

Traffic Analysis

Bingle Road from Westview Drive to IH-10

Prepared for

City of Spring Valley Village



Prepared by

Traffic Engineers, Inc.

This document is released for the purpose of interim review under the authority of Sammy Xiaoming Chen, P.E. 119339 on March 15, 2021. It is not to be used for construction or bidding purposes.

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Introduction and Project Overview

Traffic Engineers, Inc (TEI) conducted a traffic analysis of the Bingle Road corridor from Westview Drive to IH 10 for the City of Spring Valley Village (**Figure 1**). The studied corridor is an important connection for multiple modes of travel, connecting residential development throughout the city to the larger Houston region via I-10 and to retail north of Westview Drive.

The goal of the study is to analyze alternative future roadway concepts, to understand their benefits and potential impacts on the City's other major thoroughfares. A Synchro/SimTraffic traffic-simulation model was developed for a baseline and each future year scenario. The following report details the extensive data collection effort that was undertaken to understand the existing conditions of Bingle Road and the surrounding transportation network, the methodology of developing and calibrating Synchro models for each scenario, the results of the traffic operations analysis, and a summary of benefits for each roadway concept.



FIGURE 1 STUDY AREA

Executive Summary

The study indicated that the Bingle Road corridor has the capacity to support natural growth in traffic volumes as well as improved bicycle and pedestrian infrastructure. Key findings from the traffic modeling study include the following:

General Observations:

- Speeds along the corridor average right around the speed limit of 30 mph, with an 85th percentile speed being approximately 5 miles above the posted speed limit. While the average speeds are not a severe issue, some speeding does occur.
- Please refer to the *Recommendations on Sidewalk Safety Improvements Along Bingle Road*, dated May 13, 2020, for more information regarding the sidewalks on Bingle Road of concern.

Short-term Improvements:

- Bingle Road currently operates well with good signal progression through the corridor. Improvements to signal timings and cycle lengths may improve side street operations, reducing the delay felt exiting residential neighborhoods onto Bingle Road. These changes would not negatively impact Bingle Road operations.
 - Reducing the cycle length from the existing 90 seconds to 60 seconds at the W. Memorial Park Drive and Winningham Lane intersections will improve coordination with the 120-second cycle length of the IH-10 intersection. Side street traffic delay will decrease and progression along Bingle Road would slightly improve. Detailed changes of the timing parameters will be studied if the City approves this strategy.

Long-term Planning Considerations:

- A signalized pedestrian crossing does not significantly impact the progression of vehicles through the corridor and greatly improves crossing safety.
 - A signalized intersection, such as a HAWK (High-Intensity Activated Crosswalk), would provide a controlled crossing for pedestrians to safely navigate.
 - The exact location of the signal, at Merlin Drive, Cedarbrake Drive, or somewhere in-between, does not impact the traffic operations of the corridor based on the model. The location will impact usage and compliance.
- A road diet, converting the four-lane roadway to a three-lane roadway with directional bike lanes, does not show to have significant impact to vehicle operations.
 - Bingle Road currently serves approximately 19,000 vehicles per day with its four-lane (two lanes in each direction), undivided cross-section. Based on general engineering rules-of-thumb, the current ADT can be supported by a two-lane roadway. This is based on the *Highway Capacity Manual* free-flow saturation flow rate of 2,000 vehicles per hour per lane (vphpl) with adjustments for signals, peak hour factors, and heavy vehicle percentages; each lane of an urban street can support approximately 800 vphpl.
 - The road diet would support the addition of directional bike lanes along the corridor which would significantly improve bicycle safety and promote additional cyclists to use the facility if they were not comfortable sharing the road with vehicles. The addition of the bike lanes will also provide buffer space for the existing sidewalks built against the curbs and encourage drivers to slow down through this residential area.
 - The crossing distance for pedestrians crossing Bingle Road would be reduced, reducing pedestrian and vehicle conflict points and decrease the time pedestrians and vehicles must interact. This translates to safer pedestrian conditions along the corridor.

Traffic Analysis

Data Collection

An extensive data collection effort was undertaken to accurately understand the existing transportation conditions along the Bingle Road corridor and the surrounding study area travel patterns.

Roadways

Bingle Road is a north-south roadway that extends to north Houston past Beltway 8 North and to south Houston to Beltway 8 South at Fort Bend Parkway Toll Road. The section within the City of Spring Valley Village runs from I-10 to Spring Branch, just north of Westview Drive. Within the City, Bingle Road is a four-lane, undivided, concrete roadway with curb and gutter drainage and sidewalks on both sides. The road is classified as a Major Thoroughfare.

Westview Drive is an east-west roadway that extends through west Houston from Brittmoore Road to the west and to TX-290 in the east. The section within the City of Spring Valley Village runs from Campbell Road to Spring Branch, just east of Lofland Drive. Within the City, Westview Drive is a two-lane, undivided, concrete roadway with curb and gutter drainage and sidewalks on both sides. The road is classified as a Major Thoroughfare.

Campbell Road is a north-south roadway that extends through west Houston from Long Point Road to Gaylord Drive, just south of I-10. The section within the City of Spring Valley Village runs from I-10 to Westview Drive. Within the City, Campbell Road is a three-lane concrete roadway with a center turn lane, curb and gutter drainage, and sidewalks on both sides. The road is classified as a Major Thoroughfare.

I-10 Westbound Frontage Road is an east-west roadway that runs along I-10 as a feeder road for the entrance and exit ramps. Within the City, the frontage road is a three-lane concrete roadway with curb and gutter drainage and sidewalks on the north side. The road is classified as a Major Thoroughfare.

Intersections

Turning movement counts (TMCs) were collected at seven signalized intersections and two unsignalized intersections, listed below, on Wednesday, January 13th, 2021. The AM and PM peak hours were found to be 7:30 – 8:30 AM and 4:45 – 5:45 PM, respectively. Detailed TMCs are provided in **Appendix A**.

1. Burkhart Drive at Bingle Road
2. W Memorial Park Drive at Bingle Road (signalized)
3. Eastbound I-10 Frontage Road at Bingle Road (signalized)
4. Westbound I-10 Frontage Road at Bingle Road (signalized)
5. Eastbound I-10 Frontage Road at Campbell Road (signalized)
6. Westbound I-10 Frontage Road at Campbell Road (signalized)
7. Westview Drive at Campbell Road (signalized)
8. Westview Drive at Voss Road
9. Westview Drive at Bingle Road (signalized)

In addition to TMCs, bi-directional 24-hour counts and vehicle speeds on Bingle Road north of Memorial Park Drive and south of Merlin Drive were collected on Wednesday, January 13th, 2021. **Table 1** provides a summary of Bingle Road's existing traffic conditions, showing it carries approximately 19,000 vehicles per day, with an average speed of 27-32 mph. The 85th-percentile speed is about 5 mph over the posted speed limit of 30 mph.

TABLE 1 BINGLE ROAD ADT AND VEHICLE SPEEDS SUMMARY

	North of W. Memorial Park Dr.			South of Merlin Dr.		
	NB	SB	Total	NB	SB	Total
ADT (vehicles per day)	9,337	9,921	19,258	9,221	9,398	18,619
Average Speed (mph)	32.4	27.8	30.1	30.3	32.3	31.3
85th Percentile Speed (mph)	36.5	33.0	34.8	35.2	36.8	36.0

Pedestrian crossing and vehicle traffic counts were collected from 6:00 AM – 7:00 PM at the existing pedestrian crossing on Bingle Road at Merlin Drive on Wednesday, January 13th, 2021. The existing crossing, supported by an RRFB, sees approximately 29 pedestrian crossings a day, with about one-third crossing during the morning peak, as shown in **Table 2**.

TABLE 2 BINGLE ROAD AT MERLIN DRIVE PEDESTRIAN CROSSING

Unit = number of pedestrians	NB Vehicle Traffic	SB Vehicle Traffic	Total	Pedestrian Crossings
6:00 AM	474	460	934	3
7:00 AM	648	982	1,630	9
8:00 AM	611	860	1,471	1
9:00 AM	522	662	1,184	2
10:00 AM	501	540	1,041	2
11:00 AM	532	631	1,163	3
12:00 PM	591	613	1,204	2
1:00 PM	680	652	1,332	3
2:00 PM	703	689	1,392	1
3:00 PM	763	868	1,631	0
4:00 PM	839	821	1,660	0
5:00 PM	934	804	1,738	2
6:00 PM	669	641	1,310	1
13 Hour Total	8,467	9,223	17,690	29

Video Camera Observations

TMCs were collected using video cameras and the recordings were used to collect additional information along the corridor.

Queue Lengths

Peak-hour queues of the approaches of the signalized intersections within the study area were observed and documented for approximately ten to fifteen cycles, 15 to 30 minutes, during the AM and PM peak hours on Wednesday, January 13th, 2021. A summary of the observed queue lengths is provided in **Tables 3 and 4** within the next section, Traffic Model Analysis – Model Calibration and Validation. These queue lengths are approximate as some approaches were not fully visible on the videos but provide a general idea of the existing conditions at each intersection.

Signal Timings

Signal phasing and timings were collected through video recording observations. Cycle lengths were collected by observing the start of green on a certain intersection approach and seeing when the approach green time starts again. Estimated phase timings were collected by timing when each phase changed, by continuously collecting these timings, minimum and maximum splits can be identified.

Public Transit

Metro buses do not stop within the City; however, Metro Bus Route #72 Westview runs along Westview Road, and Route #39 Katy Freeway runs along the westbound I-10 frontage road. Both routes have 60-minute headways and connect residents within the City to the larger transit network.

It should be noted that METRO local bus service along Bingle Road is proposed in the METRONext long-range plan. The route would provide north-south service to Hillcroft Avenue, Voss Road, and Bingle Road.

Traffic Model Analysis

Model Calibration and Validation

This calibration effort was made so that the models will provide a reliable baseline for projecting future traffic operations by accurately representing the existing conditions, traffic patterns, and driving behaviors.

AM and PM baseline models were developed by inputting the data collected to replicate the existing geometric, traffic, and traffic signal operation conditions at the studied intersections and along Bingle Road. The existing-conditions model was tuned by adjusting Synchro and SimTraffic parameters such that the difference between the model estimated and field measured queue lengths for signalized intersection were within an acceptable range. The observed and modeled queue lengths are shown in **Tables 3 and 4** for AM and PM peaks, respectively. The observed queue lengths are expressed in number of vehicles and simulated queue lengths expressed in passenger cars. SimTraffic provides simulated queue lengths in feet, which were converted into passenger cars using 20-feet = 1 passenger car.

TABLE 3 QUEUE LENGTH GOODNESS OF FIT OF EXISTING CONDITIONS MODEL – AM PEAK

Intersection and Approach		Observed Average Queue Length	Simulated Average Queue Length	Observed 95 th Percentile Queue Length	Simulated 95 th Percentile Queue Length
Bingle Rd at I-10 WB FR	WB L	6.9	5.9	10.4	7.4
	WB T	2.9	2.9	6.1	5.3
	WB R	1.8	3.4	6.3	5.6
	SB T	3.4	6.4	6.6	10.4
Bingle Rd at W. Memorial Park Dr	WB L	1.3	1.5	2	3.2
	NB T/R	3.3	2.6	8.2	6.4
	SB L	0.4	1	1	2.5
	SB T	1.9	2.1	6.2	5.3
Bingle Rd at Westview Dr	EB L	0.6	1.1	2.6	3.8
	EB T/R	3	7.8	4.6	12.8
	WB L	3	5.5	4.6	8.8
	WB T/R	2.9	6.1	4.7	11.1
	NB L	0.5	1.2	2.1	3.2
	NB T/R	5.5	6.4	11.1	9.9
	SB L	0.8	1.3	2	1.3
	SB T/R	7.9	6.4	12.1	6.4

1. Observed Queue lengths are expressed in vehicles.
2. Simulated Queues are reported by SimTraffic in feet, the table expresses simulated queue lengths in passenger cars using the conversion 20 ft = 1 passenger car.

TABLE 4 QUEUE LENGTH GOODNESS OF FIT OF EXISTING CONDITIONS MODEL – PM PEAK

Intersection and Approach		Observed Average Queue Length	Simulated Average Queue Length	Observed 95 th Percentile Queue Length	Simulated 95 th Percentile Queue Length
Bingle Rd at I-10 WB FR	WB L	7	5.8	11.1	7.3
	WB T	4.9	5	7.7	6.8
	WB R	1.4	4.8	3.8	7.3
	SB T	3.5	7.5	6	11.6
Bingle Rd at W. Memorial Park Dr	WB L	5.7	5.8	10*	9.8
	NB T/R	2.7	4.2	7.8	8.6
	SB L	0.6	0.9	1.7	2.3
	SB T	3.5	2.4	5.4	5.3
Bingle Rd at Westview Dr	EB L	0.3	1.3	2	4.8
	EB T/R	4.6	7.2	6.2	11.7
	WB L	2.4	4.2	5	8
	WB T/R	5.1	6.9	11.2	11.9
	NB L	1.3	1.8	2.5	3.9
	NB T/R	8.8	7.7	11.6	12.8
	SB L	0.8	1.4	3	3.4
	SB T/R	7.5	6.1	12.2	9.8

1. Observed Queue lengths are expressed in vehicles.
 2. Simulated Queues are reported by SimTraffic in feet, the table expresses simulated queue lengths in passenger cars using the conversion 20 ft = 1 passenger car.
- * Queue did not dissipate, only 5-7 vehicles were processed in a single phase.

As identified in Table 4, the W. Memorial Park Drive westbound left turn queue, during the PM Peak, did not fully clear during a few observed peak hour cycles. The existing phase allowed 5-7 vehicles to clear the intersection, but the queue did not fully dissipate. This situation was observed to happen over a continuous ten-minute period during the peak hour, when many people were leaving the office park all at once.

Additionally, corridor speeds were compared to the speed data collected along the Bingle Road corridor. **Tables 5 and 6** show the comparison between the observed and simulated corridor speeds at the two locations where speed was collected.

TABLE 5 SPEED DATA GOODNESS OF FIT OF EXISTING CONDITIONS MODEL – AM PEAK

Location		Observed Average Speed (mph)	Simulated Average Speed (mph)	Relative Error
North of W. Memorial Park Dr.	NB	32.4	28	-14%
	SB	27.8	28	1%
South of Merlin Dr.	NB	30.3	34	12%
	SB	32.3	29	-10%

TABLE 6 SPEED DATA GOODNESS OF FIT OF EXISTING CONDITIONS MODEL – PM PEAK

Location		Observed Average Speed (mph)	Simulated Average Speed (mph)	Relative Error
North of W. Memorial Park Dr.	NB	32.4	29	-10%
	SB	27.8	28	1%
South of Merlin Dr.	NB	30.3	32	6%
	SB	32.3	34	5%

The model calibration focused on Bingle Road progression through the study area, with a focus on accurately simulating queue lengths on the north/south through movements as well as speed from one intersection to the next. Some of the turning movements, particularly left turns, in the queue tables show a significant difference in observed versus simulated, but only account to a one vehicle difference, as in the case of the northbound and southbound left turns at Bingle Road and Westview Drive. These large statistical differences do not have significant impacts on the overall corridor or intersection operations. The main focus of north/south movements through the corridor shows a less than 30% difference at most intersections, which is considered acceptable for this calibration method.

Based on the calibrated existing-condition model, three scenarios were developed to model the traffic operations of the studied intersections in the 2026 planning year.

- Scenario 1 – Baseline
- Scenario 2 – Improved Signal Timing and Progression
- Scenario 3 – Bingle Road Road Diet

Assumptions

Assumptions were made associated with traffic conditions, signal timings, and roadway geometrics in analyzing each of the scenarios. Each scenario was analyzed for the planning year 2026, with volumes grown by a compound annual growth rate of one percent over five years. Assumptions regarding signal timings and roadway geometries for each scenario are detailed below.

Scenario 1 – Baseline

- Volumes were grown by one percent annually for five years.
- No geometry changes to any of the roadways.
- Signal timings and cycle lengths were maintained.

Scenario 2 – Improved Signal Timings and Progression

- Bingle Road signalized intersections with W. Memorial Park Drive and Winningham Lane cycle lengths were changed to 60 sections.
- Signal timings and offsets were optimized.
- Existing roadway geometry remains.
- As a sub-scenario, a new pedestrian actuated HAWK crossing at Merlin Drive or Cedarbrake Drive replaces the existing RRFB crossing at Merlin Drive to identify impact on the corridor operations.

Scenario 3 – Bingle Road Road Diet

- The roadway was modified from the 4-lane to a 3-lane cross-section. There would be one 11-foot vehicle lane and one 5-foot bicycle lane in each direction with a two-way left-turn lane as the median.
- Intersections were modified to accommodate single-lane travel in each direction. The two-way left-turn lane transitions into an exclusive left turn lane at intersections and signal timings were adjusted to accommodate safe left turn movements.

Results for Traffic Model Analysis

Each scenario described above was evaluated using SimTraffic traffic simulation and compared to the Existing Conditions and Baseline Scenario to understand the projected impacts each scenario could have on the corridor and surrounding study area roadways. **Tables 7 through 8** provide a summary of the level-of-service (LOS) and simulation results. Full SimTraffic reports are provided in **Appendix B**.

An intersection LOS analysis provides a measure of delay and service condition for all approaches of the intersection. The Highway Capacity Manual (HCM) uses LOS as a qualitative measure to describe the operating conditions at signalized and unsignalized intersections. The LOS ranges from A through F which represents driving conditions from best to worst, respectively. LOS A represents free-flow conditions with no congestion, and LOS F represents severe congestion with significant delays. In general, a signalized intersection operating at LOS D or better in an urban area is characterized by acceptable delays.

As indicated from the results, Bingle Road currently provides good progression through the studied corridor and supports the current traffic demand with capacity to handle increased projected traffic volume. With spot improvements at signalized intersection, side street operations can improve, reducing residents delay exiting their subdivisions. Additionally, future planning considerations could include pedestrian and bicycle infrastructure that would not significantly impact Bingle Road operations.

A detailed discussion of the results is provided below.

Scenario 2 – Bingle Road Improved Signal Timings and Progression

Existing signal progression along Bingle Road is acceptable for both the morning and evening conditions analyzed. However, observations indicated that improvements could be made to benefit residents to get out of subdivisions more easily. Specifically, improved coordination between the three signalized intersections on the southern end of Bingle Road, IH-10 Frontage Road, W. Memorial Park Drive, and Winningham Ln. The IH-10 intersection operates on a 120-second cycle length and it was observed that W. Memorial Park Drive operates on a 90-second cycle length. With the short distance between these intersections cycle lengths should be compatible, either the same length or half-cycles. A shorter cycle length for the W. Memorial Park Drive intersection would also benefit the westbound approach operations as vehicles do not have to wait a considerable amount of time to enter the intersection. For these reasons, the cycle lengths at W. Memorial Park Drive and Winningham Lane were changed to half-cycles of the IH-10 intersection, 60-seconds. While no video was captured at Winningham Lane, based on area context and counts conducted at other area intersections, the cycle length of 60-seconds is also believed to improve existing operations, similar to those at W. Memorial Park Drive.

The analysis indicates that this change improves the individual approaches, particularly for the left-turn lane operations. W. Memorial Park Drive's westbound left lane improves from a LOS C to LOS B operation, with a delay decrease of 13.4 seconds during the AM peak hour. Similarly, during the PM peak hour, the westbound lane improves from a LOS D to LOS C with a delay decrease of 21.7 seconds per vehicle.

To support the City's Long-term planning considerations a signalized pedestrian crossing was modeled in place of the existing RRFB crossing at Merlin Drive. The analysis shows that the pedestrian signal would not have significant impacts on the progression of vehicles along the corridor. If vehicles were stopped by the signal, the slight queue would form but quickly dissipate. The pedestrian signal would improve crossing safety within this area and provide residents with a desirable level of comfort when trying to access the other side of the street.

Scenario 3 – Bingle Road Road Diet

The Bingle Road Road Diet Scenario was modeled and analyzed to reimagine what the long-term vision of Bingle Road could be. This option may be considered at a future date when street characteristic change or when the City reviews their long-term planning efforts.

This scenario, converting Bingle Road from a four-vehicle lane, two in each direction, roadway to a three-vehicle lane, one in each direction with a two-way-center-left-turn-lane, roadway provides significant benefits to all road users. The conversion allows for bike lanes to be provided without impeding vehicle progression through the corridor. The road diet would also reduce the crossing distance across Bingle Road, minimizing the amount of time a pedestrian and vehicle have to interact. These benefits are supported by the analysis conducted.

As Tables 7 and 8 show, there is not a significant impact on the intersection operations along the corridor between IH-10 and Westview Dr. A minor increase in side street delay at stop-controlled intersections is expected for the analyzed unsignalized intersections at Burkhart Road and Merlin Drive. During the AM peak hour, the average delay experienced by the Burkhart Road westbound left movement increases by 14.3 seconds and during the PM peak hour by 32.9 seconds. The Merlin Drive westbound left movement average vehicle delay increases by 18.5 seconds and 14.4 seconds for the AM and PM peak hours, respectively. It should also be noted that while slight increases in delay will be experienced, queue lengths do not increase. This is significant because if queues increased as well, drivers might feel rushed

and proceed through the intersection under riskier conditions. This is not the case along Bingle Road; and therefore, the delay increase will be less noticeable.

With any reduction in vehicle travel lanes, there is always a possibility that traffic patterns may change and existing vehicles using Bingle Road may disperse to other adjacent corridors to avoid potential delays or significant queuing at intersections. In the case of Bingle Road, the analysis indicates that no such delays or significant queuing would occur and therefore traffic is not likely to divert away from using Bingle Road. For this reason, no additional scenario was evaluated that involves redistribution of traffic due to the road diet to Campbell Road that also serves north-south traffic demands alongside Bingle Road.

TABLE 7 SUMMARY OF RESULTS - AM PEAK HOUR

Int. Name	Direction	Existing			Baseline			Bingle Road Diet			Improved Signal Timings		
		LOS	Delay	Queue Length (95 th Percentile)	LOS	Delay	Queue Length (95 th Percentile)	LOS	Delay	Queue Length (95 th Percentile)	LOS	Delay	Queue Length (95 th Percentile)
Bingle @ I-10 WB FR	WB L	D	39.9	148.0	D	41.2	144.5	D	40.6	148.5	D	40.7	146.5
	WB T	D	37.2	106.5	D	36.6	107	D	37.4	105.5	D	36.8	107
	WB R	A	9.4	112.0	B	10.8	133	A	7.6	111	B	10.4	124
	NB L	A	5.1	16.0	A	5.2	16	A	5.5	17.5	A	5.1	15.5
	NB T	A	1.6	4.0	A	1.7	6	A	3.4	55	A	1.8	6
	SB T	D	37.2	208.3	D	37.3	196.7	D	38.3	201.3	D	36.8	216.3
	SB R	A	8.4	260.0	A	9.4	299	A	9.3	301	B	10.4	315
	Overall	B	19.2		B	19.7		B	19.9		B	19.7	
Bingle @ W. Memorial Park Dr	WB L	C	27.5	64.0	C	27.8	56	C	31.4	68	B	14.4	58
	WB R	A	5.1	28.0	A	5.1	29	A	7.5	30	A	4.7	26
	NB T/R	A	5.1	127.5	A	4.7	117	A	6.4	150.5	A	4.8	112
	SB L	C	29.9	50.0	C	31.3	53	C	34.6	54	A	8.2	40
	SB T	A	3.6	106.0	A	3.4	106.5	A	6.5	211	A	4.1	116
		Overall	A	5.0		A	4.7		A	7		A	4.7
Bingle @ Burkhart	WB L	B	10.2	30.0	B	14.1	34	D	28.4	38	D	26.8	38
	SB L	N/A					A	9.7	11	N/A			
Bingle @ Merlin	WB L	C	18.8	50.0	C	18.8	52	E	37.3	58	C	20.7	50
	SB L	N/A					A	4.3	6	N/A			
Bingle @ Westview	EB L	C	30.8	76.0	C	31.6	99	C	30.4	84	C	28.8	95
	EB T/R	C	34.2	255.0	C	34.4	294	D	35.4	266	C	25.9	270
	WB L	D	35.6	175.0	D	35.1	176	C	33.6	177	C	34.8	180
	WB T/R	C	22	222.0	C	21.9	215	C	22.7	218	C	22.9	233
	NB L	B	18.4	63.0	B	18.1	70	C	21.5	74	B	18.7	64
	NB T/R	B	17.5	198.0	B	17	192.5	B	15.6	189	B	17.5	222
	SB L	C	20.9	77.0	B	17.9	87	C	20.8	103	B	19.7	78
	SB T/R	B	16.2	211.0	B	18.1	230.5	B	19.2	254.5	B	17.4	215.5
	Overall	C	20.9		C	21.5		C	21.5		C	21.7	
Bingle @ Pedestrian Signal	NB T	N/A					A	2.7	95				
	SB T	N/A					A	2.7	120				
	Overall	N/A					A	2.7					
Corridor Travel Time	NB	99.7			99.0			104.8			102.6		
	SB	117.1			117.4			131.0			121.2		

TABLE 8 SUMMARY OF RESULTS - PM PEAK HOUR

Int. Name	Direction	Existing			Future Baseline			Bingle Road Diet			Improved Signal Timings		
		LOS	Delay	Queue Length (95 th Percentile)	LOS	Delay	Queue Length (95 th Percentile)	LOS	Delay	Queue Length (95 th Percentile)	LOS	Delay	Queue Length (95 th Percentile)
Bingle @ I-10 WB FR	WB L	C	32.6	145.0	C	33.3	144	D	40.3	147	D	39.1	146
	WB T	C	31	136.5	C	31.4	141	D	36.3	143.5	D	36.7	143.5
	WB R	B	12.2	146.0	B	12.6	148	A	9.2	139	B	15	156
	NB L	A	4.9	9.0	A	5.1	14.5	A	5.5	15	A	5.5	14
	NB T	A	1.5	10.0	A	1.5	7	A	3.2	16	A	1.6	8
	SB T	D	48.8	232.7	D	53.4	325	D	38.2	263.3	D	38.1	270.0
	SB R	B	13.2	343.0	B	19.4	350	B	14.5	368	B	17.1	339
	Overall	C	21.5		C	21.9		C	20.6		C	21.2	
Bingle @ W. Memorial Park Dr	WB L	D	43.9	95.0	D	45.8	200	D	44	200	C	24.1	140
	WB R	A	6.9	48.0	A	9.4	56	B	17.4	68	A	8.6	54
	NB T/R	A	6.6	172.0	A	6.5	171.5	B	13	397	A	8.1	191.5
	SB L	D	49.3	46.0	D	53.2	47	D	52.6	53	C	33.4	54
	SB T	A	3.9	106.0	A	4.5	125	A	6.9	207	A	5.7	159.5
	Overall	A	8.9		A	9.5		B	13.1		A	8.6	
Bingle @ Burkhart	WB L	C	16.1	39.0	C	15.9	39	E	48.8	43	C	21	35
	SB L	N/A			N/A			B	13.5	22	N/A		
Bingle @ Merlin	WB L	D	27	48.0	D	29.5	60	E	43.9	65	C	24.7	56
	SB L	N/A			N/A			C	18.2	13	N/A		
Bingle @ Westview	EB L	C	29.8	96.0	C	31.3	100	C	30.9	105	C	32.4	104
	EB T/R	C	30.8	234.0	C	29	248	D	36.6	268	D	36.6	281
	WB L	D	35.3	160.0	D	36.9	159	D	36.4	166	D	35.6	167
	WB T/R	C	25.6	238.0	C	22.9	231	C	26.2	258	C	25.1	241
	NB L	C	21.7	36.0	C	24.8	93	C	30.2	90	C	21.7	90
	NB T/R	B	19	255.5	C	22.1	281	B	17.4	265.5	B	18.7	270.5
	SB L	C	20.3	68.0	C	21.8	105	D	35.6	131	C	23.9	89
	SB T/R	B	17.6	196.5	B	18.2	209.5	C	31.4	426.5	B	17.3	219.5
Overall	C	21.4		C	22.5		C	25.7		C	22.3		
Bingle @ Pedestrian Signal	NB T	N/A			N/A			A	2.2	122			
	SB T	N/A			N/A			A	2.0	121			
	Overall	N/A			N/A			A	2.1				
Corridor Travel Time	NB	102.3			105.9			126.7			118.9		
	SB	127.9			133.3			134.1			129.8		

Findings and Recommendations

The study indicated that the Bingle Road corridor has the capacity to support natural growth in traffic volumes as well as improved bicycle and pedestrian infrastructure. Key findings from the traffic modeling study include the following:

General Observations:

- Speeds along the corridor average right around the speed limit of 30 mph, with an 85th percentile speed being approximately 5 miles above the posted speed limit. While the average speeds are not a severe issue, some speeding does occur.
- Please refer to the *Recommendations on Sidewalk Safety Improvements Along Bingle Road*, dated May 13, 2020, for more information regarding the sidewalks on Bingle Road of concern.

Short-term Improvements:

- Bingle Road currently operates well with good signal progression through the corridor. Improvements to signal timings and cycle lengths may improve side street operations, reducing the delay felt exiting residential neighborhoods onto Bingle Road. These changes would not negatively impact Bingle Road operations.
 - Reducing the cycle length from the existing 90 seconds to 60 seconds at the W. Memorial Park Drive and Winningham Lane intersections will improve coordination with the 120-second cycle length of the IH-10 intersection. Side street traffic delay will decrease and progression along Bingle Road would slightly improve.

Long-term Planning Considerations:

- A signalized pedestrian crossing does not significantly impact the progression of vehicles through the corridor and greatly improves crossing safety.
 - A signalized intersection, such as a HAWK (High-Intensity Activated Crosswalk), would provide a controlled crossing for pedestrians to safely navigate.
 - The exact location of the signal, at Merlin Drive, Cedarbrake Drive, or somewhere in-between, does not impact the traffic operations of the corridor based on the model. The location will impact usage and compliance.
- A road diet, converting the four-lane roadway to a three-lane roadway with directional bike lanes, does not show to have significant impact to vehicle operations.
 - Bingle Road currently serves approximately 19,000 vehicles per day with its four-lane (two lanes in each direction), undivided cross-section. Based on general engineering rules-of-thumb, the current ADT can be supported by a two-lane roadway. This is based on the *Highway Capacity Manual* free-flow saturation flow rate of 2,000 vehicles per hour per lane (vphpl) with adjustments for signals, peak hour factors, and heavy vehicle percentages; each lane of an urban street can support approximately 800 vphpl.
 - The road diet would support the addition of directional bike lanes along the corridor which would significantly improve bicycle safety and promote additional cyclists to use the facility if they were not comfortable sharing the road with vehicles. The addition of the bike lanes will also provide buffer space for the existing sidewalks built against the curbs and encourage drivers to slow down through this residential area.
 - The crossing distance for pedestrians crossing Bingle Road would be reduced, reducing pedestrian and vehicle conflict points and decrease the time pedestrians and vehicles must interact. This translates to safer pedestrian conditions along the corridor.

Appendix A Turning Movement Counts



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd south of Merlin Dr
Start Date: 1/13/2021

Direction: Northbound

1/13/2021	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
0:00	0	0	0	1	7	1	0	1	0	0	0	0	0	10
0:15	0	0	0	1	3	0	2	0	0	0	0	0	0	6
0:30	0	0	0	3	5	3	1	0	0	0	0	0	0	12
0:45	0	0	0	4	4	2	1	0	0	0	0	0	0	11
1:00	0	0	0	9	19	6	4	1	0	0	0	0	0	39
1:15	0	0	0	2	2	0	0	0	0	0	0	0	0	4
1:15	0	1	0	1	6	2	0	0	0	0	0	0	0	10
1:30	0	0	0	1	1	0	0	0	0	0	0	0	0	2
1:45	0	0	0	0	2	1	0	0	0	0	0	0	0	3
2:00	0	1	0	4	11	3	0	0	0	0	0	0	0	19
2:00	0	0	1	1	3	0	0	0	0	0	0	0	0	5
2:15	0	0	0	1	0	1	0	0	0	0	0	0	0	2
2:30	0	0	0	0	2	2	0	0	0	0	0	0	0	4
2:45	0	0	0	1	4	1	0	1	0	0	0	0	0	7
3:00	0	0	1	3	9	4	0	1	0	0	0	0	0	18
3:00	0	0	0	2	2	0	0	0	0	0	0	0	0	4
3:15	1	0	1	0	4	1	0	0	0	0	0	0	0	7
3:30	0	1	0	1	0	0	0	0	0	0	0	0	0	2
3:45	0	0	0	2	1	0	0	0	0	0	0	0	0	3
4:00	1	1	1	5	7	1	0	0	0	0	0	0	0	16
4:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
4:15	0	0	1	3	4	0	0	0	0	0	0	0	0	8
4:30	0	0	0	0	2	2	2	0	0	0	0	0	0	6
4:45	0	0	1	1	3	4	2	0	0	0	0	0	0	11
5:00	0	0	2	4	10	7	4	0	0	0	0	0	0	27
5:00	0	0	0	3	9	7	0	1	0	0	0	0	0	20
5:15	0	0	1	2	10	4	3	4	0	0	0	0	0	24
5:30	0	0	0	7	17	15	4	1	0	0	0	0	0	44
5:45	0	2	1	19	33	20	5	1	0	0	0	0	0	81
6:00	0	2	2	31	69	46	12	7	0	0	0	0	0	169
6:00	1	2	0	15	31	17	2	0	0	0	0	0	0	68
6:15	0	1	5	34	44	16	3	2	0	0	0	0	0	105
6:30	1	4	0	29	53	14	4	0	0	0	0	0	0	105
6:45	0	2	7	58	59	20	4	0	0	0	0	0	0	150
7:00	2	9	12	136	187	67	13	2	0	0	0	0	0	428
7:00	3	1	11	61	52	16	1	0	0	0	0	0	0	145
7:15	0	2	11	57	53	9	0	0	0	0	0	0	0	132
7:30	4	11	18	83	37	6	0	0	0	0	0	0	0	159
7:45	2	12	20	78	49	7	1	0	0	0	0	0	0	169
8:00	9	26	60	279	191	38	2	0	0	0	0	0	0	605
8:00	2	7	8	54	36	18	2	0	0	0	0	0	0	127
8:15	2	5	9	34	73	23	1	0	0	0	0	0	0	147
8:30	1	4	14	48	40	21	8	0	0	0	0	0	0	136
8:45	3	13	8	46	54	25	4	1	0	0	0	0	0	154
9:00	8	29	39	182	203	87	15	1	0	0	0	0	0	564
9:00	0	3	5	19	63	36	6	1	0	0	0	0	0	133
9:15	0	9	4	32	62	16	4	1	0	0	0	0	0	128
9:30	0	6	1	17	56	20	3	0	0	0	0	0	0	103
9:45	0	3	4	42	62	16	3	0	0	0	0	0	0	130
10:00	0	21	14	110	243	88	16	2	0	0	0	0	0	494
10:00	1	4	3	35	49	22	3	0	0	0	0	0	0	117
10:15	1	7	7	45	27	16	3	1	0	0	0	0	0	107
10:30	1	3	1	33	62	24	6	0	0	0	0	0	0	130
10:45	0	3	6	21	52	32	7	0	0	0	0	0	0	121
11:00	3	17	17	134	190	94	19	1	0	0	0	0	0	475
11:00	0	5	2	22	47	32	9	0	0	0	0	0	0	117
11:15	3	7	0	15	54	34	8	0	0	0	0	0	0	121
11:30	0	7	5	22	59	29	8	2	0	0	0	0	0	132
11:45	0	9	8	23	62	29	8	0	0	0	0	0	0	139
12:00	3	28	15	82	222	124	33	2	0	0	0	0	0	509
12:00	7	8	9	49	43	23	2	1	0	0	0	0	0	142



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd south of Merlin

Dr

Start Date: 1/13/2021

12:15	0	5	2	11	66	40	6	0	0	0	0	0	0	130
12:30	0	4	6	33	63	34	6	0	0	0	0	0	0	146
12:45	1	3	5	18	64	38	7	1	0	0	0	0	0	137
	8	20	22	111	236	135	21	2	0	0	0	0	0	555
13:00	0	6	2	32	73	25	10	0	0	0	0	0	0	148
13:15	0	4	7	35	80	36	3	1	0	0	0	0	0	166
13:30	0	5	2	23	71	41	10	0	0	0	0	0	0	152
13:45	0	4	7	28	69	34	7	1	0	0	0	0	0	150
	0	19	18	118	293	136	30	2	0	0	0	0	0	616
14:00	1	2	10	34	83	27	6	0	0	0	0	0	0	163
14:15	2	9	17	36	65	30	4	2	0	0	0	0	0	165
14:30	2	8	2	31	72	30	5	0	0	0	0	0	0	150
14:45	5	9	5	55	48	14	3	0	0	0	0	0	0	139
	10	28	34	156	268	101	18	2	0	0	0	0	0	617
15:00	0	6	2	33	86	22	2	0	0	0	0	0	0	151
15:15	1	13	14	62	76	15	2	1	0	0	0	0	0	184
15:30	2	8	19	79	58	18	2	0	0	0	0	0	0	186
15:45	2	6	18	51	73	11	4	0	0	0	0	0	0	165
	5	33	53	225	293	66	10	1	0	0	0	0	0	686
16:00	3	23	29	60	72	12	2	0	0	0	0	0	0	201
16:15	5	18	15	46	65	20	3	1	0	0	0	0	0	173
16:30	8	16	24	83	55	12	1	1	0	0	0	0	0	200
16:45	1	12	27	72	58	16	1	0	0	0	0	0	0	187
	17	69	95	261	250	60	7	2	0	0	0	0	0	761
17:00	4	17	28	96	49	4	1	0	0	0	0	0	0	199
17:15	1	14	27	111	57	6	0	0	0	0	0	0	0	216
17:30	5	21	49	101	36	5	0	0	0	0	0	0	0	217
17:45	0	13	22	90	71	10	0	0	0	0	0	0	0	206
	10	65	126	398	213	25	1	0	0	0	0	0	0	838
18:00	1	11	19	90	56	8	0	0	0	0	0	0	0	185
18:15	1	10	17	74	60	10	0	0	0	0	0	0	0	172
18:30	0	9	10	61	59	9	2	0	0	0	0	0	0	150
18:45	3	8	9	63	43	14	1	0	0	0	0	0	0	141
	5	38	55	288	218	41	3	0	0	0	0	0	0	648
19:00	1	5	7	44	52	12	1	0	0	0	0	0	0	122
19:15	1	4	2	40	52	11	0	1	0	0	0	0	0	111
19:30	0	3	9	29	43	13	1	0	0	0	0	0	0	98
19:45	1	4	7	22	43	8	2	0	0	0	0	0	0	87
	3	16	25	135	190	44	4	1	0	0	0	0	0	418
20:00	0	3	4	42	30	9	3	0	0	0	0	0	0	91
20:15	1	5	6	37	18	5	2	0	0	0	0	0	0	74
20:30	0	3	5	14	26	8	3	0	0	0	0	0	0	59
20:45	1	4	2	26	31	3	0	0	0	0	0	0	0	67
	2	15	17	119	105	25	8	0	0	0	0	0	0	291
21:00	0	4	7	31	20	2	0	0	0	0	0	0	0	64
21:15	1	4	5	11	30	6	0	0	0	0	0	0	0	57
21:30	0	4	0	13	12	13	2	1	0	0	0	0	0	45
21:45	0	3	1	18	25	5	0	1	0	0	0	0	0	53
	1	15	13	73	87	26	2	2	0	0	0	0	0	219
22:00	0	3	1	11	15	5	1	1	0	0	0	0	0	37
22:15	0	0	1	13	17	8	1	0	0	0	0	0	0	40
22:30	0	0	2	8	19	5	1	0	1	0	0	0	0	36
22:45	0	3	1	8	15	2	1	0	0	0	0	0	0	30
	0	6	5	40	66	20	4	1	1	0	0	0	0	143
23:00	0	1	1	8	14	3	2	1	0	0	0	0	0	30
23:15	1	2	2	5	3	2	0	0	0	0	0	0	0	15
23:30	0	0	0	8	2	3	0	0	0	0	0	0	0	13
23:45	0	0	0	5	0	1	2	0	0	0	0	0	0	8
Total	1	3	3	26	19	9	4	1	0	0	0	0	0	66
	88	461	629	2929	3599	1253	230	31	1	0	0	0	0	9221

Percentile 15th 50th 85th 95th
Speed 25.5 30.5 35.2 38.5
Mean Speed (Average) 30.3
10 MPH Pace Speed 25-34



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd south of Merlin
Dr
Start Date: 1/13/2021

Number in Pace	6469
Percent in Pace	70.2%
Number > 35 MPH	1515
Percent > 35 MPH	16.4%



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd south of Merlin Dr
Start Date: 1/13/2021

Direction: Southbound

1/13/2021	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
0:00	0	0	0	0	4	1	2	0	0	0	0	0	0	7
0:15	0	0	1	0	3	4	0	0	0	0	0	0	0	8
0:30	0	0	1	0	3	1	0	0	0	0	0	0	0	5
0:45	0	0	0	0	3	0	3	0	0	0	0	0	0	6
1:00	0	0	2	0	13	6	5	0	0	0	0	0	0	26
1:15	0	0	0	0	2	0	1	0	0	0	0	0	0	3
1:30	0	0	0	0	3	0	0	0	0	0	0	0	0	3
1:45	0	0	0	1	1	2	0	0	0	0	0	0	0	4
2:00	0	0	1	0	0	1	0	0	0	0	0	0	0	2
2:15	0	0	1	1	6	3	1	0	0	0	0	0	0	12
2:30	0	0	0	1	1	2	0	0	0	0	0	0	0	4
2:45	0	0	0	1	2	1	0	0	0	0	0	0	0	4
3:00	0	0	0	0	0	0	1	0	0	0	0	0	0	2
3:15	0	0	0	1	2	1	1	0	1	0	0	0	0	6
3:30	0	0	0	1	2	3	2	0	0	0	0	0	0	8
3:45	0	0	0	1	5	2	1	0	0	0	0	0	0	9
4:00	0	0	0	3	9	6	5	0	1	0	0	0	0	24
4:15	0	0	0	2	1	1	0	0	0	0	0	0	0	4
4:30	0	0	0	1	3	1	0	0	0	0	0	0	0	5
4:45	0	1	0	3	6	7	1	0	0	0	0	0	0	18
5:00	0	2	1	5	8	6	0	0	0	0	0	0	0	22
5:15	0	3	1	11	18	15	1	0	0	0	0	0	0	49
5:30	0	0	0	5	17	11	2	0	0	0	0	0	0	35
5:45	0	1	1	4	19	11	2	1	0	0	0	0	0	39
6:00	0	1	0	9	30	11	5	0	0	0	0	0	0	56
6:15	0	1	3	11	27	20	3	0	0	0	0	0	0	65
6:30	0	3	4	29	93	53	12	1	0	0	0	0	0	195
6:45	0	1	0	11	45	16	2	1	0	0	0	0	0	76
7:00	0	1	2	24	38	15	3	0	0	0	0	0	0	83
7:15	0	1	6	44	50	13	3	0	0	0	0	0	0	117
7:30	0	1	4	40	53	12	5	0	0	0	0	0	0	115
7:45	0	4	12	119	186	56	13	1	0	0	0	0	0	391
8:00	0	2	27	58	45	18	0	0	0	0	0	0	0	150
8:15	0	6	15	118	76	18	1	1	0	0	0	0	0	235
8:30	0	1	24	102	80	16	0	0	0	0	0	0	0	223
8:45	0	2	3	58	106	20	5	0	0	0	0	0	0	194
9:00	0	11	69	336	307	72	6	1	0	0	0	0	0	802
9:15	0	3	9	52	93	23	3	0	0	0	0	0	0	183
9:30	0	3	8	57	84	38	0	1	0	0	0	0	0	191
9:45	0	4	7	44	93	35	8	0	0	0	0	0	0	191
10:00	0	1	7	37	103	27	2	0	0	0	0	0	0	177
10:15	0	11	31	190	373	123	13	1	0	0	0	0	0	742
10:30	0	2	5	33	82	27	1	0	0	0	0	0	0	150
10:45	0	1	6	23	82	34	9	2	0	0	0	0	0	157
11:00	0	2	10	41	84	29	5	0	0	0	0	0	0	171
11:15	0	1	6	22	66	22	5	0	0	0	0	0	0	122
11:30	0	6	27	119	314	112	20	2	0	0	0	0	0	600
11:45	0	3	9	20	54	36	8	1	0	0	0	0	0	131
12:00	0	3	2	23	62	15	3	0	0	0	0	0	0	108
12:15	0	5	3	21	70	32	7	3	0	0	0	0	0	141
12:30	0	4	3	7	71	39	3	0	0	0	0	0	0	127
12:45	0	15	17	71	257	122	21	4	0	0	0	0	0	507
13:00	0	1	7	18	57	39	11	1	0	0	0	0	0	134
13:15	1	2	8	14	75	34	9	2	0	0	0	0	0	145
13:30	0	1	5	20	69	43	8	1	0	0	0	0	0	147
13:45	0	1	2	12	81	55	15	2	0	0	0	0	0	168
14:00	1	5	22	64	282	171	43	6	0	0	0	0	0	594
14:15	1	3	9	21	51	37	3	0	0	0	0	0	0	125



