

Technical Traffic Memorandum

Florida Department of Transportation

District Seven

CR 52 Development Director Special Projects- Continuing Services

Limits of Project: From Church Avenue to Suwanee Way

Pasco County, Florida

Financial Management Number: 439832-5-52-01

Date: August 2024

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

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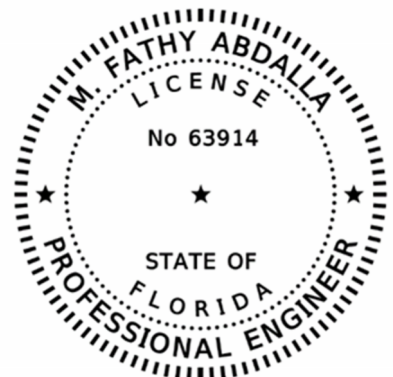
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CR 52

From Church Avenue to Suwanee Way

Development Director Special Projects- Continuing Services

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Financial Project ID No. 439832-5-52-01

Pasco County, Florida

Prepared for:



Florida Department of Transportation
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August 2024

Executive Summary

This Traffic Technical Memorandum (TTM) is for the 21st Street Intersection Improvements Project at Meridian Avenue. This TTM was prepared for Pasco County by Kisinger Campo and Associates (KCA). The purpose of this TTM is to improve safety and evaluate the existing traffic capacity and delays of 21st at Meridian Avenue. This TTM evaluates additional capacity needs to maintain acceptable LOS in the Design Year 2050.

Purpose and Need: The 21st Street Intersection Improvements Project is needed based on the future land use and growth in the project area.

Existing Analysis: The current year capacity analysis shows that the 21st Street and Meridian Avenue intersection currently operates at an acceptable LOS B.

Future Analysis: This study forecasts Opening Year 2030 and Design Year 2050 traffic volumes to assess the improvements needed to meet the expected demand within the study area. In addition, the following alternatives were evaluated to compare LOS and Delays.

1. No-Build scenario consisting of the existing mainline and intersection configurations within the project area. The Design Year 2050 No-Build capacity analysis shows the intersection is expected to fail with the future traffic demand, during the AM and PM peak hours.
2. A Build Alternative consisting of realigning the eastbound approach of St. Joe Rd to intersect at the junction of 21st Street and Meridian Avenue with the intersection operating under traffic signal control.

This TTM recommends the Build Alternative. The Design Year 2050 Build capacity analysis shows that the intersection is expected to operate at an acceptable LOS, during the AM and PM peak hours. The improvements are expected to improve the safety and operations along the corridor and at the intersection.

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1. Introduction

This Traffic Technical Memorandum (TTM) summarizes the traffic data collected and the traffic analyses for the 21st Street Intersection Improvements Project from Meridian Avenue to Suwanee Way/St. Joe Road in Pasco County, Florida. The objective of this TTM is to evaluate the operation of a signal alternative (Build Alternative) at the intersection of 21st Street and Meridian Avenue. This TTM also evaluates the existing traffic capacity and delays, and the additional capacity needs to maintain acceptable LOS throughout the Design Year 2050 within the study area. Figure 1.1 shows the project location map.

Figure 1.1 Project Location Map



2. Existing Conditions

The following section provides an evaluation of the existing conditions. The discussion items include existing traffic data and existing operating conditions.

2.1. Existing Geometry

21st Street at Meridian Avenue is a signalized T-intersection. The northbound approach consists of one through lane and one right-turn lane. The southbound approach consists of one through lane and one left-turn lane. The westbound approach consists of one left-turn lane and one right-turn lane. The northbound and westbound right-turn lanes are slip lanes separated by a pork chop island. Four pedestrian signals located on three signal poles provide pedestrian crossings across the eastern and northern approaches of the intersection. Each curb ramp is outfitted with a detectable warning mat and each crossing location is marked by a ladder crosswalk. Sidewalk runs along the westbound approach of the road with limited or no grass separation from the roadway. Sidewalk runs along the northbound approach with an approximate 20 feet of grass separation from the road. There is no sidewalk located on the southbound approach. All approaches include bike lanes. The existing posted speed at the intersection of 21st Street and Meridian Avenue is 35 mph for all approaches.

The intersection of 21st Street and Suwanee Way/St. Joe Road is a two-way stop-controlled (TWSC) intersection. The northbound approach consists of a single lane that also operates as a left turn and right-turn lane. The southbound approach consists of one through lane and one left-turn lane with the through lane operating as a right-turn lane. The eastbound and westbound approaches operate under stop-sign control and consist of one shared left/through/right lane. The existing posted speed on the eastbound and westbound approaches of the intersection at 21st Street and Suwanee Way/St. Joe Road is 30 mph and the posted speed of the northbound and southbound approaches is 35 mph. Figure 2.1 shows the existing intersection conditions and the existing lane geometry is shown in Figure 2.2.

Figure 2.1 Existing Conditions

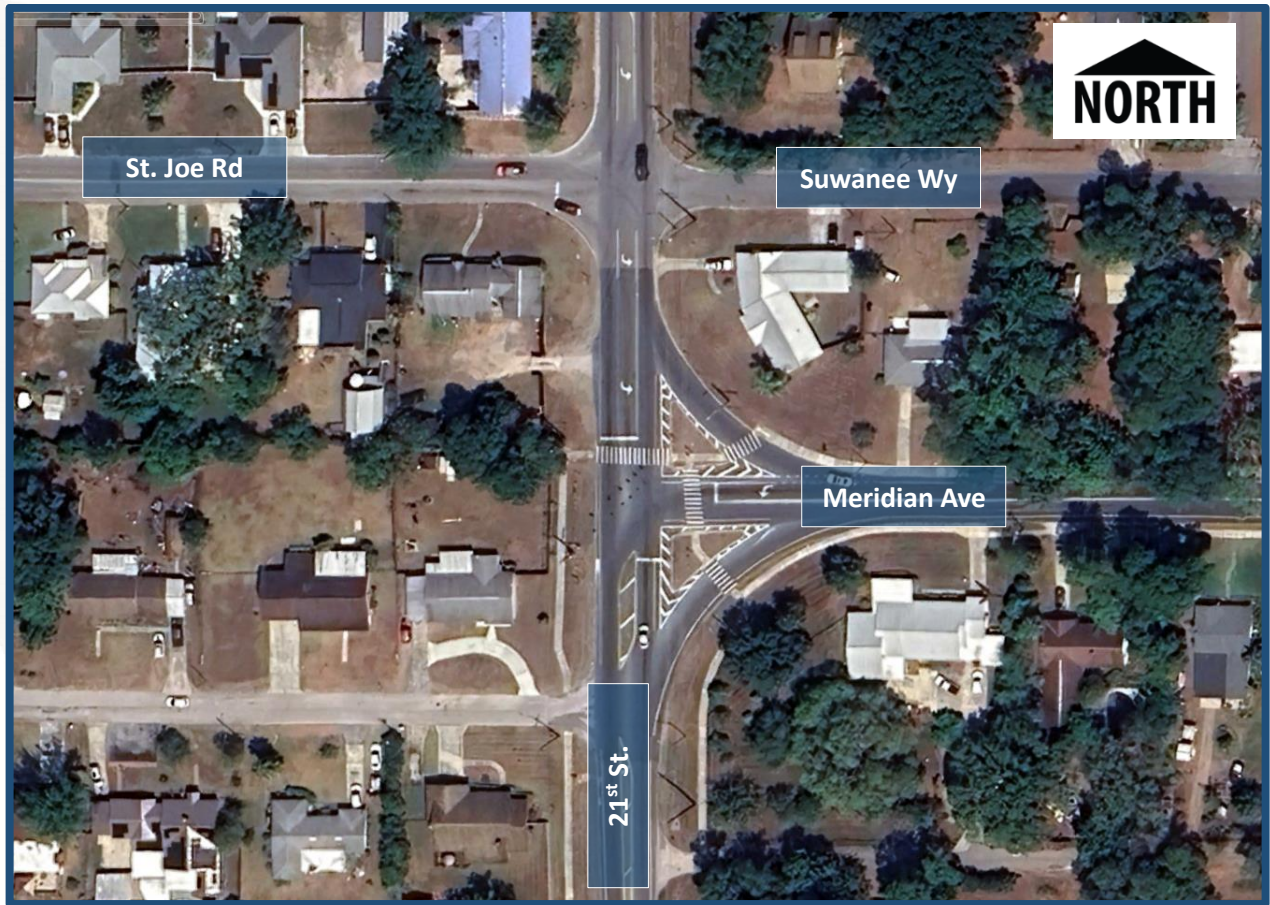
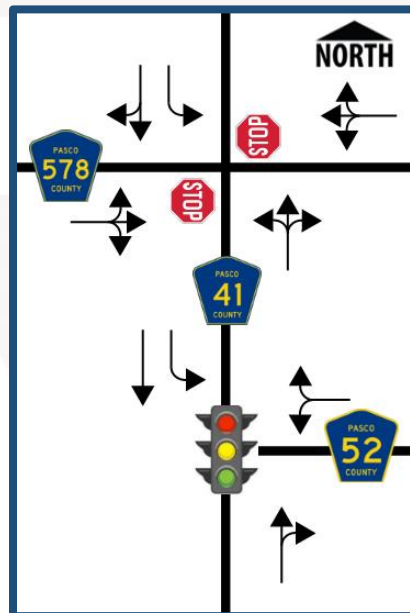


Figure 2.2 Existing Lane Geometry



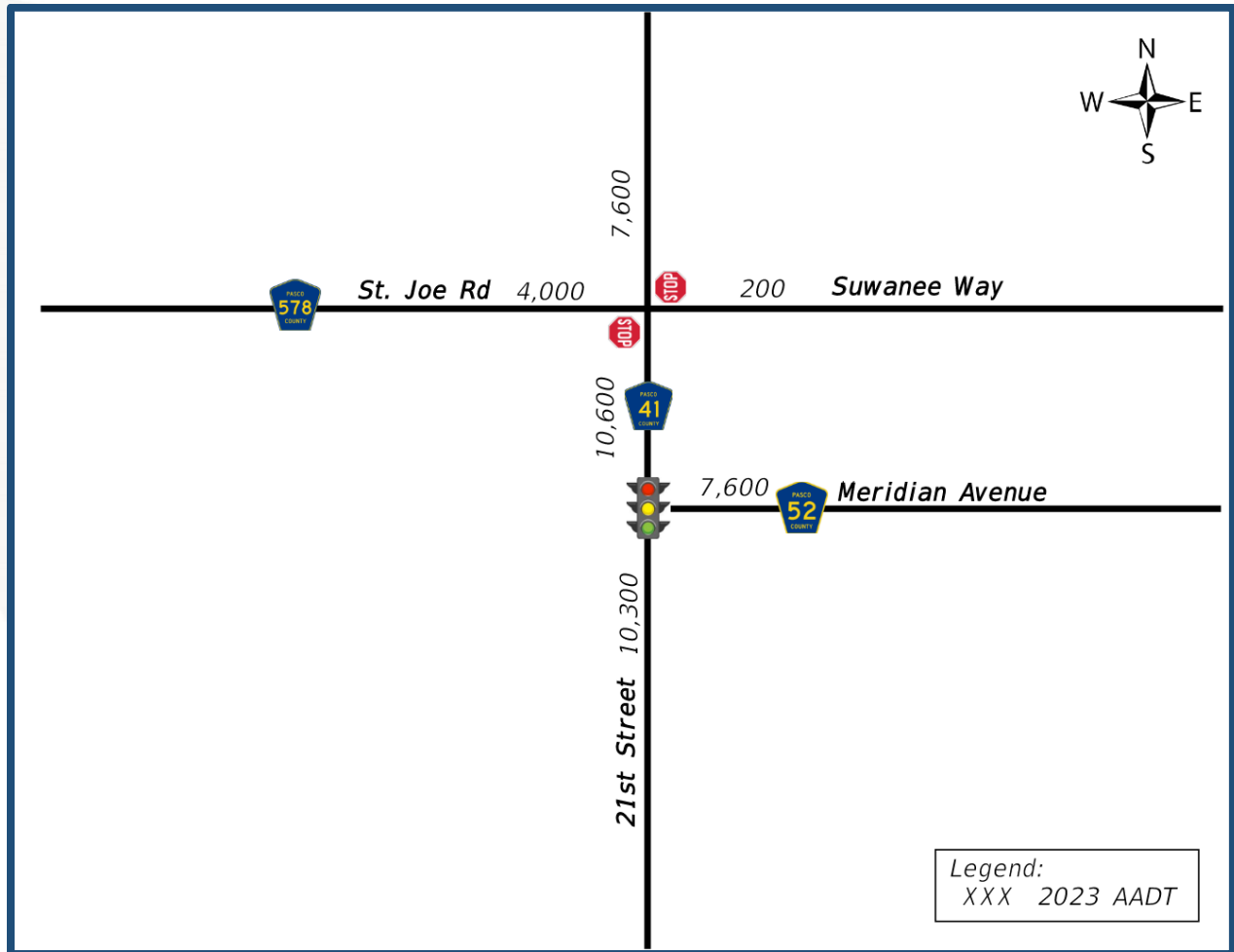
2.2. Traffic Counts

Twenty-four-hour bi-directional volume counts were conducted on Thursday November 16th, 2023. The Average Daily Traffic (ADT) was calculated by adding the daily directional volumes at each location. **Appendix A** includes a copy of the bi-directional volume counts. The two-way 24-hour volumes were subsequently converted into Annual Average Daily Traffic (AADT) volumes using the following equation: $AADT = ADT \times SF \times ACF$. The weekly seasonal adjustment factor (SF) and weekly axle correction factor (ACF) were obtained from the 2022 FDOT Peak Season Factor Category Report and Weekly Axle Factor Category Report for Pasco County. **Appendix B** includes a copy of the SF and ACF reports. The computed 2023 AADT volumes are listed in Table 2.1. Figure 2.3 depicts the 2023 AADT volumes on the map.

Table 2.1 Existing Year 2023 Annual Average Daily Traffic (AADT)

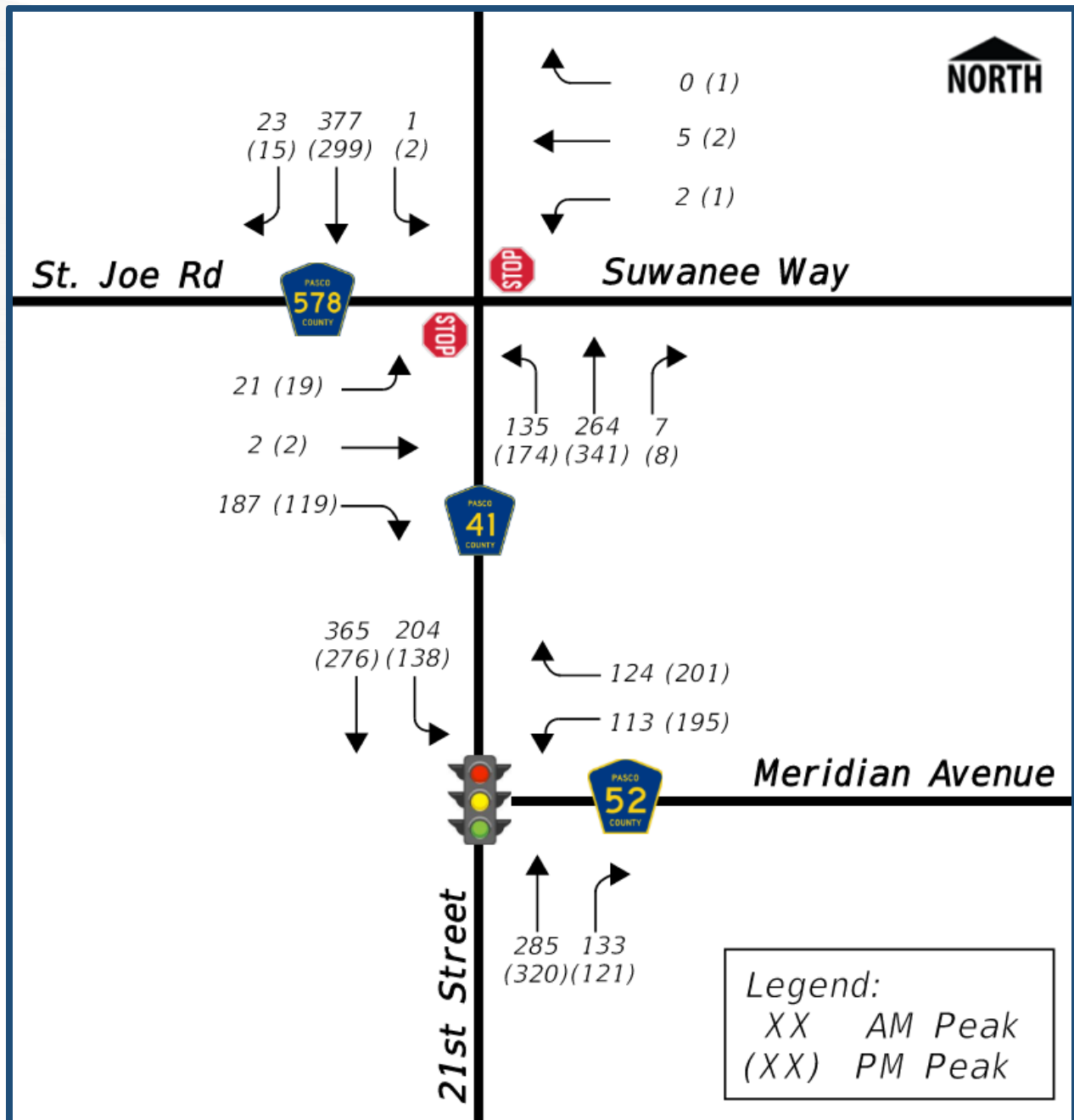
Roadway	Segment	NB / EB	SB / WB	Daily Counts	SF	ACF	2023 AADT	2023 AADT (rounded)
21st Street	South of CR 52	5,322	5,383	10,705	1.01	0.95	10,271	10,300
	From CR 52 to CR 578	5,551	5,476	11,027	1.01	0.95	10,580	10,600
	North of CR 578	3,959	3,957	7,916	1.01	0.95	7,595	7,600
CR 578	West of 21st Street	2,061	2,084	4,145	1.01	0.95	3,977	4,000
	East of 21st Street	127	79	206	1.01	0.95	198	200
CR 52	East of 21st Street	3,904	4,002	7,906	1.01	0.95	7,586	7,600

Figure 2.3 Existing Year 2023 AADT



Manual turning movement counts (TMC) were conducted at Meridian Avenue and Suwanee Way/St. Joe Road on Thursday November 16th, 2023 and the peak hours observed were 6:45 AM to 7:45 AM and 4:45 PM to 5:45 PM. Figure 2.4 depicts the Existing Year 2023 AM and PM turning movement volumes. **Appendix A** includes a copy of the manual turning movement counts.

Figure 2.4 Existing Year 2023 TMC



2.3. Design Traffic Factors

Traffic data from the bi-directional volume counts were examined to determine the existing traffic factors throughout the project area. The minimum and maximum threshold values, as identified in the 2019 Project Traffic Forecasting Handbook, were considered.

2.3.1. K-FACTOR

The design hour factor (K-Factor) was calculated based on the peak hour derived from the 24-hour bi-directional volume counts as shown in Table 2.2. FDOT 2022 historical traffic reports from Florida Traffic Online were referenced to compare with the calculated K-Factors and can be found in **Appendix B**. The Standard K-Factor will be used along all approaches being the higher and more conservative values compared with the calculated K-Factors.

Table 2.2 Existing Year 2023 Peak Hour K-Factor (PM Volumes)

Roadway	Segment	Peak Hour Volume	2023 AADT	K-Factor (%)	Average	Recommended
21st Street	South of CR 52	896	10,300	8.72%	8.98%	9.00%*
	From CR 52 to CR 578	972	10,600	9.19%		
	North of CR 578	686	7,600	9.03%		
CR 578	West of 21st Street	373	4,000	9.38%	8.99%	9.00%*
	East of 21st Street	17	200	8.60%		
CR 52	East of 21st Street	655	7,600	8.63%	8.63%	9.00%*

*Standard K-Factor of 9.0% is recommended based upon the higher value shown in the FDOT 2022 historical traffic data

2.3.2. D-FACTOR

The Directional Distribution Factor (D-Factor) is the proportion of traffic traveling in the peak direction of a roadway segment during a selected hour. This is usually expressed as a percentage for the AM or PM peak hour. The peak hour traffic D-Factor was calculated for each segment of the study. The results are summarized in Table 2.3 including the recommended D-Factors along each roadway segment. The average D-Factors along each segment were considered and used to determine the recommended D-Factors. FDOT 2022 historical traffic reports from Florida Traffic Online were referenced to compare with the calculated D-Factors. The higher and more conservative values were used as the recommended D-Factors.

Table 2.3 Existing Year 2023 Peak Hour D-Factor

Roadway	Segment	NB/EB	SB/WB	Peak Hour Volume	D-Factor (%)	Recommended
21st Street	South of CR 52	418	478	896	53.35%	56.68%
	From CR 52 to CR 578	406	566	972	58.23%	
	North of CR 578	285	401	686	58.45%	
CR 578	West of 21st Street	210	163	373	56.30%	57.56%
	East of 21st Street	10	7	17	58.82%	
CR 52	East of 21st Street	259	396	655	60.46%	60.46%

2.3.3. T-FACTOR

The truck percentage (T-Factor) recommendations are based on the higher value between the twenty-four-hour bi-directional counts and FDOT 2022 historical traffic reports from Florida Traffic Online. The design hour truck (DHT) percentage was taken as half of the 24-hour truck percentage, per the 2019 FDOT Project Traffic Forecasting Handbook. The recommendations are summarized in Table 2.4 for each roadway segment.

Table 2.4 Existing Year 2023 T-Factor

Roadway	Segment	T-Factor (%)			
		Calculated	FDOT	Recommended	DHT
21st Street	South of CR 52	3.31%	8.80%	8.85%	4.43%
	From CR 52 to CR 578	4.00%	N/A		
	North of CR 578	2.65%	8.90%		
CR 578	West of 21st Street	4.56%	8.90%	8.90%	4.45%
	East of 21st Street	3.80%	N/A		
CR 52	East of 21st Street	2.60%	4.80%	4.80%	2.40%

2.4. Existing Year 2023 LOS Analysis

This section presents the analysis results for the existing lane configuration under Existing Year 2023 traffic conditions. The analysis consisted of determining the LOS and delay at the project intersections.

The Level of Service (LOS) for a signalized intersection is defined in terms of a weighted average control delay for the entire intersection. Control delay quantifies the increase in travel time that a vehicle experiences due to the traffic signal control as well as provides a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average control delay per vehicle (in seconds) during a specified time period (e.g., weekday PM peak hour). Control delay is a complex measure based on many variables, including signal phasing and coordination (i.e., progression of movements through the intersection and along the corridor), signal cycle length, and traffic volumes with respect to intersection capacity and resulting queues.

Existing Year 2023 stop-controlled intersection LOS analysis was conducted based on the methodology outlined in the Highway Capacity Manual, 6th Edition using Synchro 11. **Appendix C** includes the copies of the Synchro LOS computer outputs. The 2023 AM and PM peak hour LOS is presented in Table 2.5. The existing year intersection LOS analysis shows that the intersections of 21st Street with Meridian Avenue and Suwanee Way are currently operating at an acceptable LOS.

Table 2.5 Current Year 2023 Intersection LOS

Intersection		Peak Hour	LOS	Overall Delay (sec/veh)	NB Delay (sec/veh) / LOS	SB Delay (sec/veh) / LOS	EB Delay (sec/veh) / LOS	WB Delay (sec/veh) / LOS
21st Street Intersections								
CR 578		AM	A	6.0	8.9 / A	7.9 / A	22.1 / C	34.6 / D
		PM	A	4.4	8.7 / A	8.2 / A	19.3 / C	29.8 / D
CR 52		AM	B	12.5	8.8 / A	10.9 / A	N/A	22.6 / C
		PM	B	18.3	14.2 / B	14.1 / B	N/A	27.3 / C

2.5. Historical Crashes

Crash data has been obtained through the Florida Signal Four Analytic crash database for the past five years. A crash analysis (2018-2023) was conducted at the intersections of 21st Street with Meridian Avenue, Suwanee Way, and Center Avenue. The intersections with the most reported crashes was Suwanee Way. Rear end crashes account for most of the crashes, followed by angle and left turn crashes. Table 2.6 provides a summary of crashes in the study period and Table 2.7 provide a breakdown of crashes by intersection. **Appendix D** includes a copy of the crash data.

