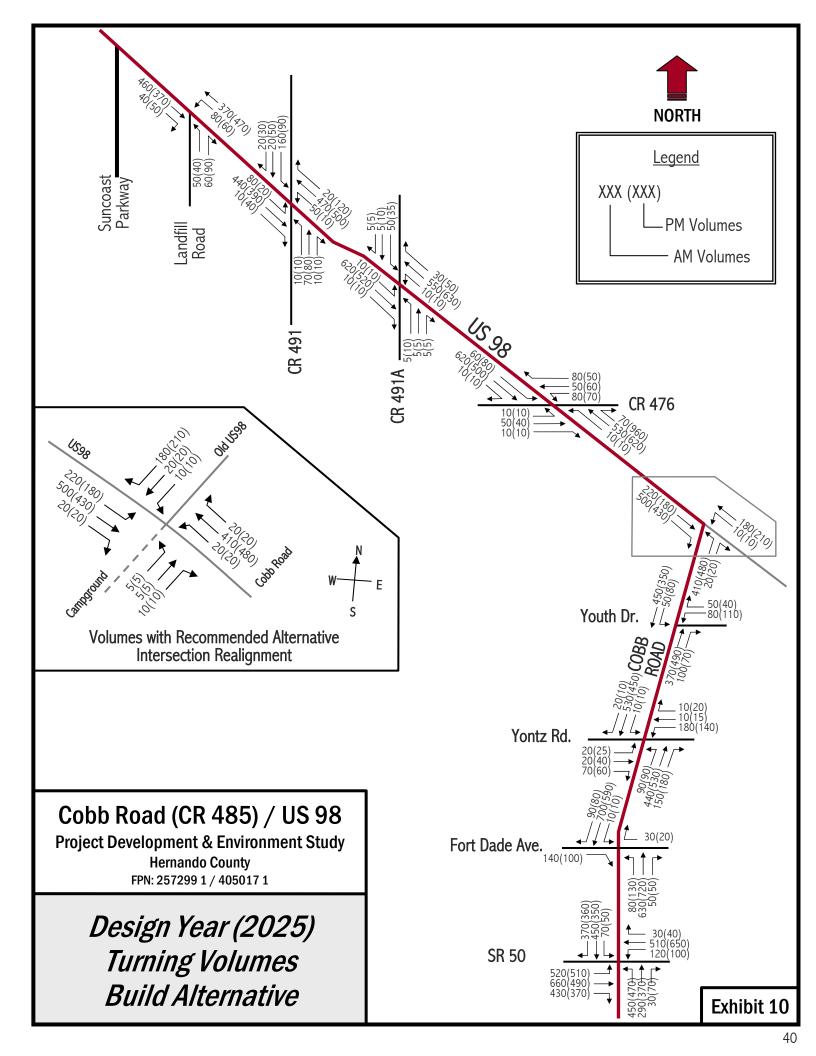
Road Count Location	Number of Lanes Build /	Build Alto (With Suncoa Projec	st Parkway	No-Build Alternative 1 (With Suncoast Parkway Project 2)			
	No- Build	Model Volumes	Level of Service	Model Volumes	Level of Service		
US 98 / SR 700 South of the Suncoast Pkwy SE of CR 491/Citrus Way North of Cobb Road	4/2	9,300	A	8,750	D		
	4/2	11,900	A	10,300	D		
	4/2	13,450	A	11,800	D		
Cobb Road / CR 485 North of Yontz Road North of Ft. Dade Ave North of SR 50.	4/ 2	10,400	A	6,700	C		
	4 / 2	14,850	A	10,700	D		
	4 / 2	16,750	B	12,850	D		

Based on the generalized level of service analysis, when Cobb Road and US 98 are widened to divided 4-lane facilities, the general daily level of service will be improved.

4.5 2025 Design Hour Volumes

Design year 2025 A.M. and P.M. peak hour volumes were derived by first multiplying the AADT volumes by a K₃₀ factor of 9.9 percent and a D₃₀ factor of 54 percent and then distributing the peak and off-peak direction link volumes. The existing year (2001) intersection turning movement volumes were used to help derive the 2025 peak hour intersection turning volumes. The developed turning movement volumes were then balanced using Fratar's method to capture the future travel patterns. For Cobb Road and US 98, the peak travel directions in the year 2025 were assumed to be southbound in the A.M. peak hour and northbound in the P.M. peak hour consistent with the existing year (2001) peak hour travel directions. For the cross streets the respective existing year (2001) A.M. and P.M. peak hour directions were assumed to be the same as the year 2025 peak hour directions. The 2025 peak hour volumes developed for the Cobb Road and US 98 corridor No-Build and Build Alternatives are illustrated in Exhibits 9 and 10 respectively.





4.6 Intersection Level of Service Analysis

Using the 2025 design hour volumes discussed in Section 4.5 of this report, level of service analyses were conducted for both the No-Build and the Build Alternatives. Level of service analyses were conducted for the signalized and unsignalized intersections using the 2000 HCS. No-Build Alternative intersection level of service analysis was conducted with the assumption that no corridor or intersection improvements would be made before the year 2025. The existing year (2001) geometric conditions at the intersections were considered for the analysis. The analysis results for signalized and unsignalized intersections are shown in Table 21 and Table 22 respectively. The HCS intersection LOS analysis sheets for the no-build conditions are included in Appendix C.

Table 21. Design Year 2025 Levels of Service at Signalized Intersections - No-Build Alternative

Intersections	Level of Service					
Three sections	AM Peak	PM Peak				
SR 50 with Cobb Road	E	E				
NB Approach - SR 50	Е	D				
SB Approach - Cobb Road	Е	D				
EB Approach - SR 50	Е	Е				
WB Approach - SR 50A	С	Е				
Cobb Road with US 98	A	A				
NB Approach - Cobb Road	В	В				
EB Approach – US 98	A	A				
WB Approach – US 98	A	A				

Table 22. Design Year 2025 Levels of Service at Unsignalized Intersections - No-Build Alternative

Intoncotions	Level	of Service
Intersections	AM Peak	PM Peak
Fort Dade Avenue with Cobb Road (All Way Stop)	F	F
NB Approach - Cobb Road	F	F
SB Approach - Cobb Road	F	Е
EB Approach - Fort Dade Avenue	C	С
WB Approach - Fort Dade Avenue	C	С
Yontz Road with Cobb Road (Two Way Stop)		
NB Approach - Cobb Road Left Turn	A	A
SB Approach - Cobb Road Left Turn	A	A
EB Approach - Yontz Road	C	D
WB Approach - Yontz Road	D	D
Youth Drive with Cobb Road (Two Way Stop)		
SB Approach - Cobb Road Left Turn	A	A
WB Approach - Youth Drive	A	A
CR 476 with US 98 (Two Way Stop)		
NB Approach - US 98 Left Turn	A	A
SB Approach - US 98 Left Turn	A	A
EB Approach - CR 476	C	С
WB Approach - CR 476	Е	D
CR 491A with US 98 (Two Way Stop)		
NB Approach - CR 491A	A	A
SB Approach - CR 491A	A	A
EB Approach - US 98 Left Turn	A	A
WB Approach - US 98 Left Turn	A	A
CR 491 with US 98 (Two Way Stop)		
NB Approach - CR 491	В	В
SB Approach - CR 491	F	С
EB Approach - US 98 Left Turn	A	A
WB Approach - US 98 Left Turn	A	A
Land fill Road with US 98 (Two Way Stop)		
NB Approach – Landfill Road	С	С
WB Approach - US 98 Left Turn	A	A

Note: LOS ratings for Two Way stop controlled intersections reflect the minor street approach LOS and major street left turning movement LOS only.

Build Alternative intersection level of service analysis was conducted with intersection improvements planned in addition to widening Cobb Road and US 98 to four lanes under the Build Alternative conditions. The proposed intersection lane arrangements are shown in Exhibit 11. The analysis results for signalized and unsignalized intersections are shown in Table 23 and Table 24 respectively. The HCS intersection LOS analysis sheets for the build conditions are included in Appendix D. As indicated in the tables, all the intersections with exception of the intersection of Cobb Road with SR 50 operate with adequate level of service conditions. The SR 50 intersection with Cobb Road operates with level of service F lower than the no-build condition level of service E. This is due to induced or diverted traffic. However, this level of service condition can be improved to D with the provision of dual left-turn lanes at the eastbound approach of the intersection. Since, the project limit is immediately north of SR 50 intersection, it is suggested that the operation and geometry of this intersection be re-examined as part of the upcoming SR 50 study.

Table 23. Design Year 2025 Levels of Service at Signalized Intersections – Build Alternative

Intersections	Level of AM Peak	Service <i>PM Peak</i>
SR 50 with Cobb Road (With Existing Lane Arrangement)	F	F
NB Approach - SR 50	F	F
SB Approach - Cobb Road	F	F
EB Approach - SR 50	F	F
WB Approach - SR 50A	С	Е
SR 50 with Cobb Road (With Dual Eastbound Left-Turn Lanes)	D	D
NB Approach - SR 50	Е	D
SB Approach - Cobb Road	D	D
EB Approach - SR 50	Е	С
WB Approach - SR 50A	С	D
Cobb Road with US 98	A	A
NB Approach - Cobb Road	В	В
EB Approach – US 98	A	A
WB Approach – US 98	A	A

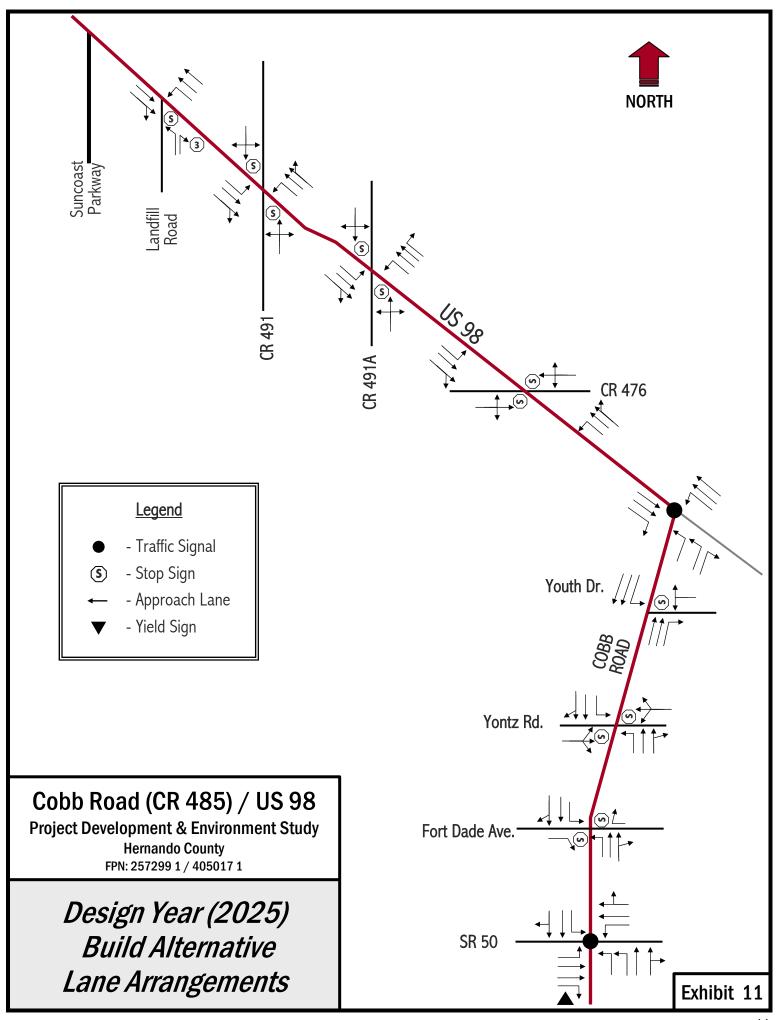


Table 24. Design Year 2025 Levels of Service at Unsignalized Intersections - Build Alternative

Turkoussations	Level	of Service
Intersections	AM Peak	PM Peak
Fort Dade Avenue with Cobb Road (Two Way Stop)		
NB Approach - Cobb Road Left Turn	В	В
SB Approach - Cobb Road Left Turn	A	В
EB Approach - Fort Dade Avenue	В	В
WB Approach - Fort Dade Avenue	В	В
Yontz Road with Cobb Road (Two Way Stop)		
NB Approach - Cobb Road Left Turn	A	A
SB Approach - Cobb Road Left Turn	A	A
EB Approach - Yontz Road	A	A
WB Approach - Yontz Road	Е	D
Youth Drive with Cobb Road (Two Way Stop)		
SB Approach - Cobb Road Left Turn	A	A
WB Approach - Youth Drive	A	В
CR 476 with US 98 (Two Way Stop)		
NB Approach - US 98 Left Turn	A	A
SB Approach - US 98 Left Turn	A	В
EB Approach - CR 476	A	A
WB Approach - CR 476	В	В
CR 491A with US 98 (Two Way Stop)		
NB Approach - CR 491A	A	A
SB Approach - CR 491A	A	A
EB Approach - US 98 Left Turn	A	A
WB Approach - US 98 Left Turn	A	A
CR 491 with US 98 (Two Way Stop)		
NB Approach - CR 491	В	В
SB Approach - CR 491	D	В
EB Approach - US 98 Left Turn	A	A
WB Approach - US 98 Left Turn	A	A
Landfill Road with US 98 (Two Way Stop)		
NB Approach – Landfill Road	В	В
WB Approach - US 98 Left Turn	A	A

Note: LOS ratings for Two Way stop controlled intersections reflect the minor street approach LOS and major street left turning movement LOS only.

4.7 Highway Segment Level of Service Analysis

The design year (2025) highway segment level of service analyses for Cobb Road and US 98 roadway segments within the study area were conducted using the projected design year (2025) design hour volumes. The level of service analysis was conducted using the Highway Capacity Software (HCS) 2000 for both No-Build and Build Alternatives. For the No-Build Alternative, Cobb Road and US 98 are defined to be two-lane undivided rural facilities. The roadway segment level of service analyses were conducted using the methodology documented in Chapter 20 of the 2000 Highway Capacity Manual. The HCS Two-way Two-lane highway segment LOS analysis sheets for the No-Build conditions are included in Appendix E. The results of this roadway segment level of service analysis for the No-Build conditions are summarized in Table 25. As indicated in Table 25, the entire two-lane roadway segments of US 98 in the project corridor are projected to operate at level of service D during the design hour. The Cobb Road segments north of Yontz Road are projected to operate at level of service C. The portion of Cobb Road from SR 50 to Fort Dade Avenue is projected to operate at level of service E.

Table 25. Design Year 2025 Levels of Service on Highway Segments - No-Build Alternative

Arterial Segments	Design Hour LOS
Cobb Road	
SR 50 to Fort Dade Avenue	Е
Fort Dade Avenue to Yontz Road	D
Yontz Road to Youth Drive	С
Youth Drive to US 98	С
US 98	
Cobb Road to CR 476	D
CR 476 to CR 491A	D
CR 491A to CR 491	D
CR 491 to Landfill Road	D
Landfill Road to Suncoast Parkway	D

The Build Alternative planned is a four-lane Cobb Road and US 98 facility from SR 50 to Suncoast Parkway. Cobb Road segments north of Yontz Road and entire US 98 segments are designed as rural typical sections. The proposed rural alternative typical section is a four lane divided rural roadway with a 46-ft. median. This typical section consists of two 12-ft. lanes, 12-ft. outside shoulders and 8-ft. inside shoulders in each direction. Two alternative design concepts are proposed for Cobb Road segments south of Yontz Road. These alternative design concepts are urban typical section and suburban typical section. The urban typical section consists of two 12-ft lanes in each direction with a 46-ft. median. No shoulder widths are provided for the roadway segments. The suburban typical section is a four lane suburban roadway with a 30-ft. median. This typical section consists of two 12-ft. lanes in each direction with 8-ft outside shoulders and 4-ft. inside shoulders in each direction.

The roadway segment level of service analyses for the Build alternative were conducted using the methodology documented in Chapter 21 – Multilane Highways of the 2000 Highway Capacity Manual. The HCS Multilane highway segment LOS analysis sheets for the Build conditions are included in Appendix F. The results of this roadway segment level of service analysis for the Build conditions are summarized in Table 26. As indicated in Table 26, all of the Cobb Road and US 98 segments with the exception of Cobb Road segment from SR 50 to Fort Dade Avenue (Urban Arterial typical section) are projected to operate at level of service A in the design year during the design hour.

Table 26. Design Year 2025 Levels of Service on Highway Segments - Build Alternative

Arterial Segments	Typical Section	Design Hour LOS
Cobb Road		
SR 50 to Fort Dade Avenue	Urban Arterial	В
SR 50 to Fort Dade Avenue	Sub-Urban Arterial	A
Fort Dade Avenue to Yontz Road	Urban Arterial	A
Fort Dade Avenue to Yontz Road	Sub-Urban Arterial	A
Yontz Road to Youth Drive	Rural Arterial	A
Youth Drive to US 98	Rural Arterial	A
US 98		
Cobb Road to CR 476	Rural Arterial	A
CR 476 to CR 491A	Rural Arterial	A
CR 491A to CR 491	Rural Arterial	A
CR 491 to Landfill Road	Rural Arterial	A
Landfill Road to Suncoast Parkway	Rural Arterial	A

4.8 Determination of Storage Lengths

The required storage lengths for turn lanes recommended along Cobb Road and US 98 were estimated using the results of the signalized and unsignalized intersection HCS analysis for the Build Alternative. Since it is possible that through lane queuing can sometimes block access to right and left turn lanes, turn lane "queuing" requirements were also reviewed against anticipated queues in the through lanes. In some cases, through queues were found to block access to the turn lane; however, in each case, the turn volume was very low. In these cases, turn lanes were not recommended to clear the through queues since the resulting delays were considered minimal. Recommended queue lengths for the relevant intersection during the year 2025 design hour are summarized by individual turn lane in Table 27.

Table 27. Recommended Design Year 2025 Storage Lengths

Intersection	Control	Control Turn Lane			
		Northbound Left – Cobb Road	725		
SP 50 with Cobb Poad		Southbound Left – Cobb Road	100		
SR 50 with Cobb Road (With Existing Lane Arrangement)	Signal	Eastbound Left – SR 50	1625		
(Eastbound Right – SR 50	800		
		Westbound Left – SR 50A	125		
		Northbound Left – Cobb Road	550		
		Southbound Left – Cobb Road	75		
SR 50 with Cobb Road (With Dual EB Left Turn Lanes)	Signal	Eastbound Left – SR 50	600		
(Eastbound Right – SR 50	800		
		Westbound Left – SR 50A	175		
		Northbound Left – Cobb Road	200		
Cobb Road with US 98	Signal	Eastbound Right – US 98	300		
		Westbound Left – US 98	50		
Fort Dade Ave with Cobb Road	Two Way Stop	Northbound Left – Cobb Road	50		
Fort Dade Ave with Coob Road	Two way stop	Southbound Left – Cobb Road	50		
Yontz Road with Cobb Road	Two Way Stop	Northbound Left – Cobb Road	100 *		
TOILE ROAU WILL COOD ROAU	Two way stop	Southbound Left – Cobb Road	50		
Youth Drive with Cobb Road	Two Way Stop	Southbound Left – Cobb Road	50		
CR 476 with US 98	Two Way Stan	Northbound Left – US 98	50		
CK 4/0 With US 98	Two Way Stop	Southbound Left – US 98	50		
CD 401 Ath LIC 00	Two Way Stan	Eastbound Left – US 98	100 *		
CR 491A with US 98	Two Way Stop	Westbound Left – US 98	50		
CR 491 with US 98	Two Way Stop	Eastbound Left – US 98	100 *		
CK 491 WIUI US 98	Two way stop	Westbound Left – US 98	50		
Landfill Road with US 98	Two Way Stop	Westbound Left – US 98	100 *		

5. TRAFFIC DATA FOR NOISE AND AIR STUDIES

5.1 Traffic Data for Air Quality Study

Traffic data were developed for the required air quality screening test. The data were based on the forecasted traffic for the opening year 2005 and design year 2025. The methodology for the development of the traffic forecasts is documented in Section 3, Development of Future Traffic.

Forecasted traffic demand for No-Build and Build scenarios are considered to develop traffic data for air quality screening test. The congested intersections in the study corridor under No-Build and Build scenarios are the intersections of Cobb Road with SR 50 and Cobb Road with Yontz Road as demonstrated in Section 4, Future Conditions, of this report.

The opening and design year average cruise speeds are assumed to be 35 mph and 40 mph at the Cobb Road intersections with SR 50 and Yontz Road respectively, lower than the existing posted speed, to both No-Build and Build conditions. Speeds are assumed to be lower due to anticipated increases in congestion at the intersections. The required forms for the air study screening data were completed and are included in Appendix G of this report.

5.2 Traffic Data for Noise Study

Traffic data were developed for the required noise studies. The following receptors were selected for possible analysis.

• Cobb Road Segments

1. Wheeling Street Receptors: From Fort Dade Avenue to Yontz Road

2. Youth Drive Receptors: From Yontz Road to Youth Drive

3. Wever Park (east side) and

Intersection Receptors (west side): From Youth Drive to US 98

• US 98 Segments

1. Ringhaver Receptors: From CR 476 to CR 491A

2. Deschamps Receptors: From CR 491A to CR 491

The existing Year 2001 AADT traffic volumes are obtained from the collected field traffic counts. The future design year 2025 traffic volumes are based on the forecasted traffic. The methodology for the development of the traffic forecasts is documented in Section 3 of the report. The maximum traffic volume of Level of Service (LOS) "C" for each individual segments were estimated using HCS 2000 software. The average speed corresponding to existing, projected or Level of Service "C" demand for each individual segments were also estimated using HCS 2000 software. The traffic characteristics (K, D and T factors) were estimated from the FDOT traffic count stations. The estimation procedure outlined in the FDOT's Design Traffic Handbook and documented in section 2.3. The required noise traffic data forms were completed and are included in Appendix G of this report.

6. SUMMARY

The Florida Department of Transportation (FDOT) is proposing capacity improvements to the existing two-lane undivided arterials, Cobb Road (CR485) and US 98. The need for this project is based on the needs of Hernando County and the City of Brooksville, upon projected increases in traffic volumes and on anticipated deficiencies in the future transportation system. In addition to the capacity improvements, the project is expected to provide a safe route for truck traffic to use in bypassing downtown Brooksville. This need is outlined in the Hernando County Metropolitan Planning Organization (MPO) 2025 LRTP.

Existing (2001) and design year (2025) traffic analyses were conducted as part of the Cobb Road / US 98 PD&E study to document the existing levels of service in the corridor as well as the anticipated future levels of service in the corridor. Results of the existing condition level of service analyses indicate the two-lane roadway segments of US 98 in the project corridor operated at level of service C during the 2001 design hour. The Cobb Road segments north of Yontz Road operated at level of service C. The portion of Cobb Road from SR 50 to Fort Dade Avenue is operated at level of service E.

Design year (2025) daily and peak hour traffic projections were developed using the TBRPM Version 4.0. The results of the No-Build Alternative analyses indicate that the entire US 98 segment projected to operate at level of service D and Cobb Road south of Yontz Road is projected to operate at level of service D or E if no improvements are made. The results of the Build Alternative analysis indicate that the proposed widening of Cobb Road and US 98 is projected to significantly improve the level of service for the constrained Cobb Road and US 98 roadway segments. Intersection analyses also were conducted to determine the intersection level of service and the design year intersection geometrics that should be provided throughout the corridor. Acceptable peak hour levels of service are projected to occur at all of the Cobb Road and US 98 intersections in the design year with the recommended geometry.

The results of the traffic analyses, the need for a safe route for truck traffic and the development of a bypass route around Brooksville indicate that widening Cobb Road and US 98 through the study corridor will be needed.

APPENDIX A

LEVEL OF SERVICE OF INTERSECTIONS FOR THE EXISTING YEAR 2001 CONDITIONS (HCS 2000 ANALYSIS)

Full Report														Pag	e 1 of
					Fl	JLL F	REPO	RI	Γ						
General Info	rmation						Site I	Info	rmatior)					
Analyst Agency or Co Date Perform Time Period	or Co. H.W.Lochner, Inc. formed 1/17/2002			Intersection SR 50 with Cobb Road Area Type All other areas Jurisdiction Analysis Year 2001											
Intersection	Geometry														
Grade = 0		0	2	1											
Glade - V			1	L											
						Grade	e = 0								
	4														
1							0								
2 -	-				-		2								
1	7				¥		1								
Grade = 0															
			†			Grade	= 0								
		2	2	0											
Volume and	Timing Inpu	ut		EB			1.0	VB			ND			0.0	
			LT	TH	RT	LT			RT	LT	NB TH	RT	LT	SB TH	RT
Volume (vph))		185	561	267	142			40	305	272	74	85	355	135
% Heavy vel			17	17	17	17	1		17	17	17	17	17	17	17
PHF			0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A	4)		Α	Α	Α	Α	A	1	Α	Α	Α	Α	Α	Α	Α
Startup lost ti	me		2.0	2.0	2.0	2.0				2.0	2.0		2.0	2.0	
Ext. eff. greer	n		2.0	2.0	2.0	2.0	2.	0		2.0	2.0		2.0	2.0	
Arrival type			3	3	3	3	3	}		3	3		3	3	
Jnit Extensio			3.0	3.0	3.0	3.0	3.	.0		3.0	3.0		3.0	3.0	
Ped/Bike/RT0	OR Volume		0		25	0			0	0		0	0		0
_ane Width			12.0	12.0	12.0	12.0) 12	.0		12.0	12.0		12.0	12.0	
Parking (Y or	· N)		Ν		Ν	N			N	Ν		N	N		Ν
Parking/hr															
Bus stops/hr			0	0	0	0	1		1	0	0		0	0	
Ped timing				3.2	<u> </u>	Ť		.2	1	Ť	3.2		۲Ť	3.2	
	EW Perm	EW P	erm	03		04	1	TF	xcl. Left	NS	Perm		07		8
	G = 8.0	G = 1		G =		G =	•		i = 11.0		18.0	G =	-	G =	
Timing	Y = 4	Y = 4		Y =		Y =			= 4	Y =		Y =		Y =	
	L	<u>' '</u>						<u> </u>	7		7				

Duration of Analysis (hrs) = 0.25

Cycle Length C =

70.0

VOLUI	ME ADJU	STME	NT AN	D SAT	URAT	ION F	LOW F	RATE	WORK	SHEE	Т		
General Information	on												
Project Description													
Volume Adjustme	nt									,			
		EB	_		WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Volume	185	561	267	142	428	40	305	272	74	85	355	135	
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow Rate	206	623	269	158	476	44	339	302	82	94	394	150	
Lane Group	L	T	R	L	TR		L	TR		L	TR		
Adj. flow rate	206	623	269	158	520		339	384		94	544		
Prop. LT or RT	0.000			0.000		0.085	0.000		0.214	0.000		0.276	
Saturation Flow R	ate						-						
Base satflow	1900	1900	1900	1900	1900		1900	1900		1900	1900		
Num. of lanes	1	2	1	1	2	0	2	2	0	1	2	0	
fVV	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000		
fHV	0.855	0.855	0.855	0.855	0.855		0.855	0.855		0.855	0.855		
fg		1.000		1.000			1.000			1.000			
fp	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000		
fbb	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000		
fa		1.00			1.00			1.00			1.00		
fLU	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95		
fLT	0.950	1.000		0.950	1.000	-	0.950	1.000		0.950	1.000		
Secondary fLT	0.241			0.200		-				0.360			
fRT		1.000	0.850		0.987			0.968			0.959		
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000		
fRpb		1.000	1.000		1.000			1.000			1.000		
Adj. satflow	1543	3085	1380	1543	3046		2993	2987		1543	2958		
Sec. adj. satflow	392			325						585			

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		CAPA	CITY	AND L	os wo	RKS	HEET				
General Information					***************************************						
Project Description											
Capacity Analysis											
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	206	623	269	158	520		339	384	94	544	
Satflow rate	1543	3085	1380	1543	3046		2993	2987	1543	2958	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Green ratio	0.41	0.24	0.63	0.41	0.24		0.16	0.26	0.47	0.26	
Lane group cap.	310	749	867	301	740		470	768	441	761	
v/c ratio	0.66	0.83	0.31	0.52	0.70		0.72	0.50	0.21	0.71	
Flow ratio		0.20	0.19		0.17		0.11	0.13		0.18	
Crit. lane group	Ν	Υ	Ν	N	N		Y	N	N	Y	
Sum flow ratios						0.6	3				
Lost time/cycle						16.0	00				
Critical v/c ratio						0.8				-	
Lane Group Capacity, (Contro	l Dela	y, and	LOS	Determi	natio	n				
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	206	623	269	158	520		339	384	94	544	
Lane group cap.	310	749	867	301	740		470	768	441	761	
v/c ratio	0.66	0.83	0.31	0.52	0.70		0.72	0.50	0.21	0.71	
Green ratio	0.41	0.24	0.63	0.41	0.24		0.16	0.26	0.47	0.26	
Unif. delay d1	14.7	25.1	6.0	14.6	24.2		28.0	22.2	10.8	23.7	
Delay factor k	0.24	0.37	0.11	0.13	0.27		0.28	0.11	0.11	0.28	
Increm. delay d2	5.3	7.9	0.2	1.7	3.0		5.4	0.5	0.2	3.2	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Control delay	20.0+	33.1	6.2	16.3	27.2		33.4	22.7	11.0	26.9	
Lane group LOS	С	С	Α	В	С		С	С	В	С	
Apprch. delay	24	.0		24	4.7		2	7.7		24.5	
Approach LOS)			С			С		С	
Intersec. delay	25	5.1			In	tersect	tion LOS	3		С	

HCS2000TM

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Version 4.1b

						FL	JLL R	EPC)R1	T						
General Info	rmation									ormation	1					
Analyst Agency or Co Date Perform Time Period			Praba Lochne 1/17/20 peak p	er, Inc. 02				Inter Area Juris	sect Typ dict	tion pe			Cobb l er areas			
Intersection	Geomet	ry														
Grade = 0			0	2	1											
l							Grade	= 0								
1	٠							0								
2						1		2								
1	7					¥		1								
Grade = 0																
			2	2	0		Grade	= 0								
Volume and	Timing	Inpu	ıt				***************************************									
					EB				MΒ			NB			SB	
				LT	TH	RT	LT		ΓH_	RT	LT	TH	RT	LT	TH	RT
Volume (vph) % Heavy vel				193	410	260	86		70	60	308	320	136	57	296	138
<u>% неаvy vei</u> PHF	11			17 0.90	17 0.90	17 0.90	17	_	7 90	17 0.90	17	17	17	17	0.00	17
Actuated (P/A	4)			0.90 A	0.90 A	0.90 A	0.90 A		90 4	0.90 A	0.90 A	0.90 A	0.90 A	0.90 A	0.90 A	0.90 A
Startup lost ti				2.0	2.0	2.0	2.0		.0	+^-	2.0	2.0	 ^ -	2.0	2.0	+
Ext. eff. greei				2.0	2.0	2.0	2.0		.0		2.0	2.0		2.0	2.0	1
Arrival type				3	3	3	3		3		3	3		3	3	İ
Unit Extensio				3.0	3.0	3.0	3.0	3	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RT0	OR Volur	ne		0		25	0			0	0		0	0		0
Lane Width				12.0	12.0	12.0	12.0	12	2.0		12.0	12.0		12.0	12.0	
Parking (Y or	N)			Ν		Ν	Ν			N	Ν		N	Ν		N
Parking/hr																
Bus stops/hr				0	0	0	0		0		0	0		0	0	
Ped timing					3.2				3.2			3.2			3.2	1
	EW Per	rm	EW P	erm	03	T	04			Excl. Lef	l NS	Perm		07		08
	G = 8.0		G = 1		G =		G =			6 = 10.4		15.9	G =		G =	
Timing	Y = 4		Y = 4		Y =		Y =			' = 4	Y =		Y =			
Duration of A		hrs) :			Y =		Υ =		Y	′ = 4		4 le Leng		68.3	Υ =	_

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VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET General Information Project Description Volume Adjustment EB **WB** NB SB LT TH RT LT TH RT LT TH RT LT TH **RT** Volume 193 410 260 86 570 60 308 320 136 57 296 138 PHF 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 Adj. Flow Rate 214 456 261 96 633 67 342 356 151 63 329 153 Τ Lane Group L R L TR L TR L TR Adj. flow rate 214 456 261 96 700 342 507 63 482 Prop. LT or RT 0.000 0.000 0.096 0.000 0.298 0.000 0.317 Saturation Flow Rate Base satflow 1900 1900 1900 1900 1900 1900 1900 1900 1900 Num. of lanes 1 2 1 1 2 0 2 2 0 1 2 0 fW 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 fH∨ 0.855 0.855 0.855 0.855 0.855 0.855 0.855 0.855 0.855 1.000 1.000 1.000 fg 1.000 fр 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 fbb 1.000 1.000 1.000 1.000 1.000 fa 1.00 1.00 1.00 1.00 fLU 1.00 0.95 1.00 1.00 0.95 0.95 0.97 1.00 0.95 fLT 1.000 0.950 0.950 1.000 0.950 1.000 0.950 1.000 Secondary fLT 0.190 0.309 0.241 fRT 1.000 0.850 0.986 0.955 0.952 1.000 1.000 1.000 fLpb 1.000 1.000 1.000 1.000 1.000 fRpb 1.000 1.000 1.000 1.000 1.000 1543 3085 Adj. satflow 1380 1543 3041 2993 2948 1543 2939 Sec. adj. satflow 309 502 391