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd south of Merlin

Dr

Start Date: 1/13/2021

12:15	0	5	3	12	51	52	13	1	1	0	0	0	0	138
12:30	0	2	4	19	76	33	16	1	1	0	0	0	0	152
12:45	0	1	5	24	59	44	16	0	0	0	0	0	0	149
	1	11	21	76	237	166	48	2	2	0	0	0	0	564
13:00	0	4	4	16	59	38	19	1	1	0	0	0	0	142
13:15	0	3	3	22	63	45	15	1	0	0	0	0	0	152
13:30	0	3	3	19	53	47	18	2	0	0	0	0	0	145
13:45	0	4	8	26	85	39	11	0	0	0	0	0	0	173
	0	14	18	83	260	169	63	4	1	0	0	0	0	612
14:00	1	3	4	16	73	37	13	0	0	0	0	0	0	147
14:15	0	3	4	25	64	30	16	1	0	0	0	0	0	143
14:30	0	4	4	21	68	46	8	0	0	0	0	0	0	151
14:45	0	4	19	62	64	28	3	2	1	0	0	0	0	183
	1	14	31	124	269	141	40	3	1	0	0	0	0	624
15:00	0	0	16	34	77	39	14	1	0	0	0	0	0	181
15:15	0	2	7	41	92	37	6	1	0	0	0	0	0	186
15:30	0	3	10	40	123	38	5	0	0	0	0	0	0	219
15:45	6	10	11	31	77	34	10	2	0	0	0	0	0	181
	6	15	44	146	369	148	35	4	0	0	0	0	0	767
16:00	0	1	4	55	80	40	8	1	0	0	0	0	0	189
16:15	0	3	7	41	94	46	4	2	0	0	0	0	0	197
16:30	0	4	8	39	76	23	4	1	0	0	0	0	0	155
16:45	0	2	3	46	78	47	3	0	0	0	0	0	0	179
	0	10	22	181	328	156	19	4	0	0	0	0	0	720
17:00	0	2	4	32	108	37	10	0	0	0	0	0	0	193
17:15	1	1	18	49	65	37	4	1	0	0	0	0	0	176
17:30	0	1	9	40	88	27	5	3	0	0	0	0	0	173
17:45	0	3	16	39	67	18	8	0	0	0	0	0	0	151
	1	7	47	160	328	119	27	4	0	0	0	0	0	693
18:00	0	3	2	37	103	18	4	0	0	0	0	0	0	167
18:15	0	2	11	40	58	12	1	0	0	0	0	0	0	124
18:30	0	5	3	42	86	14	5	0	0	0	0	0	0	155
18:45	0	3	4	34	57	15	8	1	0	0	0	0	0	122
	0	13	20	153	304	59	18	1	0	0	0	0	0	568
19:00	0	0	5	24	52	23	4	0	0	0	0	0	0	108
19:15	0	2	3	18	37	18	5	0	0	0	0	0	0	83
19:30	0	1	0	17	31	18	4	1	1	0	0	0	0	73
19:45	0	1	3	19	22	14	7	0	0	0	0	0	0	66
	0	4	11	78	142	73	20	1	1	0	0	0	0	330
20:00	0	1	0	22	45	11	2	3	0	0	0	0	0	84
20:15	0	1	3	6	37	13	5	1	0	0	0	0	0	66
20:30	0	1	2	15	37	15	2	0	0	0	0	0	0	72
20:45	0	3	1	7	20	9	1	0	0	0	0	0	0	41
	0	6	6	50	139	48	10	4	0	0	0	0	0	263
21:00	0	2	0	10	22	5	1	0	0	0	0	0	0	40
21:15	0	2	1	7	21	2	2	1	0	0	0	0	0	36
21:30	0	1	4	6	9	7	3	1	0	0	0	0	0	31
21:45	0	0	0	2	12	7	1	0	0	0	0	0	0	22
	0	5	5	25	64	21	7	2	0	0	0	0	0	129
22:00	0	0	0	8	17	6	4	0	0	0	0	0	0	35
22:15	0	1	0	7	16	7	0	1	0	0	0	0	0	32
22:30	0	1	1	6	8	3	1	0	0	0	0	0	0	20
22:45	0	0	1	3	12	10	3	0	0	0	0	0	0	29
	0	2	2	24	53	26	8	1	0	0	0	0	0	116
23:00	0	0	0	6	12	4	1	0	1	0	0	0	0	24
23:15	0	0	0	1	8	5	2	0	0	0	0	0	0	16
23:30	0	1	0	1	2	1	1	1	0	0	0	0	0	7
23:45	0	0	0	4	1	2	0	0	0	0	0	0	0	7
	0	1	0	12	23	12	4	1	1	0	0	0	0	54
Total	10	160	413	2058	4378	1884	441	47	7	0	0	0	0	9398

Percentile 15th 50th 85th 95th
 Speed 27.9 32.2 36.8 40
 Mean Speed (Average) 32.3
 10 MPH Pace Speed 26-35



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd south of Merlin
Dr
Start Date: 1/13/2021

Number in Pace	6405
Percent in Pace	68.2%
Number > 30 MPH	6757
Percent > 30 MPH	71.9%



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd north of West
Memorial Park Dr
Start Date: 1/13/2021

Direction: Northbound

1/13/2021	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
0:00	0	0	0	2	4	4	0	0	0	1	0	0	0	11
0:15	0	0	0	4	1	0	0	0	0	0	0	0	0	5
0:30	0	0	0	2	8	4	0	0	0	0	0	0	0	14
0:45	0	0	3	5	4	1	0	0	0	0	0	0	0	13
1:00	0	0	3	13	17	9	0	0	0	1	0	0	0	43
1:15	0	0	1	0	3	3	0	0	0	0	0	0	0	7
1:30	0	0	0	0	9	1	0	0	0	0	0	0	0	10
1:45	0	0	0	0	2	2	0	0	0	0	0	0	0	4
2:00	0	0	0	0	3	1	0	0	0	0	0	0	0	4
2:15	0	0	1	0	17	7	0	0	0	0	0	0	0	25
2:30	0	0	1	2	2	0	0	0	0	0	0	0	0	5
2:45	0	0	0	0	0	1	0	0	0	0	0	0	0	1
3:00	0	0	0	2	2	2	2	0	0	0	0	0	0	8
3:15	0	0	0	2	3	1	0	0	0	0	0	0	0	6
3:30	0	0	1	6	7	4	2	0	0	0	0	0	0	20
3:45	0	0	0	2	2	1	0	0	0	0	0	0	0	5
4:00	1	0	1	0	4	0	0	0	0	0	0	0	0	6
4:15	0	0	0	1	1	0	0	0	0	0	0	0	0	2
4:30	0	0	0	0	4	0	0	0	0	0	0	0	0	4
4:45	0	0	0	0	4	0	0	0	0	0	0	0	0	4
5:00	1	0	1	3	11	1	0	0	0	0	0	0	0	17
5:15	0	0	0	1	2	1	0	0	0	0	0	0	0	4
5:30	0	0	0	4	2	1	0	0	0	0	0	0	0	7
5:45	0	0	1	1	4	1	0	0	0	0	0	0	0	7
6:00	0	0	0	0	4	8	0	0	0	0	0	0	0	12
6:15	0	0	1	6	12	11	0	0	0	0	0	0	0	30
6:30	0	0	0	2	9	4	2	1	0	0	0	0	0	18
6:45	0	0	0	2	9	9	5	1	1	0	0	0	0	27
7:00	0	0	0	7	21	13	6	1	0	0	0	0	0	48
7:15	0	0	0	14	31	23	8	1	0	0	0	0	0	77
7:30	0	0	0	25	70	49	21	4	1	0	0	0	0	170
7:45	0	0	1	10	38	30	2	1	0	0	0	0	0	82
8:00	0	0	1	9	51	37	6	0	0	0	0	0	0	104
8:15	0	0	1	17	56	34	2	0	0	0	0	0	0	110
8:30	0	0	0	25	80	52	4	0	0	0	0	0	0	161
8:45	0	0	3	61	225	153	14	1	0	0	0	0	0	457
9:00	0	0	2	18	70	25	6	0	0	0	0	0	0	121
9:15	0	0	0	50	59	15	3	0	0	0	0	0	0	127
9:30	0	0	3	61	70	13	1	0	0	0	0	0	0	148
9:45	0	1	13	55	63	22	0	0	0	0	0	0	0	154
10:00	0	1	18	184	262	75	10	0	0	0	0	0	0	550
10:15	0	0	5	27	61	27	6	2	0	0	0	0	0	128
10:30	0	0	0	31	83	33	7	1	0	0	0	0	0	155
10:45	0	0	8	29	58	39	3	1	0	1	0	0	0	139
11:00	0	0	4	34	82	26	3	0	0	0	0	0	0	149
11:15	0	0	17	121	284	125	19	4	0	1	0	0	0	571
11:30	0	0	1	27	79	39	4	0	0	0	0	0	0	150
11:45	0	0	11	41	47	25	6	0	0	0	0	0	0	130
12:00	0	0	2	34	51	25	2	1	0	0	0	0	0	115
12:15	0	0	3	38	69	26	2	1	0	0	0	0	0	139
12:30	0	0	17	140	246	115	14	2	0	0	0	0	0	534
12:45	0	0	2	26	63	16	1	2	0	0	0	0	0	110
13:00	0	0	10	32	43	24	6	1	0	0	0	0	0	116
13:15	0	0	1	24	52	33	8	2	0	0	0	0	0	120
13:30	0	0	2	21	58	42	6	1	0	0	1	0	0	131
13:45	0	0	15	103	216	115	21	6	0	0	1	0	0	477
14:00	0	0	0	19	49	43	13	2	0	0	0	0	0	126
14:15	0	0	3	21	55	41	3	1	0	0	0	0	0	124
14:30	0	1	1	22	56	58	9	3	0	0	0	0	0	150
14:45	0	0	1	29	74	37	7	3	0	0	0	0	0	151
15:00	0	1	5	91	234	179	32	9	0	0	0	0	0	551
15:15	0	0	3	21	77	36	6	0	0	0	1	0	0	144



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd north of West
Memorial Park Dr
Start Date: 1/13/2021

12:15	0	0	1	33	61	36	3	1	0	0	0	0	0	135
12:30	0	0	1	27	84	36	7	2	0	0	0	0	0	157
12:45	0	0	5	22	57	36	3	1	0	0	0	0	0	124
	0	0	10	103	279	144	19	4	0	0	1	0	0	560
13:00	0	0	2	27	88	44	5	1	0	0	0	0	0	167
13:15	0	0	5	36	63	41	11	1	0	0	0	0	0	157
13:30	0	0	2	19	60	52	12	1	0	0	0	0	0	146
13:45	0	1	1	32	89	34	7	1	0	0	0	0	0	165
	0	1	10	114	300	171	35	4	0	0	0	0	0	635
14:00	0	0	0	40	88	51	6	0	0	0	0	0	0	185
14:15	0	1	2	43	60	41	6	2	0	0	0	0	0	155
14:30	0	0	4	38	74	38	8	0	0	0	0	0	0	162
14:45	0	0	2	44	71	34	7	1	0	0	0	0	0	159
	0	1	8	165	293	164	27	3	0	0	0	0	0	661
15:00	0	3	2	26	68	35	6	2	0	0	0	0	0	142
15:15	5	2	5	48	96	29	6	0	1	0	0	0	0	192
15:30	0	0	6	46	79	49	7	1	0	0	0	0	0	188
15:45	0	0	2	47	81	32	6	1	0	0	0	0	0	169
	5	5	15	167	324	145	25	4	1	0	0	0	0	691
16:00	1	3	7	61	92	28	2	0	0	0	0	0	0	194
16:15	0	2	4	48	79	41	10	1	0	0	0	0	0	185
16:30	0	0	10	61	79	26	7	0	0	0	0	0	0	183
16:45	0	1	9	48	92	29	7	1	0	0	0	0	0	187
	1	6	30	218	342	124	26	2	0	0	0	0	0	749
17:00	0	1	14	63	73	37	6	1	0	0	0	0	0	195
17:15	0	1	11	65	93	33	4	0	0	0	0	0	0	207
17:30	1	4	16	70	86	19	3	0	0	0	0	0	0	199
17:45	0	0	9	58	97	35	2	1	0	0	0	0	0	202
	1	6	50	256	349	124	15	2	0	0	0	0	0	803
18:00	0	0	11	66	71	16	2	1	0	0	0	0	0	167
18:15	0	0	11	49	80	20	4	2	0	0	0	0	0	166
18:30	0	0	3	44	72	25	2	1	0	0	0	0	0	147
18:45	0	0	5	49	60	21	5	0	0	0	0	0	0	140
	0	0	30	208	283	82	13	4	0	0	0	0	0	620
19:00	0	0	2	41	58	12	4	1	1	0	0	0	0	119
19:15	0	1	2	33	59	19	7	0	0	0	0	0	0	121
19:30	0	0	5	34	35	23	3	0	0	0	0	0	0	100
19:45	0	0	3	11	46	24	4	2	0	0	0	0	0	90
	0	1	12	119	198	78	18	3	1	0	0	0	0	430
20:00	0	1	5	38	44	8	3	0	0	0	0	0	0	99
20:15	0	1	9	38	19	2	0	0	0	0	0	0	0	69
20:30	0	0	1	16	25	18	0	0	0	0	0	0	0	60
20:45	1	0	3	28	35	13	1	0	0	0	0	0	0	81
	1	2	18	120	123	41	4	0	0	0	0	0	0	309
21:00	0	0	4	19	25	9	1	0	0	0	0	0	0	58
21:15	0	0	3	10	36	12	0	0	0	0	0	0	0	61
21:30	0	0	0	10	23	10	4	0	0	0	0	0	0	47
21:45	0	0	3	9	32	9	1	0	0	0	0	0	0	54
	0	0	10	48	116	40	6	0	0	0	0	0	0	220
22:00	0	0	5	15	15	5	1	1	0	0	0	0	0	42
22:15	0	0	0	14	16	2	2	0	0	0	0	0	0	34
22:30	0	0	1	12	19	7	1	1	0	0	0	0	0	41
22:45	1	0	0	12	10	5	0	0	0	0	0	0	0	28
	1	0	6	53	60	19	4	2	0	0	0	0	0	145
23:00	0	0	2	5	12	4	3	0	0	0	0	0	0	26
23:15	0	0	0	8	10	1	0	0	0	0	0	0	0	19
23:30	0	0	0	5	5	2	0	0	0	0	0	0	0	12
23:45	0	0	1	6	2	2	0	1	0	0	0	0	0	12
	0	0	3	24	29	9	3	1	0	0	0	0	0	69
Total	10	24	284	2348	4297	1984	328	55	3	2	2	0	0	9337

Percentile 15th 50th 85th 95th
Speed 28.2 32.1 36.5 39.4
Mean Speed (Average) 32.4
10 MPH Pace Speed 26-35



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd north of West
Memorial Park Dr
Start Date: 1/13/2021

Number in Pace	6579
Percent in Pace	70.5%
Number > 35 MPH	2374
Percent > 35 MPH	25.4%



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd north of West
Memorial Park Dr
Start Date: 1/13/2021

Direction: Southbound

1/13/2021	0 - 15	> 15 -	> 20 -	> 25 -	> 30 -	> 35 -	> 40 -	> 45 -	> 50 -	> 55 -	> 60 -	> 65 -	> 70	Total
Time	MPH	20 MPH	25 MPH	30 MPH	35 MPH	40 MPH	45 MPH	50 MPH	55 MPH	60 MPH	65 MPH	70 MPH	MPH	
0:00	0	0	0	4	3	1	1	0	0	0	0	0	0	9
0:15	0	1	1	3	2	0	0	0	0	0	0	0	0	7
0:30	0	0	0	2	4	1	0	0	0	0	0	0	0	7
0:45	0	0	0	1	3	1	1	0	0	0	0	0	0	6
1:00	0	1	1	10	12	3	2	0	0	0	0	0	0	29
1:15	0	0	0	4	2	0	0	0	0	0	0	0	0	6
1:30	0	0	0	1	2	0	0	0	0	0	0	0	0	3
1:45	0	0	1	1	2	1	0	0	0	0	0	0	0	5
2:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
2:15	0	1	1	6	7	1	0	0	0	0	0	0	0	16
2:30	0	0	1	2	0	1	0	0	0	0	0	0	0	4
2:45	0	0	0	1	1	0	0	0	0	0	0	0	0	2
3:00	0	0	0	4	0	0	0	0	0	0	0	0	0	4
3:15	0	0	0	1	1	0	0	0	0	0	0	0	0	2
3:30	0	0	0	4	0	0	0	0	0	0	0	0	0	4
3:45	0	0	1	2	2	1	1	0	0	0	0	0	0	7
4:00	0	0	2	9	3	2	1	0	0	0	0	0	0	17
4:15	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30	0	0	0	3	1	2	0	0	0	0	0	0	0	6
4:45	0	0	1	3	5	0	0	0	0	0	0	0	0	9
5:00	1	0	0	3	4	0	1	0	0	0	0	0	0	9
5:15	1	0	1	9	10	3	1	0	0	0	0	0	0	25
5:30	0	0	0	1	2	0	0	0	0	0	0	0	0	3
5:45	0	0	1	4	1	0	0	0	0	0	0	0	0	6
6:00	0	0	1	7	8	1	0	0	0	0	0	0	0	17
6:15	0	0	2	15	6	0	0	0	0	0	0	0	0	23
6:30	0	0	4	27	17	1	0	0	0	0	0	0	0	49
6:45	0	0	0	11	19	4	0	1	0	0	0	0	0	35
7:00	0	0	2	13	18	3	1	0	0	0	0	0	0	37
7:15	0	0	1	24	28	5	0	0	0	0	0	0	0	58
7:30	0	0	6	26	31	2	0	0	0	0	0	0	0	65
7:45	0	0	9	74	96	14	1	1	0	0	0	0	0	195
8:00	0	0	3	32	42	5	0	0	0	0	0	0	0	82
8:15	0	0	5	33	37	7	2	0	0	0	0	0	0	84
8:30	0	7	11	58	50	5	1	0	0	0	0	0	0	132
8:45	0	0	9	63	43	3	0	0	0	0	0	0	0	118
9:00	0	7	28	186	172	20	3	0	0	0	0	0	0	416
9:15	17	9	16	81	43	4	0	0	0	0	0	0	0	170
9:30	10	13	40	117	42	7	1	0	0	0	0	0	0	230
9:45	6	9	31	131	68	4	0	0	0	0	0	0	0	249
10:00	13	22	21	104	52	5	1	0	0	0	0	0	0	218
10:15	46	53	108	433	205	20	2	0	0	0	0	0	0	867
10:30	10	19	25	67	57	9	0	0	0	0	0	0	0	187
10:45	1	7	28	108	39	4	1	0	0	0	0	0	0	188
11:00	9	8	12	64	89	26	0	0	0	0	0	0	0	208
11:15	10	14	28	66	48	8	2	1	0	0	0	0	0	177
11:30	30	48	93	305	233	47	3	1	0	0	0	0	0	760
11:45	5	5	10	61	73	13	0	0	0	0	0	0	0	167
12:00	1	9	25	72	45	5	1	0	0	0	0	0	0	158
12:15	5	9	28	72	62	3	1	1	0	0	0	0	0	181
12:30	2	4	18	31	72	12	1	0	0	0	0	0	0	140
12:45	13	27	81	236	252	33	3	1	0	0	0	0	0	646
13:00	1	10	17	48	49	16	0	0	0	0	0	0	0	141
13:15	7	13	21	41	33	7	1	0	0	0	0	0	0	123
13:30	2	7	8	64	61	11	2	0	0	0	0	0	0	155
13:45	7	7	20	45	39	13	0	0	0	0	0	0	0	131
14:00	17	37	66	198	182	47	3	0	0	0	0	0	0	550
14:15	2	10	14	41	57	18	1	1	0	0	0	0	0	144
14:30	10	9	18	45	62	18	0	0	0	0	0	0	0	162
14:45	10	13	16	40	50	16	2	1	0	1	0	0	0	149
15:00	11	6	22	49	68	25	0	0	0	1	1	0	0	182
15:15	33	38	70	175	237	77	3	2	0	1	1	0	0	637
15:30	6	9	22	45	49	14	0	0	0	0	0	0	0	145



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd north of West
Memorial Park Dr
Start Date: 1/13/2021

12:15	0	2	16	53	64	14	3	0	0	0	0	0	0	152
12:30	12	18	21	53	45	10	2	1	0	0	0	0	0	162
12:45	1	10	26	55	53	14	3	0	0	0	0	0	0	162
	19	39	85	206	211	52	8	1	0	0	0	0	0	621
13:00	7	13	16	39	55	24	1	0	0	0	0	0	0	155
13:15	1	13	27	57	44	20	2	0	0	0	0	0	0	164
13:30	0	5	19	52	62	10	2	1	0	0	0	0	0	151
13:45	2	7	23	60	68	13	1	0	0	0	0	0	0	174
	10	38	85	208	229	67	6	1	0	0	0	0	0	644
14:00	2	6	23	39	73	11	1	0	0	0	0	0	0	155
14:15	6	8	17	45	53	14	2	0	0	0	0	0	0	145
14:30	5	16	41	50	41	13	2	0	0	0	0	0	0	168
14:45	8	17	39	72	40	10	0	0	0	0	0	0	0	186
	21	47	120	206	207	48	5	0	0	0	0	0	0	654
15:00	22	25	26	57	55	13	0	0	0	0	0	0	0	198
15:15	4	16	34	63	57	19	4	1	0	0	0	0	0	198
15:30	6	15	38	73	70	10	1	0	1	0	0	0	0	214
15:45	15	12	33	62	49	8	4	0	1	0	0	1	1	186
	47	68	131	255	231	50	9	1	2	0	0	1	1	796
16:00	11	19	22	46	42	17	3	1	0	0	1	0	0	162
16:15	16	12	31	69	54	8	4	0	0	0	0	0	1	195
16:30	4	16	35	43	37	14	1	0	0	0	0	0	0	150
16:45	13	15	34	58	63	10	1	0	0	0	0	0	0	194
	44	62	122	216	196	49	9	1	0	0	1	0	1	701
17:00	25	37	38	66	20	5	3	0	0	0	0	0	0	194
17:15	15	23	34	73	51	10	0	1	0	0	0	0	0	207
17:30	13	14	35	56	48	9	1	0	0	0	0	0	0	176
17:45	12	12	31	68	50	6	1	1	0	0	0	0	0	181
	65	86	138	263	169	30	5	2	0	0	0	0	0	758
18:00	8	13	29	83	43	4	0	0	0	0	0	0	0	180
18:15	3	9	28	59	20	4	2	1	1	0	0	0	0	127
18:30	10	9	17	78	44	5	1	0	0	0	0	0	0	164
18:45	7	10	18	45	33	10	0	1	0	0	0	0	0	124
	28	41	92	265	140	23	3	2	1	0	0	0	0	595
19:00	2	10	27	35	28	4	1	0	0	0	0	0	0	107
19:15	0	5	21	23	33	5	0	0	0	0	0	0	0	87
19:30	3	9	17	26	26	3	1	0	0	0	0	0	0	85
19:45	1	5	14	23	27	6	0	0	0	0	0	0	0	76
	6	29	79	107	114	18	2	0	0	0	0	0	0	355
20:00	0	1	10	50	21	1	1	0	0	0	0	0	0	84
20:15	0	2	6	45	12	4	0	0	0	0	0	0	0	69
20:30	2	3	8	26	28	6	0	0	0	0	0	0	0	73
20:45	0	2	9	26	12	4	0	0	0	0	0	0	0	53
	2	8	33	147	73	15	1	0	0	0	0	0	0	279
21:00	1	1	8	18	14	1	0	0	0	0	0	0	0	43
21:15	2	1	3	17	8	1	0	0	0	0	0	0	0	32
21:30	0	0	1	15	14	1	1	1	0	0	0	0	0	33
21:45	0	0	2	6	13	3	0	0	0	0	0	0	0	24
	3	2	14	56	49	6	1	1	0	0	0	0	0	132
22:00	0	0	4	23	3	3	0	0	0	0	0	0	0	33
22:15	0	1	7	19	6	0	1	0	0	0	0	0	0	34
22:30	0	0	2	8	9	1	0	0	0	0	0	0	0	20
22:45	0	0	6	9	14	3	0	0	0	0	0	0	0	32
	0	1	19	59	32	7	1	0	0	0	0	0	0	119
23:00	0	0	3	12	10	1	0	0	0	0	0	0	0	26
23:15	0	0	1	6	8	3	0	0	0	0	0	0	0	18
23:30	0	0	1	3	4	0	0	0	0	0	0	0	0	8
23:45	0	0	1	4	3	0	0	0	0	0	0	0	0	8
	0	0	6	25	25	4	0	0	0	0	0	0	0	60
Total	385	633	1388	3681	3102	637	72	14	3	1	2	1	2	9921

Percentile 15th 50th 85th 95th
Speed 22 28.7 33 35.9
Mean Speed (Average) 27.8
10 MPH Pace Speed 25-34



TRAFFIC DATA REPORT
SPEED STUDY

Location: Bingle Rd north of West
Memorial Park Dr
Start Date: 1/13/2021

Number in Pace	6749
Percent in Pace	68.0%
Number > 35 MPH	732
Percent > 35 MPH	7.4%

EBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4:30 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807512, Location: 29.78372, -95.498771



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					EBFR IH 10 Westbound					Bingle Rd Northbound					EBFR IH 10 Eastbound					Int			
	R	T	L	U	App Ped*	R	T	L	U	App Ped*	R	T	L	U	App Ped*	R	T	L	U	App Ped*				
2021-01-13 7:00AM	0	652	394	0	1046	0	0	0	134	134	1	356	556	0	0	912	0	152	178	413	122	865	0	2957
8:00AM	0	693	317	0	1010	0	0	0	219	219	4	400	559	0	0	959	0	226	248	413	161	1048	0	3236
4:00PM	0	319	156	0	475	0	0	0	132	132	0	270	414	0	0	684	0	99	112	168	148	527	0	1818
5:00PM	0	630	305	0	935	0	0	0	224	224	0	553	952	0	0	1505	0	191	243	407	268	1109	0	3773
Total	0	2294	1172	0	3466	0	0	0	709	709	5	1579	2481	0	0	4060	0	668	781	1401	699	3549	0	11784
% Approach	0%	66.2%	33.8%	0%	-	0%	0%	0%	100%	-	-	38.9%	61.1%	0%	0%	-	-	18.8%	22.0%	39.5%	19.7%	-	-	-
% Total	0%	19.5%	9.9%	0%	29.4%	0%	0%	0%	6.0%	6.0%	-	13.4%	21.1%	0%	0%	34.5%	-	5.7%	6.6%	11.9%	5.9%	30.1%	-	-
Lights	0	2249	1158	0	3407	0	0	0	702	702	-	1557	2444	0	0	4001	-	653	764	1385	696	3498	-	11608
% Lights	0%	98.0%	98.8%	0%	98.3%	0%	0%	0%	99.0%	99.0%	-	98.6%	98.5%	0%	0%	98.5%	-	97.8%	97.8%	98.9%	99.6%	98.6%	-	98.5%
Articulated Trucks	0	11	0	0	11	0	0	0	4	4	-	3	3	0	0	6	-	1	1	2	0	4	-	25
% Articulated Trucks	0%	0.5%	0%	0%	0.3%	0%	0%	0%	0.6%	0.6%	-	0.2%	0.1%	0%	0%	0.1%	-	0.1%	0.1%	0.1%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	0	34	14	0	48	0	0	0	3	3	-	19	34	0	0	53	-	14	16	14	3	47	-	151
% Buses and Single-Unit Trucks	0%	1.5%	1.2%	0%	1.4%	0%	0%	0%	0.4%	0.4%	-	1.2%	1.4%	0%	0%	1.3%	-	2.1%	2.0%	1.0%	0.4%	1.3%	-	1.3%
Pedestrians	-	-	-	-	0	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	80.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	20.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

EBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4:30 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

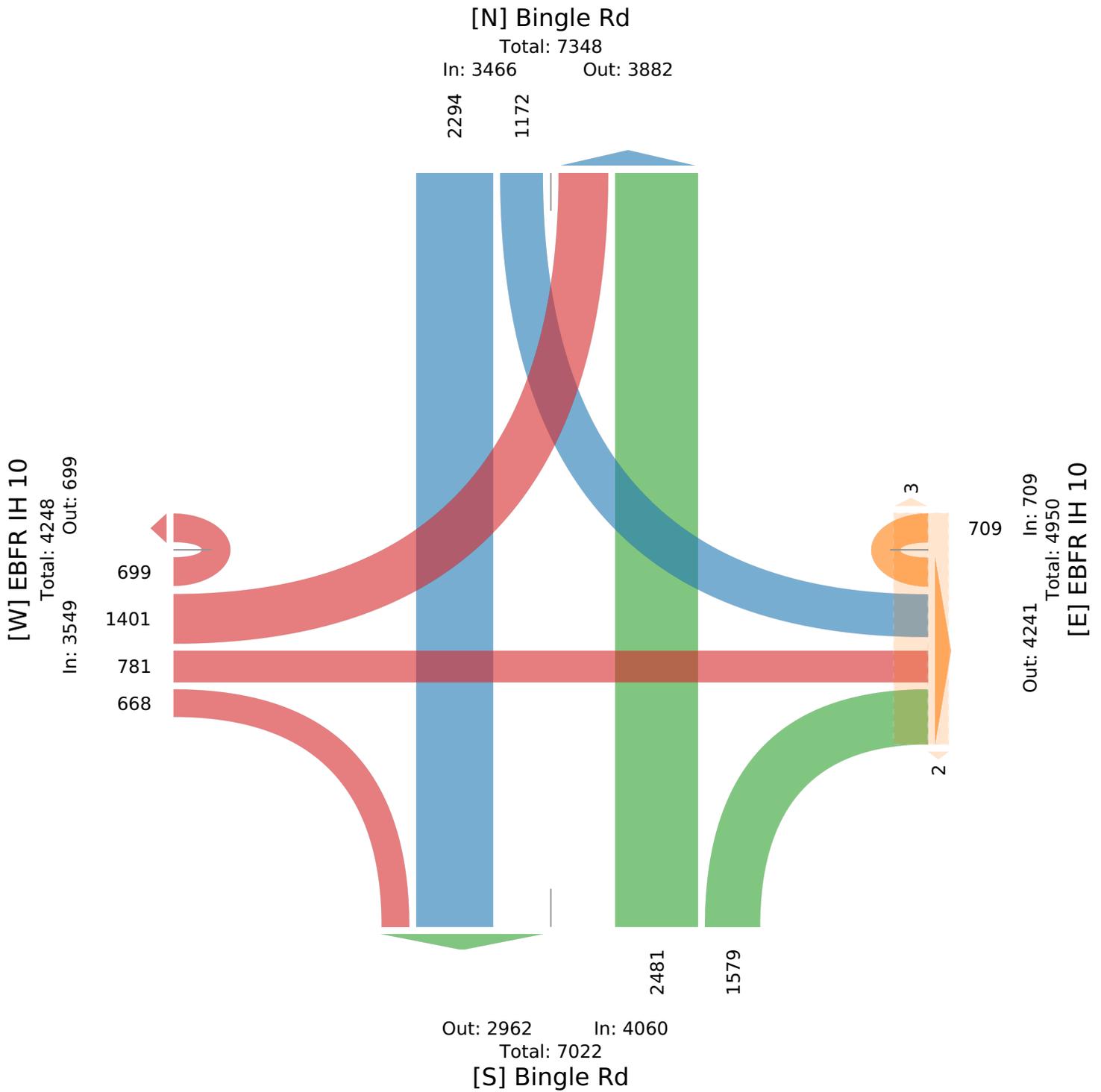
All Movements

ID: 807512, Location: 29.78372, -95.498771



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



EBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807512, Location: 29.78372, -95.498771



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound						EBFR IH 10 Westbound						Bingle Rd Northbound						EBFR IH 10 Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 7:30AM	0	195	108	0	303	0	0	0	0	38	38	0	116	157	0	0	273	0	35	53	119	49	256	0	870
7:45AM	0	163	95	0	258	0	0	0	0	45	45	1	111	180	0	0	291	0	46	74	120	51	291	0	885
8:00AM	0	158	88	0	246	0	0	0	0	52	52	1	126	185	0	0	311	0	45	56	80	39	220	0	829
8:15AM	0	174	86	0	260	0	0	0	0	67	67	0	95	125	0	0	220	0	53	68	126	34	281	0	828
Total	0	690	377	0	1067	0	0	0	0	202	202	2	448	647	0	0	1095	0	179	251	445	173	1048	0	3412
% Approach	0%	64.7%	35.3%	0%	-	-	0%	0%	0%	100%	-	-	40.9%	59.1%	0%	0%	-	-	17.1%	24.0%	42.5%	16.5%	-	-	-
% Total	0%	20.2%	11.0%	0%	31.3%	-	0%	0%	0%	5.9%	5.9%	-	13.1%	19.0%	0%	0%	32.1%	-	5.2%	7.4%	13.0%	5.1%	30.7%	-	-
PHF	-	0.885	0.873	-	0.880	-	-	-	-	0.754	0.754	-	0.889	0.874	-	-	0.880	-	0.844	0.848	0.883	0.848	0.900	-	0.964
Lights	0	673	374	0	1047	-	0	0	0	197	197	-	444	637	0	0	1081	-	172	243	440	172	1027	-	3352
% Lights	0%	97.5%	99.2%	0%	98.1%	-	0%	0%	0%	97.5%	97.5%	-	99.1%	98.5%	0%	0%	98.7%	-	96.1%	96.8%	98.9%	99.4%	98.0%	-	98.2%
Articulated Trucks	0	5	0	0	5	-	0	0	0	3	3	-	2	1	0	0	3	-	1	1	0	0	2	-	13
% Articulated Trucks	0%	0.7%	0%	0%	0.5%	-	0%	0%	0%	1.5%	1.5%	-	0.4%	0.2%	0%	0%	0.3%	-	0.6%	0.4%	0%	0%	0.2%	-	0.4%
Buses and Single-Unit Trucks	0	12	3	0	15	-	0	0	0	2	2	-	2	9	0	0	11	-	6	7	5	1	19	-	47
% Buses and Single-Unit Trucks	0%	1.7%	0.8%	0%	1.4%	-	0%	0%	0%	1.0%	1.0%	-	0.4%	1.4%	0%	0%	1.0%	-	3.4%	2.8%	1.1%	0.6%	1.8%	-	1.4%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

EBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

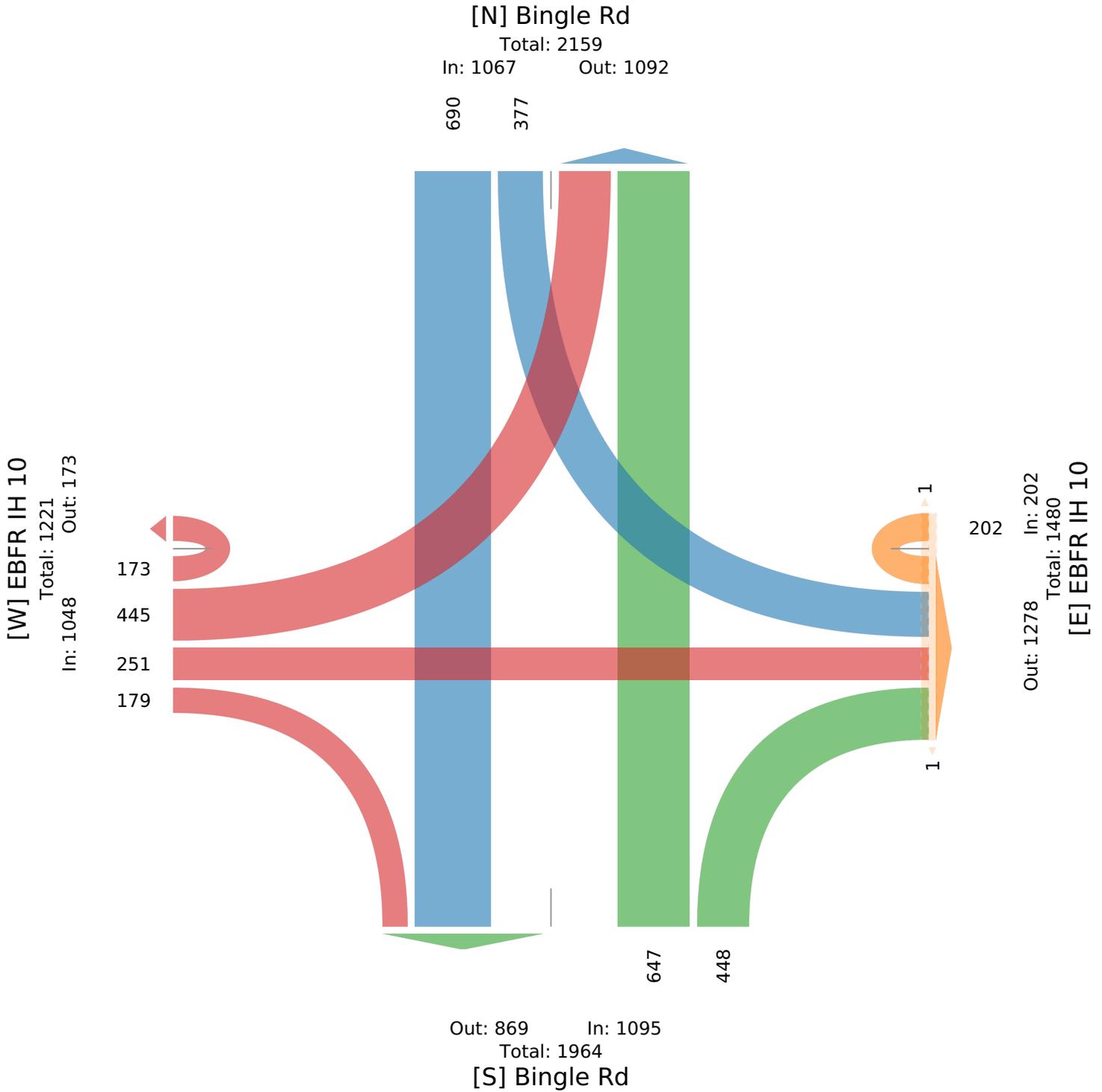
All Movements

ID: 807512, Location: 29.78372, -95.498771



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



EBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807512, Location: 29.78372, -95.498771



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound						EBFR IH 10 Westbound						Bingle Rd Northbound						EBFR IH 10 Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 4:45PM	0	167	91	0	258	0	0	0	0	76	76	0	132	201	0	0	333	0	55	55	90	87	287	0	954
5:00PM	0	161	70	0	231	0	0	0	0	84	84	0	155	224	0	0	379	0	46	80	98	78	302	0	996
5:15PM	0	186	101	0	287	0	0	0	0	56	56	0	140	258	0	0	398	0	56	54	88	59	257	0	998
5:30PM	0	150	70	0	220	0	0	0	0	42	42	0	138	256	0	0	394	0	47	63	116	60	286	0	942
Total	0	664	332	0	996	0	0	0	0	258	258	0	565	939	0	0	1504	0	204	252	392	284	1132	0	3890
% Approach	0%	66.7%	33.3%	0%	-	-	0%	0%	0%	100%	-	-	37.6%	62.4%	0%	0%	-	-	18.0%	22.3%	34.6%	25.1%	-	-	-
% Total	0%	17.1%	8.5%	0%	25.6%	-	0%	0%	0%	6.6%	6.6%	-	14.5%	24.1%	0%	0%	38.7%	-	5.2%	6.5%	10.1%	7.3%	29.1%	-	-
PHF	-	0.892	0.822	-	0.868	-	-	-	-	0.768	0.768	-	0.911	0.910	-	-	0.945	-	0.911	0.788	0.845	0.816	0.937	-	0.974
Lights	0	657	331	0	988	-	0	0	0	257	257	-	557	931	0	0	1488	-	203	249	389	284	1125	-	3858
% Lights	0%	98.9%	99.7%	0%	99.2%	-	0%	0%	0%	99.6%	99.6%	-	98.6%	99.1%	0%	0%	98.9%	-	99.5%	98.8%	99.2%	100%	99.4%	-	99.2%
Articulated Trucks	0	1	0	0	1	-	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	2
% Articulated Trucks	0%	0.2%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	6	1	0	7	-	0	0	0	1	1	-	8	7	0	0	15	-	1	3	3	0	7	-	30
% Buses and Single-Unit Trucks	0%	0.9%	0.3%	0%	0.7%	-	0%	0%	0%	0.4%	0.4%	-	1.4%	0.7%	0%	0%	1.0%	-	0.5%	1.2%	0.8%	0%	0.6%	-	0.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

EBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807512, Location: 29.78372, -95.498771



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Bingle Rd

Total: 2327

In: 996 Out: 1331

664

332

[W] EBFR IH 10
Total: 1416
In: 1132 Out: 284

284

392

252

204

258

[E] EBFR IH 10
In: 258
Total: 1665
Out: 1407

939

565

Out: 868 In: 1504

Total: 2372

[S] Bingle Rd

WBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807513, Location: 29.784906, -95.49892



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound						WBFR IH 10 Westbound						Bingle Rd Northbound						WBFR IH 10 Eastbound						Int
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 7:00AM	488	592	0	0	1080	0	262	260	457	134	1113	1	0	542	431	0	973	0	0	0	0	121	121	0	3287
8:00AM	404	512	0	0	916	0	265	275	460	217	1217	4	0	553	435	0	988	0	0	0	0	160	160	0	3281
4:00PM	484	473	0	0	957	0	358	556	456	262	1632	1	0	594	604	0	1198	0	0	0	0	334	334	0	4121
5:00PM	489	512	0	0	1001	1	370	595	413	220	1598	0	0	671	700	0	1371	0	0	0	0	291	291	0	4261
Total	1865	2089	0	0	3954	1	1255	1686	1786	833	5560	6	0	2360	2170	0	4530	0	0	0	0	906	906	0	14950
% Approach	47.2%	52.8%	0%	0%	-	-	22.6%	30.3%	32.1%	15.0%	-	-	0%	52.1%	47.9%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	12.5%	14.0%	0%	0%	26.4%	-	8.4%	11.3%	11.9%	5.6%	37.2%	-	0%	15.8%	14.5%	0%	30.3%	-	0%	0%	0%	6.1%	6.1%	-	-
Lights	1821	2065	0	0	3886	-	1239	1663	1754	824	5480	-	0	2335	2130	0	4465	-	0	0	0	897	897	-	14728
% Lights	97.6%	98.9%	0%	0%	98.3%	-	98.7%	98.6%	98.2%	98.9%	98.6%	-	0%	98.9%	98.2%	0%	98.6%	-	0%	0%	0%	99.0%	99.0%	-	98.5%
Articulated Trucks	6	1	0	0	7	-	3	1	11	4	19	-	0	3	4	0	7	-	0	0	0	1	1	-	34
% Articulated Trucks	0.3%	0%	0%	0%	0.2%	-	0.2%	0.1%	0.6%	0.5%	0.3%	-	0%	0.1%	0.2%	0%	0.2%	-	0%	0%	0%	0.1%	0.1%	-	0.2%
Buses and Single-Unit Trucks	38	23	0	0	61	-	13	22	21	5	61	-	0	22	36	0	58	-	0	0	0	8	8	-	188
% Buses and Single-Unit Trucks	2.0%	1.1%	0%	0%	1.5%	-	1.0%	1.3%	1.2%	0.6%	1.1%	-	0%	0.9%	1.7%	0%	1.3%	-	0%	0%	0%	0.9%	0.9%	-	1.3%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	83.3%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	16.7%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

WBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

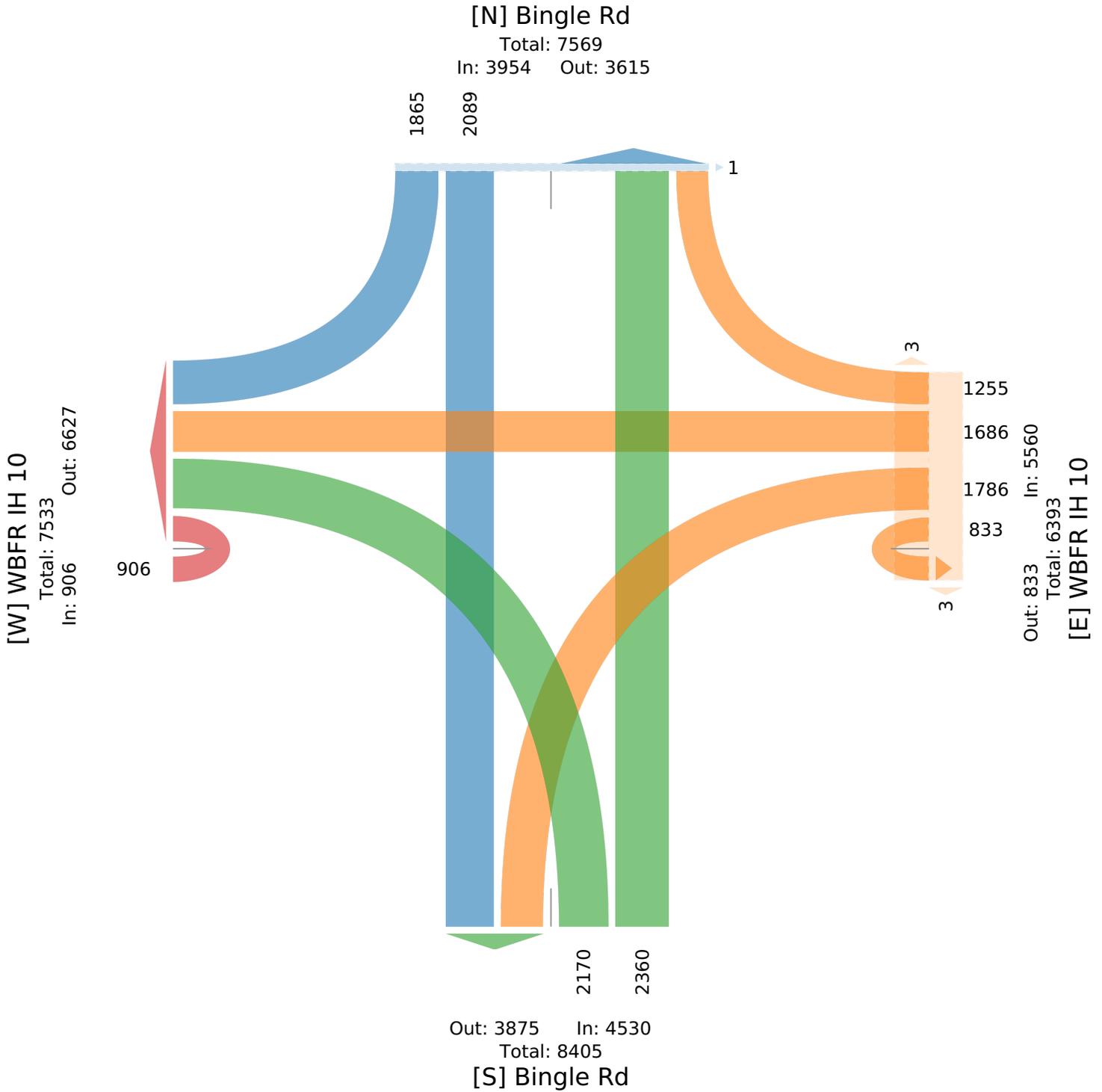
All Movements

ID: 807513, Location: 29.784906, -95.49892



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



WBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807513, Location: 29.784906, -95.49892