Table 2.6 Crash Data Summary

Category	2018	2019	2020	2021	2022	2023	Total	Percent Crashes
Total	1	3	7	7	7	4	29	-
Rear End	1	1	3	3	5	3	16	55.17%
Angle	0	0	2	1	1	0	4	13.79%
Left Turn	0	1	0	2	1	0	4	13.79%
Right Turn	0	0	1	1	0	0	2	6.90%
Pedestrian	0	0	0	0	0	1	1	3.45%
Off Road	0	1	0	0	0	0	1	3.45%
Other	0	0	1	0	0	0	1	3.45%
Injury Crashes	0	1	1	3	1	1	7	24.14%
Fatal Crashes	0	0	0	0	0	0	0	0.00%
Daylight	1	1	6	5	6	3	22	75.86%
Dark - Lighted	0	2	0	2	0	1	5	17.24%
Dusk	0	0	1	0	1	0	2	6.90%
Dry	1	2	6	6	7	3	25	86.21%
Wet	0	1	1	1	0	1	4	13.79%
AM Peak (7 AM - 9 AM)	0	0	0	1	1	1	3	10.34%
Midday Peak (12 PM - 2 PM)	0	1	0	1	0	1	3	10.34%
PM Peak (4 PM - 6 PM)	1	0	3	1	3	1	9	31.03%

Table 2.7 Intersection Crash Summary

Category	Other	Off Road	Pedestrian	Right Turn	Angle	Left Turn	Rear End	Total	Percent Crashes
Total	1	1	1	2	4	4	16	29	-
Suwanee Way	0	0	0	1	4	2	5	12	41%
Meridian Avenue	0	1	0	1	0	2	5	9	31%
Center Avenue	0	0	0	0	0	0	1	1	3%
Not at Intersection	1	0	1	0	0	0	5	7	24%

3. Future Traffic Forecast

Forecasted AADTs and directional design hour volumes were developed for the Design Year 2050. Future AADTs were developed using the Tampa Bay Regional Planning Model (TBRPM), Pasco County MOBILITY 2045 Long Range Transportation Plan (LRTP), and available historical AADT volumes. This information was used to develop an annual growth rate that was used to calculate future AADT values.

3.1. Population and Employment Growth

Population and employment annual growth rates were calculated from the Pasco County Metropolitan Planning Organization LRTP. Population and employment annual growth rates for Pasco County were calculated as 2.14% and 2.31%, respectively. Table 3.1 and Figure 3.1 provide population forecasts from the Pasco County LRTP. Using the TBRPM, population and employment annual growth rates were calculated from the entire countywide Traffic Analysis Zones (TAZs) as 2.15% and 2.31%, respectively. Population and employment annual growth rates were calculated from the surrounding TAZs as 1.06% and 0.03%, respectively. The TBRPM population and employment annual growth rates are listed in Table 3.2 and can be found in **Appendix E**.

Table 3.1 Pasco County LRTP Population and Employment Forecast Recommendation

Variable	2015	2035	2045	2015-2045 Growth
Household Population	477,662	691,614	785,428	307,766
Group Quarters Population	6,335	8,965	9,572	3,237
Total Population	483,997	700,579	795,000	311,003
Employees	157,500	228,187	266,561	109,061
Employees/Population Ratio	0.33	0.33	0.34	N/A

Figure 3.1 Pasco LRTP Annual Population Growth Rate

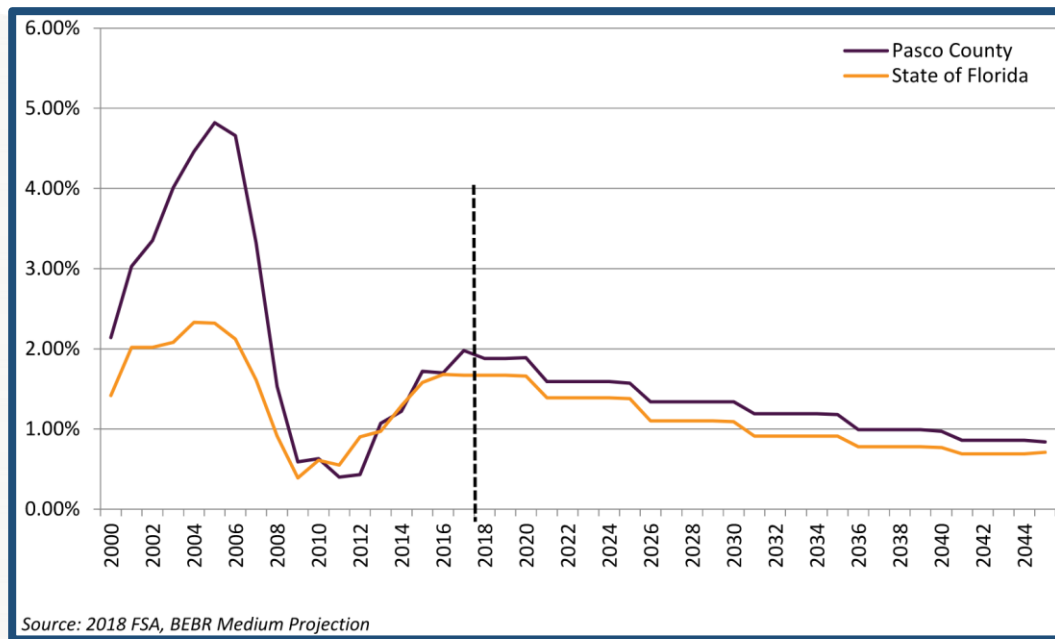


Table 3.2 Annual Growth Rate Summary

Category	Location	Annual Growth Rate
Projected Population (2015-2045)	Pasco County LRTP	2.14%
	TBRPM Countywide TAZs	2.15%
	TBRPM Project Area TAZs	1.06%
Projected Employment (2015-2045)	Pasco County LRTP	2.31%
	TBRPM Countywide TAZs	2.31%
	TBRPM Project Area TAZs	0.03%

The projected Pasco County population annual growth rate was also calculated from the Bureau of Economic and Business Research (BEBR). The most conservative “high” population projections from 2050 were considered against the estimated existing 2022 population for Pasco County and resulted in an annual growth rate of 2.64%. The BEBR population annual growth rate calculations are listed in Table 3.3 and can be found in **Appendix F**.

Table 3.3 BEBR Annual Growth Rate Summary

Range	2022 Estimate	2050 Projection	Annual Growth Rate
Low	592,669	624,100	0.19%
Medium		815,800	1.34%
High		1,007,500	2.50%

3.2. Historical Annual Growth Rate

The available historical AADT volumes have been used in this study for annual growth rate calculations. Regression analysis was conducted to calculate the annual growth rate for the number of vehicles using the history of the annual average daily traffic (AADT) obtained from Florida Traffic Online. The historical regression analysis from 2013 to 2022 is listed in Table 3.4 and can be found in **Appendix G**.

Table 3.4 Historical Growth Summary

Roadway	Segment	FDOT PMS #	2023 AADT	Historical Annual Growth Rate	Trend R ²	2050 Trend AADT
21st Street	South of CR 52	140033	10,300	-1.79%	38.23%	<10,000
	North of CR 52	149076	7,600	3.28%	92.08%	17,000
CR 578	West of 21st Street	149088	4,000	0.00%	N/A	<5,000
CR 52	East of 21st Street	145003	7,600	-1.17%	38.55%	<8,000

3.3. Tampa Bay Regional Planning Model

The 2045 TBRPM has been used. This model was developed by the FDOT District Seven with assistance from Pasco County MPO for use in projecting future travel demand through 2045 and testing various transportation alternatives. The TBRPM represents land use and transportation interaction to assess the capability of the region's highway and transit networks to support anticipated growth. The TBRPM was validated for a 2015 base year. The 2015 socioeconomic data, traffic counts and transit ridership statistics were included to establish the model as a reasonably accurate representation of traffic patterns and conditions for use in predicting future travel demand. The TBRPM was adjusted to reflect currently planned projects with construction funding through 2025 and those built since 2015 to represent an existing plus committed (E+C) network. The model then was loaded with the projected 2045 socioeconomic data and land uses to project the 2045 traffic demand.

3.3.1. Forecast Model Development

Tampa Bay Regional Planning Model (TBRPM) 2045 AADT outputs were compared to establish Design Year AADTs for this study. The TBRPM output is the Peak Season Weekday Average Daily Traffic (PSWADT). The PSWADT output is converted to AADT by multiplying the Model Output Conversion Factor (MOCF) from Pasco County. The TBRPM analysis results are shown in Table 3.5. The MOCF can be found in **Appendix B**. A copy of the model output can be found in **Appendix E**.

Table 3.5 TBRPM Output

Roadway	Segment	2023 AADT	MOCF	TBRPM 2045 PSWADT	TBRPM 2045 AADT
21st Street	South of CR 52	10,300	0.96	12,951	12,433
	North of CR 578	7,600	0.96	5,027	4,826
CR 578	West of 21st Street	4,000	0.96	1,780	1,709
CR 52	East of 21st Street	7,600	0.96	11,677	11,210

The annual growth rate for each segment between the actual 2023 AADT and the TBRPM projected 2045 AADT and between the TBRPM 2015 and 2045 AADT was calculated and is listed in Table 3.6.

Table 3.6 Annual Growth Rate Summary

Roadway	Segment	TBRPM 2015 AADT	2023 AADT	TBRPM 2045 AADT	AGR (2015-2045)	AGR (2023-2045)
21st Street	South of CR 52	8,898	10,300	12,951	1.52%	1.19%
	North of CR 578	1,990	7,600	5,027	5.09%	-1.54%
CR 578	West of 21st Street	5,937	4,000	1,780	-2.33%	-2.51%
CR 52	East of 21st Street	10,547	7,600	11,677	0.36%	2.45%

3.4. Recommended Annual Growth Rate

For traffic projection purposes this study used the individual annual growth rates of each roadway segment shown in Table 3.7 considering the model growth rates.

Table 3.7 Annual Growth Rate Calculation

Roadway	Segment	Historical Annual Growth Rate (2013 to 2022) %	Annual Growth Rate (2015 to 2045) %	Annual Growth Rate (2023 to 2045) %	Annual Growth Rate % Used
21st Street	South of CR 52	-1.79%	1.52%	1.19%	2.00%
	North of CR 578	3.28%	5.09%	-1.54%	2.00%
CR 578	West of 21st Street	0.00%	-2.33%	-2.51%	2.00%
CR 52	East of 21st Street	-1.17%	0.36%	2.45%	2.00%

4. Future Traffic Demand

This section calculates the future years traffic volumes using the Existing Year 2023 AADT and the annual growth rates used in this study. The traffic AADT volumes have been rounded according to the 2019 FDOT Project Traffic Forecasting Handbook. Table 4.1 shows the calculated Design Year 2050 AADT based on the recommended annual growth rate for each roadway segment. Table 4.2 provides the AADT values of the Existing Year 2023, Opening Year 2030, and Design Year 2050 scenarios. Figure 4.1 depicts the Design Year 2050 AADT volumes.

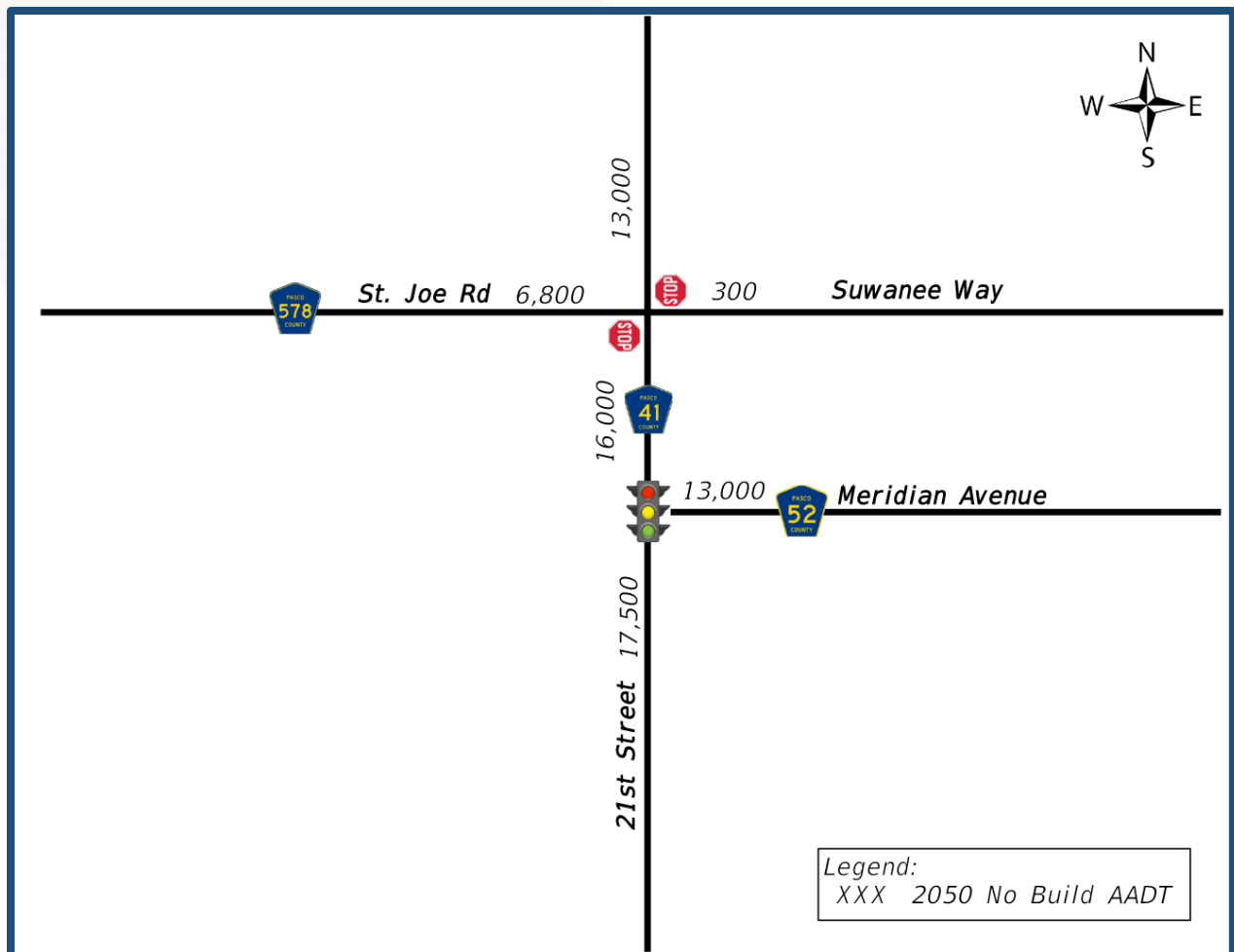
Table 4.1 Design Year 2050 AADT Calculation

Roadway	Segment	2023 AADT	Annual Growth Rate % Used	2050 AADT	2050 AADT (rounded)
21st Street	South of CR 52	10,300	2.00%	17,532	17,500
	North of CR 578	7,600	2.00%	12,964	13,000
CR 578	West of 21st Street	4,000	2.00%	6,789	6,800
CR 52	East of 21st Street	7,600	2.00%	12,948	13,000

Table 4.2 AADT Summary

Roadway	Segment	2023 AADT	2030 AADT	2050 AADT
21st Street	South of CR 52	10,300	12,000	17,500
	North of CR 578	7,600	8,700	13,000
CR 578	West of 21st Street	4,000	4,600	6,800
CR 52	East of 21st Street	7,600	8,700	13,000

Figure 4.1 AADT Summary



4.1. Future Year Turning Movement Volumes

The traffic design factors presented in **Section 2.3** were used to compute future year peak hour volumes. The FDOT TURNS5 tool was used to help in estimating future years turning movement volumes. Output worksheets from TURNS5 can be found in **Appendix H**. The peak hour intersection turning movement volumes were checked for reasonableness and manually adjusted where necessary and appropriate. Directional AM peak hour volumes were obtained from the reciprocal movement PM peak hour volumes and vice versa. Figure 4.2 and 4.3 depicts the AM and PM turning movement volumes for the Opening Year 2030 and the Design Year 2050, respectively.

Figure 4.2 2030 Turning Movement Volumes

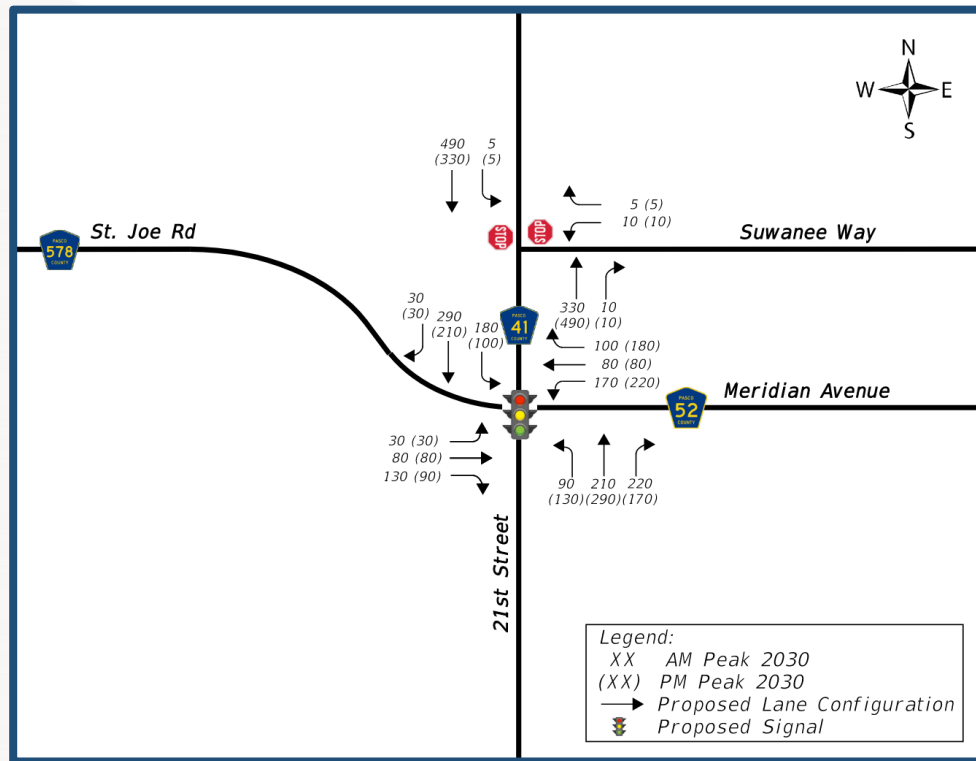
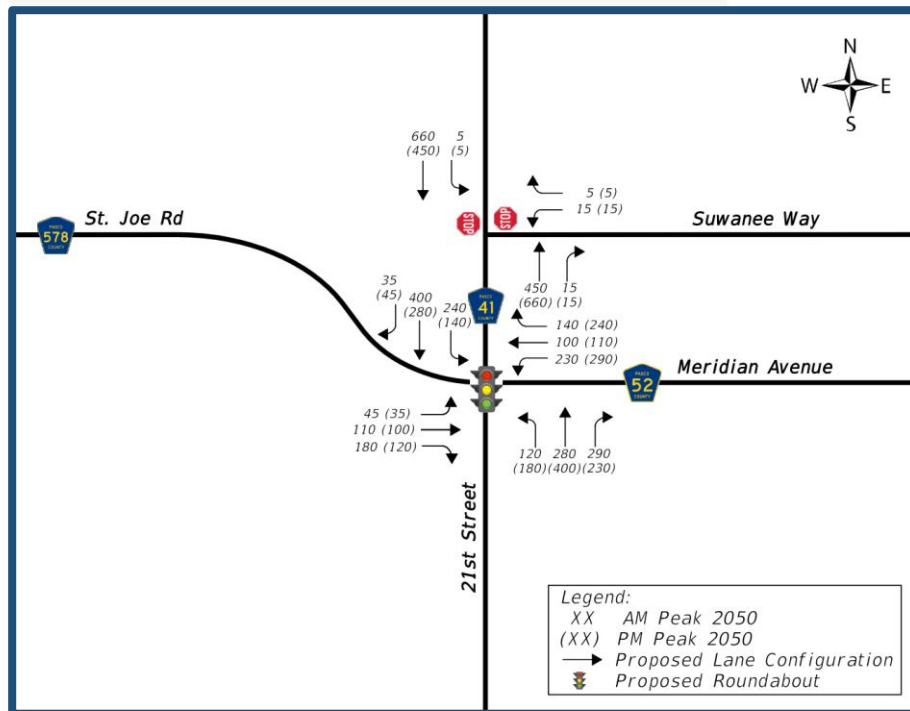


Figure 4.3 2050 Turning Movement Volumes



5. Capacity Analysis

This section includes future capacity analysis for the Opening Year 2030 and the Design Year 2050 for the No-Build and Build alternatives.

5.1. Design Year 2050 No-Build LOS Analysis

Design Year 2050 LOS analysis was conducted based on the methodology outlined in the Highway Capacity Manual, 6th Edition using Synchro 11. **Appendix C** includes the copies of the Synchro LOS computer outputs. The Design Year 2050 AM and PM peak hour LOS is presented in Table 5.1. The Design Year 2050 intersection LOS analysis shows that the intersection is expected to fail.

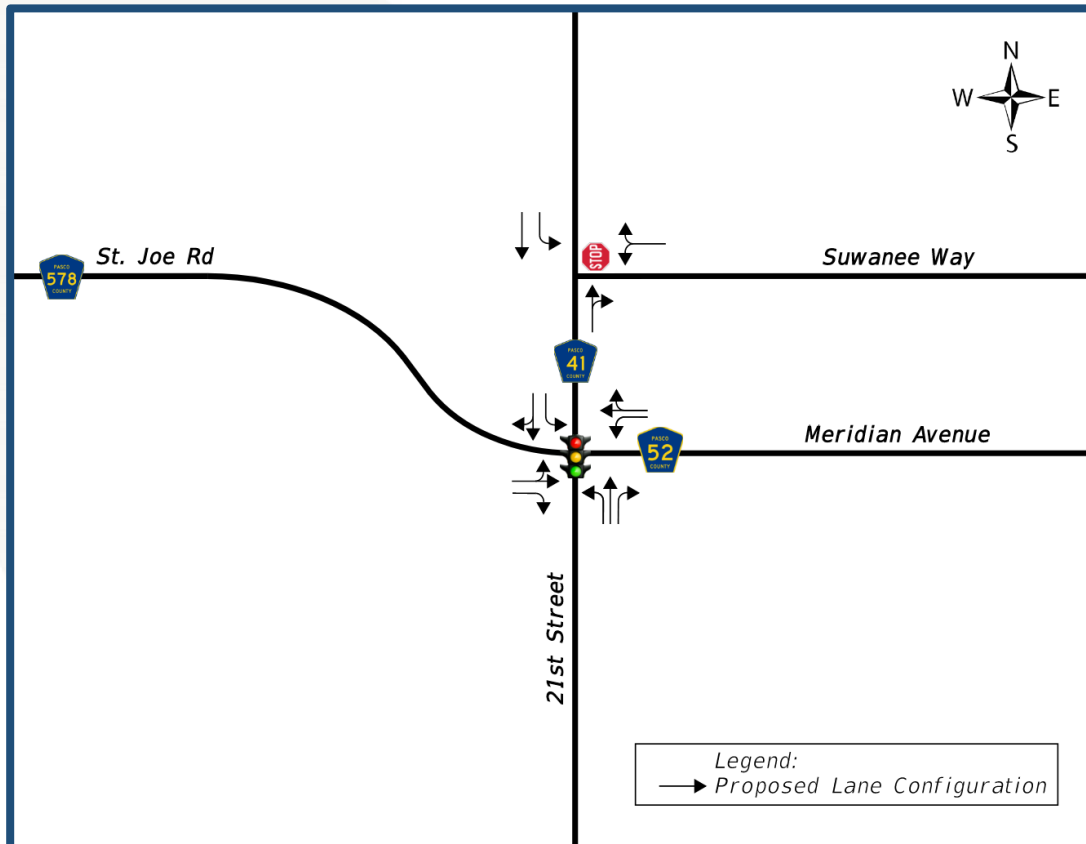
Table 5.1 Design Year 2050 No-Build Intersection LOS

Intersection		Peak Hour	LOS	Overall Delay (Sec/veh)	NB Delay (sec/veh) / LOS	SB Delay (sec/veh) / LOS	EB Delay (sec/veh) / LOS	WB Delay (sec/veh) / LOS
21st Street Intersections								
CR 578		AM	F	58.6	10.4 / B	8.3 / A	265.3 / F	310.7 / F
		PM	E	37.6	9.7 / A	9.0 / A	223.5 / F	238.6 / F
CR 52		AM	D	50.9	14.4 / B	48.6 / D	N/A	108.6 / F
		PM	F	86.7	25.8 / C	81.7 / F	N/A	168.8 / F

5.2. Proposed Geometry

The proposed geometric improvements include the realignment of the eastbound approach of St. Joe Rd to intersect at the junction of 21st Street and CR 52. The Build Alternative intends to maintain the intersection under signalized control. Figure 5.1 shows the Build Alternative lane geometry.