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		CAPA	ACITY	AND	OS WO	ORKS	HEET				
General Information									 		
Project Description											
Capacity Analysis											
		EB			WB			NB		SB	
Lane group	L	Τ	R	L	TR		L	TR	L	TR	
Adj. flow rate	214	456	261	96	700		342	507	63	482	
Satflow rate	1543	3085	1380	1543	3041		2993	2948	1543	2939	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Green ratio	0.44	0.26	0.65	0.44	0.26		0.15	0.23	0.44	0.23	
Lane group cap.	308	813	897	357	801		456	686	366	684	
v/c ratio	0.69	0.56	0.29	0.27	0.87		0.75	0.74	0.17	0.70	
Flow ratio		0.15	0.19		0.23		0.11	0.17		0.16	
Crit. lane group	N	N	N	Ν	Y		Y	Υ	N	Ν	
Sum flow ratios						0.6	55				
Lost time/cycle						16.0	20				
Critical v/c ratio						0.8	5				
Lane Group Capacity,	Contro	ol Dela	ıy, and	LOS	Determ	inatic	n				
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	214	456	261	96	700		342	507	63	482	
Lane group cap.	308	813	897	357	801		456	686	366	684	
v/c ratio	0.69	0.56	0.29	0.27	0.87		0.75	0.74	0.17	0.70	
Green ratio	0.44	0.26	0.65	0.44	0.26		0.15	0.23	0.44	0.23	
Unif. delay d1	14.1	21.7	5.2	11.9	24.1		27.7	24.3	11.7	24.0	
Delay factor k	0.26	0.16	0.11	0.11	0.40		0.31	0.30	0.11	0.27	
Increm. delay d2	6.6	0.9	0.2	0.4	10.5		6.8	4.3	0.2	3.3	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Control delay	20.8	22.6	5.3	12.4	34.6		34.5	28.5	11.9	27.3	
Lane group LOS	С	С	Α	В	С		С	С	В	С	
Apprch. delay	1	7.4		3	1.9		3	0.9		25.6	-
Approach LOS		В			С			С		С	
Intersec. delay	20	6. <i>2</i>			Ir	tersec	tion LOS	3		С	

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					Fl	JLL RE								,	
General Inform	nation					S	ite l	nformatio	on						
Analyst Agency or Co. Date Performed Time Period		Praba Lochne 1/17/20 am pea	er, Inc. 01			J V	rea [·] urisd	ection Type iction sis Year		Cot	All oth	d with U er areas 001			
ntersection G	eometry														
Grade =		0	0	0											
						Grade =	: O								
0							0								
1					-		1								
1	*				¥		1								
Grade = 0															
		•													
		0	1	0		Grade =	0								
Volume and T	iming Inpu	ut													
				EB			W	/B			NB			SB	
			LT	TH	RT	LT	TI			LT	TH	RT	LT	TH	RT
Volume (vph)				275	182	10	24.			42	0	22			
% Heavy veh				17	17	17	17		_	17	17	17			
PHF				0.90	0.90		0.9		_	90	0.90	0.90			
Actuated (P/A) Startup lost time				A 2.0	A	A 2.0	A		+	<u> </u>	A	Α			
Ext. eff. green	U			2.0	2.0	2.0	2.0 2.0		╬		2.0		<u> </u>		
Arrival type				3	3	3	3		+		3	<u> </u>			
Jnit Extension				3.0	3.0	3.0	3.		+	-	3.0				
Ped/Bike/RTOF	R Volume		0	1 3.0	0	10.0	+-	´ 	+	0	3.0	0	0		
_ane Width	. TOIGITIC			12.0	12.0	12.0	12.	0	+		12.0	+ -	 		
Parking (Y or N	<u> </u>		N	1,2.0	N N	N	+	N	+	N	12.0	N	N		N
Parking (r or in	1)			1	 ' '	 '\	+	- 'V	+	/ V		//	/V		1//
				1	 	+ -	+		+						
Bus stops/hr				0	0	0	0		+		0	<u> </u>			
Ped timing				3.2							3.2	-		3.2	
E	EW Perm	02		03		04		NB On	ly		06		07	0	8
Firming G	S = 31.0	G =		G =		G =		G = 21.	0	G=		G =		G =	
Γiming Y	′ = 4	Y =		Y =		Y =		Y = 4		Y =		Y =		Y =	
Ouration of Ana	alysis (hrs)	= 0.25								Сус	le Leng	th C =	60.0		

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VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET General Information Project Description Volume Adjustment EB **WB** NB SB LT TH RT LT TH RT LT TH RT LT TH RT Volume 275 10 243 182 142 0 22 PHF 0.90 0.90 0.90 0.90 0.90 0.90 0.90 Adj. Flow Rate 306 202 11 270 158 0 24 Lane Group Τ R L Τ LTR Adj. flow rate 306 202 11 270 182 Prop. LT or RT 0.000 0.000 0.000 0.868 0.132 Saturation Flow Rate Base satflow 1900 1900 1900 1900 1900 Num. of lanes 0 1 1 1 1 0 0 1 0 0 0 0 fW 1.000 1.000 1.000 1.000 1.000 fΗV 0.855 0.855 0.855 0.855 0.855 1.000 1.000 1.000 fg fр 1.000 1.000 1.000 1.000 1.000 fbb 1.000 1.000 1.000 1.000 1.000 1.00 1.00 fa 1.00 fLU 1.00 1.00 1.00 1.00 1.00 fLT 1.000 0.502 1.000 0.958 Secondary fLT fRT 0.982 1.000 0.850 1.000 fLpb 1.000 1.000 1.000 1.000 __ fRpb 1.000 1.000 1.000 1.000 Adj. satflow 1624 1380 814 1624 1529 Sec. adj. satflow

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	CAPA	CITY	AND L	os wo	RKSH	EET	
General Information							
Project Description							
Capacity Analysis							
	EB			WB		NB	SB
Lane group	T	R	L	T		LTR	
Adj. flow rate	306	202	11	270		182	
Satflow rate	1624	1380	814	1624		1529	
Lost time	2.0	2.0	2.0	2.0		2.0	
Green ratio	0.52	0.52	0.52	0.52		0.35	
Lane group cap.	839	713	421	839		535	
v/c ratio	0.36	0.28	0.03	0.32		0.34	
Flow ratio	0.19	0.15	0.01	0.17		0.12	
Crit. lane group	Y	N	N	N		Y	
Sum flow ratios					0.31		
Lost time/cycle					8.00		
Critical v/c ratio					0.35		
Lane Group Capacity	, Control Dela	y, and	LOS D	etermiı	nation		
	EB			WB		NB	SB
Lane group	T	R	L	T		LTR	
Adj. flow rate	306	202	11	270		182	
Lane group cap.	839	713	421	839		535	
v/c ratio	0.36	0.28	0.03	0.32		0.34	
Green ratio	0.52	0.52	0.52	0.52		0.35	1 1 1
Unif. delay d1	8.6	8.2	7.1	8.4		14.4	
Delay factor k	0.11	0.11	0.11	0.11		0.11	
Increm. delay d2	0.3	0.2	0.0	0.2		0.4	
PF factor	1.000	1.000	1.000	1.000		1.000	
Control delay	8.9	8.4	7.1	8.6		14.8	
Lane group LOS	A	Α	Α	Α		В	
Apprch. delay	8.7		8	3.6		14.8	
Approach LOS	Α			Α		В	
Intersec. delay	9.8			lr	ntersecti	on LOS	Α
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Concret Inf					FU	LL RE	POI	RT						
<u>General Int</u>	ormation							nformatio	n					
Analyst Agency or C Date Perfori Time Period	med	Praba V.Lochne 1/17/20 pm pea	er, Inc. 01			A، بار	rea ⁻ urisd	ection Гуре iction sis Year	Col	All oth	d with U er areas			
ntersection	n Geometry													
Grade =		0	0	0										
						Grade =	0							
0							0							
. 1					-		1							
1	7				¥		1							
Grade = 0														
		•	₹											
Volume an	nd Timing Inp	o ut	1	0		Grade =	0							
Volume an	nd Timing Inp			EB			W		<u> </u>	NB		I	SB	
			1 LT	EB TH	RT	LT	V _V	l RT	LT	TH	RT	LT	SB TH	RT
Volume (vpł	h)			EB TH 229	160	LT 6	W Th	H RT	173	TH 0	19	LT		RT
Volume (vpl % Heavy ve	h)			EB TH 229	160 17	LT 6 17	W Th 29	H RT	173 17	TH 0 17	19 17	LT		RT
Volume (vpl % Heavy vo PHF	h) eh			EB TH 229 17 0.90	160 17 0.90	LT 6 17 0.90	W Th 29	H RT 1 0	173 17 0.90	TH 0 17 0.90	19 17 0.90	LT		RT
Volume (vph % Heavy ve PHF Actuated (P.	h) eh			EB TH 229	160 17	LT 6 17	W Th 29	H RT 1 0	173 17	TH 0 17	19 17	LT		RT
Volume (vpl % Heavy vo PHF Actuated (P Startup lost Ext. eff. gree	h) eh V/A) time en			EB TH 229 17 0.90 A 2.0 2.0	160 17 0.90 A 2.0 2.0	LT 6 17 0.90 A 2.0 2.0	W TH 29- 17 0.9 A 2.0	H RT 1 0 0 0 0	173 17 0.90	TH 0 17 0.90 A 2.0 2.0	19 17 0.90	LT		RT
Volume (vph % Heavy vo PHF Actuated (P. Startup lost Ext. eff. gree Arrival type	h) eh ² /A) time en			EB TH 229 17 0.90 A 2.0 2.0 3	160 17 0.90 A 2.0 2.0 3	LT 6 17 0.90 A 2.0 2.0 3	W Th 29' 17' 0.9 A 2.0 2.0	H RT 1 0 0 0 0 0 0 0 0 0 0 0 0	173 17 0.90	TH 0 17 0.90 A 2.0 2.0 3	19 17 0.90	LT		RT
Volume (vph % Heavy vo PHF Actuated (P Startup lost Ext. eff. gree Arrival type Unit Extensi	h) eh //A) time en		LT	EB TH 229 17 0.90 A 2.0 2.0	160 17 0.90 A 2.0 2.0 3 3.0	LT 6 17 0.90 A 2.0 2.0	W TH 29- 17 0.9 A 2.0	H RT 1 0 0 0 0 0 0 0 0 0 0 0 0	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0	19 17 0.90 A			RT
Volume (vph % Heavy ve PHF Actuated (Pa Startup lost Ext. eff. gree Arrival type Unit Extensi Ped/Bike/R	h) eh //A) time en ion TOR Volume			EB TH 229 17 0.90 A 2.0 2.0 3 3.0	160 17 0.90 A 2.0 2.0 3 3.0	LT 6 17 0.90 A 2.0 2.0 3 3.0	W TH 29-17 0.9 A 2.0 3.0 3.0	H RT 1 0 0 0 0 0 0 0 0	173 17 0.90	TH 0 17 0.90 A 2.0 2.0 3 3.0	19 17 0.90	LT 0		RT
Volume (vph % Heavy volume) PHF Actuated (Pastartup lost Ext. eff. green Arrival type Unit Extension Ped/Bike/RT Lane Width	h) eh V/A) time en ion TOR Volume		LT	EB TH 229 17 0.90 A 2.0 2.0 3	160 17 0.90 A 2.0 2.0 3 3.0 0	LT 6 17 0.90 A 2.0 2.0 3 3.0	W Th 29' 17' 0.9 A 2.0 2.0	H RT 1 0 0 0 0 0 0 0	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3	19 17 0.90 A	0		
Volume (vpl % Heavy vo PHF Actuated (P Startup lost Ext. eff. gree Arrival type Jnit Extensi Ped/Bike/R Lane Width	h) eh V/A) time en ion TOR Volume		LT	EB TH 229 17 0.90 A 2.0 2.0 3 3.0	160 17 0.90 A 2.0 2.0 3 3.0	LT 6 17 0.90 A 2.0 2.0 3 3.0	W TH 29-17 0.9 A 2.0 3.0 3.0	H RT 1 0 0 0 0 0 0 0 0	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0	19 17 0.90 A			RT
Volume (vph % Heavy volume) PHF Actuated (Pastartup lost Ext. eff. greet Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (You	h) eh P/A) time en ion TOR Volume or N)		LT	EB TH 229 17 0.90 A 2.0 2.0 3 3.0	160 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	LT 6 17 0.90 A 2.0 2.0 3 3.0	W Th 29- 177 0.9 A 2.0 2.0 3 3.0	H RT 1 0 0 0 N	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0	19 17 0.90 A	0		
Volume (vph % Heavy volume) PHF Actuated (P. Startup lost Ext. eff. gree Arrival type Unit Extensi Ped/Bike/RT Lane Width Parking (Y comparking/hr Bus stops/h	h) eh P/A) time en ion TOR Volume or N)		LT	EB TH 229 17 0.90 A 2.0 2.0 3 3.0 12.0	160 17 0.90 A 2.0 2.0 3 3.0 0	LT 6 17 0.90 A 2.0 2.0 3 3.0	W TH 29-17 0.9 A 2.0 3.0 3.0	H RT 1 0 0 0 N	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0	19 17 0.90 A	0	TH	
Volume (vph % Heavy volume) PHF Actuated (P. Startup lost Ext. eff. green Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Y comparking/hr Bus stops/h	h) eh V/A) time en ion TOR Volume or N)	ut	LT O	EB TH 229 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	160 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	LT 6 17 0.90 A 2.0 2.0 3 3.0 12.0 N	W Th 29- 177 0.9 A 2.0 2.0 3 3.0	H RT 1 0 0 0 N	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	19 17 0.90 A	0 N	3.2	N
Volume (vpl % Heavy volume) PHF Actuated (P. Startup lost Ext. eff. green Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Y comparking/hr Bus stops/h	h) eh A) time en ion TOR Volume or N)	ut 02	LT O	EB TH 229 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	160 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	LT 6 17 0.90 A 2.0 2.0 3 3.0 12.0 N	W Th 29- 177 0.9 A 2.0 2.0 3 3.0	H RT	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	19 17 0.90 A	0 N	3.2	
Volume (vpl % Heavy vo PHF Actuated (P. Startup lost Ext. eff. gree Arrival type Unit Extensi Ped/Bike/R	h) eh V/A) time en ion TOR Volume or N)	ut	LT O	EB TH 229 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	160 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	LT 6 17 0.90 A 2.0 2.0 3 3.0 12.0 N	W Th 29- 177 0.9 A 2.0 2.0 3 3.0	H RT 1 0 0 0 N	173 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	19 17 0.90 A	0 N	3.2	N

Full Report Page 2 of 3

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET General Information Project Description Volume Adjustment EB **WB** NB SB LT RT TH TH LT RT LT TH RT LT TH RT Volume 229 160 6 291 173 0 19 PHF 0.90 0.90 0.90 0.90 0.90 0.90 0.90 Adj. Flow Rate 7 254 178 323 0 192 21 Lane Group Т R L Т LTR 7 Adj. flow rate 254 178 323 213 Prop. LT or RT 0.000 0.000 0.000 0.901 0.099 Saturation Flow Rate Base satflow 1900 1900 1900 1900 1900 0 Num. of lanes 1 1 1 1 0 0 1 0 0 0 0 fW 1.000 1.000 1.000 1.000 1.000 fHV 0.855 0.855 0.855 0.855 0.855 1.000 1.000 fg 1.000 1.000 1.000 fр 1.000 1.000 1.000 fbb 1.000 1.000 1.000 1.000 1.000 1.00 fa 1.00 1.00 fLU 1.00 1.00 1.00 1.00 1.00 fLT 1.000 0.553 1.000 0.957 Secondary fLT -fRT 1.000 0.850 1.000 0.987 fLpb 1.000 1.000 1.000 1.000 __ fRpb 1.000 1.000 1.000 1.000 Adj. satflow 1624 1380 898 1624 1533 Sec. adj. satflow

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CAPA	CITY	AND LO	os wo	RKSH	EET		
EB	EB WB NB						
T	R	L	T		LTR		
254	178	7	323		213		
1624	1380	898	1624		1533		
2.0	2.0	2.0	2.0		2.0		
0.53	0.53	0.53	0.53		0.33		
866	736	479	866		511		
0.29	0.24	0.01	0.37		0.42		
0.16	0.13	0.01	0.20		0.14		
N	N	Ν	Υ		Y		
				0.34			
				8.00			
				0.39			
Control Delay	y, and	LOS D	etermiı	nation			
EB			WB		NB	SB	
T	R	L	T		LTR		
254	178	7	323		213		
866	736	479	866		511		
0.29	0.24	0.01	0.37		0.42		
0.53	0.53	0.53	0.53		0.33		
7.7	7.5	6.6	8.2		15.5		
0.11	0.11	0.11	0.11		0.11		
0.2	0.2	0.0	0.3		0.6		
1.000	1.000	1.000	1.000		1.000		
7.9	7.7	6.6	8.4		16.0		
Α	Α	Α	Α		В		
7.8		8	3.4		16.0		
Α		A B					
9.8			Ir	ntersecti	on LOS	Α	
	EB	EB	EB	EB	EB	T R L T LTR 254 178 7 323 213 323 2.0	

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All-Way Stop Control Page 1 of 1

		ALL-VVA	1 3107 0	ONTROL	ANALYSIS	<u> </u>		
General Information	1			Site Inforr	nation			
Analyst	Praba			Intersection	ade Avenue with	e Avenue with Cobb Rd		
Agency/Co.		ochner, Inc.		Jurisdiction		0004		
Date Performed Analysis Time Period	1/17/2	002 ak period		Analysis Yea	<u> </u>	2001		
Project ID	ani pe	як репои		긔[
East/West Street: Fort Da	de Avenue			North/Couth C	Street, Cabb Da	- d		
				North/South S	Street: Cobb Roa	aa		
Volume Adjustment Approach	is and Site Cn		astbound			\A/a.	. Alb	
Movement	L		T	R	L	vve:	stbound T	R
/olume	32		54	42	68		42	6
%Thrus Left Lane	50)			50			
Approach		N	orthbound			Sou	thbound	
Movement	L		Т	R	L		Т	R
Volume	20		400	70	10		469	45
%Thrus Left Lane	5)			50			
	East	bound	Wes	tbound	North	bound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.90		0.90		0.90		0.90	1
Flow Rate	141		127		543		582	
% Heavy Vehicles	17		17		17		17	
No. Lanes		1		1	1			1
Geometry Group	•	1		1	1			1
Ouration, T				0	.25			
Saturation Headway	/ Adjustment \	<i>N</i> orksheet						
Prop. Left-Turns	0.2		0.6		0.0		0.0	
Prop. Right-Turns	0.3		0.0		0.1		0.1	
Prop. Heavy Vehicle	0.2		0.2		0.2		0.2	
nLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	8.00		8.00		8.00		8.00	1
Departure Headway		ime			1 0.00		0.00	<u> </u>
nd, initial value	3.20	T	3.20	1	3.20	T	3.20	T
ια, initial value , initial	0.13	 	0.11	-	0.48		0.52	
nd, final value	8.00		8.00		8.00		8.00	1
r, final value	0.31		0.29		0.97		1.04	†
Move-up time, m		0		2.0	2.	0		.0
Service Time	6.0	I	6.0		6.0	Ī	6.0	Ť
Capacity and Level								
The state of the s		bound	1000	tbound	North	bound	Co41	hbound
	L1		_		-	7	 	1
		L2	L1	L2	L1	L2	L1	L2
Capacity	391		377		560		582	
Delay	14.61		14.71		55.67		72.93	
.OS	В		В		F		F	
Approach: Delay	1	4.61	14	1.71	55.	67	72	.93
LOS		В	B F F				·	
ntersection Delay	_		I.		1.99			
ntersection LOS					F			

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All-Way Stop Control Page 1 of 1

General Information	1			Site Inforr	mation				
				Intersection	ilation	Fort D	Fort Dade Avenue with Cobb Rd		
Analyst Agency/Co.	Praba H.W.L	ochner, Inc.		Jurisdiction		roit D	Fort Dade Avenue With Cobb Rd		
Date Performed	1/17/2			Analysis Yea	r	2001			
Analysis Time Period	pm pe	ak period		j l					
Project ID									
East/West Street: Fort Da	de Avenue			North/South S	Street: Cobb Roa	d			
Volume Adjustment	s and Site Ch	aracteristic	es es						
Approach			astbound		T	We	stbound		
Movement	L		T	R	L		Т	R	
/olume	36		38	35	74		50	12	
%Thrus Left Lane	50)			50				
Approach		N	orthbound			Sou	thbound		
Movement	L	_	T	R	L		T	R	
/olume	43		470	60	20		391	35	
%Thrus Left Lane	5	0			50				
	Eas	bound	Wes	stbound	North	bound	South	nbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	LTR		LTR		LTR		LTR	 	
PHF	0.90	1	0.90		0.90		0.90		
low Rate	120	7	150		638		494		
6 Heavy Vehicles	17		17		17		17		
lo. Lanes		1	 ''	1	 ''			1	
Geometry Group		 1		1		1		<u>, </u>	
Ouration, T					.25				
Saturation Headway	/ Adjustment	Workshoot			.20				
		T T T T T T T T T T T T T T T T T T T			T 0.4	T	T 00	T	
Prop. Left-Turns	0.3		0.5		0.1	<u> </u>	0.0		
Prop. Right-Turns	0.3	ļ	0.1	-	0.1		0.1	ļ	
Prop. Heavy Vehicle	0.2		0.2		0.2		0.2		
LT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
RT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
HV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
adj, computed	7.99		7.99	•	7.99		7.99		
eparture Headway	and Service	Гime							
d, initial value	3.20		3.20	T	3.20	i e	3.20		
, initial	0.11		0.13		0.57		0.44		
d, final value	7.99		7.99		7.99	<u> </u>	7.99		
, final value	0.27		0.33		1.12		0.88		
love-up time, m		.0		2.0	2.	0		.0	
Service Time	6.0		6.0	<u> </u>	6.0	Ī	6.0	Ť	
Capacity and Level					1		1 0.0		
apacity and Lotte		hound	18/	the cond	T Ni. o	h	T		
		bound		stbound		bound		nbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
apacity	370		400		638		556		
elay	13.86		14.95		97.25		40.32		
.OS	В		В		F		E		
approach: Delay		3.86		1.95	97.	25		22	
								32	
LOS		В	B F E					=	
ntersection Delay	I			61	1.25				

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	TWO	D-WAY STOP	CONTR	OL SUN	MARY					
General Information	1		Site I	nformat	ion					
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 1/17/2002 am peak		Jurisdi	Intersection Jurisdiction Analysis Year			Yontz Road with Cobb Road			
Project Description	Deed		N 1 (1- //) - II- OI-						
East/West Street: Yontz Intersection Orientation:					et: Cobb I	Road				
			Study	Period (hr	s): 0.25					
Vehicle Volumes an	<u>a Adjustme</u>									
Major Street Movement	1	Northbound 2	3			Southboo	<u>ind</u>			
wovernent	 	T	R		4 	5 T		6 R		
Volume	200	146	100		1	180		25		
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90		
Hourly Flow Rate, HFR	222	162	111		1	200		27		
Percent Heavy Vehicles	17		17							
Median Type				Undivide	ed					
RT Channelized			1			·		1		
Lanes	1	1	1		1	1		1		
Configuration	L	T	R		L	T		R		
Upstream Signal		0				0				
Minor Street		Westbound				Eastbou	nd			
Movement	7	8	9		10	11		12		
	L	Т	R		L	Т		R		
Volume	118	28	4		23	23		184		
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90		
Hourly Flow Rate, HFR	131	31	4		25	25		204		
Percent Heavy Vehicles Percent Grade (%)	17	17	17		17	17		17		
		0	1			0	<u> </u>			
Flared Approach		Y				N N		***************************************		
Storage		1				1				
RT Channelized			0					0		
Lanes	0	1 1	0		0	1		0		
Configuration		LTR				LTR				
Delay, Queue Length, a			_							
Approach	NB	SB		Westbour			Eastbound			
Movement	1	4	7	8	9	10	11	12		
Lane Configuration	L	L		LTR			LTR			
v (vph)	222	1		166			254			
C (m) (vph)	1287	1331		333			527			
v/c	0.17	0.00		0.50			0.48			
95% queue length	0.62	0.00		2.65			2.59			
Control Delay	8.4	7.7		26.1			18.0			
LOS	A			D			C	 		
Approach Delay				26.1			18.0			
Approach LOS										
encercularies (100)			D			С				

		O-WAY STOR								
<u>General Informatio</u>				<u>nforma</u>	tion					
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 1/17/2002 pm peak		Interse Jurisdi Analys			Yontz Road with Cobb Road				
Project Description East/West Street: Yontz	- Pood		North/	South Ct	raati Cabb	Dood				
	North-South			North/South Street: Cobb Road Study Period (hrs): 0.25						
			Study	enou (i	113). 0.23					
Vehicle Volumes ar	<u>la Aajustme</u>									
Major Street Movement	+	Northbound				Southbo	<u>una</u>			
wovement	1 L	2 T	3 R		4 L	5 T		6 R		
Volume	210	200	114		5	160		10		
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90		
Hourly Flow Rate, HFR	233	222	126		5	177		11		
Percent Heavy Vehicles	17				17					
Median Type	 			Undivid			L			
RT Channelized			1	T				1		
Lanes	1	1	1		1	1		1		
Configuration	L	T	R		L	T		R		
Upstream Signal		0				0				
Minor Street		Westbound				Eastbou	nd			
Movement	7	8	9		10	11		12		
	L	Т	R		L	Т		R		
Volume	101	22	5		25	45		200		
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90		
Hourly Flow Rate, HFR	112	24	5		27	50		222		
Percent Heavy Vehicles	17	17	17		17	17		17		
Percent Grade (%)		0				0				
Flared Approach		Y				N				
Storage		1				1				
RT Channelized			0					0		
Lanes	0	1	0		0	1		0		
Configuration		LTR				LTR				
Delay, Queue Length, a	and Level of Se									
Approach	NB	SB	1	Westbou	ınd	<u> </u>	Eastbound	{		
Movement	1	4	7	8	9	10	11	12		
Lane Configuration	<u> </u>	L	<u> </u>	LTR		10	LTR	12		
v (vph)	233	5		141			299	+		
	1313	1263		286		_	ļ	 		
C (m) (vph) v/c							463	+		
	0.18	0.00		0.49	_	_	0.65	+		
95% queue length	0.64	0.01		2.56			4.49			
Control Delay	8.3	7.9		29.2		25.9				
LOS	Α	Α		D			D			
Approach Delay				29.2			25.9			
Approach LOS			D			D				

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	TWO	D-WAY STOP	CONTR	OL SU	JMN	IARY				
General Information	1		Site I	nform	atio	n				
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 1/17/2002 am peak		Interse Jurisdi	ction			Youth Drive with Cobb Road			
Project Description	Deiter		IN 1 (1 - 7)	2 11 0		0 11 5				
East/West Street: Youth Intersection Orientation:						: Cobb F	<i>коаа</i>			
			Study	Period (nrs).	0.25				
Vehicle Volumes an	<u>d Adjustme</u>									
Major Street Movement	1	Northbound	1 -				Southbo	und		
wovernent	1 L	2 T	3 R			4	5 T		6 R	
Volume	0	165	10			1	192		0	
Peak-Hour Factor, PHF	0.86	0.90	0.90	,		0.90	0.90		0.84	
Hourly Flow Rate, HFR	0	183	11	t		1	213		0	
Percent Heavy Vehicles	10					17	†			
Median Type				Undiv	ided					
RT Channelized			0						0	
Lanes	0	1	1			1	1		0	
Configuration		T	R			L	T			
Upstream Signal		0					0			
Minor Street		Westbound					Eastbound			
Movement	7	8	9			10	11		12	
	L	Т	R			L	Т		R	
Volume	7	0	1			0	0		0	
Peak-Hour Factor, PHF	0.90	0.90	0.90)	(0.72	0.72		0.72	
Hourly Flow Rate, HFR	7	0	1			0	0		0	
Percent Heavy Vehicles	17	17	17			8	0		0	
Percent Grade (%)		0					0			
Flared Approach		Y					Y			
Storage		1					1			
RT Channelized			0						0	
Lanes	0	1	0			0	0		0	
Configuration		LTR								
Delay, Queue Length, a	nd Level of Se	rvice								
Approach	NB	SB		Westbo	und			Eastbound	d	
Movement	1	4	7	8		9	10	11	12	
Lane Configuration		L		LTR						
v (vph)		1		8	\dashv			1		
C (m) (vph)		1294		1918	, 				+	
v/c		0.00		0.00			†		+	
95% queue length		0.00		0.01		***************************************			+	
Control Delay		7.8		6.9					+	
										
LOS		Α		A			 			
Approach Delay				6.9			ļ			
Approach LOS			Α				1			

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	TW	O-WAY STOP	CONTR	OL SU	JMMAR'	Y			
General Information			Site I	nform	ation				
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 1/17/2002 pm peak		Interse Jurisdi	Intersection Jurisdiction Analysis Year			Youth Drive with Cobb Road 2001		
Project Description	Deite		b 1 11 11						
East/West Street: Youth					treet: Co		pad		
Intersection Orientation:			Study	Period (hrs): 0.2	5			
Vehicle Volumes and	<u>d Adjustme</u>								
Major Street	1	Northbound	1 0				Southbo	und	
Movement	1 L	2 	3 R		4		<u>5</u> T		6
Volume	0	196	10		<u>L</u>		164		R 0
Peak-Hour Factor, PHF	0.86	0.90	0.90		0.90		0.90		0.84
Hourly Flow Rate, HFR	0	217	11		1		182		0
Percent Heavy Vehicles	10				17				
Median Type				Undivi				I	
RT Channelized			0			T		T	0
Lanes	0	1	1		1		1		0
Configuration		T	R		L		T		
Upstream Signal		0					0		
Minor Street		Westbound					Eastbou	nd	
Movement	7	8	9		10		11		12
	L	Т	R		L		Т		R
Volume	10	0	1		0		0		0
Peak-Hour Factor, PHF	0.90	0.90	0.90	'	0.72		0.72		0.72
Hourly Flow Rate, HFR	11	0	1		0		0		0
Percent Heavy Vehicles	17	17	17		8		0		0
Percent Grade (%)		0					0		
Flared Approach		Y					Υ		
Storage	,	1					1		
RT Channelized			0						0
Lanes	0	1	0		0		0		0
Configuration		LTR							
Delay, Queue Length, ar	nd Level of Se	rvice							
Approach	NB	SB		Westbo	und			Eastboun	d
Movement	1	4	7	8	9		10	11	12
Lane Configuration	-	L.	<u>'</u>	LTR		\vdash		''	1 '-
v (vph)		1		12	_	-+			
C (m) (vph)		1257		1879					
V/C		0.00		0.01					
95% queue length		0.00		0.02					
Control Delay		7.9		6.9					
LOS		Α		Α					
Approach Delay				6.9					
Approach LOS			A						

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General Information			Sito I	nforma	ation					
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 1/17/2002 am peak		Interse Jurisdi	Intersection Jurisdiction Analysis Year				CR 476 with US 98 2001		
Project Description		(00.470)	b			110.00				
East/West Street: Lake L		CR476)		South St						
Intersection Orientation:			Study	Period (I	nrs):	0.25				
Vehicle Volumes and	<u>d Adjustme</u>									
Major Street		Northbound					Southbo	<u>und</u>		
Movement	1	2 T	3			4	5 T		6	
Volume	9	365	R 15		1	<u>L</u>			R 1	
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.9		0.90		0.90	
Hourly Flow Rate, HFR	10	405	16			6	491		1	
Percent Heavy Vehicles	17					7				
Median Type	 			Undivi						
RT Channelized		<u> </u>	0	0.70.77			T		0	
Lanes	0	1 1	0		()	1		0	
Configuration	LTR						•			
Upstream Signal		0					0			
Minor Street		Westbound					Eastbou	ınd		
Movement	7	8	9	9 10		0	11		12	
	L	Т	R			L	T		R	
Volume	16	23	22			3	22		15	
Peak-Hour Factor, PHF	0.90	0.90		0.90 0.90			0.90		0.90	
Hourly Flow Rate, HFR	17	25	24		3	3	24		16	
Percent Heavy Vehicles	17	17	17		1	7	17		17	
Percent Grade (%)		0					0			
Flared Approach		Y					Y			
Storage		1					1			
RT Channelized			0						0	
Lanes	0	1	0		()	1		0	
Configuration		LTR					LTR			
Delay, Queue Length, ar	nd Level of Se									
Approach	NB	SB	T	Westboo	ınd		T	Eastbound		
Movement	1	4	7	8		9	10	11	12	
Lane Configuration	LTR	LTR	+ '	LTR	_	J	10	LTR	1 12	
	10	16		66	-		+	 		
v (vph)				 	+			43	-	
C (m) (vph)	998	1062	 	1031				964		
v/c	0.01	0.02		0.06				0.04		
95% queue length	0.03	0.05		0.20				0.14		
Control Delay	8.6	8.4		8.7				8.9		
LOS	Α	Α		Α				Α		
Approach Delay				8.7	-		1	8.9		
Approach LOS			A A				A			