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					WBFR IH 10 Westbound					Bingle Rd Northbound					WBFR IH 10 Eastbound									
Time	R	T	L	U	App Ped*	R	T	L	U	App Ped*	R	T	L	U	App Ped*	R	T	L	U	App Ped*	Int				
2021-01-13 7:30AM	135	167	0	0	302	0	66	56	127	37	286	0	0	155	130	0	285	0	0	0	47	47	0	920	
7:45AM	129	141	0	0	270	0	76	89	128	46	339	1	0	155	136	0	291	0	0	0	52	52	0	952	
8:00AM	85	128	0	0	213	0	54	62	100	50	266	1	0	131	147	0	278	0	0	0	38	38	0	795	
8:15AM	129	136	0	0	265	0	75	72	119	66	332	0	0	148	94	0	242	0	0	0	33	33	0	872	
Total	478	572	0	0	1050	0	271	279	474	199	1223	2	0	589	507	0	1096	0	0	0	170	170	0	3539	
% Approach	45.5%	54.5%	0%	0%	-	-	22.2%	22.8%	38.8%	16.3%	-	-	0%	53.7%	46.3%	0%	-	-	0%	0%	100%	-	-	-	
% Total	13.5%	16.2%	0%	0%	29.7%	-	7.7%	7.9%	13.4%	5.6%	34.6%	-	0%	16.6%	14.3%	0%	31.0%	-	0%	0%	4.8%	4.8%	-	-	
PHF	0.885	0.856	-	-	0.869	-	0.891	0.784	0.926	0.754	0.902	-	-	0.950	0.862	-	0.942	-	-	-	0.817	0.817	-	0.929	
Lights	461	567	0	0	1028	-	268	269	458	194	1189	-	0	582	499	0	1081	-	0	0	168	168	-	3466	
% Lights	96.4%	99.1%	0%	0%	97.9%	-	98.9%	96.4%	96.6%	97.5%	97.2%	-	0%	98.8%	98.4%	0%	98.6%	-	0%	0%	98.8%	98.8%	-	97.9%	
Articulated Trucks	2	0	0	0	2	-	1	0	5	3	9	-	0	0	1	0	1	-	0	0	0	0	0	-	12
% Articulated Trucks	0.4%	0%	0%	0%	0.2%	-	0.4%	0%	1.1%	1.5%	0.7%	-	0%	0%	0.2%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0.3%
Buses and Single-Unit Trucks	15	5	0	0	20	-	2	10	11	2	25	-	0	7	7	0	14	-	0	0	2	2	-	61	
% Buses and Single-Unit Trucks	3.1%	0.9%	0%	0%	1.9%	-	0.7%	3.6%	2.3%	1.0%	2.0%	-	0%	1.2%	1.4%	0%	1.3%	-	0%	0%	1.2%	1.2%	-	1.7%	
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

WBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807513, Location: 29.784906, -95.49892



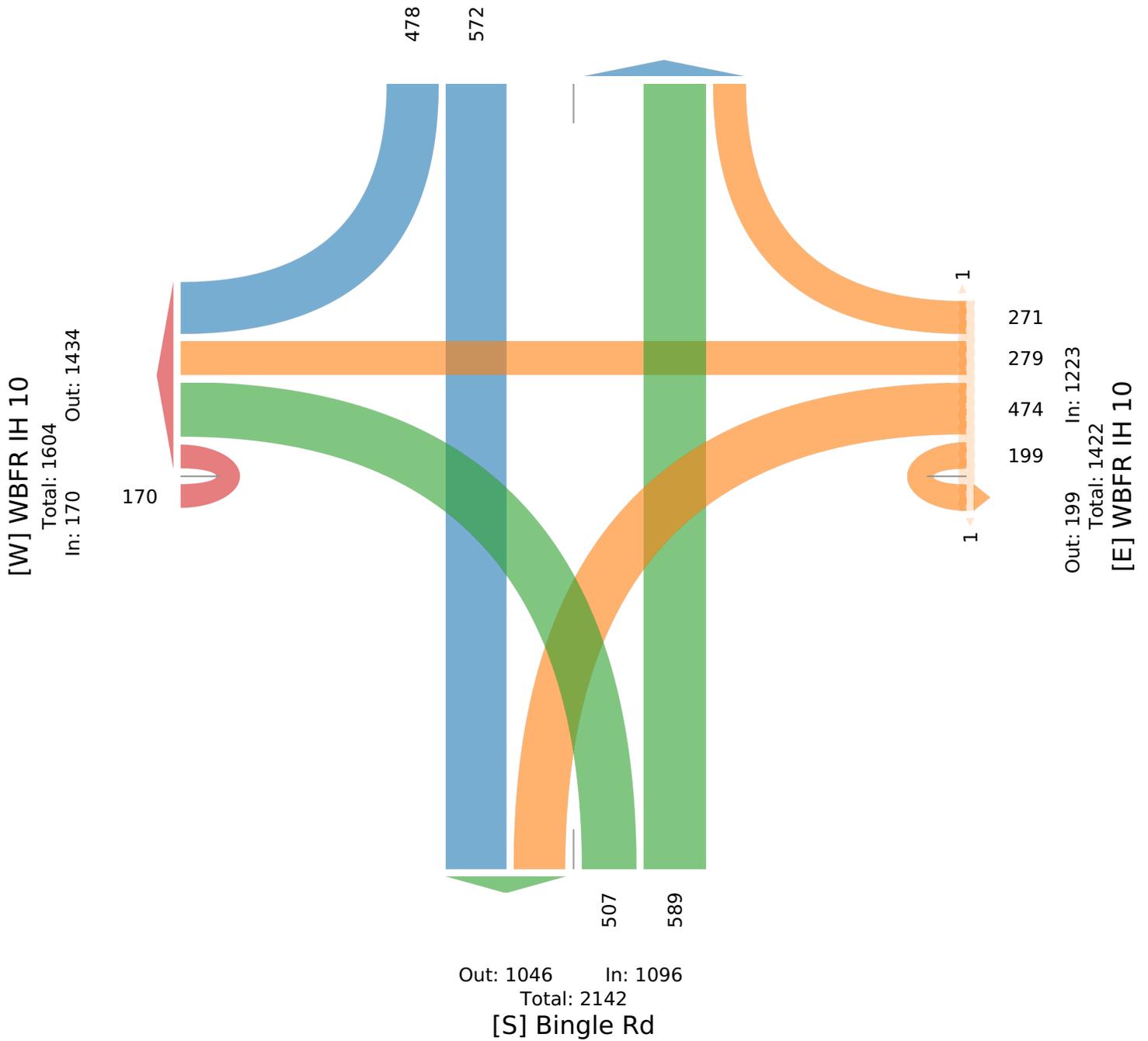
Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Bingle Rd

Total: 1910

In: 1050 Out: 860



WBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807513, Location: 29.784906, -95.49892



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound						WBFR IH 10 Westbound						Bingle Rd Northbound						WBFR IH 10 Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 4:45PM	140	116	0	0	256	0	88	159	125	77	449	0	0	146	130	0	276	0	0	0	0	88	88	0	1069
5:00PM	141	136	0	0	277	0	92	145	109	82	428	0	0	173	175	0	348	0	0	0	0	86	86	0	1139
5:15PM	132	144	0	0	276	0	92	189	122	56	459	0	0	154	169	0	323	0	0	0	0	67	67	0	1125
5:30PM	106	131	0	0	237	1	89	123	92	42	346	0	0	187	204	0	391	0	0	0	0	63	63	0	1037
Total	519	527	0	0	1046	1	361	616	448	257	1682	0	0	660	678	0	1338	0	0	0	0	304	304	0	4370
% Approach	49.6%	50.4%	0%	0%	-	-	21.5%	36.6%	26.6%	15.3%	-	-	0%	49.3%	50.7%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	11.9%	12.1%	0%	0%	23.9%	-	8.3%	14.1%	10.3%	5.9%	38.5%	-	0%	15.1%	15.5%	0%	30.6%	-	0%	0%	0%	7.0%	7.0%	-	-
PHF	0.920	0.915	-	-	0.944	-	0.981	0.815	0.896	0.784	0.916	-	-	0.882	0.831	-	0.855	-	-	-	-	0.864	0.864	-	0.959
Lights	515	523	0	0	1038	-	359	613	446	256	1674	-	0	657	674	0	1331	-	0	0	0	303	303	-	4346
% Lights	99.2%	99.2%	0%	0%	99.2%	-	99.4%	99.5%	99.6%	99.6%	99.5%	-	0%	99.5%	99.4%	0%	99.5%	-	0%	0%	0%	99.7%	99.7%	-	99.5%
Articulated Trucks	2	0	0	0	2	-	0	0	1	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	3
% Articulated Trucks	0.4%	0%	0%	0%	0.2%	-	0%	0%	0.2%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	2	4	0	0	6	-	2	3	1	1	7	-	0	3	4	0	7	-	0	0	0	1	1	-	21
% Buses and Single-Unit Trucks	0.4%	0.8%	0%	0%	0.6%	-	0.6%	0.5%	0.2%	0.4%	0.4%	-	0%	0.5%	0.6%	0%	0.5%	-	0%	0%	0%	0.3%	0.3%	-	0.5%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

WBFR IH 10 at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807513, Location: 29.784906, -95.49892



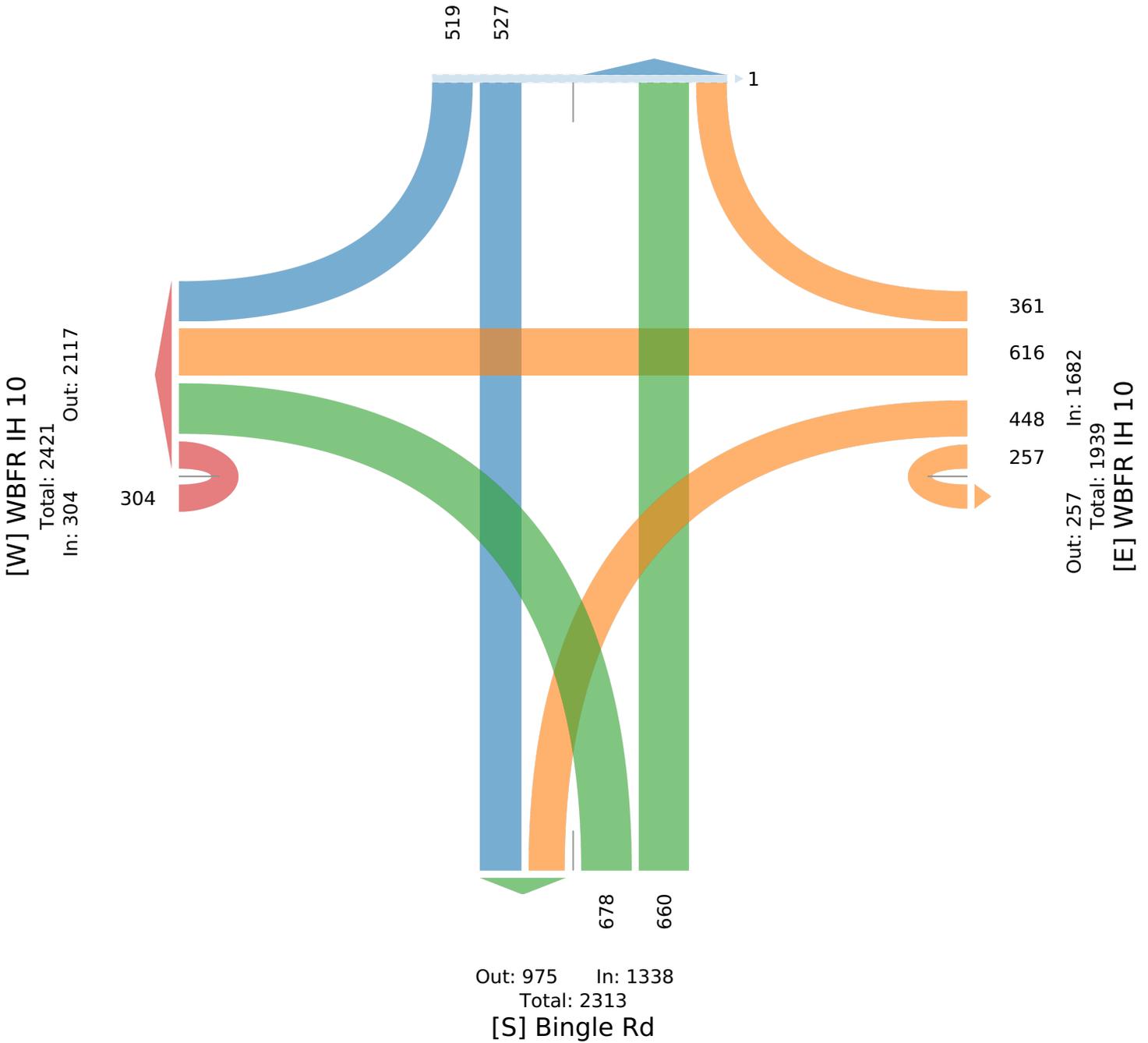
Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Bingle Rd

Total: 2067

In: 1046 Out: 1021



W Memorial Park Dr at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807511, Location: 29.786302, -95.500145



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					W Memorial Park Dr Westbound					Bingle Rd Northbound					
Time	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	Int
2021-01-13 7:00AM	1053	19	0	1072	0	7	36	0	43	0	103	688	1	792	0	1907
8:00AM	898	28	1	927	0	14	41	0	55	4	141	666	0	807	0	1789
4:00PM	845	22	0	867	0	44	149	0	193	2	72	887	0	959	0	2019
5:00PM	868	17	0	885	0	47	130	0	177	4	63	967	1	1031	0	2093
Total	3664	86	1	3751	0	112	356	0	468	10	379	3208	2	3589	0	7808
% Approach	97.7%	2.3%	0%	-	-	23.9%	76.1%	0%	-	-	10.6%	89.4%	0.1%	-	-	-
% Total	46.9%	1.1%	0%	48.0%	-	1.4%	4.6%	0%	6.0%	-	4.9%	41.1%	0%	46.0%	-	-
Lights	3591	85	1	3677	-	111	356	0	467	-	378	3167	2	3547	-	7691
% Lights	98.0%	98.8%	100%	98.0%	-	99.1%	100%	0%	99.8%	-	99.7%	98.7%	100%	98.8%	-	98.5%
Articulated Trucks	7	0	0	7	-	0	0	0	0	-	0	5	0	5	-	12
% Articulated Trucks	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	-	0%	0.2%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	66	1	0	67	-	1	0	0	1	-	1	36	0	37	-	105
% Buses and Single-Unit Trucks	1.8%	1.2%	0%	1.8%	-	0.9%	0%	0%	0.2%	-	0.3%	1.1%	0%	1.0%	-	1.3%
Pedestrians	-	-	-	-	0	-	-	-	-	8	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	80.0%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	20.0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

W Memorial Park Dr at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

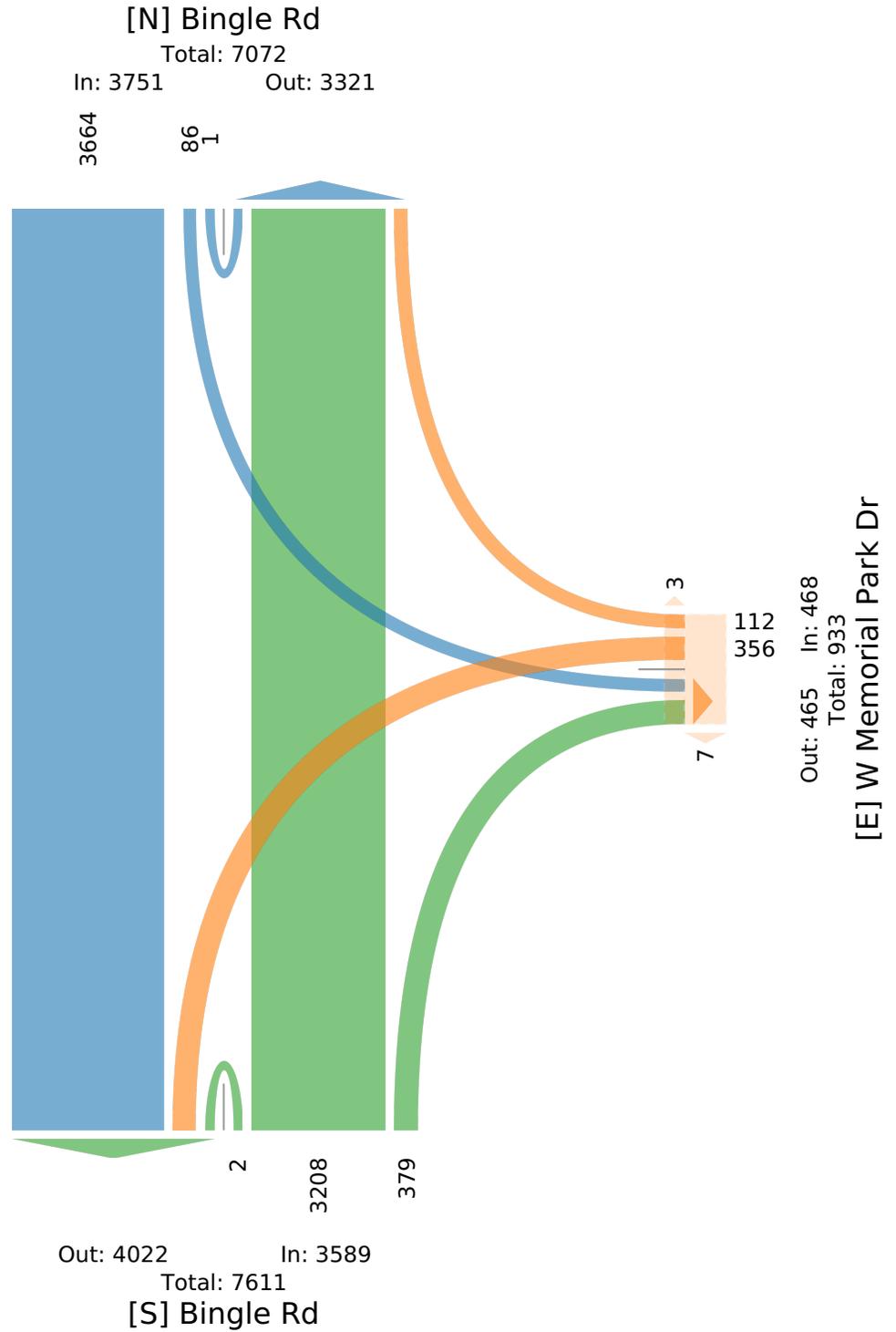
All Movements

ID: 807511, Location: 29.786302, -95.500145



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



W Memorial Park Dr at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807511, Location: 29.786302, -95.500145



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave., Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					W Memorial Park Dr Westbound					Bingle Rd Northbound					Int
	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	
2021-01-13 7:30AM	307	5	0	312	0	0	4	0	4	0	22	187	0	209	0	525
7:45AM	259	4	0	263	0	2	11	0	13	0	42	196	1	239	0	515
8:00AM	205	8	1	214	0	3	13	0	16	0	24	145	0	169	0	399
8:15AM	242	6	0	248	0	5	14	0	19	0	49	185	0	234	0	501
Total	1013	23	1	1037	0	10	42	0	52	0	137	713	1	851	0	1940
% Approach	97.7%	2.2%	0.1%	-	-	19.2%	80.8%	0%	-	-	16.1%	83.8%	0.1%	-	-	-
% Total	52.2%	1.2%	0.1%	53.5%	-	0.5%	2.2%	0%	2.7%	-	7.1%	36.8%	0.1%	43.9%	-	-
PHF	0.825	0.719	0.250	0.831	-	0.500	0.750	-	0.684	-	0.699	0.909	0.250	0.890	-	0.924
Lights	992	23	1	1016	-	10	42	0	52	-	137	702	1	840	-	1908
% Lights	97.9%	100%	100%	98.0%	-	100%	100%	0%	100%	-	100%	98.5%	100%	98.7%	-	98.4%
Articulated Trucks	1	0	0	1	-	0	0	0	0	-	0	1	0	1	-	2
% Articulated Trucks	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	-	0%	0.1%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	20	0	0	20	-	0	0	0	0	-	0	10	0	10	-	30
% Buses and Single-Unit Trucks	2.0%	0%	0%	1.9%	-	0%	0%	0%	0%	-	0%	1.4%	0%	1.2%	-	1.5%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

W Memorial Park Dr at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

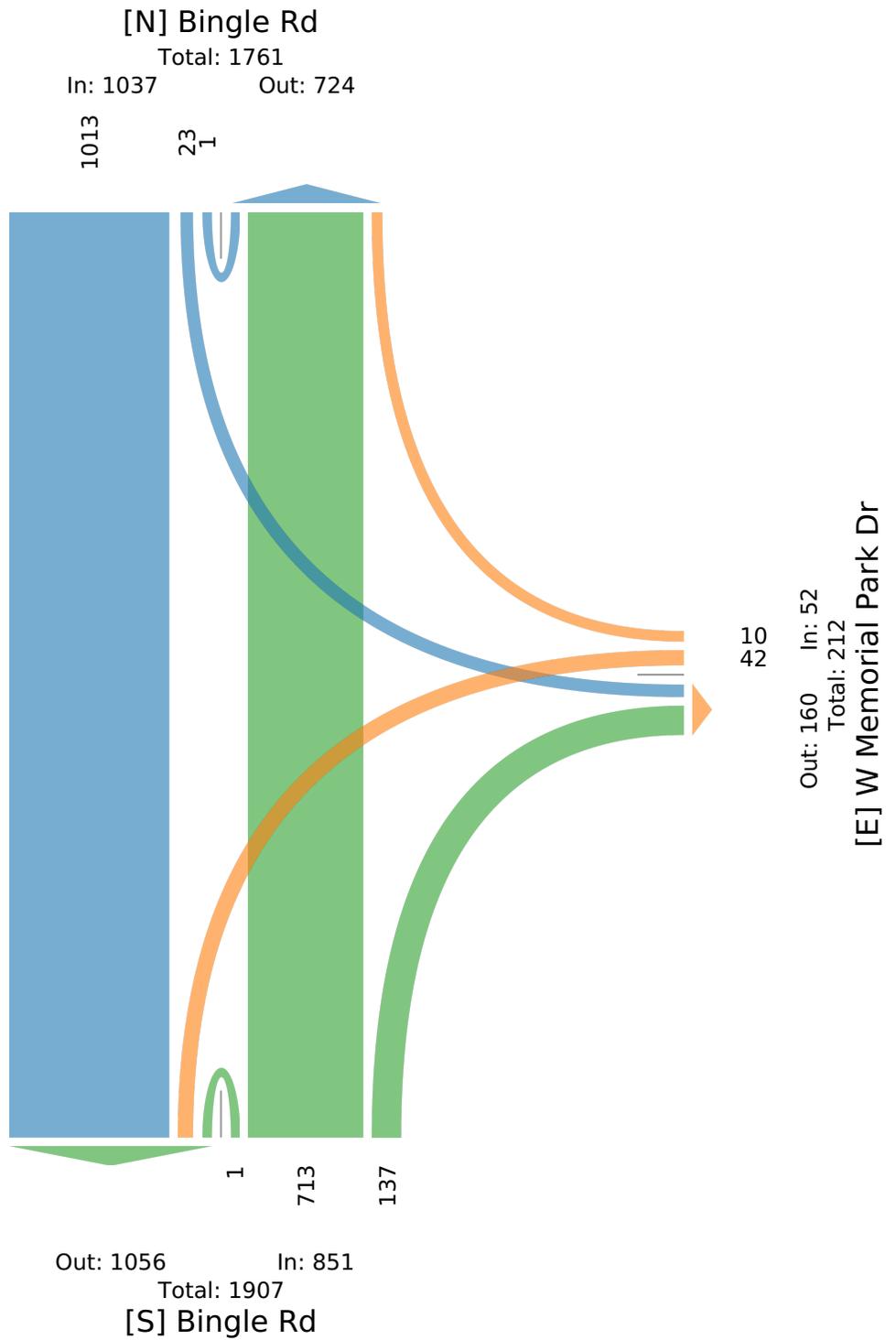
All Movements

ID: 807511, Location: 29.786302, -95.500145



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



W Memorial Park Dr at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807511, Location: 29.786302, -95.500145



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					W Memorial Park Dr Westbound					Bingle Rd Northbound					Int
	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	
2021-01-13 4:45PM	224	6	0	230	0	13	42	0	55	0	19	226	0	245	0	530
5:00PM	218	4	0	222	0	16	56	0	72	1	13	217	0	230	0	524
5:15PM	248	4	0	252	0	15	27	0	42	2	13	252	0	265	0	559
5:30PM	209	4	0	213	0	6	26	0	32	1	18	253	1	272	0	517
Total	899	18	0	917	0	50	151	0	201	4	63	948	1	1012	0	2130
% Approach	98.0%	2.0%	0%	-	-	24.9%	75.1%	0%	-	-	6.2%	93.7%	0.1%	-	-	-
% Total	42.2%	0.8%	0%	43.1%	-	2.3%	7.1%	0%	9.4%	-	3.0%	44.5%	0%	47.5%	-	-
PHF	0.906	0.750	-	0.910	-	0.781	0.674	-	0.698	-	0.829	0.937	0.250	0.930	-	0.953
Lights	889	18	0	907	-	49	151	0	200	-	62	944	1	1007	-	2114
% Lights	98.9%	100%	0%	98.9%	-	98.0%	100%	0%	99.5%	-	98.4%	99.6%	100%	99.5%	-	99.2%
Articulated Trucks	3	0	0	3	-	0	0	0	0	-	0	0	0	0	-	3
% Articulated Trucks	0.3%	0%	0%	0.3%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	7	0	0	7	-	1	0	0	1	-	1	4	0	5	-	13
% Buses and Single-Unit Trucks	0.8%	0%	0%	0.8%	-	2.0%	0%	0%	0.5%	-	1.6%	0.4%	0%	0.5%	-	0.6%
Pedestrians	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	50.0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

W Memorial Park Dr at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

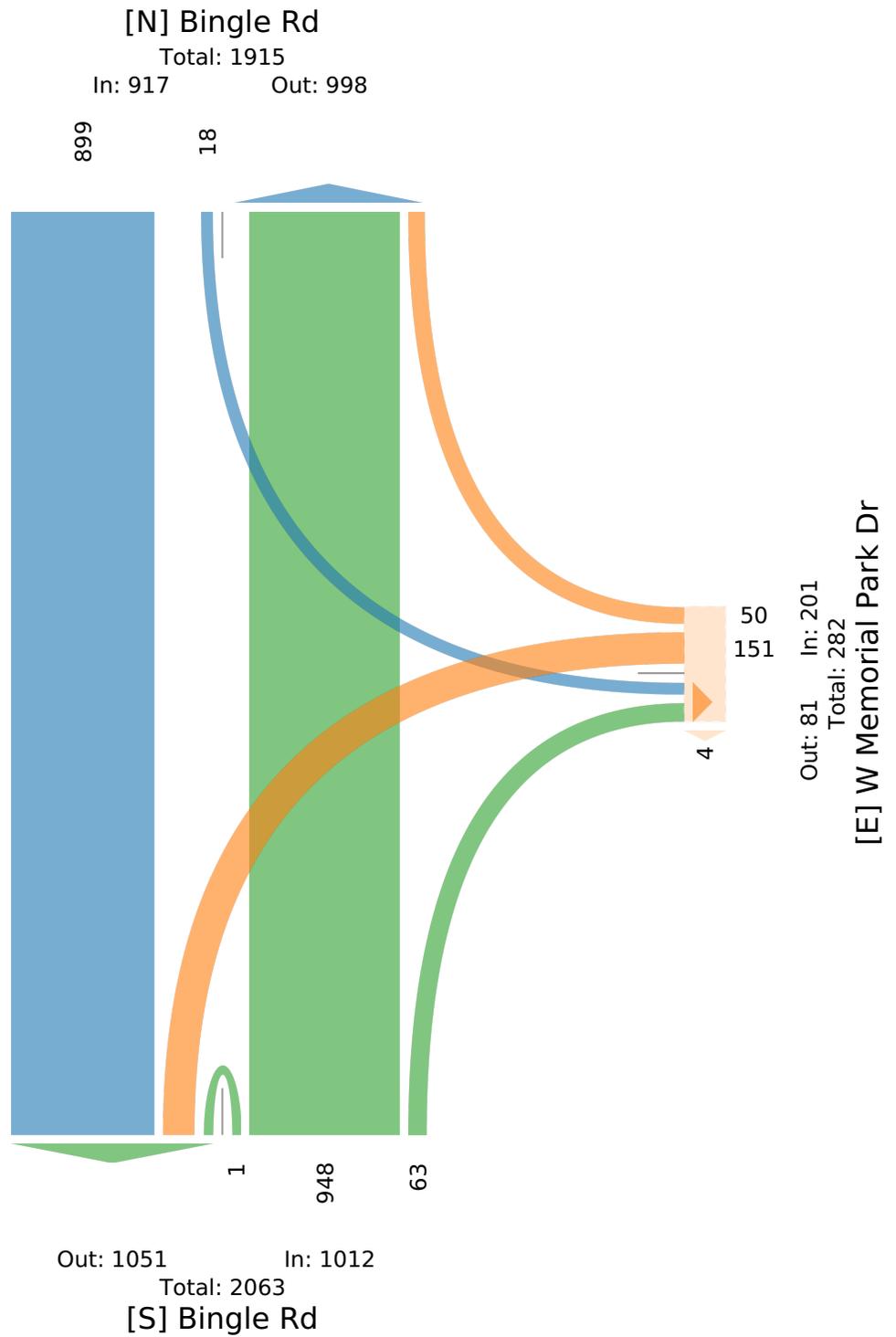
All Movements

ID: 807511, Location: 29.786302, -95.500145



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Burkhart Rd at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807510, Location: 29.789456, -95.500464



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Burkhart Rd Westbound					Bingle Rd Northbound					Int
	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	
2021-01-13 7:00AM	881	2	0	883	0	4	7	0	11	0	9	665	0	674	0	1568
8:00AM	682	0	0	682	0	2	14	0	16	2	8	645	0	653	0	1351
4:00PM	828	7	0	835	0	4	11	0	15	3	16	887	0	903	2	1753
5:00PM	651	8	0	659	0	5	6	0	11	3	14	974	0	988	0	1658
Total	3042	17	0	3059	0	15	38	0	53	8	47	3171	0	3218	2	6330
% Approach	99.4%	0.6%	0%	-	-	28.3%	71.7%	0%	-	-	1.5%	98.5%	0%	-	-	-
% Total	48.1%	0.3%	0%	48.3%	-	0.2%	0.6%	0%	0.8%	-	0.7%	50.1%	0%	50.8%	-	-
Lights	2987	17	0	3004	-	15	38	0	53	-	47	3124	0	3171	-	6228
% Lights	98.2%	100%	0%	98.2%	-	100%	100%	0%	100%	-	100%	98.5%	0%	98.5%	-	98.4%
Articulated Trucks	3	0	0	3	-	0	0	0	0	-	0	5	0	5	-	8
% Articulated Trucks	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	-	0%	0.2%	0%	0.2%	-	0.1%
Buses and Single-Unit Trucks	52	0	0	52	-	0	0	0	0	-	0	42	0	42	-	94
% Buses and Single-Unit Trucks	1.7%	0%	0%	1.7%	-	0%	0%	0%	0%	-	0%	1.3%	0%	1.3%	-	1.5%
Pedestrians	-	-	-	-	0	-	-	-	-	8	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	0%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Burkhart Rd at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

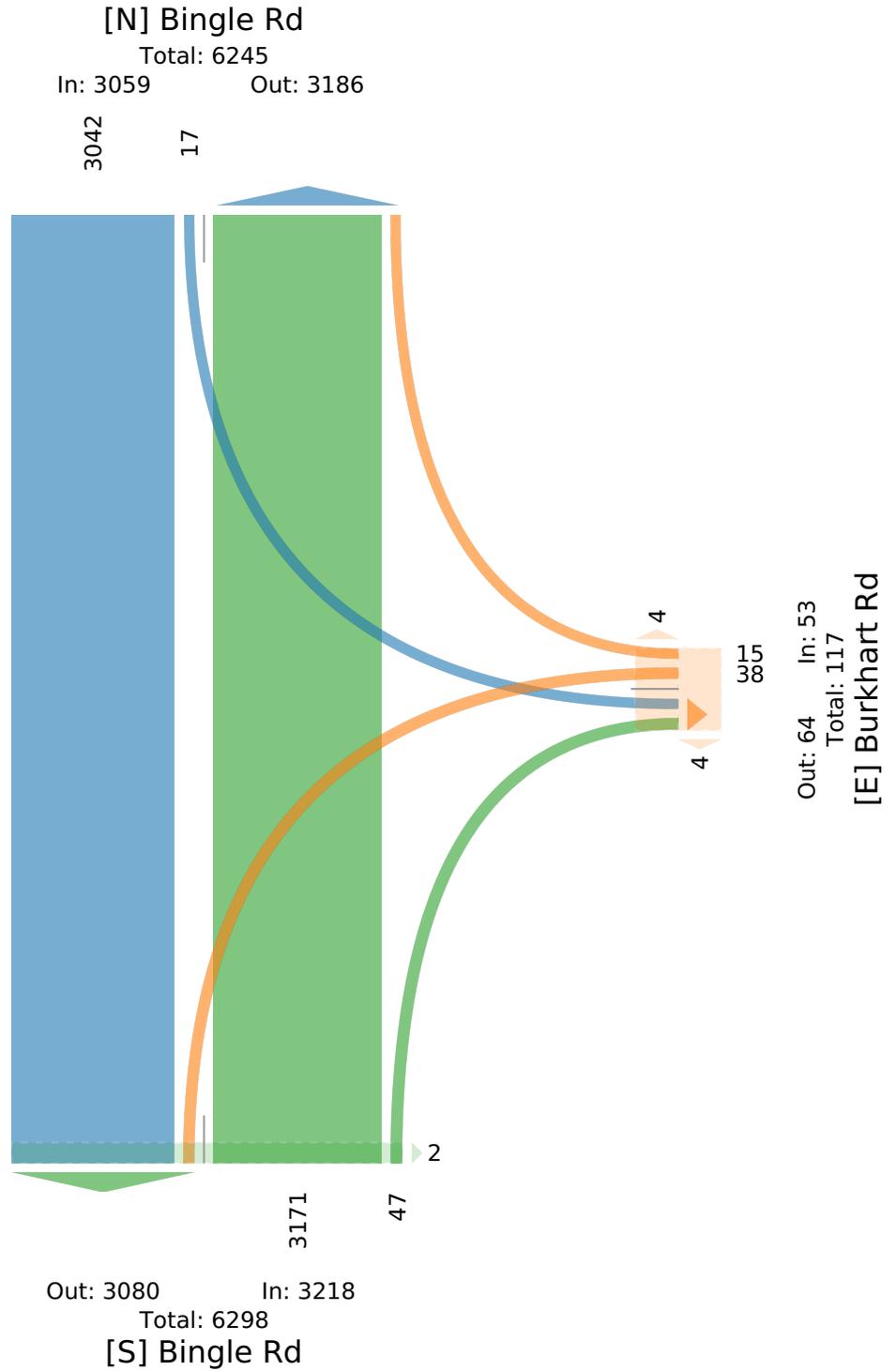
All Movements

ID: 807510, Location: 29.789456, -95.500464



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Burkhart Rd at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807510, Location: 29.789456, -95.500464



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Burkhart Rd Westbound					Bingle Rd Northbound					
Time	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	Int
2021-01-13 7:00AM	214	0	0	214	0	1	1	0	2	0	1	149	0	150	0	366
7:15AM	233	2	0	235	0	2	3	0	5	0	1	151	0	152	0	392
7:30AM	237	0	0	237	0	1	3	0	4	0	3	185	0	188	0	429
7:45AM	197	0	0	197	0	0	0	0	0	0	4	180	0	184	0	381
Total	881	2	0	883	0	4	7	0	11	0	9	665	0	674	0	1568
% Approach	99.8%	0.2%	0%	-	-	36.4%	63.6%	0%	-	-	1.3%	98.7%	0%	-	-	-
% Total	56.2%	0.1%	0%	56.3%	-	0.3%	0.4%	0%	0.7%	-	0.6%	42.4%	0%	43.0%	-	-
PHF	0.929	0.250	-	0.931	-	0.500	0.583	-	0.550	-	0.563	0.899	-	0.896	-	0.914
Lights	857	2	0	859	-	4	7	0	11	-	9	654	0	663	-	1533
% Lights	97.3%	100%	0%	97.3%	-	100%	100%	0%	100%	-	100%	98.3%	0%	98.4%	-	97.8%
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	2	0	2	-	2
% Articulated Trucks	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0%	0.3%	0%	0.3%	-	0.1%
Buses and Single-Unit Trucks	24	0	0	24	-	0	0	0	0	-	0	9	0	9	-	33
% Buses and Single-Unit Trucks	2.7%	0%	0%	2.7%	-	0%	0%	0%	0%	-	0%	1.4%	0%	1.3%	-	2.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Burkhart Rd at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

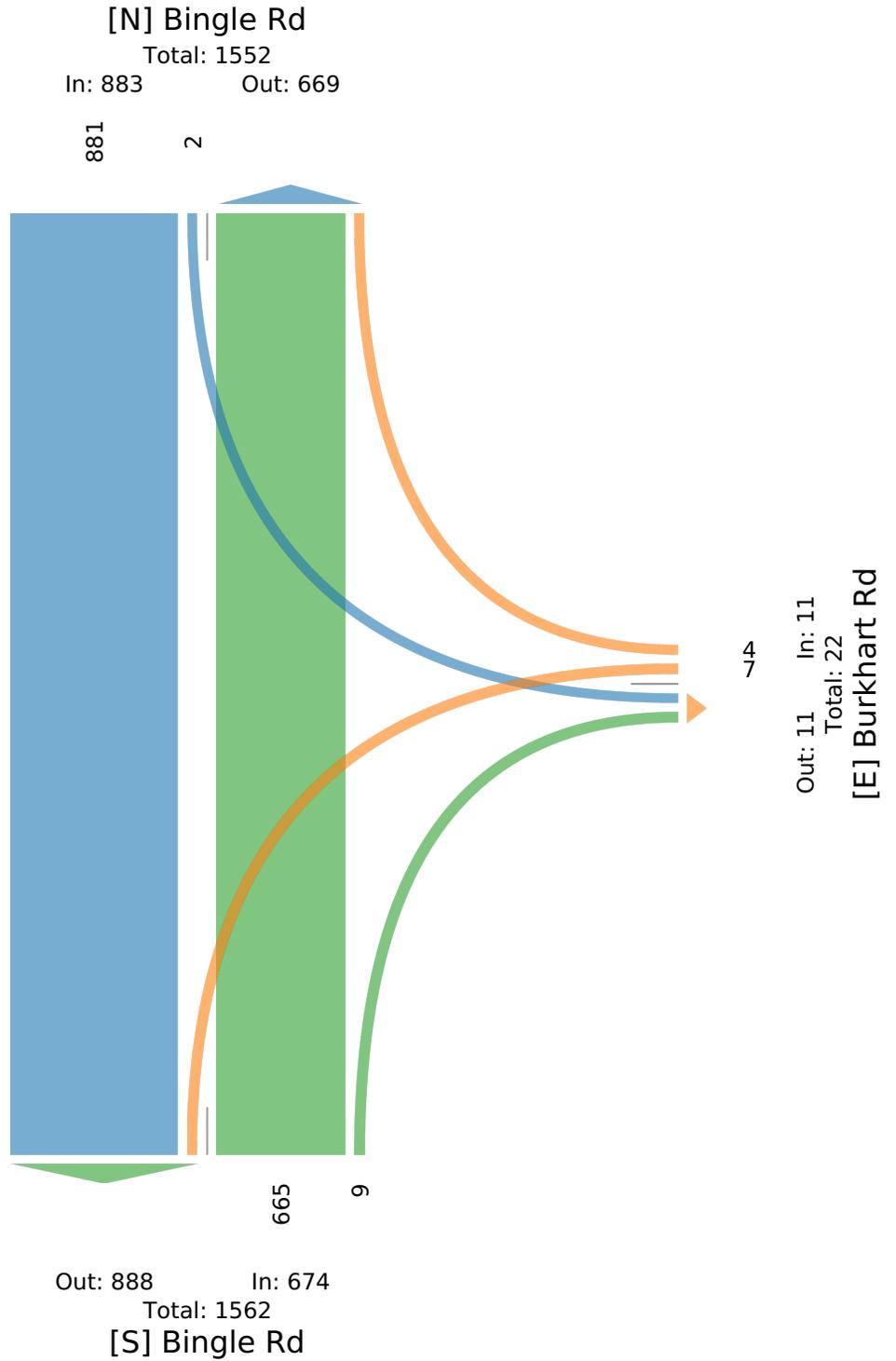
All Movements

ID: 807510, Location: 29.789456, -95.500464



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Burkhart Rd at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807510, Location: 29.789456, -95.500464



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Burkhart Rd Westbound					Bingle Rd Northbound					Int
	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	
2021-01-13 4:00PM	215	1	0	216	0	0	2	0	2	0	1	239	0	240	0	458
4:15PM	223	1	0	224	0	1	5	0	6	2	6	203	0	209	2	439
4:30PM	207	4	0	211	0	1	2	0	3	0	2	219	0	221	0	435
4:45PM	183	1	0	184	0	2	2	0	4	1	7	226	0	233	0	421
Total	828	7	0	835	0	4	11	0	15	3	16	887	0	903	2	1753
% Approach	99.2%	0.8%	0%	-	-	26.7%	73.3%	0%	-	-	1.8%	98.2%	0%	-	-	-
% Total	47.2%	0.4%	0%	47.6%	-	0.2%	0.6%	0%	0.9%	-	0.9%	50.6%	0%	51.5%	-	-
PHF	0.928	0.438	-	0.932	-	0.500	0.550	-	0.625	-	0.571	0.928	-	0.941	-	0.957
Lights	820	7	0	827	-	4	11	0	15	-	16	866	0	882	-	1724
% Lights	99.0%	100%	0%	99.0%	-	100%	100%	0%	100%	-	100%	97.6%	0%	97.7%	-	98.3%
Articulated Trucks	2	0	0	2	-	0	0	0	0	-	0	2	0	2	-	4
% Articulated Trucks	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	-	0%	0.2%	0%	0.2%	-	0.2%
Buses and Single-Unit Trucks	6	0	0	6	-	0	0	0	0	-	0	19	0	19	-	25
% Buses and Single-Unit Trucks	0.7%	0%	0%	0.7%	-	0%	0%	0%	0%	-	0%	2.1%	0%	2.1%	-	1.4%
Pedestrians	-	-	-	-	0	-	-	-	-	3	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	0%	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	2	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	100%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Burkhart Rd at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

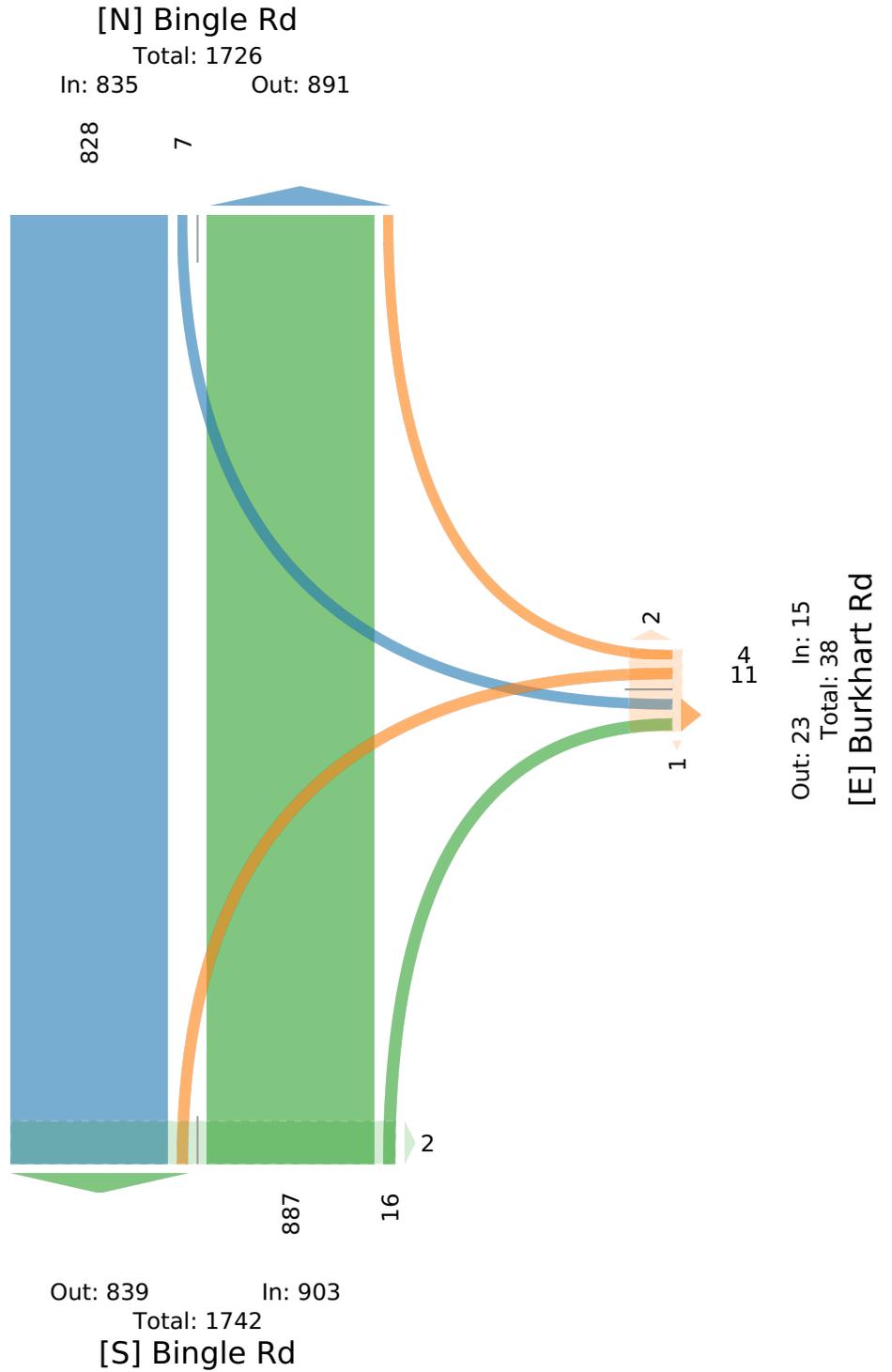
All Movements

ID: 807510, Location: 29.789456, -95.500464



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Merlin Dr Westbound					Bingle Rd Northbound					Int
	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	
2021-01-13 6:00AM	458	2	0	460	3	0	9	0	9	0	11	474	0	485	0	954
7:00AM	978	4	0	982	9	1	30	0	31	0	18	648	0	666	0	1679
8:00AM	858	2	0	860	1	5	25	0	30	0	30	611	0	641	1	1531
9:00AM	661	1	0	662	2	5	24	0	29	2	24	522	0	546	0	1237
10:00AM	538	2	0	540	2	2	24	0	26	0	20	501	0	521	0	1087
11:00AM	625	6	0	631	3	5	24	0	29	1	30	532	0	562	0	1222
12:00PM	609	4	0	613	2	8	27	0	35	2	27	591	0	618	0	1266
1:00PM	650	2	0	652	3	2	27	0	29	0	24	680	0	704	0	1385
2:00PM	684	5	0	689	1	6	28	0	34	0	36	703	0	739	0	1462
3:00PM	865	3	0	868	0	5	30	0	35	2	38	763	0	801	0	1704
4:00PM	818	3	0	821	0	8	14	0	22	1	51	839	0	890	0	1733
5:00PM	801	3	0	804	2	5	27	0	32	2	48	934	0	982	0	1818
6:00PM	636	5	0	641	1	3	22	0	25	0	39	669	0	708	0	1374
Total	9181	42	0	9223	29	55	311	0	366	10	396	8467	0	8863	1	18452
% Approach	99.5%	0.5%	0%	-	-	15.0%	85.0%	0%	-	-	4.5%	95.5%	0%	-	-	-
% Total	49.8%	0.2%	0%	50.0%	-	0.3%	1.7%	0%	2.0%	-	2.1%	45.9%	0%	48.0%	-	-
Lights	8997	39	0	9036	-	52	308	0	360	-	386	8306	0	8692	-	18088
% Lights	98.0%	92.9%	0%	98.0%	-	94.5%	99.0%	0%	98.4%	-	97.5%	98.1%	0%	98.1%	-	98.0%
Articulated Trucks	20	1	0	21	-	1	1	0	2	-	0	25	0	25	-	48
% Articulated Trucks	0.2%	2.4%	0%	0.2%	-	1.8%	0.3%	0%	0.5%	-	0%	0.3%	0%	0.3%	-	0.3%
Buses and Single-Unit Trucks	164	2	0	166	-	2	2	0	4	-	10	136	0	146	-	316
% Buses and Single-Unit Trucks	1.8%	4.8%	0%	1.8%	-	3.6%	0.6%	0%	1.1%	-	2.5%	1.6%	0%	1.6%	-	1.7%
Pedestrians	-	-	-	-	23	-	-	-	-	6	-	-	-	-	-	1
% Pedestrians	-	-	-	-	79.3%	-	-	-	-	60.0%	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	6	-	-	-	-	4	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	20.7%	-	-	-	-	40.0%	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