Figure 5.1 Build Alternative Lane Geometry



5.3. Opening Year 2030 and Design Year 2050 Build LOS Analysis

The Opening Year 2030 and Design Year 2050 AM and PM peak hour LOS for the intersection is presented in Table 5.2. The Opening Year 2030 and Design Year 2050 intersection LOS analysis shows that the intersection is expected to operate at an acceptable LOS.

Table 5.2 Build Intersection LOS

Intersection		Peak Hour	LOS	Overall Delay (sec/veh)	NB Delay (sec/veh) / LOS	SB Delay (sec/veh) / LOS	EB Delay (sec/veh) / LOS	WB Delay (sec/veh) / LOS
21st Street 2030 Build Intersection LOS								
CR 578		AM	A	0.3	N/A	8.0/A	N/A	14.8/B
		PM	A	0.3	N/A	8.5/A	N/A	15.3/C
CR 52-Signal Alt.		AM	B	19.8	16.2/B	26.4/C	11.7/B	21.4/C
		PM	C	20.5	19.2/B	23.9/C	11.7/B	23.3/C
21st Street 2050 Build Intersection LOS								
CR 578		AM	A	0.4	N/A	8.4 / A	N/A	21.1 / C
		PM	A	0.4	N/A	9.1 / A	N/A	21.7 / C
CR 52-Signal Alt.		AM	C	27.1	17.0/B	32.0/C	18.4/B	41.3/D
		PM	C	28.9	22.0/C	37.5/D	15.7/B	36.7/D

The queue lengths for each location were chosen from the highest length from the Synchro AM and PM models. The minimum queue length was determined to be 50 feet, two vehicles. The queue lengths are presented in Table 5.3

Table 5.3 Queue Lengths

Intersection	Approach	Left Turn	Through	Right Turn
21st Street 2050 Build Queue Lengths (ft)				
CR 52	Northbound	150	275	75
	Southbound	225	350	N/A
	Eastbound	N/A	125	50
	Westbound	275	175	N/A

6. Conclusions and Recommendations

The 21st Street intersection improvements are recommended based on the future land use and growth in the project area. Below is a summary of recommended improvements within the study area.

The intersection of 21st Street and CR 52 is currently operating at an acceptable LOS but is expected to fail with the future traffic demand. The Build Alternative is recommended at this intersection. The intersection improvements include the realignment of the eastbound approach of St. Joe Rd to intersect at the junction of 21st Street and CR 52 while maintaining traffic signal control.

APPENDIX A - 24 Hour Bi-Directional Volume Counts

21st Street at Meridian Avenue, Dade City, Florida

0 0

Thursday, November 16, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
12:00 AM	0	1	4	0	0	5	0	2	0	1	0	3	0	0	6	3	0	9	0	0	0	0	0	0	17
12:15 AM	0	1	4	0	0	5	0	0	0	0	0	0	0	0	10	2	0	12	0	0	0	0	0	0	17
12:30 AM	0	2	3	0	0	5	0	2	0	0	0	2	0	0	8	3	0	11	0	0	0	0	0	0	18
12:45 AM	0	0	2	0	0	2	0	1	0	3	0	4	0	0	1	1	0	2	0	0	0	0	0	0	8
Hourly Total	0	4	13	0	0	17	0	5	0	4	0	9	0	0	25	9	0	34	0	0	0	0	0	0	60
1:00 AM	0	2	1	0	0	3	0	1	0	1	0	2	0	0	4	1	0	5	0	0	0	0	0	0	10
1:15 AM	0	2	4	0	0	6	0	0	0	2	0	2	0	0	2	0	0	2	0	0	0	0	0	0	10
1:30 AM	0	0	2	0	0	2	0	2	0	0	0	2	0	0	3	3	0	6	0	0	0	0	0	0	10
1:45 AM	0	0	2	0	0	2	0	1	0	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	6
Hourly Total	0	4	9	0	0	13	0	4	0	6	0	10	0	0	9	4	0	13	0	0	0	0	0	0	36
2:00 AM	0	1	3	0	0	4	0	1	0	1	0	2	0	0	1	1	0	2	0	0	0	0	0	0	8
2:15 AM	0	1	2	0	0	3	0	1	0	0	0	1	0	0	4	1	0	5	0	0	0	0	0	0	9
2:30 AM	0	1	2	0	0	3	0	1	0	1	0	2	0	0	2	1	0	3	0	0	0	0	0	0	8
2:45 AM	0	0	2	0	0	2	0	1	0	1	0	2	0	0	3	4	0	7	0	0	0	0	0	0	11
Hourly Total	0	3	9	0	0	12	0	4	0	3	0	7	0	0	10	7	0	17	0	0	0	0	0	0	36
3:00 AM	0	0	3	0	0	3	0	2	0	1	0	3	0	0	2	1	0	3	0	0	0	0	0	0	9
3:15 AM	0	0	2	0	0	2	0	3	2	1	0	4	0	0	2	2	0	4	0	0	0	0	0	0	10
3:30 AM	0	2	1	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5
3:45 AM	0	2	4	0	0	6	0	0	0	2	0	2	0	0	2	1	0	3	0	0	0	0	0	0	11
Hourly Total	0	4	10	0	0	14	0	5	0	4	0	9	0	0	8	4	0	12	0	0	0	0	0	0	35
4:00 AM	0	1	8	0	0	9	0	4	0	1	0	5	0	0	5	0	0	5	0	0	0	0	0	0	19
4:15 AM	0	2	10	0	0	12	0	2	0	2	0	4	0	0	4	0	0	4	0	0	0	0	0	0	20
4:30 AM	0	1	14	0	0	15	0	2	0	0	0	2	0	0	7	6	0	13	0	0	0	0	0	0	30
4:45 AM	0	7	11	0	0	18	0	8	0	3	0	11	0	0	8	2	0	10	0	0	0	0	0	0	39
Hourly Total	0	11	43	0	0	54	0	16	0	6	0	22	0	0	24	8	0	32	0	0	0	0	0	0	108
5:00 AM	0	6	27	0	0	33	0	7	0	3	0	10	0	0	9	2	0	11	0	0	0	0	0	0	54
5:15 AM	0	5	31	0	0	36	0	9	0	4	0	13	0	0	13	3	0	16	0	0	0	0	0	0	65
5:30 AM	0	8	64	0	0	72	0	14	0	5	0	19	0	0	18	2	0	20	0	0	0	0	0	0	111
5:45 AM	0	9	59	0	0	68	0	22	0	9	0	31	0	0	26	6	0	32	0	0	0	0	0	0	131
Hourly Total	0	28	181	0	0	209	0	52	0	21	0	73	0	0	66	13	0	79	0	0	0	0	0	0	361
6:00 AM	0	11	51	0	0	62	0	23	0	10	0	33	0	0	30	12	0	42	0	0	0	0	0	0	137
6:15 AM	1	29	54	0	0	84	0	21	0	8	0	29	0	0	32	11	0	43	0	0	0	0	0	0	156
6:30 AM	0	41	84	0	0	125	0	34	0	16	0	50	0	0	25	16	0	41	0	0	0	0	0	0	216
6:45 AM	0	62	146	0	0	208	0	42	0	15	1	57	0	0	70	35	0	105	0	0	0	0	0	0	370
Hourly Total	1	143	335	0	0	479	0	120	0	49	1	169	0	0	157	74	0	231	0	0	0	0	0	0	879
7:00 AM	0	54	96	0	0	150	0	33	0	34	0	67	0	0	114	41	0	155	0	0	0	0	0	0	372
7:15 AM	0	46	65	0	0	111	0	14	0	35	0	49	0	0	53	31	0	84	0	0	0	0	0	0	244
7:30 AM	0	42	58	0	0	100	0	24	0	40	0	64	0	0	48	26	0	74	0	0	0	0	0	0	238
7:45 AM	0	55	73	0	0	128	0	23	0	36	0	59	0	0	71	47	0	118	0	0	0	0	0	0	305
Hourly Total	0	197	292	0	0	489	0	94	0	145	0	239	0	0	286	145	0	431	0	0	0	0	0	0	1159

21st Street at Meridian Avenue, Dade City, Florida

0 0

Thursday, November 16, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
8:00 AM	0	36	52	0	0	88	0	29	0	35	0	64	0	0	68	49	0	117	0	0	0	0	0	0	269
8:15 AM	0	63	47	0	0	110	0	19	0	25	0	44	0	0	47	51	0	98	0	0	0	0	0	0	252
8:30 AM	0	45	40	0	0	85	0	22	0	24	0	46	0	0	42	49	0	91	0	0	0	0	0	0	222
8:45 AM	0	51	47	0	0	98	0	28	0	32	0	60	0	0	42	39	0	81	0	0	0	0	0	0	239
Hourly Total	0	195	186	0	0	381	0	98	0	116	0	214	0	0	199	188	0	387	0	0	0	0	0	0	982
9:00 AM	0	47	45	0	0	92	0	24	0	31	0	55	0	0	36	20	0	56	0	0	0	0	0	0	203
9:15 AM	0	38	54	0	0	92	0	30	0	26	0	56	0	0	35	27	0	62	0	0	0	0	0	0	210
9:30 AM	0	40	58	0	0	98	0	34	0	26	0	60	0	0	24	35	0	59	0	0	0	0	0	0	217
9:45 AM	0	38	31	0	0	69	0	23	0	13	0	36	0	0	37	33	0	70	0	0	0	0	0	0	175
Hourly Total	0	163	188	0	0	351	0	111	0	96	0	207	0	0	132	115	0	247	0	0	0	0	0	0	805
10:00 AM	0	28	46	0	0	74	0	23	0	24	0	47	0	0	33	32	0	65	0	0	0	0	0	0	186
10:15 AM	0	36	44	0	0	80	0	17	0	29	0	46	0	0	36	35	0	71	0	0	0	0	0	0	197
10:30 AM	0	44	31	0	0	75	0	21	0	30	0	51	0	0	43	25	0	68	0	0	0	0	0	0	194
10:45 AM	0	42	47	0	0	89	0	21	0	36	0	57	0	0	46	36	0	82	0	0	0	0	0	0	228
Hourly Total	0	150	168	0	0	318	0	82	0	119	0	201	0	0	158	128	0	286	0	0	0	0	0	0	805
11:00 AM	0	28	42	0	0	70	0	23	0	33	0	56	0	0	49	40	0	89	0	0	0	0	0	0	215
11:15 AM	0	40	39	0	0	79	0	32	0	24	0	56	0	0	48	32	0	80	0	0	0	0	0	0	215
11:30 AM	0	29	55	0	1	84	0	31	0	26	0	57	0	0	38	31	0	69	0	0	0	0	0	0	210
11:45 AM	0	48	40	0	0	88	0	31	0	31	0	62	0	0	38	25	0	63	0	0	0	0	0	0	213
Hourly Total	0	145	176	0	1	321	0	117	0	114	0	231	0	0	173	128	0	301	0	0	0	0	0	0	853
12:00 PM	0	33	56	0	0	89	0	36	0	38	0	74	0	0	49	33	0	82	0	0	0	0	0	0	245
12:15 PM	0	48	41	0	0	89	0	29	0	36	0	65	0	0	44	31	0	75	0	0	0	0	0	0	229
12:30 PM	0	40	60	0	1	100	0	30	0	38	1	68	0	0	39	28	0	67	0	0	0	0	0	0	235
12:45 PM	0	38	44	0	0	82	0	44	0	38	0	82	0	0	49	45	0	94	0	0	0	0	0	0	258
Hourly Total	0	159	201	0	1	360	0	139	0	150	1	289	0	0	181	137	0	318	0	0	0	0	0	0	967
1:00 PM	0	48	54	0	0	102	1	36	0	35	0	72	0	0	53	32	0	85	0	0	0	0	0	0	259
1:15 PM	0	18	74	0	0	92	0	26	0	36	0	62	0	0	52	23	0	75	0	0	0	0	0	0	229
1:30 PM	0	25	60	0	0	85	0	39	0	35	0	74	0	0	61	32	0	93	0	0	0	0	0	0	252
1:45 PM	0	29	67	0	0	96	0	39	0	41	0	80	0	0	116	39	0	155	0	0	0	0	0	0	331
Hourly Total	0	120	255	0	0	375	1	140	0	147	0	288	0	0	282	126	0	408	0	0	0	0	0	0	1071
2:00 PM	0	30	42	0	0	72	0	33	0	39	1	72	0	0	96	34	1	130	0	0	0	0	0	0	274
2:15 PM	0	31	56	0	0	87	0	42	0	32	0	74	0	0	65	32	0	97	0	0	0	0	0	0	258
2:30 PM	0	16	48	0	0	64	0	37	0	34	0	71	0	0	57	33	0	90	0	0	0	0	0	0	225
2:45 PM	0	20	37	0	0	57	0	29	0	41	0	70	0	0	59	33	0	92	0	0	0	0	0	0	219
Hourly Total	0	97	183	0	0	280	0	141	0	146	1	287	0	0	277	132	1	409	0	0	0	0	0	0	976
3:00 PM	0	25	52	0	0	77	0	33	0	29	0	62	0	0	64	32	0	96	0	0	0	0	0	0	235
3:15 PM	0	26	47	0	0	73	0	29	0	33	0	62	0	0	76	32	0	108	0	0	0	0	0	0	243
3:30 PM	0	28	47	0	0	75	0	30	0	54	0	84	0	0	68	34	0	102	0	0	0	0	0	0	261
3:45 PM	0	27	57	0	0	84	0	33	0	37	0	70	0	0	50	30	0	80	0	0	0	0	0	0	234
Hourly Total	0	106	203	0	0	309	0	125	0	153	0	278	0	0	258	128	0	386	0	0	0	0	0	0	973

21st Street at Meridian Avenue, Dade City, Florida

0 0

Thursday, November 16, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehcle Approach Total</i>	
4:00 PM	0	24	60	0	0	84	0	43	0	43	0	86	0	0	65	26	0	91	0	0	0	0	0	0	261
4:15 PM	0	35	59	0	0	94	0	48	0	43	0	91	0	0	66	40	0	106	0	0	0	0	0	0	291
4:30 PM	0	23	50	0	0	73	0	33	0	57	0	90	0	0	75	37	0	112	0	0	0	0	0	0	275
4:45 PM	0	26	72	0	0	98	0	34	0	52	0	86	0	0	79	26	0	105	0	0	0	0	0	0	289
Hourly Total	0	108	241	0	0	349	0	158	0	195	0	353	0	0	285	129	0	414	0	0	0	0	0	0	1116
5:00 PM	0	44	92	0	0	136	0	77	0	46	0	123	0	0	88	29	0	117	0	0	0	0	0	0	376
5:15 PM	0	38	55	0	0	93	0	43	0	49	0	92	0	0	76	38	0	114	0	0	0	0	0	0	299
5:30 PM	0	30	57	0	0	87	0	41	0	54	0	95	0	0	77	28	0	105	0	0	0	0	0	0	287
5:45 PM	0	33	65	0	0	98	0	29	0	38	0	67	0	0	53	28	0	81	0	0	0	0	0	0	246
Hourly Total	0	145	269	0	0	414	0	190	0	187	0	377	0	0	294	123	0	417	0	0	0	0	0	0	1208
6:00 PM	0	24	43	0	0	67	1	28	0	31	0	60	0	0	47	15	0	62	0	0	0	0	0	0	189
6:15 PM	0	19	44	0	0	63	0	28	0	38	0	66	0	0	63	16	0	79	0	0	0	0	0	0	208
6:30 PM	0	18	34	0	0	52	0	24	0	38	0	62	0	0	49	22	0	71	0	0	0	0	0	0	185
6:45 PM	0	23	33	0	0	56	0	27	0	33	0	60	0	0	42	39	0	81	0	0	0	0	0	0	197
Hourly Total	0	84	154	0	0	238	1	107	0	140	0	248	0	0	201	92	0	293	0	0	0	0	0	0	779
7:00 PM	0	13	27	0	0	40	0	29	0	31	0	60	0	0	37	19	0	56	0	0	0	0	0	0	156
7:15 PM	0	16	30	0	0	46	0	21	0	29	0	50	0	0	36	22	0	58	0	0	0	0	0	0	154
7:30 PM	0	13	34	0	0	47	0	14	0	32	0	46	0	0	31	15	0	46	0	0	0	0	0	0	139
7:45 PM	0	20	11	0	0	31	0	13	0	15	0	28	0	0	29	19	0	48	0	0	0	0	0	0	107
Hourly Total	0	62	102	0	0	164	0	77	0	107	0	184	0	0	133	75	0	208	0	0	0	0	0	0	556
8:00 PM	0	9	33	0	0	42	0	19	0	29	0	48	0	0	29	17	0	46	0	0	0	0	0	0	136
8:15 PM	0	10	22	0	0	32	0	20	0	16	0	36	0	0	24	12	0	36	0	0	0	0	0	0	104
8:30 PM	0	7	23	0	0	30	0	14	0	12	0	26	0	0	32	11	0	43	0	0	0	0	0	0	99
8:45 PM	0	9	24	0	0	33	0	20	0	9	0	29	0	0	25	13	0	38	0	0	0	0	0	0	100
Hourly Total	0	35	102	0	0	137	0	73	0	66	0	139	0	0	110	53	0	163	0	0	0	0	0	0	439
9:00 PM	0	2	20	0	0	22	0	6	0	18	0	24	0	0	20	6	0	26	0	0	0	0	0	0	72
9:15 PM	0	5	15	0	0	20	0	20	0	15	0	35	0	0	20	5	0	25	0	0	0	0	0	0	80
9:30 PM	0	7	13	0	0	20	0	6	0	9	0	15	0	0	22	9	0	31	0	0	0	0	0	0	66
9:45 PM	0	9	16	0	0	25	0	3	0	12	0	15	0	0	12	11	0	23	0	0	0	0	0	0	63
Hourly Total	0	23	64	0	0	87	0	35	0	54	0	89	0	0	74	31	0	105	0	0	0	0	0	0	281
10:00 PM	0	4	5	0	0	9	0	10	0	8	0	18	0	0	10	7	0	17	0	0	0	0	0	0	44
10:15 PM	0	4	18	0	0	22	0	7	0	8	0	15	0	0	12	11	0	23	0	0	0	0	0	0	60
10:30 PM	0	3	16	0	0	19	0	6	0	6	0	12	0	0	19	7	0	26	0	0	0	0	0	0	57
10:45 PM	0	6	10	0	0	16	0	2	0	5	0	7	0	0	8	5	0	13	0	0	0	0	0	0	36
Hourly Total	0	17	49	0	0	66	0	25	0	27	0	52	0	0	49	30	0	79	0	0	0	0	0	0	197
11:00 PM	0	0	4	0	0	4	0	7	0	4	0	11	0	0	9	8	0	17	0	0	0	0	0	0	32
11:15 PM	0	0	5	0	0	5	0	5	0	3	0	8	0	0	11	5	0	16	0	0	0	0	0	0	29
11:30 PM	0	2	3	0	0	5	0	1	0	4	0	5	0	0	8	3	0	11	0	0	0	0	0	0	21
11:45 PM	0	0	5	0	0	5	0	2	0	1	0	3	0	0	6	2	0	8	0	0	0	0	0	0	16
Hourly Total	0	2	17	0	0	19	0	15	0	12	0	27	0	0	34	18	0	52	0	0	0	0	0	0	98
DAILY TOTAL Cars	1 1	2005 1932	3450 3335	0 0	2 1	5456 5268	2 2	1933 1899	0 0	2067 1997	3 3	4002 3898	0 0	0 0	3425 3279	1897 1867	1 1	5322 5146	0 0	0 0	0 0	0 0	0 0	0 0	14780 14312
Heavy Vehicles	0	73	115	0	1	188	0	34	0	70	0	104	0	0	146	30	0	176	0	0	0	0	0	0	468
Heavy Vehicle %	0.00%	3.64%	3.33%	0.00%	50.00%	3.45%	0.00%	1.76%	0.00%	3.39%	0.00%	2.60%	0.00%	0.00%	4.26%	1.58%	0.00%	3.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.17%

21st Street at Meridian Avenue, Dade City, Florida

0 0

Thursday, November 16, 2023

AM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
6:45 AM	0	62	146	0	0	208	0	42	0	15	1	57	0	0	70	35	0	105	0	0	0	0	0	0	370
7:00 AM	0	54	96	0	0	150	0	33	0	34	0	67	0	0	114	41	0	155	0	0	0	0	0	0	372
7:15 AM	0	46	65	0	0	111	0	14	0	35	0	49	0	0	53	31	0	84	0	0	0	0	0	0	244
7:30 AM	0	42	58	0	0	100	0	24	0	40	0	64	0	0	48	26	0	74	0	0	0	0	0	0	238
Peak Hour Total PHF	0	204	365	0	0	569	0	113	0	124	1	237	0	0	285	133	0	418	0	0	0	0	0	0	1224
	0.000	0.823	0.625	0.000	0.000	0.684	0.000	0.673	0.000	0.775	0.250	0.884	0.000	0.000	0.625	0.811	0.000	0.674	0.000	0.000	0.000	0.000	0.000	0.000	0.823

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:45 PM	0	26	72	0	0	98	0	34	0	52	0	86	0	0	79	26	0	105	0	0	0	0	0	0	289
5:00 PM	0	44	92	0	0	136	0	77	0	46	0	123	0	0	88	29	0	117	0	0	0	0	0	0	376
5:15 PM	0	38	55	0	0	93	0	43	0	49	0	92	0	0	76	38	0	114	0	0	0	0	0	0	299
5:30 PM	0	30	57	0	0	87	0	41	0	54	0	95	0	0	77	28	0	105	0	0	0	0	0	0	287
Peak Hour Total PHF	0	138	276	0	0	414	0	195	0	201	0	396	0	0	320	121	0	441	0	0	0	0	0	0	1251
	0.000	0.784	0.750	0.000	0.000	0.761	0.000	0.633	0.000	0.931	0.000	0.805	0.000	0.000	0.909	0.796	0.000	0.942	0.000	0.000	0.000	0.000	0.000	0.000	0.832

Total Vehicles On Leg		10949	
Vehicles Entering Intersection	5456	Vehicles Exiting Intersection	5493
Southbound			
Cars	0	3335	1932
Heavy	0	115	73
Total	0	3450	2005



Total Vehicles on Leg 0	Vehicles Entering Intersection 0	Eastbound	Cars	Heavy	Total
			0	0	0
			0	0	0
			0	0	0
			0	0	0
			0	0	0



Daily Volumes

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 4002	Total Vehicles on Leg 7904
1997	70	2067		Vehicles Exiting Intersection 3904	
0	0	0			
1899	34	1933			
2	0	2			
3	0	3			



Cars	1	0	0	3279	1867
Heavy	0	0	0	146	30
Total	1	0	0	3425	1897
Northbound					
Vehicles Entering Intersection 5322			Vehicles Exiting Intersection 5383		
Total Vehicles On Leg			10705		