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General Information			Site I	nforma	tion			
Analyst Agency/Co. Date Performed	Praba H.W.Loch 1/17/2002		Interse Jurisdi	ction		CR 476 v 2001	vith US 98	
Analysis Time Period	pm peak							
Project Description								
East/West Street: Lake L		(CR476)			eet: US 98			
Intersection Orientation:			Study	Period (r	rs): 0.25			
<u>Vehicle Volumes and</u>	d Adjustme							
Major Street		Northbound				Southbo	und	
Movement	1	2	3		4	5		6
Mali was a	L	T	R		L	T		R
Volume Peak-Hour Factor, PHF	10 0.90	424 0.90	23		22	362		5
Hourly Flow Rate, HFR	11	471	0.90 25		0.90 24	0.90 402		0.90
Percent Heavy Vehicles	17	4/1		-	<u> </u>			5
Median Type	''			Undivid				
RT Channelized			1 0	- Onaivic	ieu			0
Lanes	0	1	0		0	1		0
Configuration	LTR				LTR	- '		U
Upstream Signal		0			<i>L</i> / / /	0		
Minor Street		Westbound				Eastbou	ınd	
Movement	7	8	9	9 10		11		12
	L	Т	R		L	 		R
Volume	16	25	11		1	17		15
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	17	27	12		1	18		16
Percent Heavy Vehicles	17	17	17		17	17		17
Percent Grade (%)		0				0		
Flared Approach		Y				Y		
Storage		1				1		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, ar	nd Level of Se	ervice						
Approach	NB	SB		Westbou	ınd		Eastbound	
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	11	24		56		1	35	†
C (m) (vph)	1075	995	1	975		†	1029	†
v/c	0.01	0.02	†	0.06			0.03	1
95% queue length	0.03	0.07	†	0.18			0.11	
Control Delay	8.4	8.7	1	8.9		+	8.6	
LOS	A	A A		A			A A	
Approach Delay				8.9		1	·	I
						8.6		
Approach LOS			1	Α		1	Α	

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	TW	O-WAY STOP	CONTR	OL SUN	MARY			
General Informatio	n		Site I	nformat	tion			
Analyst	Praba		Interse	ection		CR 491A	with US 98	3
Agency/Co.	H.W.Loci		Jurisdi	ction				
Date Performed	1/17/2002	2	Analys	sis Year		2001		
Analysis Time Period	am peak							
Project Description								
East/West Street: US 9					eet: CR 491	IA .		
Intersection Orientation:	East-West		Study	Period (hi	rs): 0.25			
Vehicle Volumes a	nd Adjustme	ents						
Major Street		Eastbound				Westbou	ınd	
Movement	1	2	3		4	5		6
	L L	T	R		<u> </u>	T		R
Volume	9	410	6		1	371		18
Peak-Hour Factor, PHF	0.90	0.90	0.90	_	0.90	0.90		0.90
Hourly Flow Rate, HFR	10	455	6		17	412		20
Percent Heavy Vehicles Median Type	17			ان نام ما ا	17			
RT Channelized			1 0	Undivid	<u>ea </u>	1		
Lanes	0	1	0		0	1		0
Configuration	LTR		+ 0		LTR	1		U
Upstream Signal	LIK	0			LIK	0		***************************************
Minor Street								
Movement	7	Northbound 8	T 9		10	Southbou	una	12
Movement	 	T	R		lU	 ''		R
Volume	1	1	4		12	1		1
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90	-).90
Hourly Flow Rate, HFR	1	1	4		13	1		1
Percent Heavy Vehicles		17	17		17	17		17
Percent Grade (%)		0				0		
Flared Approach		Y				Y		
Storage		1				1		
RT Channelized		- 	0			,		0
Lanes	0	1	0		0	1		0
Configuration	 	LTR	 			LTR		<u> </u>
Delay, Queue Length, a	and Level of Sa							
Approach	EB	WB		Northbou	nd	<u> </u>	Southbound	1
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR		- "	LTR	12
v (vph)	10	1		6			15	
C (m) (vph)	1052	1026		1067		<u> </u>	1096	
v/c	0.01	0.00		0.01			0.01	
95% queue length	0.03	0.00		0.02			0.04	
Control Delay	8.5	8.5		8.4			8.3	
LOS	Α	Α		Α		<u> </u>	A	
Approach Delay				8.4			8.3	L
Approach LOS				A	····		A	***************************************
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		TWC	-WAY STOP	CONTR	OL SI	JMI	MARY			
General Informatio	n			Site I	nform	atio	on			
Analyst	P	raba		Interse	ection			CR 491A	with US 9	8
Agency/Co.		l.W.Lochi		Jurisdi	ction					
Date Performed	1,	/17/2002		Analys	sis Yea	r		2001		
Analysis Time Period	p.	m peak							numera.	
Project Description										
East/West Street: US 9							t: CR 491	Α		
Intersection Orientation:	East-	West		Study I	Period	(hrs)): 0.25			
Vehicle Volumes a	nd Adj	justme	nts							
Major Street			Eastbound					Westbou	ınd	
Movement		1	2	3			4	5		6
		L	T	R			L	T		R
Volume		1	360	2			1	442		15
Peak-Hour Factor, PHF		0.90	0.90	0.90			0.90	0.90		0.90
Hourly Flow Rate, HFR		1	400	2			1	491		16
Percent Heavy Vehicles		17					17			
Median Type					Undiv	ridea		·		
RT Channelized				0						0
Lanes		0	1	0			0	1		0
Configuration		LTR		<u> </u>			LTR			
Upstream Signal			0					0		
Minor Street			Northbound					Southboo	und	
Movement		7	8	9			10	11		12
		<u> </u>	Т	R			L	Т		R
Volume	_	4	1	2			8	3		1
Peak-Hour Factor, PHF		0.90 4	0.90	0.90			0.90	0.90		0.90
Hourly Flow Rate, HFR Percent Heavy Vehicles	+	17	1 17	17			8 17	3 17		1
Percent Grade (%)		17		1//			17	•		17
			0	1				0		
Flared Approach			Y					Y		
Storage			1					1		
RT Channelized				0						0
Lanes		0	1	0			0	1		0
Configuration			LTR					LTR		
Delay, Queue Length,										
Approach	E	В	WB		Northbo	ounc		S	Southbound	i
Movement		1	4	7	8		9	10	11	12
Lane Configuration	LT	R	LTR		LTR	?			LTR	
v (vph)	1	1	1		7				12	
C (m) (vph)	98	35	1080		1113	5			1043	
v/c	0.0	00	0.00		0.01	1			0.01	
95% queue length	0.0	00	0.00		0.02	?			0.03	
Control Delay	8.		8.3		8.2				8.5	
LOS	A		A		A				A.S	
Approach Delay		<u>-</u>	A		8.2				<u> </u>	L
									8.5	
Approach LOS		- 1			A				A	
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	TW	O-WAY STOP	CONTR	OL SUM	MARY				
General Information	n		Site I	nformati	ion	***************************************			
Analyst	Praba		Interse	ection		CR 491 w	ith US 98		
Agency/Co.	H.W.Loch	nner, Inc.	Jurisdi	ction					
Date Performed	1/17/2002	2	Analys	sis Year		2001			
Analysis Time Period	am peak								
Project Description									
East/West Street: US 9	8		North/S	South Stre	et: CR 49	1			
Intersection Orientation:	East-West		Study I	Period (hrs	s): 0.25				
Vehicle Volumes ar	nd Adjustme	ents							
Major Street		Eastbound				Westbou	nd		
Movement	1	2	3		4	5		6	
	L	Т	R		L	Т		R	
Volume	30	250	9		50	282		30	
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90	
Hourly Flow Rate, HFR	33	277	10		55	313		33	
Percent Heavy Vehicles	17				17				
Median Type				Undivide	d				
RT Channelized			0					0	
Lanes	0	1	0		0	1		1	
Configuration	LTR				LT			R	
Upstream Signal		0				0			
Minor Street		Northbound				Southboo	und		
Movement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
Volume	15	57	8		128	30		15	
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90	
Hourly Flow Rate, HFR	16	63	8		142	33		16	
Percent Heavy Vehicles	17	17	17		17	17		17	
Percent Grade (%)		0				0			
Flared Approach		Y				Y			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length, a	and Level of Se	ervice							
Approach	EB	WB		Northboun	nd	5	outhbound		
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	LTR	LT		LTR			LTR		
v (vph)	33	55		87			191		
C (m) (vph)	1134	1194		1228			557		
v/c	0.03	0.05		0.07			0.34		
95% queue length	0.09	0.14		0.23			1.52		
Control Delay	8.3	8.2		8.2			14.8		
LOS	Α	Α		Α			В		
Approach Delay				8.2		1	14.8		
Approach LOS				A		<u> </u>	В		
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Caparal Informatia		O-WAY STOF	lo:4- 1						
General Informatio				nformat	ion				
Analyst	Praba		Interse			CR 491 v	vith US 98		
Agency/Co. Date Performed	H.W.Loch 1/17/2002		Jurisd			2004			
		<u> </u>	Analys	sis Year		2001			
Analysis Time Period	pm peak								
Project Description East/West Street: US 9	10		N141- 11	2 - 11 - 01					
Intersection Orientation:					et: CR 49	91			
			Study	Period (hr	s): 0.25				
Vehicle Volumes a	<u>nd Adjustme</u>								
Major Street		Eastbound				Westbou	ınd		
Movement	1 1	2	3		4	5		6	
Volume	20	7 226	R		L	T		R	
Peak-Hour Factor, PHF	0.90		20		10	300		115	
Hourly Flow Rate, HFR	22	0.90 251	0.90	<u>'</u>	0.90 11	0.90		0.90 127	
Percent Heavy Vehicles		231	1 22		17 17	333		121	
Median Type	- ''			Undivide					
RT Channelized		<u> </u>						_	
Lanes	0	1	0		0	+ -		0	
Configuration	LTR	1	- 0		LT	1		1	
Upstream Signal	LIK	0			LI	0		R	
	_			<u> </u>					
Minor Street Movement	7	Northbound			10	Southbou	und	40	
viovement		8 T	9 R		10	11 T		12	
Volume	L	50	6		L			R	
Peak-Hour Factor, PHF	0.90	0.90	0.90	1	83 0.90	45 0.90		15	
Hourly Flow Rate, HFR	5	55	6		92 50			0.90 16	
Percent Heavy Vehicles		17	17		<u> </u>	17		17	
Percent Grade (%)	,,,	0			- ' '	0		17	
Flared Approach		TY				T Y			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length, a			_						
Approach	EB	WB	_	Northbou	nd	5	Southbound	t	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	LTR	LT		LTR			LTR		
v (vph)	22	11		66			158		
C (m) (vph)	1027	1208		1295			811		
v/c	0.02	0.01		0.05	1		0.19		
95% queue length	0.07	0.03		0.16			0.79		
			 	ļ	-			-	
Control Delay	8.6	8.0		7.9	_		10.5	 	
LOS	Α	Α		Α			В		
Approach Delay				7.9			10.5		
Approach LOS			1	A			В		

		O-WAY STOP	CONTR	OL SU	MMA	KY					
General Information			Site I	nforma	ation						
Analyst	Praba		Interse				Landfil	I Ro	ad wit	h US	3 98
Agency/Co.	H.W.Loci		Jurisd								
Date Performed	1/17/200		Analys	sis Year			2001				
Analysis Time Period	am peak										
Project Description											
East/West Street: US 98				South St			Road				
ntersection Orientation:			Study	Period (I	hrs): (0.25					
Vehicle Volumes an	<u>ıd Adjustme</u>										
Major Street		Eastbound					Westb		nd		
Movement	1 1	2	3		4		5				6
7.1	L L	T	R		L]				R
Volume	0	222	10		46		20				0
Peak-Hour Factor, PHF	0.90	0.90	0.90	<u>'</u>	0.9		0.9				.90
Hourly Flow Rate, HFR	0	246	11		51		22	2			0
Percent Heavy Vehicles	15			11 1: :	17						
Median Type RT Channelized			Undivided								
	 		0		.4						0
anes	0	1	1				1				0
Configuration		T 0	R		L		7				
Jpstream Signal							0				
Minor Street	 	Northbound			4.		South		nd		10
Movement	7	8 -	9		10		1				12
/-l	L	T	R		L		7				R
Volume Peak-Hour Factor, PHF	0.90	0	24	,	0		0	0.90		0.90	
Hourly Flow Rate, HFR	8	0.90	0.90			0.90					
Percent Heavy Vehicles	17	0	17		25		4				9
Percent Grade (%)	- ''	0					0				9
		T Y	T								
Flared Approach	-						Y				
Storage	_	1					1				
RT Channelized			1				<u> </u>				0
Lanes	1	0	1		0		0				0
Configuration	L		R								
Delay, Queue Length, a			1				_				
Approach	EB	WB		Northbo	und			S	outhbo	und	
Movement	11	4	7	8		9	10		11		12
_ane Configuration		L	L			R		T			
v (vph)		51	8			26		寸			
C (m) (vph)		1225	440			757		寸		\dashv	
v/c		0.04	0.02			0.03	1	\dashv		\dashv	
95% queue length		0.13	0.06).11	 	\dashv		\dashv	
Control Delay		8.1	13.3			9.9	 	\dashv		\dashv	
					-		-	\dashv			
LOS		Α	В			Α					
Approach Delay				10.7							
Approach LOS				В				-			

	I W	O-WAY STOP	CONTR	UL SI	JMMARY				
General Informatio	1		Site I	nform	ation				
Analyst	Praba		Interse			Landfill F	Road with	US 98	
Agency/Co.	H.W.Loch		Jurisd						
Date Performed	1/17/2002	2	Analys	sis Yea	r	2001			
Analysis Time Period	pm peak					L			
Project Description	_		,						
East/West Street: US 9					Street: Land	fill Road			
Intersection Orientation:			Study	Period	(hrs): 0.25				
<u>Vehicle Volumes ar</u>	<u>ıd Adjustme</u>								
Major Street		Eastbound				Westbou	ınd		
Movement	1 1	2	3		4	5		6	
V-1	<u> </u>	T	R		L	T		R	
Volume	0	179	10		40	249		0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	<u>'</u>	0.90	0.90		0.90	
Hourly Flow Rate, HFR	0	198	11		44	276		0	
Percent Heavy Vehicles	15			1.1::- :1'	17		I		
Median Type RT Channelized	-	T	1 ^	Undiv	riaea				
Lanes	0	+ ,	0					0	
Configuration	+ -	1 T	1		1	1 T		0	
Upstream Signal			R		L	T			
	+	0				0			
Minor Street	7	Northbound	1 ^		10	Southbo	und	- 10	
Movement	7	8 T	9		10	11		12	
Volume	L		R		L	T		R	
Peak-Hour Factor, PHF	10 0.90	0.90	28		0 0.90	0		0	
Hourly Flow Rate, HFR	11	0.90	0.90		0.90	0.90		0.90 0	
Percent Heavy Vehicles	17	0	17		25	0 4		9	
Percent Grade (%)	+ ''	0	17		25	0		9	
Flared Approach	-	TY				Y			
Storage		1				1			
RT Channelized			1					0	
Lanes	1	0	1		0	0		0	
Configuration	L		R						
Delay, Queue Length, a									
Approach	EB	WB	4	Northbo			Southbour		
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		L	L		R				
v (vph)		44	11		31				
C (m) (vph)		1277	448		806				
v/c		0.03	0.02		0.04				
95% queue length		0.11	0.08		0.12				
Control Delay		7.9	13.2		9.6				
LOS								-	
		Α	В		<i>A</i>		<u> </u>		
Approach Delay				10.6) 				
Approach LOS				В					

APPENDIX B

LEVEL OF SERVICE OF HIGHWAY SEGMENTS FOR THE EXISTING YEAR 2001 CONDITIONS (HCS 2000 ANALYSIS)

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		t Dade Aver unty				
		input bata_				
Segment length 0.	.0 ft	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.9 17 0 100 7	00
Two-way hourly volume, Directional split		veh/h %				
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	n (note-2)	1.00 1.1 1.0 0.983 1203 650	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	ed: eFFS der width, f		- - 47.0 0.0 1.8	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			45.3	mi/h		
Adjustment for no-passi Average travel speed, A		р	2.1 33.8	mi/h mi/h		
	Percent T	ime-Spent-E	ollowing	•		
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	et factor, fH e-1) vp it proportion e-following, tribution and owing, PTSF	n (note-2) BPTSF d no-passir			75.2	pc/h %
Level o	of Service an	d Other Per	formance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel of travel,	VMT60			E 0.38 89 320 2.6	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road	Praba H.W.Lochner, Inc 1/17/2002 Design Hour Cobb Road Fort Dade Avenue / Yo Okaloosa County 2001 & US 98 PD&E Study	ontz Road			
	Input Data	a			
	-				
Lane width 12 Segment length 1.	2.0 ft % Trucks 5 mi % Recreat	factor, and buses sional vel sing zones bints/mi	s hicles	0.9 17 0 38 2	0 % % % /mi
Two-way hourly volume, Directional split					
-	Average Travel Sp	oeed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	nt factor, e-1) vp	1.00 1.2 1.0 0.967 1114 602	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, E Adj. for lane and shoul Adj. for access points,	sFM eed: BFFS der width, fLS	- - 55.0 0.0 0.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS		54.5	mi/h		-
Adjustment for no-passi Average travel speed, A		1.3 44.5	mi/h mi/h		
	Percent Time-Spent-	-Following	g		
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll Level of	at factor, fHV e-1) vp lit proportion (note-2) e-following, BPTSF etribution and no-passe	ing zones,	, fd/np	70.1	pc/h %
	or pervice and other re	- LOLMANCE	- ricasu		
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, VMT15 of travel, VMT60			D 0.35 404 1455 9.1	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road	Praba H.W.Lochner, 1/17/2002 Design Hour Cobb Road Yontz Road / Okaloosa Cou 2001 & US 98 PD&E	Youth Dri	ve			
	I					
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 1. Terrain type Le Grade: Length Up/down	.0 ft 1 mi vel	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.9 17 0 54 1	0 % % /mi
Two-way hourly volume, Directional split		veh/h ક				
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	ı (note-2)	1.00 1.7 1.0 0.894 474 256	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, fI		- - 55.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			54.8	mi/h		
Adjustment for no-passi Average travel speed, A			3.1 48.0	mi/h mi/h		
	Percent Ti	.me-Spent-F	ollowing			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fHV -1) vp it proportion -following, E tribution and	n (note-2) BPTSF	g zones,	fd/np	1.00 1.1 1.0 0.983 431 233 31.5 20.3 51.8	pc/h %
Level o	f Service and	l Other Per	formance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, of travel, V				C 0.15 116 419 2.4	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road	Praba H.W.Lochner, Inc 1/17/2002 Design Hour Cobb Road Youth Drive / US 98 Okaloosa County 2001 & US 98 PD&E Study				
	Input Dat	:a			
Highway along Class 1					
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 1. Terrain type Le Grade: Length Up/down	.0 ft % Trucks 6 mi % Recrea	ar factor, s and buses ational veh ssing zones points/mi	icles	0.9 17 0 38 1	0 % % % /mi
Two-way hourly volume, Directional split	V 356 veh/h 54 / 46 %				
	Average Travel S	Speed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	1.00 1.7 1.0 0.894 443 2) 239	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	ed: eFFS der width, fLS	- - 55.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS		54.8	mi/h		
Adjustment for no-passi Average travel speed, A		2.5 48.8	mi/h mi/h		
	Percent Time-Spent	-Following			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fHV -1) vp it proportion (note-2) -following, BPTSF tribution and no-pass	.)		1.00 1.1 1.0 0.983 402 217 29.8 17.3 47.1	pc/h %
Level o	f Service and Other E	erformance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, VMT15 of travel, VMT60			C 0.14 158 570 3.2	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		CR476 unty				
		Imput Data_		TT-1770 TT ARROUNDS MANAGEMENT		
Segment length 1.	.0 ft	Peak-hour % Trucks a % Recreati % No-passi Access poi	and buses onal veh ng zones	s nicles	0.9 17 0 20 1	0 8 8 8 9 /mi
Two-way hourly volume, Directional split		veh/h %				
	Average	Travel Spe	eed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	n (note-2)	1.00 1.2 1.0 0.967 972 525	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, f		- - 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			59.8	mi/h		
Adjustment for no-passi Average travel speed, A		p	1.1 51.1	mi/h mi/h		
	Percent T	ime-Spent-E	ollowing	J		
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fH -1) vp it proportion -following, tribution and	n (note-2) BPTSF	ng zones,	fd/np	1.00 1.1 1.0 0.983 956 516 56.8 7.2 64.0	pc/h %
Level o	f Service and	d Other Per	formance	e Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel of travel,				C 0.30 353 1269 6.9	veh-mi veh-mi veh-h

Date Performed 1/17 Analysis Time Period Desirement US 9 From/To CR 4	Lochner, Inc /2002 gn Hour 8 76 / CR 491A oosa County 98 PD&E Study				
	Input Da	ıta			
Highway class Class 1 Shoulder width 6.0 Lane width 12.0 Segment length 0.6 Terrain type Level Grade: Length Up/down	ft % Truck mi % Recre % No-pa	our factor, as and buses actional veh assing zones points/mi	icles	0.9 17 0 6 1	0 % % % /mi
Two-way hourly volume, V Directional split 54	846 veh/h / 46 %				
	Average Travel	Speed			
Grade adjustment factor, fG PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment fact Two-way flow rate, (note-1) vy Highest directional split pro	p	1.00 1.2 1.0 0.967 972	pc/h pc/h		
Free-Flow Speed from Field Me Field measured speed, SFM Observed volume, Vf Estimated Free-Flow Speed: Base free-flow speed, BFFS Adj. for lane and shoulder wand		- - 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS		59.8	mi/h		
Adjustment for no-passing zon Average travel speed, ATS	nes, fnp	0.3 51.9	mi/h mi/h		
Pe.	rcent Time-Spen	t-Following			
Grade adjustment factor, fG PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor Two-way flow rate, (note-1) vy Highest directional split pro Base percent time-spent-following Percent time-spent-following	p oportion (note- owing, BPTSF tion and no-pas		fd/np	1.00 1.1 1.0 0.983 956 516 56.8 2.2 59.0	pc/h %
Level of Ser	vice and Other	Performance	Measu	res	
Level of service, LOS Volume to capacity ratio, v/o Peak 15-min vehicle-miles of Peak-hour vehicle-miles of to Peak 15-min total travel time	travel, VMT15 ravel, VMT60			C 0.30 129 465 2.5	veh-mi veh-mi veh-h

Praba

Analyst

Agency/Co.	H.W.Lochner	, Inc				
Date Performed	1/17/2002	,				
Analysis Time Period	Design Hour					
Highway From/To	US 98	D 401				
Jurisdiction	CR 491A / C Okaloosa Co					
Analysis Year	2001	arrey				
Description Cobb Road	& US 98 PD&E	Study				
		Input Data				
	-				TOTAL VIOLENCE SALES AND ADDRESS OF THE PARTY OF THE PART	
Highway class Class 1						
	.0 ft	Peak-hour			0.9	
	2.0 ft .6 mi	% Trucks a			17	8
_	evel	<pre>% Recreati % No-passi</pre>			0 28	& &
Grade: Length	mi	Access poi		,	1	, /mi
Up/down	90	1	, <u>-</u>		_	,
Two-way hourly volume,	V 787	veh/h				
Directional split		8				
	Average	Travel Spe	eed			
Grade adjustment factor	r. fG		1.00			
PCE for trucks, ET	., 10		1.2			
PCE for RVs, ER			1.0			
Heavy-vehicle adjustmer			0.967			
Two-way flow rate, (note			904	pc/h		
Highest directional spl	lit proportio	n (note-2)	488	pc/h		
Free-Flow Speed from Fi	ield Measurem	ent:				
Field measured speed, S			_	mi/h		
Observed volume, Vf	_		-	veh/h		
Estimated Free-Flow Spe			60.0	. /1		
Base free-flow speed, Adj. for lane and should		T.S	60.0 0.0	mi/h mi/h		
Adj. for access points,	-	шо	0.3	mi/h		
Free-flow speed, FFS			59.8	mi/h		
Adjustment for no-passi	ing zones fr	n				
Average travel speed, A		Þ	1.4 51.3	mi/h mi/h		
	Percent T	ime-Spent-E	Following	J		
Grade adjustment factor	r. fG				1.00	
PCE for trucks, ET	., 10				1.1	
PCE for RVs, ER					1.0	
Heavy-vehicle adjustmen	nt factor, fH	V			0.983	
Two-way flow rate, (note	-				889	pc/h
Highest directional spl					480	
Base percent time-spent				C 1 /	54.2	9
Adj.for directional dis Percent time-spent-foll		a no-passir	ig zones,	Id/np	8.9 63.1	9
_	of Service an	d Other Per	formance	e Measu		
				110454		
Level of service, LOS					C	
Volume to capacity rational and the Pook 15-min webigle-min		37Mm1 E			0.28	1
Peak 15-min vehicle-mil Peak-hour vehicle-miles		•			350 1259	veh-mi
Peak 15-min total trave		V111 00			6.8	veh-mi veh-h
					J. J	V C11 11

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		ndfill Road unty				
		input Data_				
Segment length 2.	.0 ft	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.9 17 0 27 1	0 % % % /mi
Two-way hourly volume, Directional split		veh/h ક				
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	n (note-2)	1.00 1.2 1.0 0.967 615 332	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, fI		- 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			59.8	mi/h		
Adjustment for no-passi Average travel speed, A			1.9 53.1	mi/h mi/h		
	Percent Ti	ime-Spent-F	ollowing			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fHV -1) vp it proportior -following, E tribution and	n (note-2) BPTSF	g zones,	fd/np	1.00 1.1 1.0 0.983 605 327 41.2 12.8 54.0	pc/h %
Level o	f Service and	d Other Per	formance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, of travel, V				C 0.19 386 1391 7.3	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road	Praba H.W.Lochner, Inc 1/17/2002 Design Hour US 98 Landfill Road / Sun Okaloosa County 2001 & US 98 PD&E Study Input Dat		У		
	-				
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 1. Terrain type Le Grade: Length Up/down	1.0 ft % Trucks 2 mi % Recrea evel % No-pas	r factor, and buses tional vel sing zones oints/mi	s nicles	0.9 17 0 100	olo olo
Two-way hourly volume, Directional split					
	Average Travel S	peed_			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	1.00 1.7 1.0 0.894 511) 276	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	ed: eFFS der width, fLS	- - 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS		59.8	mi/h		
Adjustment for no-passi Average travel speed, A		4.2 51.6	mi/h mi/h		
	Percent Time-Spent	-Following]		
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fHV -1) vp it proportion (note-2 -following, BPTSF tribution and no-pass		, fd/np	1.00 1.1 1.0 0.983 464 251 33.5 22.7 56.2	pc/h %
Level o	f Service and Other P	erformance	e Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, VMT15 of travel, VMT60			C 0.16 137 493 2.7	veh-mi veh-mi veh-h

APPENDIX C

LEVEL OF SERVICE OF INTERSECTIONS FOR THE NO-BUILD 2025 CONDITIONS (HCS 2000 ANALYSIS)

Company	41				FU	LL RE								
General Info	ormation					S	ite Ir	nformatio	on					
Analyst Agency or C Date Perforr Time Period	med	Praba Lochn! 4/17/20 peak p	er, Inc. 102			A J	rea ⁻ urisd	ection Type iction sis Year	SR		Cobb er area			
Intersection	n Geometry													
		0	2	1										
Grade = 0		Ū	1	(
						Grade =	0							
1	_ 						0							
2					•		2							
1	7				√		1							
Grade = 0														
		2	2	0		Grade =	0							
Volume and	d Timing Inpu	ıt												
				EB			W	В		NB			SB	
			LT	TH	RT	LT	TH		LT	TH	RT	LT	TH	RT
Volume (vph	1)		410	620	420	60	490		430	180	30	60	300	330
% Heavy ve PHF	en		17	17	17	17	17		17	17	17	17	17	17
Actuated (P/	Δ)		0.90 A	0.90 A	0.90 A	0.90 A	0.90 A		0.90	0.90	0.90	0.90	0.90	0.90
Startup lost t			2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	Α	A 2.0	2.0	A
Ext. eff. gree			2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
			3	3	3	3	3		3	3		3	3	
									_		 			
Arrival type	on		3.0	3.0	3.0		3.0)	3.0	3.0	l	3.0	30	
Arrival type Unit Extensio					3.0	3.0	3.0		3.0	3.0	0	3.0	3.0	0
Arrival type Unit Extension Ped/Bike/RT			3.0			3.0		0	0		0	0		0
Arrival type Unit Extension Ped/Bike/RT Lane Width	OR Volume		3.0 0 12.0	3.0	3.0 100 12.0	3.0 0 12.0	3.0 12.0	0	0 12.0	3.0 12.0		0 12.0	3.0 12.0	
Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Y o	OR Volume		3.0 0	3.0	3.0 100	3.0		0	0		0 N	0		0 N
Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Y o Parking/hr	OR Volume		3.0 0 12.0 N	3.0 12.0	3.0 100 12.0 N	3.0 0 12.0 N	12.0	0 0 N	0 12.0 N	12.0		0 12.0 N	12.0	
Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Yo Parking/hr Bus stops/hr	OR Volume		3.0 0 12.0	3.0 12.0	3.0 100 12.0	3.0 0 12.0	12.0	0 0 N	0 12.0	12.0		0 12.0	12.0	
Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Yo Parking/hr Bus stops/hr	OR Volume	EW/P	3.0 0 12.0 N	3.0 12.0 0 3.2	3.0 100 12.0 N	3.0 0 12.0 N	12.0	0 0 N	0 12.0 N	12.0 0 3.2	N	0 12.0 N 0	12.0	N
Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Yo Parking/hr Bus stops/hr	r N)	EWP	3.0 0 12.0 N 0	3.0 12.0 0 3.2	3.0 100 12.0 N	3.0 0 12.0 N 0	12.0	0 0 N 2 Excl. Le	0 12.0 N 0	12.0 0 3.2 Perm	N	0 12.0 N	12.0 0 3.2	
Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Yo Parking/hr Bus stops/hr Ped timing Timing	OR Volume	EWP G = 2 Y = 4	3.0 0 12.0 N 0 erm 4.0	3.0 12.0 0 3.2	3.0 100 12.0 N	3.0 0 12.0 N	12.0	0 0 N	0 12.0 N 0	12.0 0 3.2 S Perm	N	0 12.0 N 0	12.0	N

VOLUME	ADJU	STME	NT AN	D SA1	URAT	ION F	LOW F	RATE	W ORK	SHEE	Т	
General Information												
Project Description NO-E	BUILD AL	TERNA	TIVE									
Volume Adjustment												
		EB			WB	,		NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	410	620	420	60	490	20	430	180	30	60	300	330
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow Rate	456	689	356	67	544	22	478	200	33	67	333	367
Lane Group	L	T	R	L	TR		L	TR		L	TR	
Adj. flow rate	456	689	356	67	566		478	233		67	700	
Prop. LT or RT	0.000			0.000		0.039	0.000		0.142	0.000		0.524
Saturation Flow Rate									1	.	L	1
Base satflow	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Num. of lanes	1	2	1	1	2	0	2	2	0	1	2	0
f₩	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fH∨	0.855	0.855	0.855	0.855	0.855		0.855	0.855		0.855	0.855	
fg		1.000			1.000			1.000	·		1.000	
fp	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fbb	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fa		1.00			1.00			1.00			1.00	
fLU	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Secondary fLT	0.252			0.178						0.480		
fRT		1.000	0.850		0.994			0.979			0.921	
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000			1.000			1.000	
Adj. satflow	1543	3085	1380	1543	3067		2993	3020		1543	2843	
Sec. adj. satflow	410			290						779		

		CAP	ACITY	AND	LOS W	ORKS	HEET				
General Information											
Project Description NO-	BUILD ALT	ERNAT	ΓΙVE								
Capacity Analysis											
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	456	689	356	67	566		478	233	67	700	
Satflow rate	1543	3085	1380	1543	3067		2993	3020	1543	2843	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Green ratio	0.48	0.29	0.29	0.48	0.29		0.15	0.23	0.43	0.23	
Lane group cap.	361	903	404	321	898		438	700	454	659	
v/c ratio	1.26	0.76	0.88	0.21	0.63		1.09	0.33	0.15	1.06	
Flow ratio		0.22	0.26		0.18		0.16	0.08		0.23	
Crit. lane group	N	N	N	N	N		Υ	N	N	Y	
Sum flow ratios						1.1	0				
Lost time/cycle						12.0	00				
Critical v/c ratio						1.2	9				
Lane Group Capacit	y, Contro	ol Dela	y, and	LOS	Determ	natio	n				
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	456	689	356	67	566		478	233	67	700	
Lane group cap.	361	903	404	321	898		438	700	454	659	
v/c ratio	1.26	0.76	0.88	0.21	0.63		1.09	0.33	0.15	1.06	
Green ratio	0.48	0.29	0.29	0.48	0.29		0.15	0.23	0.43	0.23	
Unif. delay d1	29.3	26.4	27.6	13.2	25.2		35.0	26.2	14.2	31.5	
Delay factor k	0.50	0.32	0.41	0.11	0.21		0.50	0.11	0.11	0.50	
Increm. delay d2	138.8	3.9	19.7	0.3	1.4		69.9	0.3	0.2	52.7	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Control delay	168.2	30.3	47.3	13.6	26.6		104.9	26.5	14.4	84.2	
Lane group LOS	F	С	D	В	С		F	С	В	F	
Apprch. delay	76	5.2		2	5.2		7	9.2		78.1	
Approach LOS	Į.	=			С			E		Е	
Intersec. delay	68	3.3			In	tersect	ion LOS	3		Е	
ugganoTM											