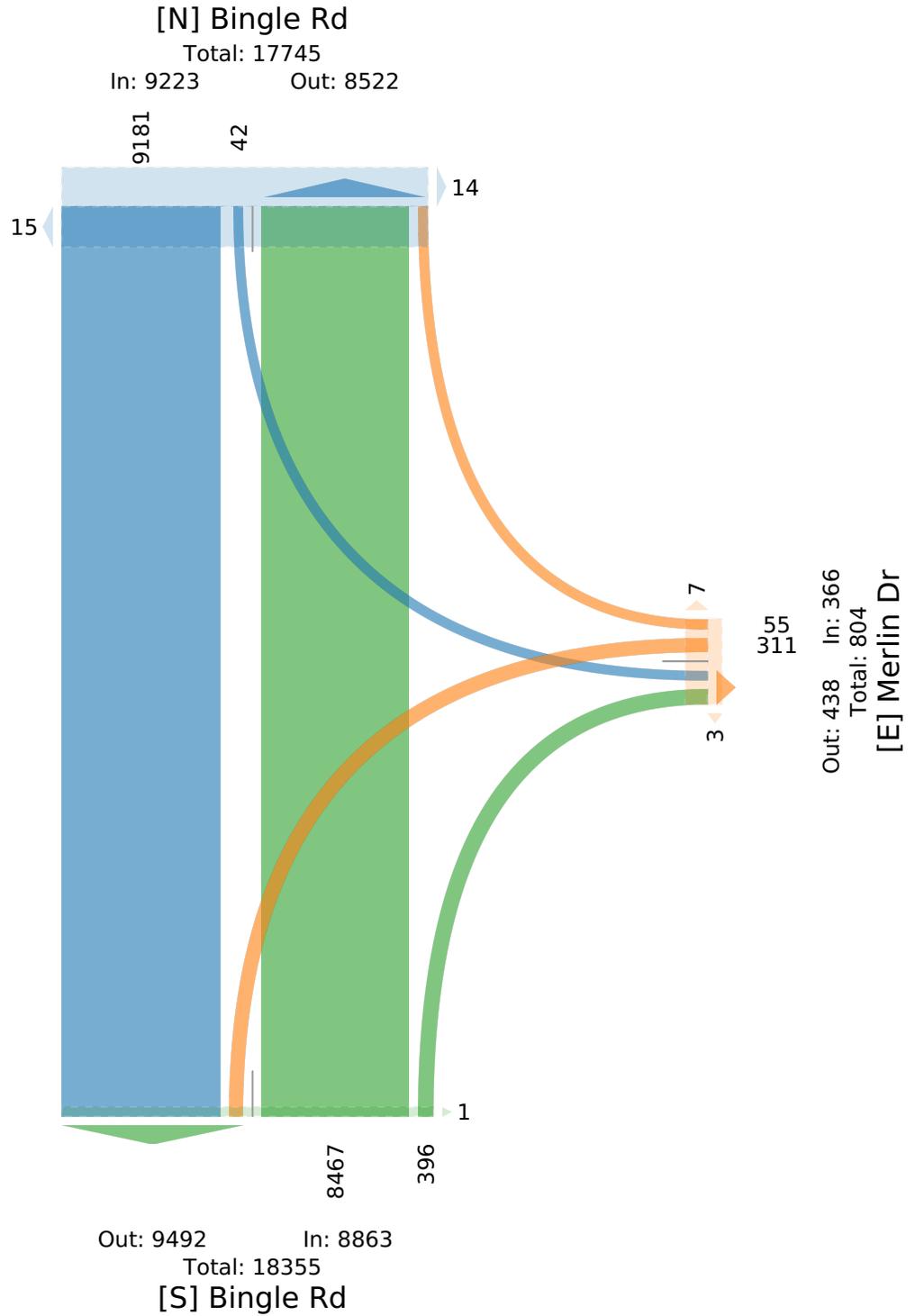
All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Merlin Dr Westbound					Bingle Rd Northbound					Int
	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	
2021-01-13 7:15AM	269	0	0	269	3	0	14	0	14	0	1	142	0	143	0	426
7:30AM	277	2	0	279	2	1	7	0	8	0	10	180	0	190	0	477
7:45AM	237	1	0	238	0	0	3	0	3	0	6	169	0	175	0	416
8:00AM	221	0	0	221	0	1	4	0	5	0	7	142	0	149	0	375
Total	1004	3	0	1007	5	2	28	0	30	0	24	633	0	657	0	1694
% Approach	99.7%	0.3%	0%	-	-	6.7%	93.3%	0%	-	-	3.7%	96.3%	0%	-	-	-
% Total	59.3%	0.2%	0%	59.4%	-	0.1%	1.7%	0%	1.8%	-	1.4%	37.4%	0%	38.8%	-	-
PHF	0.906	0.375	-	0.902	-	0.500	0.500	-	0.536	-	0.600	0.879	-	0.864	-	0.888
Lights	981	2	0	983	-	1	27	0	28	-	20	624	0	644	-	1655
% Lights	97.7%	66.7%	0%	97.6%	-	50.0%	96.4%	0%	93.3%	-	83.3%	98.6%	0%	98.0%	-	97.7%
Articulated Trucks	3	1	0	4	-	1	0	0	1	-	0	2	0	2	-	7
% Articulated Trucks	0.3%	33.3%	0%	0.4%	-	50.0%	0%	0%	3.3%	-	0%	0.3%	0%	0.3%	-	0.4%
Buses and Single-Unit Trucks	20	0	0	20	-	0	1	0	1	-	4	7	0	11	-	32
% Buses and Single-Unit Trucks	2.0%	0%	0%	2.0%	-	0%	3.6%	0%	3.3%	-	16.7%	1.1%	0%	1.7%	-	1.9%
Pedestrians	-	-	-	-	4	-	-	-	-	0	-	-	-	-	0	-
% Pedestrians	-	-	-	-	80.0%	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	20.0%	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

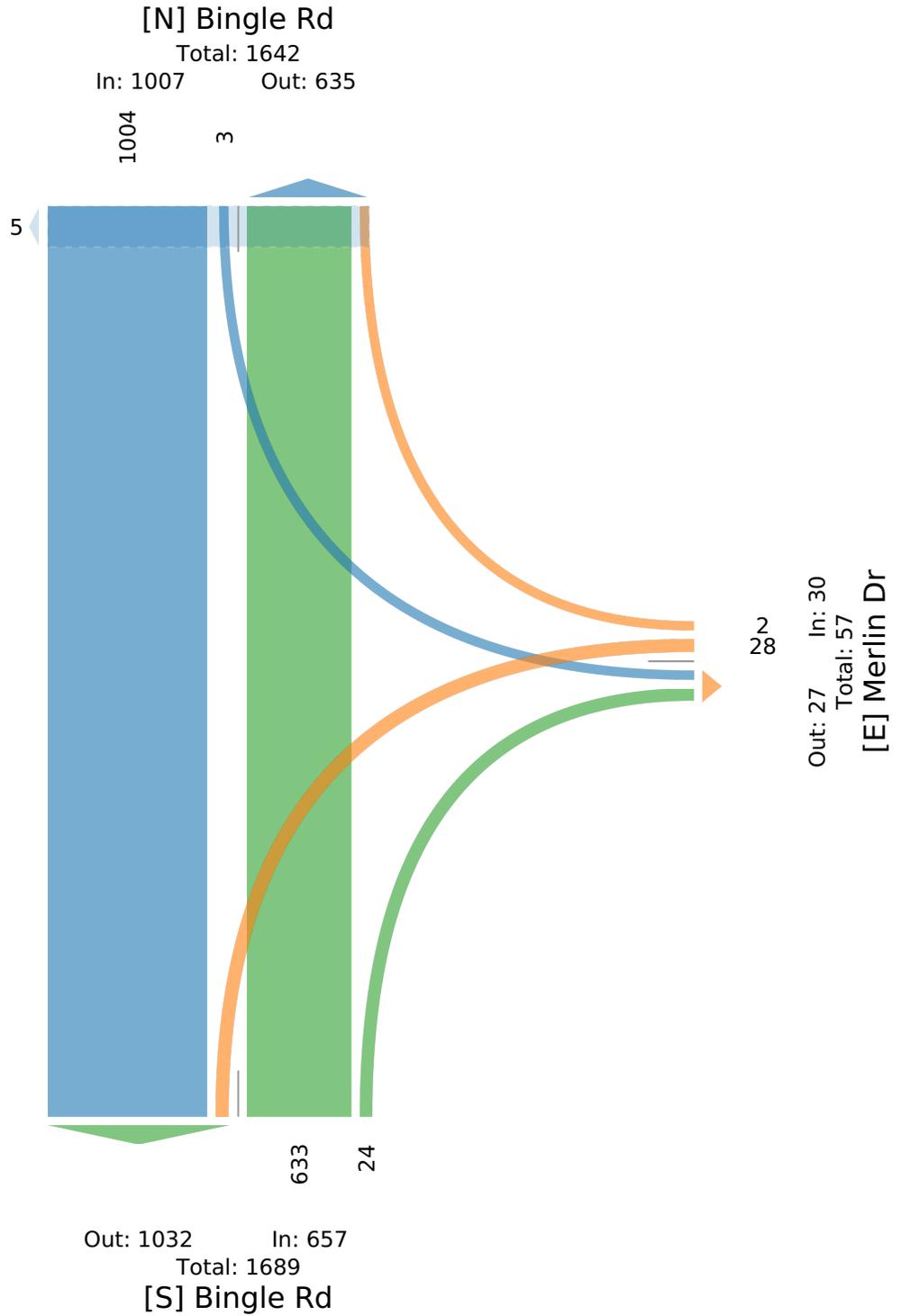
All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Merlin Dr Westbound					Bingle Rd Northbound					
Time	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	Int
2021-01-13 11:45AM	188	0	0	188	2	1	3	0	4	0	11	145	0	156	0	348
12:00PM	138	1	0	139	1	4	8	0	12	1	6	148	0	154	0	305
12:15PM	141	0	0	141	0	0	8	0	8	0	9	144	0	153	0	302
12:30PM	166	1	0	167	1	3	5	0	8	1	7	168	0	175	0	350
Total	633	2	0	635	4	8	24	0	32	2	33	605	0	638	0	1305
% Approach	99.7%	0.3%	0%	-	-	25.0%	75.0%	0%	-	-	5.2%	94.8%	0%	-	-	-
% Total	48.5%	0.2%	0%	48.7%	-	0.6%	1.8%	0%	2.5%	-	2.5%	46.4%	0%	48.9%	-	-
PHF	0.842	0.500	-	0.844	-	0.500	0.750	-	0.667	-	0.750	0.900	-	0.911	-	0.932
Lights	616	2	0	618	-	7	24	0	31	-	33	589	0	622	-	1271
% Lights	97.3%	100%	0%	97.3%	-	87.5%	100%	0%	96.9%	-	100%	97.4%	0%	97.5%	-	97.4%
Articulated Trucks	2	0	0	2	-	0	0	0	0	-	0	4	0	4	-	6
% Articulated Trucks	0.3%	0%	0%	0.3%	-	0%	0%	0%	0%	-	0%	0.7%	0%	0.6%	-	0.5%
Buses and Single-Unit Trucks	15	0	0	15	-	1	0	0	1	-	0	12	0	12	-	28
% Buses and Single-Unit Trucks	2.4%	0%	0%	2.4%	-	12.5%	0%	0%	3.1%	-	0%	2.0%	0%	1.9%	-	2.1%
Pedestrians	-	-	-	-	1	-	-	-	-	1	-	-	-	-	0	-
% Pedestrians	-	-	-	-	25.0%	-	-	-	-	50.0%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	1	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	75.0%	-	-	-	-	50.0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

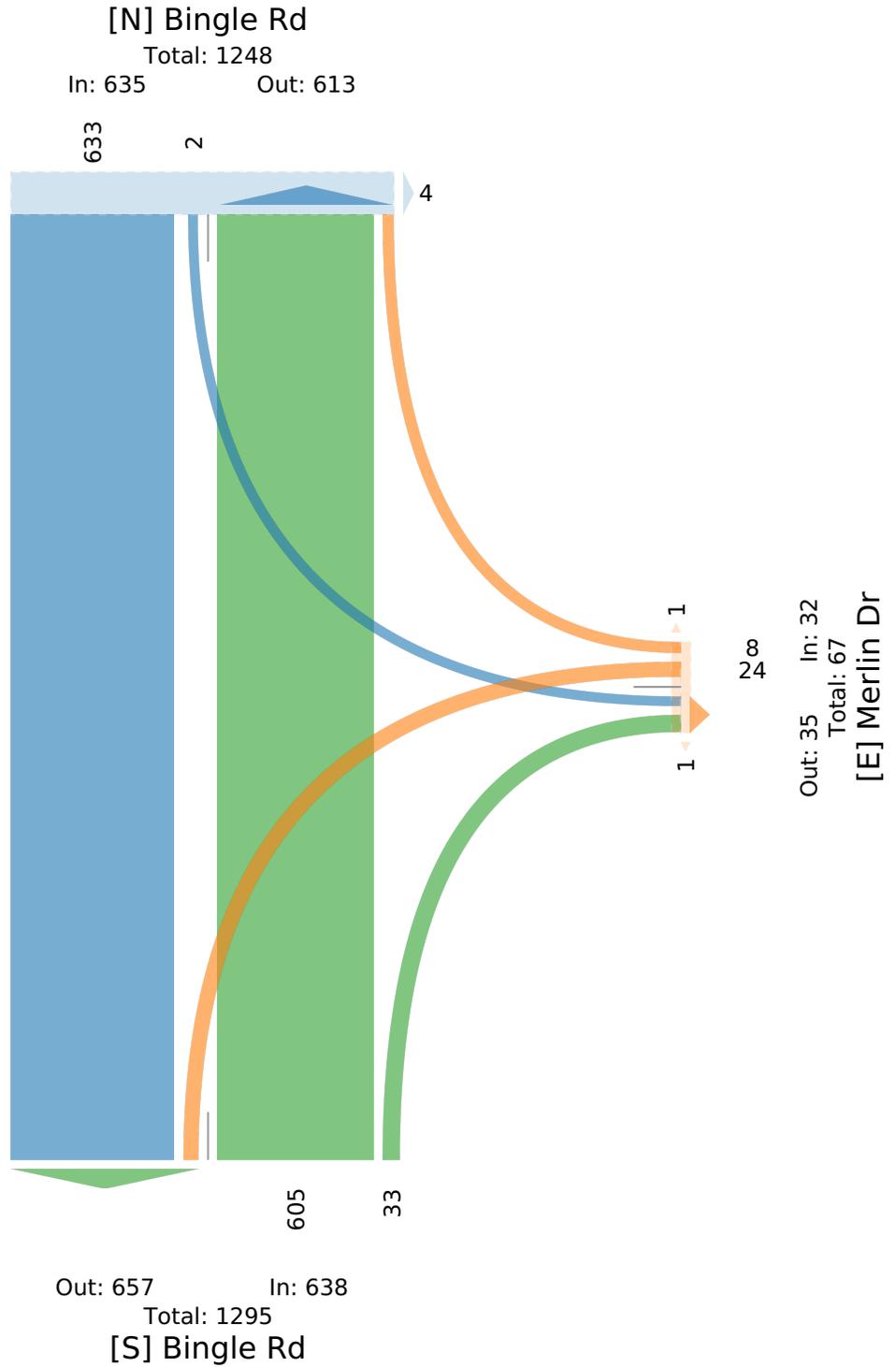
All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound					Merlin Dr Westbound					Bingle Rd Northbound					
Time	T	L	U	App	Ped*	R	L	U	App	Ped*	R	T	U	App	Ped*	Int
2021-01-13 4:45PM	202	0	0	202	0	6	6	0	12	0	13	212	0	225	0	439
5:00PM	218	1	0	219	0	1	6	0	7	0	10	218	0	228	0	454
5:15PM	211	2	0	213	0	3	9	0	12	0	15	256	0	271	0	496
5:30PM	207	0	0	207	1	1	4	0	5	1	11	230	0	241	0	453
Total	838	3	0	841	1	11	25	0	36	1	49	916	0	965	0	1842
% Approach	99.6%	0.4%	0%	-	-	30.6%	69.4%	0%	-	-	5.1%	94.9%	0%	-	-	-
% Total	45.5%	0.2%	0%	45.7%	-	0.6%	1.4%	0%	2.0%	-	2.7%	49.7%	0%	52.4%	-	-
PHF	0.961	0.375	-	0.960	-	0.458	0.694	-	0.750	-	0.817	0.895	-	0.890	-	0.928
Lights	831	3	0	834	-	11	25	0	36	-	49	911	0	960	-	1830
% Lights	99.2%	100%	0%	99.2%	-	100%	100%	0%	100%	-	100%	99.5%	0%	99.5%	-	99.3%
Articulated Trucks	2	0	0	2	-	0	0	0	0	-	0	0	0	0	-	2
% Articulated Trucks	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	-	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	5	0	0	5	-	0	0	0	0	-	0	5	0	5	-	10
% Buses and Single-Unit Trucks	0.6%	0%	0%	0.6%	-	0%	0%	0%	0%	-	0%	0.5%	0%	0.5%	-	0.5%
Pedestrians	-	-	-	-	1	-	-	-	-	1	-	-	-	-	0	-
% Pedestrians	-	-	-	-	100%	-	-	-	-	100%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	0%	-	-	-	-	0%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Bingle Rd at Merlin Dr - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

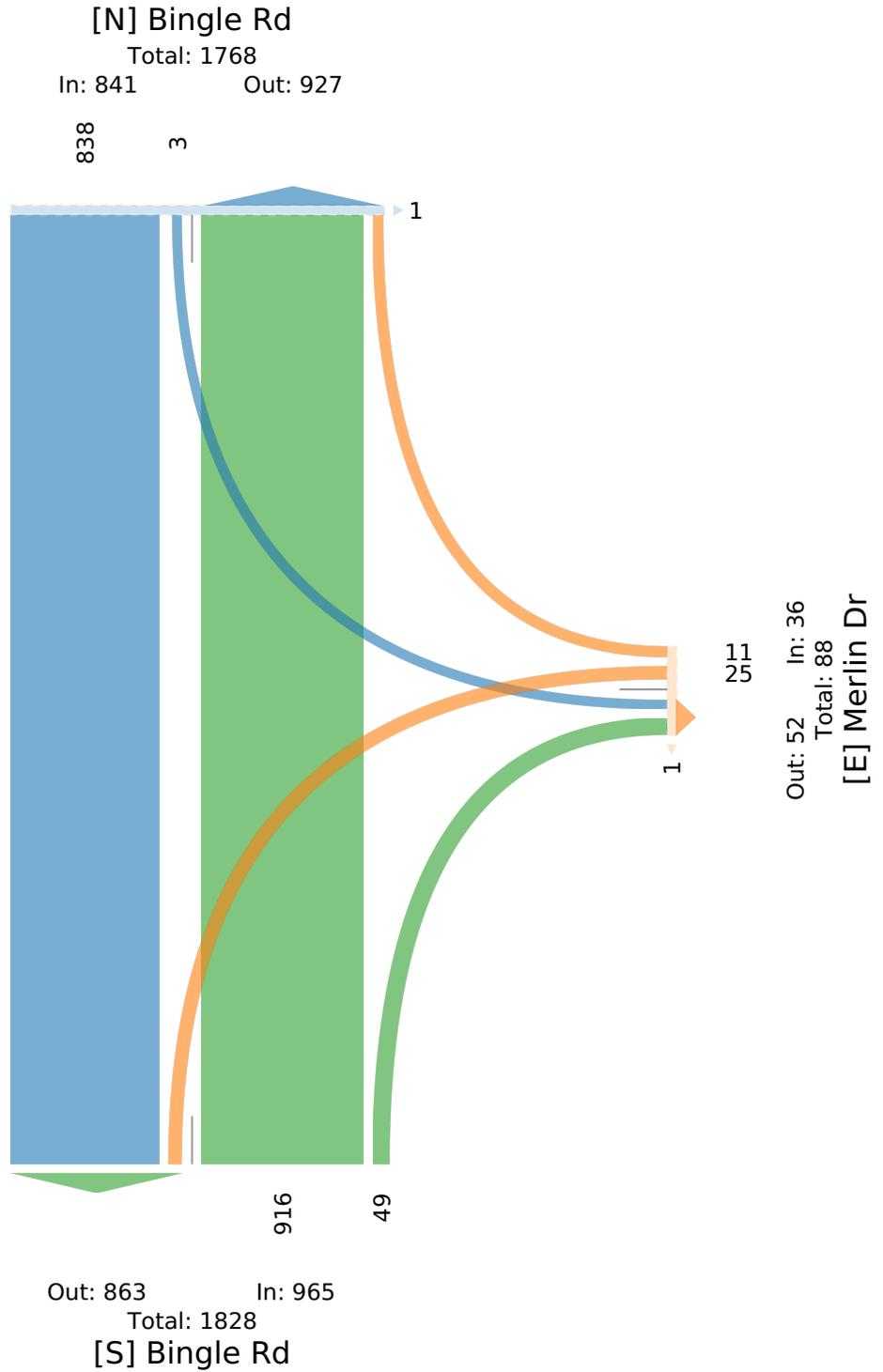
All Movements

ID: 807507, Location: 29.79205, -95.500478



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807509, Location: 29.793841, -95.500461



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound						Westview Dr Westbound						Bingle Rd Northbound						Westview Dr Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 7:00AM	36	675	31	1	743	8	41	198	198	0	437	0	135	469	33	0	637	2	104	222	28	1	355	0	2172
8:00AM	26	653	38	0	717	0	29	102	130	0	261	0	125	460	39	0	624	0	87	128	22	0	237	1	1839
4:00PM	42	621	37	0	700	12	78	235	126	0	439	0	158	645	47	0	850	2	76	233	43	0	352	0	2341
5:00PM	33	588	38	0	659	7	70	238	143	0	451	1	156	710	61	0	927	5	71	231	19	0	321	0	2358
Total	137	2537	144	1	2819	27	218	773	597	0	1588	1	574	2284	180	0	3038	9	338	814	112	1	1265	1	8710
% Approach	4.9%	90.0%	5.1%	0%	-	-	13.7%	48.7%	37.6%	0%	-	-	18.9%	75.2%	5.9%	0%	-	-	26.7%	64.3%	8.9%	0.1%	-	-	-
% Total	1.6%	29.1%	1.7%	0%	32.4%	-	2.5%	8.9%	6.9%	0%	18.2%	-	6.6%	26.2%	2.1%	0%	34.9%	-	3.9%	9.3%	1.3%	0%	14.5%	-	-
Lights	134	2477	144	1	2756	-	214	752	589	0	1555	-	572	2247	177	0	2996	-	332	803	106	1	1242	-	8549
% Lights	97.8%	97.6%	100%	100%	97.8%	-	98.2%	97.3%	98.7%	0%	97.9%	-	99.7%	98.4%	98.3%	0%	98.6%	-	98.2%	98.6%	94.6%	100%	98.2%	-	98.2%
Articulated Trucks	0	8	0	0	8	-	0	1	1	0	2	-	0	7	0	0	7	-	0	0	1	0	1	-	18
% Articulated Trucks	0%	0.3%	0%	0%	0.3%	-	0%	0.1%	0.2%	0%	0.1%	-	0%	0.3%	0%	0%	0.2%	-	0%	0%	0.9%	0%	0.1%	-	0.2%
Buses and Single-Unit Trucks	3	52	0	0	55	-	4	20	7	0	31	-	2	30	3	0	35	-	6	11	5	0	22	-	143
% Buses and Single-Unit Trucks	2.2%	2.0%	0%	0%	2.0%	-	1.8%	2.6%	1.2%	0%	2.0%	-	0.3%	1.3%	1.7%	0%	1.2%	-	1.8%	1.4%	4.5%	0%	1.7%	-	1.6%
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	37.0%	-	-	-	-	-	0%	-	-	-	-	-	55.6%	-	-	-	-	-	100%	
Bicycles on Crosswalk	-	-	-	-	-	17	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	63.0%	-	-	-	-	-	100%	-	-	-	-	-	44.4%	-	-	-	-	-	0%	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Bingle Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

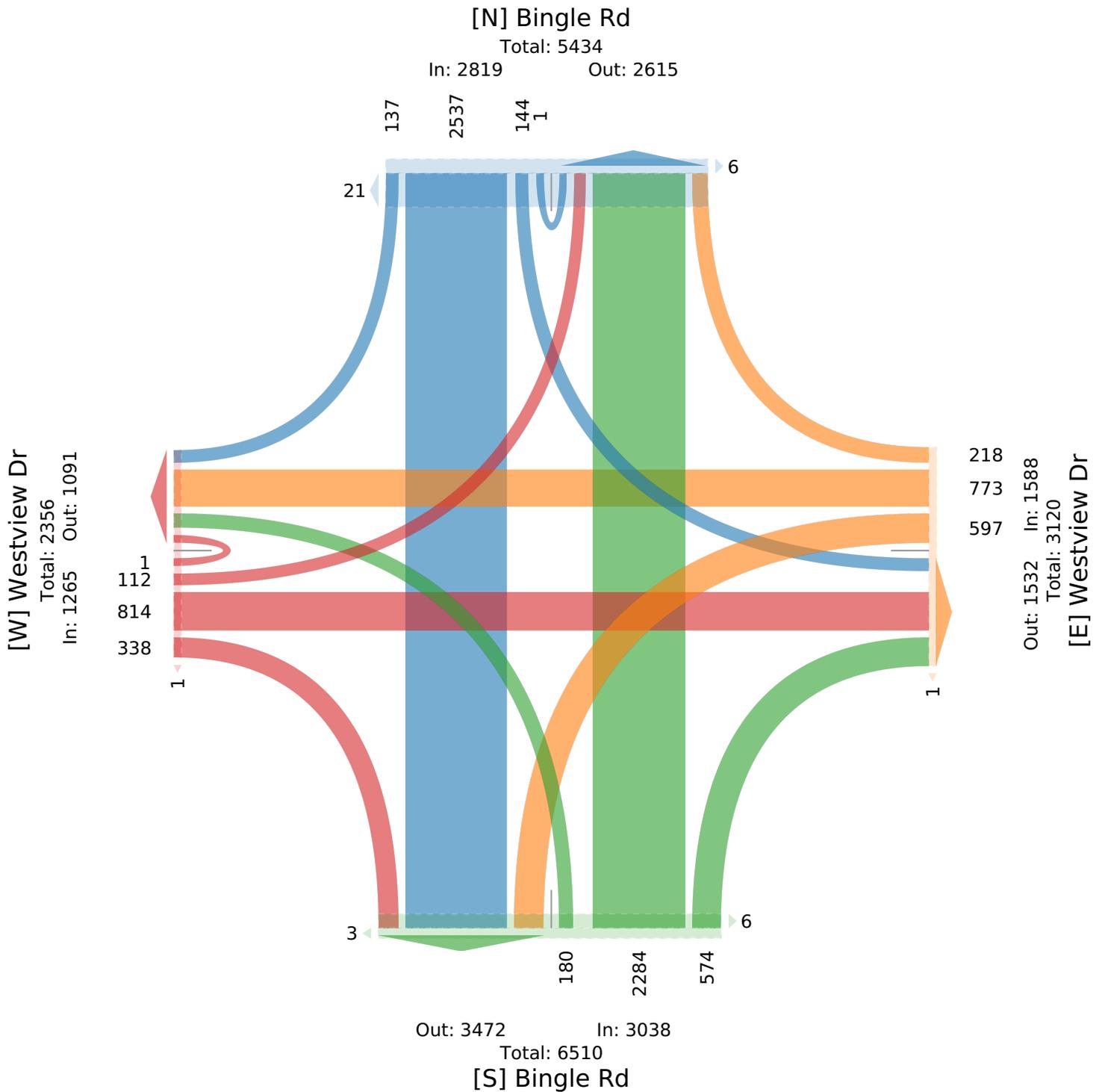
All Movements

ID: 807509, Location: 29.793841, -95.500461



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807509, Location: 29.793841, -95.500461



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound							Westview Dr Westbound							Bingle Rd Northbound							Westview Dr Eastbound									
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 7:00AM	5	139	8	0	152	2	10	34	32	0	76	0	28	126	5	0	159	0	17	94	6	0	117	0							504
7:15AM	12	175	8	1	196	1	8	73	64	0	145	0	24	110	4	0	138	0	32	41	9	0	82	0							561
7:30AM	7	198	7	0	212	2	10	45	50	0	105	0	37	123	11	0	171	2	36	34	8	0	78	0							566
7:45AM	12	163	8	0	183	3	13	46	52	0	111	0	46	110	13	0	169	0	19	53	5	1	78	0							541
Total	36	675	31	1	743	8	41	198	198	0	437	0	135	469	33	0	637	2	104	222	28	1	355	0							2172
% Approach	4.8%	90.8%	4.2%	0.1%	-	-	9.4%	45.3%	45.3%	0%	-	-	21.2%	73.6%	5.2%	0%	-	-	29.3%	62.5%	7.9%	0.3%	-	-							-
% Total	1.7%	31.1%	1.4%	0%	34.2%	-	1.9%	9.1%	9.1%	0%	20.1%	-	6.2%	21.6%	1.5%	0%	29.3%	-	4.8%	10.2%	1.3%	0%	16.3%	-							-
PHF	0.750	0.852	0.969	0.250	0.876	-	0.788	0.678	0.773	-	0.753	-	0.734	0.931	0.635	-	0.931	-	0.722	0.590	0.778	0.250	0.759	-							0.959
Lights	35	656	31	1	723	-	40	195	192	0	427	-	134	463	33	0	630	-	102	219	25	1	347	-							2127
% Lights	97.2%	97.2%	100%	100%	97.3%	-	97.6%	98.5%	97.0%	0%	97.7%	-	99.3%	98.7%	100%	0%	98.9%	-	98.1%	98.6%	89.3%	100%	97.7%	-							97.9%
Articulated Trucks	0	3	0	0	3	-	0	0	1	0	1	-	0	1	0	0	1	-	0	0	0	0	0	-							5
% Articulated Trucks	0%	0.4%	0%	0%	0.4%	-	0%	0%	0.5%	0%	0.2%	-	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-							0.2%
Buses and Single-Unit Trucks	1	16	0	0	17	-	1	3	5	0	9	-	1	5	0	0	6	-	2	3	3	0	8	-							40
% Buses and Single-Unit Trucks	2.8%	2.4%	0%	0%	2.3%	-	2.4%	1.5%	2.5%	0%	2.1%	-	0.7%	1.1%	0%	0%	0.9%	-	1.9%	1.4%	10.7%	0%	2.3%	-							1.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0							-
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-							-
Bicycles on Crosswalk	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0							-
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-							-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Bingle Rd - TMC

Wed Jan 13, 2021

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

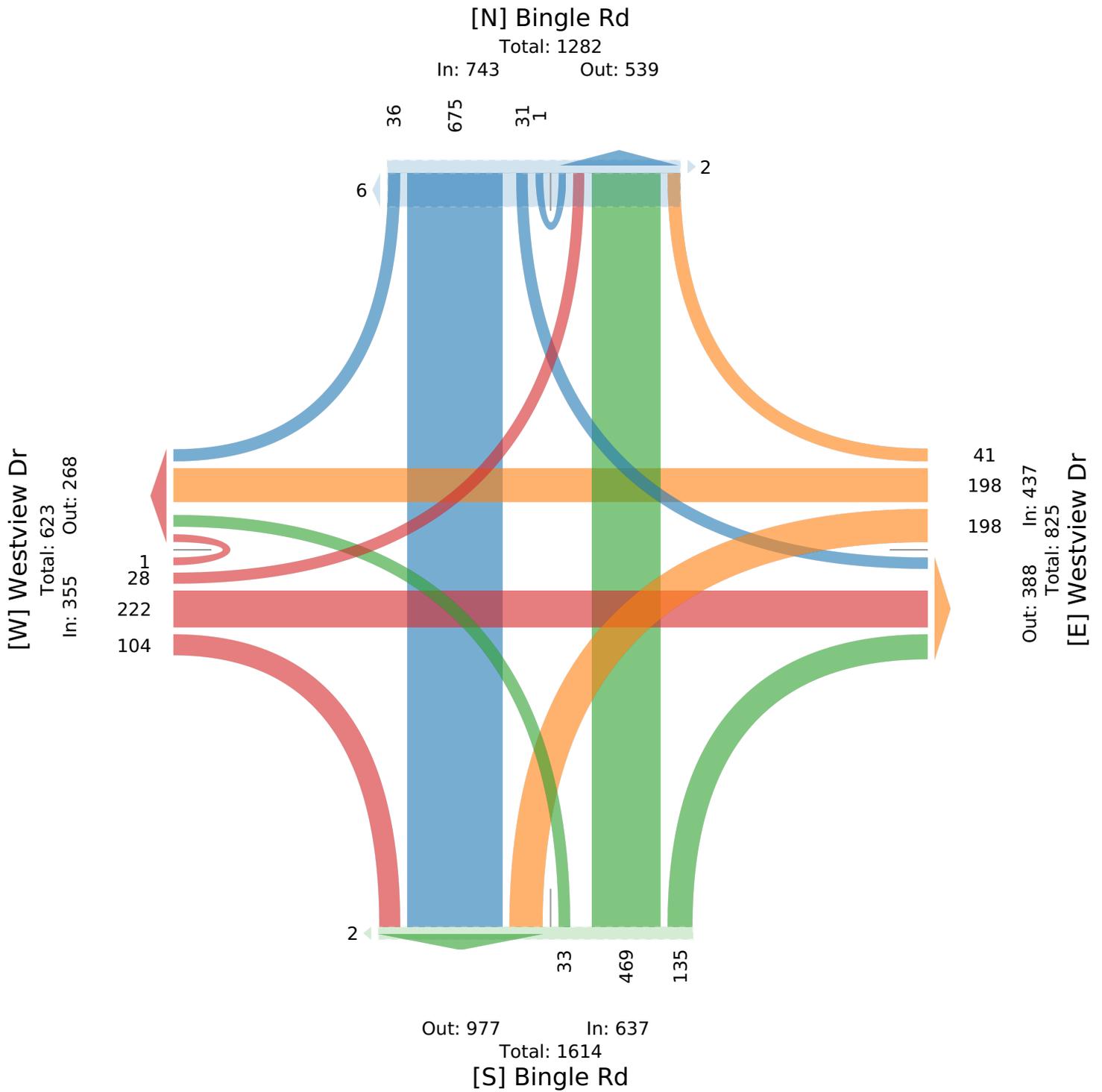
All Movements

ID: 807509, Location: 29.793841, -95.500461



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807509, Location: 29.793841, -95.500461



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bingle Rd Southbound						Westview Dr Westbound						Bingle Rd Northbound						Westview Dr Eastbound							
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int	
2021-01-13 4:45PM	15	158	11	0	184	3	18	51	30	0	99	0	41	158	13	0	212	0	16	60	13	0	89	0	584	
5:00PM	8	170	10	0	188	2	13	58	37	0	108	0	34	183	8	0	225	0	15	67	7	0	89	0	610	
5:15PM	8	162	10	0	180	1	20	72	28	0	120	0	42	189	20	0	251	2	20	64	3	0	87	0	638	
5:30PM	11	148	11	0	170	1	21	56	40	0	117	0	48	165	21	0	234	0	20	55	4	0	79	0	600	
Total	42	638	42	0	722	7	72	237	135	0	444	0	165	695	62	0	922	2	71	246	27	0	344	0	2432	
% Approach	5.8%	88.4%	5.8%	0%	-	-	16.2%	53.4%	30.4%	0%	-	-	17.9%	75.4%	6.7%	0%	-	-	20.6%	71.5%	7.8%	0%	-	-	-	
% Total	1.7%	26.2%	1.7%	0%	29.7%	-	3.0%	9.7%	5.6%	0%	18.3%	-	6.8%	28.6%	2.5%	0%	37.9%	-	2.9%	10.1%	1.1%	0%	14.1%	-	-	
PHF	0.700	0.938	0.955	-	0.960	-	0.857	0.823	0.844	-	0.925	-	0.859	0.919	0.738	-	0.918	-	0.888	0.918	0.519	-	0.966	-	0.953	
Lights	41	632	42	0	715	-	71	234	135	0	440	-	165	690	61	0	916	-	69	245	27	0	341	-	2412	
% Lights	97.6%	99.1%	100%	0%	99.0%	-	98.6%	98.7%	100%	0%	99.1%	-	100%	99.3%	98.4%	0%	99.3%	-	97.2%	99.6%	100%	0%	99.1%	-	99.2%	
Articulated Trucks	0	3	0	0	3	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	-	3
% Articulated Trucks	0%	0.5%	0%	0%	0.4%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	1	3	0	0	4	-	1	3	0	0	4	-	0	5	1	0	6	-	2	1	0	0	3	-	17	
% Buses and Single-Unit Trucks	2.4%	0.5%	0%	0%	0.6%	-	1.4%	1.3%	0%	0%	0.9%	-	0%	0.7%	1.6%	0%	0.7%	-	2.8%	0.4%	0%	0%	0.9%	-	0.7%	
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	57.1%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	42.9%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Bingle Rd - TMC

Wed Jan 13, 2021

PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

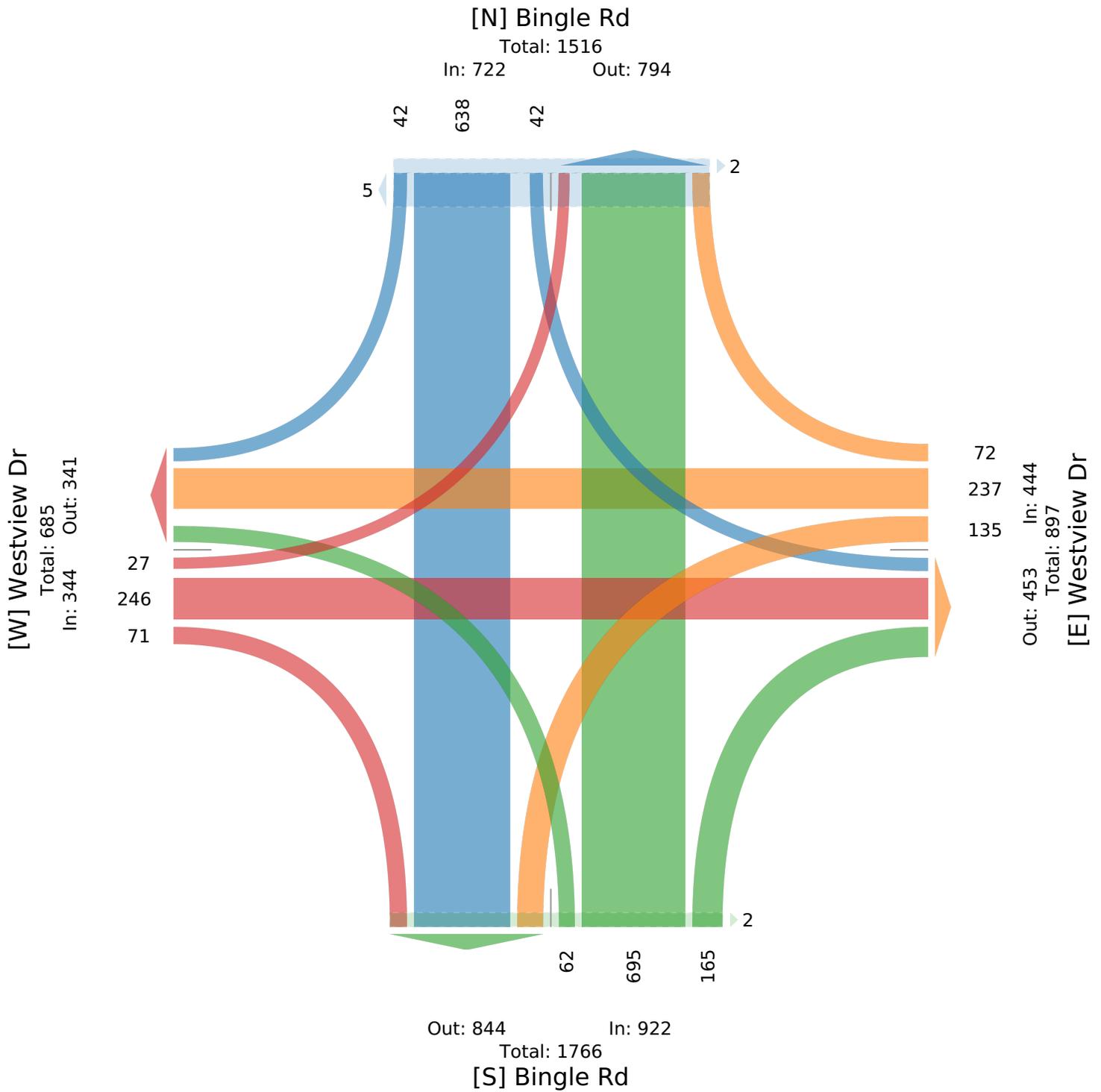
All Movements

ID: 807509, Location: 29.793841, -95.500461



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Campbell Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807516, Location: 29.794312, -95.513942



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						Westview Dr Westbound						Campbell Rd Northbound						Westview Dr Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 7:00AM	22	352	50	0	424	1	59	124	115	0	298	0	113	261	17	0	391	0	35	179	39	0	253	0	1366
8:00AM	22	307	24	0	353	0	31	93	53	0	177	3	50	227	19	0	296	3	48	97	36	0	181	0	1007
4:00PM	46	305	32	0	383	3	52	205	73	0	330	2	61	352	55	0	468	4	30	200	45	0	275	0	1456
5:00PM	35	305	34	0	374	3	38	168	48	0	254	1	83	361	47	0	491	4	32	194	58	0	284	0	1403
Total	125	1269	140	0	1534	7	180	590	289	0	1059	6	307	1201	138	0	1646	11	145	670	178	0	993	0	5232
% Approach	8.1%	82.7%	9.1%	0%	-	-	17.0%	55.7%	27.3%	0%	-	-	18.7%	73.0%	8.4%	0%	-	-	14.6%	67.5%	17.9%	0%	-	-	-
% Total	2.4%	24.3%	2.7%	0%	29.3%	-	3.4%	11.3%	5.5%	0%	20.2%	-	5.9%	23.0%	2.6%	0%	31.5%	-	2.8%	12.8%	3.4%	0%	19.0%	-	-
Lights	121	1248	133	0	1502	-	178	562	283	0	1023	-	302	1181	137	0	1620	-	144	656	175	0	975	-	5120
% Lights	96.8%	98.3%	95.0%	0%	97.9%	-	98.9%	95.3%	97.9%	0%	96.6%	-	98.4%	98.3%	99.3%	0%	98.4%	-	99.3%	97.9%	98.3%	0%	98.2%	-	97.9%
Articulated Trucks	0	3	0	0	3	-	1	0	0	0	1	-	0	0	0	0	0	-	0	1	0	0	1	-	5
% Articulated Trucks	0%	0.2%	0%	0%	0.2%	-	0.6%	0%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	4	18	7	0	29	-	1	28	6	0	35	-	5	20	1	0	26	-	1	13	3	0	17	-	107
% Buses and Single-Unit Trucks	3.2%	1.4%	5.0%	0%	1.9%	-	0.6%	4.7%	2.1%	0%	3.3%	-	1.6%	1.7%	0.7%	0%	1.6%	-	0.7%	1.9%	1.7%	0%	1.7%	-	2.0%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	11	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-28.6%	-	-	-	-	-	-66.7%	-	-	-	-	-	-100%	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	5	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-71.4%	-	-	-	-	-	-33.3%	-	-	-	-	-	0%	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Campbell Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

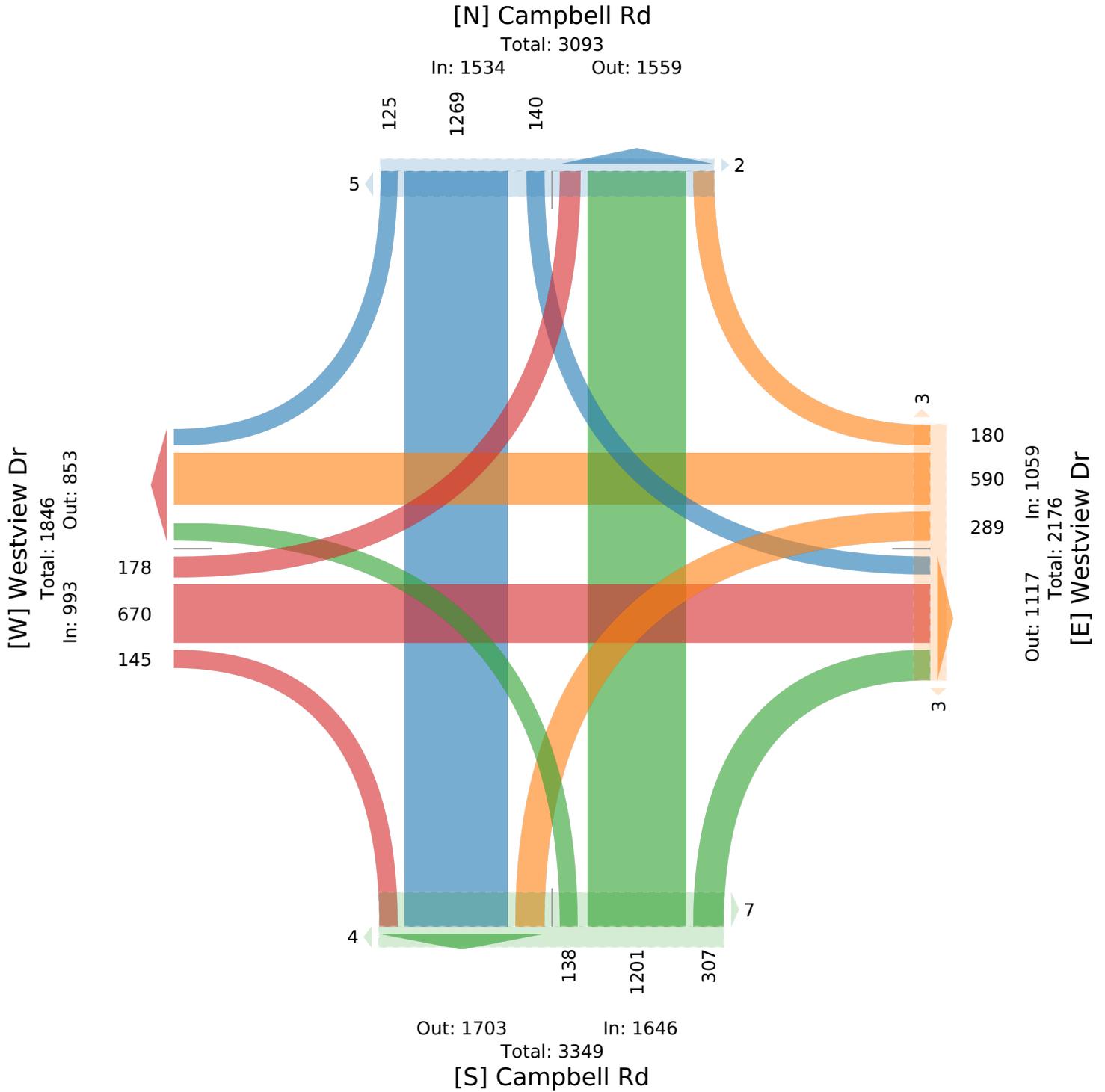
All Movements

ID: 807516, Location: 29.794312, -95.513942



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Campbell Rd - TMC

Wed Jan 13, 2021

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807516, Location: 29.794312, -95.513942



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						Westview Dr Westbound						Campbell Rd Northbound						Westview Dr Eastbound							
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int	
2021-01-13 7:15AM	3	76	11	0	90	1	20	36	15	0	71	0	32	55	6	0	93	0	8	41	7	0	56	0	310	
7:30AM	7	100	13	0	120	0	19	37	38	0	94	0	30	76	5	0	111	0	11	53	8	0	72	0	397	
7:45AM	8	118	16	0	142	0	14	40	55	0	109	0	37	70	5	0	112	0	12	63	16	0	91	0	454	
8:00AM	6	83	9	0	98	0	11	35	18	0	64	0	15	59	5	0	79	2	21	28	3	0	52	0	293	
Total	24	377	49	0	450	1	64	148	126	0	338	0	114	260	21	0	395	2	52	185	34	0	271	0	1454	
% Approach	5.3%	83.8%	10.9%	0%	-	-	18.9%	43.8%	37.3%	0%	-	-	28.9%	65.8%	5.3%	0%	-	-	19.2%	68.3%	12.5%	0%	-	-	-	
% Total	1.7%	25.9%	3.4%	0%	30.9%	-	4.4%	10.2%	8.7%	0%	23.2%	-	7.8%	17.9%	1.4%	0%	27.2%	-	3.6%	12.7%	2.3%	0%	18.6%	-	-	
PHF	0.750	0.799	0.766	-	0.792	-	0.800	0.925	0.573	-	0.775	-	0.770	0.855	0.875	-	0.882	-	0.619	0.734	0.531	-	0.745	-	0.801	
Lights	22	370	46	0	438	-	63	140	122	0	325	-	110	258	21	0	389	-	51	180	33	0	264	-	1416	
% Lights	91.7%	98.1%	93.9%	0%	97.3%	-	98.4%	94.6%	96.8%	0%	96.2%	-	96.5%	99.2%	100%	0%	98.5%	-	98.1%	97.3%	97.1%	0%	97.4%	-	97.4%	
Articulated Trucks	0	1	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	-	1
% Articulated Trucks	0%	0.3%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	2	6	3	0	11	-	1	8	4	0	13	-	4	2	0	0	6	-	1	5	1	0	7	-	37	
% Buses and Single-Unit Trucks	8.3%	1.6%	6.1%	0%	2.4%	-	1.6%	5.4%	3.2%	0%	3.8%	-	3.5%	0.8%	0%	0%	1.5%	-	1.9%	2.7%	2.9%	0%	2.6%	-	2.5%	
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Campbell Rd - TMC

Wed Jan 13, 2021

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807516, Location: 29.794312, -95.513942



Provided by: C. J. Hensch & Associates Inc.