21st Street at Suwanee Way, Dade City, Florida

0 0

Thursday, November 16, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL	
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total		
12:00 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	2	4	0	0	0	6	0	0	0	0	0	0	11
12:15 AM	0	0	5	0	0	5	0	0	0	0	0	0	0	0	11	0	0	0	11	0	0	0	0	0	0	16
12:30 AM	0	0	4	1	0	5	0	0	0	0	0	0	0	0	7	1	0	8	0	0	0	2	0	2	15	
12:45 AM	0	0	1	0	0	1	0	1	0	0	0	0	0	1	3	0	0	4	0	2	0	0	0	2	8	
Hourly Total	0	0	15	1	0	16	0	1	0	0	0	1	0	3	25	1	0	29	0	2	0	2	0	4	50	
1:00 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	3	1	0	5	0	0	0	0	0	0	8	
1:15 AM	0	0	6	0	0	6	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10	
1:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	
1:45 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	0	0	0	7	
Hourly Total	0	0	13	0	0	13	0	0	0	0	0	0	0	4	11	1	0	16	0	0	0	0	0	0	29	
2:00 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	1	6	
2:15 AM	0	0	1	0	0	1	0	1	0	0	0	1	0	0	3	1	0	4	0	1	0	1	0	2	8	
2:30 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	1	0	1	5	
2:45 AM	0	0	2	1	0	3	0	0	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	7	
Hourly Total	0	0	7	1	0	8	0	1	0	0	0	1	0	3	9	1	0	13	0	1	0	3	0	4	26	
3:00 AM	0	0	3	0	0	3	0	0	0	0	0	0	0	1	2	0	0	3	0	1	0	0	0	1	7	
3:15 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	5	
3:30 AM	0	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	2	5	
3:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	2	4	0	0	6	0	0	1	2	0	3	13	
Hourly Total	0	0	10	1	0	11	0	0	0	0	0	0	0	4	9	0	0	13	0	1	1	4	0	6	30	
4:00 AM	0	0	7	1	0	8	0	0	0	0	0	0	0	1	5	0	0	6	0	1	0	1	1	2	16	
4:15 AM	0	0	11	1	0	12	0	0	0	0	1	0	0	1	5	0	0	6	0	0	0	2	0	2	20	
4:30 AM	0	0	13	0	0	13	0	1	0	0	0	1	0	0	7	0	0	7	0	0	0	1	0	1	22	
4:45 AM	0	0	12	3	0	15	0	0	0	1	0	1	0	4	7	0	0	11	0	0	0	6	0	6	33	
Hourly Total	0	0	43	5	0	48	0	1	0	1	1	2	0	6	24	0	0	30	0	1	0	10	1	11	91	
5:00 AM	0	0	28	3	0	31	0	1	0	0	0	1	0	3	10	0	0	13	0	0	0	4	0	4	49	
5:15 AM	0	0	31	3	0	34	0	2	0	0	0	2	0	4	13	1	0	18	0	2	0	3	0	5	59	
5:30 AM	0	0	67	8	0	75	0	1	0	0	0	1	0	6	18	0	1	24	0	3	1	9	0	13	113	
5:45 AM	0	0	56	9	0	65	0	1	0	0	0	1	0	12	22	0	0	34	0	1	0	9	0	10	110	
Hourly Total	0	0	182	23	0	205	0	5	0	0	0	5	0	25	63	1	1	89	0	6	1	25	0	32	331	
6:00 AM	0	0	48	15	0	63	0	1	1	1	0	3	0	13	28	0	0	41	0	5	0	12	0	17	124	
6:15 AM	0	0	56	12	0	68	0	1	1	1	0	3	0	9	30	0	0	39	0	1	0	21	0	22	132	
6:30 AM	0	0	92	22	0	114	0	2	0	0	1	2	0	18	23	1	0	42	0	4	0	35	0	39	197	
6:45 AM	0	0	146	8	0	154	0	1	3	0	0	4	0	27	54	0	0	81	0	6	0	61	0	67	306	
Hourly Total	0	0	342	57	0	399	0	5	5	2	1	12	0	67	135	1	0	203	0	16	0	129	0	145	759	
7:00 AM	0	0	100	4	0	104	0	0	1	0	0	1	0	56	91	3	0	150	0	5	0	46	2	51	306	
7:15 AM	0	1	68	7	0	76	0	1	0	0	0	1	0	29	57	3	0	89	0	4	0	43	0	47	213	
7:30 AM	0	0	63	4	0	67	0	0	1	0	0	1	0	23	62	1	0	86	0	6	2	37	0	45	199	
7:45 AM	0	0	78	2	0	80	0	2	0	0	0	2	0	26	83	0	0	109	0	8	0	51	0	59	250	
Hourly Total	0	1	309	17	0	327	0	3	2	0	0	5	0	134	293	7	0	434	0	23	2	177	2	202	968	
	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOT	

21st Street at Suwanee Way, Dade City, Florida
0 0

Thursday, November 16, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	
8:00 AM	0	0	55	1	0	56	0	0	2	0	0	2	0	35	67	1	0	103	0	4	1	32	0	37	198
8:15 AM	0	0	54	2	0	56	0	0	1	0	0	1	0	21	51	1	0	73	0	6	1	55	0	62	192
8:30 AM	0	0	47	1	0	48	0	1	0	0	0	1	0	26	41	0	0	67	0	2	0	37	0	39	155
8:45 AM	0	0	59	2	0	61	0	0	1	1	0	2	0	37	38	0	0	75	0	8	0	39	0	47	185
Hourly Total	0	0	215	6	0	221	0	1	4	1	0	6	0	119	197	2	0	318	0	20	2	163	0	185	730
9:00 AM	0	0	46	1	0	47	0	0	0	0	0	0	1	24	41	0	0	66	0	6	0	43	0	49	162
9:15 AM	0	0	44	1	0	45	0	0	2	1	0	3	0	20	38	1	0	59	0	4	2	48	0	54	161
9:30 AM	0	0	60	2	0	62	0	1	0	0	0	1	0	16	36	1	0	53	0	7	1	37	0	45	161
9:45 AM	0	1	29	1	0	31	0	0	0	0	1	0	0	15	40	0	0	55	0	7	1	37	0	45	131
Hourly Total	0	1	179	5	0	185	0	1	2	1	1	4	1	75	155	2	0	233	0	24	4	165	0	193	615
10:00 AM	0	0	52	2	0	54	0	0	0	0	0	0	0	20	39	0	0	59	0	1	0	23	0	24	137
10:15 AM	0	1	59	1	0	61	0	0	0	0	0	0	0	24	41	2	0	67	0	5	0	27	0	32	160
10:30 AM	0	0	42	2	0	44	0	0	1	1	0	2	0	26	47	2	0	75	0	1	0	29	0	30	151
10:45 AM	0	0	60	3	0	63	0	0	1	0	0	1	0	28	57	0	0	85	0	1	0	29	0	30	179
Hourly Total	0	1	213	8	0	222	0	0	2	1	0	3	0	98	184	4	0	286	0	8	0	108	0	116	627
11:00 AM	0	0	52	0	0	52	0	0	0	0	0	0	0	25	59	0	0	84	0	7	0	17	0	24	160
11:15 AM	0	1	48	2	0	51	0	0	0	1	0	1	0	31	58	1	0	90	0	8	0	30	0	38	180
11:30 AM	0	0	61	2	0	63	0	0	0	1	0	1	0	32	34	2	0	68	0	4	0	24	0	28	160
11:45 AM	0	0	55	3	0	58	0	1	0	0	0	1	0	26	47	0	0	73	0	6	1	30	0	37	169
Hourly Total	0	1	216	7	0	224	0	1	0	2	0	3	0	114	198	3	0	315	0	25	1	101	0	127	669
12:00 PM	0	0	62	0	0	62	0	2	0	0	0	2	0	27	59	0	0	86	0	9	0	30	0	39	189
12:15 PM	0	0	51	2	0	53	0	1	0	0	0	1	0	29	55	0	0	84	0	11	1	29	0	41	179
12:30 PM	0	0	66	1	0	67	0	1	0	0	0	1	0	31	42	2	0	75	0	6	0	37	1	43	186
12:45 PM	0	0	51	1	0	52	0	0	0	0	0	0	0	29	58	2	0	89	0	3	1	32	0	36	177
Hourly Total	0	0	230	4	0	234	0	4	0	0	0	4	0	116	214	4	0	334	0	29	2	128	1	159	731
1:00 PM	0	0	67	1	0	68	0	1	0	0	0	1	0	34	53	1	0	88	0	7	1	33	0	41	198
1:15 PM	0	0	69	2	0	71	0	1	0	0	0	1	0	30	57	2	0	89	0	4	1	22	0	27	188
1:30 PM	0	0	65	3	0	68	0	0	1	0	0	1	0	40	57	0	0	97	0	4	0	25	0	29	195
1:45 PM	0	0	62	1	0	63	0	1	0	0	0	1	0	44	104	3	0	151	0	3	0	29	0	32	247
Hourly Total	0	0	263	7	0	270	0	3	1	0	0	4	0	148	271	6	0	425	0	18	2	109	0	129	828
2:00 PM	0	0	46	4	0	50	0	2	0	0	1	2	0	45	89	5	0	139	0	5	0	28	0	33	224
2:15 PM	0	0	49	2	0	51	0	1	0	0	0	1	0	29	72	0	0	101	0	3	0	29	0	32	185
2:30 PM	0	0	49	5	0	54	0	1	0	1	0	2	0	25	65	1	0	91	0	4	1	20	0	25	172
2:45 PM	0	0	39	1	0	40	0	0	0	0	0	0	0	36	58	0	0	94	0	3	2	16	0	21	155
Hourly Total	0	0	183	12	0	195	0	4	0	1	1	5	0	135	284	6	0	425	0	15	3	93	0	111	736
3:00 PM	0	0	57	5	0	62	0	0	0	0	0	0	0	31	62	1	0	94	0	2	0	20	0	22	178
3:15 PM	0	0	51	1	0	52	0	2	1	0	0	3	0	45	61	2	0	108	0	8	0	22	0	30	193
3:30 PM	0	0	44	2	0	46	0	1	0	1	0	2	0	45	78	2	0	125	0	14	0	29	0	43	216
3:45 PM	0	0	64	3	0	67	0	0	1	0	0	1	0	33	54	1	0	88	0	11	2	25	0	38	194
Hourly Total	0	0	216	11	0	227	0	3	2	1	0	6	0	154	255	6	0	415	0	35	2	96	0	133	781

21st Street at Suwanee Way, Dade City, Florida

0 0

Thursday, November 16, 2023

Time	Southbound 0						Westbound 0						Northbound 0						Eastbound 0						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	<i>Vehicle Approach Total</i>	
4:00 PM	0	0	65	2	0	67	0	0	0	1	0	1	0	39	67	2	0	108	0	5	1	19	0	25	201
4:15 PM	0	2	57	4	0	63	0	0	0	0	0	0	0	36	67	3	0	106	0	8	0	36	0	44	213
4:30 PM	0	0	56	2	0	58	0	0	0	1	0	1	0	45	90	0	0	135	0	7	1	19	0	27	221
4:45 PM	0	0	64	1	0	65	0	1	0	0	0	1	0	43	82	5	0	130	0	2	0	33	0	35	231
Hourly Total	0	2	242	9	0	253	0	1	0	2	0	3	0	163	306	10	0	479	0	22	2	107	0	131	866
5:00 PM	0	0	110	5	0	115	0	0	0	1	0	1	0	46	89	0	0	135	0	9	0	31	0	40	291
5:15 PM	0	2	63	2	0	67	0	0	0	0	0	0	0	40	84	1	0	125	0	5	1	28	0	34	226
5:30 PM	0	0	62	7	0	69	0	0	2	0	0	2	0	45	86	2	0	133	0	3	1	27	0	31	235
5:45 PM	0	1	59	1	0	61	0	0	0	0	0	0	0	27	66	1	0	94	0	4	2	34	0	40	195
Hourly Total	0	3	294	15	0	312	0	0	2	1	0	3	0	158	325	4	0	487	0	21	4	120	0	145	947
6:00 PM	0	0	52	5	0	57	0	1	0	0	0	1	0	31	47	2	0	80	0	5	1	24	0	30	168
6:15 PM	0	1	52	5	0	58	0	0	0	0	0	0	0	35	64	3	0	102	0	3	0	15	0	18	178
6:30 PM	0	0	44	1	0	45	0	0	1	0	0	1	0	33	54	1	0	88	0	8	1	8	0	17	151
6:45 PM	0	0	40	2	0	42	0	0	0	0	0	0	0	19	54	1	0	74	0	2	0	18	0	20	136
Hourly Total	0	1	188	13	0	202	0	1	1	0	0	2	0	118	219	7	0	344	0	18	2	65	0	85	633
7:00 PM	0	1	27	3	0	31	0	1	0	1	0	2	0	24	45	0	0	69	0	4	2	12	0	18	120
7:15 PM	0	0	32	1	0	33	0	0	0	0	0	0	0	20	44	0	0	64	0	0	0	13	0	13	110
7:30 PM	0	0	36	5	0	41	0	2	0	0	0	2	0	19	40	3	0	62	0	2	0	8	0	10	115
7:45 PM	0	0	19	1	0	20	0	0	1	0	1	1	0	16	25	4	1	45	0	2	0	12	0	14	80
Hourly Total	0	1	114	10	0	125	0	3	1	1	1	5	0	79	154	7	1	240	0	8	2	45	0	55	425
8:00 PM	0	0	38	3	0	41	0	0	0	0	0	0	0	20	33	3	0	56	0	2	1	6	0	9	106
8:15 PM	0	0	19	4	0	23	0	1	0	0	0	1	0	14	27	0	0	41	0	0	1	11	0	12	77
8:30 PM	0	0	21	1	0	22	0	0	0	0	0	0	0	5	39	0	0	44	0	2	0	9	0	11	77
8:45 PM	0	2	28	1	0	31	0	0	1	0	0	1	0	9	25	1	0	35	0	0	0	7	0	7	74
Hourly Total	0	2	106	9	0	117	0	1	1	0	0	2	0	48	124	4	0	176	0	4	2	33	0	39	334
9:00 PM	0	0	18	1	0	19	0	0	0	0	0	0	0	9	29	1	0	39	0	0	0	4	0	4	62
9:15 PM	0	0	15	0	0	15	0	0	0	0	0	0	0	10	25	0	0	35	0	1	0	5	0	6	56
9:30 PM	0	0	17	1	0	18	0	1	0	0	0	1	0	7	24	0	0	31	0	4	0	3	0	7	57
9:45 PM	0	0	16	1	0	17	0	1	0	0	0	1	0	9	15	1	0	25	0	1	0	8	0	9	52
Hourly Total	0	0	66	3	0	69	0	2	0	0	0	2	0	35	93	2	0	130	0	6	0	20	0	26	227
10:00 PM	0	0	5	2	0	7	0	0	0	1	0	1	0	6	9	1	0	16	0	3	0	4	0	7	31
10:15 PM	0	0	25	0	0	25	0	0	0	0	0	0	1	6	15	0	0	22	0	2	0	2	0	4	51
10:30 PM	0	0	13	2	0	15	0	0	0	0	0	0	0	3	15	1	0	19	0	1	0	2	0	3	37
10:45 PM	0	1	12	0	0	13	0	0	0	0	0	0	0	3	9	0	0	12	0	0	0	4	0	4	29
Hourly Total	0	1	55	4	0	60	0	0	0	1	0	1	1	18	48	2	0	69	0	6	0	12	0	18	148
11:00 PM	0	0	2	0	0	2	0	0	0	0	0	0	0	2	11	0	0	13	0	0	0	2	0	2	17
11:15 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	4	11	0	0	15	0	0	0	1	0	1	20
11:30 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	2	10	0	0	12	0	0	0	2	0	2	18
11:45 PM	0	0	4	0	0	4	0	0	0	0	0	0	0	1	7	0	0	8	0	0	0	0	0	0	12
Hourly Total	0	0	14	0	0	14	0	0	0	0	0	0	0	9	39	0	0	48	0	0	0	5	0	5	67
DAILY TOTAL	0	14	3715	228	0	3957	0	41	23	15	5	79	2	1833	3635	81	2	5551	0	309	32	1720	4	2061	11648
Cars	0	14	3610	228	0	3852	0	40	22	14	5	76	2	1761	3485	81	2	5329	0	303	32	1632	4	1967	11224
Heavy Vehicles	0	0	105	0	0	105	0	1	1	1	0	3	0	72	150	0	0	222	0	6	0	88	0	94	424
Heavy Vehicle %	0.00%	0.00%	2.83%	0.00%	0.00%	2.65%	0.00%	2.44%	4.35%	6.67%	0.00%	3.80%	0.00%	3.93%	4.13%	0.00%	0.00%	4.00%	0.00%	1.94%	0.00%	5.12%	0.00%	4.56%	3.64%

21st Street at Suwanee Way, Dade City, Florida

0 0

Thursday, November 16, 2023

AM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
6:45 AM	0	0	146	8	0	154	0	1	3	0	0	4	0	27	54	0	0	81	0	6	0	61	0	67	306
7:00 AM	0	0	100	4	0	104	0	0	1	0	0	1	0	56	91	3	0	150	0	5	0	46	2	51	306
7:15 AM	0	1	68	7	0	76	0	1	0	0	0	1	0	29	57	3	0	89	0	4	0	43	0	47	213
7:30 AM	0	0	63	4	0	67	0	0	1	0	0	1	0	23	62	1	0	86	0	6	2	37	0	45	199
Peak Hour Total PHF	0	1	377	23	0	401	0	2	5	0	0	7	0	135	264	7	0	406	0	21	2	187	2	210	1024
	0.000	0.250	0.646	0.719	0.000	0.651	0.000	0.500	0.417	0.000	0.000	0.438	0.000	0.603	0.725	0.583	0.000	0.677	0.000	0.875	0.250	0.766	0.250	0.784	0.837

PM Peak Hour

Time	Southbound						Westbound						Northbound						Eastbound						VEHICLE TOTAL
	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	U Turns	Left Turns	Straight Through	Right Turns	Crosswalk Crossings	Vehicle Approach Total	
4:45 PM	0	0	64	1	0	65	0	1	0	0	0	1	0	43	82	5	0	130	0	2	0	33	0	35	231
5:00 PM	0	0	110	5	0	115	0	0	0	1	0	1	0	46	89	0	0	135	0	9	0	31	0	40	291
5:15 PM	0	2	63	2	0	67	0	0	0	0	0	0	0	40	84	1	0	125	0	5	1	28	0	34	226
5:30 PM	0	0	62	7	0	69	0	0	2	0	0	2	0	45	86	2	0	133	0	3	1	27	0	31	235
Peak Hour Total PHF	0	2	299	15	0	316	0	1	2	1	0	4	0	174	341	8	0	523	0	19	2	119	0	140	983
	0.000	0.250	0.680	0.536	0.000	0.687	0.000	0.250	0.250	0.250	0.000	0.500	0.000	0.946	0.958	0.400	0.000	0.969	0.000	0.528	0.500	0.902	0.000	0.875	0.845

Total Vehicles On Leg		7916	
Vehicles Entering Intersection		3957	Vehicles Exiting Intersection 3959
Southbound			
Cars	228	3610	14 0 0
Heavy	0	105	0 0 0
Total	228	3715	14 0 0

Total Vehicles on Leg 4145	Vehicles Entering Intersection 2061	Eastbound	Cars	Heavy	Total
	Vehicles Exiting Intersection 2084		4	0	4
			0	0	0
			303	6	309
			32	0	32
			1632	88	1720

Cars	Heavy	Total	Westbound	Vehicles Entering Intersection 79	Total Vehicles on Leg 206
14	1	15			
22	1	23			
40	1	41			
0	0	0			
5	0	5			
				Vehicles Exiting Intersection 127	

Daily Volumes

Cars	2	2	1761	3485	81
Heavy	0	0	72	150	0
Total	2	2	1833	3635	81
Northbound					
Vehicles Entering Intersection			Vehicles Exiting Intersection		
5551			5476		
Total Vehicles On Leg			11027		

APPENDIX B - Florida Traffic Online References

2022 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 14 - PASCO

WEEK	DATES	1429 PASCO WESTERN HPMS 2	1430 PASCO COUNTY WIDE	SR 56	1431
1	01/01/2022 - 01/01/2022	0.98	0.96		0.90
2	01/02/2022 - 01/08/2022	0.98	0.95		0.90
3	01/09/2022 - 01/15/2022	0.98	0.94		0.89
4	01/16/2022 - 01/22/2022	0.98	0.94		0.89
5	01/23/2022 - 01/29/2022	0.98	0.94		0.89
6	01/30/2022 - 02/05/2022	0.98	0.95		0.89
7	02/06/2022 - 02/12/2022	0.98	0.95		0.89
8	02/13/2022 - 02/19/2022	0.98	0.95		0.89
9	02/20/2022 - 02/26/2022	0.98	0.95		0.89
10	02/27/2022 - 03/05/2022	0.98	0.95		0.89
11	03/06/2022 - 03/12/2022	0.98	0.95		0.89
12	03/13/2022 - 03/19/2022	0.98	0.95		0.89
13	03/20/2022 - 03/26/2022	0.98	0.95		0.89
14	03/27/2022 - 04/02/2022	0.98	0.95		0.89
15	04/03/2022 - 04/09/2022	0.98	0.95		0.89
16	04/10/2022 - 04/16/2022	0.98	0.95		0.89
17	04/17/2022 - 04/23/2022	0.98	0.95		0.89
18	04/24/2022 - 04/30/2022	0.98	0.95		0.89
19	05/01/2022 - 05/07/2022	0.98	0.95		0.89
20	05/08/2022 - 05/14/2022	0.98	0.95		0.89
21	05/15/2022 - 05/21/2022	0.98	0.95		0.89
22	05/22/2022 - 05/28/2022	0.98	0.95		0.89
23	05/29/2022 - 06/04/2022	0.98	0.95		0.89
24	06/05/2022 - 06/11/2022	0.98	0.95		0.89
25	06/12/2022 - 06/18/2022	0.98	0.95		0.89
26	06/19/2022 - 06/25/2022	0.98	0.95		0.89
27	06/26/2022 - 07/02/2022	0.98	0.95		0.89
28	07/03/2022 - 07/09/2022	0.98	0.95		0.89
29	07/10/2022 - 07/16/2022	0.98	0.95		0.89
30	07/17/2022 - 07/23/2022	0.98	0.95		0.89
31	07/24/2022 - 07/30/2022	0.98	0.95		0.89
32	07/31/2022 - 08/06/2022	0.98	0.95		0.89
33	08/07/2022 - 08/13/2022	0.98	0.95		0.89
34	08/14/2022 - 08/20/2022	0.98	0.95		0.89
35	08/21/2022 - 08/27/2022	0.98	0.95		0.90
36	08/28/2022 - 09/03/2022	0.98	0.96		0.91
37	09/04/2022 - 09/10/2022	0.98	0.96		0.91
38	09/11/2022 - 09/17/2022	0.98	0.96		0.92
39	09/18/2022 - 09/24/2022	0.98	0.96		0.91
40	09/25/2022 - 10/01/2022	0.98	0.96		0.91
41	10/02/2022 - 10/08/2022	0.98	0.95		0.90
42	10/09/2022 - 10/15/2022	0.98	0.95		0.89
43	10/16/2022 - 10/22/2022	0.98	0.95		0.89
44	10/23/2022 - 10/29/2022	0.98	0.95		0.89
45	10/30/2022 - 11/05/2022	0.98	0.95		0.89
46	11/06/2022 - 11/12/2022	0.98	0.95		0.89
47	11/13/2022 - 11/19/2022	0.98	0.95		0.89
48	11/20/2022 - 11/26/2022	0.98	0.95		0.89
49	11/27/2022 - 12/03/2022	0.98	0.96		0.90
50	12/04/2022 - 12/10/2022	0.98	0.96		0.90
51	12/11/2022 - 12/17/2022	0.98	0.96		0.90
52	12/18/2022 - 12/24/2022	0.98	0.95		0.90
53	12/25/2022 - 12/31/2022	0.98	0.94		0.89

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1400 PASCO COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.96 PSCF
1	01/01/2022 - 01/01/2022	0.99	1.03
2	01/02/2022 - 01/08/2022	1.02	1.06
3	01/09/2022 - 01/15/2022	1.04	1.08
4	01/16/2022 - 01/22/2022	1.03	1.07
5	01/23/2022 - 01/29/2022	1.01	1.05
6	01/30/2022 - 02/05/2022	1.00	1.04
* 7	02/06/2022 - 02/12/2022	0.98	1.02
* 8	02/13/2022 - 02/19/2022	0.97	1.01
* 9	02/20/2022 - 02/26/2022	0.96	1.00
* 10	02/27/2022 - 03/05/2022	0.95	0.99
* 11	03/06/2022 - 03/12/2022	0.95	0.99
* 12	03/13/2022 - 03/19/2022	0.94	0.98
* 13	03/20/2022 - 03/26/2022	0.95	0.99
* 14	03/27/2022 - 04/02/2022	0.95	0.99
* 15	04/03/2022 - 04/09/2022	0.96	1.00
* 16	04/10/2022 - 04/16/2022	0.96	1.00
* 17	04/17/2022 - 04/23/2022	0.97	1.01
* 18	04/24/2022 - 04/30/2022	0.98	1.02
* 19	05/01/2022 - 05/07/2022	0.98	1.02
20	05/08/2022 - 05/14/2022	0.99	1.03
21	05/15/2022 - 05/21/2022	1.00	1.04
22	05/22/2022 - 05/28/2022	1.01	1.05
23	05/29/2022 - 06/04/2022	1.01	1.05
24	06/05/2022 - 06/11/2022	1.02	1.06
25	06/12/2022 - 06/18/2022	1.03	1.07
26	06/19/2022 - 06/25/2022	1.03	1.07
27	06/26/2022 - 07/02/2022	1.03	1.07
28	07/03/2022 - 07/09/2022	1.03	1.07
29	07/10/2022 - 07/16/2022	1.04	1.08
30	07/17/2022 - 07/23/2022	1.04	1.08
31	07/24/2022 - 07/30/2022	1.04	1.08
32	07/31/2022 - 08/06/2022	1.04	1.08
33	08/07/2022 - 08/13/2022	1.04	1.08
34	08/14/2022 - 08/20/2022	1.04	1.08
35	08/21/2022 - 08/27/2022	1.04	1.08
36	08/28/2022 - 09/03/2022	1.05	1.09
37	09/04/2022 - 09/10/2022	1.05	1.09
38	09/11/2022 - 09/17/2022	1.06	1.10
39	09/18/2022 - 09/24/2022	1.04	1.08
40	09/25/2022 - 10/01/2022	1.02	1.06
41	10/02/2022 - 10/08/2022	1.00	1.04
42	10/09/2022 - 10/15/2022	0.98	1.02
43	10/16/2022 - 10/22/2022	0.98	1.02
44	10/23/2022 - 10/29/2022	0.99	1.03
45	10/30/2022 - 11/05/2022	0.99	1.03
46	11/06/2022 - 11/12/2022	1.00	1.04
47	11/13/2022 - 11/19/2022	1.01	1.05
48	11/20/2022 - 11/26/2022	1.00	1.04
49	11/27/2022 - 12/03/2022	1.00	1.04
50	12/04/2022 - 12/10/2022	0.99	1.03
51	12/11/2022 - 12/17/2022	0.99	1.03
52	12/18/2022 - 12/24/2022	1.02	1.06
53	12/25/2022 - 12/31/2022	1.04	1.08