 $HCS2000^{\mathrm{TM}}$

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					FU	LL RE	PU	RT						
General Info	rmation							nformatio	n					
Analyst Agency or Co Date Perform Time Period	ned	Praba N.Lochn 4/17/20 m peak p	er, Inc. 102			A Ji	rea ⁻ urisd	ection Type iction sis Year	SR	All oth	Cobb er area 025			
Intersection	Geometry													
Grade = 0		0	2	1		Grade =	0							
1	ℐ						0							
2 -					*	_	2							
1	7				V		1							
Grade = 0														
		2	2	0		Grade =	0							
Volume and	l Timing Inp	ut					١.٨	_	_	N.E	-			
			LT	EB TH	RT	LT	W Th		LT	NB TH	RT	LT	SB TH	RT
Volume (vph))		400	470	360	30	610		460	240	50	40	230	320
% Heavy vel			17	17	17	17	17		17	17	17	17	17	17
PHF			0.90	0.90	0.90	0.90	0.9		0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A			Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
Startup lost ti	me		2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
			1											
Ext. eff. greer	n		2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. greer Arrival type			3	3	3	3	3		3	3		3	3	
Ext. eff. greer Arrival type Unit Extensio	n		3 3.0		3 3.0	3 3.0		0	3 3.0			3 3.0		
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RT0	n		3 3.0 0	3.0	3 3.0 100	3 3.0 0	3.0	0	3 3.0 0	3 3.0	0	3 3.0 0	3.0	0
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RT0 Lane Wdth	on OR Volume		3 3.0 0 12.0	3	3 3.0 100 12.0	3 3.0 0 12.0	3	0	3 3.0 0 12.0	3		3 3.0 0 12.0	3	
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RT0 Lane Wdth Parking (Y or	on OR Volume		3 3.0 0	3.0	3 3.0 100	3 3.0 0	3.0	0	3 3.0 0	3 3.0	0 N	3 3.0 0	3.0	0 N
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RTC Lane Wdth Parking (Y or Parking/hr	on OR Volume		3 3.0 0 12.0 N	3 3.0 12.0	3 3.0 100 12.0 N	3 3.0 0 12.0 N	3 3.0 12.0	0 0 0 N	3 3.0 0 12.0 N	3 3.0 12.0		3 3.0 0 12.0 N	3.0	
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RT0 Lane Width Parking (Y or Parking/hr Bus stops/hr	on OR Volume		3 3.0 0 12.0	3.0	3 3.0 100 12.0	3 3.0 0 12.0	3.0	0 0 0 N	3 3.0 0 12.0	3 3.0		3 3.0 0 12.0	3.0	
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RT0 Lane Width Parking (Y or Parking/hr Bus stops/hr	on OR Volume		3 3.0 0 12.0 N	3 3.0 12.0	3 3.0 100 12.0 N	3 3.0 0 12.0 N	3 3.0 12.0	0 0 0 N	3 3.0 0 12.0 N	3 3.0 12.0		3 3.0 0 12.0 N	3 3.0 12.0	
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RT0 Lane Width Parking (Y or Parking/hr Bus stops/hr	on OR Volume	EWP	3 3.0 0 12.0 N	3 3.0 12.0	3 3.0 100 12.0 N	3 3.0 0 12.0 N	3 3.0 12.0	0 0 0 N	3 3.0 0 12.0 N	3 3.0 12.0	N	3 3.0 0 12.0 N	3 3.0 12.0 0 3.2	
Ext. eff. greer Arrival type Unit Extensio Ped/Bike/RTC Lane Width Parking (Y or Parking/hr Bus stops/hr Ped timing Timing	on OR Volume · N)	EWP	3 3.0 0 12.0 N 0	3 3.0 12.0 0 3.2	3 3.0 100 12.0 N	3 3.0 0 12.0 N	3 3.0 12.0	0 0 0 0 N N 22	3 3.0 0 12.0 N	3 3.0 12.0 0 3.2	N	3 3.0 0 12.0 N	3 3.0 12.0 0 3.2	N

VOLUME	ADJU	STME	NT AN	D SA1	URAT	TION F	LOW F	RATE	WORK	SHEE	Т	
General Information												
Project Description NO-E	BUILD AL	LTERNA	TIVE									
Volume Adjustment				т								
		EB			WB	_		NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	400	470	360	30	610	30	460	240	50	40	230	320
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow Rate	444	522	289	33	678	33	511	267	56	44	256	356
Lane Group	L	Т	R	L	TR		L	TR		L	TR	
Adj. flow rate	444	522	289	33	711		511	323		44	612	
Prop. LT or RT	0.000			0.000		0.046	0.000		0.173	0.000		0.582
Saturation Flow Rate												
Base satflow	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Num. of lanes	1	2	1	1	2	0	2	2	0	1	2	0
fW	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fHV	0.855	0.855	0.855	0.855	0.855		0.855	0.855		0.855	0.855	
fg		1.000			1.000			1.000			1.000	
fp	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fbb	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fa		1.00			1.00			1.00			1.00	
fLU	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Secondary fLT	0.190			0.215						0.385		·
fRT		1.000	0.850		0.993			0.974			0.913	
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000			1.000			1.000	
Adj. satflow	1543	3085	1380	1543	3064		2993	3005		1543	2816	
Sec. adj. satflow	309			349						625		

Full Report Page 3 of 3

		CAP	ACITY	AND	LOS W	DRKS	HEET				
General Information											
Project Description NO-B	UILD ALT	ERNA1	IVE								
Capacity Analysis											
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	444	522	289	33	711		511	323	44	612	
Satflow rate	1543	3085	1380	1543	3064		2993	3005	1543	2816	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Green ratio	0.45	0.22	0.22	0.45	0.22		0.17	0.22	0.45	0.22	
Lane group cap.	379	694	310	381	689		524	676	453	634	
v/c ratio	1.17	0.75	0.93	0.09	1.03		0.98	0.48	0.10	0.97	
Flow ratio		0.17	0.21		0.22		0.17	0.11		0.22	
Crit. lane group	Ν	Ν	N	Ν	Ν		Υ	N	N	Y	
Sum flow ratios				-		1.0	8				
Lost time/cycle						12.0	00				
Critical v/c ratio						1.2	7				
Lane Group Capacity	, Contro	ol Dela	ıy, and	LOS	Determ	inatic	n				
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	444	522	289	33	711		511	323	44	612	
Lane group cap.	379	694	310	381	689		524	676	453	634	
v/c ratio	1.17	0.75	0.93	0.09	1.03		0.98	0.48	0.10	0.97	
Green ratio	0.45	0.22	0.22	0.45	0.22		0.17	0.22	0.45	0.22	
Unif. delay d1	21.1	28.9	30.4	13.2	31.0		32.8	26.9	12.7	30.7	
Delay factor k	0.50	0.31	0.45	0.11	0.50		0.48	0.11	0.11	0.47	
Increm. delay d2	101.8	4.6	33.9	0.1	42.7		32.9	0.5	0.1	27.2	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Control delay	122.9	33.6	64.3	13.3	73.7		65.7	27.5	12.8	57.9	
Lane group LOS	F	С	Ε	В	E		Ε	С	В	Ε	
Apprch. delay	72	2.2		7	1.1		5	0.9		54.9	
Approach LOS		E			Е			D		D	
Intersec. delay	63	3.6			In	tersec	tion LOS	3		E	
TM											

 $HCS2000^{\mathrm{TM}}$

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Comprelled					<u> FU</u>	LL RE	PO	RT						
General init	ormation					S	ite Ir	nformatio	n					
Analyst Agency or C Date Perforr Time Period	med	Praba V.Lochne 4/17/20 am pea	er, Inc. 01			A J	rea ⁻ urisd	ection Type iction sis Year	Co	All oth	d with U er area			
Intersection	n Geometry													
Grade =		0	0	0										
						Grade =	: 0							
0							0							
1					*	-	1							
1	7				¥		1							
Grade = 0														
			4											
Volume an	d Timing Inpi	o ut	1	0		Grade =								
Volume an	d Timing Inpi			EB			W			NB			SB	
			1 LT	EB TH	RT	LT	W	l RT	LT	TH	RT	LT	SB TH	RT
Volume (vph	n)			EB TH 330	300	LT 10	W TH 280	H RT	230	TH 0	20	LT		RT
√olume (vph % Heavy ve	n)			EB TH 330	300 17	LT 10 17	W Th 280	RT RT	230 17	TH 0 17	20 17	LT		RT
Volume (vph % Heavy ve PHF	n) eh			EB TH 330 17 0.90	300 17 0.90	LT 10 17 0.90	W Th 280 17	RT RT	230 17 0.90	TH 0 17 0.90	20 17 0.90	LT		RT
Volume (vph % Heavy ve PHF Actuated (P/ Startup lost	n) eh 'A) time			EB TH 330	300 17	LT 10 17	W Th 280	H RT	230 17	TH 0 17	20 17	LT		RT
Volume (vph % Heavy ve PHF Actuated (P/ Startup lost	n) eh 'A) time			EB TH 330 17 0.90 A 2.0 2.0	300 17 0.90 A 2.0 2.0	LT 10 17 0.90 A 2.0 2.0	W TH 280 17 0.90 A 2.0	RT RT	230 17 0.90	TH 0 17 0.90 A 2.0 2.0	20 17 0.90	LT		RT
Volume (vph % Heavy ve PHF Actuated (P/ Startup lost Ext. eff. gree Arrival type	n) eh 'A) time			EB TH 330 17 0.90 A 2.0 2.0 3	300 17 0.90 A 2.0 2.0 3	LT 10 17 0.90 A 2.0 2.0	W TH 280 17 0.90 A 2.00 2.00 3	H RT	230 17 0.90	TH 0 17 0.90 A 2.0 2.0 3	20 17 0.90	LT		RT
Volume (vph % Heavy ve PHF Actuated (P/ Startup lost Ext. eff. gree Arrival type Unit Extensi	n) eh (A) time en		LT	EB TH 330 17 0.90 A 2.0 2.0	300 17 0.90 A 2.0 2.0 3 3.0	LT 10 17 0.90 A 2.0 2.0	W TH 280 17 0.90 A 2.0	H RT	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0	20 17 0.90 A			RT
Volume (vph % Heavy ve PHF Actuated (P/ Startup lost (Ext. eff. gree Arrival type Unit Extension	n) eh 'A) time			EB TH 330 17 0.90 A 2.0 2.0 3 3.0	300 17 0.90 A 2.0 2.0 3 3.0	LT 10 17 0.90 A 2.0 2.0 3 3.0	W TH 280 17 0.90 A 2.0 2.0 3 3.0	H RT	230 17 0.90	TH 0 17 0.90 A 2.0 2.0 3 3.0	20 17 0.90	LT		RT
Volume (vph % Heavy ver PHF Actuated (P/ Startup lost Ext. eff. gree Arrival type Jnit Extension Ped/Bike/RT Lane Width	n) eh (A) time en OR Volume		LT	EB TH 330 17 0.90 A 2.0 2.0 3	300 17 0.90 A 2.0 2.0 3 3.0 100 12.0	LT 10 17 0.90 A 2.0 2.0 3 3.0	W TH 280 17 0.90 A 2.00 2.00 3	H RT O	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3	20 17 0.90 A	0		
Volume (vph % Heavy version of the PHF Actuated (P/Startup lost of the Philippe of the Ped/Bike/RT ane Width Parking (Young to the Ped/Bike/RT of the Perking (Young to the Perking (Youn	n) eh (A) time en OR Volume		LT	EB TH 330 17 0.90 A 2.0 2.0 3 3.0	300 17 0.90 A 2.0 2.0 3 3.0	LT 10 17 0.90 A 2.0 2.0 3 3.0	W TH 280 17 0.90 A 2.0 2.0 3 3.0	H RT	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0	20 17 0.90 A			RT
Volume (vph % Heavy version of the World (P/Startup lost Ext. eff. greet Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Yor Parking/hr	n) eh (A) time en OR Volume		LT	EB TH 330 17 0.90 A 2.0 2.0 3 3.0	300 17 0.90 A 2.0 2.0 3 3.0 100 12.0 N	LT 10 17 0.90 A 2.0 2.0 3 3.0	W 17 280 17 0.90 A 2.0 3 3.0	O N	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0	20 17 0.90 A	0		
Volume (vph % Heavy version of the Williams of	n) eh (A) time en OR Volume		LT	EB TH 330 17 0.90 A 2.0 2.0 3 3.0 12.0	300 17 0.90 A 2.0 2.0 3 3.0 100 12.0	LT 10 17 0.90 A 2.0 2.0 3 3.0	W TH 280 17 0.90 A 2.0 2.0 3 3.0	O N	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0	20 17 0.90 A	0	TH	
Volume (vph % Heavy version of the Williams of	n) eh (A) time en OR Volume or N)		LT	EB TH 330 17 0.90 A 2.0 2.0 3 3.0	300 17 0.90 A 2.0 2.0 3 3.0 100 12.0 N	LT 10 17 0.90 A 2.0 2.0 3 3.0	W 17 280 17 0.90 A 2.0 3 3.0	O N	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0	20 17 0.90 A	0		
Volume (vph % Heavy ve PHF Actuated (P/ Startup lost t Ext. eff. gree Arrival type Unit Extensi	in) in) ich		LT O N	EB TH 330 17 0.90 A 2.0 2.0 3 3.0 12.0	300 17 0.90 A 2.0 2.0 3 3.0 100 12.0 N	LT 10 17 0.90 A 2.0 2.0 3 3.0	W 17 280 17 0.90 A 2.0 3 3.0	O N	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0	20 17 0.90 A 10 N	0	3.2	RT
Volume (vph % Heavy version PHF Actuated (P/ Startup lost) Ext. eff. greet Arrival type Unit Extension Ped/Bike/RT Lane Width Parking (Y of Parking/hr Bus stops/hr	n) eh (A) time en OR Volume or N)	ut	O N	EB TH 330 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	300 17 0.90 A 2.0 2.0 3 3.0 100 12.0 N	LT 10 17 0.90 A 2.0 2.0 3 3.0 12.0 N	W 17 280 17 0.90 A 2.0 3 3.0	O N	230 17 0.90 A	TH 0 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	20 17 0.90 A 10 N	0 N	3.2	N

VOLUM	IE ADJUST	MENT	AND	SATUF	RATIO	N FLO	W RA1	E WO	RKSHE	EET		
General Informatio	n											
Project Description NC)-BUILD ALTE	RNATI	VE									
Volume Adjustmen	ıt			T								
		EB	Т		WB			NB	Ţ		SB	_
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume		330	300	10	280		230	0	20			
PHF		0.90	0.90	0.90	0.90		0.90	0.90	0.90			
Adj. Flow Rate		367	222	11	311		256	0	11			
Lane Group		Т	R	L	T			LTR				
Adj. flow rate		367	222	11	311			267				
Prop. LT or RT	0.000			0.000		0.000	0.959		0.041			
Saturation Flow Ra	te											1
Base satflow		1900	1900	1900	1900			1900				
Num. of lanes	0	1	1	1	1	0	0	1	0	0	0	0
fW		1.000	1.000	1.000	1.000			1.000				
fHV		0.855	0.855	0.855	0.855			0.855				
fg		1.000			1.000			1.000				1
fp		1.000	1.000	1.000	1.000			1.000				
fbb		1.000	1.000	1.000	1.000			1.000				
fa		1.00			1.00			1.00				
fLU		1.00	1.00	1.00	1.00			1.00				
fLT		1.000		0.472	1.000	 		0.954				
Secondary fLT												
fRT		1.000	0.850		1.000			0.994				
fLpb		1.000	1	1.000	1.000			1.000				
fRpb		1.000	1.000		1.000			1.000				
Adj. satflow		1624	1380	766	1624			1541				
Sec. adj. satflow												

	CAPA	CITY	AND L	os wo	RKSH	EET	
General Information							
Project Description NO-B	UILD ALTERNATI	VE					
Capacity Analysis							
	EB			WB		NB	SB
Lane group	T	R	L	T		LTR	
Adj. flow rate	367	222	11	311		267	
Satflow rate	1624	1380	766	1624		1541	
Lost time	2.0	2.0	2.0	2.0		2.0	
Green ratio	0.55	0.55	0.55	0.55		0.31	
Lane group cap.	896	761	423	896		478	
v/c ratio	0.41	0.29	0.03	0.35		0.56	
Flow ratio	0.23	0.16	0.01	0.19		0.17	
Crit. lane group	Y	Ν	N	Ν		Y	
Sum flow ratios					0.40		
Lost time/cycle					8.00		
Critical v/c ratio					0.46		
Lane Group Capacity	, Control Delay	, and	LOS D	etermiı	nation		
	EB			WB		NB	SB
Lane group	T	R	L	T		LTR	
Adj. flow rate	367	222	11	311		267	
Lane group cap.	896	761	423	896		478	
v/c ratio	0.41	0.29	0.03	0.35		0.56	
Green ratio	0.55	0.55	0.55	0.55		0.31	
Unif. delay d1	7.5	6.9	5.9	7.2		16.7	
Delay factor k	0.11	0.11	0.11	0.11		0.16	
Increm. delay d2	0.3	0.2	0.0	0.2		1.5	
PF factor	1.000	1.000	1.000	1.000		1.000	
Control delay	7.8	7.2	5.9	7.4		18.2	
Lane group LOS	A	Α	Α	Α		В	
Apprch. delay	7.6		7	.4		18.2	
Approach LOS	Α	*		A		В	
Intersec. delay	9.9			Ir	ntersecti	on LOS	Α
ALGG2000TM							

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						Fl	JLL R	EPO	RT							
General Info	ormation					-			nforma	ation	1					
Analyst Agency or C Date Perforn Time Period			Praba /.Lochna 4/17/20 pm pea	er, Inc. 01				Inters Area Juriso	ection Type liction sis Yea			All oth	d with L er area			-
Intersection	Geometr								· · · · · · · · · · · · · · · · · · ·							
Grade =			0	0	0											
Grade																
							Grade	= 0								
0								_								
0								0								
1	→					-		1								
1	$\overline{}$					J	_	1								
,	•					¥		,								
Grade = 0																
			•													
							Grade	= 0								
			0	1	0											
Volume and	l liming l	npı	ıt	ı .	EB		T	V	/D		r	NB		I	CD	
				LT	TH	RT	LT	T		T	LT	TH	RT	LT	SB TH	RT
Volume (vph)				280	260	10	33			280	0	20			1
% Heavy ve	h				17	17	17	17	,		17	17	17		†	
PHF					0.90	0.90	0.90	0.9			0.90	0.90	0.90			
Actuated (P/	A)				Α	Α	Α	Α			Α	Α	Α			
Startup lost t	ime				2.0	2.0	2.0	2.0)			2.0				
Ext. eff. gree	n				2.0	2.0	2.0	2.0)			2.0				
Arrival type					3	3	3	3				3				
Jnit Extension					3.0	3.0	3.0	3.	0			3.0				
Ped/Bike/RT	OR Volum	ne		0		80					0		10	0		
₋ane Width					12.0	12.0	12.0	12.	0			12.0				
Parking (Y o	r N)			Ν		N	N		٨	I	Ν		Ν	Ν		N
Parking/hr								丁				1	1			T
Bus stops/hr					0	0	0	0				0				†
Ped timing					3.2	1	+ -					3.2	<u> </u>		3.2	<u> </u>
	EW Perr	m	02		03		04		NB C	nly		06		07		8
Timina	G = 22.0		G =		G =		G =		G = 1				G =		G =	
Timing	Y = 4		Y =		Y =		Y =		Y = 4		Y =		Y =		Y =	
	nalysis (h	ro)	- 0.25								Cvc	مملما	th C =	47 O	-	

General Information

Scheral Information												
Project Description NC		RNATI	VE									
Volume Adjustmen	ıt			T			_			т —		
	-	EB	_		WB			NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume		280	260	10	330		280	0	20			
PHF		0.90	0.90	0.90	0.90		0.90	0.90	0.90			
Adj. Flow Rate		311	200	11	367		311	0	11			
Lane Group		Т	R	L	Т			LTR				
Adj. flow rate		311	200	11	367			322				
Prop. LT or RT	0.000			0.000		0.000	0.966		0.034			
Saturation Flow Ra	te											.
Base satflow		1900	1900	1900	1900			1900				
Num. of lanes	0	1	1	1	1	0	0	1	0	0	0	0
fW		1.000	1.000	1.000	1.000			1.000				
fH∨		0.855	0.855	0.855	0.855			0.855				
fg		1.000			1.000			1.000	<u> </u>			
fp		1.000	1.000	1.000	1.000			1.000				
fbb		1.000	1.000	1.000	1.000			1.000				
fa		1.00			1.00			1.00				
fLU		1.00	1.00	1.00	1.00			1.00				
fLT		1.000		0.484	1.000			0.954	-			
Secondary fLT												
fRT		1.000	0.850		1.000			0.995				
fLpb		1.000		1.000	1.000	-		1.000				
fRpb		1.000	1.000	-	1.000			1.000				
Adj. satflow		1624	1380	786	1624			1542				
Sec. adj. satflow												

	CAPA	CITY	AND L	os wo	RKSH	EET	
General Information							
Project Description NO-B	UILD ALTERNATI	VE					
Capacity Analysis							
	EB			WB		NB	SB
Lane group	T	R	L	T		LTR	
Adj. flow rate	311	200	11	367		322	
Satflow rate	1624	1380	786	1624		1542	
Lost time	2.0	2.0	2.0	2.0		2.0	
Green ratio	0.47	0.47	0.47	0.47		0.36	
Lane group cap.	760	646	368	760		558	
v/c ratio	0.41	0.31	0.03	0.48		0.58	
Flow ratio	0.19	0.14	0.01	0.23		0.21	
Crit. lane group	N	N	N	Υ		Y	
Sum flow ratios					0.43		
Lost time/cycle					8.00		
Critical v/c ratio					0.52		
Lane Group Capacity,	, Control Delay	, and	LOS D	etermi	nation		
	EB			WB		NB	SB
Lane group	T	R	L	T		LTR	
Adj. flow rate	311	200	11	367		322	
Lane group cap.	760	646	368	760		558	
v/c ratio	0.41	0.31	0.03	0.48		0.58	
Green ratio	0.47	0.47	0.47	0.47		0.36	
Unif. delay d1	8.2	7.8	6.7	8.6		12.1	
Delay factor k	0.11	0.11	0.11	0.11		0.17	
Increm. delay d2	0.4	0.3	0.0	0.5		1.5	
PF factor	1.000	1.000	1.000	1.000		1.000	
Control delay	8.6	8.1	6.8	9.1		13.6	
Lane group LOS	A	Α	Α	Α		В	
Apprch. delay	8.4		g	0.0	'	13.6	
Approach LOS	Α			A		В	
Intersec. delay	10.0-			Ir	tersection		Α
HCS2000 TM	Commission	-+@ 2000 II		Florida All			

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All-Way Stop Control Page 1 of 1

0		ALL-WA							
General Information				Site Inforn	mation				
Analyst	Praba			Intersection		Fort D	ade Avenue with	Cobb Rd	
Agency/Co. Date Performed	H.W.Ld 4/16/20	ochner, Inc.		Jurisdiction Analysis Year	r	2025			
Analysis Time Period		ak period		-	•	2020			
Project ID <i>NO-BUILD ALTE</i>				<u> </u>					
East/West Street: Fort Dad				North/South S	Street: Cobb Roa	ad			
Volume Adjustment		aracteristi	``C	process country c					
Approach			astbound		ı	We	stbound		
Movement	L		Т	R	L		T	R	
/olume	60		60	140	40		50	10	
%Thrus Left Lane	50)			50	·			
Approach		N	orthbound			Sou	ithbound		
Movement	L		T	R	L		T	R	
/olume	80		450	50	10		490	80	
%Thrus Left Lane		/			50				
	East	bound	Wes	stbound	Norti	nbound	South	hbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	LTR		LTR		LTR		LTR		
PHF	0.90		0.90		0.90		0.90		
low Rate	287		110		643		643		
6 Heavy Vehicles	17		17		17		17		
No. Lanes				1		1		1	
Seometry Group				1		1		1	
Ouration, T				0.	.25				
Saturation Headway	Adjustment \	Norksheet							
Prop. Left-Turns	0.2		0.4		0.1		0.0		
Prop. Right-Turns	0.5		0.1		0.1		0.1		
Prop. Heavy Vehicle	0.2		0.2	1	0.2		0.2		
LT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
iHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
adi, computed	7.88		7.88	 	7.88	7.,	7.88	1.7	
Departure Headway		ime	7.00		7.00		7.00		
d, initial value	3.20		3.20		3.20	T	2 20	T	
initial	0.26		0.10		0.57		3.20 0.57		
id, final value	7.88		7.88		7.88		7.88	-	
, final value	0.63		0.28	1	1.29		1.28		
love-up time, m	2.	0		2.0		.0	1.20	0	
Service Time	5.9	_	5.9	T	5.9	T	5.9	Ĭ	
Capacity and Level			1 3.0		3.0		1 0.0	1	
apacity and Love!		oound	18/	thound	- A1 - 0	.h.aa1	1		
				tbound		bound		nbound	
4	L1	L2	L1	L2	L1	L2	L1	L2	
apacity	452		360		643		643		
Delay	23.30		15.64		167.54		163.26		
os	С		С		F		F		
Approach: Delay	2:	3.30		5.64		.54	163	26	
LOS		C		C	F				
ntersection Delay					1.38		F		
ntersection LOS					1.38 F				

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All-Way Stop Control Page 1 of 1

ANALYSIS			
mation			
	Fort D	ade Avenue witi	h Cobb Rd
ar	2025		
Street: Cobb Roa	d		
T	We	stbound	
L		Т	R
50		60	10
50			
	Sou	uthbound	
10		T	R
		420	60
50			
North	bound	Sout	hbound
L1	L2	L1	L2
LTR		LTR	
0.90		0.90	
754		543	
17		17	
1			1
1			1
0.25			
0.2		0.0	
0.1		0.1	
0.2		0.2	
0.2	0.2	0.2	0.2
-0.6	-0.6	-0.6	-0.6
1.7	1.7	1.7	1.7
8.08		8.08	
			-
3.20		3.20	T
0.67		0.48	
8.08		8.08	
1.50		1.07	
2.	0		.0
6.1		6.1	
Northi	pound	Sout	hbound
L1	L2	L1	L2
	L.Z		LZ
754		543	
255.90		86.44	
F		F	
255.	90	86	.44
F			=
47.71			
_	F	F 7.71	F .71

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0		O-WAY STOR						
General Information				nforma	ation			
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 4/16/2002 am peak	2	Interse Jurisdi Analys			Yontz Ro 2025	oad with Co	obb Road
Project Description NO		RNATIVE						
East/West Street: Yont:					reet: Cobb	Road		
Intersection Orientation:	North-South		Study	Period (I	nrs): <i>0.25</i>			
Vehicle Volumes ar	id Adjustme	ents						
Major Street		Northbound				Southbo	und	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
Volume	80	270	140		10	330		20
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	88	300	155		11	366		22
Percent Heavy Vehicles	17			17				
Median Type				Undivi	ded			
RT Channelized			1					1
Lanes	1	1	1		1	1		1
Configuration	L	T	R		L	T		R
Upstream Signal		0				0		
Minor Street		Westbound			Eastbou	ınd		
Movement	7	8	9			11		12
	L L	Т	R		L	Т		R
Volume	150	20	10			20		70
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	166	22	11		22	22		77
Percent Heavy Vehicles	17	17	17		17	17		17
Percent Grade (%)		0				0		
Flared Approach		Y				N		
Storage		1				1		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, a	nd Level of Se	ervice						
Approach	NB	SB		Westbou	ınd		Eastbound	
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	88	11		199			121	
C (m) (vph)	1114	1180		351			376	1
v/c	0.08	0.01	 	0.57			0.32	+
95% queue length	0.26	0.03		3.34			1.37	
Control Delay	8.5	8.1		27.9	_			
LOS				<u> </u>			19.1	
	Α	Α		D		С		
Approach Delay				27.9			19.1	
Approach LOS			D		С			

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	TW	O-WAY STO	P CONTR	ROL SI	UMMARY				
General Informatio	n		Site	Inform	nation				
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 4/16/2002 pm peak		Jurisd	ection liction sis Yeaı		Yontz Ro 2025	oad with C	obb Roa	
Project Description N		RNATIVE							
East/West Street: Yont	z Road		North	South S	Street: Col	bb Road			
Intersection Orientation:	North-South				(hrs): 0.25				
Vehicle Volumes a	nd Adiustme	ents							
Major Street		Northbound	1	I		Southbound			
Movement	1	2	3		4	5	una	6	
	L	Т	R		L	T		R	
Volume	80	330	160)	10	290		10	
Peak-Hour Factor, PHF	0.90	0.90	0.9	0	0.90	0.90		0.90	
Hourly Flow Rate, HFR	88	366	17	7	11	322		11	
Percent Heavy Vehicles	17				17				
Median Type				Undiv	rided				
RT Channelized			1					1	
Lanes	1	1	1		1	1		1	
Configuration	L	T	R		L	Т		R	
Upstream Signal		0				0			
Minor Street		Westbound				Eastbou	ınd		
Movement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
Volume	130	30	25		25	40		60	
Peak-Hour Factor, PHF	0.90	0.90	0.9	0	0.90	0.90		0.90	
Hourly Flow Rate, HFR	144	33	27		27	44		66	
Percent Heavy Vehicles	17	17	17		17	17		17	
Percent Grade (%)		0				0			
Flared Approach		Y				N			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR		U	
Delay, Queue Length, a	and Level of Se			1		277	1		
Approach	NB	SB	1	Westbo	wind		Coothours	J	
Movement	1	4	7	T			Eastbound		
Lane Configuration	L		-	8	9	10	11	12	
	88			LTR			LTR		
v (vph)		11		204			137	+	
C (m) (vph)	1158	1114		368			313		
v/c	0.08	0.01		0.55			0.44		
95% queue length	0.25	0.03		3.22			2.13		
Control Delay	8.4	8.3		26.3			25.2		
LOS	Α	Α		D			D	1	
Approach Delay				26.3	<u> </u>		25.2		
Approach LOS			1	D		D			

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		O-WAY STOR	CONTR	OL SUI	IIVIAKI					
General Information			Site I	nformat	tion					
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 4/17/2002 am peak	?	Interse Jurisdi Analys			Youth Dr 2025	ive with C	obb Road		
Project Description NC		RNATIVE								
East/West Street: Youth					et: Cobb	Road				
Intersection Orientation:		***************************************	Study Period (hrs): 0.25		s): 0.25					
Vehicle Volumes an	d Adjustme	nts		_						
Major Street		Northbound				Southbo	und			
Movement	1	2	3		4	5		6		
	L	Т	R		L	Т		R		
Volume	0	200	100		40	260	·	0		
Peak-Hour Factor, PHF	0.86	0.90	0.90		0.90	0.90		0.84		
Hourly Flow Rate, HFR	0	222	111		44	288		0		
Percent Heavy Vehicles	10				17					
Median Type	_			Undivide	ed					
RT Channelized			0					0		
Lanes	0	1	1		1	1		0		
Configuration		Т	R		L	T				
Upstream Signal		0				0				
Minor Street		Westbound				Eastbou	ınd			
Movement	7	8	9		10	11		12		
	L	Т	R		L	Т		R		
Volume	80	0	50		0	0				
Peak-Hour Factor, PHF	0.90	0.90	0.90)	0.72		0.72			
Hourly Flow Rate, HFR	88	0	55		0	0		0		
Percent Heavy Vehicles	17	17	17		8	0		0		
Percent Grade (%)		0				0				
Flared Approach		Y				Y				
Storage		1				1				
RT Channelized			0					0		
Lanes	0	1	0		0	0		0		
Configuration		LTR								
Delay, Queue Length, a	nd Level of Se	rvice								
Approach	NB	SB		Westboun	nd	<u> </u>	Eastbound	1		
Movement	1	4	7	8	9	10	·			
Lane Configuration	'	4			+	10	11	12		
				LTR				-		
v (vph)		44		143						
C (m) (vph)		1147		1586				1		
v/c		0.04		0.09						
95% queue length		0.12		0.30						
Control Delay		8.3		7.5						
LOS		Α		Α				1		
						L	_1			
Approach Delay				7.5						

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	TWO	D-WAY STOP	CONTR	ROL SU	MMARY			
General Information	1		Site	Informa	ition			
Analyst Agency/Co. Date Performed Analysis Time Period			Juriso	ection iction sis Year		Youth Dr. 2025	ive with C	obb Road
Project Description NC		RNATIVE	IN	(0 11 01				
East/West Street: Youth Intersection Orientation:					reet: Cobb	Road		
			Study	Period (r	rs): 0.25			
Vehicle Volumes an	<u>d Adjustme</u>							
Major Street		Northbound					und	
Movement	1 1	2	3		4	5		6
Volume	0	T	R		L	T		R
Peak-Hour Factor, PHF	0.86	280 0.90	70 0.9		70 0.90	180		0
Hourly Flow Rate, HFR	0.88	311	77		77	0.90 200		0.84
Percent Heavy Vehicles	10				17	200		0
Median Type	70			Undivid				
RT Channelized			1 0	Ondivid	ieu	T		0
Lanes	0	1	1		1	1		0
Configuration	+	$\frac{1}{T}$	R		L	$\frac{1}{T}$		U
Upstream Signal	+	0	 		<u> </u>	0		
Minor Street		Westbound				Eastbou	_	
Movement	7	8	T 9		10	11	na	12
WIOVEINETTE	 	 	R		l	 		R
Volume	110	0	40		0	0		0
Peak-Hour Factor, PHF	0.90	0.90	0.9		0.72	0.72		0.72
Hourly Flow Rate, HFR	122	0.00	44		0.72		0 0.72	
Percent Heavy Vehicles	17	17	17		8	0		0
Percent Grade (%)		0				0		
Flared Approach		TY				T Y		
Storage		1						
RT Channelized		- 	+ -			1		
			0					0
Lanes Configuration	0	1 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	- 0		0	0		0
		LTR						
Delay, Queue Length, a			7					
Approach	NB	SB		Westbou			Eastbound	t
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L		LTR				
v (vph)		77		166				
C (m) (vph)		1093		916				
v/c		0.07		0.18				
95% queue length		0.23		0.66				1
Control Delay		8.5		9.8				+
LOS				-				-
		Α		A				
Approach Delay				9.8				
Approach LOS			Α			1		