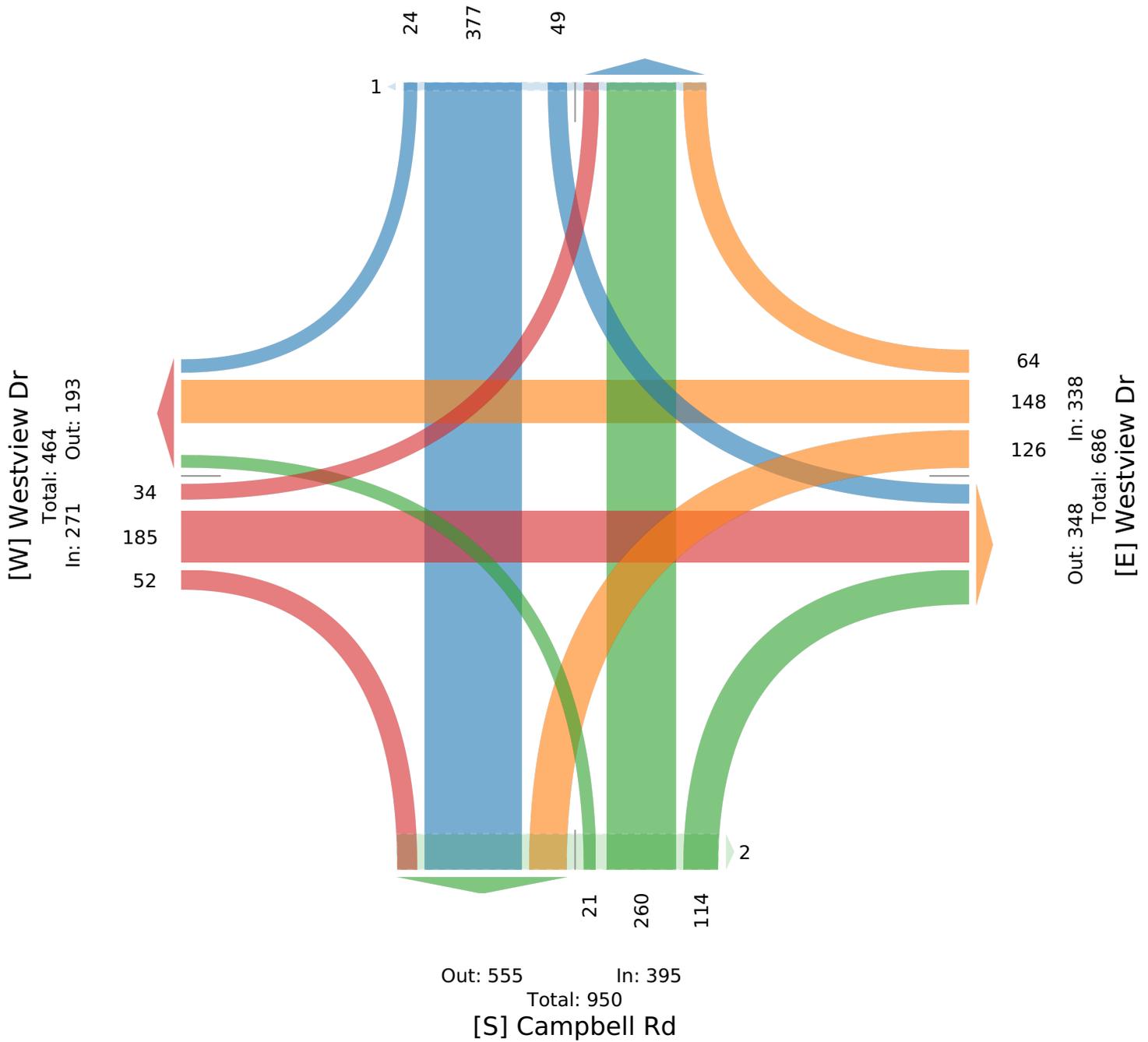
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Campbell Rd

Total: 808

In: 450

Out: 358



Westview Dr at Campbell Rd - TMC

Wed Jan 13, 2021

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807516, Location: 29.794312, -95.513942



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						Westview Dr Westbound						Campbell Rd Northbound						Westview Dr Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 4:30PM	8	87	10	0	105	0	10	70	17	0	97	0	12	96	14	0	122	0	7	51	13	0	71	0	395
4:45PM	18	71	5	0	94	0	16	37	11	0	64	0	10	88	16	0	114	2	8	55	10	0	73	0	345
5:00PM	9	93	5	0	107	0	11	37	8	0	56	0	25	97	9	0	131	1	7	49	15	0	71	0	365
5:15PM	7	84	10	0	101	1	12	59	14	0	85	0	22	105	18	0	145	0	8	64	17	0	89	0	420
Total	42	335	30	0	407	1	49	203	50	0	302	0	69	386	57	0	512	3	30	219	55	0	304	0	1525
% Approach	10.3%	82.3%	7.4%	0%	-	-	16.2%	67.2%	16.6%	0%	-	-	13.5%	75.4%	11.1%	0%	-	-	9.9%	72.0%	18.1%	0%	-	-	-
% Total	2.8%	22.0%	2.0%	0%	26.7%	-	3.2%	13.3%	3.3%	0%	19.8%	-	4.5%	25.3%	3.7%	0%	33.6%	-	2.0%	14.4%	3.6%	0%	19.9%	-	-
PHF	0.583	0.901	0.750	-	0.951	-	0.766	0.725	0.735	-	0.778	-	0.690	0.919	0.792	-	0.883	-	0.938	0.855	0.809	-	0.854	-	0.908
Lights	42	332	30	0	404	-	49	196	50	0	295	-	69	380	57	0	506	-	30	217	54	0	301	-	1506
% Lights	100%	99.1%	100%	0%	99.3%	-	100%	96.6%	100%	0%	97.7%	-	100%	98.4%	100%	0%	98.8%	-	100%	99.1%	98.2%	0%	99.0%	-	98.8%
Articulated Trucks	0	1	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	1
% Articulated Trucks	0%	0.3%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	2	0	0	2	-	0	7	0	0	7	-	0	6	0	0	6	-	0	2	1	0	3	-	18
% Buses and Single-Unit Trucks	0%	0.6%	0%	0%	0.5%	-	0%	3.4%	0%	0%	2.3%	-	0%	1.6%	0%	0%	1.2%	-	0%	0.9%	1.8%	0%	1.0%	-	1.2%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Campbell Rd - TMC

Wed Jan 13, 2021

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

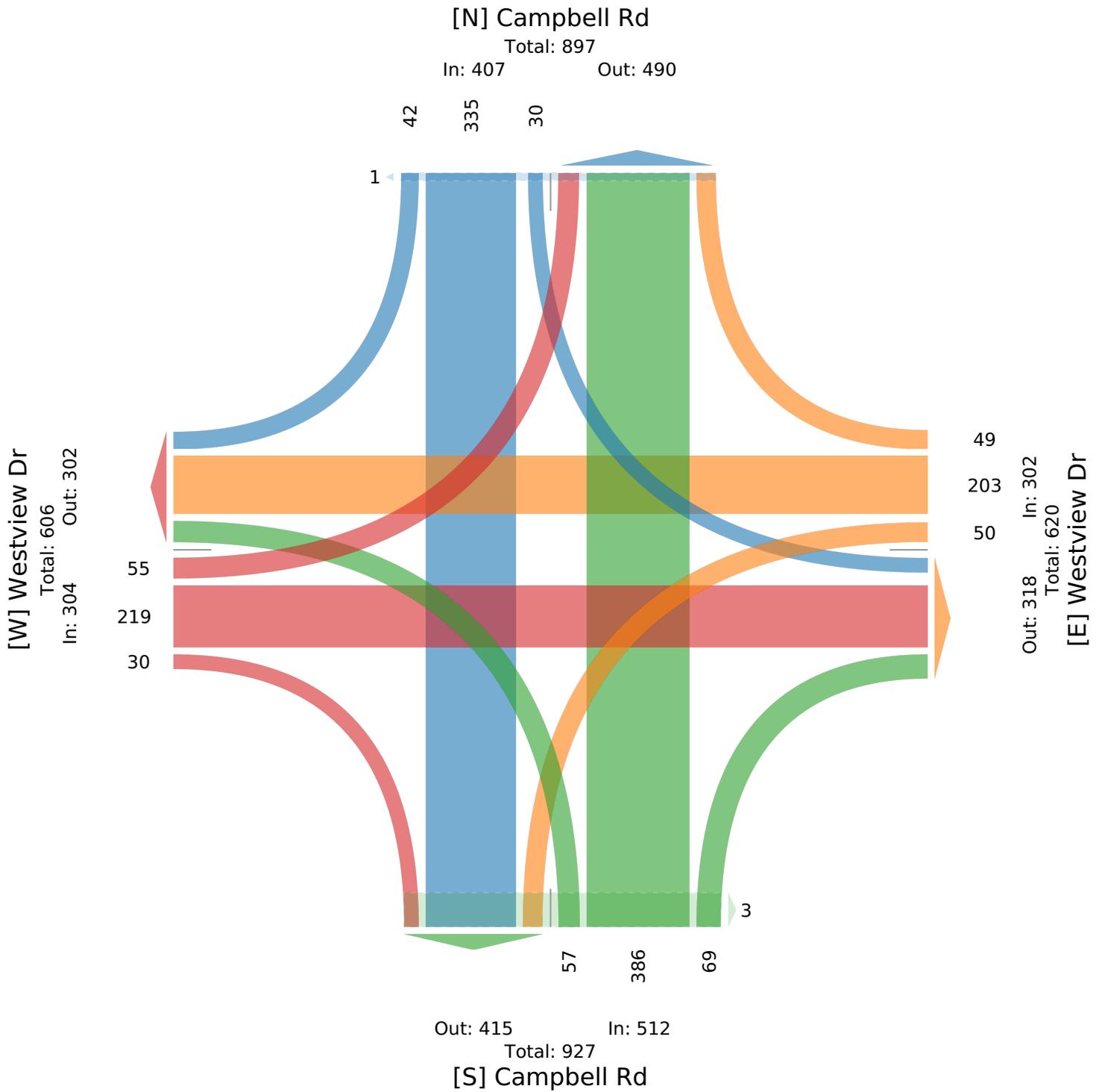
All Movements

ID: 807516, Location: 29.794312, -95.513942



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



WBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807514, Location: 29.784891, -95.513966



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						WBFR IH 10 Westbound						Campbell Rd Northbound						WBFR IH 10 Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 7:00AM	202	340	0	0	542	0	262	274	110	336	982	1	0	274	44	0	318	0	0	0	0	80	80	1	1922
8:00AM	208	306	0	0	514	2	245	333	89	103	770	0	0	256	76	0	332	0	0	0	0	156	156	3	1772
4:00PM	265	305	0	0	570	0	317	635	54	229	1235	3	0	276	216	0	492	0	0	0	0	204	204	3	2501
5:00PM	265	245	0	0	510	0	349	709	40	265	1363	1	0	234	129	0	363	0	0	0	0	110	110	5	2346
Total	940	1196	0	0	2136	2	1173	1951	293	933	4350	5	0	1040	465	0	1505	0	0	0	0	550	550	12	8541
% Approach	44.0%	56.0%	0%	0%	-	-	27.0%	44.9%	6.7%	21.4%	-	-	0%	69.1%	30.9%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	11.0%	14.0%	0%	0%	25.0%	-	13.7%	22.8%	3.4%	10.9%	50.9%	-	0%	12.2%	5.4%	0%	17.6%	-	0%	0%	0%	6.4%	6.4%	-	-
Lights	922	1182	0	0	2104	-	1163	1915	285	928	4291	-	0	1021	440	0	1461	-	0	0	0	539	539	-	8395
% Lights	98.1%	98.8%	0%	0%	98.5%	-	99.1%	98.2%	97.3%	99.5%	98.6%	-	0%	98.2%	94.6%	0%	97.1%	-	0%	0%	0%	98.0%	98.0%	-	98.3%
Articulated Trucks	1	1	0	0	2	-	0	4	0	1	5	-	0	1	3	0	4	-	0	0	0	2	2	-	13
% Articulated Trucks	0.1%	0.1%	0%	0%	0.1%	-	0%	0.2%	0%	0.1%	0.1%	-	0%	0.1%	0.6%	0%	0.3%	-	0%	0%	0%	0.4%	0.4%	-	0.2%
Buses and Single-Unit Trucks	17	13	0	0	30	-	10	32	8	4	54	-	0	18	22	0	40	-	0	0	0	9	9	-	133
% Buses and Single-Unit Trucks	1.8%	1.1%	0%	0%	1.4%	-	0.9%	1.6%	2.7%	0.4%	1.2%	-	0%	1.7%	4.7%	0%	2.7%	-	0%	0%	0%	1.6%	1.6%	-	1.6%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	8	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	40.0%	-	-	-	-	-	-	-	-	-	-	-	66.7%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	4	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	60.0%	-	-	-	-	-	-	-	-	-	-	-	33.3%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

WBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807514, Location: 29.784891, -95.513966



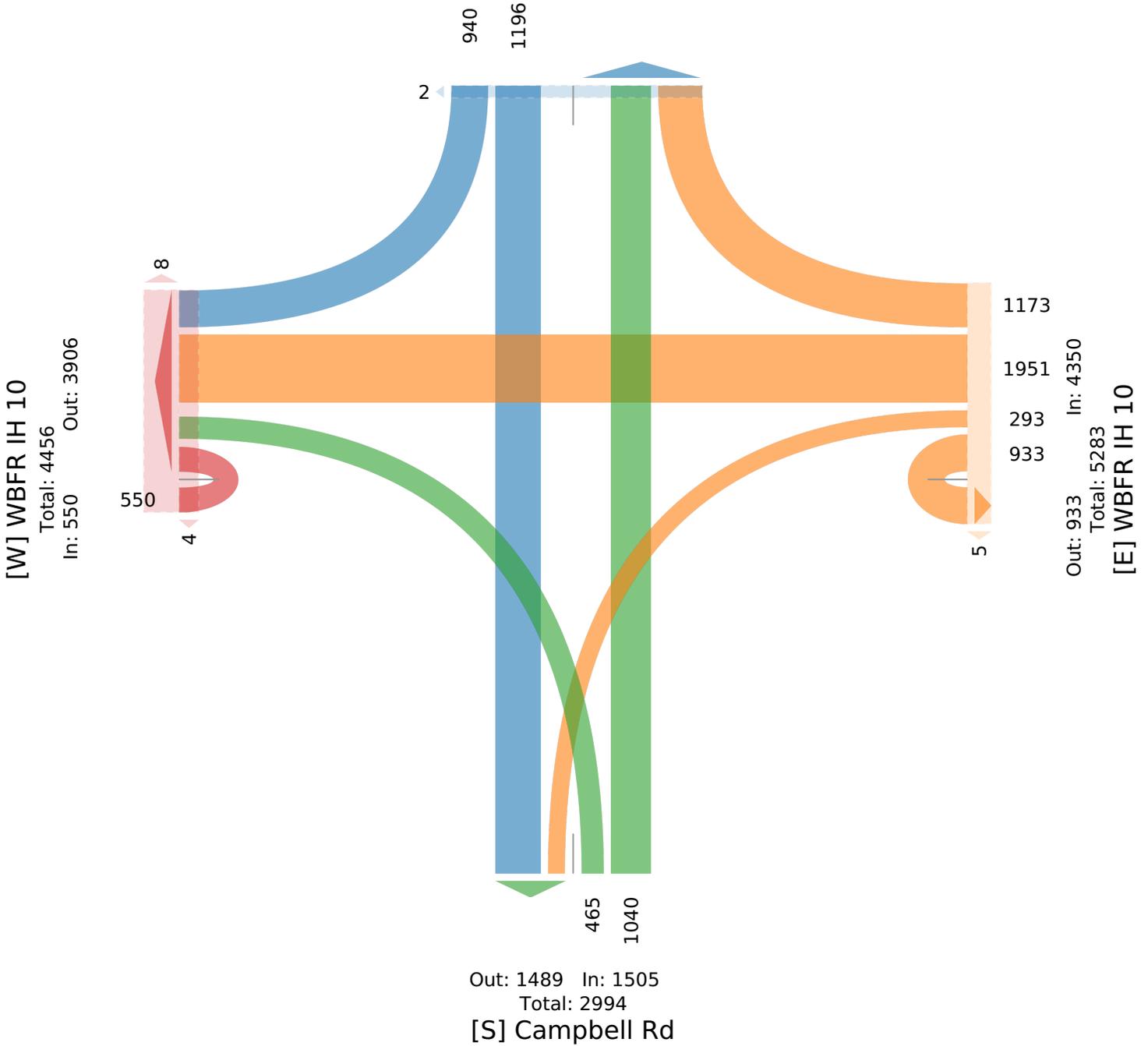
Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Campbell Rd

Total: 4349

In: 2136 Out: 2213



WBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807514, Location: 29.784891, -95.513966



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						WBFR IH 10 Westbound						Campbell Rd Northbound						WBFR IH 10 Eastbound						Int
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 7:30AM	47	108	0	0	155	0	85	73	32	101	291	0	0	86	11	0	97	0	0	0	0	18	18	0	561
7:45AM	81	109	0	0	190	0	73	74	41	94	282	1	0	89	16	0	105	0	0	0	0	33	33	0	610
8:00AM	58	90	0	0	148	0	70	54	32	48	204	0	0	59	23	0	82	0	0	0	0	27	27	2	461
8:15AM	60	74	0	0	134	1	47	110	34	23	214	0	0	72	21	0	93	0	0	0	0	40	40	0	481
Total	246	381	0	0	627	1	275	311	139	266	991	1	0	306	71	0	377	0	0	0	0	118	118	2	2113
% Approach	39.2%	60.8%	0%	0%	-	-	27.7%	31.4%	14.0%	26.8%	-	-	0%	81.2%	18.8%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	11.6%	18.0%	0%	0%	29.7%	-	13.0%	14.7%	6.6%	12.6%	46.9%	-	0%	14.5%	3.4%	0%	17.8%	-	0%	0%	0%	5.6%	5.6%	-	-
PHF	0.759	0.874	-	-	0.825	-	0.809	0.707	0.848	0.658	0.851	-	-	0.860	0.772	-	0.898	-	-	-	-	0.738	0.738	-	0.866
Lights	242	374	0	0	616	-	273	301	131	265	970	-	0	300	51	0	351	-	0	0	0	114	114	-	2051
% Lights	98.4%	98.2%	0%	0%	98.2%	-	99.3%	96.8%	94.2%	99.6%	97.9%	-	0%	98.0%	71.8%	0%	93.1%	-	0%	0%	0%	96.6%	96.6%	-	97.1%
Articulated Trucks	1	0	0	0	1	-	0	0	0	0	0	-	0	1	1	0	2	-	0	0	0	0	0	-	3
% Articulated Trucks	0.4%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0.3%	1.4%	0%	0.5%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	3	7	0	0	10	-	2	10	8	1	21	-	0	5	19	0	24	-	0	0	0	4	4	-	59
% Buses and Single-Unit Trucks	1.2%	1.8%	0%	0%	1.6%	-	0.7%	3.2%	5.8%	0.4%	2.1%	-	0%	1.6%	26.8%	0%	6.4%	-	0%	0%	0%	3.4%	3.4%	-	2.8%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

WBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807514, Location: 29.784891, -95.513966



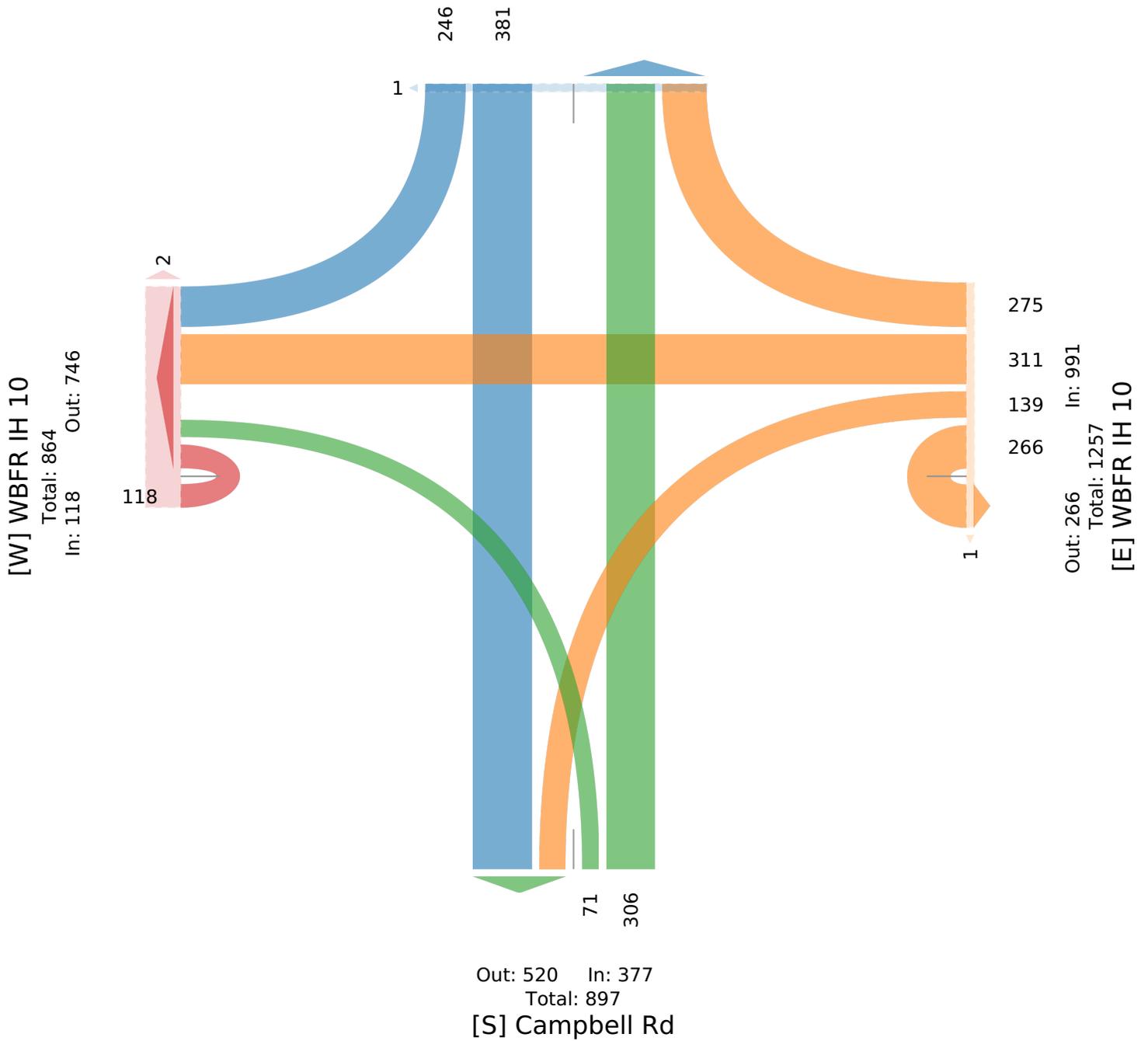
Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Campbell Rd

Total: 1208

In: 627 Out: 581



WBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807514, Location: 29.784891, -95.513966



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound					WBFR IH 10 Westbound					Campbell Rd Northbound					WBFR IH 10 Eastbound					Int				
	R	T	L	U	App Ped*	R	T	L	U	App Ped*	R	T	L	U	App Ped*	R	T	L	U	App Ped*					
2021-01-13 4:30PM	63	99	0	0	162	0	87	145	14	54	300	2	0	66	56	0	122	0	0	0	0	45	45	0	629
4:45PM	68	61	0	0	129	0	78	157	13	79	327	0	0	63	52	0	115	0	0	0	0	27	27	0	598
5:00PM	67	75	0	0	142	0	95	188	9	63	355	1	0	71	45	0	116	0	0	0	0	37	37	3	650
5:15PM	79	67	0	0	146	0	97	208	13	62	380	0	0	52	39	0	91	0	0	0	0	22	22	2	639
Total	277	302	0	0	579	0	357	698	49	258	1362	3	0	252	192	0	444	0	0	0	0	131	131	5	2516
% Approach	47.8%	52.2%	0%	0%	-	-	26.2%	51.2%	3.6%	18.9%	-	-	0%	56.8%	43.2%	0%	-	-	0%	0%	0%	100%	-	-	-
% Total	11.0%	12.0%	0%	0%	23.0%	-	14.2%	27.7%	1.9%	10.3%	54.1%	-	0%	10.0%	7.6%	0%	17.6%	-	0%	0%	0%	5.2%	5.2%	-	-
PHF	0.877	0.763	-	-	0.894	-	0.920	0.839	0.875	0.816	0.896	-	-	0.887	0.857	-	0.910	-	-	-	-	0.728	0.728	-	0.968
Lights	275	300	0	0	575	-	354	690	49	258	1351	-	0	248	189	0	437	-	0	0	0	130	130	-	2493
% Lights	99.3%	99.3%	0%	0%	99.3%	-	99.2%	98.9%	100%	100%	99.2%	-	0%	98.4%	98.4%	0%	98.4%	-	0%	0%	0%	99.2%	99.2%	-	99.1%
Articulated Trucks	0	0	0	0	0	-	0	2	0	0	2	-	0	0	2	0	2	-	0	0	0	0	0	0	4
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0.3%	0%	0%	0.1%	-	0%	0%	1.0%	0%	0.5%	-	0%	0%	0%	0%	0%	0%	0.2%
Buses and Single-Unit Trucks	2	2	0	0	4	-	3	6	0	0	9	-	0	4	1	0	5	-	0	0	0	1	1	-	19
% Buses and Single-Unit Trucks	0.7%	0.7%	0%	0%	0.7%	-	0.8%	0.9%	0%	0%	0.7%	-	0%	1.6%	0.5%	0%	1.1%	-	0%	0%	0%	0.8%	0.8%	-	0.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	40.0%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	-	3
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-	-	-	-	-	-	-	-	60.0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

WBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807514, Location: 29.784891, -95.513966



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Campbell Rd

Total: 1188

In: 579 Out: 609

277

302

[W] WBFR IH 10

Total: 1429

In: 131 Out: 1298

131

5

357

698

49

258

3

Out: 258 In: 1362

Total: 1620

[E] WBFR IH 10

Out: 351 In: 444

Total: 795

[S] Campbell Rd

192

252

EBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807515, Location: 29.783841, -95.513955



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						EBFR IH 10 Westbound						Campbell Rd Northbound						EBFR IH 10 Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 7:00AM	0	154	291	0	445	0	0	0	0	360	360	0	14	53	0	0	67	0	90	324	265	75	754	1	1626
8:00AM	0	154	265	0	419	0	0	0	0	392	392	0	27	109	0	0	136	0	133	547	222	155	1057	2	2004
4:00PM	0	92	273	1	366	0	0	0	0	267	267	4	63	283	0	0	346	0	84	529	205	194	1012	3	1991
5:00PM	0	55	230	0	285	0	0	0	0	271	271	1	33	162	0	0	195	0	47	397	197	102	743	4	1494
Total	0	455	1059	1	1515	0	0	0	0	1290	1290	5	137	607	0	0	744	0	354	1797	889	526	3566	10	7115
% Approach	0%	30.0%	69.9%	0.1%	-	-	0%	0%	0%	100%	-	-	18.4%	81.6%	0%	0%	-	-	9.9%	50.4%	24.9%	14.8%	-	-	-
% Total	0%	6.4%	14.9%	0%	21.3%	-	0%	0%	0%	18.1%	18.1%	-	1.9%	8.5%	0%	0%	10.5%	-	5.0%	25.3%	12.5%	7.4%	50.1%	-	-
Lights	0	439	1053	1	1493	-	0	0	0	1280	1280	-	135	576	0	0	711	-	343	1767	880	516	3506	-	6990
% Lights	0%	96.5%	99.4%	100%	98.5%	-	0%	0%	0%	99.2%	99.2%	-	98.5%	94.9%	0%	0%	95.6%	-	96.9%	98.3%	99.0%	98.1%	98.3%	-	98.2%
Articulated Trucks	0	0	1	0	1	-	0	0	0	1	1	-	0	1	0	0	1	-	0	1	1	0	2	-	5
% Articulated Trucks	0%	0%	0.1%	0%	0.1%	-	0%	0%	0%	0.1%	0.1%	-	0%	0.2%	0%	0%	0.1%	-	0%	0.1%	0.1%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	0	16	5	0	21	-	0	0	0	9	9	-	2	30	0	0	32	-	11	29	8	10	58	-	120
% Buses and Single-Unit Trucks	0%	3.5%	0.5%	0%	1.4%	-	0%	0%	0%	0.7%	0.7%	-	1.5%	4.9%	0%	0%	4.3%	-	3.1%	1.6%	0.9%	1.9%	1.6%	-	1.7%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	-	7
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	40.0%	-	-	-	-	-	-	-	-	-	-	-	-	70.0%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	-	3
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	60.0%	-	-	-	-	-	-	-	-	-	-	-	-	30.0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

EBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

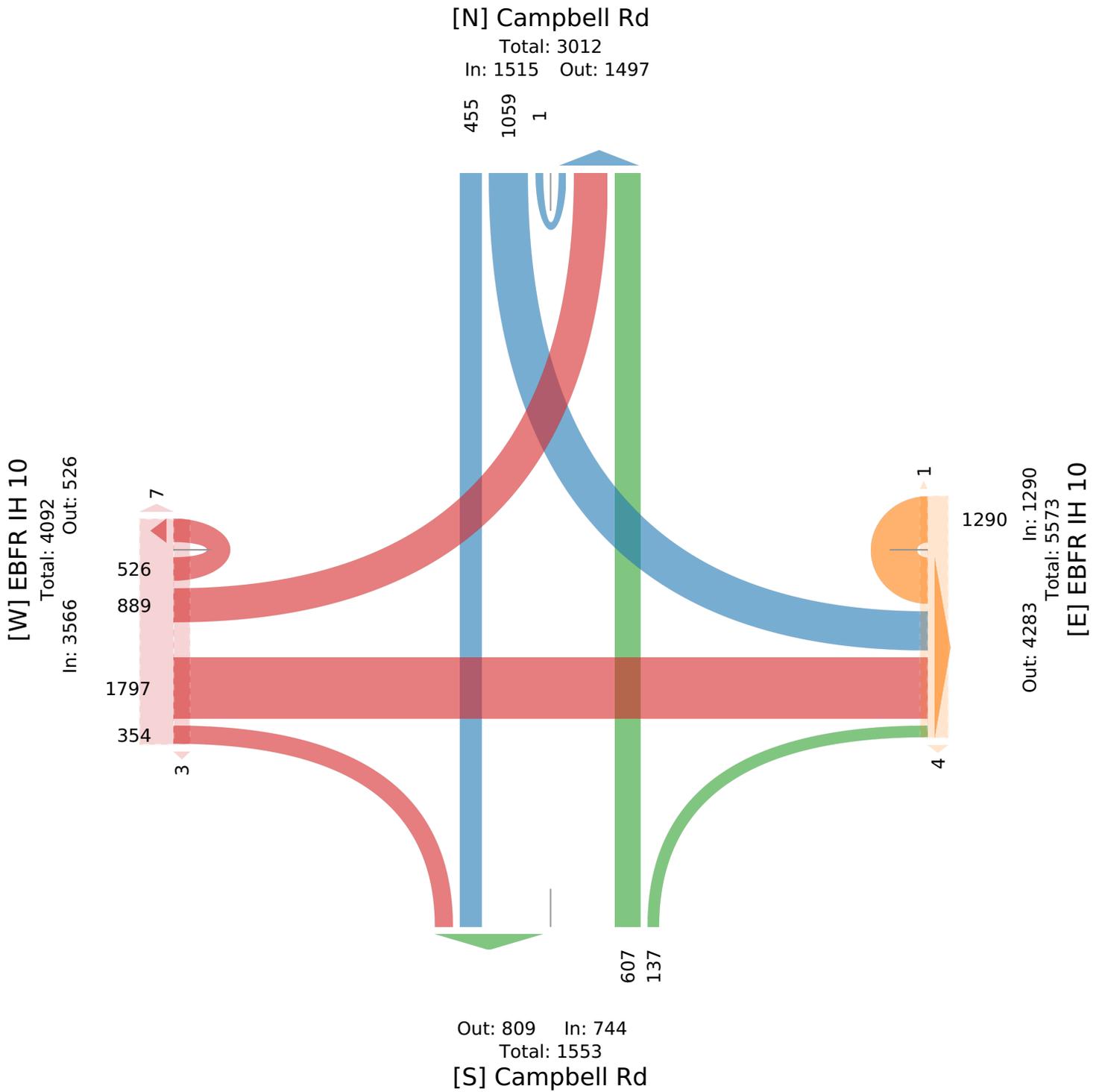
All Movements

ID: 807515, Location: 29.783841, -95.513955



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



EBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

AM Peak (7:45 AM - 8:45 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807515, Location: 29.783841, -95.513955



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						EBFR IH 10 Westbound						Campbell Rd Northbound						EBFR IH 10 Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 7:45AM	0	59	95	0	154	0	0	0	0	117	117	0	4	20	0	0	24	0	34	106	83	31	254	0	549
8:00AM	0	49	77	0	126	0	0	0	0	106	106	0	2	30	0	0	32	0	39	96	53	28	216	2	480
8:15AM	0	56	60	0	116	0	0	0	0	111	111	0	6	33	0	0	39	0	37	166	57	42	302	0	568
8:30AM	0	24	74	0	98	0	0	0	0	87	87	0	8	23	0	0	31	0	33	180	59	57	329	0	545
Total	0	188	306	0	494	0	0	0	0	421	421	0	20	106	0	0	126	0	143	548	252	158	1101	2	2142
% Approach	0%	38.1%	61.9%	0%	-	-	0%	0%	0%	100%	-	-	15.9%	84.1%	0%	0%	-	-	13.0%	49.8%	22.9%	14.4%	-	-	-
% Total	0%	8.8%	14.3%	0%	23.1%	-	0%	0%	0%	19.7%	19.7%	-	0.9%	4.9%	0%	0%	5.9%	-	6.7%	25.6%	11.8%	7.4%	51.4%	-	-
PHF	-	0.797	0.805	-	0.802	-	-	-	-	0.900	0.900	-	0.625	0.803	-	-	0.808	-	0.917	0.761	0.759	0.693	0.837	-	0.943
Lights	0	177	302	0	479	-	0	0	0	420	420	-	20	86	0	0	106	-	137	536	250	154	1077	-	2082
% Lights	0%	94.1%	98.7%	0%	97.0%	-	0%	0%	0%	99.8%	99.8%	-	100%	81.1%	0%	0%	84.1%	-	95.8%	97.8%	99.2%	97.5%	97.8%	-	97.2%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0.4%	0%	0.1%	-	0%
Buses and Single-Unit Trucks	0	11	4	0	15	-	0	0	0	1	1	-	0	20	0	0	20	-	6	12	1	4	23	-	59
% Buses and Single-Unit Trucks	0%	5.9%	1.3%	0%	3.0%	-	0%	0%	0%	0.2%	0.2%	-	0%	18.9%	0%	0%	15.9%	-	4.2%	2.2%	0.4%	2.5%	2.1%	-	2.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

EBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

AM Peak (7:45 AM - 8:45 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807515, Location: 29.783841, -95.513955



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

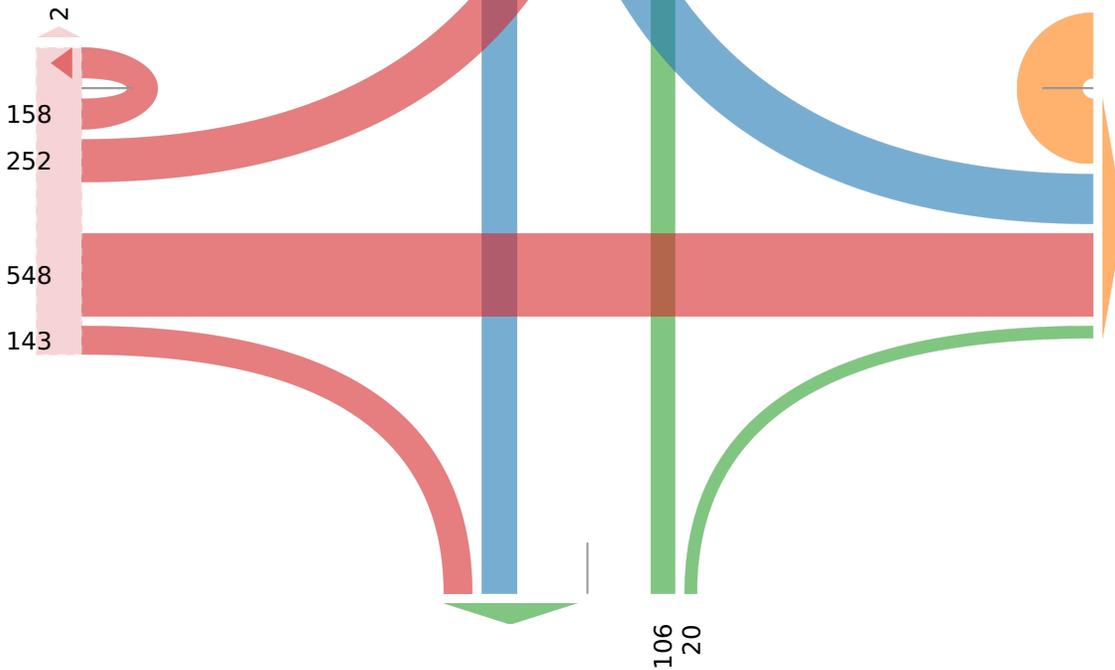
[N] Campbell Rd

Total: 852

In: 494 Out: 358

188
306

[W] EBFR IH 10
Total: 1259
In: 1101 Out: 158



[E] EBFR IH 10
Total: 1716
In: 421 Out: 1295

Out: 331 In: 126
Total: 457

[S] Campbell Rd

EBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

PM Peak (4 PM - 5 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807515, Location: 29.783841, -95.513955



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						EBFR IH 10 Westbound						Campbell Rd Northbound						EBFR IH 10 Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 4:00PM	0	27	69	0	96	0	0	0	0	64	64	1	17	89	0	0	106	0	21	187	62	77	347	0	613
4:15PM	0	25	57	0	82	0	0	0	0	64	64	0	13	63	0	0	76	0	21	111	41	48	221	3	443
4:30PM	0	22	89	1	112	0	0	0	0	57	57	2	15	65	0	0	80	0	20	109	55	43	227	0	476
4:45PM	0	18	58	0	76	0	0	0	0	82	82	1	18	66	0	0	84	0	22	122	47	26	217	0	459
Total	0	92	273	1	366	0	0	0	0	267	267	4	63	283	0	0	346	0	84	529	205	194	1012	3	1991
% Approach	0%	25.1%	74.6%	0.3%	-	-	0%	0%	0%	100%	-	-	18.2%	81.8%	0%	0%	-	-	8.3%	52.3%	20.3%	19.2%	-	-	-
% Total	0%	4.6%	13.7%	0.1%	18.4%	-	0%	0%	0%	13.4%	13.4%	-	3.2%	14.2%	0%	0%	17.4%	-	4.2%	26.6%	10.3%	9.7%	50.8%	-	-
PHF	-	0.852	0.767	0.250	0.817	-	-	-	-	0.814	0.814	-	0.875	0.795	-	-	0.816	-	0.955	0.707	0.827	0.630	0.729	-	0.812
Lights	0	91	272	1	364	-	0	0	0	267	267	-	62	273	0	0	335	-	82	525	203	192	1002	-	1968
% Lights	0%	98.9%	99.6%	100%	99.5%	-	0%	0%	0%	100%	100%	-	98.4%	96.5%	0%	0%	96.8%	-	97.6%	99.2%	99.0%	99.0%	99.0%	-	98.8%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.2%	0%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	0	1	1	0	2	-	0	0	0	0	0	-	1	10	0	0	11	-	2	3	2	2	9	-	22
% Buses and Single-Unit Trucks	0%	1.1%	0.4%	0%	0.5%	-	0%	0%	0%	0%	0%	-	1.6%	3.5%	0%	0%	3.2%	-	2.4%	0.6%	1.0%	1.0%	0.9%	-	1.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-50.0%	-	-	-	-	-	-	-	-	-	-	-	-100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-50.0%	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

EBFR IH 10 at Campbell Rd - TMC

Wed Jan 13, 2021

PM Peak (4 PM - 5 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807515, Location: 29.783841, -95.513955