* PEAK SEASON

23-FEB-2023 09:11:23

830UPD

7_1400_PKSEASON.TXT

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 14 - PASCO

SITE: 9076 - 21ST ST/CR 41, N OF SR 52/MERIDIAN AVE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2022	9800 X		0		0	9.00	55.10	8.90
2021	9700 X		0		0	9.00	54.60	5.60
2020	9500 X		0		0	9.00	55.40	5.10
2019	9600 X		0		0	9.00	56.20	5.10
2018	9400 X		0		0	9.00	57.10	5.80
2017	9100 6		0		0	9.00	57.30	4.70
2016	8600 V		0		0	9.00	57.90	5.60
2015	8100 R		0		0	9.00	57.90	6.30
2014	7900 T					9.00	56.10	5.80
2013	7800 S		0		0	9.00	60.00	5.40
2012	7600 F		0		0	9.00	59.00	5.10
2011	7400 C	N	0	S	0	9.00	58.20	6.10

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 14 - PASCO

SITE: 0033 - SR 52/21ST ST, SOUTH OF COLEMAN AVE

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2022	10700	C	N 5000		S 5700	9.00	55.10	8.80
2021	10600	C	N 5100		S 5500	9.00	54.60	8.80
2020	10400	C	N 5100		S 5300	9.00	55.40	6.90
2019	11400	C	N 5600		S 5800	9.00	56.20	5.50
2018	12500	C	N 6100		S 6400	9.00	57.10	6.20
2017	13900	S	N 6700		S 7200	9.00	57.30	6.30
2016	13200	F	N 6400		S 6800	9.00	57.90	6.30
2015	12500	C	N 6100		S 6400	9.00	57.90	6.30
2014	12700	C	N 6200		S 6500	9.00	56.10	5.70
2013	11600	C	N 5600		S 6000	9.00	60.00	5.30
2012	12500	C	N 6100		S 6400	9.00	59.00	5.60
2011	12400	C	N 6000		S 6400	9.00	58.20	5.50
2010	13100	C	N 6700		S 6400	9.07	58.18	5.70
2009	11900	C	N 5800		S 6100	9.17	58.07	5.20
2008	12300	C	N 6000		S 6300	9.52	56.97	5.80
2007	13000	C	N 6300		S 6700	9.26	52.68	6.60

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 14 - PASCO

SITE: 5003 - SR 52/MERIDIAN AVE, WEST OF 17TH ST

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2022	8500	F	E 4200		W 4300	9.00	55.10	4.80
2021	8500	C	E 4200		W 4300	9.00	54.60	4.80
2020	7900	C	E 4000		W 3900	9.00	55.40	3.60
2019	9100	C	E 4600		W 4500	9.00	56.20	3.40
2018	9800	C	E 4900		W 4900	9.00	57.10	4.00
2017	9300	F	E 4700		W 4600	9.00	57.30	4.60
2016	8900	C	E 4500		W 4400	9.00	57.90	4.60
2015	9400	C	E 4800		W 4600	9.00	57.90	3.90
2014	9600	C	E 4900		W 4700	9.00	56.10	6.40
2013	9100	C	E 4600		W 4500	9.00	60.00	5.10
2012	9600	C	E 4900		W 4700	9.00	59.00	5.60
2011	8900	C	E 4500		W 4400	9.00	58.20	6.00
2010	8600	C	E 4300		W 4300	9.07	58.18	4.90
2009	8600	C	E 4400		W 4200	9.17	58.07	5.30
2008	9400	C	E 4800		W 4600	9.52	56.97	4.80
2007	9700	C	E 5000		W 4700	9.26	52.68	6.70

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 14 - PASCO

SITE: 9088 - CR 578/SAINT JOE RD, E OF 21ST ST

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2022	250 X	0	0	9.00	55.10	8.90
2021	250 X	0	0	9.00	54.60	5.60
2020	250 X	0	0	9.00	55.40	5.10
2019	250 X	0	0	9.00	56.20	5.10
2018	250 X	0	0	9.00	57.10	5.80
2017	250 6	0	0	9.00	57.30	4.70
2016	250 V	0	0	9.00	57.90	5.60
2015	250 R	0	0	9.00	57.90	6.30
2014	250 T			9.00	56.10	5.80
2013	250 S	0	0	9.00	60.00	5.40
2012	250 F	0	0	9.00	59.00	5.10
2011	250 C	E 0	W 0	9.00	58.20	6.10

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

APPENDIX C - Synchro Outputs

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↙	↘	
Traffic Vol, veh/h	21	2	187	2	5	0	135	264	7	1	377	23
Future Vol, veh/h	21	2	187	2	5	0	135	264	7	1	377	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	25	2	223	2	6	0	161	314	8	1	449	27
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1108	1109	463	1217	1118	318	476	0	0	322	0	0
Stage 1	465	465	-	640	640	-	-	-	-	-	-	-
Stage 2	643	644	-	577	478	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.54	6.24	7.14	6.54	6.24	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.536	4.036	3.336	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	186	208	595	156	205	718	1076	-	-	1227	-	-
Stage 1	574	560	-	460	467	-	-	-	-	-	-	-
Stage 2	459	465	-	499	552	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	155	170	595	83	167	718	1076	-	-	1227	-	-
Mov Cap-2 Maneuver	155	170	-	83	167	-	-	-	-	-	-	-
Stage 1	469	559	-	376	382	-	-	-	-	-	-	-
Stage 2	369	380	-	311	551	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	22.1		34.6		3		0					
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1076	-	-	455	130	1227	-	-				
HCM Lane V/C Ratio	0.149	-	-	0.549	0.064	0.001	-	-				
HCM Control Delay (s)	8.9	0	-	22.1	34.6	7.9	-	-				
HCM Lane LOS	A	A	-	C	D	A	-	-				
HCM 95th %tile Q(veh)	0.5	-	-	3.2	0.2	0	-	-				

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	19	2	119	1	2	1	174	341	8	2	299	15
Future Vol, veh/h	19	2	119	1	2	1	174	341	8	2	299	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	23	2	142	1	2	1	207	406	10	2	356	18
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1196	1199	365	1266	1203	411	374	0	0	416	0	0
Stage 1	369	369	-	825	825	-	-	-	-	-	-	-
Stage 2	827	830	-	441	378	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.54	6.24	7.14	6.54	6.24	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.536	4.036	3.336	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	161	184	676	144	183	636	1174	-	-	1132	-	-
Stage 1	647	617	-	364	384	-	-	-	-	-	-	-
Stage 2	363	382	-	591	612	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	130	141	676	92	141	636	1174	-	-	1132	-	-
Mov Cap-2 Maneuver	130	141	-	92	141	-	-	-	-	-	-	-
Stage 1	498	616	-	280	296	-	-	-	-	-	-	-
Stage 2	277	294	-	465	611	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	19.3		29.8		2.9		0.1					
HCM LOS	C		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1174	-	-	416	150	1132	-	-				
HCM Lane V/C Ratio	0.176	-	-	0.401	0.032	0.002	-	-				
HCM Control Delay (s)	8.7	0	-	19.3	29.8	8.2	-	-				
HCM Lane LOS	A	A	-	C	D	A	-	-				
HCM 95th %tile Q(veh)	0.6	-	-	1.9	0.1	0	-	-				

Lanes, Volumes, Timings
6: 21st Street & CR 52

No-Build 2023 AM

12/11/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	113	124	285	133	204	365
Future Volume (vph)	113	124	285	133	204	365
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929		0.957			
Flt Protected	0.977				0.950	
Satd. Flow (prot)	1691	0	1748	0	1736	1827
Flt Permitted	0.977				0.424	
Satd. Flow (perm)	1691	0	1748	0	775	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	90		59			
Link Speed (mph)	35		35			30
Link Distance (ft)	2649		3203			201
Travel Time (s)	51.6		62.4			4.6
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	2%	4%	4%	4%	4%
Adj. Flow (vph)	138	151	348	162	249	445
Shared Lane Traffic (%)						
Lane Group Flow (vph)	289	0	510	0	249	445
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	32		16			24
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						

No-Build 2023 AM 4:02 pm 11/06/2023 Baseline

Synchro 11 Report
Page 1

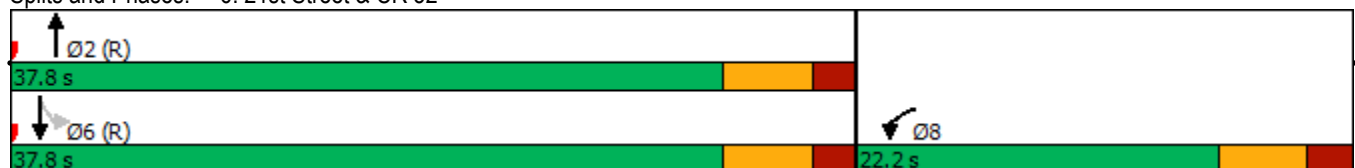
Lanes, Volumes, Timings
6: 21st Street & CR 52

No-Build 2023 AM

12/11/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	22.1		22.5		22.5	22.5
Total Split (s)	22.2		37.8		37.8	37.8
Total Split (%)	37.0%		63.0%		63.0%	63.0%
Maximum Green (s)	16.1		31.8		31.8	31.8
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	2.1		2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.1		6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Min		C-Min	C-Min
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	12.8		35.1		35.1	35.1
Actuated g/C Ratio	0.21		0.58		0.58	0.58
v/c Ratio	0.67		0.49		0.55	0.42
Control Delay	22.6		8.8		14.5	8.9
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	22.6		8.8		14.5	8.9
LOS	C		A		B	A
Approach Delay	22.6		8.8			10.9
Approach LOS	C		A			B
Queue Length 50th (ft)	65		79		48	76
Queue Length 95th (ft)	108		143		109	133
Internal Link Dist (ft)	2569		3123			121
Turn Bay Length (ft)						
Base Capacity (vph)	519		1048		453	1070
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.56		0.49		0.55	0.42
Intersection Summary						
Area Type:	Other					
Cycle Length: 60						
Actuated Cycle Length: 60						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.67						
Intersection Signal Delay: 12.5				Intersection LOS: B		
Intersection Capacity Utilization 64.6%				ICU Level of Service C		
Analysis Period (min) 15						

Splits and Phases: 6: 21st Street & CR 52



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	195	201	320	121	138	276
Future Volume (vph)	195	201	320	121	138	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.963			
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1694	0	1759	0	1736	1827
Flt Permitted	0.976				0.361	
Satd. Flow (perm)	1694	0	1759	0	660	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	103		44			
Link Speed (mph)	35		35			35
Link Distance (ft)	2649		3203			201
Travel Time (s)	51.6		62.4			3.9
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	4%	4%	4%	4%
Adj. Flow (vph)	235	242	386	146	166	333
Shared Lane Traffic (%)						
Lane Group Flow (vph)	477	0	532	0	166	333
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	32		16			24
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						

	↖	↗	↑	↘	↙	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	22.1		22.5		22.5	22.5
Total Split (s)	25.0		30.0		30.0	30.0
Total Split (%)	45.5%		54.5%		54.5%	54.5%
Maximum Green (s)	18.9		24.0		24.0	24.0
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	2.1		2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.1		6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Min		C-Min	C-Min
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effect Green (s)	16.4		26.5		26.5	26.5
Actuated g/C Ratio	0.30		0.48		0.48	0.48
v/c Ratio	0.83		0.61		0.52	0.38
Control Delay	27.3		14.2		19.3	11.6
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	27.3		14.2		19.3	11.6
LOS	C		B		B	B
Approach Delay	27.3		14.2			14.1
Approach LOS	C		B			B
Queue Length 50th (ft)	106		115		37	69
Queue Length 95th (ft)	172		185		85	112
Internal Link Dist (ft)	2569		3123			121
Turn Bay Length (ft)						
Base Capacity (vph)	649		869		318	879
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.73		0.61		0.52	0.38

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 55

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 18.3

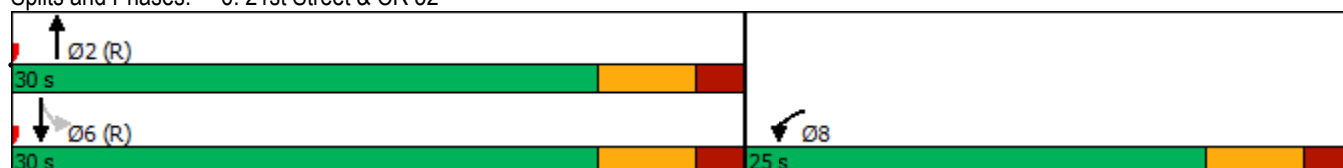
Intersection LOS: B

Intersection Capacity Utilization 74.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 6: 21st Street & CR 52



Intersection												
Int Delay, s/veh	58.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	40	5	290	10	5	5	210	420	10	5	630	30
Future Vol, veh/h	40	5	290	10	5	5	210	420	10	5	630	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	42	5	305	11	5	5	221	442	11	5	663	32
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1584	1584	679	1734	1595	448	695	0	0	453	0	0
Stage 1	689	689	-	890	890	-	-	-	-	-	-	-
Stage 2	895	895	-	844	705	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.54	6.24	7.14	6.54	6.24	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.536	4.036	3.336	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	87	107	448	68	106	607	891	-	-	1097	-	-
Stage 1	433	443	-	335	358	-	-	-	-	-	-	-
Stage 2	333	356	-	355	436	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	60	71	448	15	70	607	891	-	-	1097	-	-
Mov Cap-2 Maneuver	60	71	-	15	70	-	-	-	-	-	-	-
Stage 1	289	441	-	224	239	-	-	-	-	-	-	-
Stage 2	216	238	-	111	434	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	265.3		\$ 310.7		3.4		0.1					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	891	-	-	242	27	1097	-	-				
HCM Lane V/C Ratio	0.248	-	-	1.457	0.78	0.005	-	-				
HCM Control Delay (s)	10.4	0	-	265.3	\$ 310.7	8.3	-	-				
HCM Lane LOS	B	A	-	F	F	A	-	-				
HCM 95th %tile Q(veh)	1	-	-	20.3	2.5	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	37.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	30	5	210	10	5	5	290	630	10	5	420	40
Future Vol, veh/h	30	5	210	10	5	5	290	630	10	5	420	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	32	5	221	11	5	5	305	663	11	5	442	42
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1757	1757	463	1865	1773	669	484	0	0	674	0	0
Stage 1	473	473	-	1279	1279	-	-	-	-	-	-	-
Stage 2	1284	1284	-	586	494	-	-	-	-	-	-	-
Critical Hdwy	7.14	6.54	6.24	7.14	6.54	6.24	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.14	5.54	-	6.14	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.536	4.036	3.336	3.536	4.036	3.336	2.236	-	-	2.236	-	-
Pot Cap-1 Maneuver	66	84	595	55	82	454	1068	-	-	908	-	-
Stage 1	568	555	-	202	235	-	-	-	-	-	-	-
Stage 2	201	233	-	493	543	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	45	595	20	44	454	1068	-	-	908	-	-
Mov Cap-2 Maneuver	38	45	-	20	44	-	-	-	-	-	-	-
Stage 1	308	552	-	110	128	-	-	-	-	-	-	-
Stage 2	103	127	-	305	540	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	223.5		238.6		3		0.1					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1068	-	-	195	32	908	-	-				
HCM Lane V/C Ratio	0.286	-	-	1.323	0.658	0.006	-	-				
HCM Control Delay (s)	9.7	0	-	223.5	238.6	9	-	-				
HCM Lane LOS	A	A	-	F	F	A	-	-				
HCM 95th %tile Q(veh)	1.2	-	-	14.5	2.2	0	-	-				

Lanes, Volumes, Timings
6: 21st Street & CR 52

No-Build 2050 AM
12/11/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	230	240	400	290	350	580
Future Volume (vph)	230	240	400	290	350	580
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.931		0.943			
Flt Protected	0.976				0.950	
Satd. Flow (prot)	1693	0	1723	0	1736	1827
Flt Permitted	0.976				0.278	
Satd. Flow (perm)	1693	0	1723	0	508	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	42		62			
Link Speed (mph)	35		35			30
Link Distance (ft)	2649		3203			201
Travel Time (s)	51.6		62.4			4.6
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	4%	4%	4%
Adj. Flow (vph)	242	253	421	305	368	611
Shared Lane Traffic (%)						
Lane Group Flow (vph)	495	0	726	0	368	611
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	32		16			24
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						

No-Build 2050 AM 8:19 am 12/11/2023

Synchro 11 Report
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Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	22.1		22.5		22.5	22.5
Total Split (s)	36.0		84.0		84.0	84.0
Total Split (%)	30.0%		70.0%		70.0%	70.0%
Maximum Green (s)	29.9		78.0		78.0	78.0
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	2.1		2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.1		6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Min		C-Min	C-Min
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	29.9		78.0		78.0	78.0
Actuated g/C Ratio	0.25		0.65		0.65	0.65
v/c Ratio	1.09		0.64		1.12	0.51
Control Delay	108.8		14.4		107.8	13.0
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	108.8		14.4		107.8	13.0
LOS	F		B		F	B
Approach Delay	108.8		14.4			48.6
Approach LOS	F		B			D
Queue Length 50th (ft)	~407		283		~327	230
Queue Length 95th (ft)	#622		405		#519	319
Internal Link Dist (ft)	2569		3123			121
Turn Bay Length (ft)						
Base Capacity (vph)	453		1141		330	1187
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	1.09		0.64		1.12	0.51
Intersection Summary						
Area Type:	Other					
Cycle Length: 120						
Actuated Cycle Length: 120						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 120						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.12						
Intersection Signal Delay: 50.9	Intersection LOS: D					
Intersection Capacity Utilization 100.7%	ICU Level of Service G					
Analysis Period (min) 15						
~ Volume exceeds capacity, queue is theoretically infinite.						
Queue shown is maximum after two cycles.						
# 95th percentile volume exceeds capacity, queue may be longer.						

Queue shown is maximum after two cycles.

Splits and Phases: 6: 21st Street & CR 52



						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	290	350	580	230	240	400
Future Volume (vph)	290	350	580	230	240	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.926		0.962			
Flt Protected	0.978				0.950	
Satd. Flow (prot)	1687	0	1757	0	1736	1827
Flt Permitted	0.978				0.174	
Satd. Flow (perm)	1687	0	1757	0	318	1827
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	44		26			
Link Speed (mph)	35		35			35
Link Distance (ft)	2649		3203			201
Travel Time (s)	51.6		62.4			3.9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	4%	4%	4%	4%
Adj. Flow (vph)	305	368	611	242	253	421
Shared Lane Traffic (%)						
Lane Group Flow (vph)	673	0	853	0	253	421
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	32		16			24
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0		15.0		15.0	15.0
Minimum Split (s)	22.1		22.5		22.5	22.5
Total Split (s)	48.0		92.0		92.0	92.0
Total Split (%)	34.3%		65.7%		65.7%	65.7%
Maximum Green (s)	41.9		86.0		86.0	86.0
Yellow Time (s)	4.0		4.0		4.0	4.0
All-Red Time (s)	2.1		2.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	6.1		6.0		6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Min		C-Min	C-Min
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	41.9		86.0		86.0	86.0
Actuated g/C Ratio	0.30		0.61		0.61	0.61
v/c Ratio	1.26		0.78		1.30	0.38
Control Delay	168.8		25.8		193.1	14.7
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	168.8		25.8		193.1	14.7
LOS	F		C		F	B
Approach Delay	168.8		25.8			81.7
Approach LOS	F		C			F
Queue Length 50th (ft)	~739		534		~294	182
Queue Length 95th (ft)	#983		729		#294	251
Internal Link Dist (ft)	2569		3123			121
Turn Bay Length (ft)						
Base Capacity (vph)	535		1089		195	1122
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	1.26		0.78		1.30	0.38
Intersection Summary						
Area Type:	Other					
Cycle Length: 140						
Actuated Cycle Length: 140						
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green						
Natural Cycle: 140						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 1.30						
Intersection Signal Delay: 86.7	Intersection LOS: F					
Intersection Capacity Utilization 110.5%	ICU Level of Service H					
Analysis Period (min) 15						
~ Volume exceeds capacity, queue is theoretically infinite.						
Queue shown is maximum after two cycles.						
# 95th percentile volume exceeds capacity, queue may be longer.						

Queue shown is maximum after two cycles.

Splits and Phases: 6: 21st Street & CR 52



Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	330	10	5	490
Future Vol, veh/h	10	5	330	10	5	490
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	380	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	11	5	347	11	5	516

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	879	353	0
Stage 1	353	-	-
Stage 2	526	-	-
Critical Hdwy	6.44	6.24	-
Critical Hdwy Stg 1	5.44	-	-
Critical Hdwy Stg 2	5.44	-	-
Follow-up Hdwy	3.536	3.336	-
Pot Cap-1 Maneuver	315	686	-
Stage 1	707	-	-
Stage 2	589	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	314	686	-
Mov Cap-2 Maneuver	314	-	-
Stage 1	707	-	-
Stage 2	587	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	14.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	383	1190
HCM Lane V/C Ratio	-	-	0.041	0.004
HCM Control Delay (s/veh)	-	-	14.8	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q (veh)	-	-	0.1	0

Intersection

Int Delay, s/veh 0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	490	10	5	330
Future Vol, veh/h	10	5	490	10	5	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	380	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	11	5	516	11	5	347

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	879	522	0
Stage 1	522	-	-
Stage 2	357	-	-
Critical Hdwy	6.44	6.24	-
Critical Hdwy Stg 1	5.44	-	-
Critical Hdwy Stg 2	5.44	-	-
Follow-up Hdwy	3.536	3.336	-
Pot Cap-1 Maneuver	315	551	-
Stage 1	591	-	-
Stage 2	704	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	313	551	-
Mov Cap-2 Maneuver	313	-	-
Stage 1	591	-	-
Stage 2	700	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	15.3	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	366	1030
HCM Lane V/C Ratio	-	-	0.043	0.005
HCM Control Delay (s/veh)	-	-	15.3	8.5
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q (veh)	-	-	0.1	0

Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2030 AM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	80	130	170	80	100	90	210	220	180	290	30
Future Volume (vph)	30	80	130	170	80	100	90	210	220	180	290	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	305		0	230		230	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.917				0.850		0.986	
Flt Protected		0.986		0.950			0.950			0.950		
Satd. Flow (prot)	0	1801	1553	1736	1675	0	1736	1827	1553	1736	1801	0
Flt Permitted		0.861		0.682			0.950			0.950		
Satd. Flow (perm)	0	1573	1553	1246	1675	0	1736	1827	1553	1736	1801	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		103				232		9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2479			3298			2483			195	
Travel Time (s)		56.3			75.0			56.4			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	84	137	179	84	105	95	221	232	189	305	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	137	179	189	0	95	221	232	189	337	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			

Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2030 AM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		4.0	15.0	15.0	4.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		10.5	22.5	22.5	10.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		12.5	22.5	22.5	15.0	25.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%		20.8%	37.5%	37.5%	25.0%	41.7%	
Maximum Green (s)	16.5	16.5	16.5	16.5	16.5		6.0	16.5	16.5	8.5	19.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.5	4.0	4.0	4.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0	6.0	6.0		6.5	6.0	6.0	6.5	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effect Green (s)		13.6	13.6	13.6	13.6		6.7	18.5	18.5	9.4	23.6	
Actuated g/C Ratio		0.23	0.23	0.23	0.23		0.11	0.31	0.31	0.16	0.39	
v/c Ratio		0.32	0.28	0.63	0.41		0.48	0.39	0.36	0.69	0.47	
Control Delay (s/veh)		21.0	3.6	31.2	12.0		35.4	19.9	4.7	41.0	18.1	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		21.0	3.6	31.2	12.0		35.4	19.9	4.7	41.0	18.1	
LOS		C	A	C	B		D	B	A	D	B	
Approach Delay (s/veh)		11.7			21.4			16.2			26.4	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		35	0	59	25		32	65	0	63	97	
Queue Length 95th (ft)		69	23	109	68		#86	121	44	#160	171	
Internal Link Dist (ft)		2399			3218			2403			115	
Turn Bay Length (ft)			150	305			230		230			
Base Capacity (vph)		432	552	342	535		197	563	639	274	713	
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio		0.27	0.25	0.52	0.35		0.48	0.39	0.36	0.69	0.47	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.69												
Intersection Signal Delay (s/veh): 19.8	Intersection LOS: B											
Intersection Capacity Utilization 61.6%	ICU Level of Service B											
Analysis Period (min) 15												
# 95th percentile volume exceeds capacity, queue may be longer.												