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General Information	1		Sito I	nform	otion				
Analyst Agency/Co. Date Performed	Praba H.W.Loch 4/17/2002		Interse Jurisdi	ction	<u>ation</u>		CR 476 v 2025	vith US 98	3
Analysis Time Period	am peak		Ĺ						
	-BUILD ALTEI								
East/West Street: Lake		(CR476)		South St					
Intersection Orientation:			Study	Period (hrs): 0	25			
<u>Vehicle Volumes an</u>	<mark>d Adjustme</mark>	nts							
Major Street		Northbound					Southbo	und	
Movement	1	2	3		4		5		6
	L	Т	R		L		Т		R
Volume	20	470	50		30		550		10
Peak-Hour Factor, PHF	0.90	0.90	0.90	<u> </u>	0.90)	0.90		0.90
Hourly Flow Rate, HFR	22	522	55		33		611		11
Percent Heavy Vehicles	17				17				
Median Type RT Channelized			1 -	Undivi	ded		_		
			0						0
Lanes	0	1	0		0		1		0
Configuration Upstream Signal	LTR				LTF				
		0					0		
Minor Street Movement	-	Westbound	1 0		- 10		Eastbound		
wovement	7	8	9		10		11		12
Volume	L	T	R		L		Т		R
Volume Peak-Hour Factor, PHF	50 0.90	80	50		10		70		30
Hourly Flow Rate, HFR	55	0.90	0.90		0.90	1	0.90		0.90
Percent Heavy Vehicles	17	88 17	55		11		77		33
Percent Grade (%)	1/		17		17		17		17
		0					0		
Flared Approach	-	Y					Y		
Storage		1					1		
RT Channelized			0						0
Lanes	0	1	0		0		1		0
Configuration		LTR					LTR		
Delay, Queue Length, ar	nd Level of Se	rvice							
Approach	NB	SB		Westbo	und			Eastbound	
Movement	1	4	7	8		9	10	11	12
ane Configuration	LTR	LTR		LTR				LTR	
v (vph)	22	33		198				121	-
C (m) (vph)	890	926		266				396	
V/C	0.02	0.04							-
	0.02			0.74				0.31	
95% queue length		0.11		5.36				1.27	
Control Delay	9.1	9.0		49.6				18.0	
LOS	Α	Α		Ε				С	
Approach Delay				49.6				18.0	
Approach LOS			E C						

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	TW	O-WAY STOP	CONTR	OL SU	MMARY			
General Information	1		Site I	nforma	tion			
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Loch 4/17/2002 pm peak		Interse Jurisdi	ction		CR 476 v 2025	vith US 98	
Project Description NC		RNATIVE						
East/West Street: Lake			North/S	South St	reet: US 9	8		
Intersection Orientation:			Study	Period (h	rs): 0.25	-		
Vehicle Volumes an	d Adjustme	ents						
Major Street	T	Northbound				Southbo	und	
Movement	1	2	3		4	5	una	6
	L	Т	R		L	Т		R
Volume	20	550	60		50	450		10
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	22	611	66		55	500		11
Percent Heavy Vehicles	17				17			
Median Type				Undivid	ded			
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration	LTR				LTR			
Upstream Signal		0				0		
Minor Street		Westbound				Eastbou	nd	
Movement	7	8	9		10	11		
	L	Т	R		L	Т		R
Volume	40	80	30		10	50		30
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	44	88	33		11	55		33
Percent Heavy Vehicles	17	17	17		17	17		17
Percent Grade (%)		0				0		
Flared Approach		Y				Y		
Storage		1				1		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, a	nd Level of Se							
Approach	NB	SB		Westbou	ınd		Eastbound	
Movement	1	4	7	8 8	9	10	11	12
Lane Configuration	LTR	LTR	<u>'</u>	LTR	+ -	10	LTR	12
v (vph)	22	55		165			99	
C (m) (vph)	982	848		293			420	╂
ν/c	0.02	0.06		0.56			0.24	
95% queue length	0.02	0.00		3.22			0.24	
Control Delay	8.7	9.5		32.0			16.2	-
LOS	A.7	9.5 A		32.0 D			76.2 C	1
Approach Delay	A			32.0				
Approach LOS							16.2	
Approach LOS			<u> </u>	D			С	

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		O-WAY STOR	CONTR	ROL SUM	MARY			
General Information			Site	Informat	ion			
Analyst	Praba		Intersection			CR 491A	with US 9	8
Agency/Co.		chner, Inc.		liction				
Date Performed	4/17/200		Analy	sis Year		2025		
Analysis Time Period	am peak							
Project Description A		RNATIVE						
East/West Street: US				South Stre)1A		
Intersection Orientation			Study	Period (hrs	iod (hrs): 0.25			
Vehicle Volumes a	ind Adjustm							
Major Street Movement	 	Eastbound	1 ^			Westbou	und	
Movement	1 L	2 	3		4	5		6
Volume	10	530	10		L 	470		R
Peak-Hour Factor, PHF		0.90	0.90)	0.90	0.90		30 0.90
Hourly Flow Rate, HFR	11	588	11		5	522		33
Percent Heavy Vehicles					17			
Median Type	· ·			Undivide				
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration	LTR				LTR			
Upstream Signal		0				0		
Minor Street		Northbound				Southbo	und	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume	5	5	5		40	5		5
Peak-Hour Factor, PHF		0.90	0.90)	0.90	0.90		0.90
Hourly Flow Rate, HFR	5	5	5		44	5		5
Percent Heavy Vehicles	17	17	17		17	17		17
Percent Grade (%)		0				0		
Flared Approach		Y				Υ		
Storage		1				1		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length,								
Approach	EB	WB		Northboun		5	Southbound	t
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
v (vph)	11	5		15			54	
C (m) (vph)	944	909		802			842	
v/c	0.01	0.01		0.02			0.06	
95% queue length	0.04	0.02		0.06			0.21	
Control Delay	8.9	9.0		9.6			9.6	
LOS	Α	Α		Α			A	
Approach Delay	## CO			9.6	L	 	9.6	<u> </u>
Approach LOS				A			A A	
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TW6	O-WAY STOF	CONTR	OL SUM	MARY					
n		Site lı	nformati	ion					
Praba		Interse	ection		CR 491A	with US 9	8		
	2	Analys	sis Year		2025				
	RNATIVE								
					1A				
		Study I	Period (hrs	s): 0.25					
<u>nd Adjustme</u>									
		1 0							
1				4			6		
10							R		
							50		
							0.90 55		
					800		30		
			Undivido						
		Ι ο	Onalvide	u			0		
	1			0	1		0		
	+ ' -	+			1 0				
0		1		LIIX	0				
						un d			
7		Τ ο		10		una T	12		
							R		
							5		
							0.90		
							5		
							17		
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		T			_				
					_				
		0			<u> </u>		0		
0	1			0	1		0		
and Level of Se									
EB	WB		Northboun	d	5	outhbound			
1	4	7	8	9	10		12		
LTR	LTR		LTR			LTR			
11	5		21						
865	982		854						
0.01	0.01		0.02						
				1					
			9.5 A						
				-	A				
A				1			<u> </u>		
 	 		9.3 A	<u> </u>		9.9 A			
	Praba H.W.Lock 4/17/2002 pm peak O-BUILD ALTER Past-West The past Pa	Praba	Praba	Praba	Praba	Praba	Praba H.W.Lochner, Inc. H.W.Lochner, Inc		

	TW	O-WAY STOP	CONTR	OL SUN	IMARY				
General Informatio	n		Site I	nformat	ion				
Analyst	Praba		Interse	ection		CR 491 v	vith US 98		
Agency/Co.	H.W.Lock	nner, Inc.	Jurisd	iction					
Date Performed	4/17/2002	2	Analys	sis Year		2025			
Analysis Time Period	am peak								
Project Description N		RNATIVE							
East/West Street: US 9	_		North/S	South Stre	et: CR 49	1			
Intersection Orientation:	East-West		Study	Period (hr:	s): 0.25				
Vehicle Volumes a	<u>nd Adjustme</u>								
Major Street		Eastbound				Westbou	ınd		
Movement	1 1	2	3		4	5		6	
Volume	L	T 110	R		L	T		R	
Peak-Hour Factor, PHF	80	410	10		50	400		20	
Hourly Flow Rate, HFR	0.90 88	0.90	0.90	'	0.90	0.90		0.90	
Percent Heavy Vehicles		455	11		55	444		22	
Median Type	1/			l Indiada	17	<u> </u>			
RT Channelized			1 ^	Undivide	u	T			
Lanes	0	1	0		0		0		
Configuration	LTR		- 0			1		1	
Upstream Signal	LIK				LT	 		R	
	0 Northbound					0			
Minor Street Movement	7	Northbound	T 0		40	Southboo	und		
Movement	-	8 T	9		10	11		12	
Volume	20		R		L	T		R	
Peak-Hour Factor, PHF	0.90	70 0.90	10 0.90		140 0.90	30		20	
Hourly Flow Rate, HFR	22	77	11		155	0.90		0.90	
Percent Heavy Vehicles		17	17		17	33 17		22 17	
Percent Grade (%)		0	1 //		17	0		17	
Flared Approach		T Y							
Storage			-			Y			
RT Channelized		1				1			
		-	0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length,									
Approach	EB	WB		Northboun			Southbound		
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	LTR	LT		LTR			LTR		
v (vph)	88	55		110			210		
C (m) (vph)	1021	1021		473			106		
v/c	0.09	0.05		0.23			1.98		
95% queue length	0.28	0.17		0.89			17.50		
Control Delay	8.9	8.7		14.9			540.8		
LOS	Α	Α		В			F		
Approach Delay				14.9		540.8			
Approach LOS				В			F		
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	TW	O-WAY STOR	CONTR	OL SU	MMAR	Υ					
General Informatio	n		Site I	nforma	ation						
Analyst	Praba		Interse	ection		C	R 491 v	vith US 98			
Agency/Co.	H.W.Loch		Jurisd	iction							
Date Performed	4/17/2002	2	Analys	sis Year		20	025				
Analysis Time Period	pm peak										
Project Description N		RNATIVE									
East/West Street: US 9			North/S	South St	reet: <i>CF</i>	₹ 491					
Intersection Orientation:			Study	Period (hrs): 0.2	25					
Vehicle Volumes a	<u>nd Adjustme</u>										
Major Street		Eastbound				V	Vestbou	ınd			
Movement	1 1	2	3		4		5		6		
Volume	20	T	R		L		T		R		
Peak-Hour Factor, PHF	0.90	370	40		10		450		90		
Hourly Flow Rate, HFR	22	0.90 411	0.90	<u>'</u>	0.90		0.90		0.90		
Percent Heavy Vehicles		411	44		11		500		100		
Median Type	''			l le eli :	17						
RT Channelized		<u> </u>	1 0	Undivi	uea			<u> </u>	0		
Lanes	0	1	0		0						
Configuration	LTR		+ -		LT		1 1 R				
Upstream Signal	LIN	0			LI			0			
Minor Street Movement	7	Northbound		9 10			outhbo	und	10		
Movement	 	8 T		R L			11		12		
Volume	10						T		R		
Peak-Hour Factor, PHF	0.90	60 0.90	10 0.90	<u> </u>	80		50		30		
Hourly Flow Rate, HFR	11	66	11		0.90 88		0.90 55		0.90		
Percent Heavy Vehicles		17	17		17				33 17		
Percent Grade (%)		0	1 11		17		17 0		17		
Flared Approach		TY						1			
Storage		1									
RT Channelized			-				1				
			0						0		
Lanes	0	1 1 7 7 7	0		0		1		0		
Configuration		LTR					LTR				
Delay, Queue Length, a Approach	EB	ervice WB	1 .	ا جالم ا	und			No. 141-1	1		
Movement	1	4	7	Northbo 8	und 9			Southbound	T		
Lane Configuration	LTR	LT	'	LTR	- 		10	11 LTR	12		
v (vph)	22	11		88				176	 		
C (m) (vph)	908	1031		554	+			418			
v/c	0.02	0.01		0.16				0.42			
95% queue length	0.07	0.03		0.76				2.04			
Control Delay	9.1	8.5		12.7				19.7			
LOS	A. A	0.5 A		12.7 B				19.7 C			
Approach Delay				12.7			19.7				
Approach LOS				B				C	-		
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	TW	O-WAY STOR	CONTR	OL SUI	MMARY			
General Informatio	n		Site I	nforma	tion			
Analyst	Praba		Interse	ection		Landfill F	Road with	US 98
Agency/Co.	H.W.Loch		Jurisd					
Date Performed	4/17/2002	2	Analys	sis Year		2025		
Analysis Time Period	am peak							
Project Description No		RNATIVE						
East/West Street: US 9					eet: <i>Landfill</i>	l Road		
Intersection Orientation:			Study	Period (h	rs): 0.25			
Vehicle Volumes a	<u>nd Adjustme</u>							
Major Street		Eastbound	т .			Westbou	und	
Movement	1 1	2	3		4	5		6
Volume	0	T 120	R		L	T 050		R
Peak-Hour Factor, PHF	0.90	430	40		80	350		0
Hourly Flow Rate, HFR	0.90	0.90 477	0.90 44	<u>'</u>	0.90 88	0.90		0.90
Percent Heavy Vehicles		4//			88 17	388		0
Median Type	10			Undivid				
RT Channelized		1	1 0	Uriaivia I	eu			0
Lanes	0	1	0		1	1		0
Configuration	+ -	† † † † † † † † † † † † † † † † † † †	R		L	T		U
Upstream Signal			 		L	0		
		0 Northbound						
Minor Street Movement	7	Northbound			10	Southbo	und	40
Movement	- / L	8 T	9 R			11 T		12
Volume	50	0	60		0 0	0		R
Peak-Hour Factor, PHF	0.90	0.90	0.90	. 	0.90	0.90		0 0.90
Hourly Flow Rate, HFR	55	0.90	66		0.90	0.90		0.90
Percent Heavy Vehicles	17	0	17		25	4		9
Percent Grade (%)	1	0				0	L	
Flared Approach		T Y				T Y		
Storage	_	1				1		
RT Channelized		-	1			+ '		0
Lanes	1	0	1		0	0		0
Configuration	'	 	R		U	 		U
Delay, Queue Length, a	and Level of Se		1 /\					
Approach	EB	WB	T	Northbou	ınd	Τ .	Southboun	d
Movement	1	4	7	8	9	10	11	12
Lane Configuration	•	L	L	H	$\frac{1}{R}$	1 10	''	12
v (vph)		88	55		66			
C (m) (vph)		973	217		559			
v/c		0.09	0.25		0.12			
95% queue length		0.30	0.97		0.40			
Control Delay		9.1	27.1		12.3			
LOS		9.1 A	D D		12.3 B	 		1
Approach Delay		A	 	19.0	<u> </u>		<u> </u>	
Approach LOS				19.0 C		-		
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	TWO	D-WAY STOP	CONTR	OL SUN	IMARY				
General Informatio	n		Site I	nformat	tion				
Analyst	Praba		Interse			l andfill F	Road with	US 98	
Agency/Co.	H.W.Loch	ner, Inc.	Jurisd						
Date Performed	4/17/2002		Analy	sis Year		2025			
Analysis Time Period	pm peak								
Project Description No	O-BUILD ALTER	RNATIVE							
East/West Street: US 9			North/	South Stre	eet: Landfil	l Road			
Intersection Orientation:	East-West		Study	Period (hr	rs): 0.25				
Vehicle Volumes a	nd Adjustme	nts							
Major Street		Eastbound				Westboo	und		
Movement	1	2	3		4	5 6			
	L	Т	R		L	Т		R	
Volume	0	350	50		60	440		0	
Peak-Hour Factor, PHF	0.90	0.90	0.90)	0.90	0.90		0.90	
Hourly Flow Rate, HFR	0	388	55		66	488		0	
Percent Heavy Vehicles	15				17				
Median Type				Undivide	ed	-			
RT Channelized				0				0	
Lanes	0	1	1		1	1		0	
Configuration		T	R		L	T			
Upstream Signal		0				0			
Minor Street		Northbound				Southbo	und		
Movement	7	8		9		11		12	
	L	Т	R			Т		R	
Volume	40	0	90			0		0	
Peak-Hour Factor, PHF	0.90	0.90		0.90 0.90		0.90		0.90	
Hourly Flow Rate, HFR	44	0		100		0		0	
Percent Heavy Vehicles	17	0	17		25	4		9	
Percent Grade (%)	·	0				0			
Flared Approach		Y				Y			
Storage		1				1			
RT Channelized			1					0	
Lanes	1	0	1		0	0		0	
Configuration	L		R			1		-	
Delay, Queue Length, a	and Level of Se	rvice							
Approach	EB	WB		Northbour	nd	9	Southbour	nd	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		L	L		R				
v (vph)		66	44		100				
C (m) (vph)		1042	234		628				
v/c		0.06	0.19		0.16				
95% queue length		0.20	0.68		0.56		 	 	
Control Delay		8.7	23.9	<u> </u>	11.8				
LOS		A	C C		17.0 B				
Approach Delay			 	15.5			L		
Approach LOS									
Apploach LOS			ersity of Florida	C				····	

APPENDIX D

LEVEL OF SERVICE OF INTERSECTIONS FOR THE BUILD 2025 CONDITIONS (HCS 2000 ANALYSIS)

Full Report													Pag	ge 1 of
					FU	LL RE	POR	T						
General Info	rmation					s	ite In	formatio	n					
Analyst Agency or Co Date Perform Time Period	ned	Praba Lochno 4/18/20 peak p	er, Inc. 102			J	nterse	/pe	SR		Cobb er area			
		, peak p	oriou				lialy Si	3 i cai			025			
Intersection	Geometry					-								
Grade = 0		0	2	1										
			1											
			4 /	*										
						Grade =	0							
	4													
1							0							
2	-				•		2							
					4		_							
1	7				€		1							
	,				•									
Grade = 0														
0.000														
		*	↑ *											
		ļ				Grade =	0							
		•	•	•		Grade -	U							
		2	2	0										
Volume and	l Timing Inpu	ıt	T	EB		_	\A/ID	· · · · · · · · · · · · · · · · · · ·	1	ND			00	
			LT	TH	RT	LT	WB TH	RT	LT	NB TH	RT	LT	SB TH	RT
Volume (vph))		520	660	430	120	510	30	450	290	30	70	450	370
% Heavy vel			17	17	17	17	17	17	17	17	17	17	17	17
PHF			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A			Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	Α
Startup lost ti			2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. greei	n		2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type			3	3	3	3	3		3	3		3	3	
Jnit Extensio			3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RT0	OR Volume		0		80	0		5	0		5	0		35
₋ane Width			12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking (Y or	· N)		Ν		Ν	Ν		N	N		Ν	Ν		Ν
Parking/hr														
Bus stops/hr			0	0	0	0	0		0	0		0	0	
Ped timing				3.2			3.2	-		3.2	-		3.2	
	Excl. Left	EWP	erm	03		04		Excl. Lef	t NS	S Perm		07)8
		1			I									-

G = 24.0

Y = 4

G =

Y =

G =

Y =

G = 12.0

Y = 4

G = 24.0

Y = 4

G =

Y =

Cycle Length C = 91.0

G = 15.0 Y = 4

Duration of Analysis (hrs) = 0.25

Timing

G =

Y =

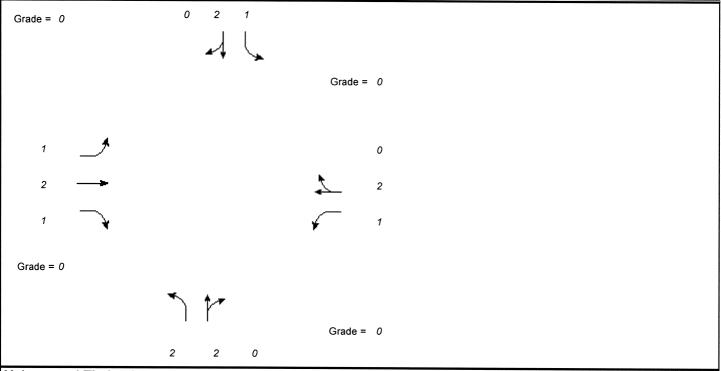
VOLUM	E ADJU	STME	NT AN	ID SAT	TURA1	ION F	LOW F	RATE	WORK	SHEE	Т	
General Information	า											
Project Description BU	ILD ALTEI	RNATIV	Έ									
Volume Adjustmen	t											
		EB			WB	_		NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	520	660	430	120	510	30	450	290	30	70	450	370
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow Rate	578	733	389	133	567	28	500	322	28	78	500	372
Lane Group	L	Т	R	L	TR		L	TR		L	TR	
Adj. flow rate	578	733	389	133	595		500	350		78	872	
Prop. LT or RT	0.000			0.000		0.047	0.000		0.080	0.000		0.427
Saturation Flow Rat	te				1							
Base satflow	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Num. of lanes	1	2	1	1	2	0	2	2	0	1	2	0
fVV	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fHV	0.855	0.855	0.855	0.855	0.855		0.855	0.855		0.855	0.855	
fg		1.000			1.000			1.000			1.000	<u> </u>
fp	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fbb	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fa		1.00			1.00			1.00			1.00	<u>.</u>
fLU	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Secondary fLT	0.204			0.148						0.389		
fRT		1.000	0.850		0.993			0.988			0.936	
fLpb	1.000	1.000	-	1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000			1.000			1.000	
Adj. satflow	1543	3085	1380	1543	3064		2993	3048		1543	2888	
Sec. adj. satflow	331			241						631		

		CAP	ACITY	AND	OS W	ORKS	HEET					
General Informatio	n					***************************************			·			
Project Description BU	IILD ALTERI	VATIVE										
Capacity Analysis												
		EB			WB			NB			SB	
Lane group	L	Τ	R	L	TR		L	TR		L	TR	
Adj. flow rate	578	733	389	133	595		500	350		78	872	
Satflow rate	1543	3085	1380	1543	3064		2993	3048	1	1543	2888	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.47	0.26	0.26	0.47	0.26		0.13	0.26	(0.44	0.26	
Lane group cap.	369	814	364	350	808		395	804		407	762	
v/c ratio	1.57	0.90	1.07	0.38	0.74		1.27	0.44	(0.19	1.14	
Flow ratio		0.24	0.28		0.19		0.17	0.11			0.26	
Crit. lane group	N	N	N	N	N		Υ	Ν		Ν	Y	
Sum flow ratios						1.5	3					
Lost time/cycle						12.0	00					
Critical v/c ratio						1.7	7					
Lane Group Capac	ity, Contro	ol Dela	ıy, and	LOS	Determ	inatic	n					
		EB			WB			NB			SB	
Lane group	L	T	R	L	TR		L	TR		L	TR	
Adj. flow rate	578	733	389	133	595		500	350		78	872	
Lane group cap.	369	814	364	350	808		395	804	1.	407	762	
v/c ratio	1.57	0.90	1.07	0.38	0.74		1.27	0.44	(0.19	1.14	
Green ratio	0.47	0.26	0.26	0.47	0.26		0.13	0.26	(0.44	0.26	
Unif. delay d1	20.9	32.3	33.5	16.1	30.6		39.5	27.9	7	15.4	33.5	
Delay factor k	0.50	0.42	0.50	0.11	0.29		0.50	0.11	(0.11	0.50	
Increm. delay d2	267.7	13.1	66.6	0.7	3.6		138.4	0.4		0.2	80.1	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1	.000	1.000	
Control delay	288.6	45.4	100.1	16.8	34.2		177.9	28.2	1	15.6	113.6	
Lane group LOS	F	D	F	В	С		F	С		В	F	
Apprch. delay	14	0.6		3	1.0		1:	6.3		1	105.6	
Approach LOS		=			С			F			F	
Intersec. delay	10	9.0			Ir	tersec	tion LOS	3			F	
MZcanacz	<u> </u>	<u> </u>	1.0.000		of Florida A							

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General Informati	on	Site Information	
Analyst Agency or Co. Date Performed Time Period	Praba H.W.Lochner, Inc. 4/18/2002 pm peak period	Intersection SR 50 with C Area Type All other Jurisdiction Analysis Year 2025	areas
Intersection Geor	netry		



Volume and	d Timing Iոթւ	ıt												
				EB			WB			NB			SB	
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (vph	1)		510	490	370	100	650	40	470	370	70	50	350	360
% Heavy ve	eh		17	17	17	17	17	17	17	17	17	17	17	17
PHF			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/	'A)		Α	Α	Α	Α	Α	Α	Α	Α	Α	Α	A	A
Startup lost	time		2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. gree	en		2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type			3	3	3	3	3		3	3		3	3	
Unit Extensi	on		3.0	3.0 3.0 3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RT	OR Volume		0		75	0		5	0		5	0		35
Lane Width			12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking (Y o	r N)		Ν		Ν	N		N	N		N	Ν		N
Parking/hr														
Bus stops/hr	•		0	0	0	0	0		0	0		0	0	
Ped timing				3.2			3.2			3.2			3.2	
	Excl. Left	EWP	erm	03		04		Excl. Let	ft N	S Perm		07		08
Timing	G = 18.0	G = 2	4.0	G =		G =		G = 15.0) G	G = 24.0 G =				
Tilling	Y = 4	Y = 4		Y =		Y =	Y	′ = 4	Υ:	= 4	Y =		Y =	
Duration of A	Analysis (hrs) :	= 0.25			Cycle Length C = 97.0									

VOLUME	ADJU	STME	NT AN	D SAT	URAT	ION F	LOW F	RATE	WORK	SHEE	Т	
General Information												
Project Description BUILL	D ALTEI	RNATIV	E									
Volume Adjustment	1						_					
		EB			WB			NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume	510	490	370	100	650	40	470	370	70	50	350	360
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow Rate	567	544	328	111	722	39	522	411	72	56	389	361
Lane Group	L	Т	R	L	TR		L	TR		L	TR	
Adj. flow rate	567	544	328	111	761		522	483		56	750	
Prop. LT or RT	0.000			0.000		0.051	0.000		0.149	0.000		0.481
Saturation Flow Rate							ı		1	1		ı
Base satflow	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Num. of lanes	1	2	1	1	2	0	2	2	0	1	2	0
fW	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fHV	0.855	0.855	0.855	0.855	0.855		0.855	0.855		0.855	0.855	
fg		1.000			1.000			1.000	-		1.000	<u> </u>
fp	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fbb	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fa		1.00			1.00			1.00			1.00	-
fLU	1.00	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
fLT	0.950	1.000		0.950	1.000	-	0.950	1.000		0.950	1.000	
Secondary fLT	0.148			0.219						0.265		
fRT		1.000	0.850		0.992			0.978			0.928	
fLpb	1.000	1.000		1.000	1.000		1.000	1.000		1.000	1.000	-
fRpb		1.000	1.000		1.000			1.000	<u> </u>		1.000	
Adj. satflow	1543	3085	1380	1543	3062		2993	3016		1543	2863	
Sec. adj. satflow	241			356						430		

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		CAPA	ACITY	AND L	os wo	ORKS	HEET				
General Information											
Project Description BUILD /	ALTERN	VATIVE									
Capacity Analysis											
		EB			WB			NB		SB	
Lane group	L	Τ	R	L	TR		L	TR	L	TR	
Adj. flow rate	567	544	328	111	761		522	483	56	750	
Satflow rate	1543	3085	1380	1543	3062		2993	3016	1543	2863	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Green ratio	0.47	0.25	0.25	0.47	0.25		0.15	0.25	0.44	0.25	
Lane group cap.	376	763	341	401	758		463	746	375	708	
v/c ratio	1.51	0.71	0.96	0.28	1.00		1.13	0.65	0.15	1.06	
Flow ratio	·	0.18	0.24		0.25		0.17	0.16		0.25	
Crit. lane group	Ν	Ν	N	N	N		Υ	Ν	Ν	Y	
Sum flow ratios						1.7	2				
Lost time/cycle						12.0	00				
Critical v/c ratio						1.9					
Lane Group Capacity, (Contro		y, and	LOS		inatio	n				
		EB	_		WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	567	544	328	111	761		522	483	56	750	
Lane group cap.	376	763	341	401	758		463	746	375	708	
v/c ratio	1.51	0.71	0.96	0.28	1.00		1.13	0.65	0.15	1.06	
Green ratio	0.47	0.25	0.25	0.47	0.25		0.15	0.25	0.44	0.25	
Unif. delay d1	27.8	33.4	36.0	15.6	36.5		41.0	32.7	16.4	36.5	
Delay factor k	0.50	0.28	0.47	0.11	0.50		0.50	0.23	0.11	0.50	
Increm. delay d2	242.0	3.2	38.6	0.4	33.7		81.5	2.0	0.2	50.6	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Control delay	269.8	36.5	74.6	16.0	70.2		122.5	34.7	16.6	87.1	
Lane group LOS	F	D	Ε	В	Ε		F	С	В	F	
Apprch. delay	13	7.1		6	3.3		80	0.3		82.2	
Approach LOS	I	=			E			F		F	
Intersec. delay	0.6	5.9			•		ion LOS			F	

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Camarallaria					FU	LL RE	:PUR							
Generai info	ormation							ormatio	n					
Analyst Agency or Co Date Perforn Time Period	ned	Praba V.Lochner 4/18/2002 n peak pe	2			Ir A J	ntersec irea Ty urisdic	tion pe		All oth	Cobb er area			
Intersection	Geometry													
Grade = 0		0	2	1										
		4	\downarrow											
						Grade =	0							
2	<i>‡</i>						0							
2					4		2							
1	*				V		1							
Grade = 0														
		* *	- 75											
)				Grade =	0							
		2	2	0		Grade -	U							
Volume and	d Timing Inpu	ut												
				EB			145			NB		T		
							WB					1	SB	
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	SB TH	RT
			LT 520	TH 660	RT 430	LT 120		RT 30	LT 450		RT 30	LT 70		RT 370
		5					TH		 	TH			TH	
% Heavy ve		5	20	660	430	120	TH 510	30	450	TH 290	30	70	TH 450	370 17
% Heavy ve PHF Actuated (P//	h A)	0	520 17	660 17	430 17	120 17	TH 510 17	30 17	450 17	TH 290 17	30 17	70 17	TH 450 17	370 17
% Heavy ve PHF Actuated (P// Startup lost t	h A) ime	0	520 17 2.90 A 2.0	660 17 0.90	430 17 0.90 A 2.0	120 17 0.90	TH 510 17 0.90	30 17 0.90	450 17 0.90	TH 290 17 0.90	30 17 0.90	70 17 0.90	TH 450 17 0.90	370 17 0.90
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree	h A) ime	0	520 17 2.90 A 2.0 2.0	660 17 0.90 A 2.0 2.0	430 17 0.90 A 2.0 2.0	120 17 0.90 A 2.0 2.0	TH 510 17 0.90 A 2.0 2.0	30 17 0.90	450 17 0.90 A	TH 290 17 0.90 A	30 17 0.90	70 17 0.90 A	TH 450 17 0.90 A	370 17 0.90
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type	A) ime n	0	520 17 2.90 A 2.0	660 17 0.90 A 2.0	430 17 0.90 A 2.0	120 17 0.90 A 2.0	TH 510 17 0.90 A 2.0	30 17 0.90	450 17 0.90 A 2.0	TH 290 17 0.90 A 2.0	30 17 0.90	70 17 0.90 A 2.0	TH 450 17 0.90 A 2.0	370 17 0.90
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extension	A) ime n	0	520 17 2.90 A 2.0 2.0	660 17 0.90 A 2.0 2.0	430 17 0.90 A 2.0 2.0	120 17 0.90 A 2.0 2.0	TH 510 17 0.90 A 2.0 2.0	30 17 0.90	450 17 0.90 A 2.0 2.0	TH 290 17 0.90 A 2.0 2.0	30 17 0.90	70 17 0.90 A 2.0 2.0	TH 450 17 0.90 A 2.0 2.0	370 17 0.90
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extension	A) ime n	0	520 17 .90 A 2.0 2.0 3	660 17 0.90 A 2.0 2.0 3	430 17 0.90 A 2.0 2.0 3	120 17 0.90 A 2.0 2.0	TH 510 17 0.90 A 2.0 2.0	30 17 0.90	450 17 0.90 A 2.0 2.0 3	TH 290 17 0.90 A 2.0 2.0 3	30 17 0.90	70 17 0.90 A 2.0 2.0 3	TH 450 17 0.90 A 2.0 2.0 3	370 17 0.90
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extensic Ped/Bike/RT	A) ime n	0	520 17 .90 A 2.0 2.0 3	660 17 0.90 A 2.0 2.0 3	430 17 0.90 A 2.0 2.0 3 3.0	120 17 0.90 A 2.0 2.0 3	TH 510 17 0.90 A 2.0 2.0	30 17 0.90 A	450 17 0.90 A 2.0 2.0 3 3.0	TH 290 17 0.90 A 2.0 2.0 3	30 17 0.90 A	70 17 0.90 A 2.0 2.0 3 3.0	TH 450 17 0.90 A 2.0 2.0 3	370 17 0.90 A
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extension Ped/Bike/RT/ Lane Width	A) ime n on OR Volume	0 2 2	520 17 9.90 A 2.0 2.0 3 3.0	660 17 0.90 A 2.0 2.0 3 3.0	430 17 0.90 A 2.0 2.0 3 3.0 80	120 17 0.90 A 2.0 2.0 3 3.0	TH 510 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	450 17 0.90 A 2.0 2.0 3 3.0	TH 290 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	70 17 0.90 A 2.0 2.0 3 3.0 0	TH 450 17 0.90 A 2.0 2.0 3 3.0	370 17 0.90 A
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extensic Ped/Bike/RT/ Lane Width Parking (Y or	A) ime n on OR Volume	0 2 2	520 17 2.90 A 2.0 2.0 3 3.0 0	660 17 0.90 A 2.0 2.0 3 3.0	430 17 0.90 A 2.0 2.0 3 3.0 80 12.0	120 17 0.90 A 2.0 2.0 3 3.0 0	TH 510 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	450 17 0.90 A 2.0 2.0 3 3.0 0	TH 290 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	70 17 0.90 A 2.0 2.0 3 3.0	TH 450 17 0.90 A 2.0 2.0 3 3.0	370 17 0.90 A 35
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extensic Ped/Bike/RT/ Lane Width Parking (Y or Parking/hr	A) ime n OR Volume r N)	0 2 2	520 17 2.90 A 2.0 2.0 3 3.0 0	660 17 0.90 A 2.0 2.0 3 3.0	430 17 0.90 A 2.0 2.0 3 3.0 80 12.0	120 17 0.90 A 2.0 2.0 3 3.0 0	TH 510 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	450 17 0.90 A 2.0 2.0 3 3.0 0	TH 290 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	70 17 0.90 A 2.0 2.0 3 3.0 0	TH 450 17 0.90 A 2.0 2.0 3 3.0	370 17 0.90 A 35
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extension Ped/Bike/RTo Lane Width Parking (Y or Parking/hr Bus stops/hr	A) ime n OR Volume r N)	0 2 2	520 17 .90 A 2.0 2.0 3 3.0 0 2.0 N	660 17 0.90 A 2.0 2.0 3 3.0	430 17 0.90 A 2.0 2.0 3 3.0 80 12.0 N	120 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 510 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	450 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 290 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A	70 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 450 17 0.90 A 2.0 2.0 3 3.0	370 17 0.90 A 35
% Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extensic Ped/Bike/RT Lane Width Parking (Y or Parking/hr Bus stops/hr	A) ime n OR Volume r N)	0 2 2	520 17 .90 A 2.0 2.0 3 3.0 0 2.0 N	660 17 0.90 A 2.0 2.0 3 3.0 12.0	430 17 0.90 A 2.0 2.0 3 3.0 80 12.0 N	120 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 510 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	30 17 0.90 A	450 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 290 17 0.90 A 2.0 2.0 3 3.0	30 17 0.90 A 5	70 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 450 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	370 17 0.90 A 35
Volume (vph % Heavy ve PHF Actuated (P// Startup lost t Ext. eff. gree Arrival type Unit Extension Ped/Bike/RT/ Lane Width Parking (Y or Parking/hr Bus stops/hr Ped timing Timing	A) ime n OR Volume r N)	0	520 17 90 A 2.0 2.0 3 3.0 0 2.0 N	660 17 0.90 A 2.0 2.0 3 3.0 12.0	430 17 0.90 A 2.0 2.0 3 3.0 80 12.0 N	120 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 510 17 0.90 A 2.0 2.0 3 3.0 12.0	30 17 0.90 A 5	450 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 290 17 0.90 A 2.0 2.0 3 3.0 12.0	30 17 0.90 A 5	70 17 0.90 A 2.0 2.0 3 3.0 0 12.0 N	TH 450 17 0.90 A 2.0 2.0 3 3.0 12.0 0 3.2	370 17 0.90 A 35