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

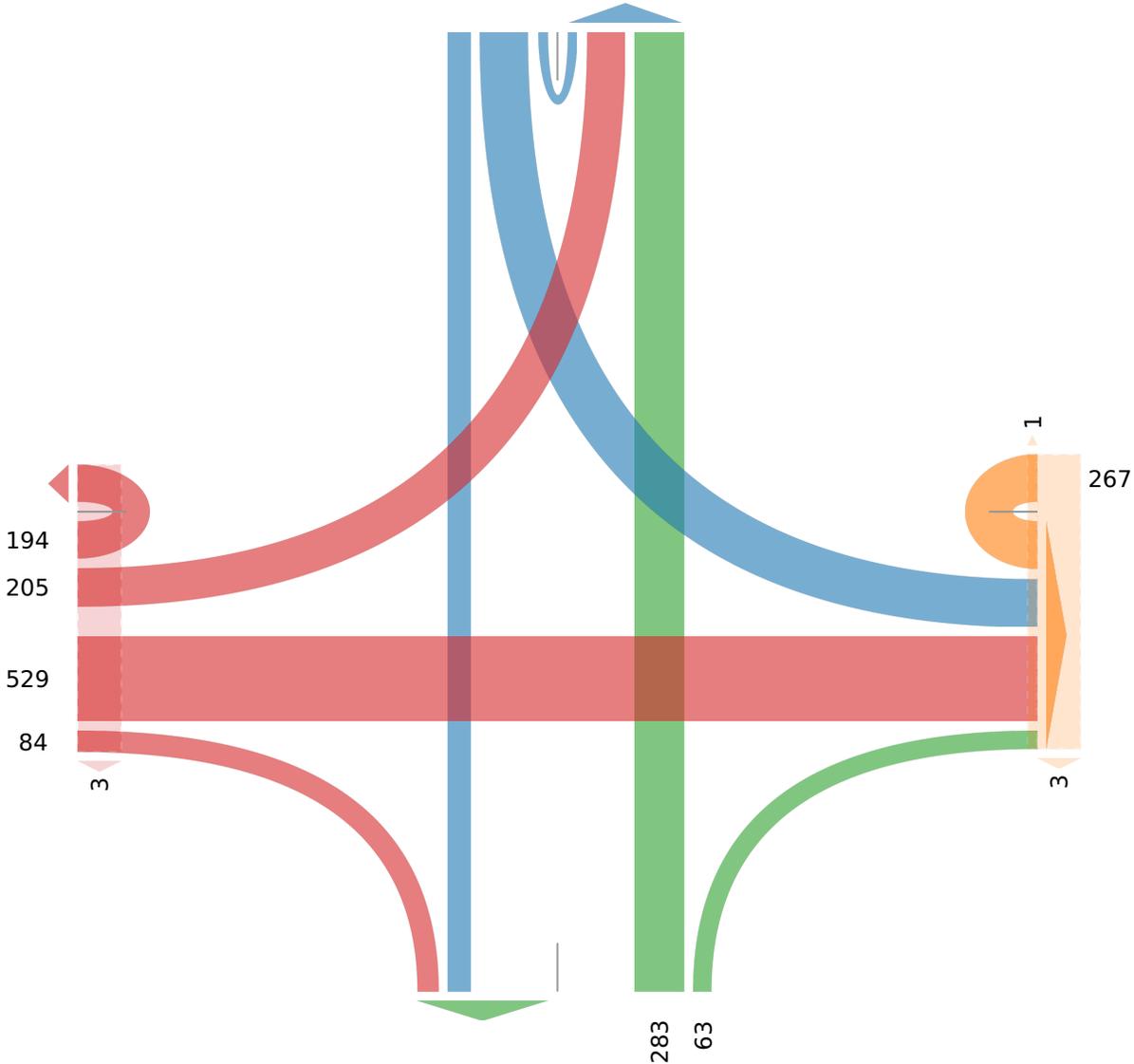
[N] Campbell Rd

Total: 855

In: 366 Out: 489

92
273
1

[W] EBFR IH 10
Total: 1206
In: 1012 Out: 194



[E] EBFR IH 10
Total: 1399
In: 267 Out: 1132

Out: 176 In: 346
Total: 522

[S] Campbell Rd

Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bracher St Southbound						Westview Dr Westbound						Voss Rd Northbound						Westview Dr Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 6:00AM	6	3	19	0	28	0	3	41	6	0	50	0	17	2	2	0	21	0	2	60	1	0	63	4	162
7:00AM	21	8	79	0	108	6	25	210	30	0	265	0	58	19	9	0	86	2	3	212	4	0	219	4	678
8:00AM	9	21	57	0	87	2	26	122	15	0	163	0	26	22	6	0	54	0	5	155	9	0	169	2	473
9:00AM	6	7	43	0	56	2	21	125	14	1	161	2	21	25	5	0	51	4	5	145	4	0	154	12	422
10:00AM	20	3	36	0	59	4	24	137	17	0	178	0	32	19	13	0	64	0	1	137	14	0	152	6	453
11:00AM	16	7	50	0	73	0	19	130	18	0	167	2	30	23	10	0	63	0	7	147	8	0	162	14	465
12:00PM	10	6	46	0	62	1	34	176	17	0	227	0	22	19	9	0	50	0	16	168	12	0	196	12	535
1:00PM	18	11	41	0	70	1	27	139	17	0	183	0	26	25	10	0	61	1	8	205	7	1	221	4	535
2:00PM	12	5	48	0	65	1	48	193	30	0	271	0	38	26	14	0	78	1	11	225	8	0	244	2	658
3:00PM	24	26	45	0	95	9	35	250	22	0	307	0	32	45	13	0	90	5	10	216	16	0	242	10	734
4:00PM	16	15	35	0	66	7	37	251	32	0	320	0	55	61	12	0	128	5	11	263	21	0	295	19	809
5:00PM	15	11	49	0	75	4	48	248	30	0	326	0	48	54	16	0	118	10	7	216	14	0	237	11	756
6:00PM	22	11	39	0	72	0	42	160	14	0	216	1	28	25	9	0	62	3	13	156	12	0	181	4	531
Total	195	134	587	0	916	37	389	2182	262	1	2834	5	433	365	128	0	926	31	99	2305	130	1	2535	104	7211
% Approach	21.3%	14.6%	64.1%	0%	-	-	13.7%	77.0%	9.2%	0%	-	-	46.8%	39.4%	13.8%	0%	-	-	3.9%	90.9%	5.1%	0%	-	-	-
% Total	2.7%	1.9%	8.1%	0%	12.7%	-	5.4%	30.3%	3.6%	0%	39.3%	-	6.0%	5.1%	1.8%	0%	12.8%	-	1.4%	32.0%	1.8%	0%	35.2%	-	-
Lights	193	134	579	0	906	-	385	2132	251	1	2769	-	420	364	126	0	910	-	94	2235	128	1	2458	-	7043
% Lights	99.0%	100%	98.6%	0%	98.9%	-	99.0%	97.7%	95.8%	100%	97.7%	-	97.0%	99.7%	98.4%	0%	98.3%	-	94.9%	97.0%	98.5%	100%	97.0%	-	97.7%
Articulated Trucks	0	0	0	0	0	-	0	2	0	0	2	-	0	0	0	0	0	-	0	3	0	0	3	-	5
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0.1%
Buses and Single-Unit Trucks	2	0	8	0	10	-	4	48	11	0	63	-	13	1	2	0	16	-	5	67	2	0	74	-	163
% Buses and Single-Unit Trucks	1.0%	0%	1.4%	0%	1.1%	-	1.0%	2.2%	4.2%	0%	2.2%	-	3.0%	0.3%	1.6%	0%	1.7%	-	5.1%	2.9%	1.5%	0%	2.9%	-	2.3%
Pedestrians	-	-	-	-	-	16	-	-	-	-	-	5	-	-	-	-	-	26	-	-	-	-	-	83	
% Pedestrians	-	-	-	-	-	43.2%	-	-	-	-	-	100%	-	-	-	-	-	83.9%	-	-	-	-	-	79.8%	-
Bicycles on Crosswalk	-	-	-	-	-	21	-	-	-	-	-	0	-	-	-	-	-	5	-	-	-	-	-	21	
% Bicycles on Crosswalk	-	-	-	-	-	56.8%	-	-	-	-	-	0%	-	-	-	-	-	16.1%	-	-	-	-	-	20.2%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

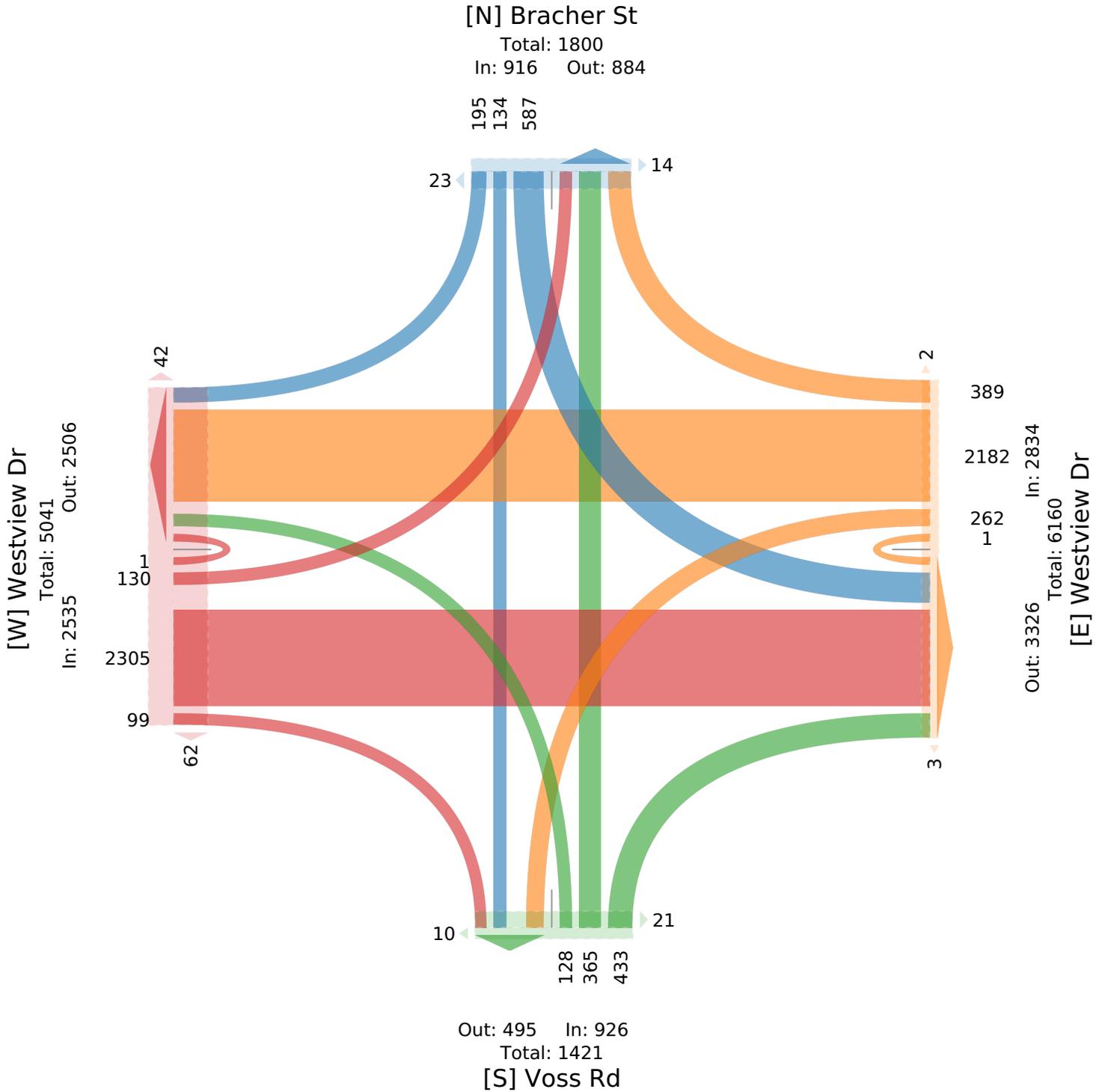
All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bracher St Southbound						Westview Dr Westbound						Voss Rd Northbound						Westview Dr Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 7:00AM	5	3	20	0	28	0	4	34	4	0	42	0	24	1	1	0	26	0	0	71	0	0	71	1	167
7:15AM	4	4	22	0	30	1	6	69	13	0	88	0	12	1	2	0	15	0	0	47	2	0	49	1	182
7:30AM	5	1	19	0	25	2	4	53	6	0	63	0	9	7	1	0	17	2	0	46	1	0	47	2	152
7:45AM	7	0	18	0	25	3	11	54	7	0	72	0	13	10	5	0	28	0	3	48	1	0	52	0	177
Total	21	8	79	0	108	6	25	210	30	0	265	0	58	19	9	0	86	2	3	212	4	0	219	4	678
% Approach	19.4%	7.4%	73.1%	0%	-	-	9.4%	79.2%	11.3%	0%	-	-	67.4%	22.1%	10.5%	0%	-	-	1.4%	96.8%	1.8%	0%	-	-	-
% Total	3.1%	1.2%	11.7%	0%	15.9%	-	3.7%	31.0%	4.4%	0%	39.1%	-	8.6%	2.8%	1.3%	0%	12.7%	-	0.4%	31.3%	0.6%	0%	32.3%	-	-
PHF	0.750	0.500	0.898	-	0.900	-	0.568	0.761	0.577	-	0.753	-	0.604	0.475	0.450	-	0.768	-	0.250	0.746	0.500	-	0.771	-	0.931
Lights	20	8	77	0	105	-	25	207	29	0	261	-	56	19	9	0	84	-	3	208	4	0	215	-	665
% Lights	95.2%	100%	97.5%	0%	97.2%	-	100%	98.6%	96.7%	0%	98.5%	-	96.6%	100%	100%	0%	97.7%	-	100%	98.1%	100%	0%	98.2%	-	98.1%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	1	0	2	0	3	-	0	3	1	0	4	-	2	0	0	0	2	-	0	4	0	0	4	-	13
% Buses and Single-Unit Trucks	4.8%	0%	2.5%	0%	2.8%	-	0%	1.4%	3.3%	0%	1.5%	-	3.4%	0%	0%	0%	2.3%	-	0%	1.9%	0%	0%	1.8%	-	1.9%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	2	-
% Pedestrians	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	50.0%	-
Bicycles on Crosswalk	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-
% Bicycles on Crosswalk	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	50.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

AM Peak (7 AM - 8 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Bracher St

Total: 156

In: 108 Out: 48

21 8 79

6

2

25

210

30

212

3

2

9 19 58

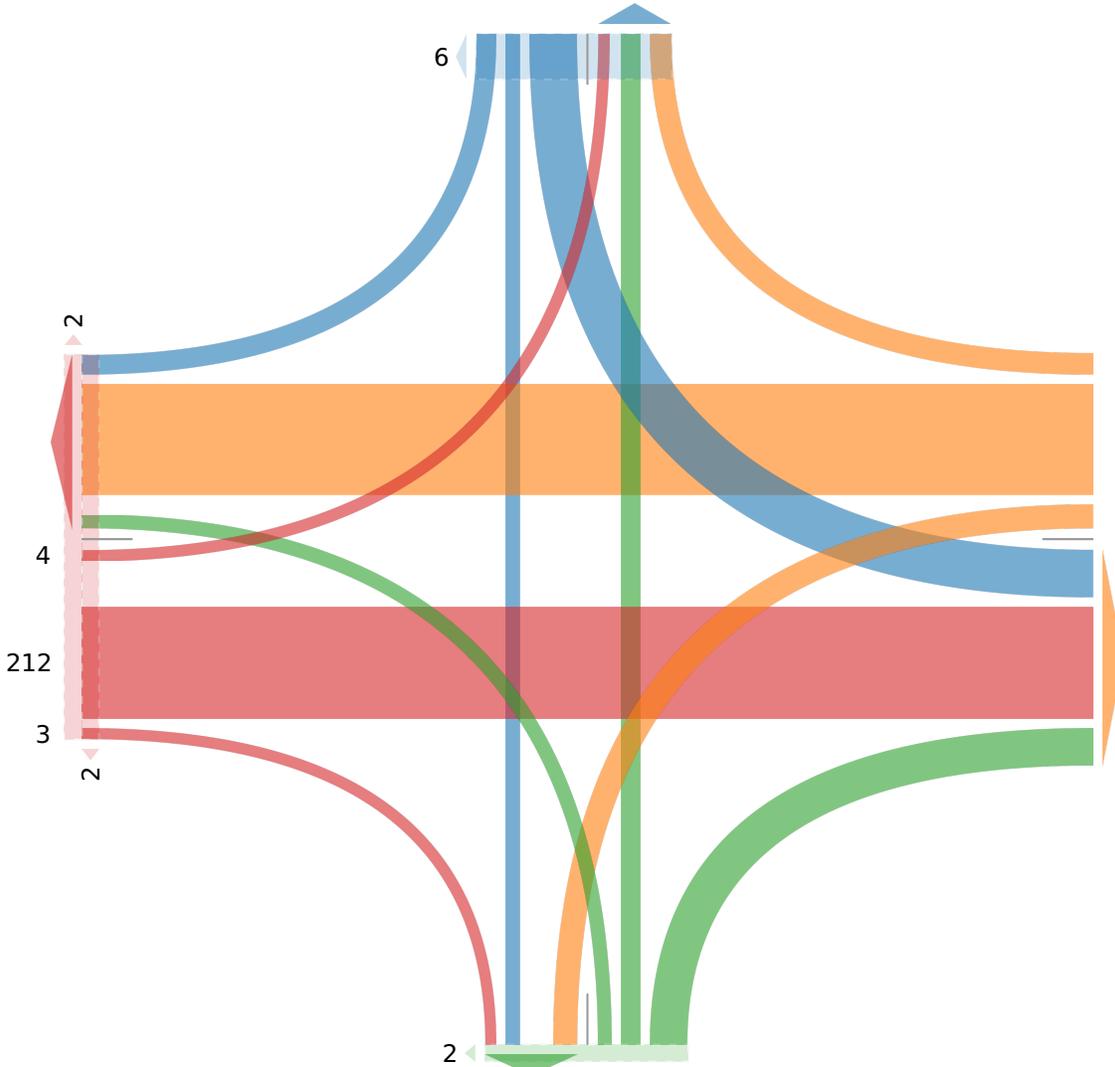
Out: 41 In: 86

Total: 127

[S] Voss Rd

[W] Westview Dr
Total: 459
In: 219 Out: 240

[E] Westview Dr
In: 265
Total: 614
Out: 349



Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

Midday Peak (12 PM - 1 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bracher St Southbound						Westview Dr Westbound						Voss Rd Northbound						Westview Dr Eastbound						Int
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 12:00PM	4	2	9	0	15	1	9	37	4	0	50	0	7	1	2	0	10	0	6	41	3	0	50	5	125
12:15PM	2	0	17	0	19	0	8	42	3	0	53	0	5	7	4	0	16	0	6	40	2	0	48	4	136
12:30PM	3	2	10	0	15	0	10	51	7	0	68	0	4	6	1	0	11	0	3	41	5	0	49	1	143
12:45PM	1	2	10	0	13	0	7	46	3	0	56	0	6	5	2	0	13	0	1	46	2	0	49	2	131
Total	10	6	46	0	62	1	34	176	17	0	227	0	22	19	9	0	50	0	16	168	12	0	196	12	535
% Approach	16.1%	9.7%	74.2%	0%	-	-	15.0%	77.5%	7.5%	0%	-	-	44.0%	38.0%	18.0%	0%	-	-	8.2%	85.7%	6.1%	0%	-	-	-
% Total	1.9%	1.1%	8.6%	0%	11.6%	-	6.4%	32.9%	3.2%	0%	42.4%	-	4.1%	3.6%	1.7%	0%	9.3%	-	3.0%	31.4%	2.2%	0%	36.6%	-	-
PHF	0.625	0.750	0.676	-	0.816	-	0.850	0.863	0.607	-	0.835	-	0.786	0.679	0.563	-	0.781	-	0.667	0.913	0.600	-	0.980	-	0.935
Lights	10	6	45	0	61	-	34	175	17	0	226	-	21	19	9	0	49	-	16	164	12	0	192	-	528
% Lights	100%	100%	97.8%	0%	98.4%	-	100%	99.4%	100%	0%	99.6%	-	95.5%	100%	100%	0%	98.0%	-	100%	97.6%	100%	0%	98.0%	-	98.7%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	0	1	0	1	-	0	1	0	0	1	-	1	0	0	0	1	-	0	4	0	0	4	-	7
% Buses and Single-Unit Trucks	0%	0%	2.2%	0%	1.6%	-	0%	0.6%	0%	0%	0.4%	-	4.5%	0%	0%	0%	2.0%	-	0%	2.4%	0%	0%	2.0%	-	1.3%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	12	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

Midday Peak (12 PM - 1 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

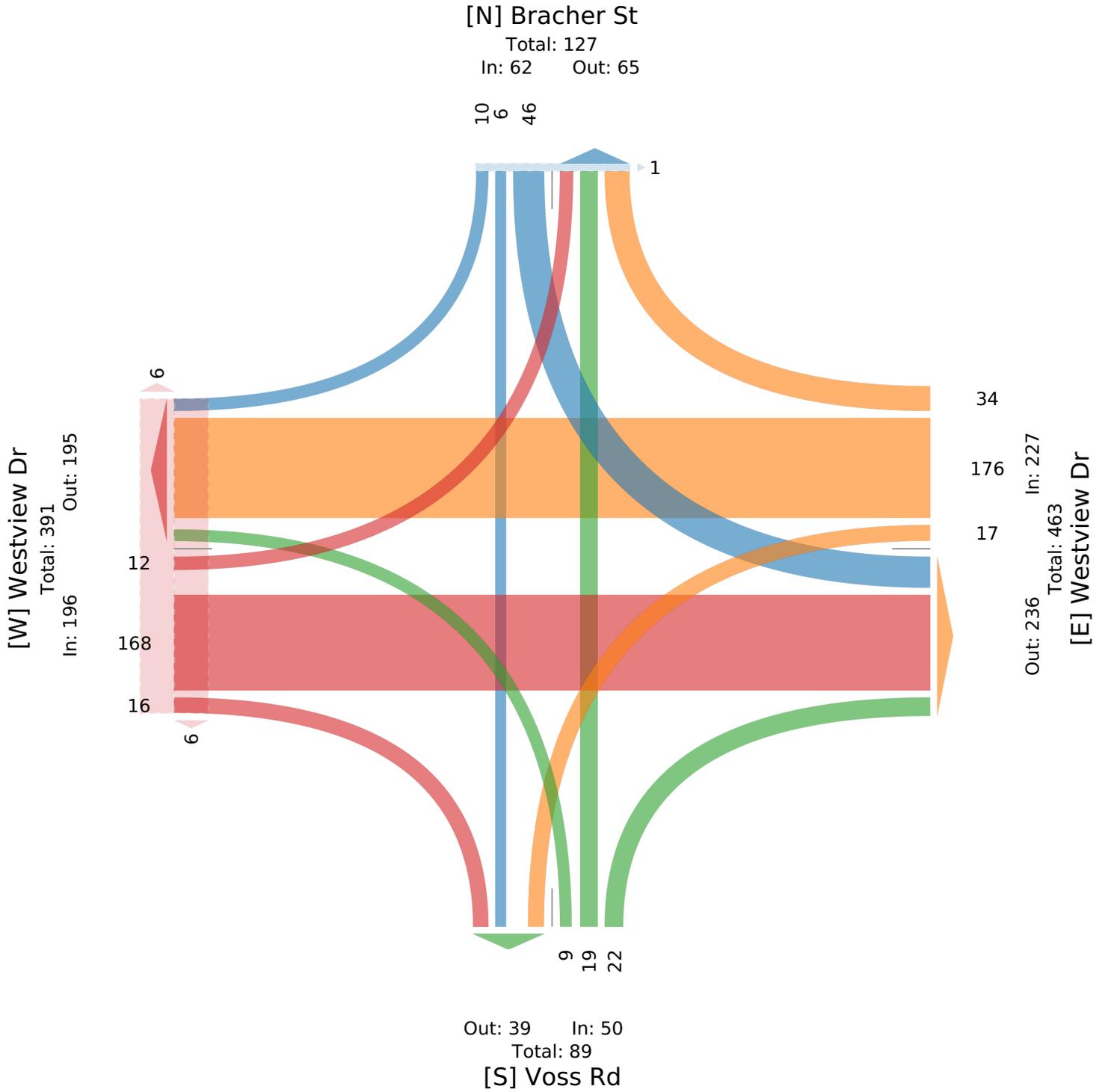
All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Bracher St Southbound						Westview Dr Westbound						Voss Rd Northbound						Westview Dr Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 4:00PM	5	3	6	0	14	3	7	67	8	0	82	0	8	17	3	0	28	2	0	70	8	0	78	6	202
4:15PM	2	2	10	0	14	3	9	69	8	0	86	0	15	15	4	0	34	1	2	64	4	0	70	4	204
4:30PM	4	6	8	0	18	0	8	64	5	0	77	0	15	12	1	0	28	2	4	68	6	0	78	3	201
4:45PM	5	4	11	0	20	1	13	51	11	0	75	0	17	17	4	0	38	0	5	61	3	0	69	6	202
Total	16	15	35	0	66	7	37	251	32	0	320	0	55	61	12	0	128	5	11	263	21	0	295	19	809
% Approach	24.2%	22.7%	53.0%	0%	-	-	11.6%	78.4%	10.0%	0%	-	-	43.0%	47.7%	9.4%	0%	-	-	3.7%	89.2%	7.1%	0%	-	-	-
% Total	2.0%	1.9%	4.3%	0%	8.2%	-	4.6%	31.0%	4.0%	0%	39.6%	-	6.8%	7.5%	1.5%	0%	15.8%	-	1.4%	32.5%	2.6%	0%	36.5%	-	-
PHF	0.800	0.625	0.795	-	0.825	-	0.712	0.909	0.727	-	0.930	-	0.809	0.897	0.750	-	0.842	-	0.550	0.939	0.656	-	0.946	-	0.991
Lights	16	15	34	0	65	-	36	239	30	0	305	-	53	61	12	0	126	-	11	258	21	0	290	-	786
% Lights	100%	100%	97.1%	0%	98.5%	-	97.3%	95.2%	93.8%	0%	95.3%	-	96.4%	100%	100%	0%	98.4%	-	100%	98.1%	100%	0%	98.3%	-	97.2%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.4%	0%	0%	0.3%	-	0.1%
Buses and Single-Unit Trucks	0	0	1	0	1	-	1	12	2	0	15	-	2	0	0	0	2	-	0	4	0	0	4	-	22
% Buses and Single-Unit Trucks	0%	0%	2.9%	0%	1.5%	-	2.7%	4.8%	6.3%	0%	4.7%	-	3.6%	0%	0%	0%	1.6%	-	0%	1.5%	0%	0%	1.4%	-	2.7%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	13	-
% Pedestrians	-	-	-	-	-	28.6%	-	-	-	-	-	-	-	-	-	-	-	80.0%	-	-	-	-	-	68.4%	-
Bicycles on Crosswalk	-	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	6	-
% Bicycles on Crosswalk	-	-	-	-	-	71.4%	-	-	-	-	-	-	-	-	-	-	-	20.0%	-	-	-	-	-	31.6%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Westview Dr at Voss Rd/Bracher St - TMC

Wed Jan 13, 2021

PM Peak (4 PM - 5 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807506, Location: 29.793853, -95.50377



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

[N] Bracher St

Total: 185

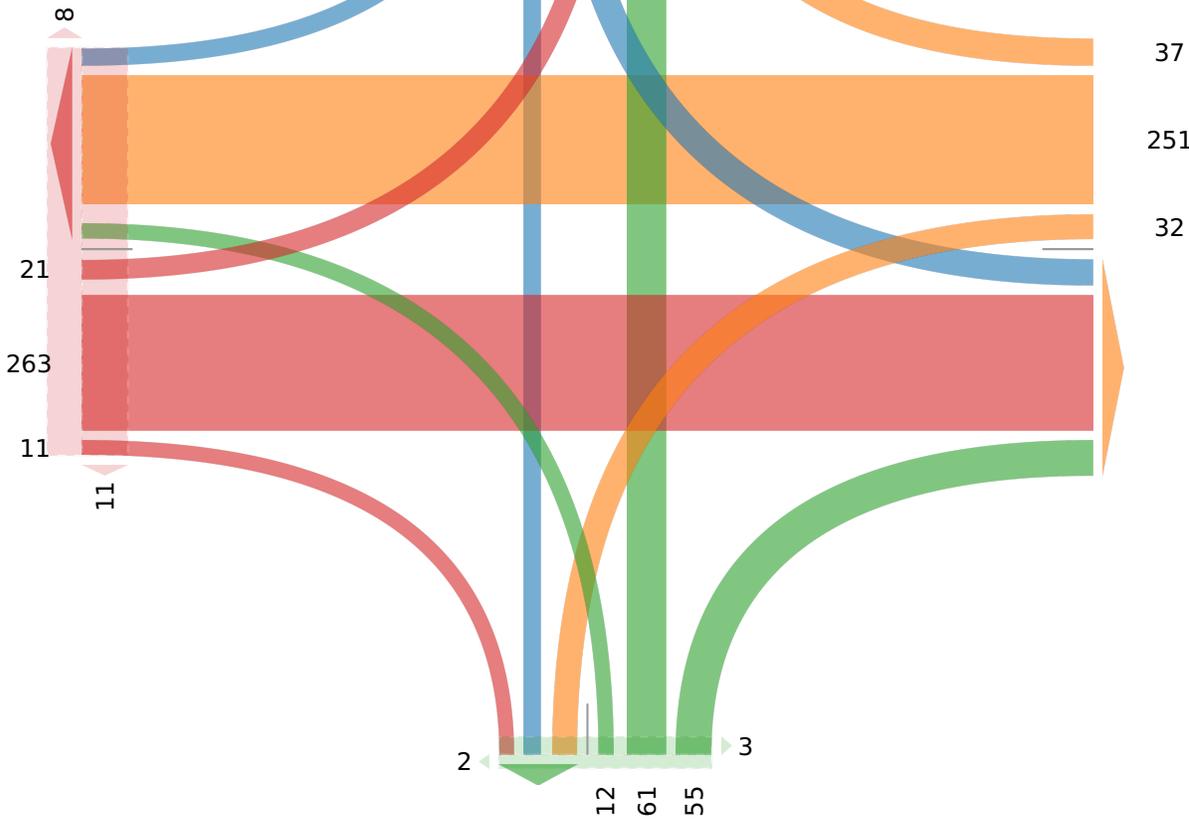
In: 66 Out: 119

16 15 35

6 1

[W] Westview Dr

Total: 574
In: 295 Out: 279



Out: 58 In: 128
Total: 186
[S] Voss Rd

Out: 353 In: 320
Total: 673
[E] Westview Dr

Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						W Tex Dr Westbound						Campbell Rd Northbound						Anne St Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 6:00AM	2	164	0	0	166	0	0	0	0	0	0	5	0	175	1	0	176	0	7	0	2	0	9	1	351
7:00AM	3	531	2	0	536	0	1	0	4	0	5	0	14	488	6	0	508	0	14	0	3	0	17	2	1066
8:00AM	4	480	5	0	489	0	0	1	5	0	6	0	11	442	7	0	460	0	18	1	1	0	20	2	975
9:00AM	1	338	1	0	340	0	0	0	4	0	4	0	9	341	11	0	361	0	11	0	2	0	13	1	718
10:00AM	2	319	6	0	327	0	2	0	6	0	8	0	6	341	8	1	356	0	10	0	2	0	12	2	703
11:00AM	2	375	4	0	381	0	5	0	24	0	29	0	4	362	14	1	381	0	11	0	3	0	14	1	805
12:00PM	3	384	4	0	391	0	8	0	11	0	19	0	6	405	9	3	423	1	8	0	2	0	10	6	843
1:00PM	2	394	5	0	401	0	4	0	11	0	15	0	8	388	9	3	408	0	9	0	5	0	14	6	838
2:00PM	5	401	1	0	407	0	2	0	12	0	14	0	1	392	18	2	413	0	15	0	1	0	16	2	850
3:00PM	3	531	3	0	537	0	1	0	14	0	15	0	6	515	15	2	538	0	13	0	1	0	14	3	1104
4:00PM	2	508	2	0	512	0	5	0	29	0	34	1	3	564	16	1	584	0	20	0	4	0	24	6	1154
5:00PM	3	471	0	0	474	0	5	0	25	0	30	0	0	552	24	1	577	0	8	0	1	0	9	7	1090
6:00PM	5	365	0	0	370	0	3	0	12	0	15	0	1	424	14	1	440	0	11	0	1	0	12	1	837
Total	37	5261	33	0	5331	0	36	1	157	0	194	6	69	5389	152	15	5625	1	155	1	28	0	184	40	11334
% Approach	0.7%	98.7%	0.6%	0%	-	-	18.6%	0.5%	80.9%	0%	-	-	1.2%	95.8%	2.7%	0.3%	-	-	84.2%	0.5%	15.2%	0%	-	-	-
% Total	0.3%	46.4%	0.3%	0%	47.0%	-	0.3%	0%	1.4%	0%	1.7%	-	0.6%	47.5%	1.3%	0.1%	49.6%	-	1.4%	0%	0.2%	0%	1.6%	-	-
Lights	33	5163	33	0	5229	-	35	1	153	0	189	-	69	5298	149	15	5531	-	150	1	28	0	179	-	11128
% Lights	89.2%	98.1%	100%	0%	98.1%	-	97.2%	100%	97.5%	0%	97.4%	-	100%	98.3%	98.0%	100%	98.3%	-	96.8%	100%	100%	0%	97.3%	-	98.2%
Articulated Trucks	0	9	0	0	9	-	0	0	1	0	1	-	0	9	0	0	9	-	0	0	0	0	0	-	19
% Articulated Trucks	0%	0.2%	0%	0%	0.2%	-	0%	0%	0.6%	0%	0.5%	-	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0.2%
Buses and Single-Unit Trucks	4	89	0	0	93	-	1	0	3	0	4	-	0	82	3	0	85	-	5	0	0	0	5	-	187
% Buses and Single-Unit Trucks	10.8%	1.7%	0%	0%	1.7%	-	2.8%	0%	1.9%	0%	2.1%	-	0%	1.5%	2.0%	0%	1.5%	-	3.2%	0%	0%	0%	2.7%	-	1.6%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	31	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-100%	-	-	-	-	-	-	0%	-	-	-	-	-	-77.5%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	9	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-100%	-	-	-	-	-	-22.5%	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

Full Length (6 AM-7 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

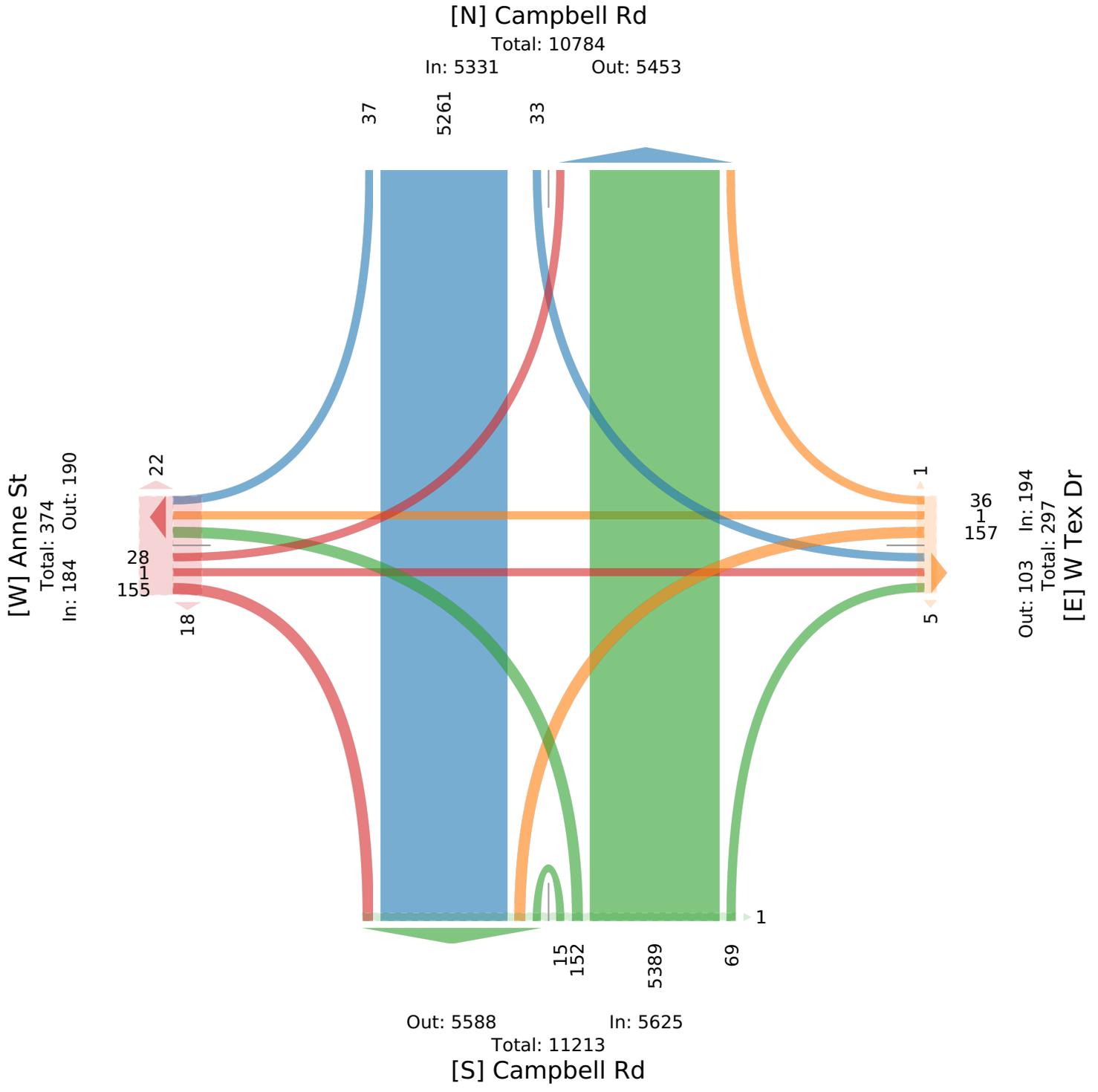
All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						W Tex Dr Westbound						Campbell Rd Northbound						Anne St Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 7:30AM	0	149	0	0	149	0	1	0	1	0	2	0	7	152	0	0	159	0	4	0	0	0	4	0	314
7:45AM	2	192	1	0	195	0	0	0	2	0	2	0	1	143	4	0	148	0	3	0	1	0	4	0	349
8:00AM	1	139	3	0	143	0	0	0	0	0	0	0	3	116	1	0	120	0	3	0	0	0	3	2	266
8:15AM	1	131	1	0	133	0	0	0	1	0	1	0	2	107	1	0	110	0	5	0	0	0	5	0	249
Total	4	611	5	0	620	0	1	0	4	0	5	0	13	518	6	0	537	0	15	0	1	0	16	2	1178
% Approach	0.6%	98.5%	0.8%	0%	-	-	20.0%	0%	80.0%	0%	-	-	2.4%	96.5%	1.1%	0%	-	-	93.8%	0%	6.3%	0%	-	-	-
% Total	0.3%	51.9%	0.4%	0%	52.6%	-	0.1%	0%	0.3%	0%	0.4%	-	1.1%	44.0%	0.5%	0%	45.6%	-	1.3%	0%	0.1%	0%	1.4%	-	-
PHF	0.500	0.796	0.417	-	0.795	-	0.250	-	0.500	-	0.625	-	0.464	0.852	0.375	-	0.844	-	0.750	-	0.250	-	0.800	-	0.844
Lights	4	602	5	0	611	-	1	0	4	0	5	-	13	510	6	0	529	-	15	0	1	0	16	-	1161
% Lights	100%	98.5%	100%	0%	98.5%	-	100%	0%	100%	0%	100%	-	100%	98.5%	100%	0%	98.5%	-	100%	0%	100%	0%	100%	-	98.6%
Articulated Trucks	0	1	0	0	1	-	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	2
% Articulated Trucks	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0.2%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0.2%
Buses and Single-Unit Trucks	0	8	0	0	8	-	0	0	0	0	0	-	0	7	0	0	7	-	0	0	0	0	0	-	15
% Buses and Single-Unit Trucks	0%	1.3%	0%	0%	1.3%	-	0%	0%	0%	0%	0%	-	0%	1.4%	0%	0%	1.3%	-	0%	0%	0%	0%	0%	-	1.3%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

AM Peak (7:30 AM - 8:30 AM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

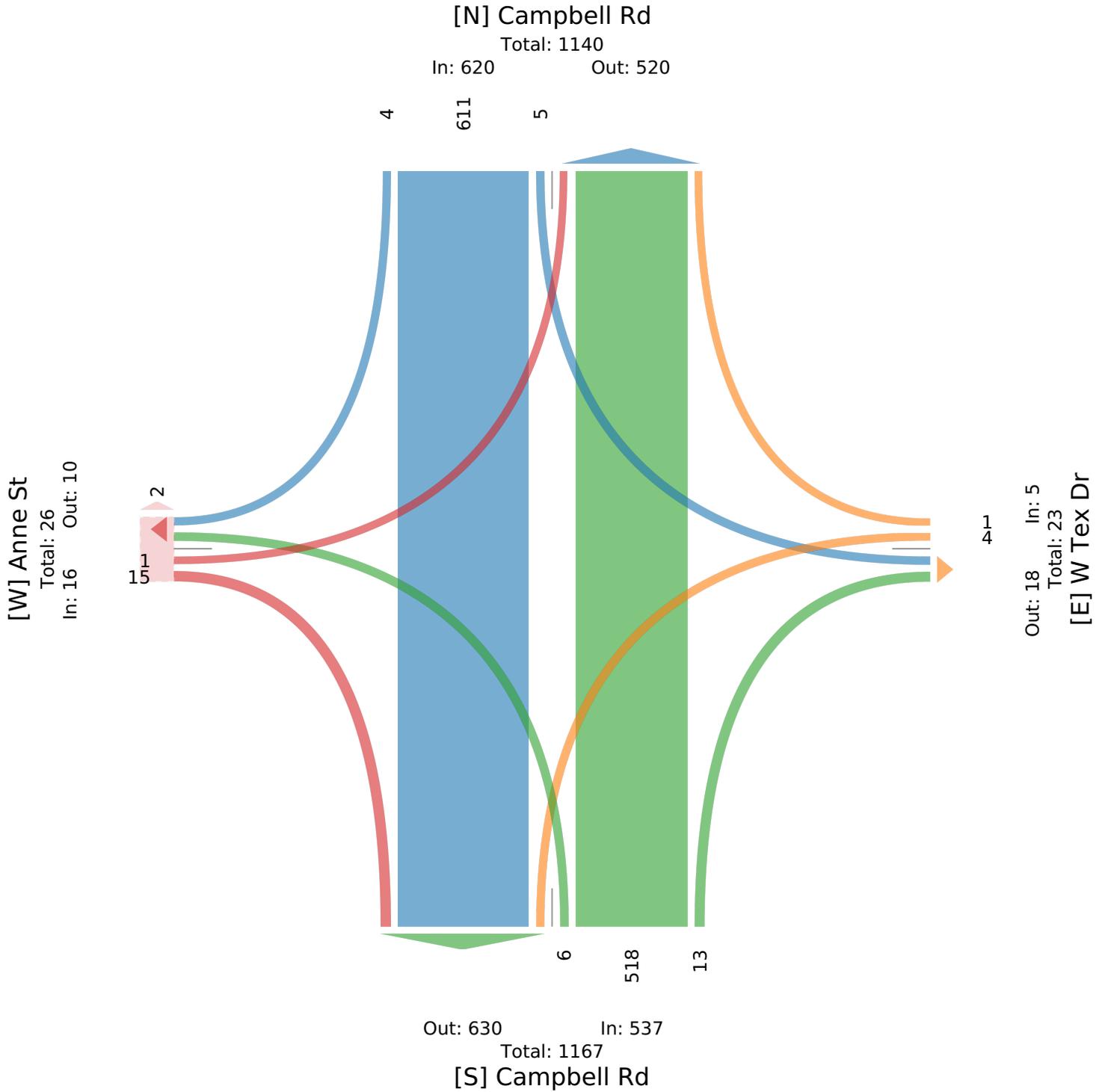
All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						W Tex Dr Westbound						Campbell Rd Northbound						Anne St Eastbound						Int
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	
2021-01-13 11:45AM	0	100	2	0	102	0	0	0	9	0	9	0	4	96	5	0	105	0	3	0	0	0	3	0	219
12:00PM	0	102	2	0	104	0	3	0	3	0	6	0	2	103	1	1	107	0	1	0	1	0	2	0	219
12:15PM	0	90	0	0	90	0	3	0	4	0	7	0	0	94	0	1	95	0	2	0	0	0	2	2	194
12:30PM	2	97	0	0	99	0	1	0	2	0	3	0	1	101	4	1	107	0	1	0	1	0	2	0	211
Total	2	389	4	0	395	0	7	0	18	0	25	0	7	394	10	3	414	0	7	0	2	0	9	2	843
% Approach	0.5%	98.5%	1.0%	0%	-	-	28.0%	0%	72.0%	0%	-	-	1.7%	95.2%	2.4%	0.7%	-	-	77.8%	0%	22.2%	0%	-	-	-
% Total	0.2%	46.1%	0.5%	0%	46.9%	-	0.8%	0%	2.1%	0%	3.0%	-	0.8%	46.7%	1.2%	0.4%	49.1%	-	0.8%	0%	0.2%	0%	1.1%	-	-
PHF	0.250	0.953	0.500	-	0.950	-	0.583	-	0.500	-	0.694	-	0.438	0.956	0.500	0.750	0.967	-	0.583	-	0.500	-	0.750	-	0.962
Lights	2	382	4	0	388	-	7	0	18	0	25	-	7	385	10	3	405	-	6	0	2	0	8	-	826
% Lights	100%	98.2%	100%	0%	98.2%	-	100%	0%	100%	0%	100%	-	100%	97.7%	100%	100%	97.8%	-	85.7%	0%	100%	0%	88.9%	-	98.0%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	1
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.3%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0.1%
Buses and Single-Unit Trucks	0	7	0	0	7	-	0	0	0	0	0	-	0	8	0	0	8	-	1	0	0	0	1	-	16
% Buses and Single-Unit Trucks	0%	1.8%	0%	0%	1.8%	-	0%	0%	0%	0%	0%	-	0%	2.0%	0%	0%	1.9%	-	14.3%	0%	0%	0%	11.1%	-	1.9%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

Midday Peak (11:45 AM - 12:45 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