Queue shown is maximum after two cycles.

Splits and Phases: 2: 21st Street & CR 52



Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2030 PM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	80	90	220	80	180	130	290	170	100	210	30
Future Volume (vph)	30	80	90	220	80	180	130	290	170	100	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	305		0	230		230	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.896				0.850		0.981	
Flt Protected		0.986		0.950			0.950			0.950		
Satd. Flow (prot)	0	1801	1553	1736	1637	0	1736	1827	1553	1736	1792	0
Flt Permitted		0.842		0.682			0.950			0.950		
Satd. Flow (perm)	0	1538	1553	1246	1637	0	1736	1827	1553	1736	1792	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			173		186				179		12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2479			3298			2483			195	
Travel Time (s)		56.3			75.0			56.4			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	84	95	232	84	189	137	305	179	105	221	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	95	232	273	0	137	305	179	105	253	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			

Lanes, Volumes, Timings
2: 21st Street & CR 52

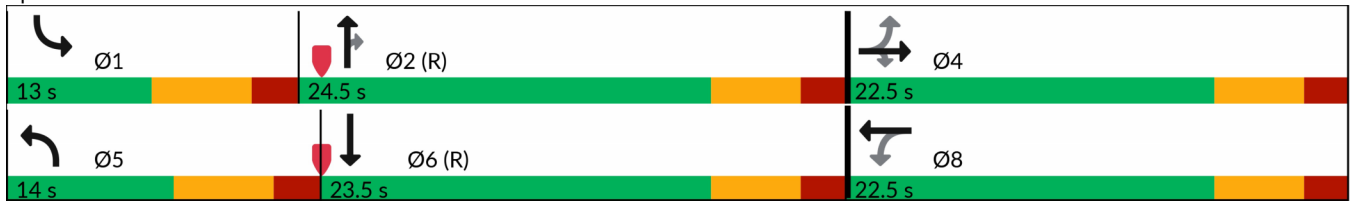
Build 2030 PM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		4.0	15.0	15.0	4.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		10.5	22.5	22.5	10.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		14.0	24.5	24.5	13.0	23.5	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%		23.3%	40.8%	40.8%	21.7%	39.2%	
Maximum Green (s)	16.5	16.5	16.5	16.5	16.5		7.5	18.5	18.5	6.5	17.5	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.5	4.0	4.0	4.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0	6.0	6.0		6.5	6.0	6.0	6.5	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effect Green (s)		14.7	14.7	14.7	14.7		7.5	22.7	22.7	6.6	21.9	
Actuated g/C Ratio		0.25	0.25	0.25	0.25		0.13	0.38	0.38	0.11	0.37	
v/c Ratio		0.30	0.18	0.76	0.50		0.62	0.44	0.25	0.55	0.38	
Control Delay (s/veh)		20.1	1.4	38.7	10.1		40.0	18.7	4.1	38.1	17.9	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		20.1	1.4	38.7	10.1		40.0	18.7	4.1	38.1	17.9	
LOS		C	A	D	B		D	B	A	D	B	
Approach Delay (s/veh)		11.7			23.3			19.2			23.9	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		33	0	74	24		48	90	0	37	71	
Queue Length 95th (ft)		70	6	#165	78		#116	158	37	#92	130	
Internal Link Dist (ft)		2399			3218			2403			115	
Turn Bay Length (ft)			150	305			230		230			
Base Capacity (vph)		422	552	342	585		224	691	698	195	661	
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio		0.27	0.17	0.68	0.47		0.61	0.44	0.26	0.54	0.38	
Intersection Summary												
Area Type:	Other											
Cycle Length: 60												
Actuated Cycle Length: 60												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.76												
Intersection Signal Delay (s/veh): 20.5	Intersection LOS: C											
Intersection Capacity Utilization 64.8%	ICU Level of Service C											
Analysis Period (min) 15												
# 95th percentile volume exceeds capacity, queue may be longer.												

Queue shown is maximum after two cycles.

Splits and Phases: 2: 21st Street & CR 52



Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	450	15	5	660
Future Vol, veh/h	15	5	450	15	5	660
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	380	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	16	5	474	16	5	695
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1187	482	0	0	490	0
Stage 1	482	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Critical Hdwy	6.44	6.24	-	-	4.14	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	-	-	2.236	-
Pot Cap-1 Maneuver	206	580	-	-	1063	-
Stage 1	617	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	205	580	-	-	1063	-
Mov Cap-2 Maneuver	205	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	21.1	0	0.1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	245	1063	-	
HCM Lane V/C Ratio	-	-	0.086	0.005	-	
HCM Control Delay (s/veh)	-	-	21.1	8.4	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q (veh)	-	-	0.3	0	-	

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	5	660	15	5	450
Future Vol, veh/h	15	5	660	15	5	450
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	380	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	4	4	4
Mvmt Flow	16	5	695	16	5	474

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1187	703	0
Stage 1	703	-	-
Stage 2	484	-	-
Critical Hdwy	6.44	6.24	-
Critical Hdwy Stg 1	5.44	-	-
Critical Hdwy Stg 2	5.44	-	-
Follow-up Hdwy	3.536	3.336	-
Pot Cap-1 Maneuver	206	434	-
Stage 1	487	-	-
Stage 2	616	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	205	434	-
Mov Cap-2 Maneuver	205	-	-
Stage 1	487	-	-
Stage 2	612	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	21.7	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	236	879
HCM Lane V/C Ratio	-	-	0.089	0.006
HCM Control Delay (s/veh)	-	-	21.7	9.1
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q (veh)	-	-	0.3	0

Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2050 AM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	110	180	230	100	140	120	280	290	240	400	35
Future Volume (vph)	45	110	180	230	100	140	120	280	290	240	400	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	305		0	230		230	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.912				0.850		0.988	
Flt Protected		0.986		0.950			0.950			0.950		
Satd. Flow (prot)	0	1801	1553	1736	1666	0	1736	1827	1553	1736	1805	0
Flt Permitted		0.732		0.654			0.950			0.950		
Satd. Flow (perm)	0	1337	1553	1195	1666	0	1736	1827	1553	1736	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189		88				305		6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2479			3298			2483			195	
Travel Time (s)		56.3			75.0			56.4			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	116	189	242	105	147	126	295	305	253	421	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	189	242	252	0	126	295	305	253	458	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			

Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2050 AM
04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		15.0	15.0	15.0	15.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		21.5	28.0	28.0	21.5	22.5	
Total Split (s)	24.0	24.0	24.0	24.0	24.0		21.5	29.4	29.4	21.6	29.5	
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%		28.7%	39.2%	39.2%	28.8%	39.3%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		15.5	23.4	23.4	15.6	23.5	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effect Green (s)		17.2	17.2	17.2	17.2		15.0	24.4	24.4	15.4	29.0	
Actuated g/C Ratio		0.23	0.23	0.23	0.23		0.20	0.33	0.33	0.21	0.39	
v/c Ratio		0.53	0.37	0.88	0.56		0.36	0.49	0.42	0.71	0.65	
Control Delay (s/veh)		32.2	6.4	61.9	21.4		29.4	24.3	4.7	40.5	27.2	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		32.2	6.4	61.9	21.4		29.4	24.3	4.7	40.5	27.2	
LOS		C	A	E	C		C	C	A	D	C	
Approach Delay (s/veh)		18.4			41.3			17.0			32.0	
Approach LOS		B			D			B			C	
Queue Length 50th (ft)		66	0	107	65		51	112	0	110	189	
Queue Length 95th (ft)		124	47	#231	135		99	185	52	#208	#336	
Internal Link Dist (ft)		2399			3218			2403			115	
Turn Bay Length (ft)			150	305			230		230			
Base Capacity (vph)		320	516	286	466		358	595	711	361	701	
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio		0.51	0.37	0.85	0.54		0.35	0.50	0.43	0.70	0.65	
Intersection Summary												
Area Type:	Other											
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.89												
Intersection Signal Delay (s/veh): 27.1	Intersection LOS: C											
Intersection Capacity Utilization 77.9%	ICU Level of Service D											
Analysis Period (min) 15												
# 95th percentile volume exceeds capacity, queue may be longer.												

Queue shown is maximum after two cycles.

Splits and Phases: 2: 21st Street & CR 52



Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2050 PM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	100	120	290	110	240	180	400	230	140	280	45
Future Volume (vph)	35	100	120	290	110	240	180	400	230	140	280	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	305		0	230		230	0		0
Storage Lanes	0		1	1		0	1		1	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.897				0.850		0.979	
Flt Protected		0.987		0.950			0.950			0.950		
Satd. Flow (prot)	0	1803	1553	1736	1639	0	1736	1827	1553	1736	1789	0
Flt Permitted		0.688		0.666			0.950			0.950		
Satd. Flow (perm)	0	1257	1553	1217	1639	0	1736	1827	1553	1736	1789	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			138		148				242		10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2479			3298			2483			195	
Travel Time (s)		56.3			75.0			56.4			4.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	105	126	305	116	253	189	421	242	147	295	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	126	305	369	0	189	421	242	147	342	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60	60		60	60		60
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			

Lanes, Volumes, Timings
2: 21st Street & CR 52

Build 2050 PM

04/02/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		15.0	15.0	15.0	4.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		21.0	22.5	22.5	10.5	22.5	
Total Split (s)	28.0	28.0	28.0	28.0	28.0		21.0	31.0	31.0	16.0	26.0	
Total Split (%)	37.3%	37.3%	37.3%	37.3%	37.3%		28.0%	41.3%	41.3%	21.3%	34.7%	
Maximum Green (s)	22.0	22.0	22.0	22.0	22.0		15.0	25.0	25.0	9.5	20.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.0	6.0	6.0	6.0		6.0	6.0	6.0	6.5	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0	0		0	
Act Effect Green (s)		21.0	21.0	21.0	21.0		15.0	26.4	26.4	9.1	21.0	
Actuated g/C Ratio		0.28	0.28	0.28	0.28		0.20	0.35	0.35	0.12	0.28	
v/c Ratio		0.40	0.23	0.89	0.65		0.54	0.65	0.34	0.70	0.67	
Control Delay (s/veh)		25.5	4.7	57.0	19.8		33.6	26.9	4.2	50.9	31.6	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)		25.5	4.7	57.0	19.8		33.6	26.9	4.2	50.9	31.6	
LOS		C	A	E	B		C	C	A	D	C	
Approach Delay (s/veh)		15.7			36.7			22.0			37.5	
Approach LOS		B			D			C			D	
Queue Length 50th (ft)		52	0	133	85		80	167	0	66	139	
Queue Length 95th (ft)		102	32	#272	175		142	267	45	#145	#249	
Internal Link Dist (ft)		2399			3218			2403			115	
Turn Bay Length (ft)			150	305			230		230			
Base Capacity (vph)		368	553	356	585		347	644	704	219	509	
Starvation Cap Reductn		0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn		0	0	0	0		0	0	0	0	0	
Storage Cap Reductn		0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio		0.39	0.23	0.86	0.63		0.54	0.65	0.34	0.67	0.67	
Intersection Summary												
Area Type:	Other											
Cycle Length: 75												
Actuated Cycle Length: 75												
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green												
Natural Cycle: 75												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.90												
Intersection Signal Delay (s/veh): 28.9	Intersection LOS: C											
Intersection Capacity Utilization 78.8%	ICU Level of Service D											
Analysis Period (min) 15												
# 95th percentile volume exceeds capacity, queue may be longer.												

Queue shown is maximum after two cycles.

Splits and Phases: 2: 21st Street & CR 52

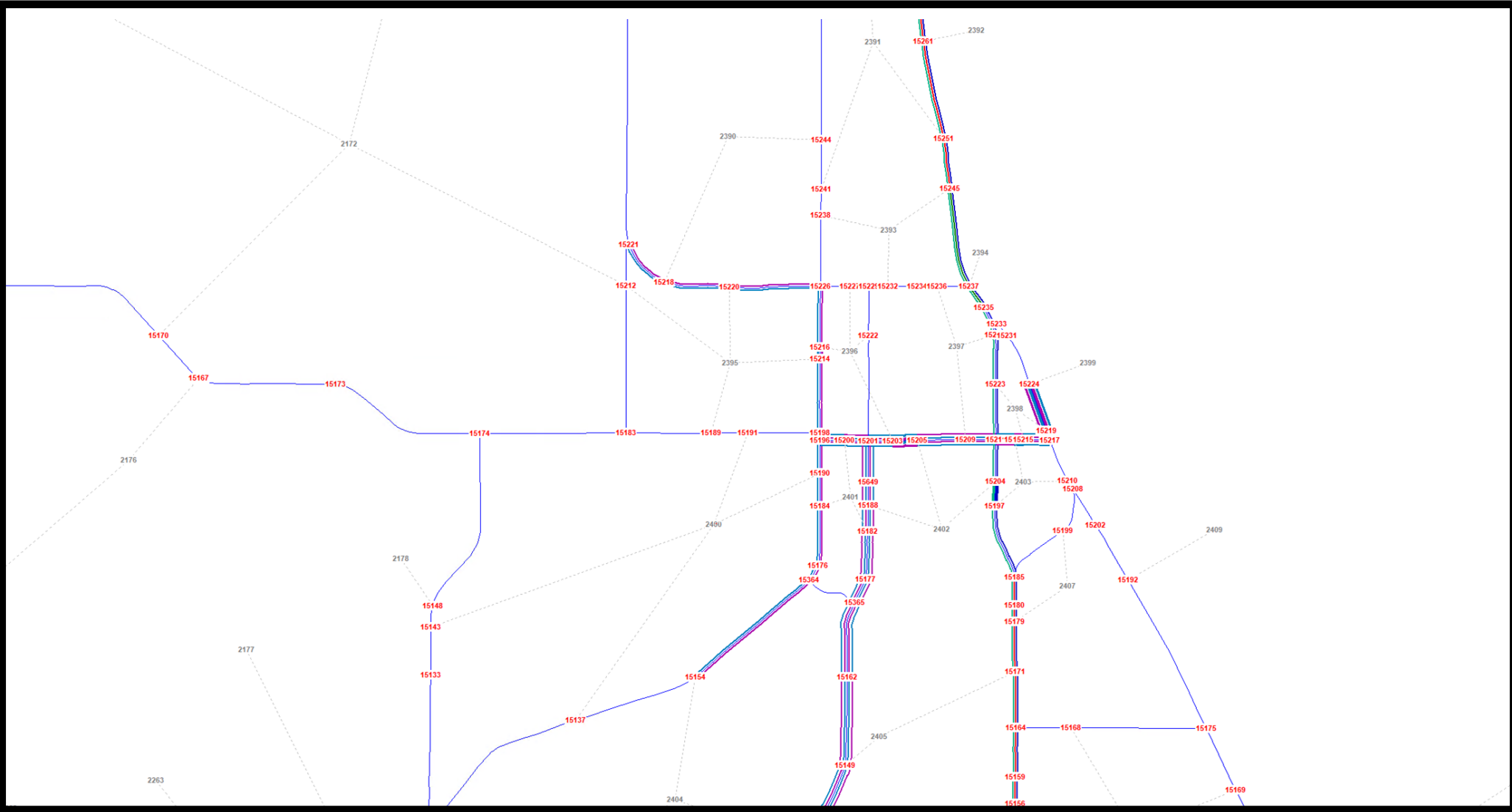


APPENDIX D - Crash Data

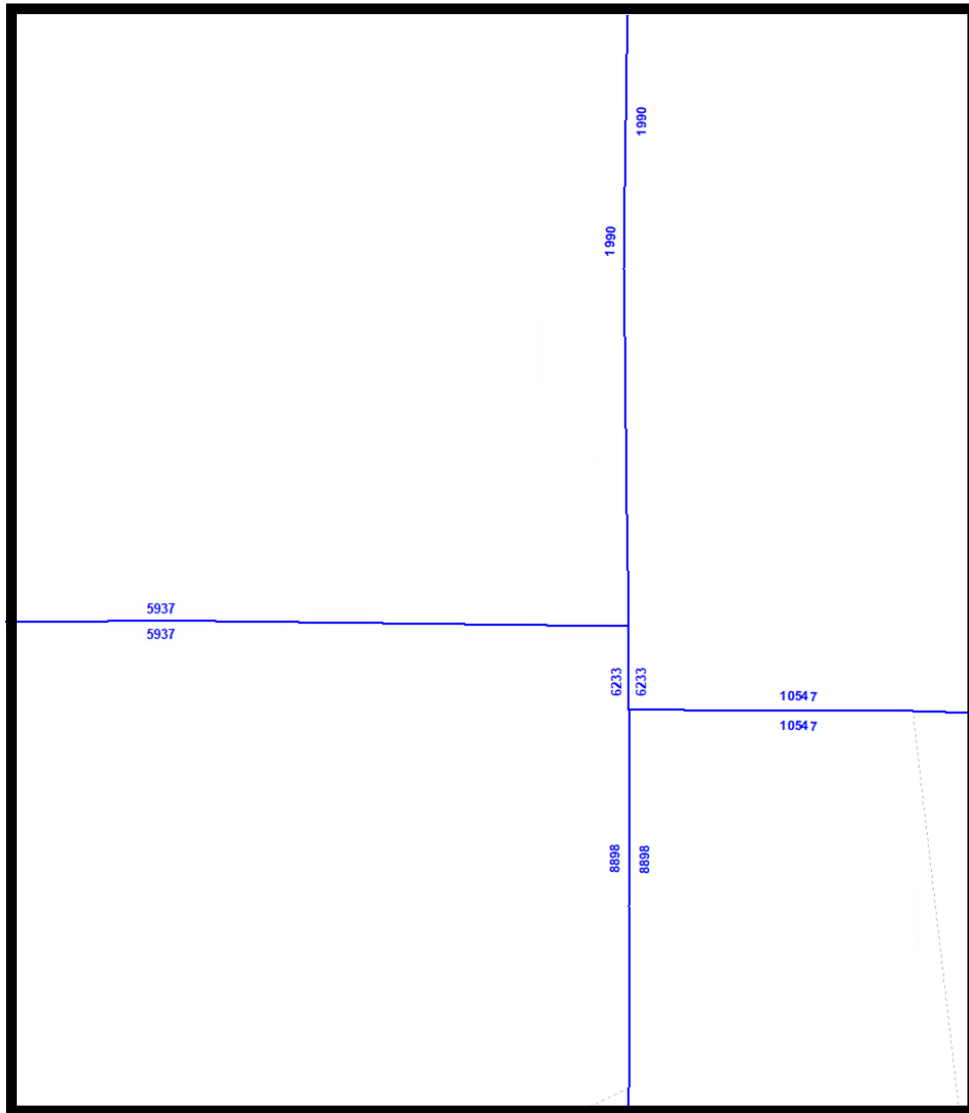
Crash Number	Report Number	Crash Year	Intersection	Light Condition	Road Surface Condition	Type of Impact	First Harmful Event	Crash Severity
1	82109777	2018	Not at Intersection	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
2	82110159	2019	MERIDIAN AVE	Dark - Lighted	Wet	Other	Fence	Non-Incapacitating Injury
3	82110061	2019	SUWANEE WAY	Daylight	Dry	Angle	Motor Vehicle in Transport	No Injury
4	82109896	2019	Not at Intersection	Dark - Lighted	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
5	82110285	2020	SUWANEE WAY	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
6	82110907	2020	SUWANEE WAY	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	Possible Injury
7	82110753	2020	SUWANEE WAY	Dusk	Wet	Other	Motor Vehicle in Transport	No Injury
8	82110288	2020	MERIDIAN AVE	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
9	82110308	2020	MERIDIAN AVE	Daylight	Dry	Angle	Motor Vehicle in Transport	No Injury
10	82110402	2020	Not at Intersection	Daylight	Dry	Sideswipe, Same Direction	Motor Vehicle in Transport	No Injury
11	82110480	2020	MERIDIAN AVE	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
12	82111059	2021	SUWANEE WAY	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
13	82111265	2021	SUWANEE WAY	Daylight	Dry	Angle	Motor Vehicle in Transport	No Injury
14	82111176	2021	SUWANEE WAY	Dark - Lighted	Wet	Front to Rear	Motor Vehicle in Transport	Possible Injury
15	82111177	2021	SUWANEE WAY	Daylight	Dry	Angle	Motor Vehicle in Transport	No Injury
16	82111169	2021	SUWANEE WAY	Daylight	Dry	Angle	Motor Vehicle in Transport	Non-Incapacitating Injury
17	82111148	2021	MERIDIAN AVE	Dark - Lighted	Dry	Angle	Motor Vehicle in Transport	Possible Injury
18	82111020	2021	Not at Intersection	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
19	25145738	2022	SUWANEE WAY	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
20	25145766	2022	SUWANEE WAY	Daylight	Dry	Other	Motor Vehicle in Transport	No Injury
21	25145736	2022	Not at Intersection	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
22	25145851	2022	MERIDIAN AVE	Dusk	Dry	Front to Front	Motor Vehicle in Transport	No Injury
23	25145790	2022	MERIDIAN AVE	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	Possible Injury
24	82111619	2022	Not at Intersection	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
25	25145708	2022	CENTER AVE	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
26	25145879	2023	MERIDIAN AVE	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
27	25145948	2023	SUWANEE WAY	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
28	25145935	2023	MERIDIAN AVE	Daylight	Dry	Front to Rear	Motor Vehicle in Transport	No Injury
29	25145934	2023	Not at Intersection	Dark - Lighted	Wet	Unknown	Pedestrian	Non-Incapacitating Injury