Duration of Analysis (hrs) = 0.25

Cycle Length C = 88.0

VOLUI	ME ADJU	STME	NT AN	D SA1	TURAT	ION F	LOW F	RATE \	WORK	SHEE	Т	
General Information	on											
Project Description B	UILD ALTEI	RNATIV	E									***************************************
Volume Adjustme	nt						1					
		EB			WB			NB	_		SB	
	LT	TH	RT	LT	TH	RT	LT	ТН	RT	LT	TH	RT
Volume	520	660	430	120	510	30	450	290	30	70	450	370
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow Rate	578	733	389	133	567	28	500	322	28	78	500	372
Lane Group	L	Т	R	L	TR		L	TR		L	TR	
Adj. flow rate	578	733	389	133	595		500	350		78	872	
Prop. LT or RT	0.000			0.000		0.047	0.000		0.080	0.000		0.427
Saturation Flow R	ate								•			
Base satflow	1900	1900	1900	1900	1900		1900	1900		1900	1900	
Num. of lanes	2	2	1	1	2	0	2	2	0	1	2	0
f₩	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fH∨	0.855	0.855	0.855	0.855	0.855		0.855	0.855		0.855	0.855	
fg		1.000			1.000			1.000			1.000	
fp	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fbb	1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
fa		1.00			1.00			1.00	*		1.00	
fLU	0.97	0.95	1.00	1.00	0.95		0.97	0.95		1.00	0.95	
fLT	0.950	1.000		0.950	1.000		0.950	1.000		0.950	1.000	
Secondary fLT	0.364			0.154						0.416		
fRT		1.000	0.850		0.993			0.988			0.936	
fLpb	1.000	1.000	-	1.000	1.000		1.000	1.000		1.000	1.000	
fRpb		1.000	1.000		1.000			1.000			1.000	
Adj. satflow	2993	3085	1380	1543	3064		2993	3048		1543	2888	
Sec. adj. satflow	1148			250		-				676		

		CAP	ACITY	AND I	OS WO	RKS	HEET				
General Information	n										
Project Description BU	ILD ALTERI	VATIVE									
Capacity Analysis											
		EB			WB			NB		SB	
Lane group	L	Τ	R	L	TR		L	TR	L	TR	
Adj. flow rate	578	733	389	133	595		500	350	78	872	
Satflow rate	2993	3085	1380	1543	3064		2993	3048	1543	2888	
Lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	
Green ratio	0.40	0.26	0.26	0.40	0.26		0.16	0.31	0.51	0.31	
Lane group cap.	645	806	361	240	801		476	935	493	886	
v/c ratio	0.90	0.91	1.08	0.55	0.74		1.05	0.37	0.16	0.98	
Flow ratio		0.24	0.28		0.19		0.17	0.11		0.30	
Crit. lane group	N	N	Υ	N	N		Υ	N	N	Υ	
Sum flow ratios						0.8	5				
Lost time/cycle						16.0	00				
Critical v/c ratio						1.0	4				
Lane Group Capaci	ty, Contro	ol Dela	y, and	LOS	Determii	natio	n			O II O O O O O O O O O O O O O O O O O	
		EB			WB			NB		SB	
Lane group	L	T	R	L	TR		L	TR	L	TR	
Adj. flow rate	578	733	389	133	595		500	350	78	872	
Lane group cap.	645	806	361	240	801		476	935	493	886	
v/c ratio	0.90	0.91	1.08	0.55	0.74		1.05	0.37	0.16	0.98	
Green ratio	0.40	0.26	0.26	0.40	0.26		0.16	0.31	0.51	0.31	
Unif. delay d1	26.2	31.5	32.5	19.6	29.8		37.0	23.9	11.4	30.3	
Delay factor k	0.42	0.43	0.50	0.15	0.30		0.50	0.11	0.11	0.49	
Increm. delay d2	15.2	14.3	69.6	2.8	3.8		55.1	0.3	0.2	26.3	
PF factor	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1.000	1.000	
Control delay	41.4	45.8	102.1	22.4	33.6		92.1	24.1	11.5	56.6	
Lane group LOS	D	D	F	С	С		F	С	В	Ε	
Apprch. delay	57	7.2		3	1.5		6	4.1		52.9	
Approach LOS	L	=			С			E		D	
Intersec. delay	53	3.2			Inte	ersec	tion LOS	3		D	
MCS2000TM		C	1 4 @ 2000	TT : :.	of Florida All	D: 1.					

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Site Information Site Information Site Information			FULL DEDORT		Page 1 of
Analyst Praba Agency or Co. Date Performed Time Period Page period Analysis Year Grade = 0 Praba H.W.Lochner, Inc. 4/18/2002 pm peak period Analysis Year Analysis Year All other areas Jurisdiction Analysis Year 2025 Grade = 0 Grade = 0 O 2 1 Grade = 0 O 2 1 1 1	General Information	on	FULL REPORT Site Information	1	
Grade = 0 0 2 1 Grade = 0 2	Analyst Agency or Co. Date Performed	Praba H.W.Lochner, Inc. 4/18/2002	Intersection Area Type Jurisdiction	SR 50 with Cobb Road All other areas	
Grade = 0 2	ntersection Geom	etry			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Grade = 0	0 2 1			
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	2		0		
	2		2		
Grade = 0	1		1		
	Grade = 0				
* **		7 1			

Volume a	nd Timing Inpu	ı +														
Volume a	na mining mpt	1		EB			WE	3	T	NB			SB			
		L	Т	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
Volume (vp	oh)	51	0	490	370	100	650	40	470	370	70	50	350	360		
% Heavy v	/eh	17	7	17	17	17	17	17	17	17	17	17	17	17		
PHF		0.9	0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
Actuated (F	P/A)	Α		Α	Α	Α	Α	Α	Α	Α	Α	Α	A	A		
Startup lost		2.0	0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0			
Ext. eff. gre	een	2.0	0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0			
Arrival type)	3		3	3	3	3		3	3		3	3			
Unit Extens	sion	3.0	0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0			
Ped/Bike/R	TOR Volume	0			75	0		5	0		5	0		35		
Lane Width	1	12.	.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0			
Parking (Y	or N)	Ν	1		Ν	N		N	Ν		N	N		N		
Parking/hr														1		
Bus stops/l	nr	0		0	0	0	0		0	0		0	0	†		
Ped timing				3.2			3.2			3.2			3.2			
	Excl. Left	EW Perm	T	03		04		Excl. Lef	t N	NS Perm		07		08		
Timina	G = 8.0	G = 24.0	1	G =		G =		G = 15.0	G	= 24.0	G =	G =				
Timing	Y = 4	Y = 4	T	Y =		Y =	•	Y = 4		= 4	Y =					
Duration of	Analysis (hrs)	= 0.25			•		-		C/	cle Lena	th C =	87 O				

Full Report Page 2 of 3

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET General Information Project Description BUILD ALTERNATIVE Volume Adjustment ΕB **WB** NB SB LT TH RT LT TH RT LT TH RT LT TH RT Volume 510 490 370 100 650 40 470 370 70 50 350 360 PHF 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 Adj. Flow Rate 567 544 328 111 722 39 522 411 72 56 389 361 Lane Group L Τ R L TR L TR L TR Adj. flow rate 567 544 328 111 761 522 483 56 750 Prop. LT or RT 0.000 0.000 0.051 0.000 0.149 0.000 0.481 Saturation Flow Rate Base satflow 1900 1900 1900 1900 1900 1900 1900 1900 1900 Num. of lanes 2 2 1 2 0 1 2 2 0 1 2 0 fW 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 fΗV 0.855 0.855 0.855 0.855 0.855 0.855 0.855 0.855 0.855 1.000 1.000 fg 1.000 1.000 1.000 1.000 fр 1.000 1.000 1.000 1.000 1.000 1.000 1.000 fbb 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 fa 1.00 1.00 1.00 1.00 fLU 0.97 0.95 1.00 1.00 0.95 0.97 0.95 1.00 0.95 fLT 0.950 1.000 0.950 1.000 0.950 1.000 0.950 1.000 Secondary fLT 0.415 0.251 0.294 fRT 1.000 0.850 0.992 0.978 0.928 fLpb 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 fRpb 1.000 1.000 1.000 1.000 1.000 Adj. satflow 2993 3085 3062 1380 1543 2993 3016 2863 1543 Sec. adj. satflow 1307 407 477

Full Report Page 3 of 3

CAPACITY AND LOS WORKSHEET											
ALTERN	IATIVE										

	EB			WB			NB			SB	
L	T	R	L	TR		L	TR		L	TR	
567	544	328	111	761		522	483		56	750	
2993	3085	1380	1543	3062		2993	3016		1543	2863	
2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
0.41	0.28	0.28	0.41	0.28		0.17	0.28		0.49	0.28	
716	851	381	286	845		516	832		432	790	
0.79	0.64	0.86	0.39	0.90		1.01	0.58		0.13	0.95	
	0.18	0.24		0.25		0.17	0.16			0.26	
Ν	Ν	N	Ν	Υ		Y	N		N	Υ	
					0.7	9					
					16.0	00					
					0.9	7					
Contro	l Dela	y, and	LOS	Determi	inatio	n					
	EB			WB			NB			SB	
L	Τ	R	L	TR		L	TR		L	TR	
567	544	328	111	761		522	483		56	750	
716	851	381	286	845		516	832		432	790	
0.79	0.64	0.86	0.39	0.90		1.01	0.58		0.13	0.95	
0.41	0.28	0.28	0.41	0.28		0.17	0.28		0.49	0.28	
21.4	27.7	29.9	17.1	30.4		36.0	27.2		12.2	30.9	
0.34	0.22	0.39	0.11	0.42		0.50	0.17		0.11	0.46	
6.1	1.6	17.8	0.9	12.7		42.6	1.0		0.1	20.6	
1.000	1.000	1.000	1.000	1.000		1.000	1.000		1.000	1.000	
27.4	29.3	47.7	17.9	43.1		78.6	28.2		12.3	51.5	
С	С	D	В	D		Ε	С		В	D	
32	2.8	-	39	9.9		5.	4.3			48.8	
			1	D			D			D	
	L 567 2993 2.0 0.41 716 0.79 N Contro L 567 716 0.79 0.41 21.4 0.34 6.1 1.000 27.4 C	EB L 7 567 0.41 0.28 716 851 0.79 0.64 0.18 N N Control Dela EB L T 567 544 716 851 0.79 0.64 716 851 0.79 0.64 0.41 0.28 21.4 27.7 0.34 0.22 6.1 1.6 1.000 1.000 27.4 29.3 C C 32.8	EB L 7 567 544 328 2993 3085 1380 2.0 2.0 0.41 0.28 0.28 716 851 381 0.79 0.64 0.86 0.18 0.24 N N N Control Delay, and EB L 7 567 544 328 716 851 381 0.79 0.64 0.86 0.18 0.24 N 0.28 0.28 0.28 0.38 0.41 0.79 0.64 0.86 0.41 0.28 0.28 0.28 0.39 0.34 0.22 0.39 0.34 0.22 0.39 0.34 0.22 0.39 0.34 0.20 0.39 0.30 0.30 0.30 0.30 0.30 0.30 0.3	EB L 7 82.0 0.41 0.28 0.79 0.64 0.18 0.24 0.18 0.79 0.18 0.24 0.18 0.18 0.24 0.18 0.29 0.39 0.41 0.28 0.28 0.41 0.28 0.28 0.41 0.28 0.28 0.41 0.28 0.28 0.41 0.28 0.28 0.41 0.28 0.28 0.41 0.29 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.22 0.39 0.11 0.34 0.25 0.39 0.11 0.34 0.26 0.39 0.39 0.39 0.39 0.39 0.39 0.39 0.39	EB	EB	EB	EB	EB	L	Land

 $HCS2000^{\mathrm{TM}}$

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						FU	LL RE	PO	RT							
General Info	ormation									rmatio	n					
Analyst Agency or C Date Perforr Time Period	ned		Praba Lochne 4/18/20 am pea	er, Inc. 01			J V	nters rea urisc naly	Typ:	е	Col	All oth	d with U er area 025			
Intersection	Geomet	ry														
Grade =			0	0	0					١						
							Grade =	0								
0								0								
2	-					4		2								
1	7					¥		1								
Grade = 0																
			2	0	1		Grade =	0								
Volume and	d Timing	Inpu	ıt													
				. +	EB	T ==			/B			NB			SB	
Volume (vph	1)			LT	TH 220	RT 500	10	18		RT	LT	TH	RT 20	LT	TH	RT
% Heavy ve					17	17	17	17			410 17		17			_
PHF					0.90	0.90	0.90	0.9			0.90		0.90			
Actuated (P/	A)				Α	Α	A	A			A		A		1	
Startup lost t					2.0	2.0	2.0	2.0)		2.0		2.0			
Ext. eff. gree	n				2.0	2.0	2.0	2.0			2.0		2.0			
Arrival type Unit Extension					3.0	3.0	3	3			3		3			-
Ped/Bike/RT		ne		0	3.0	100	3.0	3.	U		3.0		3.0	_		-
Lane Width	OIX VOIUI	i IC		 	12.0	12.0	12.0	12.	n		12.0		10 12.0	0	1	
Parking (Y o	r N)			N	+	N	N N	1,5.	_	N	N N		N	N		$\frac{1}{N}$
Parking/hr	,				_	 '\	+ '*	+			'\ '		''	 '\		 '\
Bus stops/hr					0	0	0	10	,—		0		0		+	
Ped timing					3.2	<u> </u>	 				ا	3.2	1 -	 	3.2	
	EW Per	m	02		03	Г	04		N I	B Only		06	<u> </u>	0 7		10
	G = 27.		G =		G =		G =			= 15.0			G =	U /	G =)8
Timing	Y = 4		Y =		Y =		Y =			- 15.0 - 4	Y =		Y =		Y =	
Duration of A		nrs) =								Cycle Length $C = 50.0$						

Full Report Page 2 of 3

VOLUME ADJUSTMENT AND SATURATION FLOW RATE WORKSHEET General Information Project Description BUILD ALTERNATIVE Volume Adjustment EΒ **WB** NB SB LT TH RT LT TH LT ΤH RT RT LT TH RT Volume 220 500 10 180 410 20 PHF 0.90 0.90 0.90 0.90 0.90 0.90 Adj. Flow Rate 244 444 11 200 456 11 Lane Group Τ R L Т L R Adj. flow rate 244 444 11 200 456 11 Prop. LT or RT 0.000 0.000 0.000 Saturation Flow Rate 1900 Base satflow 1900 1900 1900 1900 1900 Num. of lanes 0 2 1 2 0 1 0 1 0 0 0 fW 1.000 1.000 1.000 1.000 1.000 1.000 fΗV 0.855 0.855 0.855 0.855 0.855 0.855 1.000 1.000 fg fp 1.000 1.000 1.000 1.000 1.000 1.000 fbb 1.000 1.000 1.000 1.000 1.000 1.000 fa 1.00 1.00 fLU 0.95 1.00 1.00 0.95 0.97 1.00 fLT 1.000 0.600 1.000 0.950 Secondary fLT -fRT 1.000 0.850 1.000 0.850 fLpb 1.000 1.000 1.000 1.000 fRpb 1.000 1.000 1.000 1.000 Adj. satflow 3085 3085 1380 975 2993 1380 Sec. adj. satflow

Full Report Page 3 of 3

CAPACITY AND LOS WORKSHEET General Information Project Description BUILD ALTERNATIVE Capacity Analysis EB **WB** NB SB ane group Τ R L Т L R Adj. flow rate 444 244 11 200 456 11 Satflow rate 1380 975 3085 3085 2993 1380 Lost time 2.0 2.0 2.0 2.0 2.0 2.0 Green ratio 0.54 0.54 0.54 0.54 0.30 0.30 745 Lane group cap. 1666 527 1666 898 414 v/c ratio 0.15 0.60 0.02 0.12 0.51 0.03 Flow ratio 0.08 0.32 0.01 0.06 0.15 0.01 Crit. lane group Y Ν Y Ν Ν Ν Sum flow ratios 0.47 Lost time/cycle 8.00 Critical v/c ratio 0.56 Lane Group Capacity, Control Delay, and LOS Determination **WB** NB SB Τ R Т Lane group L L R Adj. flow rate 244 11 444 200 456 11 745 Lane group cap. 1666 527 1666 898 414 v/c ratio 0.15 0.60 0.12 0.02 0.51 0.03 Green ratio 0.54 0.54 0.54 0.54 0.30 0.30 Unif. delay d1 7.8 5.7 5.4 5.7 14.5 12.3 Delay factor k 0.11 0.18 0.11 0.11 0.12 0.11 Increm. delay d2 0.0 1.3 0.0 0.0 0.5 0.0 PF factor 1.000 1.000 1.000 1.000 1.000 1.000 Control delay 5.8 9.1 5.4 5.7 14.9 12.4 Lane group LOS Α Α Α Α В В Apprch. delay 7.9 5.7 14.9 Approach LOS Α В Α Intersec. delay 10.0-Intersection LOS

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						FU	LL RE	PO	RT							
General Info	ormation						s	ite l	nforn	natior)					
Analyst Agency or C Date Perforr Time Period	ned		Praba Lochne! 4/18/20! pm pea	er, Inc. 01			A Ji	rea · urisc	ection Type liction sis Yo	1		All oth	d with U er areas 025			
Intersection	Geomet	ry														
Grade =			0	0	0											
							Grade =	0								
0								0								
2						*		2								
1	7					¥		1								
Grade = 0																
			2	0	1		Grade =	0								
Volume and	d Timing	Inpu	ıt													
					EB			V				NB			SB	
				LT	TH	RT	LT	TI		RT	LT	TH	RT	LT	TH	RT
Volume (vph					180	430	10	21			480		20			
% Heavy ve	71 l				17 0.90	17 0.90	17 0.90	0.9			17 0.90		17 0.90	 		1
Actuated (P/	(A)				A	0.90 A	0.90 A	A A			0.90 A		0.90 A			-
Startup lost t					2.0	2.0	2.0	2.0			2.0		2.0			
Ext. eff. gree	en				2.0	2.0	2.0	2.0)		2.0		2.0			
Arrival type					3	3	3	3			3		3			
Unit Extension					3.0	3.0	3.0	3.	0		3.0		3.0			
Ped/Bike/RT	OK Volur	ne		0	10.0	80	10.0	10	${}$		0		10	0		
Lane Width	r NI\			Λ/	12.0	12.0	12.0	12.	<u>- </u>	Λ/	12.0		12.0			1
Parking (Y o Parking/hr	1 IN)			Ν		N	N	-		Ν	Ν		N	N		N
	•					0	+	+-	+							
Bus stops/hr					0	0	0	0			0		0		L	<u></u>
Ped timing					3.2						<u> </u>	3.2			3.2	
	EW Per		02		03		04			Only		06		07)8
Timing	G = 22 $Y = 4$.0	G = Y =		G = G = Y = Y =					G = Y =		G = Y =		G = Y =		
Duration of A		hrs) :						Y = Y = 4			Y = Y = Cycle Length C = 45.0		<i>45</i> 0	1'-		

				-	-							
VOLUME	ADJUST	MENT	AND S	ATUR	ATION	FLOW	/ RATE	E WO	RKSHI	EET		
General Information												
	O ALTERNA	TIVE										
Volume Adjustment				T			T					
		EB	T		WB	,		NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume		180	430	10	210		480		20			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Adj. Flow Rate		200	389	11	233		533		11			
Lane Group		T	R	L	Т		L		R			
Adj. flow rate		200	389	11	233		533		11			
Prop. LT or RT	0.000			0.000		0.000						
Saturation Flow Rate												
Base satflow		1900	1900	1900	1900		1900		1900			
Num. of lanes	0	2	1	1	2	0	2	0	1	0	0	0
fVV		1.000	1.000	1.000	1.000		1.000		1.000			
fHV		0.855	0.855	0.855	0.855		0.855		0.855			
fg		1.000			1.000							
fp		1.000	1.000	1.000	1.000		1.000		1.000			
fbb		1.000	1.000	1.000	1.000		1.000		1.000			
fa		1.00			1.00							
fLU		0.95	1.00	1.00	0.95		0.97		1.00			
fLT		1.000		0.626	1.000		0.950					
Secondary fLT												-
fRT		1.000	0.850		1.000				0.850			
fLpb		1.000		1.000	1.000		1.000					
fRpb		1.000	1.000		1.000				1.000			
Adj. satflow		3085	1380	1017	3085		2993		1380			

Sec. adj. satflow

Full Report Page 3 of 3

CAPA	CITY	AND L	os wo	RKSH	HEET			
ALTERNATIVE								
EB			WB			NB	SB	
T	R	L	T		L	R		
200	389	11	233		533	11		
3085	1380	1017	3085		2993	1380	·	
2.0	2.0	2.0	2.0		2.0	2.0		
0.49	0.49	0.49	0.49		0.33	0.33		
1508	675	497	1508		998	460		
0.13	0.58	0.02	0.15		0.53	0.02		
0.06	0.28	0.01	0.08		0.18	0.01		
N	Y	N	N		Υ	N		
				0.40	6			-
				8.00	0			
				0.50	6			*********
Control Dela	y, and	LOS E	Determi	natior	1			
EB			WB			NB	SB	
T	R	L	T		L	R		
200	389	11	233		533	11		
1508	675	497	1508		998	460		
0.13	0.58	0.02	0.15		0.53	0.02		
0.49	0.49	0.49	0.49		0.33	0.33		
6.3	8.2	5.9	6.4		12.2	10.1		
0.11	0.17	0.11	0.11		0.14	0.11		
0.0	1.2	0.0	0.0		0.6	0.0		
1.000	1.000	1.000	1.000		1.000	1.000		
6.3	9.4	6.0	6.4		12.7	10.1		
Α	Α	Α	Α		В	В		
8.4		(6.4		12.	7		
Α			A		В			
9.7			Ir	ntersec	tion LOS		Α	
	EB	EB	EB	EB WB 0.13 0.58 0.02 0.15 0.06 0.28 0.01 0.08 N Y N N Control Delay, and LOS Determine EB WB T R L T 200 389 11 233 0.58 0.02 0.15 0.06 0.28 0.01 0.08 N N Y N Control Delay, and LOS Determine EB WB T R L T 200 389 11 233 1508 675 497 1508 0.13 0.58 0.02 0.15 0.06 0.28 0.01 0.08 N O	EB	EB	FB	EB

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	TWO	D-WAY STOP	CONTR	OL SI	JMI	MARY				
General Informatio	n		Site I	nform	atio	on				
Analyst Agency/Co. Date Performed	Praba H.W.Loch 4/18/2002		Interse Jurisdio Analys	ction	-		Fort Dad Road 2025	le Ave.	with	Cobb
Analysis Time Period	am peak			.0 1 001			2020			
	JILD ALTERNA	TIVE								
East/West Street: Fort						t: Cobb R	Road			
Intersection Orientation:			Study I	Period	(hrs)	: 0.25				
Vehicle Volumes ar	nd Adjustme									
Major Street		Northbound					Southbo	ound		-
Movement	1 1	2	3			4	5			6
Valuma	L	T	R			L	T			R
Volume Peak-Hour Factor, PHF	80	630	50			10	700			90
Hourly Flow Rate, HFR	0.90 88	0.90 700	0.90 55			0.90	0.90			0.90
Percent Heavy Vehicles	17					11 17	777			100
Median Type	- ''			Raised	1 0111					
RT Channelized			0	Raisec	ı cui	ט	T			
Lanes	1	2	0			1	2			0
Configuration	'	T	TR			<u></u>	T			TR
Upstream Signal		0	+ //				0			IK
Minor Street		Westbound					Eastbo	ınd		
Movement	7	8	T 9			10	11	unu		12
Movement	Ĺ	T	R			L		+		R
Volume	150	20	30			20	20			140
Peak-Hour Factor, PHF	0.90	0.90	0.90			0.90	0.90			0.90
Hourly Flow Rate, HFR	0	0	33			0	0			155
Percent Heavy Vehicles	17	17	17			17	17			17
Percent Grade (%)		0					0			
Flared Approach		Υ					N	T		
Storage		1	 				1			
RT Channelized			0							0
Lanes	0	0	1			0	0	+		1
Configuration		 	R							R
Delay, Queue Length, a	and Level of Se	rvice					1			
Approach	NB	SB	,	Westbo	ound			Eastbo	nund	
Movement	1	4	7	8		9	10	1		12
Lane Configuration	L	 L	•			R		 	<u>'</u>	R
v (vph)	88	11				33				155
C (m) (vph)	678	760				579				527
v/c	0.13	0.01				0.06				0.29
95% queue length	0.44	0.04				0.18				1.22
Control Delay	11.1	9.8				11.6		1		14.7
LOS	В	Α				В		1		В
Approach Delay				11.6		<u> </u>	14.7			
Approach LOS				В			B			
>							В			

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	TWO	D-WAY STOR	CONTR	OL SUN	/MARY			
General Information	1		Site I	nformat	tion			
Analyst Agency/Co. Date Performed Analysis Time Period	Praba H.W.Lochi 4/18/2002 pm peak		Jurisdio	Intersection Jurisdiction Analysis Year		Fort Dade Ave. with Road 2025		h Cobb
Project Description BU	ILD ALTERNA	TIVE						
East/West Street: Fort L		· · · · -	North/S	South Stre	et: Cobb F	Road		
Intersection Orientation:	North-South			Period (hr				
Vehicle Volumes an	d Adiustme	nts						
Major Street	T	Northbound				Southbo	und	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
Volume	130	720	50		10	590		80
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	144	800	55		11	655		88
Percent Heavy Vehicles	17				17			
Median Type			Raised curb					
RT Channelized			0					0
Lanes	1	2	0		1	2		0
Configuration	L	T	TR		L	T		TR
Upstream Signal		0			0			
Minor Street	<u> </u>	Westbound		Eastbound				
Movement	7	8	9		10	11		12
	L L	Т	R		L	Т		R
Volume	150	20	20		20	20		100
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	17	0	22		0	0		111
Percent Heavy Vehicles	17	17	17		17	17		17
Percent Grade (%)		0	<u> </u>			0		
Flared Approach	-	Y				N		
Storage		1				1		
RT Channelized			0					0
Lanes	0	0	1		0	0		1
Configuration			R					R
Delay, Queue Length, a	nd Level of Se							
Approach	NB	SB	,	Westbour	nd		Eastboun	d
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L			R			R
v (vph)	144	11			22			111
C (m) (vph)	768	692			535			584
v/c	0.19	0.02			0.04			0.19
95% queue length	0.69	0.05			0.13			0.70
· · · · · · · · · · · · · · · · · · ·	10.8							
Control Delay		10.3	-		12.0			12.6
LOS	В	В			В			В
Approach Delay			_	12.0			12.6	
Approach LOS			В			В		

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		O-WAY STOR								
General Informatio				nform	ation					
Analyst	Praba			Intersection			Yontz Road with Cobb Road			
Agency/Co. Date Performed	H.W.Loch 4/18/2002			Jurisdiction Analysis Year			2025			
Analysis Time Period	am peak	•	Allalys	ois i eai		4	2025			
Project Description Box		TIVE								
East/West Street: Yont		· · · · -	North/	South S	treet: Co	bb Roa	ad			
Intersection Orientation:					(hrs): 0.2					
Vehicle Volumes a	nd Adiustme	ente								
Major Street		Northbound						und		
Movement	1	2	3	3 4			5	1114	6	
	L	Т	R		L		T		R	
Volume	90	440	150		10		530		20	
Peak-Hour Factor, PHF	0.90	0.90	0.90)	0.90		0.90		0.90	
Hourly Flow Rate, HFR	100	488	166		11		588		22	
Percent Heavy Vehicles	17				17					
Median Type	Raised curb									
RT Channelized			0	0					0	
Lanes	1	2	0	0 1			2		0	
Configuration	L	T	TR	TR L			T		TR	
Upstream Signal		0					0			
Minor Street	Westbound						Eastbou	nd		
Movement	7	8	9		10		11		12	
	L	Т	R		L		Т		R	
Volume	180	10	10				10		70	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90 0.90			0.90		0.90	
Hourly Flow Rate, HFR	200	11	11		22		11		77	
Percent Heavy Vehicles	17	17	17		17		17		17	
Percent Grade (%)		0					0			
Flared Approach		Y					Y			
Storage		1					1			
RT Channelized			0						0	
Lanes	0	1	0		0		1		0	
Configuration		LTR				<u> </u>	LTR			
Delay, Queue Length, a	and Level of Se									
Approach	NB	SB		Westbo	und			Eastbound		
Movement	1	4	7	8	9		10	11	12	
Lane Configuration	L	L	<u>'</u>	LTR			10	LTR	1 12	
v (vph)	100	11		222		-+		110	1	
C (m) (vph)	869	834		331				1097	 	
v/c	0.12	0.01		0.67				0.10	+	
95% queue length	0.72	0.04		4.57				0.70		
Control Delay	9.7	9.4						8.6	1	
LOS	9.1 A	A A		35.4 E		-+				
Approach Delay				35.4		-+		8.6		
					·	_	8.6			
Approach LOS			E				Α			

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	TW	O-WAY STOP	CONTR	OL SI	JMN	/IARY				
General Information	ı		Site I	nform	atic	n				
Analyst Agency/Co. Date Performed	Praba H.W.Loch 4/18/2002		Jurisdi	Intersection Jurisdiction Analysis Year			Yontz Road with Cobb Road			
Analysis Time Period	pm peak		Analysis fear				2025			
Project Description BU East/West Street: Yontz		IIVE	N1	2 11 . 0		0.11.6				
Intersection Orientation:						t: Cobb F	<i>коаа</i>			
			Study	Period	(nrs)	. 0.25				
Vehicle Volumes an Major Street	ia Aajustme	Northbound					04	1		
Movement	1	Northbound 2	3	3 4		Southbox 5	una I	6		
Movement	 	T	R			_ 	T 3		 R	
Volume	90	530	180			10	450		10	
Peak-Hour Factor, PHF	0.90	0.90	0.90			0.90	0.90		0.90	
Hourly Flow Rate, HFR	100	588	200			11	500		11	
Percent Heavy Vehicles	17		17							
Median Type		Raised curb								
RT Channelized			0					0		
Lanes	1	2	0	0 1		2		0		
Configuration	L	T	TR	TR L		T		TR		
Upstream Signal		0					0			
Minor Street		Westbound						nd		
Movement	7	8	9			10	11		12	
	L	Т	R			L	Т		R	
Volume	140	15	20			25	40		60	
Peak-Hour Factor, PHF	0.90	0.90		0.90 0.90			0.90		0.90	
Hourly Flow Rate, HFR	155 17	16		22 27			44		66	
Percent Heavy Vehicles Percent Grade (%)	17	17	17			17	17		17	
· · · · · · · · · · · · · · · · · · ·		0 Y	1				0	1		
Flared Approach			_				Y			
Storage	-	1					1			
RT Channelized			0				<u> </u>		0	
Lanes	0	1 1 7 7 7	0			0	1 1 70		0	
Configuration		LTR					LTR			
Delay, Queue Length, a			r	\A/ 11						
Approach Movement	NB	SB	7	Westbo	ouna			Eastbound		
	1	4	'	8	, -	9	10	11	12	
Lane Configuration	100	11		LTR				LTR		
v (vph)	952	737	-	193				137		
C (m) (vph) v/c	952 0.11	0.01		345				1138		
95% queue length	0.11	0.01		0.56				0.12		
				3.25			<u> </u>	0.41		
Control Delay	9.2	10.0-		27.9			-	8.6		
LOS	Α	Α		D 07.6				A		
Approach Delay				27.9	<i>'</i>			8.6		
Approach LOS			D			Α				