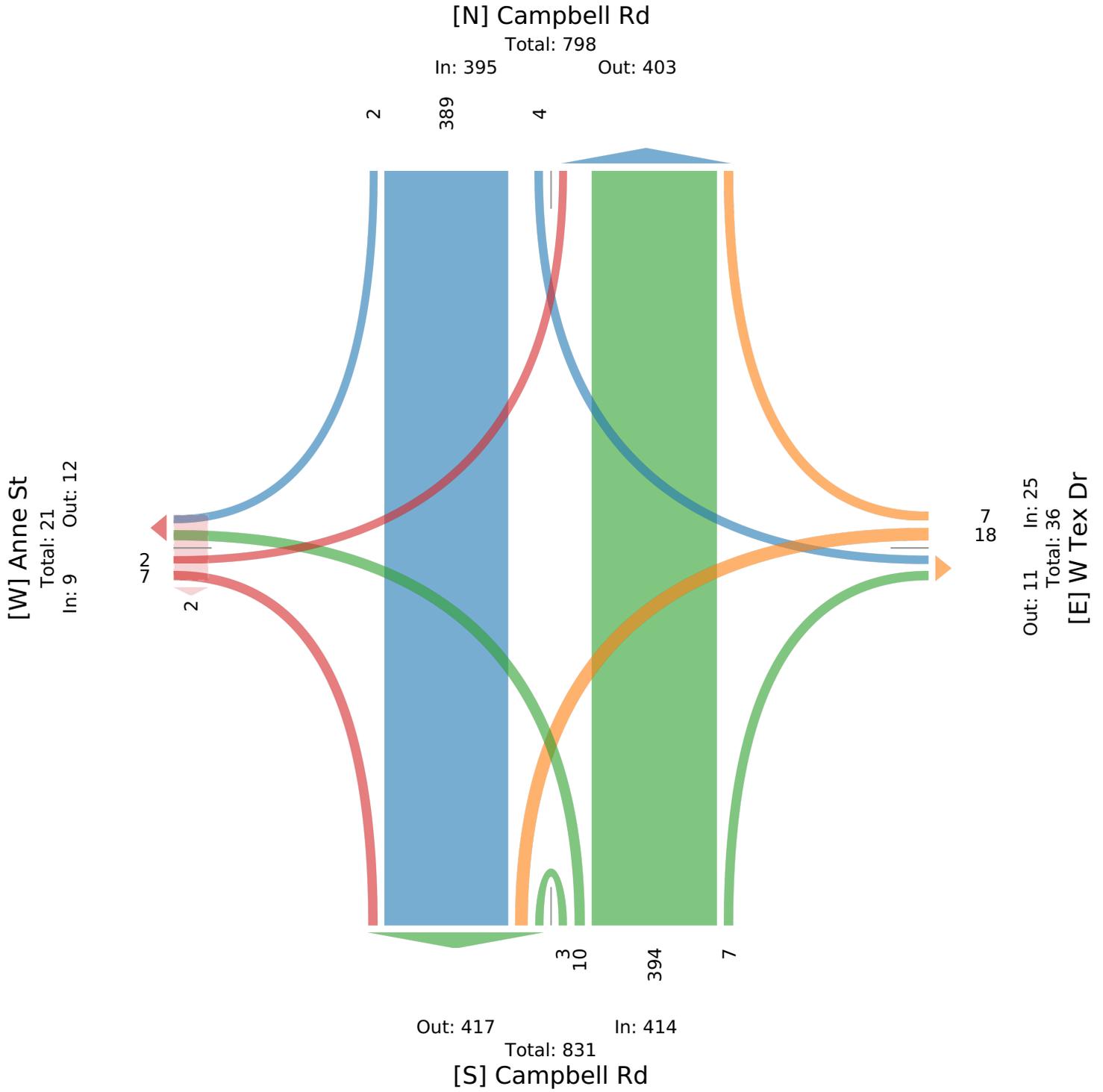
All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

PM Peak (4:30 PM - 5:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	Campbell Rd Southbound						W Tex Dr Westbound						Campbell Rd Northbound						Anne St Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2021-01-13 4:30PM	1	139	0	0	140	0	1	0	7	0	8	0	0	141	3	0	144	0	5	0	1	0	6	3	298
4:45PM	0	118	2	0	120	0	1	0	9	0	10	0	2	133	6	1	142	0	5	0	2	0	7	0	279
5:00PM	1	125	0	0	126	0	3	0	7	0	10	0	0	156	8	1	165	0	0	0	0	0	0	3	301
5:15PM	0	138	0	0	138	0	1	0	9	0	10	0	0	147	2	0	149	0	2	0	1	0	3	4	300
Total	2	520	2	0	524	0	6	0	32	0	38	0	2	577	19	2	600	0	12	0	4	0	16	10	1178
% Approach	0.4%	99.2%	0.4%	0%	-	-	15.8%	0%	84.2%	0%	-	-	0.3%	96.2%	3.2%	0.3%	-	-	75.0%	0%	25.0%	0%	-	-	-
% Total	0.2%	44.1%	0.2%	0%	44.5%	-	0.5%	0%	2.7%	0%	3.2%	-	0.2%	49.0%	1.6%	0.2%	50.9%	-	1.0%	0%	0.3%	0%	1.4%	-	-
PHF	0.500	0.935	0.250	-	0.936	-	0.500	-	0.889	-	0.950	-	0.250	0.925	0.594	0.500	0.909	-	0.600	-	0.500	-	0.571	-	0.978
Lights	2	518	2	0	522	-	6	0	32	0	38	-	2	569	19	2	592	-	12	0	4	0	16	-	1168
% Lights	100%	99.6%	100%	0%	99.6%	-	100%	0%	100%	0%	100%	-	100%	98.6%	100%	100%	98.7%	-	100%	0%	100%	0%	100%	-	99.2%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	0	2	0	0	2	-	0	0	0	0	0	-	0	8	0	0	8	-	0	0	0	0	0	-	10
% Buses and Single-Unit Trucks	0%	0.4%	0%	0%	0.4%	-	0%	0%	0%	0%	0%	-	0%	1.4%	0%	0%	1.3%	-	0%	0%	0%	0%	0%	-	0.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	6	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60.0%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40.0%	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Campbell Rd at W Tex Dr/Anne St - TMC

Wed Jan 13, 2021

PM Peak (4:30 PM - 5:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)

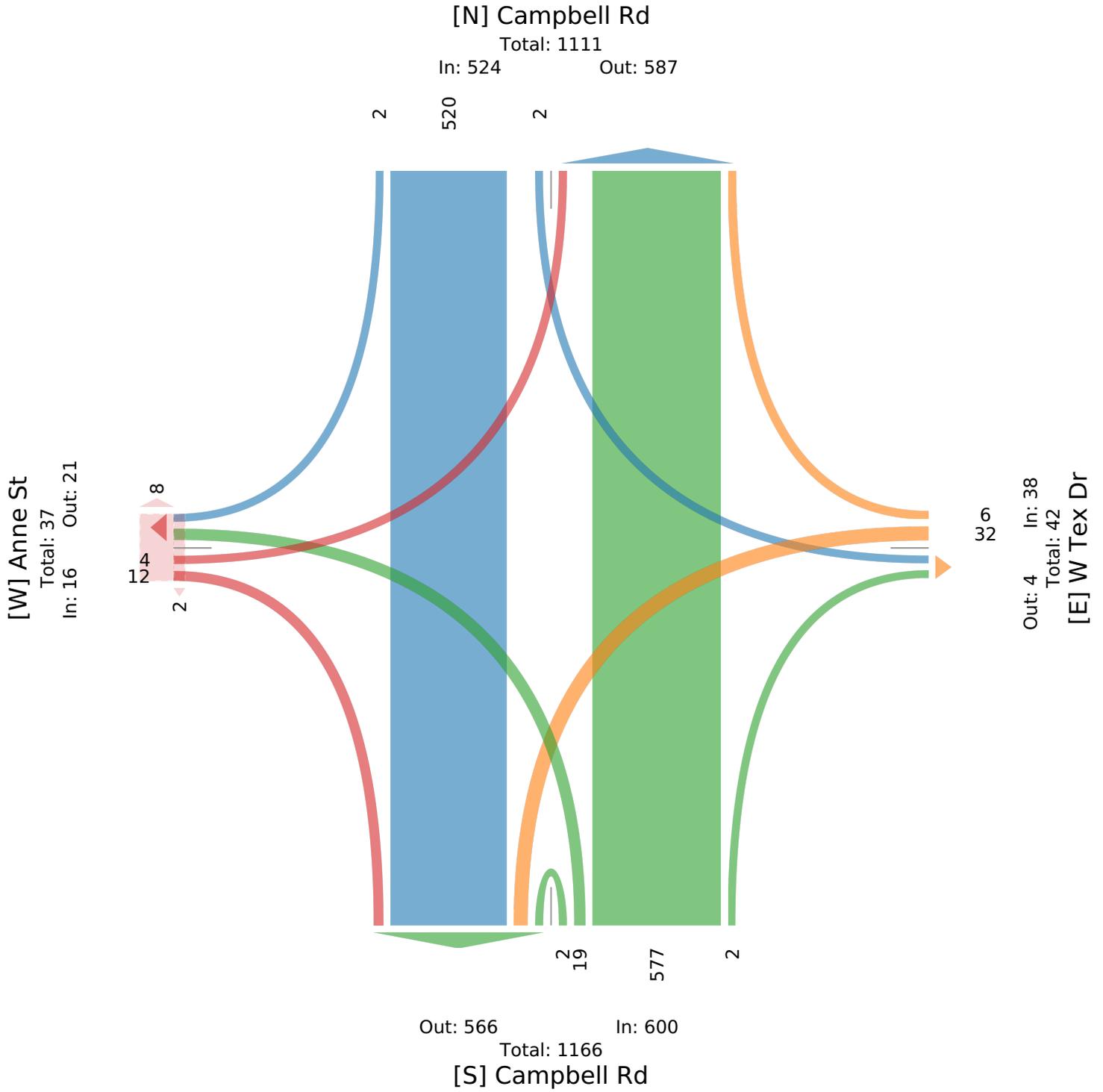
All Movements

ID: 807508, Location: 29.785861, -95.513941



Provided by: C. J. Hensch & Associates Inc.

5215 Sycamore Ave.,
Pasadena, TX, 77503, US



Appendix B SimTraffic Modeling Results

Existing Conditions – AM Peak

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	39.4	34.7	2.1	45.7	4.8	4.2	1.4	20.1

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	39.9	37.2	9.4	5.1	1.6	37.2	8.4	19.2

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.3	0.0	0.0
Total Del/Veh (s)	27.5	5.1	5.1	4.5	29.9	3.6	5.0

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.2	0.1	0.1	4.1	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	28.9	13.3	8.3	25.9	24.0	3.0	14.2	3.6	5.3	6.6	3.1	1.8

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	4.3

5: Bingle Rd & Burkhart Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.2	4.8	1.0	1.1	3.8	0.8	0.9

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.8	7.5	0.5	0.1	6.7	2.1	1.8

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	2.4	0.6	0.5	0.0	0.0	0.0	3.1	0.2	0.3
Total Del/Veh (s)	30.8	34.2	23.4	35.6	22.0	15.6	18.4	17.5	15.0	20.9	16.2	11.7

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	20.9

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
Total Del/Veh (s)	7.4	8.2	9.2	9.3	10.0	5.5	4.8	6.5	3.2	5.5	7.1	3.6

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	7.8

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.4	0.3	0.3	0.5	0.1	0.1	0.0	0.0	0.0	3.5	0.5	0.5
Total Del/Veh (s)	26.7	20.4	12.2	35.8	23.9	15.1	15.5	10.7	12.1	12.2	11.4	8.9

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.0

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Total Del/Veh (s)	11.1	5.6	13.6	9.6	4.6	0.6	0.4	15.1	6.2	4.1	3.6

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1
Total Del/Veh (s)	40.4	36.9	7.9	4.6	1.8	35.2	29.3	23.8

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	35.5	31.7	3.7	41.5	15.0	2.7	1.5	20.7

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	13.1	5.6	4.6	0.6	0.5	0.4	0.6

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	9.3	6.6	7.0

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.3	2.9	3.2

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.2	5.3	5.5

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.5	2.2	1.7

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.7	0.3	0.6
Total Del/Veh (s)	4.7	20.0	17.8

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	5.6	3.0

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.5	0.4	0.8
Total Del/Veh (s)	5.3	19.3	17.1

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.0	6.0	5.1

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	58.8

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
	1	45.7	60.8	0.1	8	8	46.3
WB I10 Frontage Rd	2	2.0	12.0	0.1	27	28	2.0
W Memorial Park Dr	3	5.3	21.0	0.2	27	26	5.6
Winningham Ln	4	3.7	17.9	0.1	28	29	3.3
Burkhart Rd	5	1.0	9.8	0.1	32	32	0.9
Cedarbrake Dr	28	0.6	13.4	0.1	32	33	0.6
Merlin Dr	6	0.5	7.0	0.1	34	34	0.5
Westview Dr	7	17.5	30.7	0.1	15	16	15.3
Total		76.3	172.5	0.9	19	20	74.4

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
	8	46.9	8	44.7	8	43.9	8
WB I10 Frontage Rd	28	2.1	27	2.1	27	2.1	27
W Memorial Park Dr	27	4.8	27	4.9	26	5.5	26
Winningham Ln	28	3.6	29	3.3	27	4.3	28
Burkhart Rd	32	1.1	32	1.0	32	1.1	32
Cedarbrake Dr	32	0.7	33	0.5	32	0.6	32
Merlin Dr	34	0.5	34	0.4	33	0.6	33
Westview Dr	14	20.9	16	15.5	15	16.9	15
Total	19	80.6	20	72.4	19	75.0	19

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
Westview Dr	7	16.2	24.7	0.1	13	13	14.9
Merlin Dr	6	2.6	16.0	0.1	29	30	2.3
Cedarbrake Dr	28	0.5	6.8	0.1	34	34	0.4
Burkhart Rd	5	0.8	13.0	0.1	34	33	0.8
Winningham Ln	4	3.1	11.8	0.1	27	25	3.7
W Memorial Park Dr	3	3.6	17.8	0.1	28	27	3.9
WB I10 Frontage Rd	2	37.2	51.7	0.2	11	10	39.8
EB I10 Frontage Rd	1	2.1	14.1	0.1	23	23	2.2
Total		66.2	155.9	0.9	20	20	68.0

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
Westview Dr	13	15.8	12	17.1	13	16.1	12
Merlin Dr	29	2.5	29	2.8	29	2.9	29
Cedarbrake Dr	34	0.5	34	0.6	34	0.5	35
Burkhart Rd	34	0.8	33	0.8	34	0.7	34
Winningham Ln	27	3.0	27	2.8	27	2.9	26
W Memorial Park Dr	28	3.5	29	3.4	28	3.8	28
WB I10 Frontage Rd	11	36.8	11	35.9	12	33.8	10
EB I10 Frontage Rd	24	2.0	23	2.1	24	2.0	23
Total	20	65.0	20	65.5	21	62.6	20

Queuing and Blocking Report
Baseline

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Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	T	T	T	R	L	L	T
Maximum Queue (ft)	218	235	145	141	297	264	224	214	50	31	28
Average Queue (ft)	131	153	78	63	185	153	110	47	13	4	2
95th Queue (ft)	201	220	132	120	262	235	194	162	40	20	14
Link Distance (ft)	170	170	170	170	654	654	654	654	424	424	424
Upstream Blk Time (%)	3	5	0	0							
Queuing Penalty (veh)	5	9	0	0							
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	R
Maximum Queue (ft)	135	155	131	111	123	26	31	6	231	273	285	261
Average Queue (ft)	106	130	83	33	67	1	4	0	102	136	145	98
95th Queue (ft)	153	143	136	77	112	12	20	4	179	218	228	260
Link Distance (ft)	69	69	69	69	69	424	424	424		679	679	
Upstream Blk Time (%)	33	77	21	4	10							
Queuing Penalty (veh)	68	158	43	9	19							
Storage Bay Dist (ft)									250			250
Storage Blk Time (%)									0	0	0	0
Queuing Penalty (veh)									0	0	2	1

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	88	27	160	175	67	133	167
Average Queue (ft)	29	8	42	62	20	30	52
95th Queue (ft)	64	28	114	141	50	85	127
Link Distance (ft)	602	602	679	679		668	668
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					1	1	
Queuing Penalty (veh)					4	0	

Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	31	53	92	29	110	122	142	178
Average Queue (ft)	2	20	39	5	31	43	41	62
95th Queue (ft)	14	47	73	22	83	98	104	143
Link Distance (ft)		215		332	668	668	387	387
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200					
Storage Blk Time (%)	2	6						
Queuing Penalty (veh)	0	0						

Intersection: 5: Bingle Rd & Burkhart Rd

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	36	12
Average Queue (ft)	8	0
95th Queue (ft)	30	6
Link Distance (ft)	559	593
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	59	12	23	61	55
Average Queue (ft)	21	0	1	5	3
95th Queue (ft)	50	6	10	29	27
Link Distance (ft)	587	275	275	624	624
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
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Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	133	296	174	273	84	198	234	143	271	233
Average Queue (ft)	21	156	109	121	23	94	128	26	134	122
95th Queue (ft)	76	255	175	222	63	178	218	77	220	202
Link Distance (ft)		1172		1489		624	624		422	422
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		60			70		
Storage Blk Time (%)	0	27	13	10	0	15		1	24	
Queuing Penalty (veh)	0	8	30	20	0	5		3	8	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	102	29	119	66	48	58
Average Queue (ft)	56	2	61	19	23	27
95th Queue (ft)	86	15	97	50	41	46
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	91	209	162	191	94	237	111	227
Average Queue (ft)	25	97	73	90	15	107	27	111
95th Queue (ft)	62	171	133	167	57	199	74	195
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)		5	0	0	0	14		16
Queuing Penalty (veh)		2	0	0	0	3		8

Queuing and Blocking Report
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Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	32	33	30	165
Average Queue (ft)	12	6	2	14
95th Queue (ft)	35	25	15	78
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	TR
Maximum Queue (ft)	83	115	122	124	124	43	28	248	277
Average Queue (ft)	46	82	88	94	68	5	2	125	184
95th Queue (ft)	79	113	125	128	112	24	17	216	281
Link Distance (ft)	58	58	58	58	58	480	480	260	260
Upstream Blk Time (%)	4	25	22	29	11			0	2
Queuing Penalty (veh)	6	36	32	42	16			0	7
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	T	TR	L	LT
Maximum Queue (ft)	125	149	140	117	72	107	140	5	6
Average Queue (ft)	40	127	109	42	40	44	48	0	0
95th Queue (ft)	92	141	150	92	64	86	101	3	4
Link Distance (ft)	65	65	65	65	65	343	343	480	480
Upstream Blk Time (%)	4	70	35	6	1				
Queuing Penalty (veh)	8	133	66	11	1				
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Queuing and Blocking Report
Baseline

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Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	47	30
Average Queue (ft)	10	1
95th Queue (ft)	36	11
Link Distance (ft)	213	593
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	15	24
Average Queue (ft)	1	2
95th Queue (ft)	8	18
Link Distance (ft)		5305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 102:

Movement	SE
Directions Served	L
Maximum Queue (ft)	79
Average Queue (ft)	20
95th Queue (ft)	57
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
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Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	14	36	45	58
Average Queue (ft)	1	3	7	3
95th Queue (ft)	12	19	31	27
Link Distance (ft)	5272	5272	5272	5272
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	43
Average Queue (ft)	8
95th Queue (ft)	33
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB
Directions Served	T	T	T	T
Maximum Queue (ft)	261	318	256	129
Average Queue (ft)	107	199	133	6
95th Queue (ft)	249	283	253	53
Link Distance (ft)		692	692	692
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	0	9		
Queuing Penalty (veh)	0	30		

Queuing and Blocking Report Baseline

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Intersection: 122: EB I10 Frontage Rd

Movement	EB	SB
Directions Served	T	L
Maximum Queue (ft)	4	134
Average Queue (ft)	0	58
95th Queue (ft)	3	109
Link Distance (ft)	72	474
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	265	295	214	14	38
Average Queue (ft)	143	197	87	0	2
95th Queue (ft)	251	270	220	7	18
Link Distance (ft)		1060	1060	1060	1060
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	225				
Storage Blk Time (%)	0	3			
Queuing Penalty (veh)	0	12			

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	NW
Directions Served	T	T	L
Maximum Queue (ft)	43	84	113
Average Queue (ft)	2	4	48
95th Queue (ft)	18	43	93
Link Distance (ft)	109	109	578
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 805

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	38.0	35.4	2.1	46.5	5.0	4.1	1.4	20.2

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	41.2	36.6	10.8	5.2	1.7	37.3	9.4	19.7

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	27.8	5.1	4.7	4.5	31.3	3.4	4.7

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.4	0.1	0.1	4.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.3	18.1	8.2	30.6	28.4	5.3	7.7	3.4	4.6	8.7	3.3	1.2

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	4.5

5: Bingle Rd & Burkhart Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	14.1	4.4	1.0	0.4	7.1	0.8	1.0

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	18.8	3.8	0.6	0.3	8.2	2.3	1.9

Scenario 1: Baseline Conditions – AM Peak

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	2.2	0.6	0.6	0.0	0.0	0.0	2.9	0.2	0.3
Total Del/Veh (s)	31.6	34.4	25.9	35.1	21.9	16.2	18.1	17.0	14.3	17.9	18.1	12.0

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	21.5

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.1	0.2
Total Del/Veh (s)	10.1	8.6	8.8	8.6	9.9	5.7	6.4	7.3	3.5	6.0	7.5	3.5

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	8.0

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.4	0.4	0.3	0.6	0.1	0.1	0.0	0.0	0.0	3.4	0.5	0.5
Total Del/Veh (s)	24.4	20.1	13.2	33.9	21.0	15.4	17.6	12.9	14.8	14.0	11.8	8.4

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.4

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)		0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1
Total Del/Veh (s)		8.2	12.0	4.2	4.1	0.6	0.4	9.8	7.1	8.4	4.1

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	39.0	36.0	9.1	4.6	1.9	37.2	31.9	24.3

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	35.8	33.4	4.0	41.3	24.4	2.7	1.5	21.5

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	22.8	6.6	3.7	0.6	0.5	0.2	0.6

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.0	6.3	6.9

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.4	3.3	3.4

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.0	5.6	5.7

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.5	2.3	1.7

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.6	0.3	0.7
Total Del/Veh (s)	5.2	20.8	18.5

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	4.8	2.8

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.4	0.4	0.7
Total Del/Veh (s)	5.9	21.1	18.7

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	4.9	6.2	5.0

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	60.4

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
	1	46.5	61.6	0.1	8	8	46.2
WB I10 Frontage Rd	2	2.2	12.4	0.1	27	26	2.1
W Memorial Park Dr	3	4.9	20.6	0.2	27	27	4.7
Winningham Ln	4	3.5	17.7	0.1	28	28	3.8
Burkhart Rd	5	1.0	9.8	0.1	32	32	1.2
Cedarbrake Dr	28	0.6	13.5	0.1	32	32	0.6
Merlin Dr	6	0.6	7.1	0.1	33	32	0.7
Westview Dr	7	17.0	30.2	0.1	15	16	16.4
Total		76.3	173.0	0.9	19	19	75.7

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
	8	47.1	8	45.5	8	45.5	8
WB I10 Frontage Rd	26	2.3	27	2.2	26	2.1	27
W Memorial Park Dr	26	5.3	28	4.5	27	4.6	27
Winningham Ln	29	3.1	28	3.5	28	3.4	28
Burkhart Rd	32	0.9	32	1.1	32	1.0	32
Cedarbrake Dr	32	0.7	33	0.6	32	0.7	32
Merlin Dr	33	0.7	33	0.6	33	0.6	34
Westview Dr	15	17.0	15	18.1	16	16.2	15
Total	19	77.1	19	76.2	19	74.1	19

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
Westview Dr	7	18.1	26.6	0.1	12	12	18.0
Merlin Dr	6	2.8	16.2	0.1	29	29	2.8
Cedarbrake Dr	28	0.5	6.9	0.1	34	34	0.5
Burkhart Rd	5	0.8	13.0	0.1	33	33	0.9
Winningham Ln	4	3.3	11.9	0.1	26	27	3.1
W Memorial Park Dr	3	3.5	17.7	0.1	28	28	3.8
WB I10 Frontage Rd	2	37.2	51.8	0.2	11	11	37.6
EB I10 Frontage Rd	1	2.0	14.1	0.1	23	23	2.1
Total		68.3	158.1	0.9	20	20	68.8

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
Westview Dr	12	17.8	12	17.3	12	18.3	11
Merlin Dr	29	2.7	29	2.7	29	3.0	29
Cedarbrake Dr	34	0.5	34	0.5	34	0.5	34
Burkhart Rd	33	0.9	33	0.9	34	0.8	34
Winningham Ln	27	3.1	25	4.1	26	3.4	28
W Memorial Park Dr	29	3.2	27	4.0	29	3.5	29
WB I10 Frontage Rd	11	36.1	11	37.0	11	37.1	11
EB I10 Frontage Rd	23	2.2	24	1.9	23	2.0	23
Total	20	66.4	20	68.4	20	68.4	20

Queuing and Blocking Report
Baseline

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Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	T	T	T	R	L	L	T
Maximum Queue (ft)	203	225	152	149	305	265	227	212	40	36	32
Average Queue (ft)	133	155	78	66	197	166	118	54	7	6	3
95th Queue (ft)	198	214	136	122	272	247	198	176	29	24	16
Link Distance (ft)	170	170	170	170	654	654	654	654	424	424	424
Upstream Blk Time (%)	3	4	0	0							
Queuing Penalty (veh)	5	8	0	0							
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	R
Maximum Queue (ft)	140	140	137	91	137	27	35	11	192	224	298	271
Average Queue (ft)	112	128	88	34	80	2	3	0	93	128	152	130
95th Queue (ft)	153	136	138	76	133	13	19	6	158	191	241	299
Link Distance (ft)	69	69	69	69	69	424	424	424		679	679	
Upstream Blk Time (%)	40	78	24	4	15							
Queuing Penalty (veh)	86	168	52	10	32							
Storage Bay Dist (ft)									250			250
Storage Blk Time (%)									0	0	0	1
Queuing Penalty (veh)									0	0	2	2

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	66	31	137	168	64	123	179
Average Queue (ft)	28	9	39	57	22	28	50
95th Queue (ft)	56	29	104	130	53	82	131
Link Distance (ft)	602	602	679	679		668	668
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					1	1	
Queuing Penalty (veh)					3	0	

Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	32	57	94	28	99	118	123	177
Average Queue (ft)	2	22	43	5	30	47	44	66
95th Queue (ft)	16	51	81	21	77	98	103	145
Link Distance (ft)		215		332	668	668	387	387
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200					
Storage Blk Time (%)	2	6						
Queuing Penalty (veh)	1	0						

Intersection: 5: Bingle Rd & Burkhart Rd

Movement	WB	SB
Directions Served	LR	LT
Maximum Queue (ft)	36	26
Average Queue (ft)	10	1
95th Queue (ft)	34	13
Link Distance (ft)	559	593
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	67	23	54	50	56
Average Queue (ft)	23	1	3	4	4
95th Queue (ft)	52	13	21	27	28
Link Distance (ft)	587	275	275	624	624
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Baseline

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Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	154	344	174	249	79	194	218	143	273	244
Average Queue (ft)	30	171	113	117	28	96	128	29	151	131
95th Queue (ft)	99	294	176	215	70	178	207	87	242	219
Link Distance (ft)		1172		1489		624	624		422	422
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		60			70		
Storage Blk Time (%)		29	15	9	1	15		0	27	
Queuing Penalty (veh)		9	37	19	2	5		0	9	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	102	28	104	47	62	66
Average Queue (ft)	60	3	59	19	26	30
95th Queue (ft)	91	17	87	46	47	53
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	92	194	152	166	88	327	138	217
Average Queue (ft)	28	95	77	85	13	133	33	122
95th Queue (ft)	69	163	133	150	48	249	84	200
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)	0	4				19	0	17
Queuing Penalty (veh)	0	2				4	1	8

Queuing and Blocking Report
Baseline

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Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	36	29	30	235
Average Queue (ft)	10	3	3	26
95th Queue (ft)	32	18	18	120
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	T	TR
Maximum Queue (ft)	94	116	118	119	124	32	10	30	261	279
Average Queue (ft)	51	87	92	95	75	6	0	2	130	196
95th Queue (ft)	88	118	129	126	119	23	5	15	229	295
Link Distance (ft)	58	58	58	58	58	480	480	480	260	260
Upstream Blk Time (%)	6	28	24	28	15				1	4
Queuing Penalty (veh)	10	42	37	43	22				2	14
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	125	145	146	111	81	104	128	11
Average Queue (ft)	46	125	116	51	42	44	56	0
95th Queue (ft)	100	134	150	96	68	87	107	8
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	6	74	41	8	1			
Queuing Penalty (veh)	12	147	81	17	2			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
Baseline

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Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	35	33
Average Queue (ft)	8	2
95th Queue (ft)	31	15
Link Distance (ft)	213	593
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB
Directions Served	T	T
Maximum Queue (ft)	11	25
Average Queue (ft)	0	1
95th Queue (ft)	6	13
Link Distance (ft)		5305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 102:

Movement	SE
Directions Served	L
Maximum Queue (ft)	79
Average Queue (ft)	24
95th Queue (ft)	60
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Baseline

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Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	8	28	60	66	70
Average Queue (ft)	0	2	8	9	6
95th Queue (ft)	7	15	38	41	34
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	52
Average Queue (ft)	13
95th Queue (ft)	41
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	47	273	319	262	117
Average Queue (ft)	2	121	208	142	9
95th Queue (ft)	33	259	286	258	66
Link Distance (ft)			692	692	692
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200	200			
Storage Blk Time (%)		0	11		
Queuing Penalty (veh)		0	38		

Queuing and Blocking Report
Baseline

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Intersection: 122: EB I10 Frontage Rd

Movement	SB
Directions Served	L
Maximum Queue (ft)	131
Average Queue (ft)	52
95th Queue (ft)	94
Link Distance (ft)	474
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB
Directions Served	T	T	T	T
Maximum Queue (ft)	285	362	268	62
Average Queue (ft)	155	212	111	6
95th Queue (ft)	266	306	247	38
Link Distance (ft)		1060	1060	1060
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	225			
Storage Blk Time (%)	0	6		
Queuing Penalty (veh)	0	25		

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	WB	NW
Directions Served	T	T	T	L
Maximum Queue (ft)	16	41	60	125
Average Queue (ft)	1	2	5	52
95th Queue (ft)	11	18	33	105
Link Distance (ft)	109	109	109	578
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 957

Scenario 2: Bingle Road Improved Signal Timings and Progression – AM Peak

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	55.0	48.3	2.2	46.6	4.9	3.7	1.4	23.7

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	40.7	36.8	10.4	5.1	1.8	36.8	10.4	19.7

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	14.4	4.7	4.8	4.4	8.2	4.1	4.7

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	4.2	0.1	0.1	4.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	20.2	14.7	9.1	28.6	23.7	5.9	9.2	3.5	3.8	10.6	3.1	2.8

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	4.3

5: Bingle Rd & Burkhart Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0		0.0	0.0
Total Del/Veh (s)	26.8	6.4	1.1	0.9		1.1	1.2

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.2	0.0	0.0
Total Del/Veh (s)	20.7	3.0	0.7	0.2	7.4	3.1	2.4

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.1	0.0	0.0	2.3	0.6	0.6	0.0	0.0	0.0	2.8	0.2	0.4
Total Del/Veh (s)	28.8	35.9	26.2	34.8	22.9	14.1	18.7	17.5	15.8	19.7	17.4	12.0

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	21.7

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1
Total Del/Veh (s)	10.4	8.4	6.3	9.0	10.3	6.0	5.6	7.0	3.1	5.7	7.1	3.3

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	8.0

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.3	0.3	0.5	0.2	0.2	0.2	0.0	0.0	3.4	0.5	0.5
Total Del/Veh (s)	26.2	20.6	14.1	36.5	23.4	15.3	18.0	12.1	13.0	14.7	11.9	8.3

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.7

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	10.5	10.4	20.6	7.3	6.5	0.6	0.5	11.7	7.5	6.0	4.4

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	42.5	37.6	8.5	4.8	1.8	36.7	32.0	24.9

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	34.9	34.0	4.2	41.2	19.0	2.8	1.6	21.2

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.8	7.9	8.1	1.0	0.6	0.2	0.9

30: Bingle Rd Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.7	2.7	2.7

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.3	6.7	7.3

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.3	3.1	3.3

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.0	5.8	5.8

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.5	2.3	1.7

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.5	0.3	0.6
Total Del/Veh (s)	5.3	22.6	20.1

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	5.7	3.0

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.5	0.4	0.8
Total Del/Veh (s)	6.3	21.8	19.3

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.1	4.5	5.0

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	64.0

Arterial Level of Service
Baseline

03/12/2021

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
	1	46.6	61.7	0.1	8	8	44.6
WB I10 Frontage Rd	2	2.2	12.2	0.1	27	28	2.1
W Memorial Park Dr	3	5.0	20.7	0.2	27	26	5.7
Winningham Ln	4	3.5	17.8	0.1	28	28	3.4
Burkhart Rd	5	1.1	9.9	0.1	32	32	1.0
Cedarbrake Dr	28	1.0	13.8	0.1	32	31	1.0
	30	2.7	6.4	0.0	19	20	2.6
Merlin Dr	6	0.7	3.5	0.0	32	32	0.6
Westview Dr	7	17.5	30.7	0.1	15	15	18.6
Total		80.3	176.5	0.9	19	19	79.6

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
	8	45.8	8	49.1	8	46.2	8
WB I10 Frontage Rd	27	2.2	26	2.2	27	2.2	27
W Memorial Park Dr	27	4.8	27	4.6	26	5.4	28
Winningham Ln	28	3.6	29	3.1	28	3.6	28
Burkhart Rd	31	1.2	32	1.1	32	1.2	32
Cedarbrake Dr	32	1.0	32	0.8	31	1.3	32
	18	3.2	22	2.1	17	3.5	21
Merlin Dr	30	0.8	33	0.6	31	0.7	31
Westview Dr	16	15.6	15	18.7	15	17.7	16
Total	19	78.3	19	82.3	19	81.7	19

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
Westview Dr	7	17.4	25.9	0.1	12	12	16.8
Merlin Dr	6	3.8	17.1	0.1	27	27	4.0
	30	2.6	5.9	0.0	19	18	2.8
Cedarbrake Dr	28	0.6	3.8	0.0	33	33	0.6
Burkhart Rd	5	1.1	13.2	0.1	33	33	1.1
Winningham Ln	4	3.1	11.7	0.1	27	27	3.1
W Memorial Park Dr	3	4.1	18.3	0.1	27	28	4.0
WB I10 Frontage Rd	2	36.7	51.2	0.2	11	11	36.9
EB I10 Frontage Rd	1	2.1	14.1	0.1	23	24	2.1
Total		71.6	161.2	0.9	20	20	71.3

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
Westview Dr	12	18.1	12	18.2	12	17.1	12
Merlin Dr	27	3.8	28	3.2	28	3.5	26
	18	2.9	22	1.7	19	2.5	17
Cedarbrake Dr	33	0.6	34	0.5	33	0.6	32
Burkhart Rd	33	1.0	33	1.0	33	1.1	32
Winningham Ln	27	3.2	27	2.8	27	3.0	26
W Memorial Park Dr	27	4.3	28	4.1	28	3.8	27
WB I10 Frontage Rd	11	37.1	11	38.2	11	37.5	12
EB I10 Frontage Rd	23	2.1	23	2.1	24	2.0	23
Total	19	73.2	19	71.7	20	71.0	20

Queuing and Blocking Report
Baseline

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Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	R	T	T	T	R	L	L	T
Maximum Queue (ft)	231	236	161	145	29	310	295	244	203	43	28	32
Average Queue (ft)	160	175	93	76	1	195	164	117	56	7	3	4
95th Queue (ft)	226	235	146	133	20	274	250	203	176	27	16	19
Link Distance (ft)	170	170	170	170	170	654	654	654	654	424	424	424
Upstream Blk Time (%)	11	16	0	0								
Queuing Penalty (veh)	20	30	0	0								
Storage Bay Dist (ft)												
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	R
Maximum Queue (ft)	149	147	136	84	129	27	26	11	206	253	326	275
Average Queue (ft)	113	129	88	34	75	2	3	0	99	135	162	144
95th Queue (ft)	156	137	140	74	124	15	16	6	170	213	266	315
Link Distance (ft)	69	69	69	69	69	424	424	424		679	679	
Upstream Blk Time (%)	39	78	22	4	13							
Queuing Penalty (veh)	84	168	48	8	28							
Storage Bay Dist (ft)									250			250
Storage Blk Time (%)									0	0	0	2
Queuing Penalty (veh)									0	0	2	3

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	68	31	159	174	45	125	192
Average Queue (ft)	28	7	37	55	14	34	60
95th Queue (ft)	58	26	99	125	40	94	138
Link Distance (ft)	602	602	679	679		668	668
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					0	2	
Queuing Penalty (veh)					1	0	

Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	30	72	88	29	112	125	144	194
Average Queue (ft)	3	22	39	5	28	36	37	60
95th Queue (ft)	17	53	76	23	79	93	99	148
Link Distance (ft)		215		332	668	668	387	387
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200					
Storage Blk Time (%)	2	7						
Queuing Penalty (veh)	1	0						

Intersection: 5: Bingle Rd & Burkhart Rd

Movement	WB	NB
Directions Served	LR	T
Maximum Queue (ft)	43	4
Average Queue (ft)	12	0
95th Queue (ft)	38	2
Link Distance (ft)	559	387
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	61	23	40	123	140
Average Queue (ft)	21	2	3	16	21
95th Queue (ft)	50	13	22	75	88
Link Distance (ft)	592	110	110	624	624
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Baseline

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Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	174	318	174	288	84	222	253	143	241	232
Average Queue (ft)	28	167	112	125	23	110	140	26	139	130
95th Queue (ft)	95	270	180	233	64	204	240	78	216	215
Link Distance (ft)		1172		1489		624	624		422	422
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		60			70		
Storage Blk Time (%)	0	30	16	10	0	16		1	26	
Queuing Penalty (veh)	0	9	41	22	1	6		2	9	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	115	29	113	49	57	49
Average Queue (ft)	58	3	62	18	25	26
95th Queue (ft)	89	18	98	46	44	45
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	86	207	158	194	113	272	149	260
Average Queue (ft)	24	99	78	90	16	136	34	123
95th Queue (ft)	63	171	134	154	57	245	91	215
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)		6	0	0	0	17	0	15
Queuing Penalty (veh)		2	1	0	0	4	2	8

Queuing and Blocking Report
Baseline

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Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	49	34	30	267
Average Queue (ft)	14	5	3	34
95th Queue (ft)	38	22	17	152
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	T	TR
Maximum Queue (ft)	98	126	122	132	122	27	15	28	265	276
Average Queue (ft)	46	79	82	88	72	5	0	2	154	215
95th Queue (ft)	88	118	126	131	118	21	8	16	243	290
Link Distance (ft)	58	58	58	58	58	480	480	480	260	260
Upstream Blk Time (%)	6	27	24	31	14				1	4
Queuing Penalty (veh)	9	42	37	47	22				3	14
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	117	144	140	116	75	99	118	32
Average Queue (ft)	45	125	117	47	40	36	41	2
95th Queue (ft)	97	134	152	100	68	77	92	15
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	6	74	44	9	1			
Queuing Penalty (veh)	11	146	87	17	2			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
Baseline

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Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB	NB
Directions Served	LR	LT	T
Maximum Queue (ft)	36	61	60
Average Queue (ft)	11	4	3
95th Queue (ft)	36	28	24
Link Distance (ft)	214	593	593
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Bingle Rd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	146	143	120	140
Average Queue (ft)	26	38	41	49
95th Queue (ft)	95	120	120	137
Link Distance (ft)	133	133	110	110
Upstream Blk Time (%)	1	1	2	3
Queuing Penalty (veh)	2	4	11	17
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB	EB
Directions Served	L	T	T
Maximum Queue (ft)	13	39	70
Average Queue (ft)	1	2	5
95th Queue (ft)	7	15	30
Link Distance (ft)			5305
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	100	
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Queuing and Blocking Report
Baseline

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Intersection: 102:

Movement	EB	SE
Directions Served	T	L
Maximum Queue (ft)	13	77
Average Queue (ft)	0	24
95th Queue (ft)	9	57
Link Distance (ft)	74	489
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	7	45	1108	59	84
Average Queue (ft)	0	2	40	8	6
95th Queue (ft)	5	21	757	38	40
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	40
Average Queue (ft)	11
95th Queue (ft)	38
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Baseline

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Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	45	272	357	276	116
Average Queue (ft)	2	124	219	154	13
95th Queue (ft)	32	272	308	265	77
Link Distance (ft)			692	692	692
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200	200			
Storage Blk Time (%)		0	14		
Queuing Penalty (veh)		1	50		

Intersection: 122: EB I10 Frontage Rd

Movement	EB	SB
Directions Served	T	L
Maximum Queue (ft)	4	144
Average Queue (ft)	0	61
95th Queue (ft)	3	113
Link Distance (ft)	72	474
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	273	313	245	24	58
Average Queue (ft)	164	214	121	1	4
95th Queue (ft)	263	291	249	17	28
Link Distance (ft)		1060	1060	1060	1060
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	225				
Storage Blk Time (%)	0	6			
Queuing Penalty (veh)	0	24			

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	NW
Directions Served	T	T	L
Maximum Queue (ft)	28	80	92
Average Queue (ft)	1	3	31
95th Queue (ft)	12	29	74
Link Distance (ft)	109	109	578
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1044

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	44.8	34.1	2.1	47.3	4.9	3.9	1.4	21.4

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	40.6	37.4	7.6	5.5	3.4	38.3	9.3	19.9

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	31.4	7.5	6.4	2.9	34.6	6.5	7.0

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.7	0.1	0.1	4.0	0.5	0.4	0.0	0.0	0.0	0.2	0.1	0.1
Total Del/Veh (s)	24.1	46.8	15.6	35.6	14.0	7.5	16.9	5.4	4.9	15.0	6.0	3.3

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	7.0

5: Bingle Rd & Burkhart Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	28.4	17.4	1.9	1.1	9.7	1.3	1.7

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	37.3	20.6	1.2	0.4	4.3	1.8	2.1

Scenario 3: Bingle Road Road Diet – AM Peak

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.2	0.0	0.0	2.2	0.6	0.6	0.0	0.0	0.0	2.9	0.2	0.2
Total Del/Veh (s)	30.4	35.4	23.7	33.6	22.7	18.2	21.5	15.6	12.4	20.8	19.2	9.3

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	21.5

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	12.1	8.0	7.3	8.6	10.2	5.6	5.7	6.7	3.1	5.8	6.9	3.1

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	7.8

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.3	0.4	0.6	0.2	0.1	0.0	0.0	0.0	3.4	0.5	0.4
Total Del/Veh (s)	27.7	21.6	15.5	34.6	22.9	15.1	17.3	12.4	13.9	14.6	11.7	9.8

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.9

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Total Del/Veh (s)	7.6	8.9	16.0	6.2	6.5	0.6	0.5	11.4	7.4	12.0	4.3

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	40.0	37.0	8.8	5.3	1.7	37.2	32.7	24.8

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.2	0.0	0.0	0.0
Total Del/Veh (s)	35.4	33.8	4.1	44.2	15.2	2.7	1.6	21.7

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	28.0	10.8	8.2	1.2	0.7	0.1	1.1

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.4	6.9	7.5

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.3	3.4	3.3

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.4	5.9	6.0

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.6	2.4	1.7

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.6	0.3	0.6
Total Del/Veh (s)	5.7	23.4	20.9

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.3	5.0	2.9

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.6	0.5	0.8
Total Del/Veh (s)	6.3	22.0	19.4

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.0	6.1	5.2

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	64.9

Arterial Level of Service
Baseline

03/10/2021

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
	1	47.3	62.4	0.1	8	8	48.1
WB I10 Frontage Rd	2	2.3	12.4	0.1	27	27	2.2
W Memorial Park Dr	3	7.0	22.8	0.2	24	25	7.0
Winningham Ln	4	5.5	19.6	0.1	26	26	4.8
Burkhart Rd	5	1.9	10.7	0.1	29	30	1.8
Cedarbrake Dr	28	1.2	14.0	0.1	31	31	1.2
Merlin Dr	6	1.2	7.7	0.1	30	32	0.9
	30	1.2	7.6	0.1	29	29	1.0
Westview Dr	7	15.6	22.4	0.1	11	12	14.5
Total		83.2	179.6	0.9	19	19	81.3

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
	8	47.2	7	51.6	8	44.5	8
WB I10 Frontage Rd	27	2.2	26	2.3	26	2.3	26
W Memorial Park Dr	23	8.4	25	6.8	24	7.3	26
Winningham Ln	26	5.1	27	4.4	25	6.2	24
Burkhart Rd	30	1.7	30	1.6	29	2.0	28
Cedarbrake Dr	31	1.4	31	1.1	31	1.2	31
Merlin Dr	30	1.5	31	1.2	31	1.1	30
	29	1.1	29	1.1	29	1.2	28
Westview Dr	12	13.6	12	14.7	10	16.8	10
Total	19	82.1	18	84.9	19	82.7	18

Arterial Level of Service
Baseline

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Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 23 Speed	Run 23 Delay
Westview Dr	7	19.2	27.6	0.1	11	11	18.8
	30	6.9	14.0	0.1	18	18	6.8
Merlin Dr	6	1.8	8.2	0.1	27	27	1.7
Cedarbrake Dr	28	0.7	7.1	0.1	33	33	0.7
Burkhart Rd	5	1.3	13.4	0.1	32	32	1.4
Winningham Ln	4	6.0	14.6	0.1	22	22	5.7
W Memorial Park Dr	3	6.6	20.9	0.1	24	24	6.4
WB I10 Frontage Rd	2	38.4	52.9	0.2	11	11	37.6
EB I10 Frontage Rd	1	2.0	14.0	0.1	23	23	2.0
Total		82.9	172.6	0.9	18	18	81.0

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 24 Speed	Run 24 Delay	Run 25 Speed	Run 25 Delay	Run 26 Speed	Run 26 Delay	Run 27 Speed
Westview Dr	11	19.1	12	18.6	11	19.8	11
	18	6.9	18	6.5	17	7.3	18
Merlin Dr	28	1.6	27	1.8	26	2.2	27
Cedarbrake Dr	33	0.7	33	0.7	32	0.9	34
Burkhart Rd	32	1.3	33	1.2	32	1.3	32
Winningham Ln	21	6.2	22	5.7	23	5.4	20
W Memorial Park Dr	24	6.6	25	6.1	23	7.2	24
WB I10 Frontage Rd	11	38.4	11	36.4	10	39.7	10
EB I10 Frontage Rd	23	2.2	23	1.9	24	1.8	23
Total	18	82.8	19	79.0	18	85.7	18