APPENDIX E - Tampa Bay Regional Planning Model Outputs

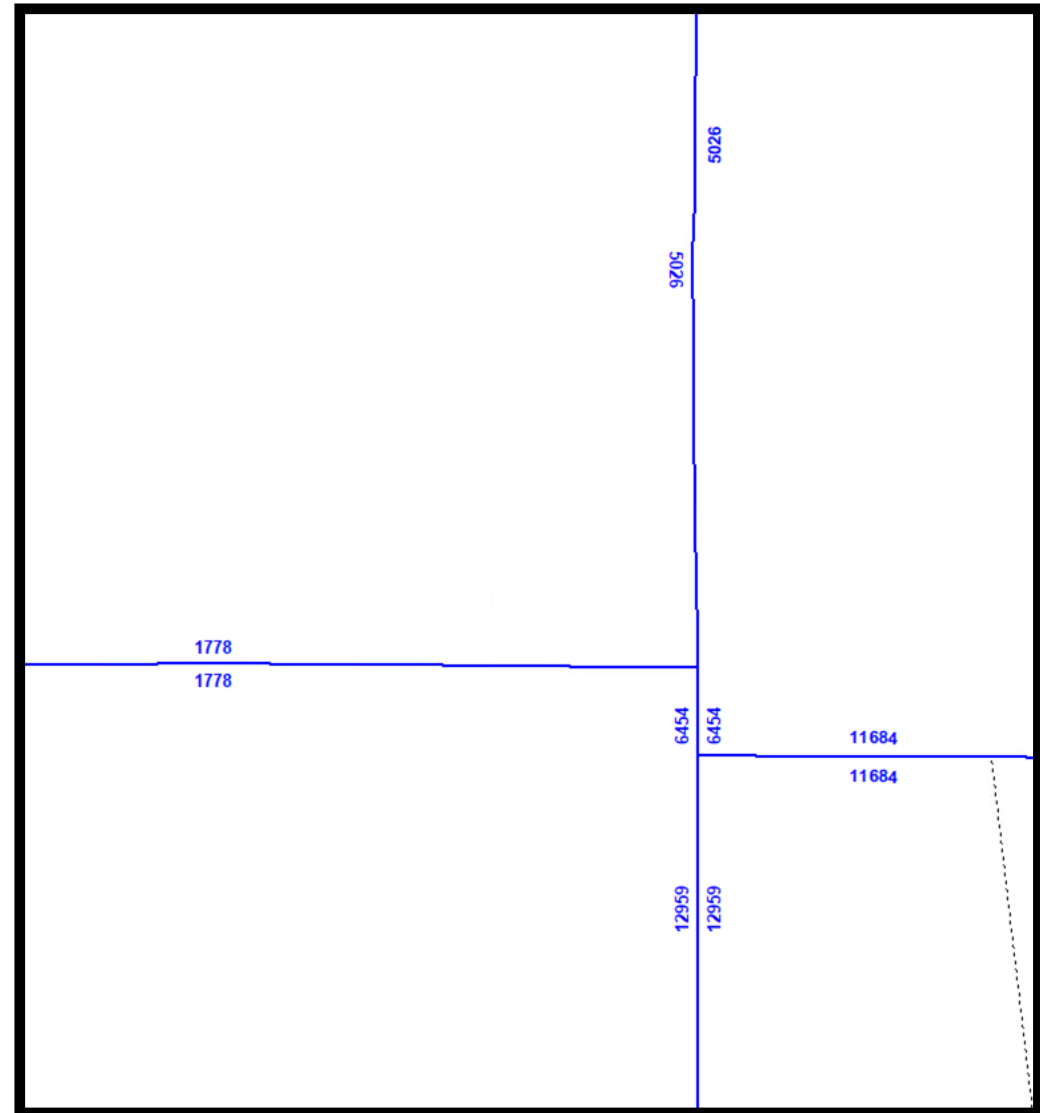
TAZ Map



2015 PSWADT



2045 PSWADT



TAZ		Year				Difference		Annual Growth	
		2015		2045					
		Population	Employment	Population	Employment	Population	Employment	Population	Employment
1	2172	1,205	180	2,052	180	847	0	2.34%	0.00%
2	2176	247	30	247	30	0	0	0.00%	0.00%
3	2177	1,137	198	1,176	198	39	0	0.11%	0.00%
4	2178	271	127	271	127	0	0	0.00%	0.00%
5	2390	404	121	810	121	406	0	3.35%	0.00%
6	2391	704	250	887	259	183	9	0.87%	0.12%
7	2393	1,163	110	1,232	110	69	0	0.20%	0.00%
8	2395	576	200	2,153	200	1,577	0	9.13%	0.00%
9	2396	2,367	129	2,367	129	0	0	0.00%	0.00%
10	2397	796	811	796	811	0	0	0.00%	0.00%
11	2398	18	1,178	18	1,178	0	0	0.00%	0.00%
12	2400	1,550	569	1,972	569	422	0	0.91%	0.00%
13	2401	461	235	461	235	0	0	0.00%	0.00%
14	2402	1,256	882	1,256	882	0	0	0.00%	0.00%
15	2403	390	697	447	697	57	0	0.49%	0.00%
16	2404	780	302	1,525	302	745	0	3.18%	0.00%
17	2405	499	986	549	1,042	50	56	0.33%	0.19%
	Total	13,824	7,005	18,219	7,070	4,395	65	1.06%	0.03%

County Wide	477,662	157,500	785,428	266,561	307,766	109,061	2.15%	2.31%
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APPENDIX F - Bureau of Economic and Business Research (BEBR) Population Projections

Projections of Florida Population by County, 2025–2050, with Estimates for 2022

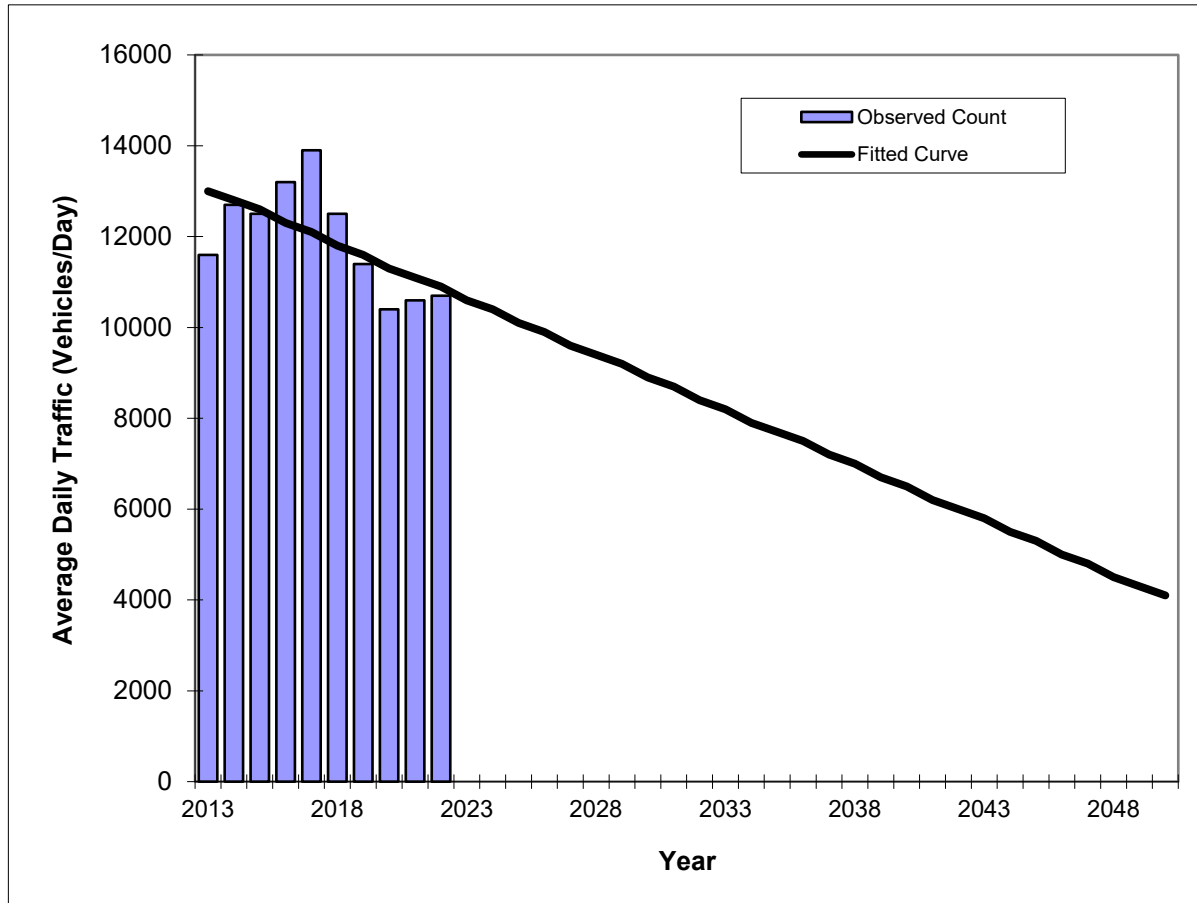
County and State	Estimates April 1, 2022	Projections, April 1					
		2025	2030	2035	2040	2045	2050
MIAMI-DADE	2,757,592						
Low		2,685,500	2,679,300	2,657,200	2,623,100	2,585,200	2,549,500
Medium		2,826,900	2,928,200	3,010,900	3,076,900	3,133,600	3,186,900
High		2,968,200	3,177,100	3,364,700	3,530,800	3,681,900	3,824,300
MONROE	83,961						
Low		80,300	78,400	75,900	73,200	70,400	67,800
Medium		85,400	87,100	88,000	88,400	88,600	88,700
High		90,500	95,800	100,100	103,600	106,800	109,500
NASSAU	95,809						
Low		95,100	98,900	100,800	101,300	100,800	99,900
Medium		102,200	111,800	119,600	126,200	131,700	136,900
High		109,400	124,700	138,500	151,100	162,700	173,900
OKALOOSA	215,751						
Low		209,800	210,300	208,500	205,000	200,800	196,600
Medium		223,200	233,600	241,700	247,700	252,500	257,000
High		236,600	257,000	275,000	290,400	304,300	317,400
OKEECHOBEE	39,385						
Low		37,700	36,600	35,600	34,500	33,600	32,700
Medium		39,700	40,000	40,300	40,500	40,700	40,900
High		41,700	43,400	45,000	46,500	47,800	49,000
ORANGE	1,481,321						
Low		1,471,600	1,519,700	1,539,600	1,540,400	1,531,600	1,520,400
Medium		1,565,600	1,688,500	1,785,000	1,861,500	1,926,600	1,987,400
High		1,659,500	1,857,400	2,030,500	2,182,600	2,321,500	2,454,400
OSCEOLA	424,946						
Low		435,700	473,500	495,300	506,900	512,300	515,200
Medium		468,500	535,000	587,900	631,600	669,600	705,800
High		501,200	596,500	680,500	756,400	827,000	896,300
PALM BEACH	1,518,152						
Low		1,489,900	1,502,300	1,498,400	1,484,600	1,465,900	1,447,400
Medium		1,568,300	1,641,900	1,698,000	1,741,500	1,776,900	1,809,200
High		1,646,700	1,781,400	1,897,500	1,998,300	2,087,800	2,171,100
PASCO	592,669						
Low		590,800	612,500	624,300	628,100	626,800	624,100
Medium		628,500	680,600	723,900	759,000	788,400	815,800
High		666,200	748,700	823,400	889,900	950,000	1,007,500
PINELLAS	972,852						
Low		947,200	935,000	921,000	905,800	891,200	878,100
Medium		986,700	1,005,400	1,020,500	1,032,300	1,042,300	1,051,600
High		1,026,100	1,075,700	1,120,000	1,158,800	1,193,400	1,225,100
POLK	770,019						
Low		768,800	799,500	816,000	822,400	821,900	819,200
Medium		817,800	888,400	946,100	993,900	1,033,800	1,070,900
High		866,900	977,200	1,076,200	1,165,300	1,245,700	1,322,500
PUTNAM	74,249						
Low		71,000	68,900	67,000	65,100	63,300	61,600
Medium		74,700	75,300	75,900	76,300	76,700	77,000
High		78,400	81,800	84,800	87,600	90,100	92,400
ST. JOHNS	296,919						
Low		303,700	329,000	343,700	351,400	354,900	356,700
Medium		326,600	371,700	408,000	437,800	463,900	488,600
High		349,400	414,500	472,200	524,300	572,900	620,500
ST. LUCIE	350,518						
Low		350,800	366,400	374,700	378,100	378,300	377,500
Medium		373,200	407,100	434,500	457,000	475,800	493,500
High		395,600	447,800	494,200	535,800	573,400	609,400

APPENDIX G - Regression Analysis

Traffic Trends - V03.a **21ST STREET -- South of CR 52**

FIN#	0
Location	1

County:	Pasco (14)
Station #:	0
Highway:	21ST STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	11600	13000
2014	12700	12800
2015	12500	12600
2016	13200	12300
2017	13900	12100
2018	12500	11800
2019	11400	11600
2020	10400	11300
2021	10600	11100
2022	10700	10900
2030 Opening Year Trend		
2030	N/A	8900
2040 Mid-Year Trend		
2040	N/A	6500
2050 Design Year Trend		
2050	N/A	4100
TRANPLAN Forecasts/Trends		

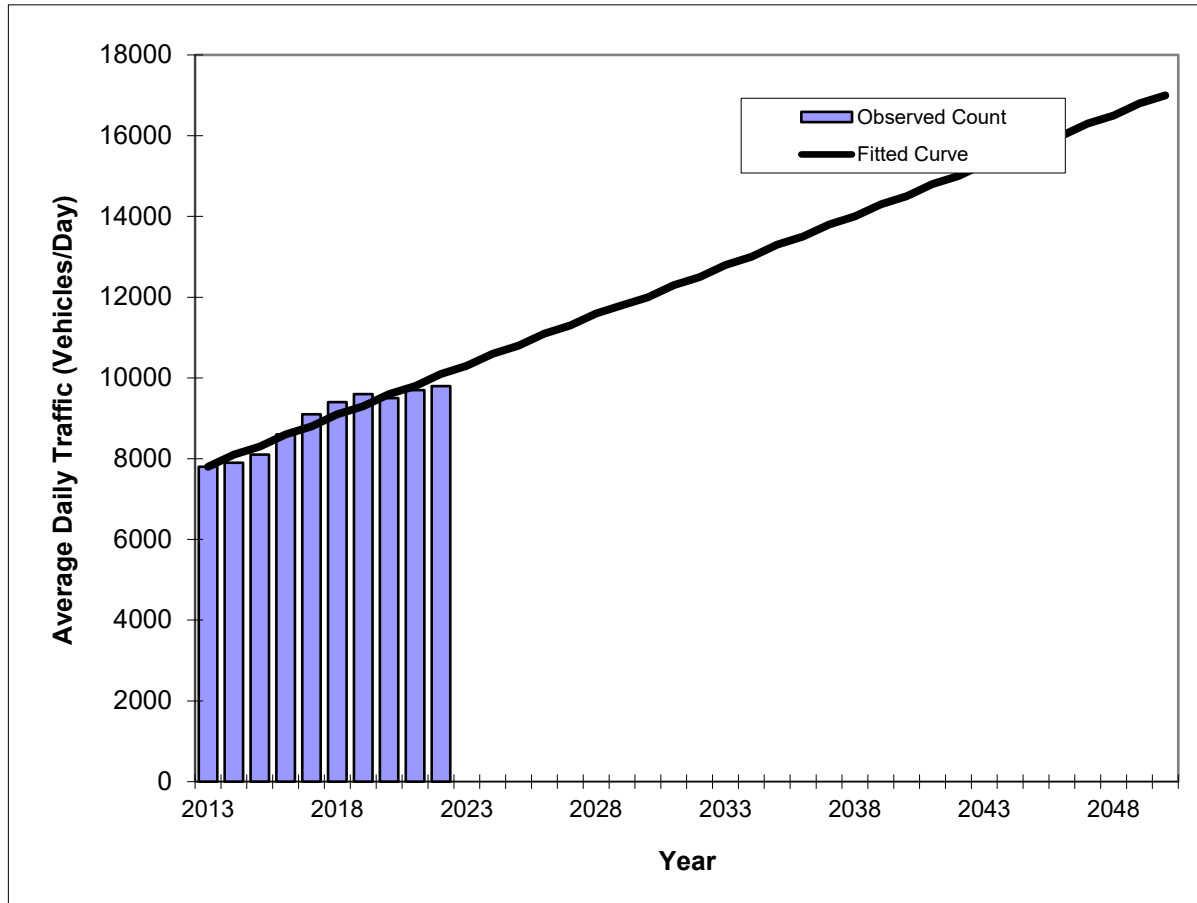
** Annual Trend Increase:	-243
Trend R-squared:	38.23%
Trend Annual Historic Growth Rate:	-1.79%
Trend Growth Rate (2022 to Design Year):	-2.23%
Printed:	6-Nov-23
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **21ST STREET -- North of CR 52**

FIN#	0
Location	1

County:	Pasco (14)
Station #:	0
Highway:	21ST STREET



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	7800	7800
2014	7900	8100
2015	8100	8300
2016	8600	8600
2017	9100	8800
2018	9400	9100
2019	9600	9300
2020	9500	9600
2021	9700	9800
2022	9800	10100
2030 Opening Year Trend		
2030	N/A	12000
2040 Mid-Year Trend		
2040	N/A	14500
2050 Design Year Trend		
2050	N/A	17000
TRANPLAN Forecasts/Trends		

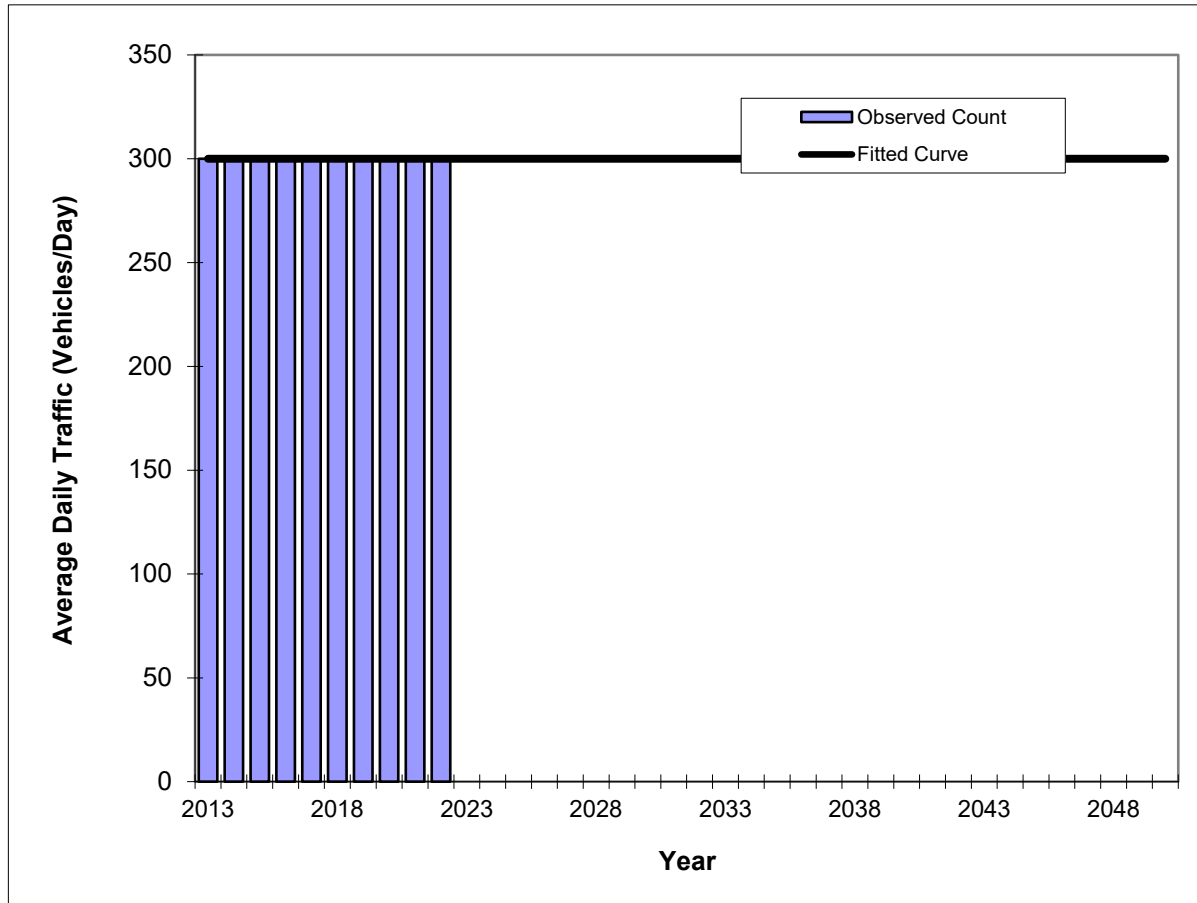
** Annual Trend Increase:	248
Trend R-squared:	92.08%
Trend Annual Historic Growth Rate:	3.28%
Trend Growth Rate (2022 to Design Year):	2.44%
Printed:	6-Nov-23
Straight Line Growth Option	

*Axle-Adjusted

Traffic Trends - V03.a **CR 578 -- West of 21st St**

FIN#	0
Location	4

County:	Pasco (14)
Station #:	0
Highway:	CR 578



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	300	300
2014	300	300
2015	300	300
2016	300	300
2017	300	300
2018	300	300
2019	300	300
2020	300	300
2021	300	300
2022	300	300
2030 Opening Year Trend		
2030	N/A	300
2040 Mid-Year Trend		
2040	N/A	300
2050 Design Year Trend		
2050	N/A	300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	0
Trend R-squared:	#DIV/0!
Trend Annual Historic Growth Rate:	0.00%
Trend Growth Rate (2022 to Design Year):	0.00%
Printed:	6-Nov-23
Straight Line Growth Option	

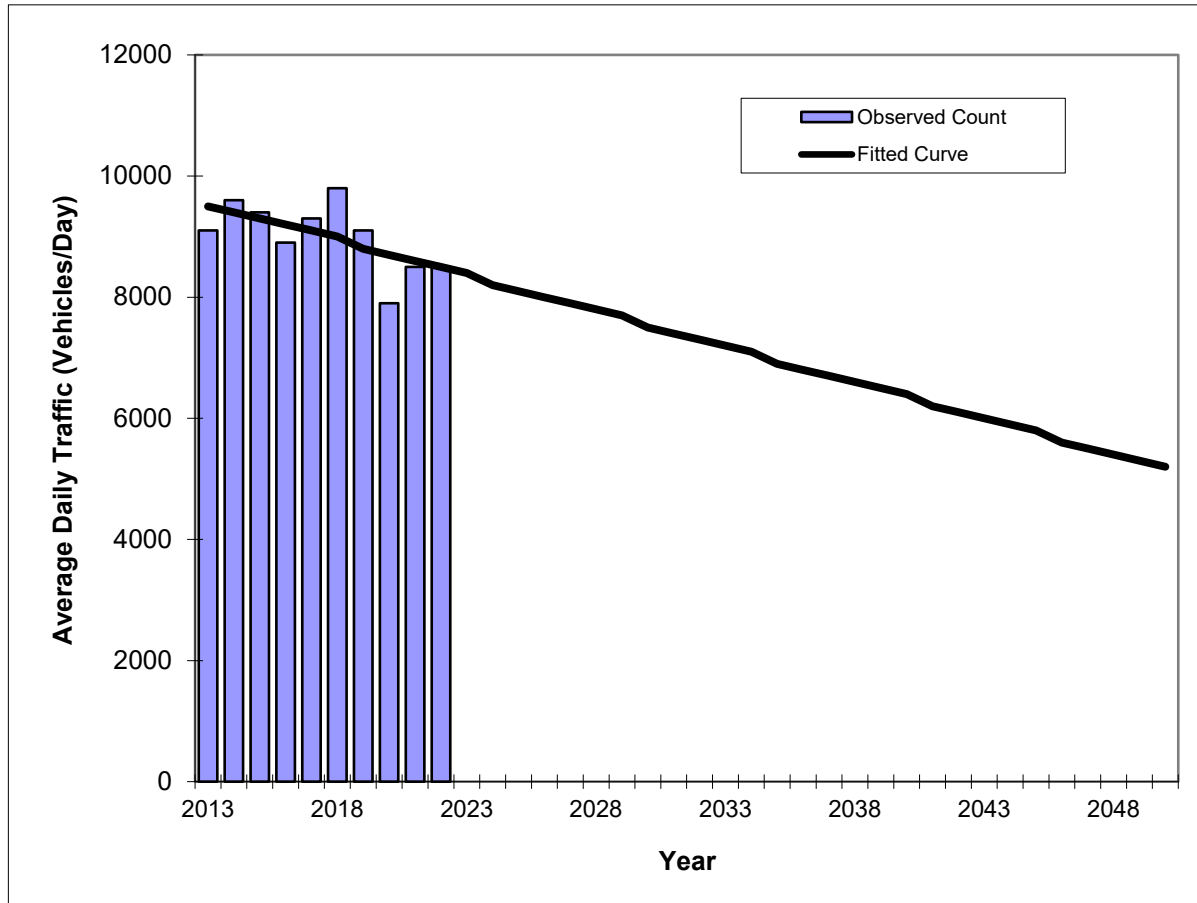
*Axle-Adjusted

Traffic Trends - V03.a

CR 52 -- East of 21st St

FIN#	0
Location	3

County:	Pasco (14)
Station #:	0
Highway:	CR 52



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	9100	9500
2014	9600	9400
2015	9400	9300
2016	8900	9200
2017	9300	9100
2018	9800	9000
2019	9100	8800
2020	7900	8700
2021	8500	8600
2022	8500	8500
2030 Opening Year Trend		
2030	N/A	7500
2040 Mid-Year Trend		
2040	N/A	6400
2050 Design Year Trend		
2050	N/A	5200
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-118
Trend R-squared:	38.55%
Trend Annual Historic Growth Rate:	-1.17%
Trend Growth Rate (2022 to Design Year):	-1.39%
Printed:	6-Nov-23
Straight Line Growth Option	

*Axle-Adjusted

APPENDIX H - FDOT TURNS5 Output

TURNS5 ANALYSIS SHEET - INPUT

Analyst:	KCA	Is this a 4 way intersection? ☒ Yes, my intersection has four approaches If not, which 3 approaches exist in the intersection? ☐ EB, WB, and SB ☐ EB, WB, and NB ☐ EB, SB, and NB ☐ WB, SB, and NB
Date:	13-Dec-23	
Highway:	21st Street	
Intersection:	Suwanee Way	
Project:	21st Street Intersection Improvements	
County:	Pasco	
Is the Mainline Oriented North/South? ☒ Yes ☐ No		

K Factors Mainline 9.00% Side street 9.00%	D Factors Northbound (NB) 43.3% Southbound (SB) 56.7% Westbound (WB) 42.4% Eastbound (EB) 57.6%	Mainline 43.3% Side street 42.4%
---	--	---

Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)	Enter Yes or No ☐ Yes ☒ No
If "Yes" go to cell C47	If "No" go to cell C31