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		D-WAY STOF							
General Information				nforma	ation				
Analyst	Praba			Intersection			Youth Drive with Cobb Road		
Agency/Co.	H.W.Loch			Jurisdiction		2025			
Date Performed Analysis Time Period	4/18/2002		Analys	Analysis Year					
Project Description BUI	am peak	TNE							
East/West Street: Youth		IIVE	North/	South St	root: Cobb	Pood			
Intersection Orientation:					reet: <i>Cobb</i> nrs): <i>0.25</i>	Road			
		4 -	Study	Period (i	118). 0.25				
Vehicle Volumes and	<u>a Aajustme</u> T	nts Northbound				041-1			
Major Street Movement	+		1 2			Southbo	una		
wovernent	1 L	2 	3 R		4	5 		6	
Volume	0	370	100		50	450		R 0	
Peak-Hour Factor, PHF	0.86	0.90	0.90		0.90	0.90		0.84	
Hourly Flow Rate, HFR	0.00	411	111		<u> </u>	500		0.64	
Percent Heavy Vehicles	10		 		17				
Median Type	Raised curb								
RT Channelized			0	, tuiou	our b			0	
Lanes	0	2	1		1	2		0	
Configuration		T	R		L				
Upstream Signal		0				0			
Minor Street		Westbound				Eastbou	nd		
Movement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
Volume	80	0	50		0	0		0	
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90 0.72		0.72		0.72	
Hourly Flow Rate, HFR	88	0	55	55 0		0		0	
Percent Heavy Vehicles	17	17	17		8	0		0	
Percent Grade (%)		0				0			
Flared Approach		Y				Y			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	0		0	
Configuration	1	LTR				—			
Delay, Queue Length, ar	nd Level of Se								
Approach	NB	SB		Westbou	ınd		Eastbound	4	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	-	L.	,	LTR	 	 	- ' ' -	1	
v (vph)		55		143					
C (m) (vph)		943		1468			 		
v/c		0.06		0.10				1	
95% queue length		0.19		0.32			 	+	
Control Delay		9.1		7.7				+	
LOS		A		A				+	
Approach Delay			 	7.7			I		
			7.7 A						

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		D-WAY STOP								
General Information				<u>nforma</u>	tion					
Analyst Agency/Co. Date Performed Analysis Time Period Project Description <i>BU</i>	Praba H.W.Loch 4/18/2002 pm peak		Jurisdi	Intersection Jurisdiction Analysis Year			Youth Drive with Cobb Road			
East/West Street: Youth		IIVE	N a mile /	Cauth Ch	cati Cabb	Dood				
Intersection Orientation:					reet: Cobb rs): 0.25	Roau				
			Study	renou (ii	15). 0.23					
Vehicle Volumes an	<u>d Adjustme</u>									
Major Street	1	Northbound				Southboo	und			
Movement	1 L		3	3 4 R L		5 T		6		
Volume	0	490		70 80		350		R 0		
Peak-Hour Factor, PHF	0.86	0.90		0.90 0.90		0.90		0.84		
Hourly Flow Rate, HFR	0.00	544	77			388		0		
Percent Heavy Vehicles	10		- 17							
Median Type	 			Raised o						
RT Channelized	1	T	0					0		
Lanes	0	2		1 1		2		0		
Configuration		T		R L		$\frac{1}{T}$				
Upstream Signal		0			0					
Minor Street		Westbound	ì			Eastbou	nd .			
Movement	7	8	9		10	11		12		
	L	Т	R		L	Т		R		
Volume	110	0	40			0		0		
Peak-Hour Factor, PHF	0.90	0.90	0.90	0.90 0.72		0.72		0.72		
Hourly Flow Rate, HFR	122	0	44	44 0		0		0		
Percent Heavy Vehicles	17	17	17	17 8		0		0		
Percent Grade (%)		0				0				
Flared Approach		Υ				Y				
Storage		1				1				
RT Channelized			0					0		
Lanes	0	1	0		0	0		0		
Configuration	1	LTR								
Delay, Queue Length, a	nd Level of Se	rvice								
Approach	NB	SB		Westbou	ınd		Eastbound	1		
Movement	1	4	7	8	9	10	11	12		
Lane Configuration		L		LTR	3	1 10	''	1 '-		
v (vph)				166		-		 		
								+		
C (m) (vph)		860		851				1		
V/C		0.10		0.20						
95% queue length		0.34		0.72						
Control Delay		9.7	10.3							
LOS		Α		В						
Approach Delay				10.3						
Approach LOS			В							

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	TW	O-WAY STOP	CONTR	OL SU	MMARY				
General Information			Site I	nforma	tion				
Analyst Agency/Co. Date Performed Analysis Time Period		2	Interse Jurisdi	Intersection Jurisdiction Analysis Year			CR 476 with US 98 2025		
Project Description BU			b						
East/West Street: Lake									
Intersection Orientation:			Study	Perioa (r	irs): 0.25				
Vehicle Volumes an	<u>ld Adjustme</u>								
Major Street		Northbound					und		
Movement	1 1	2 T	3			5		6	
Volume	10	530	70		60	T		R	
Peak-Hour Factor, PHF	0.90	0.90	0.90)	0.90	620 0.90		10 0.90	
Hourly Flow Rate, HFR	11	588	77	<u></u>	66	688		11	
Percent Heavy Vehicles	17		- 17						
Median Type	+''	Raised curb							
RT Channelized			0					0	
Lanes	1	2	0 1		2		0		
Configuration	Ĺ	- -	TR L			T 7		TR	
Upstream Signal	_	0			_	0		,,,	
Minor Street		Westbound					nd		
Movement	7	8	9		10	11	1	12	
	L	Т	R		L	Т		R	
Volume	80	50	80		10	50		10	
Peak-Hour Factor, PHF	0.90	0.90	<u> </u>		0.90	0.90		0.90	
Hourly Flow Rate, HFR	88	55	88			55		11	
Percent Heavy Vehicles	17	17	17		17	17		17	
Percent Grade (%)		0				0			
Flared Approach		Y				Y			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length, a	nd I evel of Se								
Approach	NB	SB		Westbou	ınd		Eastbound		
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	L	L	 '	LTR		+ 10	LTR	1 12	
	11	66				-		+	
v (vph)				231		-	77	-	
C (m) (vph)	800	826		661			981		
v/c	0.01	0.08		0.35			0.08		
95% queue length	0.04	0.26	1.57				0.25		
Control Delay	9.6	9.7	13.3				9.0		
LOS	Α	Α		В		A			
Approach Delay				13.3		T	9.0	-	
Approach LOS			В			A A			

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	TW	O-WAY STOP	CONTR	OL SU	MMARY				
General Information	1		Site I	nforma	ation				
Analyst Agency/Co. Date Performed Analysis Time Period		2	Interse Jurisdi	Intersection Jurisdiction Analysis Year			CR 476 with US 98 2025		
Project Description BU			I N1 (1 (0 11 01					
East/West Street: Lake Intersection Orientation:		(CR476)			reet: US 98	3			
			Study	Perioa (nrs): 0.25				
Vehicle Volumes an									
Major Street		Northbound					und		
Movement	1 1	2	3 4		5		6		
Volume	L 10	T	R L		T		R		
Peak-Hour Factor, PHF	10 0.90	620		90 80		500		10	
Hourly Flow Rate, HFR	11	0.90	0.90		0.90	0.90		0.90	
Percent Heavy Vehicles	17	688	100 88			555		11	
Median Type	1/			Doined	17				
RT Channelized	+		1 0	Raised	curb				
Lanes	1	2	0			+		0	
Configuration	L	T	TR		1	2		<u> </u>	
Upstream Signal		0	 '^		L	T 0		TR	
Minor Street Movement	7	Westbound			40	Eastbou	nd	40	
wovernent		8 T	9		10	11		12	
Valuma	L 70		R		L	T		R	
Volume Peak-Hour Factor, PHF	70 0.90	60	50		10	40		10	
Hourly Flow Rate, HFR	77	0.90 66	0.90		0.90	0.90		0.90	
Percent Heavy Vehicles	17	17	17	55 11		17		11	
Percent Grade (%)	 ''	0	17		17			17	
						0			
Flared Approach		Y				Y			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length, a	nd Level of Se	ervice							
Approach	NB	SB		Westboo	und		Eastbound		
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	L	L		LTR			LTR	1	
v (vph)	11	88		198		1	66	1	
C (m) (vph)	905	737		602		1	1027	1	
v/c	0.01	0.12					0.06	 	
95% queue length	0.04	0.12		0.33		-		1	
				1.43			0.21	 	
Control Delay	9.0	10.5		13.9			8.7		
LOS	Α	В		В			Α		
Approach Delay				13.9		8.7			
Approach LOS			В			A			

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	TW	O-WAY STOP	CONTR	OL SUM	MARY				
General Information	1		Site II	nformati	on				
Analyst	Praba	-	Interse	ection		CR 491A	with US 98		
Agency/Co.	H.W.Loch	ner, Inc.	Jurisdi	Jurisdiction					
Date Performed	4/18/2002	2	Analys	sis Year		2025			
Analysis Time Period	am peak								
Project Description BU		TIVE							
East/West Street: US 98					et: CR 491	1A			
Intersection Orientation:	East-West		Study I	Period (hrs	s): 0.25				
Vehicle Volumes an	d Adjustme								
Major Street	<u> </u>	Eastbound				Westbou	nd		
Movement	1 1	2	3		4	5		6	
M.I.	L	T	R		L	T		R	
Volume	10	620	10		10	550		30	
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90	
Hourly Flow Rate, HFR	11	688	11		11	611		33	
Percent Heavy Vehicles	17			Doine de	17 b				
Median Type				Raised cu	T				
RT Channelized		+	0		 _ _ _ _ _ _ 		0		
Lanes	1	2 T	0 TD			2		1	
Configuration	L	0	TR L		<i>T</i> 0		R		
Upstream Signal									
Minor Street		Northbound	1 0 1 10 1			Southbou	<u>ınd</u>		
Movement	7	8 -	9		10	11		12	
.,.	L L	T	R		L	Т		R	
Volume	5	5	5		50	5		5	
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90	
Hourly Flow Rate, HFR	5 17	5 17	5 17		55	5		5	
Percent Heavy Vehicles	17		17		17	17		17	
Percent Grade (%)		0				0			
Flared Approach		Y	4			. Y			
Storage		1				1			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length, a									
Approach	EB	WB		Northbour	d	S	Southbound	1	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	L	L		LTR			LTR		
v (vph)	11	11		15			65		
C (m) (vph)	842	800		1106			1173		
v/c	0.01	0.01		0.01			0.06		
95% queue length	0.04	0.04		0.04	T		0.18		
Control Delay	9.3	9.6		8.3			8.2		
LOS	Α	Α		Α			Α		
Approach Delay				8.3			8.2	<u> </u>	
Approach LOS				A			A		
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	TW	O-WAY STOF	CONTR	OL SUM	IMARY .			
General Informatio	n		Site I	nformat	ion			
Analyst	Praba		Interse			CR 491A	with US 9	8
Agency/Co.	H.W.Lock		Jurisdi					
Date Performed	4/18/2002	2	Analys	sis Year		2025		
Analysis Time Period	pm peak							
Project Description Bl		TIVE	h					
East/West Street: US 9					et: CR 49	1A	****	
Intersection Orientation:								
Vehicle Volumes a	<u>nd Adjustme</u>							
Major Street		Eastbound				Westbou	nd	
Movement	1 1	2	3		4	5		6
Volume	10	520	R 10		L	T 620		R
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	630 0.90		50 0.90
Hourly Flow Rate, HFR	11	577	11		11	700		55
Percent Heavy Vehicles					17			
Median Type		I			L			
RT Channelized			0	Raised cι			0	
Lanes	1	2	0			2		1
Configuration	L	T	TR			T		R
Upstream Signal		0				0		
Minor Street		Northbound					und	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume	10	5	5		35	10		5
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	11	'5		5 38		11		5
Percent Heavy Vehicles	17	17	17		17	17		17
Percent Grade (%)		0				0		
Flared Approach		Y				Υ		
Storage		1				1		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, a	and Level of Se							
Approach	EB	WB		Northbour	nd	S	Southbound	t
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	11	11		21			54	1
C (m) (vph)	760	887		1184			1117	
v/c	0.01	0.01		0.02			0.05	
95% queue length	0.04	0.04		0.05			0.15	
Control Delay	9.8	9.1		8.1	1		8.4	
LOS	9.0 A	A A						-
				A 9.1			A	
Approach Delay			ļ	8.1			8.4	
Approach LOS ACS2000 TM				A	eserved		A	

	TW	O-WAY STOP	CONTR	OL SU	JMMAF	RY			
General Information	n		Site I	nform	ation				
Analyst	Praba		Interse	ection			CR 491 w	ith US 98	
Agency/Co.	H.W.Loch	nner, Inc.	Jurisdi	ction					
Date Performed	4/18/2002	2	Analys	sis Year			2025		
Analysis Time Period	am peak								
Project Description BU		TIVE							
East/West Street: US 9					treet: C		1		
Intersection Orientation:			Study I	Period (hrs): <i>0.</i>	25			
Vehicle Volumes ar	<u>nd Adjustme</u>								
Major Street		Eastbound	1 2			Westbou	nd		
Movement	1 L		3 R		4		5 T		6 R
Volume	80	440	10		50		470		20
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90)	0.90		<u>20</u> 0.90
Hourly Flow Rate, HFR	88	488	11		55	,	522		22
Percent Heavy Vehicles				-+	17				
Median Type	+ ''	· ·		Raised curb		1	I		
RT Channelized	+		0					I	0
Lanes	1	2	0	-+	1		2	 	0
Configuration	i	$\frac{2}{T}$	TR		L		T		TR
Upstream Signal		0	 	,,, <u>-</u>		0			
Minor Street	Northbound						Southbou	ınd	
Movement	7	8	9	9 10			11	ind	12
IVIO V OTITICITA	Ĺ	T	R		L		T		R
Volume	10	70	10		160		20		20
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90		0.90		0.90
Hourly Flow Rate, HFR	11	77	11		177		22		22
Percent Heavy Vehicles		17	17		17		17		17
Percent Grade (%)		0					0		
Flared Approach		Y	i				Y		
Storage		1					1		
RT Channelized			0		· · · · · · · · · · · · · · · · · · ·		<u> </u>		0
Lanes	0	1	0		0		1		0
Configuration	 	LTR	+				LTR		
Delay, Queue Length, a	and Level of Se								
Approach	EB	WB	4.	Northbo	ound		S	Southbound	<u> </u>
Movement	1	4	7	8		9	10	11	12
Lane Configuration	L	L		LTR				LTR	
v (vph)	88	55		99				221	
C (m) (vph)	924	963		686				389	
v/c	0.10	0.06		0.14				0.57	
95% queue length	0.31	0.18		0.50			†	3.40	
Control Delay	9.3	9.0		11.1				25.7	1
LOS	A	A		В				D	
Approach Delay				11.1				25.7	L
Approach LOS	<u></u>			B				D	
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	TW	O-WAY STOP	CONTR	OL SUM	MARY			
General Informatio	n		Site I	nformati	on			
Analyst	Praba		Interse	ection		CR 491 v	with US 98	
Agency/Co.	H.W.Loc	hner, Inc.	Jurisd	iction				
Date Performed	4/18/200)2	Analys	sis Year		2025		
Analysis Time Period	pm peak							
Project Description Bl		ATIVE						
East/West Street: US 9			North/S	South Stree	et: CR 49	1		
Intersection Orientation:	East-West		Study	Period (hrs): 0.25			
Vehicle Volumes a	nd Adjustm	ents						
Major Street		Eastbound				Westbou	und	
Movement	1	2	3		4	5		6
	L	T	R		L	Т		R
Volume	20	390	40		10	500		120
Peak-Hour Factor, PHF	0.90	0.90	0.90	<u>'</u>	0.90	0.90		0.90
Hourly Flow Rate, HFR	22	433	44		11	555		133
Percent Heavy Vehicles	17				17			
Median Type				Raised curb				
RT Channelized			0					0
Lanes	1	2	0		1	2		0
Configuration	L	T	TR		L	T		TR
Upstream Signal		0			0			
Minor Street		Northbound					und	
Movement	7	8	9		10	11		12
\/ . 1	L	T	R		L	Т		R
Volume	10	80	10		90	50		30
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.90 11	0.90	0.90	<u>' </u>	0.90	0.90	- (0.90
Percent Heavy Vehicles		88 17	11 17		100	55		33
Percent Grade (%)	17				17	17		17
		0	<u> </u>			0		
Flared Approach		Y				Y		
Storage		1				1		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, a								
Approach	EB	WB		Northboun	d		Southbound	
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L		LTR			LTR	
v (vph)	22	11		110			188	
C (m) (vph)	809	983		786			722	
v/c	0.03	0.01		0.14			0.26	
95% queue length	0.08	0.03		0.49			1.04	
Control Delay	9.6	8.7		10.3			11.7	
LOS	Α	Α		В			В	
Approach Delay				10.3			11.7	
Approach LOS				B				
						1	В	
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	TWO	D-WAY STOP	CONTR	OL SU	MMARY				
General Informatio	n		Site I	nforma	ation				
Analyst	Praba		Interse	Intersection			Landfill Road with US 98		
Agency/Co.	H.W.Loch		Jurisdi	ction					
Date Performed	4/18/2002)	Analys	is Year		2025			
Analysis Time Period	am peak								
Project Description Bl		TIVE							
East/West Street: US 9					reet: Landfill	Road			
Intersection Orientation:	East-West		Study I	Period (I	nrs): <i>0.25</i>				
Vehicle Volumes a	nd Adjustme								
Major Street		Eastbound				Westbound			
Movement	1	2	3		4	5		6	
	<u> </u>	T	R		L	T		R	
Volume	0	460	40		80	370		0	
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90	
Hourly Flow Rate, HFR	0	511	44		88	411		0	
Percent Heavy Vehicles	15			17					
Median Type RT Channelized	Raised curb					T			
	0			0		 		0	
Lanes	0	2 T		0 1		2 T		0	
Configuration		0	TR	TR L		0			
Upstream Signal	-								
Minor Street	7	Northbound		9 10		Southbo	und	40	
Movement		8 T				11		12	
Maliana	L		R		L 0	T		R	
Volume Peak-Hour Factor, PHF	50 0.90	0.90		60 0.90		0.90	<u>-</u>	0.00	
Hourly Flow Rate, HFR	55	0.90	66			0.90		0.90	
Percent Heavy Vehicles		0	17			4		9	
Percent Grade (%)	- ''	0			20	0		-	
Flared Approach		T Y				T Y			
	+								
Storage		1				1			
RT Channelized			0					0	
Lanes	1	0	1		0	0		0	
Configuration	L		R			<u> </u>			
Delay, Queue Length, a			T						
Approach	EB	WB	_	Northbo			Southbou	<u>-</u>	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		L	L		R		ļ		
v (vph)		88	55		66		<u> </u>		
C (m) (vph)		915	345		676		ļ		
v/c		0.10	0.16		0.10				
95% queue length		0.32	0.56		0.32				
Control Delay		9.4	17.4		10.9				
LOS		Α	С		В				
Approach Delay			1	13.9		†			
Approach LOS				В					
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General Information		D-WAY STOI		nformat				
					ion			
Analyst	Praba H.W.Loch	nor Inc	Interse			Landfill F	Road with	1 US 98
Agency/Co. Date Performed	4/18/2002		Jurisd	sis Year		2025		
Analysis Time Period	pm peak		Analys	sis rear		2025		
Project Description BU		TIVE						
East/West Street: US 98		IIVE	North/	South Stro	et: <i>Landfi</i>	II Dood		
Intersection Orientation:				Period (hr		i Road		
			Otudy	r enou (III.	5). 0.23			
Vehicle Volumes an	a Aajustme T	Eastbound		- T		\	1	
Major Street Movement	1	2	3		1	Westbou	ina T	-
VIOVEITIENT	† '	T	R		4	5 T		6 R
Volume	0	370	50		60	470		0
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	0	411	55		66	522		0.90
Percent Heavy Vehicles	15				17			
Median Type				Raised cu				
RT Channelized			0				T	0
Lanes	0	2	0		1	2		0
Configuration		T	TR		L	$\frac{1}{T}$		
Upstream Signal		0		- 0				
Minor Street		Northbound				Southbo	und	
Movement	7	8	9		10	11	1	12
	L	Т	R		L	Т		R
Volume	40	0	90		0	0		0
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR	44	0	100		0	0		0
Percent Heavy Vehicles	17	0	17		25	4		9
Percent Grade (%)		0				0		
Flared Approach		Y				Y		
Storage		1				1		
RT Channelized	1		0			† 		0
Lanes	1	0	1		0	0		0
Configuration	L		R			† •		
Delay, Queue Length, a	nd Level of Se	rvice						
Approach	EB	WB	T	Northbour	nd]	Southbou	ınd
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	Ĺ	 	R	 	 ''	12
v (vph)		66	44	 	100	1		
C (m) (vph)		993	380		-	-		
					725	_		
//c		0.07	0.12		0.14			
95% queue length		0.21	0.39		0.48			
Control Delay		8.9	15.7		10.8			
LOS		Α	С		В			
Approach Delay				12.3	-			<u> </u>
Approach LOS						4		

APPENDIX E

LEVEL OF SERVICE OF HIGHWAY SEGMENTS FOR THE NO-BUILD 2025 CONDITIONS (HCS 2000 ANALYSIS)

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		t Dade Aven unty Study - NO		LTERNA'	TIVE	
		Input Data_			*************	
Segment length 0.	.0 ft	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.90 17 0 100 7	0 % % % /mi
Two-way hourly volume, Directional split						
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	n (note-2)	1.00 1.1 1.0 0.983 1435 775	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, f		- - 47.0 0.0 1.8	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			45.3	mi/h		
Adjustment for no-passi Average travel speed, A		р	1.7 32.4	mi/h mi/h		
***************************************	Percent T	ime-Spent-F	ollowing			***************************************
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fH -1) vp it proportio -following, tribution an owing, PTSF	n (note-2) BPTSF d no-passin			79.0	pc/h %
Level o	f Service an	d Other Per	formance	: Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel of travel,	VMT60			E 0.45 106 381 3.3	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		venue / Yon unty		.LTERNA:	「IVE	
		.nput Data_				
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 1. Terrain type Le Grade: Length Up/down	.0 ft 5 mi vel	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.9 17 0 38 2	0 % % % /mi
Two-way hourly volume, Directional split						
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	n (note-2)	1.00 1.1 1.0 0.983 1198 647	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, fI		- - 55.0 0.0 0.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			54.5	mi/h		
Adjustment for no-passi Average travel speed, A)	1.2 44.0	mi/h mi/h		
	Percent Ti	.me-Spent-F	ollowing			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fHV -1) vp it proportior -following, F tribution and	n (note-2) BPTSF	g zones,	fd/np	1.00 1.1 1.0 0.983 1198 647 65.1 7.3 72.4	pc/h %
Level o	f Service and	d Other Per	formance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, of travel, \				D 0.37 442 1590 10.0	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road	Praba H.W.Lochner, Inc 4/16/2002 Design Hour Cobb Road Yontz Road / Youth D Okaloosa County 2025 & US 98 PD&E Study - 1		ALTERNA	TIVE	
	Input Dat	a			
	•				78.00.000
Lane width 12 Segment length 1.	.0 ft % Trucks 1 mi % Recrea	sing zones	s nicles	0.9 17 0 54 1	0 % % /mi
Two-way hourly volume, Directional split					
	Average Travel S	peed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	1.00 1.2 1.0 0.967 764) 413	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, fLS	- - 55.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS		54.8	mi/h		
Adjustment for no-passi Average travel speed, A		2.4 46.5	mi/h mi/h		
*****	Percent Time-Spent	-Following	J		
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-followed	t factor, fHV -1) vp it proportion (note-2 -following, BPTSF tribution and no-pass		fd/np	1.00 1.1 1.0 0.983 751 406 48.3 14.2 62.5	pc/h %
Level o	f Service and Other P	erformance	e Measu	res	
Level of service, LOS Volume to capacity rations Peak 15-min vehicle-miles Peak-hour vehicle-miles Peak 15-min total trave	es of travel, VMT15 of travel, VMT60			C 0.24 203 732 4.4	veh-mi veh-mi veh-h

0.20

242

872

5.1

veh-mi

veh-mi

veh-h

Volume to capacity ratio, v/c

Peak 15-min vehicle-miles of travel, VMT15

Peak-hour vehicle-miles of travel, VMT60

Peak 15-min total travel time, TT15

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		CR476 unty Study - NO		LTERNA:	「IVE	
		Input Data_				
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 1. Terrain type Le Grade: Length Up/down	.0 ft	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.90 17 0 20 1	0 % % % /mi
Two-way hourly volume, Directional split		veh/h %				
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, -1) vp	n (note-2)	1.00 1.1 1.0 0.983 1322 714	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, f		- - 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			59.8	mi/h		
Adjustment for no-passi Average travel speed, A		р	0.7 48.8	mi/h mi/h		
	Percent T	ime-Spent-F	ollowing			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fH -1) vp it proportio -following, tribution an owing, PTSF	n (note-2) BPTSF d no-passin			72.5	pc/h %
Level o	f Service an	a Other Per	iormance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel of travel,	VMT60			D 0.41 488 1755 10.0	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road	Praba H.W.Lochner, Inc 4/16/2002 Design Hour US 98 CR 476 / CR 491A Okaloosa County 2025 US 98 PD&E Study - N	O-BUILD A	LTERNA'	TIVE	
	Input Data				
Highway along Class 1					
Highway class Class 1 Shoulder width 6.0 Lane width 12 Segment length 0.0 Terrain type Length Up/down	.0 ft % Trucks 6 mi % Recreat	factor, and buses ional veh ing zones ints/mi	icles	0.90 17 0 6 1	% % % % /mi
Two-way hourly volume, 'Directional split					
	Average Travel Sp	eed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment Two-way flow rate, (note Highest directional spl.) Free-Flow Speed from Fir Field measured speed, Sobserved volume, Vf Estimated Free-Flow Speed Base free-flow speed, Badj. for lane and should Adj. for access points, Free-flow speed, FFS Adjustment for no-passic Average travel speed, Adv.	t factor, -1) vp it proportion (note-2) eld Measurement: FM ed: FFS der width, fLS fA	- 60.0 0.0 0.3 59.8 0.2 49.9	pc/h pc/h mi/h veh/h mi/h mi/h mi/h mi/h		
	£C			1 00	
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll Level o	t factor, fHV -1) vp it proportion (note-2) -following, BPTSF tribution and no-pass	.ng zones,		67.4	pc/h %
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, VMT15 of travel, VMT60			D 0.39 168 605 3.4	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		R 491 unty Study - NO		LTERNA	TIVE	
		Input Data_				
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 1. Terrain type Le Grade: Length Up/down	.0 ft 6 mi	Peak-hour % Trucks a % Recreati % No-passi Access poi	and buses lonal veh lng zones	icles	0.9 17 0 28 1	0 % % % /mi
Two-way hourly volume, Directional split						
	Average	Travel Spe	eed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl.	t factor, -1) vp	n (note-2)	1.00 1.2 1.0 0.967 1172 633	pc/h pc/h		
Free-Flow Speed from Figure Field measured speed, Someone Conserved volume, Vf Estimated Free-Flow Speed Base free-flow speed, Badj. for lane and should Adj. for access points,	FM ed: FFS der width, f		- - 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			59.8	mi/h		
Adjustment for no-passin Average travel speed, A	ng zones, fn	p	1.0 49.6	mi/h mi/h		
	Percent T	ime-Spent-F	ollowing			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment Two-way flow rate, (note Highest directional splishase percent time-spent-Adj.for directional distance Percent time-spent-folio	t factor, fH -1) vp it proportion -following, i tribution and owing, PTSF	n (note-2) BPTSF d no-passin			70.3	pc/h %
	f Service and	d Other Per	formance	Measu	ces	
Level of service, LOS Volume to capacity ratio Peak 15-min vehicle-miles Peak-hour vehicle-miles Peak 15-min total travel	es of travel, of travel,				D 0.37 453 1632 9.1	veh-mi veh-mi veh-h

Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description Cobb Road		ndfill Road unty Study - NC	-BUILD A	LTERNA'	rive	
		Input Data_				
Highway class Class 1 Shoulder width 6. Lane width 12 Segment length 2. Terrain type Le Grade: Length Up/down	.0 ft 6 mi	Peak-hour % Trucks a % Recreati % No-passi Access poi	nd buses onal veh ng zones	icles	0.9 17 0 27 1	0 % % /mi
Two-way hourly volume, Directional split						
	Average	Travel Spe	ed			
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl	t factor, .	n (note-2)	1.00 1.2 1.0 0.967 1068 577	pc/h pc/h		
Free-Flow Speed from Fi Field measured speed, S Observed volume, Vf Estimated Free-Flow Spe Base free-flow speed, B Adj. for lane and shoul Adj. for access points,	FM ed: FFS der width, fi		- - 60.0 0.0 0.3	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFS			59.8	mi/h		
Adjustment for no-passi Average travel speed, A		р	1.2 50.3	mi/h mi/h		
	Percent T	ime-Spent-F	ollowing	Ī		
Grade adjustment factor PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustmen Two-way flow rate, (note Highest directional spl Base percent time-spent Adj.for directional dis Percent time-spent-foll	t factor, fH -1) vp it proportion -following, in tribution and	n (note-2) BPTSF	g zones,	fd/np	1.00 1.1 1.0 0.983 1051 568 60.3 7.3 67.6	pc/h %
Level o	f Service and	d Other Per	formance	Measu	res	
Level of service, LOS Volume to capacity rati Peak 15-min vehicle-mil Peak-hour vehicle-miles Peak 15-min total trave	es of travel, of travel,				D 0.33 672 2418 13.4	veh-mi veh-mi veh-h

IWO-Way IWO-Lane Highway S	egment Ar	narysis		
Analyst Praba Agency/Co. H.W.Lochner, Inc Date Performed 4/16/2002 Analysis Time Period Design Hour				
Analysis Time Period Design Hour Highway US 98 From/To Landfill Road / Sun C	oast Pkwy	7		
Jurisdiction Okaloosa County	oase raw	<i>!</i>		
Analysis Year 2025 Description Cobb Road & US 98 PD&E Study - N	10-DIITT 7	TUEDNIN	m = 3 712	
Description comb road & 05 90 FD&E Study - N	IO-POILD A	ALTERNA	LIAF	
Input Data	L		***************************************	
Highway class Class 1 Shoulder width 6.0 ft Peak-hour Lane width 12.0 ft % Trucks Segment length 1.2 mi % Recreat Terrain type Level % No-pass Grade: Length mi Access po	and buses ional vel	s nicles	0.9 17 0 100 1	90 90
Two-way hourly volume, V 865 veh/h Directional split 54 / 46 %				
Average Travel Sp	eed			
Grade adjustment factor, fG	1.00			
PCE for trucks, ET	1.2			
PCE for RVs, ER Heavy-vehicle adjustment factor,	1.0 0.967			
Two-way flow rate, (note-1) vp	994	pc/h		
Highest directional split proportion (note-2)	537	pc/h		
Free-Flow Speed from Field Measurement: Field measured speed, SFM		mi/h		
Observed volume, Vf	_	weh/h		
Estimated Free-Flow Speed: Base free-flow speed, BFFS	60.0	mi/h		
Adj. for lane and shoulder width, fLS	0.0	mi/h		
Adj. for access points, fA	0.3	mi/h		
Free-flow speed, FFS	59.8	mi/h		
Adjustment for no-passing zones, fnp Average travel speed, ATS	2.6 49.4	mi/h mi/h		
Percent Time-Spent-	Following	J		
Grade adjustment factor, fG			1.00	
PCE for trucks, ET PCE for RVs, ER			1.1 1.0	
Heavy-vehicle adjustment factor, fHV			0.983	
Two-way flow rate, (note-1) vp Highest directional split proportion (note-2)			977	pc/h
Base percent time-spent-following, BPTSF			528 57.6	%
Adj.for directional distribution and no-passi Percent time-spent-following, PTSF	ng zones,	fd/np	12.9 70.6	9
Level of Service and Other Pe	rformance	e Measu	res	
Level of service, LOS				
Volume to capacity ratio, v/c			0.31	
Peak 15-min vehicle-miles of travel, VMT15 Peak-hour vehicle-miles of travel, VMT60			288	veh-mi
Peak 15-min total travel time, TT15			1038 5.8	veh-mi veh-h

APPENDIX F

LEVEL OF SERVICE OF HIGHWAY SEGMENTS FOR THE BUILD 2025 CONDITIONS

(HCS 2000 ANALYSIS)

	MULTILANE HIGHWAYS	WORKSHEET(Direction	on 1)
110 Free-Flow Speed = 100 km/h 100 90 90 km/h 90 km/h 100 80 km/h 100 100 100 km/h 100 100 100 km/h 100 100 100 km/h 100 100 100 km/h 1	C D E E	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input
General Information		Site Information	
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alternat	Praba H.W.Lochner, Inc 4/17/2002 Design Hour ive - Urban Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road SR 50 / Fort Dade Avenue Okaloosa County 2025
□ Oper.(LOS)		Des. (N)	Diam (cm)
Flow Inputs	<u> </u>	Des. (N)	☐ Plan. (vp)
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h) Driver Type Adjustment	1.00	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi) Up/Down %	0.90 17 0 Level 0.00 0.00
Calculate Flow Adjust	mante	Number of Lanes	2
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV}	0.922
Speed Inputs		Calc Speed Adj and F	
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 0.0 7 Divided	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 5.4 1.8 0.0 47.8
Operations		Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	539 47.8 11.3 B	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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	MULTILANE HIGHWAYS	WORKSHEET(Direction	on 1)
110 Free-Flow Speed = 100 km/h 100 90 km/h 90 km/h 100 70 km/h 100 100 A B B 100 km/h 100 400 80	C D E E	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input Output
General Information	riow rate sparions	Site Information	
Analyst Agency or Company Date Performed Analysis Time Period	Praba H.W.Lochner, Inc 4/17/2002 Design Hour tive - Sub-Urban Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road SR 50 / Fort Dade Avenue Okaloosa County 2025
✓ Oper.(LOS)		Des. (N)	Plan. (vp)
Flow Inputs		200. (11)	· · · · · · · · · · · · · · · · · · ·
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h) Driver Type Adjustment	1.00	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi) Up/Down %	0.90 17 0 Level 0.00 0.00
Calculate Flow Adjust	ments	Number of Lanes	2
f _p	1.00	E _R	1.2
E _T	1.5	f _{HV}	0.922
Speed Inputs		Calc Speed Adj and F	FS
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 10.0 7 Divided	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.4 1.8 0.0 52.8
Operations		Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	539 52.8 10.2 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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	MULTILANE HIG	SHWAYS	WORKSHEET(Direct	tion 1)	
1100 Free-Flow Speed = 100 km/h 100 90 km/h 100 90 km/h 100 80 km/h 100 70 km/h 100 100 80 km/h 100 100 80 km/h 100 100 80 km/h 100 100 80 km/h	C D D 10 10 Flow Rate (pc/h/in)	E 600 20	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input FFS, N, V _p FFS, LOS, V _p FFS, LOS, N FFS, N, AADT FFS, LOS, AADT FFS, LOS, N	Output LOS, S, D N, S, D V _p , S, D LOS, S, D N, S, D V _p , S, D
General Information			Site Information		
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour		Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road Fort Dade Avenu Okaloosa County 2025	
Project Description Build Alterna	nive - Orban Arteriai) on (NI)		
Flow Inputs		L	Des. (N)	☐ Plan. (v	p)
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D	794		Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain:	0.90 17 0 Level	
DDHV (veh/h) Driver Type Adjustment	1.00		Grade Length (mi) Up/Down % Number of Lanes	0.00 0.00 2	
Calculate Flow Adjust	ments				
f_p E_T	1.00 1.5		E _R f _{HV}	1.2 0.922	
Speed Inputs			Calc Speed Adj and	I FFS	
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 0.0 7 Divided		f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 5.4 1.8 0.0 47.8	
Operations			Design		
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	478 47.8 10.0 A		Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/lr Design LOS	1)	
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	MULTILANE HIC	SHWAYS	WORKSH	IEET(Directi	on 1)	
1100 Free-Flow Speed = 100 km/h 90 km/h 90 km/h 100 70 km/h 100 A B B	C D D 10 Reference 100 10 Flow Rate (pc/h/in)	E 600 20	00 2400	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input FFS, N, v _p FFS, LOS, v _p FFS, LOS, N FFS, N, AADT FFS, LOS, AADT FFS, LOS, N	Output LOS, S, D N, S, D V _p , S, D LOS, S, D N, S, D V _p , S, D
General Information	riow rate (persun)		Site Info	rmation		
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour		†	ction to Travel	Cobb Road Fort Dade Avenu Okaloosa County 2025	
Project Description Build Alterna	llive - Sub-Orban Arterial)oo (NI)		□ Dian (r	
Flow Inputs		1 L	es. (N)		Plan. (v	/p)
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D	794		Peak-Hour Fa %Trucks and %RVs, P _R General Terra	Buses, P _T	0.90 17 0 Level	
DDHV (veh/h) Driver Type Adjustment	1.00		Grade Len	gth (mi) Down %	0.00 0.00 2	
Calculate Flow Adjust	ments					
f _p E _T	1.00 1.5		E _R f _{HV}		1.2 0.922	
Speed Inputs			1	ed Adj and	FFS	
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 10.0 7 Divided 55.0		f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)		0.0 0.4 1.8 0.0 52.8	
Operations			Design			
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	478 52.8 9.0 A		Design (N) Required Nun Flow Rate, v _p	nber of Lanes, N (pc/h) Flow Rate (pc/h/ln)		
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	MULTILANE HIGHWAYS	S WORKSHEET(Direction	on 1)
	C D E E	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input
General Information	,	Site Information	
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour tive - Rural Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road Yontz Road / Youth Drive Okaloosa County 2025
✓ Oper.(LOS)		Des. (N)	☐ Plan. (vp)
Flow Inputs	<u> </u>	DOG. (14)	ι Ριαιι. (νμ)
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h)	556	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi)	0.90 17 0 Level 0.00
Driver Type Adjustment Calculate Flow Adjust	1.00	Up/Down % Number of Lanes	0.00 2
	1.00	E	4.0
f _p E _T	1.5	E _R f _{HV}	1.2 0.922
Speed Inputs		Calc Speed Adj and F	
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3
Operations		Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	335 58.3 5.8 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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	MULTILANE HIGHWAYS	WORKSHEET(Direction	n 1)
110 Free-Flow Speed = 100 km/h 100 90 km/h 90 km/h 100 90 km/h 100 80 km/h	C D E E	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input
General Information		Site Information	
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour tive - Rural Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road Youth Drive / US 98 Okaloosa County 2025
✓ Oper.(LOS)		Des. (N)	 ☐ Plan. (vp)
Flow Inputs		DOS. (IN)	ι τίαπ. (ν ρ)
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h) Driver Type Adjustment	1.00	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi) Up/Down % Number of Lanes	0.90 17 0 Level 0.00 0.00
Calculate Flow Adjust	ments	Number of Lanes	
f _p E _T	1.00 1.5	E _R	1.2 0.922
Speed Inputs		Calc Speed Adj and F	FS
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3
Operations		Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	301 58.3 5.2 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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	MULTILANE HIGHWAY	S WORKSHEET(Directi	on 1)
40	C D E E	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input Output
General Information	rios rac quitar,	Site Information	
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour tive - Rural Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road Cobb Road / CR 476 Okaloosa County 2025
✓ Oper.(LOS)			☐ Plan. (vp)
Flow Inputs		Door (11)	r idii. (VP)
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h)	719	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi)	0.90 17 0 Level 0.00
Driver Type Adjustment Calculate Flow Adjust	1.00 tments	Up/Down % Number of Lanes	0.00 2
f_p	1.00	E _R	1.2
E _T	1.5	f _{HV}	0.922
Speed Inputs		Calc Speed Adj and	FFS
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided 60.0	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3
Operations		Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	433 58.3 7.4 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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	MULTILANE HIGHWA	YS WORKSHEET(Di	rection 1)	
110 Free-Flow Speed = 100 km/h 90 km/h 90 km/h 90 km/h 100 90 km/h 100 km/h 1		Applicati Oper. (LC Des. (N) Des. (v _p) Plan. (LC Plan. (N) Plan. (v _p)	FFS, N, V _p FFS, LOS, V _p FFS, LOS, N FFS, N, AADT FFS, LOS, AADT	Output LOS, S, D N, S, D v _p , S, D LOS, S, D N, S, D v _p , S, D
General Information	Flow Rate (pc/h/ln)	Site Information		
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour tive - Rural Arterial	Highway/Direction to Tra From/To Jurisdiction Analysis Year		
✓ Oper.(LOS)		□ Des. (N)	—————————————————————————————————————	(p)
Flow Inputs		,		1-7
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h) Driver Type Adjustment	1.00	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi) Up/Down %	0.90 17 0 Level 0.00 0.00	
Calculate Flow Adjust	ments	Number of Lanes	2	
f _p	1.00	E _R	1.2	
E _T	1.5	−ĸ f _{HV}	0.922	
Speed Inputs		Calc Speed Adj		
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3	
Operations		Design		
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	417 58.3 7.2 A	Design (N) Required Number of Lan Flow Rate, v _p (pc/h) Max Service Flow Rate (Design LOS		
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	MULTILANE HIGHWAYS WORKSHEET(Direction 1)					
	C D E E	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input Output			
General Information	,	Site Information				
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alterna	Praba H.W.Lochner, Inc 4/17/2002 Design Hour tive - Rural Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road CR 491A / CR 491 Okaloosa County 2025			
✓ Oper.(LOS)		Des. (N)	☐ Plan. (vp)			
Flow Inputs	<u>'</u>	('')	. τιαπ. (*Ρ)			
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h)	636	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi)	0.90 17 0 Level 0.00			
Driver Type Adjustment Calculate Flow Adjust	1.00	Up/Down % Number of Lanes	0.00 2			
	1.00	F	1.2			
f _p E _T	1.5	E _R f _{HV}	0.922			
Speed Inputs		Calc Speed Adj and F	FS			
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided 60.0	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3			
Operations		Design				
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	383 58.3 6.6 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS				
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	MULTILANE HIGHWAYS	WORKSHEET(Direction	n 1)
110	C D E E C C C D 1600 20 Flow Rate (pc/h/ln)	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input
General Information	From rease (persons)	Site Information	
Analyst Agency or Company Date Performed Analysis Time Period Project Description Build Alternat	Praba H.W.Lochner, Inc 4/17/2002 Design Hour ive - Rural Arterial	Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road CR 491 / Landfill Road Okaloosa County 2025
✓ Oper.(LOS)		Des. (N)	☐ Plan. (vp)
Flow Inputs			· · · · · · · · · · · · · · · · · · ·
Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h) Driver Type Adjustment	1.00	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi) Up/Down %	0.90 17 0 Level 0.00 0.00
Calculate Flow Adjust	monte	Number of Lanes	2
f _p E _T	1.00 1.5	E _R	1.2 0.922
Speed Inputs		Calc Speed Adj and F	FS
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided 60.0	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3
Operations		Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	320 58.3 5.5 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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	MULTILANE HIGHWAYS	WORKSHEET(Direction	on 1)
40 400 B	C D E E D E D D D D D D D D D D D D D D	Application Oper. (LOS) Des. (N) Des. (v _p) Plan. (LOS) Plan. (N) Plan. (v _p)	Input
Analyst Agency or Company Date Performed Analysis Time Period	Praba H.W.Lochner, Inc 4/17/2002 Design Hour	Site Information Highway/Direction to Travel From/To Jurisdiction Analysis Year	Cobb Road Landfill Road / Suncoast Okaloosa County 2025
Project Description Build Alterna Oper.(LOS)		Des. (N)	☐ Plan. (vp)
Flow Inputs Volume, V (veh/h) AADT(veh/h) Peak-Hour Prop of AADT (veh/d) Peak-Hour Direction Prop, D DDHV (veh/h) Driver Type Adjustment	1.00	Peak-Hour Factor, PHF %Trucks and Buses, P _T %RVs, P _R General Terrain: Grade Length (mi) Up/Down % Number of Lanes	0.90 17 0 Level 0.00 0.00
Calculate Flow Adjust fp ET	1.00 1.5	E _R	1.2
Speed Inputs	1.5	f _{HV} Calc Speed Adj and F	0.922 F FS
Lane Width, LW (ft) Total Lateral Clearence, LC (ft) Access Points, A (A/mi) Median Type, M FFS (measured) Base Free-Flow Speed, BFFS	12.0 12.0 7 Divided 60.0	f _{LW} (mi/h) f _{LC} (mi/h) f _A (mi/h) f _M (mi/h) FFS (mi/h)	0.0 0.0 1.8 0.0 58.3
Operations	00.0	Design	
Operational (LOS) Flow Rate, v _p (pc/h/ln) Speed, S (mi/h) D (pc/mi/ln) LOS	299 58.3 5.1 A	Design (N) Required Number of Lanes, N Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/h/ln) Design LOS	
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APPENDIX G

AIR AND NOISE TRAFFIC DATA FORMS

DISTRICT 7 PD&E TRAFFIC DATA FOR AIR STUDY SCREENING TEST

	DATE:		4/23/02	
	PREPARED	BY:	N. Prabaha	aran
Financial Project Number(s)				
Financial Project Number(s): Work Program Item No.:	257200 1 405017 1			
Federal Aid Number(s):	257299 1, 405017 1) D		
	2891 007 P & 2891 008			
Troject Description	Cobb Road / US 98 PD&E Stud	У		
speeds and it cou alternatives. The approaching the	sted intersection with the uld be two different inter e traffic volumes are to be intersection. The speed o closer than 152.4 m (50	rsections base se the vph of s are to be th	ed on the "Bu the most con ne approach s	ild" vs. "No-Build" gested leg peed for the most
Intersection: Cobb Road and SR 50				
	OPENING YEA	R: 2005		
<u>"Build"</u>			<u>"No-l</u>	Build"
Signalized Intersection:		Signalized I	Intersection:	
Intersection: Cobb Road and SR 50		Intersection: (Cobb Road and S	R 50
Design or Peak Hour Traffic			eak Hour Tra	
for most congested leg:	1130 vph	_	ngested leg:	1100 v ph
Specify leg: West leg (Eastbo	•	Specify leg:	-	Eastbound SR 50)
Approach Speed:	35 mph	Approach S		35 mph
		, ippi odeii o		<u></u>
Interception Call Day 1 - 1 -	'D FO			
Intersection: Cobb Road and S	K 50			
	DESIGN YEAR	R: 2025		
<u>"Build"</u>			<u>"No-l</u>	Build"
Signalized Intersection:		Signalized I	intersection:	
Intersection: Cobb Road and SR 50			Cobb Road and S	R 50
Design or Peak Hour Traffic	***************************************		eak Hour Tra	
for most congested leg: 16	10 vph	_	ngested leg:	1450 vph
Specify leg: West leg (Eastbo	•	Specify leg:	•	West leg (Eastbound SR 50)
Approach Speed:	25 mnh	_ opeciny leg. Approach S		west leg (Lastboullu SK 50)

DISTRICT 7 PD&E TRAFFIC DATA FOR AIR STUDY SCREENING TEST

		DATE:		4/23/02		
		PREPAREI	D BY:	N. Praba		
Financial Proj	ect Number(s):					
Work Progran	. ,	257299 1, 405017 1	····			
Federal Aid N	umber(s):	2891 007 P & 2891 00	8 P			
Project Descri	iption Cobb	Road / US 98 PD&E Stud				
	The most congested speeds and it could be alternatives. The tra approaching the inte congested leg no closested.	oe two different inte ffic volumes are to rsection. The speed	rsections base be the vph of Is are to be th	ed on the "B the most co ne approach	Build" vs. "I Ingested le Speed for	No-Build" eg
Intersection: Cob	b Road and Yontz Road	ODENING VE	4D 2005			
		OPENING YEA	AR: 2005			
	<u>"Build"</u>			<u>"Nc</u>	o-Build"	
Signalized Int	ersection:		Signalized 1	Intersection	:	
Intersection: Cob	b Road and Yontz Road		Intersection:	Cobb Road and	Yontz Road	
Design or Pea	k Hour Traffic		Design or F	Peak Hour Tr	raffic	
for most cong	jested leg:	575 vph		ngested leg		535 vph
Specify leg:	South leg (Northbour	-	Specify leg	_	g (Northboun	•
Approach Spe	-	mph	Approach S			mph
		-	7,777			<u>,</u>
Intersection:	Cobb Road and Yont	z Road				
		DESIGN YEA	R: 2025			
	<u>"Build"</u>			<u>"Nc</u>	o-Build"	
Signalized Int	ersection:		Signalized 1	Intersection:	<u>.</u>	
Intersection: Cob	b Road and Yontz Road		_	Cobb Road and		
Design or Pea	k Hour Traffic			Peak Hour Tr		
for most cong		vph	_	ngested leg		570 vph
Specify leg:	South leg (Northbour	-	Specify leg	5		(Northbound SR 50)
Approach Spe		mnh	_ Approach S			mph

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E TRAFFIC DATA FOR NOISE STUDIES

Project:	Cobb Road/US98 PD&E Study	Date:	4/22/2002
State Project Number(s):		Prepared By	<i>r</i> :
Work Program Number(s):	257299 1 & 405017 1		
Federal Aid Number(s):	2891 007 P & 2891 008 P		
Segment Description:	Wheeling Street Receptors: Cobb Road from Fort Dad	de Avenue to Yontz Road	

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

	Existing Facility	У		No-Build (Design Y	′ear)		Build (Design Year)		
Lanes:	2	_	Lanes:	2		Lanes:	4		
Year:	2001	_	Year:	2025		Year:	2025		
ADT: LOS (C)	8,080	_	ADT: LOS (C)	8,080	_	ADT: LOS (C)	44,000		
Demand	9,800	_	Demand	10,700		Demand	14,850		
Speed:	46 74	mph kmh	Speed:	46 74	mph kmh	Speed:	53 mph 85 kmh	· ·	
K=	9.9	_%	K=	9.9	<u></u> %	K=	9.9 %		
D=	54	_%	D=	54	%	D=	%		
T=	33.5	_ % for 24 hrs.	T=	33.5	% for 24 hrs.	T=	% fc	r 24 hrs.	
T=	16.8	_ % Design hr	T=	16.8	% Design hr	T=	16.8% D	esign hr	
3.8	% Medium Truck	s DHV		% Medium Trucks	s DHV	3.8	_ % Medium Trucks DH\	,	
13.0	% Heavy Trucks	DHV		_% Heavy Trucks I	DHV	13.0	_ % Heavy Trucks DHV		
1.0	_ % Buses DHV			% Buses DHV		1.0	_ % Buses DHV		
0.0	_ % Motorcycles D)HV		_ % Motorcycles DI	⊣∨	0.0	% Motorcycles DHV		

****				STAMINA/TNM INPU				
	The follow	ng are spreads	heet calculation	ns based on the inpu	ıt above - do ı	not enter data b	elow this line	
Existing Fac	Existing Facility Model: LOS (C)		No-Build (De	esign Year) Model:	LOS (C)	Build (Desig	n Year) Model:	Demand
LOS (C)			LOS (C)			LOS (C)		
Northbound:	Autos	355	Northbound:	Autos	434	Northbound:	Autos	1934
	Med Trucks	16		Med Trucks	0		Med Trucks	89
	Hvy Trucks	56		Hvy Trucks	0		Hvy Trucks	306
	Buses	4		Buses	0		Buses	24
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Southbound:	Autos	303	Southbound:	Autos	365	Southbound:	Autos	1647
	Med Trucks	14		Med Trucks	0		Med Trucks	76
	Hvy Trucks	48		Hvy Trucks	0		Hvy Trucks	260
	Buses	4		Buses	0		Buses	20
	Motorcycles	0		Motorcycles	0		Motorcycles	0
	Demand			Demand			Demand	
Northbound:	Autos	431	Northbound:	Autos	575	Northbound:	Autos	653
	Med Trucks	20		Med Trucks	0		Med Trucks	30
	Hvy Trucks	68		Hvy Trucks	0		Hvy Trucks	103
	Buses	5		Buses	0		Buses	8
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Southbound:	Autos	367	Southbound:	Autos	483	Southbound:	Autos	556
	Med Trucks	17		Med Trucks	0		Med Trucks	26
	Hvy Trucks	58		Hvy Trucks	0		Hvy Trucks	88
	Buses	4		Buses	0		Buses	7
	Motorcycles	0		Motorcycles	0		Motorcycles	0

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E TRAFFIC DATA FOR NOISE STUDIES

Project:	Cobb Road/US98 PD&E Study	Date:	4/22/2002
State Project Number(s):		Prepared By:	
Work Program Number(s):	257299 1 & 405017 1		
Federal Aid Number(s):	2891 007 P & 2891 008 P		
Segment Description:	Youth Drive Receptors: Cobb Road from Yontz Road to Youth Drive		

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

 ${\tt NOTE:}\ Modeled\ ADT\ is\ the\ LOS(C)\ volume\ referenced\ in\ the\ FDOT\ LOS\ tables\ or\ demand,\ whichever\ is\ less.$

	Existing Facility		No-Build (Design Year) Build (Design Year)				ır)	
Lanes:	2	-	Lanes:	2	_	Lanes:	4	
Year:	2001	_	Year:	2025		Year:	2025	_
ADT: LOS (C)	7,550	_	ADT: LOS (C)	7,550	_	ADT: LOS (C)	44,100	_
Demand	3,850	_	Demand	6,700		Demand	10,400	_
Speed:	48 77	mph kmh	Speed:	47 76	mph kmh	Speed:	58 93	mph kmh
K=	9.9	%	K=	9.9	%	K=	9.9	_%
D=	54	_%	D=	54	%	D=	54	_%
T=	33.5	% for 24 hrs.	T=	33.5	% for 24 hrs.	T=	33.5	% for 24 hrs.
T=	16.8	% Design hr	T=	16.8	% Design hr	T=	16.8	_% Design hr
3.8	% Medium Trucks	s DHV	3.8	% Medium Trucks	DHV	3.8	_ % Medium Truck	s DHV
13.0	% Heavy Trucks I	DHV	13.0	% Heavy Trucks D)HV	13.0	_ % Heavy Trucks	DHV
1.0	1.0 % Buses DHV		1.0	% Buses DHV		1.0	% Buses DHV	
0.0 % Motorcycles DHV		0.0	% Motorcycles DHV		0.0	% Motorcycles DHV		

				STAMINA/TNM INPU				
	The followi	ing are spreadsl	heet calculatio	ns based on the inpu	ut above - do i	not enter data b	elow this line	
Existing Fac	ility Model:	Demand	No-Build (De	esign Year) Model:	Demand	Build (Desig	ın Year) Model:	Demand
LOS (C)			LOS (C)			LOS (C)		
Northbound: Southbound:	Med Trucks Hvy Trucks Buses Motorcycles	332 15 52 4 0 283 13 45 3	Northbound:	Med Trucks Hvy Trucks Buses Motorcycles	332 15 52 4 0 283 13 45 3 0	Northbound:	Med Trucks Hvy Trucks Buses Motorcycles	1939 88 306 24 0 1652 75 261 20
	Demand			Demand			Demand	
Northbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	169 8 27 2 0	Northbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	295 13 47 4 0	Northbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	457 21 72 6 0
Southbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	144 7 23 2 0	Southbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	251 11 40 3 0	Southbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	390 18 62 5 0

DISTRICT 7 PD&E TRAFFIC DATA FOR NOISE STUDIES

Project:	Cobb Road/US98 PD&E Study	Date:	4/22/2002
State Project Number(s):		Prepared By:	
Work Program Number(s):	257299 1 & 405017 1		
Federal Aid Number(s):	2891 007 P & 2891 008 P		
Segment Description:	Wever Park Receptors (east side) and Intersection Rece	eptors(west side): Cobb Road from Youth Dri	ive to US 98

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

 $NOTE: Modeled\ ADT\ is\ the\ LOS(C)\ volume\ referenced\ in\ the\ FDOT\ LOS\ tables\ or\ demand,\ whichever\ is\ less.$

	Existing Facility	No-Build (Design Year)			Build (Design Year)		
Lanes:	2	Lanes:	2		Lanes:	4	
Year:	2001	Year:	2025		Year:	2025	
ADT: LOS (C)	8,080	ADT: LOS (C)	8,080		ADT: LOS (C)	44,100	
Demand	3,600	Demand	5,500		Demand	9,350	
Speed:	49 mph 79 kmh	Speed:	48 mph 77 kmh		Speed:	58 mph 8mh	
K=	9.9 %	K=	9.9 %		К=	9.9 %	
D=	%	D=	%		D=	%	
T=	33.5 % for 24 hrs.	T=	33.5 % for 24 hrs		T=	% for 24 hrs.	
T=	% Design hr	T=	16.8 % Design h	r	T=	16.8 % Design hr	
3.8	_ % Medium Trucks DHV	3.8	_ % Medium Trucks DHV		3.8	% Medium Trucks DHV	
13.0	_ % Heavy Trucks DHV	13.0	13.0 % Heavy Trucks DHV		13.0	% Heavy Trucks DHV	
1.0	_ % Buses DHV	1.0	1.0 % Buses DHV		1.0	% Buses DHV	
0.0	_ % Motorcycles DHV	0.0	% Motorcycles DHV		0.0	% Motorcycles DHV	

	The fe		STAMINA/TNM IN			
	I ne to	llowing are spre	adsheet calculations based on the	nput above - do not e	enter data below this line	
Existing Facili	ing Facility Model: Dema		No-Build (Design Year) Model:	Demand	Build (Design Year) Model:	Demand
	LOS (C)		LOS (C)		LOS (C)	
NB (Wever),	SB		NB (Wever), SB		NB (Wever), SB	
(Intersection):	Autos	355	(Intersection): Autos	355	(Intersection): Autos	1939
	Med Trucks	16	Med Trucks	16	Med Trucks	88
	Hvy Trucks	56	Hvy Trucks	56	Hvy Trucks	306
	Buses	4	Buses	4	Buses	24
	Motorcycles	0	Motorcycles	0	Motorcycles	0
SB (Wever),	NB		SB (Wever), NB		SB (Wever), NB	
(Intersection):	Autos	303	(Intersection): Autos	303	(Intersection): Autos	1652
	Med Trucks	14	Med Trucks	14	Med Trucks	75
	Hvy Trucks	48	Hvy Trucks	48	Hvy Trucks	261
	Buses	4	Buses	4	Buses	20
	Motorcycles	0	Motorcycles	0	Motorcycles	0
	Demand		Demand		Demand	***************************************
NB (Wever),	SB		NB (Wever), SB		NB (Wever), SB	
(Intersection):	Autos	158	(Intersection): Autos	242	(Intersection): Autos	411
	Med Trucks	7	Med Trucks	11	Med Trucks	19
	Hvy Trucks	25	Hvy Trucks	38	Hvy Trucks	65
	Buses	2	Buses	3	Buses	5
	Motorcycles	0	Motorcycles	0	Motorcycles	0
00 444					Motordydics	
SB (Wever),	NB		SB (Wever), NB		SB (Wever), NB	
(Intersection):	Autos	135	(Intersection): Autos	206	(Intersection): Autos	350
	Med Trucks	. 6	Med Trucks	9	Med Trucks	16
	Hvy Trucks	21	Hvy Trucks	33	Hvy Trucks	55
	Buses	2	Buses	3	Buses	4
	Motorcycles	0	Motorcycles	0	Motorcycles	0

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E TRAFFIC DATA FOR NOISE STUDIES

Project:	Cobb Road/US98 PD&E Study	Date:	4/22/2002
State Project Number(s):		Prepared E	3y:
Work Program Number(s):	257299 1 & 405017 1		
Federal Aid Number(s):	2891 007 P & 2891 008 P		
Seament Description:	Ringhaver Recentors: US98 from CR476 to CR4914		

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

NOTE: Modeled ADT is the LOS(C) volume referenced in the FDOT LOS tables or demand, whichever is less.

	Existing Facility		No-Build (Design Year) Build (Design Year)				
Lanes:	2	Lanes:	2	Lanes:	4		
Year:	2001	Year:	2025	Year:	2025		
ADT: LOS (C)	10,100	ADT: LOS (C)	10,100	ADT: LOS (C)	47,700		
Demand	8,550	Demand	11,100	Demand	12,950		
Speed:	52 mph 84 kmh	Speed:	51 mph 82 kmh	Speed:	58 mph 93 kmh		
K=	9.9 %	K=	9.9 %	K=	9.9 %		
D=	%	D=	%	D=	%		
T=	33.5 % for 24 hrs.	T=	33.5 % for 24 hrs.	T=	33.5 % for 24 hrs.		
T=	16.8 % Design hr	T=	% Design hr	T=	16.8 % Design hr		
3.8	_ % Medium Trucks DHV	3.8	_ % Medium Trucks DHV	3.8	% Medium Trucks DHV		
13.0 % Heavy Trucks DHV		13.0	_ % Heavy Trucks DHV	13.0	% Heavy Trucks DHV		
1.0	1.0 % Buses DHV		% Buses DHV	1.0	% Buses DHV		
0.0 % Motorcycles DHV		0.0	_ % Motorcycles DHV	0.0	_ % Motorcycles DHV		

				STAMINA/TNM INPU				
	The follow	ng are spreads	heet calculatio	ns based on the inpu	ıt above - do ı	not enter data b	elow this line	
Existing Facil	lity Model:	Demand	No-Build (D	No-Build (Design Year) Model:		Build (Desig	ın Year) Model:	Demand
	LOS (C)			LOS (C)			LOS (C)	
Northbound: /	Autos	444	Northbound:	Autos	444	Northbound:	Autos	2097
į r	Med Trucks	20		Med Trucks	20		Med Trucks	96
	Hvy Trucks	70		Hvy Trucks	70		Hvy Trucks	332
	Buses	5		Buses	5		Buses	26
"	Motorcycles	0		Motorcycles	0		Motorcycles	0
Southbound: /	Autos	378	Southbound:	Autos	378	Southbound:	Autos	1787
'	Med Trucks	17		Med Trucks	17		Med Trucks	81
1	Hvy Trucks	60		Hvy Trucks	60		Hvy Trucks	282
F	Buses	5		Buses	5		Buses	22
ľ	Motorcycles	0		Motorcycles	0		Motorcycles	0
	Demand			Demand			Demand	
Northbound: /	Autos	376	Northbound:	Autos	488	Northbound:	Autos	569
į r	Med Trucks	17		Med Trucks	22		Med Trucks	26
1	Hvy Trucks	59		Hvy Trucks	77		Hvy Trucks	90
į F	Buses	5		Buses	6		Buses	7
"	Motorcycles	0		Motorcycles	0		Motorcycles	0
Southbound: /	Autos	320	Southbound:	Autos	416	Southbound:	Autos	485
ľ	Med Trucks	15		Med Trucks	19		Med Trucks	22
1	Hvy Trucks	51		Hvy Trucks	66		Hvy Trucks	77
	Buses	4		Buses	5		Buses	6
'	Motorcycles	0		Motorcycles	0		Motorcycles	0

This spreadsheet is designed to calculate the appropriate traffic data for use in the noise model - do not input values for items in "red".

DISTRICT 7 PD&E TRAFFIC DATA FOR NOISE STUDIES

Project:	Cobb Road/US98 PD&E Study	Date:	4/22/2002	
State Project Number(s):		Prepared By:		
Work Program Number(s):	257299 1 & 405017 1			
Federal Aid Number(s):	2891 007 P & 2891 008 P			
Segment Description:	Deschamps Receptors: US 98 from CR491A to CR491			

(Data sheets are to be filled out for every segment having a change in traffic parameters such as volumes, posted speeds, typical section, etc.)

 $NOTE: Modeled\ ADT\ is\ the\ LOS(C)\ volume\ referenced\ in\ the\ FDOT\ LOS\ tables\ or\ demand,\ whichever\ is\ less.$

	Existing Facility			No-Build (Design Year)			Build (Design Year)			
Lanes:	2		Lanes:	2	_	Lanes:	4	_		
Year:	2001		Year:	2025		Year:	2025	_		
ADT: LOS (C)	8,480		ADT: LOS (C)	8,480	·	ADT: LOS (C)	47,700	_		
Demand	7,950	.	Demand	10,300	_	Demand	9,950	_		
Speed:	51 82	mph kmh	Speed:	51 82	mph kmh	Speed:	58 93	mph kmh		
K=	9.9	.%	K=	9.9	%	K=	9.9	_%		
D=	54	.%	D=	54	%	D=	54	_%		
T=	33.5	% for 24 hrs.	T=	33.5	% for 24 hrs.	T=	33.5	% for 24 hrs.		
T=	16.8	% Design hr	T=	16.8	% Design hr	T=	16.8	% Design hr		
3.8	% Medium Trucks	DHV	3.8	% Medium Trucks	DHV	3.8	_ % Medium Trucks	s DHV		
13.0	13.0 % Heavy Trucks DHV		13.0	% Heavy Trucks D	HV	13.0	% Heavy Trucks	DHV		
1.0	1.0 % Buses DHV		1.0	% Buses DHV		1.0	% Buses DHV			
0.0	0.0 % Motorcycles DHV		0.0	% Motorcycles DHV		0.0	_ % Motorcycles DI	HV		

				STAMINA/TNM INPU				
	The followi	ing are spreads	heet calculation	ns based on the inpu	ut above - do r	not enter data b	elow this line	
Existing Facility Model:		Demand	No-Build (Design Year) Model:		LOS (C)	Build (Design Year) Model: Demand		Demand
LOS (C)			LOS (C)			LOS (C)		
Northbound:	Autos Med Trucks	373 17	Northbound:	Autos Med Trucks	373 17	Northbound:	Autos Med Trucks	2097 96
	Hvy Trucks Buses Motorcycles	59 5 0		Hvy Trucks Buses Motorcycles	59 5		Hvy Trucks Buses	332 26
Southbound:	Autos	318	Southbound:	Autos	0 318	Southbound:	Motorcycles Autos	1787
	Med Trucks Hvy Trucks Buses	50 4		Med Trucks Hvy Trucks Buses	14 50 4		Med Trucks Hvy Trucks Buses	81 282 22
	Motorcycles	0		Motorcycles	0		Motorcycles	0
Demand			Demand			Demand		
Northbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	350 16 55 4 0	Northbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	453 21 72 6 0	Northbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	438 20 69 5 0
Southbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	298 14 47 4 0	Southbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	386 18 61 5	Southbound:	Autos Med Trucks Hvy Trucks Buses Motorcycles	373 17 59 5