Enter Year and Growth Rates from Base Year:				Mainline Growth Function ☒ Linear ☐ Exponential ☐ Decaying Side Street Growth Function ☒ Linear ☐ Exponential ☐ Decaying
	Year	Rate (1.0% = 0.01)		
Base	2023	Mainline	Side Street	
Opening	2030			
Mid	2040	2.00%	2.00%	
Design	2050			

Enter Base Year AADTs for Volume Comparison: (growth rates are used to calculate other project years)				
From West:	From East:	From North:	From South:	
EB Approach	WB Approach	SB Approach	NB Approach	TOTAL
4000	200	7600	10600	22400

Enter Project and Model Years

	Year
Base	2023
Opening	2030
Mid	2040
Design	2050
Model	2045

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	
	EB Approach	WB Approach	SB Approach	NB Approach	TOTAL
2023	0	0	0	0	0
2045	0	0	0	0	0

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2"></th> <th style="text-align: center;">1st Guess</th> <th style="text-align: center;">Actual/Counted</th> </tr> <tr> <th colspan="2"></th> <th style="text-align: center;">Turning %'s for</th> <th style="text-align: center;">Traffic</th> </tr> <tr> <th colspan="2"></th> <th style="text-align: center;">AADT Balancing</th> <th style="text-align: center;">for 2023</th> </tr> <tr> <td style="text-align: right;">(EB LT)</td> <td style="text-align: right;">West-to-North</td> <td style="text-align: center;">13.6%</td> <td style="text-align: center;">19</td> </tr> <tr> <td style="text-align: right;">(EB THRU)</td> <td style="text-align: right;">West-to-East</td> <td style="text-align: center;">1.4%</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: right;">(EB RT)</td> <td style="text-align: right;">West-to-South</td> <td style="text-align: center;">85.0%</td> <td style="text-align: center;">119</td> </tr> <tr> <td style="text-align: right;">(WB LT)</td> <td style="text-align: right;">East-to-South</td> <td style="text-align: center;">25.0%</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: right;">(WB THRU)</td> <td style="text-align: right;">East-to-West</td> <td style="text-align: center;">50.0%</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: right;">(WB RT)</td> <td style="text-align: right;">East-to-North</td> <td style="text-align: center;">25.0%</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: right;">(SB LT)</td> <td style="text-align: right;">North-to-East</td> <td style="text-align: center;">0.6%</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: right;">(SB THRU)</td> <td style="text-align: right;">North-to-South</td> <td style="text-align: center;">94.7%</td> <td style="text-align: center;">299</td> </tr> <tr> <td style="text-align: right;">(SB RT)</td> <td style="text-align: right;">North-to-West</td> <td style="text-align: center;">4.7%</td> <td style="text-align: center;">15</td> </tr> <tr> <td style="text-align: right;">(NB LT)</td> <td style="text-align: right;">South-to-West</td> <td style="text-align: center;">33.3%</td> <td style="text-align: center;">174</td> </tr> <tr> <td style="text-align: right;">(NB THRU)</td> <td style="text-align: right;">South-to-North</td> <td style="text-align: center;">65.2%</td> <td style="text-align: center;">341</td> </tr> <tr> <td style="text-align: right;">(NB RT)</td> <td style="text-align: right;">South-to-East</td> <td style="text-align: center;">1.5%</td> <td style="text-align: center;">8</td> </tr> </table>			1st Guess	Actual/Counted			Turning %'s for	Traffic			AADT Balancing	for 2023	(EB LT)	West-to-North	13.6%	19	(EB THRU)	West-to-East	1.4%	2	(EB RT)	West-to-South	85.0%	119	(WB LT)	East-to-South	25.0%	1	(WB THRU)	East-to-West	50.0%	2	(WB RT)	East-to-North	25.0%	1	(SB LT)	North-to-East	0.6%	2	(SB THRU)	North-to-South	94.7%	299	(SB RT)	North-to-West	4.7%	15	(NB LT)	South-to-West	33.3%	174	(NB THRU)	South-to-North	65.2%	341	(NB RT)	South-to-East	1.5%	8	Existing Year AADTs Existing Turning Movement Counts FSUTMS Model Year AADTs	First Guess Turning % Option Used Existing Turning Movement Counts Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess. The turning percentages first guess is the same as the <u>actual distribution of turning volumes entered</u>. No balancing technique is used. Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.
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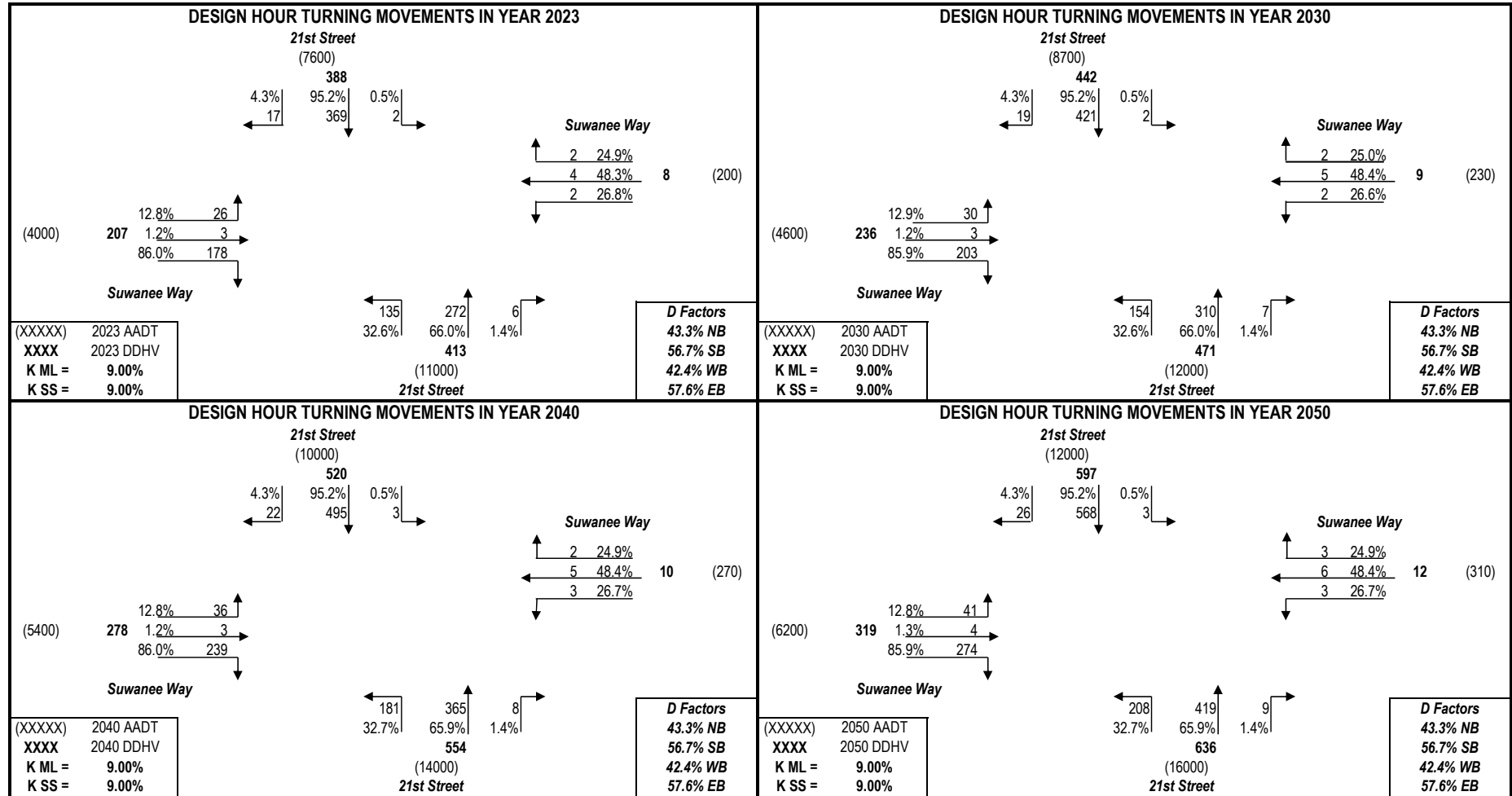
Desired Closure:	0.01
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TURNS5 INITIAL TURNING VOLUME SUMMARY

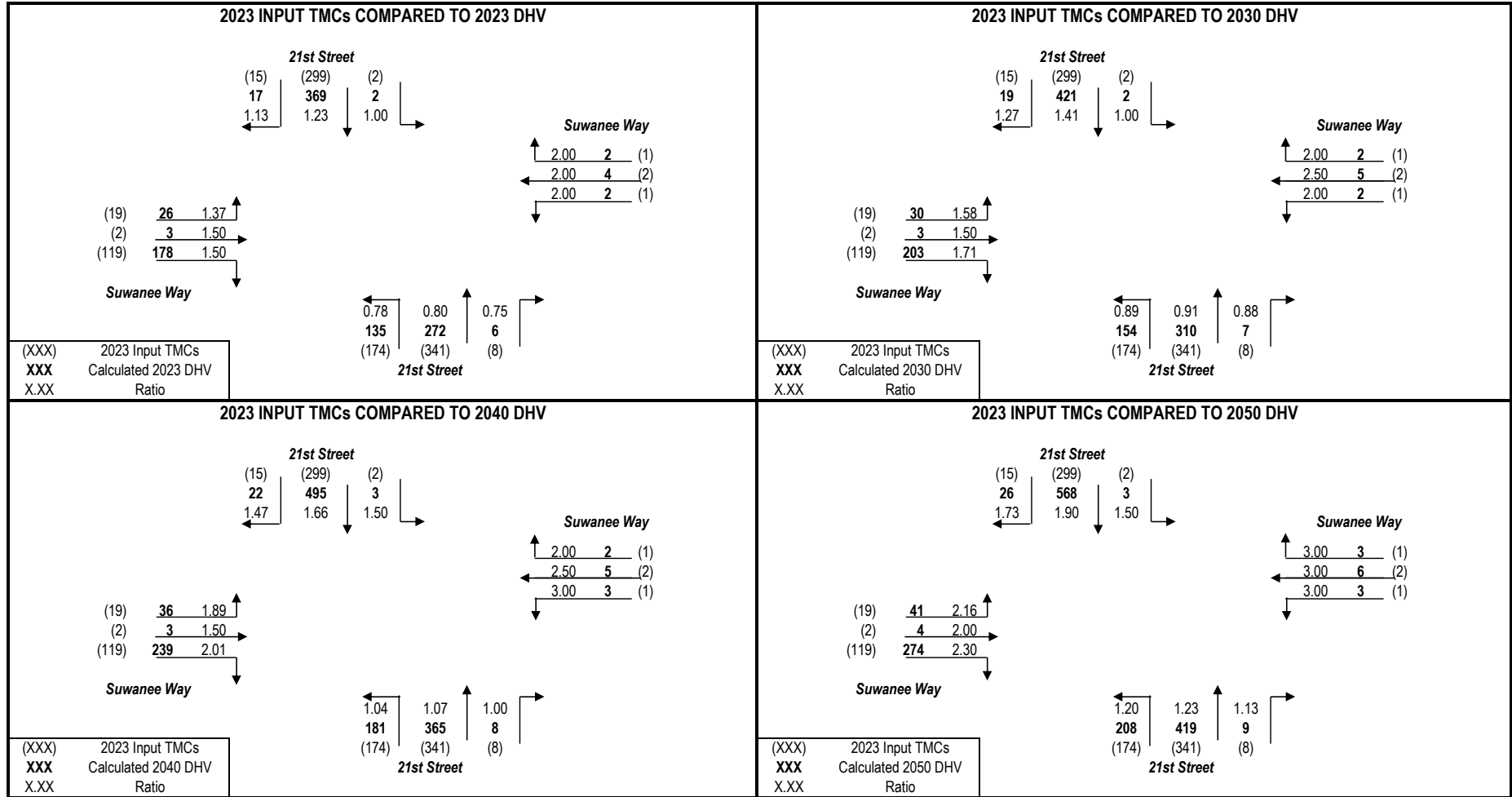
Highway:	21st Street	County:	Pasco
Intersection:	Suwanee Way		
Project:	21st Street Intersection Improvements	Analyst:	KCA
		Date:	13-Dec-23

Approach-To-Approach	2023 Initial Estimate	2023		2030		2040		2050	
		Final Estimate	Calculated Volume	Final Estimate	Calculated Volume	Final Estimate	Calculated Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.136	0.128	26	0.129	30	0.128	36	0.128	41
West-To-East (Thru)	0.014	0.012	3	0.012	3	0.012	3	0.013	4
West-To-South (RT)	0.850	0.860	178	0.859	203	0.860	239	0.859	274
Total Flow From West:			207		236		278		319
East-To-South (LT)	0.250	0.268	2	0.266	2	0.267	3	0.267	3
East-To-West (Thru)	0.500	0.483	4	0.484	5	0.484	5	0.484	6
East-To-North (RT)	0.250	0.249	2	0.250	2	0.249	2	0.249	3
Total Flow From East:			8		9		10		12
North-To-East (LT)	0.006	0.005	2	0.005	2	0.005	3	0.005	3
North-To-South (Thru)	0.947	0.952	369	0.952	421	0.952	495	0.952	568
North-To-West (RT)	0.047	0.043	17	0.043	19	0.043	22	0.043	26
Total Flow From North:			388		442		520		597
South-To-West (LT)	0.333	0.326	135	0.326	154	0.327	181	0.327	208
South-To-North (Thru)	0.652	0.660	272	0.660	310	0.659	365	0.659	419
South-To-East (RT)	0.015	0.014	6	0.014	7	0.014	8	0.014	9
Total Flow From South:			413		471		554		636

PROJECT TRAFFIC FOR 21st Street AT Suwanee Way



PROJECT TRAFFIC FOR 21st Street AT Suwanee Way



TURNS5 ANALYSIS SHEET - INPUT

Analyst:	KCA	Is this a 4 way intersection? ☐ Yes, my intersection has four approaches If not, which 3 approaches exist in the intersection? ☐ EB, WB, and SB ☐ EB, WB, and NB ☐ EB, SB, and NB ☒ WB, SB, and NB
Date:	8-Dec-23	
Highway:	21st Street	
Intersection:	Meridian Avenue	
Project:	21st Street Intersection Improvements	
County:	Pasco	
Is the Mainline Oriented North/South? ☒ Yes ☐ No		

K Factors Mainline 9.00% Side street 9.00%	D Factors Northbound (NB) 56.7% Southbound (SB) 43.3% Westbound (WB) 60.5% Eastbound (EB) 0.0%	Mainline Northbound (NB) 56.7% Southbound (SB) 43.3% Side street Westbound (WB) 60.5% Eastbound (EB) 0.0%
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Do you have FTSUTMS Model Year traffic from which you would like to interpolate/extrapolate for project years? (Y/N)	Enter Yes or No ☐ Yes ☒ No
If "Yes" go to cell C47	If "No" go to cell C31

Enter Year and Growth Rates from Base Year:				Mainline Growth Function ☒ Linear ☐ Exponential ☐ Decaying Side Street Growth Function ☒ Linear ☐ Exponential ☐ Decaying
	Year	Rate (1.0% = 0.01)		
Base	2023	Mainline	Side Street	
Opening	2030			
Mid	2040	2.00%	2.00%	
Design	2050			
Enter Base Year AADTs for Volume Comparison: (growth rates are used to calculate other project years)				
From West:	From East:	From North:	From South:	
EB Approach	WB Approach	SB Approach	NB Approach	TOTAL
0	7600	10600	10300	28500

Enter Project and Model Years

Year
Base 2023
Opening 2030
Mid 2040
Design 2050
Model 2045

Enter Base and Model Year AADTs for Volume Comparison:

(volumes for other project years are calculated by interpolation)

	From West:	From East:	From North:	From South:	
	EB Approach	WB Approach	SB Approach	NB Approach	TOTAL
2023	0	0	0	0	0
2045	0	0	0	0	0

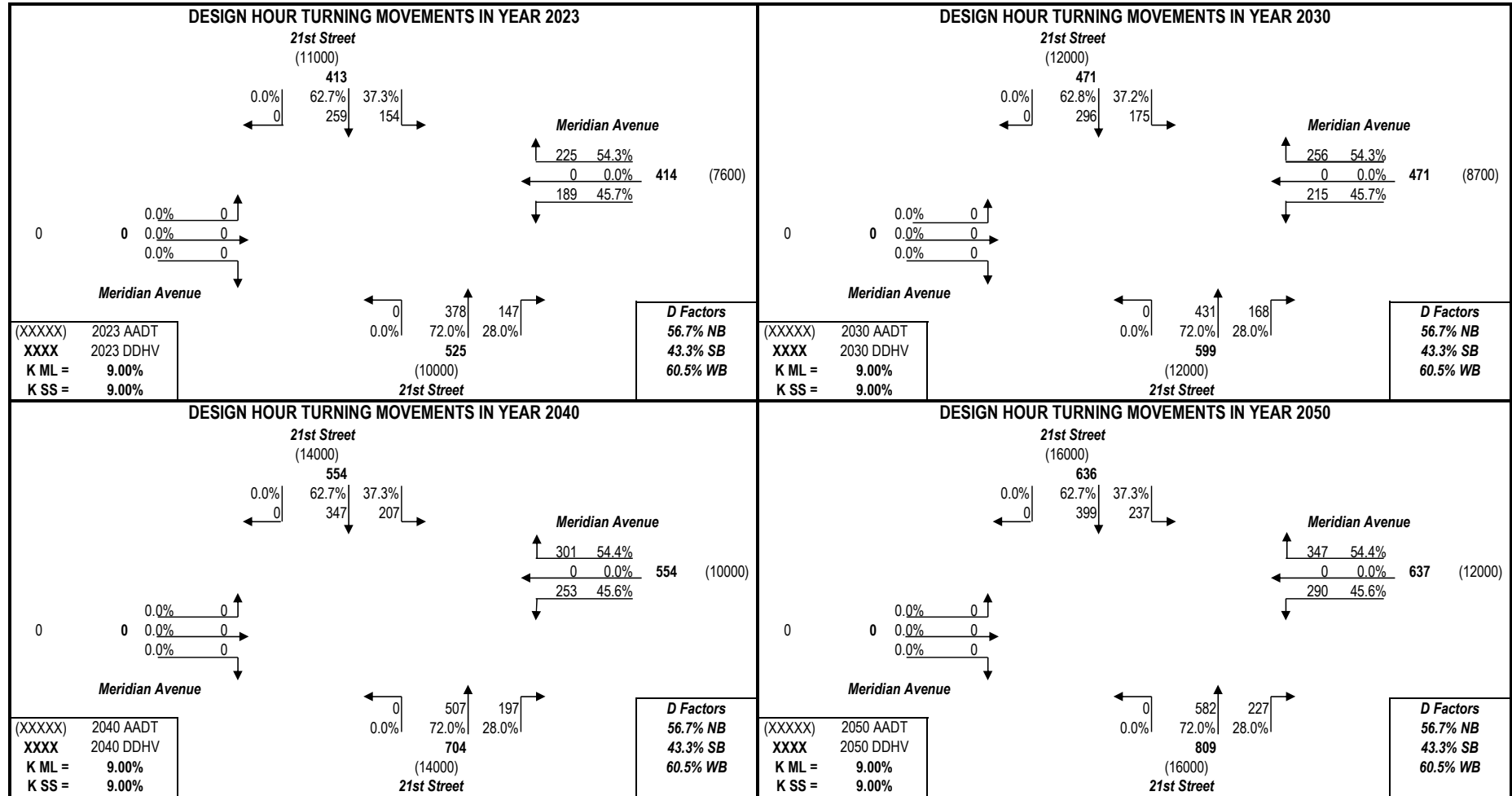
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2"></th> <th>1st Guess</th> <th>Actual/Counted</th> </tr> <tr> <th colspan="2"></th> <th colspan="2">Turning %'s for Traffic</th> </tr> <tr> <th colspan="2"></th> <th colspan="2">AADT Balancing for 2023</th> </tr> <tr> <td>(EB LT)</td> <td>West-to-North</td> <td>0.0%</td> <td>0</td> </tr> <tr> <td>(EB THRU)</td> <td>West-to-East</td> <td>0.0%</td> <td>0</td> </tr> <tr> <td>(EB RT)</td> <td>West-to-South</td> <td>0.0%</td> <td>0</td> </tr> <tr> <td colspan="4" style="text-align: center;">Existing Year AADTs</td> </tr> <tr> <td>(WB LT)</td> <td>East-to-South</td> <td>49.2%</td> <td>195</td> </tr> <tr> <td>(WB THRU)</td> <td>East-to-West</td> <td>0.0%</td> <td>0</td> </tr> <tr> <td>(WB RT)</td> <td>East-to-North</td> <td>50.8%</td> <td>201</td> </tr> <tr> <td colspan="4" style="text-align: center;">Existing Turning Movement Counts</td> </tr> <tr> <td>(SB LT)</td> <td>North-to-East</td> <td>33.3%</td> <td>138</td> </tr> <tr> <td>(SB THRU)</td> <td>North-to-South</td> <td>66.7%</td> <td>276</td> </tr> <tr> <td>(SB RT)</td> <td>North-to-West</td> <td>0.0%</td> <td>0</td> </tr> <tr> <td colspan="4" style="text-align: center;">FSUTMS Model Year AADTs</td> </tr> <tr> <td>(NB LT)</td> <td>South-to-West</td> <td>0.0%</td> <td>0</td> </tr> <tr> <td>(NB THRU)</td> <td>South-to-North</td> <td>72.6%</td> <td>320</td> </tr> <tr> <td>(NB RT)</td> <td>South-to-East</td> <td>27.4%</td> <td>121</td> </tr> <tr> <td colspan="2">Desired Closure:</td> <td colspan="2">0.01</td> </tr> </table>			1st Guess	Actual/Counted			Turning %'s for Traffic				AADT Balancing for 2023		(EB LT)	West-to-North	0.0%	0	(EB THRU)	West-to-East	0.0%	0	(EB RT)	West-to-South	0.0%	0	Existing Year AADTs				(WB LT)	East-to-South	49.2%	195	(WB THRU)	East-to-West	0.0%	0	(WB RT)	East-to-North	50.8%	201	Existing Turning Movement Counts				(SB LT)	North-to-East	33.3%	138	(SB THRU)	North-to-South	66.7%	276	(SB RT)	North-to-West	0.0%	0	FSUTMS Model Year AADTs				(NB LT)	South-to-West	0.0%	0	(NB THRU)	South-to-North	72.6%	320	(NB RT)	South-to-East	27.4%	121	Desired Closure:		0.01		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;"> First Guess Turning % Option Used Existing Turning Movement Counts Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess. </td> </tr> <tr> <td style="padding: 5px;"> The turning percentages first guess is the same as the <u>actual distribution of turning volumes entered</u>. No balancing technique is used. </td> </tr> <tr> <td style="padding: 5px;"> Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess. </td> </tr> </table>	First Guess Turning % Option Used Existing Turning Movement Counts Only the existing year total departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.	The turning percentages first guess is the same as the <u>actual distribution of turning volumes entered</u> . No balancing technique is used.	Only the FSUTMS model year departure volumes [AADT*K*(1-D)] will be used to calculate the turning percentages first guess.
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TURNS5 INITIAL TURNING VOLUME SUMMARY

Highway:	21st Street	County:	Pasco
Intersection:	Meridian Avenue		
Project:	21st Street Intersection Improvements	Analyst:	KCA
		Date:	8-Dec-23

Approach-To-Approach	2023 Initial Estimate	2023		2030		2040		2050	
		Final Estimate	Calculated Volume	Final Estimate	Calculated Volume	Final Estimate	Calculated Volume	Final Estimate	Calculated Volume
West-To-North (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-East (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
West-To-South (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From West:			0		0		0		0
East-To-South (LT)	0.492	0.457	189	0.457	215	0.456	253	0.456	290
East-To-West (Thru)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
East-To-North (RT)	0.508	0.543	225	0.543	256	0.544	301	0.544	347
Total Flow From East:			414		471		554		637
North-To-East (LT)	0.333	0.373	154	0.372	175	0.373	207	0.373	237
North-To-South (Thru)	0.667	0.627	259	0.628	296	0.627	347	0.627	399
North-To-West (RT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
Total Flow From North:			413		471		554		636
South-To-West (LT)	0.000	0.000	0	0.000	0	0.000	0	0.000	0
South-To-North (Thru)	0.726	0.720	378	0.720	431	0.720	507	0.720	582
South-To-East (RT)	0.274	0.280	147	0.280	168	0.280	197	0.280	227
Total Flow From South:			525		599		704		809

PROJECT TRAFFIC FOR 21st Street AT Meridian Avenue



PROJECT TRAFFIC FOR 21st Street AT Meridian Avenue