Queuing and Blocking Report
Baseline

03/10/2021

Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	T	T	T	R	L	L	T
Maximum Queue (ft)	235	210	148	141	292	281	246	206	39	32	32
Average Queue (ft)	179	152	77	63	197	167	120	40	6	5	3
95th Queue (ft)	248	220	128	118	279	253	206	150	25	21	21
Link Distance (ft)	170	170	170	170	654	654	654	654	424	424	424
Upstream Blk Time (%)	12	6	0	0							
Queuing Penalty (veh)	22	10	0	0							
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	T
Maximum Queue (ft)	141	148	133	92	127	23	35	87	80	207	260	280
Average Queue (ft)	112	129	84	34	64	1	6	3	3	97	134	156
95th Queue (ft)	158	139	137	74	111	11	24	54	56	158	206	240
Link Distance (ft)	69	69	69	69	69	424	424	424	424			682
Upstream Blk Time (%)	37	78	23	3	8							
Queuing Penalty (veh)	80	168	49	6	16							
Storage Bay Dist (ft)										300	300	
Storage Blk Time (%)											0	0
Queuing Penalty (veh)											0	2

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	318
Average Queue (ft)	125
95th Queue (ft)	301
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	250
Storage Blk Time (%)	1
Queuing Penalty (veh)	7

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	R	T	R	L	T
Maximum Queue (ft)	88	31	334	101	72	230
Average Queue (ft)	32	8	89	3	19	95
95th Queue (ft)	68	30	230	71	54	211
Link Distance (ft)	608	608	682	682		668
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)					60	
Storage Blk Time (%)					1	7
Queuing Penalty (veh)					8	2

Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	19	67	119	29	30	267	63	254
Average Queue (ft)	2	26	47	4	2	79	4	114
95th Queue (ft)	14	56	91	20	13	187	31	226
Link Distance (ft)		227		344		668		388
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200		100		100	
Storage Blk Time (%)	1	13				3		6
Queuing Penalty (veh)	0	0				0		0

Intersection: 5: Bingle Rd & Burkhardt Rd

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	47	18
Average Queue (ft)	12	1
95th Queue (ft)	38	11
Link Distance (ft)	564	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Baseline

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Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	SB	SB	B30	B30
Directions Served	LR	TR	L	T	T	
Maximum Queue (ft)	68	12	12	93	313	128
Average Queue (ft)	24	1	0	6	29	8
95th Queue (ft)	58	8	6	45	154	68
Link Distance (ft)	599	276		273	294	294
Upstream Blk Time (%)					0	0
Queuing Penalty (veh)					1	0
Storage Bay Dist (ft)			100			
Storage Blk Time (%)				0		
Queuing Penalty (veh)				0		

Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	B30	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	T	L	T	TR
Maximum Queue (ft)	148	302	174	268	84	224	212	4	144	331	244
Average Queue (ft)	25	162	112	122	31	105	107	0	31	183	126
95th Queue (ft)	84	266	177	218	74	194	184	3	103	279	230
Link Distance (ft)		1172		1489		294		273		422	422
Upstream Blk Time (%)						0					
Queuing Penalty (veh)						1					
Storage Bay Dist (ft)	100		100		60		200		70		
Storage Blk Time (%)		29	14	11	1	17	1		0	35	
Queuing Penalty (veh)		9	35	22	7	74	2		1	12	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	115	28	146	46	53	54
Average Queue (ft)	56	3	64	17	25	29
95th Queue (ft)	89	18	103	43	43	48
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		1			
Queuing Penalty (veh)	0		0			

Queuing and Blocking Report
Baseline

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Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	95	261	164	185	106	258	131	244
Average Queue (ft)	26	110	78	89	18	124	32	119
95th Queue (ft)	67	201	134	158	68	227	82	204
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)	0	7	0	0		17	0	16
Queuing Penalty (veh)	0	3	0	0		4	1	8

Intersection: 10: Campbell Dr

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	L	TR	LTR
Maximum Queue (ft)	45	30	30	4	229
Average Queue (ft)	13	4	3	0	29
95th Queue (ft)	39	20	18	3	133
Link Distance (ft)	198	318	260	260	3114
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	T	TR
Maximum Queue (ft)	103	120	127	124	121	40	6	34	260	276
Average Queue (ft)	54	87	96	98	79	7	0	2	141	199
95th Queue (ft)	95	120	129	129	121	26	4	16	243	293
Link Distance (ft)	58	58	58	58	58	480	480	480	260	260
Upstream Blk Time (%)	6	27	26	30	16				0	4
Queuing Penalty (veh)	9	42	39	46	24				1	14
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Queuing and Blocking Report
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Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	122	154	141	121	86	104	119	10
Average Queue (ft)	44	126	119	53	42	48	50	0
95th Queue (ft)	97	141	147	103	72	92	101	5
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	5	75	46	8	1			
Queuing Penalty (veh)	11	148	91	16	3			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	44	31
Average Queue (ft)	14	3
95th Queue (ft)	39	17
Link Distance (ft)	220	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB	EB
Directions Served	L	T	T
Maximum Queue (ft)	27	76	42
Average Queue (ft)	1	6	3
95th Queue (ft)	19	40	30
Link Distance (ft)			5305
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	100	
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		0	0

Queuing and Blocking Report

Baseline

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Intersection: 102:

Movement	EB	SE
Directions Served	T	L
Maximum Queue (ft)	10	92
Average Queue (ft)	0	27
95th Queue (ft)	7	65
Link Distance (ft)	74	489
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	12	42	60	61	61
Average Queue (ft)	1	4	12	14	5
95th Queue (ft)	7	22	43	46	29
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	48
Average Queue (ft)	13
95th Queue (ft)	41
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Baseline

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Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB
Directions Served	T	T	T	T
Maximum Queue (ft)	274	375	261	165
Average Queue (ft)	142	227	157	20
95th Queue (ft)	291	328	269	103
Link Distance (ft)		692	692	692
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	0	16		
Queuing Penalty (veh)	1	58		

Intersection: 122: EB I10 Frontage Rd

Movement	EB	SB
Directions Served	T	L
Maximum Queue (ft)	11	129
Average Queue (ft)	0	55
95th Queue (ft)	8	98
Link Distance (ft)	72	474
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	105	280	360	263	48
Average Queue (ft)	3	161	211	101	2
95th Queue (ft)	53	274	311	248	20
Link Distance (ft)			1060	1060	1060
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	225	225			
Storage Blk Time (%)		1	6		
Queuing Penalty (veh)		2	24		

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	NW
Directions Served	T	T	L
Maximum Queue (ft)	42	88	116
Average Queue (ft)	2	5	54
95th Queue (ft)	19	37	103
Link Distance (ft)	109	109	578
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1081

Existing Conditions – PM Peak

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	35.0	32.9	2.2	47.2	5.6	3.6	1.4	21.5

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	32.6	31.0	12.2	4.9	1.5	48.8	13.2	20.0

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.2	0.0	0.0
Total Del/Veh (s)	43.9	6.9	6.6	4.9	49.3	3.9	8.9

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.1	0.1	4.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.5	8.3	5.2	21.5	21.4	2.7	9.0	3.0	3.4	11.6	1.7	0.9

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.6

5: Bingle Rd & Burkhardt Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	16.1	5.3	1.1	0.8	8.5	1.0	1.2

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	27.0	13.5	0.8	0.4	7.9	2.1	1.8

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	2.2	0.5	0.5	0.0	0.0	0.0	3.0	0.2	0.3
Total Del/Veh (s)	29.8	30.8	23.5	35.3	25.6	19.2	21.7	19.0	17.9	20.3	17.6	12.1

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	21.4

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.2
Total Del/Veh (s)	7.1	8.3	7.8	8.5	7.2	5.8	5.1	6.8	3.1	5.2	7.3	3.2

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	7.1

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.3	0.4	0.6	0.1	0.1	0.1	0.0	0.0	3.3	0.5	0.6
Total Del/Veh (s)	28.1	19.8	12.4	34.9	24.1	16.0	15.7	11.3	11.8	12.8	11.1	7.0

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	15.9

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)		0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1
Total Del/Veh (s)		5.5	21.4	5.2	3.9	0.6	0.3	10.9	6.1	3.9	3.6

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	40.0	33.2	7.6	4.7	1.7	36.5	31.1	23.6

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	36.1	32.9	4.1	42.7	11.0	2.8	1.6	21.2

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	11.3	6.0	8.0	0.9	0.4	0.1	0.8

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	9.9	6.8	7.6

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.3	3.1	3.3

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.7	5.0	5.2

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.5	2.3	1.6

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.6	0.3	0.6
Total Del/Veh (s)	5.0	21.0	18.7

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	4.4	2.7

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.2	0.4	0.7
Total Del/Veh (s)	6.3	17.7	16.0

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.5	11.1	6.2

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	58.2

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
	1	47.2	62.2	0.1	8	8	45.0
WB I10 Frontage Rd	2	1.9	13.6	0.1	24	24	2.0
W Memorial Park Dr	3	6.7	22.8	0.2	24	25	5.8
Winningham Ln	4	3.1	17.0	0.1	29	30	3.0
Burkhart Rd	5	1.1	9.9	0.1	32	31	1.1
Cedarbrake Dr	28	0.9	13.1	0.1	33	33	0.9
Merlin Dr	6	0.8	7.3	0.1	32	33	0.7
Westview Dr	7	19.0	32.2	0.1	15	14	20.5
Total		80.7	178.1	0.9	19	19	79.1

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
	7	54.1	8	44.8	8	44.8	8
WB I10 Frontage Rd	24	1.7	24	1.9	24	1.9	24
W Memorial Park Dr	24	7.1	25	6.4	24	7.1	24
Winningham Ln	29	3.5	30	2.6	29	3.2	29
Burkhart Rd	31	1.2	33	0.8	31	1.3	32
Cedarbrake Dr	33	0.9	33	1.0	33	1.1	33
Merlin Dr	33	0.8	32	0.8	32	0.9	32
Westview Dr	16	16.7	14	19.7	15	18.7	14
Total	18	85.9	19	78.0	19	78.9	19

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
Westview Dr	7	17.6	26.1	0.1	12	12	18.2
Merlin Dr	6	2.6	16.1	0.1	29	29	2.8
Cedarbrake Dr	28	0.4	6.9	0.1	34	34	0.4
Burkhart Rd	5	1.0	13.4	0.1	32	33	0.9
Winningham Ln	4	1.7	10.3	0.1	31	31	1.6
W Memorial Park Dr	3	3.9	17.8	0.1	28	27	4.5
WB I10 Frontage Rd	2	49.1	63.4	0.2	9	9	50.7
EB I10 Frontage Rd	1	2.5	14.6	0.1	23	22	2.6
Total		78.8	168.6	0.9	19	18	81.6

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
Westview Dr	12	17.0	12	17.7	12	17.0	12
Merlin Dr	29	2.7	29	2.6	29	2.4	29
Cedarbrake Dr	34	0.5	34	0.5	34	0.4	34
Burkhart Rd	32	1.0	32	1.1	33	0.9	32
Winningham Ln	31	1.7	30	2.0	31	1.5	30
W Memorial Park Dr	27	4.7	29	3.6	29	3.4	29
WB I10 Frontage Rd	9	49.9	8	52.2	9	45.9	9
EB I10 Frontage Rd	22	2.6	23	2.4	23	2.4	23
Total	19	80.1	18	82.1	19	73.9	19

Queuing and Blocking Report
Baseline

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Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB
Directions Served	L	LT	T	T	T	T	T	R	L
Maximum Queue (ft)	190	202	135	113	375	342	301	262	15
Average Queue (ft)	113	131	72	54	248	214	188	59	1
95th Queue (ft)	183	200	119	105	351	311	281	197	9
Link Distance (ft)	170	170	170	170	654	654	654	654	424
Upstream Blk Time (%)	1	2	0						
Queuing Penalty (veh)	2	4	0						
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	T
Maximum Queue (ft)	140	154	132	135	147	15	15	17	18	196	240	366
Average Queue (ft)	103	129	123	76	95	1	1	1	1	112	155	182
95th Queue (ft)	151	139	143	130	146	10	8	11	9	180	222	296
Link Distance (ft)	69	69	69	69	69	424	424	424	424		680	680
Upstream Blk Time (%)	26	71	42	16	22							
Queuing Penalty (veh)	74	203	119	46	63							
Storage Bay Dist (ft)										250		
Storage Blk Time (%)										0	0	0
Queuing Penalty (veh)										0	0	0

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	275
Average Queue (ft)	178
95th Queue (ft)	343
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	250
Storage Blk Time (%)	4
Queuing Penalty (veh)	7

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	232	55	203	222	54	111	150
Average Queue (ft)	115	25	74	92	17	34	61
95th Queue (ft)	195	48	165	179	46	82	130
Link Distance (ft)	596	596	680	680		666	666
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					1	1	
Queuing Penalty (veh)					3	0	

Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	31	31	38	28	113	146	108	128
Average Queue (ft)	2	9	7	3	25	25	18	25
95th Queue (ft)	14	31	27	16	77	91	68	87
Link Distance (ft)		215		332	666	666	387	387
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200					
Storage Blk Time (%)	1	1						
Queuing Penalty (veh)	0	0						

Intersection: 5: Bingle Rd & Burkhardt Rd

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	44	28	60	70	72
Average Queue (ft)	13	1	3	7	3
95th Queue (ft)	39	12	23	36	32
Link Distance (ft)	559	387	387	593	593
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Baseline

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Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	58	24	28	54	32
Average Queue (ft)	23	1	1	4	2
95th Queue (ft)	48	11	13	25	20
Link Distance (ft)	587	275	275	624	624
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	174	269	174	276	84	276	291	109	228	213
Average Queue (ft)	25	144	83	137	36	141	167	28	128	116
95th Queue (ft)	96	234	160	238	77	245	266	68	201	192
Link Distance (ft)		1172		1489		624	624		422	422
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		60			70		
Storage Blk Time (%)	0	25	4	19	1	23		0	24	
Queuing Penalty (veh)	0	7	12	25	5	14		2	10	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	108	28	113	61	48	56
Average Queue (ft)	56	2	58	19	23	26
95th Queue (ft)	91	15	89	49	40	45
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Queuing and Blocking Report
Baseline

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Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	91	208	148	197	113	241	118	235
Average Queue (ft)	27	92	72	92	16	110	28	114
95th Queue (ft)	67	165	124	168	61	195	71	205
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)		5		0	0	15	0	14
Queuing Penalty (veh)		2		1	1	3	1	7

Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	28	34	18	162
Average Queue (ft)	10	7	1	16
95th Queue (ft)	32	28	11	83
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	TR
Maximum Queue (ft)	110	113	115	119	115	44	23	257	275
Average Queue (ft)	50	84	84	86	62	6	1	135	190
95th Queue (ft)	90	114	118	124	109	27	9	229	286
Link Distance (ft)	58	58	58	58	58	480	480	260	260
Upstream Blk Time (%)	5	26	18	24	10			0	2
Queuing Penalty (veh)	7	38	26	35	14			0	8
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Queuing and Blocking Report
Baseline

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Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	115	150	147	111	90	95	115	22
Average Queue (ft)	42	127	114	49	41	45	43	1
95th Queue (ft)	92	140	149	96	70	88	88	10
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	6	74	38	7	1			
Queuing Penalty (veh)	11	139	73	14	2			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	35	78
Average Queue (ft)	10	6
95th Queue (ft)	34	36
Link Distance (ft)	213	593
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB	EB
Directions Served	L	T	T
Maximum Queue (ft)	5	14	26
Average Queue (ft)	0	1	1
95th Queue (ft)	4	8	13
Link Distance (ft)			5305
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Baseline

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Intersection: 102:

Movement	SE
Directions Served	L
Maximum Queue (ft)	92
Average Queue (ft)	26
95th Queue (ft)	65
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	14	28	19	44	62
Average Queue (ft)	1	3	2	5	4
95th Queue (ft)	7	19	13	25	29
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	WB	NB
Directions Served	T	L
Maximum Queue (ft)	13	56
Average Queue (ft)	0	9
95th Queue (ft)	9	36
Link Distance (ft)	41	489
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
Baseline

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Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	44	262	341	297	63
Average Queue (ft)	1	117	207	141	6
95th Queue (ft)	31	260	292	262	51
Link Distance (ft)			692	692	692
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200	200			
Storage Blk Time (%)		0	11		
Queuing Penalty (veh)		0	37		

Intersection: 122: EB I10 Frontage Rd

Movement	SB
Directions Served	L
Maximum Queue (ft)	109
Average Queue (ft)	42
95th Queue (ft)	84
Link Distance (ft)	474
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	262	285	228	128	110
Average Queue (ft)	155	213	141	11	14
95th Queue (ft)	261	274	242	67	60
Link Distance (ft)		1060	1060	1060	1060
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	225				
Storage Blk Time (%)	0	4			
Queuing Penalty (veh)	0	23			

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	WB	NW
Directions Served	T	T	T	L
Maximum Queue (ft)	18	46	68	216
Average Queue (ft)	1	3	5	108
95th Queue (ft)	14	21	43	188
Link Distance (ft)	109	109	109	578
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			2	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1039

Scenario 1: Baseline Conditions – PM Peak

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.1
Total Del/Veh (s)	34.5	34.7	2.1	50.0	6.4	3.8	1.5	22.6

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	33.3	31.4	12.6	5.1	1.5	53.4	19.4	21.9

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.4	0.0	0.0
Total Del/Veh (s)	45.8	9.4	6.5	5.7	53.2	4.5	9.5

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	2.5	0.1	0.1	4.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Total Del/Veh (s)	9.1	10.2	3.8	17.2	15.3	2.8	10.4	3.2	3.2	7.9	1.6	1.4

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.6

5: Bingle Rd & Burkhardt Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	15.9	8.6	1.2	1.0	7.6	1.1	1.3

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	29.5	11.3	0.8	0.5	7.6	2.3	2.0

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	2.2	0.6	0.6	0.0	0.0	0.0	2.9	0.2	0.3
Total Del/Veh (s)	31.3	29.0	22.1	36.9	22.9	17.8	24.8	22.1	21.2	21.8	18.2	12.7

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	22.5

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Total Del/Veh (s)	13.0	8.5	8.4	8.5	7.8	5.7	5.5	6.8	3.2	5.6	6.6	3.2

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	7.4

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.2	0.3	0.3	0.6	0.1	0.1	0.0	0.0	0.0	3.4	0.6	0.5
Total Del/Veh (s)	25.6	20.3	13.6	37.9	23.6	15.4	16.5	12.4	14.0	14.6	12.2	8.0

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	17.0

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)		0.1	0.1	0.1	0.0	0.0	0.0	0.4	0.1	0.0	0.1
Total Del/Veh (s)		8.9	23.4	5.0	6.8	0.6	0.4	13.4	7.6	6.1	4.4

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
Total Del/Veh (s)	38.8	32.0	7.7	5.9	2.0	39.2	34.7	24.4

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	35.4	33.3	4.3	43.2	22.0	2.8	1.6	21.2

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.1	6.8	7.6	1.1	0.5	0.4	0.9

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.2	6.7	7.6

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.5	3.3	3.4

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.6	5.1	5.3

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.4	2.3	1.6

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.5	0.3	0.6
Total Del/Veh (s)	5.4	23.0	20.5

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	4.7	2.7

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.1	0.4	0.7
Total Del/Veh (s)	6.7	18.0	16.3

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.9	10.7	6.6

Total Network Performance

Denied Del/Veh (s)	0.6
Total Del/Veh (s)	61.9

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
	1	50.0	65.2	0.1	8	8	46.6
WB I10 Frontage Rd	2	1.8	13.5	0.1	24	24	1.7
W Memorial Park Dr	3	6.5	22.6	0.2	25	25	6.3
Winningham Ln	4	3.3	17.3	0.1	29	30	2.8
Burkhart Rd	5	1.2	10.0	0.1	31	31	1.2
Cedarbrake Dr	28	1.1	13.3	0.1	33	33	1.0
Merlin Dr	6	0.8	7.3	0.1	32	33	0.7
Westview Dr	7	22.1	35.3	0.1	13	13	22.4
Total		86.9	184.6	0.9	18	18	82.8

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
	7	51.1	7	56.9	7	51.3	8
WB I10 Frontage Rd	24	2.0	25	1.7	24	1.8	24
W Memorial Park Dr	25	6.0	25	6.3	24	6.8	24
Winningham Ln	29	3.4	28	3.8	29	3.0	29
Burkhart Rd	31	1.3	31	1.3	31	1.2	32
Cedarbrake Dr	33	1.0	32	1.3	33	1.1	33
Merlin Dr	32	0.8	31	1.0	32	0.8	32
Westview Dr	13	22.1	13	22.2	14	19.9	13
Total	18	87.7	17	94.5	18	86.0	18

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
Westview Dr	7	18.2	26.7	0.1	12	12	17.2
Merlin Dr	6	2.9	16.4	0.1	28	28	2.8
Cedarbrake Dr	28	0.5	7.0	0.1	34	34	0.5
Burkhart Rd	5	1.1	13.6	0.1	32	32	1.0
Winningham Ln	4	1.6	10.2	0.1	31	30	1.9
W Memorial Park Dr	3	4.6	18.4	0.1	27	26	4.9
WB I10 Frontage Rd	2	53.6	67.8	0.2	8	9	50.6
EB I10 Frontage Rd	1	2.6	14.7	0.1	22	22	2.8
Total		85.0	174.7	0.9	18	18	81.6

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
Westview Dr	12	17.5	11	19.6	12	18.3	12
Merlin Dr	29	2.9	29	2.9	28	2.9	29
Cedarbrake Dr	34	0.4	33	0.5	33	0.6	34
Burkhart Rd	32	1.3	32	1.1	32	1.1	32
Winningham Ln	31	1.3	30	1.9	32	1.1	31
W Memorial Park Dr	28	3.9	27	5.1	26	5.0	29
WB I10 Frontage Rd	9	48.9	7	63.1	8	54.9	9
EB I10 Frontage Rd	22	2.6	22	2.5	22	2.6	23
Total	19	78.8	17	96.7	18	86.6	18

Queuing and Blocking Report
Baseline

03/11/2021

Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB
Directions Served	L	LT	T	T	T	T	T	R	L
Maximum Queue (ft)	194	222	139	126	414	375	342	263	24
Average Queue (ft)	115	133	79	63	264	234	204	86	2
95th Queue (ft)	174	195	125	115	381	353	311	234	12
Link Distance (ft)	170	170	170	170	654	654	654	654	424
Upstream Blk Time (%)	1	2	0	0					
Queuing Penalty (veh)	2	4	0	0					
Storage Bay Dist (ft)									
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	T
Maximum Queue (ft)	138	139	145	128	139	20	38	16	6	231	448	580
Average Queue (ft)	106	128	124	84	103	2	3	1	0	126	184	242
95th Queue (ft)	154	134	145	137	148	12	17	10	4	205	318	452
Link Distance (ft)	69	69	69	69	69	424	424	424	424		680	680
Upstream Blk Time (%)	29	72	44	22	24							0
Queuing Penalty (veh)	86	215	132	66	72							0
Storage Bay Dist (ft)										250		
Storage Blk Time (%)										0	1	1
Queuing Penalty (veh)										0	2	8

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	275
Average Queue (ft)	202
95th Queue (ft)	350
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	250
Storage Blk Time (%)	10
Queuing Penalty (veh)	21

Queuing and Blocking Report
Baseline

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Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	227	76	184	210	55	143	161
Average Queue (ft)	125	28	72	95	19	45	72
95th Queue (ft)	200	56	157	186	47	106	144
Link Distance (ft)	596	596	680	680		666	666
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					0	2	
Queuing Penalty (veh)					2	0	

Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	12	31	38	23	120	132	96	128
Average Queue (ft)	1	7	8	3	28	30	20	22
95th Queue (ft)	8	28	31	16	85	97	66	82
Link Distance (ft)		215		332	666	666	387	387
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200					
Storage Blk Time (%)	0	1						
Queuing Penalty (veh)	0	0						

Intersection: 5: Bingle Rd & Burkhardt Rd

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	40	47	69	83	88
Average Queue (ft)	13	3	5	9	6
95th Queue (ft)	39	21	33	42	41
Link Distance (ft)	559	387	387	593	593
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Baseline

03/11/2021

Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	72	6	13	52	41
Average Queue (ft)	27	0	1	4	2
95th Queue (ft)	60	6	9	25	21
Link Distance (ft)	587	275	275	624	624
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	174	290	174	288	84	288	323	145	247	229
Average Queue (ft)	29	154	85	135	47	171	195	40	134	123
95th Queue (ft)	100	248	159	231	93	269	293	105	212	207
Link Distance (ft)		1172		1489		624	624		422	422
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		60			70		
Storage Blk Time (%)		25	6	15	1	30		0	26	
Queuing Penalty (veh)		7	19	22	5	20		1	11	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	93	29	99	51	46	51
Average Queue (ft)	58	3	58	19	24	27
95th Queue (ft)	85	16	89	46	41	46
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Queuing and Blocking Report
Baseline

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Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	119	223	172	193	86	301	131	306
Average Queue (ft)	26	104	82	91	16	130	31	120
95th Queue (ft)	74	175	144	159	52	240	85	226
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)		7	0	0	0	18	0	17
Queuing Penalty (veh)		3	1	0	0	4	1	9

Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	51	30	35	241
Average Queue (ft)	14	4	4	32
95th Queue (ft)	39	21	22	143
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	T	TR
Maximum Queue (ft)	115	120	120	133	114	57	9	30	266	282
Average Queue (ft)	53	83	81	88	72	8	0	2	150	207
95th Queue (ft)	95	116	116	127	118	34	7	15	241	300
Link Distance (ft)	58	58	58	58	58	480	480	480	260	260
Upstream Blk Time (%)	6	26	19	23	12				0	5
Queuing Penalty (veh)	10	39	29	36	18				1	18
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Queuing and Blocking Report
Baseline

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Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	116	149	143	129	90	106	131	24
Average Queue (ft)	47	125	118	48	41	44	56	1
95th Queue (ft)	101	134	146	102	70	88	114	10
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	7	75	40	7	1			
Queuing Penalty (veh)	13	148	80	15	2			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB	NB
Directions Served	LR	LT	T
Maximum Queue (ft)	43	79	46
Average Queue (ft)	12	7	2
95th Queue (ft)	38	41	24
Link Distance (ft)	213	593	593
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB	EB
Directions Served	L	T	T
Maximum Queue (ft)	8	12	20
Average Queue (ft)	0	0	1
95th Queue (ft)	4	7	8
Link Distance (ft)			5305
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
Baseline

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Intersection: 102:

Movement	SE
Directions Served	L
Maximum Queue (ft)	96
Average Queue (ft)	30
95th Queue (ft)	70
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	26	45	21	43	52
Average Queue (ft)	2	3	2	6	4
95th Queue (ft)	17	25	13	30	28
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	44
Average Queue (ft)	10
95th Queue (ft)	35
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Baseline

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Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB
Directions Served	L	T	T	T	T
Maximum Queue (ft)	47	274	333	280	160
Average Queue (ft)	2	139	224	163	18
95th Queue (ft)	33	284	312	274	95
Link Distance (ft)			692	692	692
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200	200			
Storage Blk Time (%)		0	15		
Queuing Penalty (veh)		0	55		

Intersection: 122: EB I10 Frontage Rd

Movement	SB
Directions Served	L
Maximum Queue (ft)	113
Average Queue (ft)	48
95th Queue (ft)	89
Link Distance (ft)	474
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	T	T
Maximum Queue (ft)	52	262	330	240	168	134
Average Queue (ft)	2	155	209	143	16	18
95th Queue (ft)	37	249	279	241	81	73
Link Distance (ft)			1060	1060	1060	1060
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225	225				
Storage Blk Time (%)		0	4			
Queuing Penalty (veh)		0	20			

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	WB	NW
Directions Served	T	T	T	L
Maximum Queue (ft)	7	46	109	210
Average Queue (ft)	0	3	8	109
95th Queue (ft)	5	21	60	185
Link Distance (ft)	109	109	109	578
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1198

Scenario 2: Bingle Road Improved Signal Timings and Progression – PM Peak

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	4.0	4.2	0.0	0.0	1.8
Total Del/Veh (s)	36.5	33.5	2.2	134.5	10.1	3.5	1.4	47.7

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Del/Veh (s)	39.1	36.7	15.0	5.5	1.6	38.1	17.1	21.2

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	24.1	8.6	8.1	6.5	33.4	5.7	8.6

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.8	0.1	0.1	4.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	34.8	33.1	6.3	34.4	49.8	5.5	11.3	3.4	3.4	12.2	1.5	1.3

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	2.8

5: Bingle Rd & Burkhart Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	21.0	6.1	1.1	0.8	6.0	1.3	1.3

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	24.7	10.9	0.8	0.3	9.7	2.3	1.9

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	2.1	0.6	0.5	0.0	0.0	0.0	2.9	0.2	0.3
Total Del/Veh (s)	32.4	36.6	29.2	35.6	25.1	19.7	21.7	18.7	19.4	23.9	17.3	12.3

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.3
Total Del/Veh (s)	22.3

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.2	0.2	0.1
Total Del/Veh (s)	9.9	8.7	7.3	9.1	7.7	5.7	5.1	7.5	3.5	5.8	7.4	3.3

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	7.5

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.3	0.4	0.7	0.1	0.1	0.0	0.0	0.0	3.4	0.6	0.5
Total Del/Veh (s)	26.6	20.5	13.7	38.4	22.7	15.1	17.0	11.7	13.4	14.8	12.4	8.3

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.7

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1
Total Del/Veh (s)	3.7	6.5	28.2	4.0	7.4	0.6	0.5	10.8	7.7	9.7	4.4

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	40.3	38.4	8.4	5.0	1.9	36.6	32.5	24.8

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0
Total Del/Veh (s)	35.5	33.1	4.0	39.9	13.2	2.7	1.5	21.2

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	24.0	7.2	4.8	1.4	0.5	0.1	1.1

30: Bingle Rd Performance by movement

Movement	NBT	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	2.0	2.1

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.2	6.8	7.7

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.7	3.2	3.6

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.7	5.3	5.4

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.6	2.3	1.7

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.5	0.3	0.6
Total Del/Veh (s)	5.8	23.4	21.0

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.3	5.2	2.9

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.1	0.4	0.7
Total Del/Veh (s)	7.6	22.7	20.4

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.9	10.8	6.6

Total Network Performance

Denied Del/Veh (s)	1.4
Total Del/Veh (s)	73.5

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
	1	134.5	152.8	0.1	3	5	89.9
WB I10 Frontage Rd	2	1.9	13.8	0.1	24	24	1.8
W Memorial Park Dr	3	8.9	27.1	0.2	21	21	8.3
Winningham Ln	4	3.5	20.0	0.1	25	25	3.3
Burkhart Rd	5	1.1	11.4	0.1	27	28	1.0
Cedarbrake Dr	28	1.4	15.7	0.1	28	28	1.2
	30	2.2	6.3	0.0	19	19	2.1
Merlin Dr	6	0.8	4.3	0.0	27	27	0.8
Westview Dr	7	18.7	34.1	0.1	14	14	17.3
Total		173.0	285.5	0.9	12	14	125.8

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
	4	103.6	2	227.4	3	148.7	4
WB I10 Frontage Rd	23	2.0	24	1.9	24	1.9	24
W Memorial Park Dr	20	9.1	21	8.8	20	9.4	21
Winningham Ln	25	3.7	26	2.9	24	4.1	25
Burkhart Rd	27	1.2	27	1.1	27	1.2	28
Cedarbrake Dr	28	1.1	28	1.4	27	1.8	27
	21	1.6	17	2.7	17	2.8	20
Merlin Dr	28	0.7	27	0.8	27	0.9	28
Westview Dr	14	17.0	13	20.9	14	17.1	13
Total	13	140.1	9	268.0	11	187.9	14

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
Westview Dr	7	17.3	27.2	0.1	12	12	15.8
Merlin Dr	6	2.8	18.6	0.1	25	26	2.5
	30	2.0	6.0	0.0	19	20	1.9
Cedarbrake Dr	28	0.5	4.0	0.0	29	29	0.5
Burkhart Rd	5	1.3	15.8	0.1	28	28	1.3
Winningham Ln	4	1.5	11.5	0.1	27	27	1.5
W Memorial Park Dr	3	5.6	21.7	0.1	23	23	5.7
WB I10 Frontage Rd	2	35.1	52.3	0.2	11	11	34.9
EB I10 Frontage Rd	1	2.2	14.2	0.1	23	23	2.4
Total		68.3	171.2	0.9	18	19	66.3

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
Westview Dr	11	19.2	11	18.4	12	17.0	12
Merlin Dr	25	3.2	24	3.6	26	2.3	26
	19	2.3	18	2.6	20	1.7	21
Cedarbrake Dr	29	0.6	28	0.6	30	0.4	29
Burkhart Rd	27	1.5	27	1.4	28	1.0	28
Winningham Ln	28	1.3	28	1.2	27	1.7	27
W Memorial Park Dr	23	6.1	23	5.2	24	4.8	22
WB I10 Frontage Rd	11	35.6	10	37.8	11	34.8	11
EB I10 Frontage Rd	23	2.2	23	2.1	23	2.0	23
Total	18	71.9	18	72.9	19	65.8	19

Queuing and Blocking Report
Baseline

03/12/2021

Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	T	T	T	R	L	L
Maximum Queue (ft)	207	215	143	139	633	596	562	360	5	31
Average Queue (ft)	123	134	82	63	462	438	408	198	0	3
95th Queue (ft)	187	194	129	116	704	684	665	556	3	16
Link Distance (ft)	170	170	170	170	654	654	654	654	424	424
Upstream Blk Time (%)	1	2	0	0	7	10	9	5		
Queuing Penalty (veh)	2	4	0	0	0	0	0	0		
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	R
Maximum Queue (ft)	147	158	148	137	146	22	26	17	206	396	509	275
Average Queue (ft)	125	130	129	102	106	2	3	1	90	139	191	164
95th Queue (ft)	150	142	139	148	156	13	15	8	165	260	385	339
Link Distance (ft)	69	69	69	69	69	424	424	424		679	679	
Upstream Blk Time (%)	39	79	55	27	30							
Queuing Penalty (veh)	115	235	164	80	90							
Storage Bay Dist (ft)									250			250
Storage Blk Time (%)									0	0	0	9
Queuing Penalty (veh)									0	0	0	18

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	171	66	205	227	64	141	227
Average Queue (ft)	84	24	115	138	20	59	109
95th Queue (ft)	140	54	181	202	54	121	198
Link Distance (ft)	602	602	679	679		668	668
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					60		
Storage Blk Time (%)					1	3	
Queuing Penalty (veh)					4	1	

Queuing and Blocking Report
Baseline

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Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	LT	TR	LT	TR
Maximum Queue (ft)	28	40	46	28	144	160	103	115
Average Queue (ft)	2	9	9	3	43	37	16	18
95th Queue (ft)	14	32	32	16	116	121	60	76
Link Distance (ft)		215		332	668	668	387	387
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200					
Storage Blk Time (%)	2	2						
Queuing Penalty (veh)	0	0						

Intersection: 5: Bingle Rd & Burkhart Rd

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	36	41	42	69	66
Average Queue (ft)	11	4	4	7	6
95th Queue (ft)	35	24	25	36	35
Link Distance (ft)	559	387	387	593	593
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	NB	SB	SB
Directions Served	LR	T	TR	LT	T
Maximum Queue (ft)	62	58	49	98	86
Average Queue (ft)	27	2	2	10	11
95th Queue (ft)	56	23	22	55	54
Link Distance (ft)	592	121	121	624	624
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Baseline

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Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	174	329	174	292	84	298	305	130	281	236
Average Queue (ft)	29	171	97	145	43	158	179	35	138	124
95th Queue (ft)	104	281	167	241	90	263	278	89	232	207
Link Distance (ft)		1172		1489		624	624		422	422
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		100		60			70		
Storage Blk Time (%)		34	6	18	1	26		1	28	
Queuing Penalty (veh)		9	20	25	4	17		3	12	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	101	22	103	49	56	59
Average Queue (ft)	58	2	58	20	25	27
95th Queue (ft)	86	15	89	48	46	47
Link Distance (ft)	3858		1172		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	57	204	203	236	66	270	102	272
Average Queue (ft)	21	102	81	95	14	127	29	120
95th Queue (ft)	53	177	154	184	45	225	71	208
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)		7	1	1		17	0	18
Queuing Penalty (veh)		3	2	1		4	2	9

Queuing and Blocking Report
Baseline

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Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	37	34	34	248
Average Queue (ft)	11	4	3	29
95th Queue (ft)	34	21	17	141
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	T	TR
Maximum Queue (ft)	99	126	120	123	127	40	28	35	245	277
Average Queue (ft)	44	80	84	88	70	5	1	3	133	202
95th Queue (ft)	86	117	127	130	115	23	12	19	214	295
Link Distance (ft)	58	58	58	58	58	480	480	480	260	260
Upstream Blk Time (%)	5	29	26	32	14				0	5
Queuing Penalty (veh)	8	43	39	48	21				0	16
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	127	144	151	122	89	119	111	4
Average Queue (ft)	60	126	122	63	43	41	38	0
95th Queue (ft)	118	135	145	118	72	94	83	2
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	8	75	45	10	1			
Queuing Penalty (veh)	17	149	88	20	2			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
Baseline

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Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB	NB
Directions Served	LR	LT	T
Maximum Queue (ft)	35	74	100
Average Queue (ft)	11	10	10
95th Queue (ft)	35	49	55
Link Distance (ft)	214	593	593
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: Bingle Rd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	T
Maximum Queue (ft)	138	149	133	148
Average Queue (ft)	36	43	33	36
95th Queue (ft)	117	136	110	117
Link Distance (ft)	122	122	121	121
Upstream Blk Time (%)	1	2	1	1
Queuing Penalty (veh)	4	12	4	6
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 101: EB I10 Frontage Rd

Movement	EB	EB	EB
Directions Served	L	T	T
Maximum Queue (ft)	5	6	10
Average Queue (ft)	0	0	0
95th Queue (ft)	3	4	5
Link Distance (ft)			5305
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100	100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report

Baseline

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Intersection: 102:

Movement	SE
Directions Served	L
Maximum Queue (ft)	91
Average Queue (ft)	32
95th Queue (ft)	68
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	4	40	48	64	92
Average Queue (ft)	0	2	4	8	6
95th Queue (ft)	2	16	25	36	40
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	43
Average Queue (ft)	14
95th Queue (ft)	40
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
Baseline

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Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB
Directions Served	T	T	T	T
Maximum Queue (ft)	272	353	293	156
Average Queue (ft)	158	238	174	21
95th Queue (ft)	300	326	268	103
Link Distance (ft)		692	692	692
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	200			
Storage Blk Time (%)	0	17		
Queuing Penalty (veh)	1	61		

Intersection: 122: EB I10 Frontage Rd

Movement	SB
Directions Served	L
Maximum Queue (ft)	126
Average Queue (ft)	50
95th Queue (ft)	96
Link Distance (ft)	474
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	T	T
Maximum Queue (ft)	51	298	328	280	208	142
Average Queue (ft)	3	189	239	179	45	35
95th Queue (ft)	52	287	307	259	152	112
Link Distance (ft)			1060	1060	1060	1060
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225	225				
Storage Blk Time (%)		0	8			
Queuing Penalty (veh)		1	46			

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	WB	NW
Directions Served	T	T	T	L
Maximum Queue (ft)	4	49	63	210
Average Queue (ft)	0	4	4	104
95th Queue (ft)	2	26	39	181
Link Distance (ft)	109	109	109	578
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			2	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1414

Scenario 3: Bingle Road Road Diet – PM Peak

1: Bingle Rd & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.3	0.4	0.0	0.0	0.1
Total Del/Veh (s)	41.8	35.9	2.1	129.6	7.5	3.5	1.5	45.6

2: Bingle Rd & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	40.3	36.3	9.2	5.5	3.2	38.2	14.5	20.6

3: Bingle Rd & W Memorial Park Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.5	0.2	0.1
Total Del/Veh (s)	44.0	17.4	13.0	2.2	52.6	6.9	13.1

4: Bingle Rd & Winningham Ln Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)		0.1	0.1	4.2		0.1	0.0	0.1	0.0	0.1	0.1	0.0
Total Del/Veh (s)		4.3	6.8	16.1		3.6	14.7	5.2	5.2	18.7	2.2	1.8

4: Bingle Rd & Winningham Ln Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	4.0

5: Bingle Rd & Burkhart Rd Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	48.8	18.9	2.1	1.5	13.5	1.5	2.1

6: Bingle Rd & Merlin Dr Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	43.9	19.2	1.8	0.9	18.2	0.7	2.0

7: Bingle Rd & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	2.2	0.5	0.5	0.0	0.0	0.0	3.6	1.1	1.0
Total Del/Veh (s)	30.9	36.6	30.4	36.4	26.2	20.2	30.2	17.4	13.7	35.6	31.4	9.9

7: Bingle Rd & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.5
Total Del/Veh (s)	25.7

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1	0.2	0.1	0.2	0.2
Total Del/Veh (s)	8.8	8.5	8.7	9.2	8.2	5.7	5.4	6.7	3.5	5.6	6.3	3.5

8: Voss Rd/Bracher St & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	7.6

9: Campbell Dr & Westview Dr Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	3.3	0.3	0.3	0.6	0.1	0.1	0.0	0.0	0.0	3.5	0.5	0.5
Total Del/Veh (s)	27.7	21.4	13.7	36.6	24.6	14.8	16.1	11.6	11.9	13.4	11.5	10.3

9: Campbell Dr & Westview Dr Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	16.7

10: Campbell Dr Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Total Del/Veh (s)	17.8	8.2	24.6	3.5	3.7	0.7	0.4	11.9	7.3	4.1	4.3

11: Campbell Dr & WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	WBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Total Del/Veh (s)	40.2	37.1	7.8	5.5	1.7	38.6	33.9	25.4

12: Campbell Dr & EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	EBR	NBT	NBR	SBL	SBT	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Total Del/Veh (s)	36.9	32.6	4.0	41.0	14.4	2.7	1.6	21.1

28: Bingle Rd & Cedarbrake Dr Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.2	0.2	0.0	0.0	0.1
Total Del/Veh (s)	42.4	11.4	10.2	1.9	0.7	0.2	1.5

101: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	10.0	6.8	7.5

102: Performance by movement

Movement	EBT	SEL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	3.7	3.2	3.6

111: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	6.6	5.2	5.4

112: WB I10 Frontage Rd Performance by movement

Movement	WBT	NBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	1.6	2.3	1.7

121: EB I10 Frontage Rd Performance by movement

Movement	EBL	EBT	All
Denied Del/Veh (s)	2.5	0.3	0.6
Total Del/Veh (s)	5.1	21.8	19.4

122: EB I10 Frontage Rd Performance by movement

Movement	EBT	SBL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.2	5.1	2.8

201: WB I10 Frontage Rd Performance by movement

Movement	WBL	WBT	All
Denied Del/Veh (s)	2.2	0.4	0.7
Total Del/Veh (s)	7.8	23.0	20.6

202: WB I10 Frontage Rd Performance by movement

Movement	WBT	NWL	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	5.7	10.3	6.4

Total Network Performance

Denied Del/Veh (s)	0.7
Total Del/Veh (s)	75.0

Arterial Level of Service: NB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
	1	129.6	144.5	0.1	3	4	122.8
WB I10 Frontage Rd	2	2.4	14.0	0.1	24	24	2.3
W Memorial Park Dr	3	13.6	31.8	0.2	18	16	16.3
Winningham Ln	4	5.3	21.7	0.1	23	23	5.4
Burkhart Rd	5	2.1	12.4	0.1	25	24	2.5
Cedarbrake Dr	28	1.9	16.3	0.1	27	26	2.2
Merlin Dr	6	1.8	9.4	0.1	25	24	2.2
	30	2.3	10.2	0.1	22	23	2.2
Westview Dr	7	17.4	25.1	0.1	10	11	14.2
Total		176.3	285.2	0.9	12	12	170.0

Arterial Level of Service: NB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
	4	113.4	5	89.4	3	145.8	3
WB I10 Frontage Rd	23	2.6	23	2.3	23	2.6	24
W Memorial Park Dr	20	10.0	17	14.8	18	13.4	18
Winningham Ln	25	3.9	23	5.6	23	5.6	23
Burkhart Rd	26	1.7	25	2.3	25	2.0	26
Cedarbrake Dr	28	1.6	27	2.0	27	1.8	28
Merlin Dr	26	1.6	25	1.9	25	1.7	26
	24	1.8	21	3.2	22	2.7	24
Westview Dr	10	17.3	9	18.6	8	21.3	11
Total	13	153.8	13	140.2	11	197.0	10

Arterial Level of Service: SB Bingle Rd

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed	Run 32 Speed	Run 32 Delay
Westview Dr	7	31.4	42.0	0.1	8	7	35.4
	30	2.6	10.6	0.1	22	22	2.6
Merlin Dr	6	0.7	8.5	0.1	27	27	0.7
Cedarbrake Dr	28	0.7	8.3	0.1	28	28	0.7
Burkhart Rd	5	1.5	16.0	0.1	27	27	1.6
Winningham Ln	4	2.2	12.3	0.1	26	25	2.4
W Memorial Park Dr	3	6.9	23.1	0.1	22	22	6.7
WB I10 Frontage Rd	2	38.3	55.2	0.2	10	10	39.1
EB I10 Frontage Rd	1	2.2	14.4	0.1	23	23	2.3
Total		86.6	190.5	0.9	17	16	91.6

Arterial Level of Service: SB Bingle Rd

Cross Street	Run 33 Speed	Run 33 Delay	Run 34 Speed	Run 34 Delay	Run 35 Speed	Run 35 Delay	Run 36 Speed
Westview Dr	7	33.8	6	38.9	9	25.5	10
	22	2.6	22	2.8	23	2.4	23
Merlin Dr	26	0.9	27	0.6	27	0.6	27
Cedarbrake Dr	28	0.8	28	0.7	29	0.7	28
Burkhart Rd	27	1.7	27	1.4	28	1.4	28
Winningham Ln	26	1.9	25	2.5	25	2.4	26
W Memorial Park Dr	22	6.9	22	6.8	20	8.3	23
WB I10 Frontage Rd	10	38.1	10	39.2	10	36.6	10
EB I10 Frontage Rd	23	2.2	22	2.3	23	2.2	23
Total	16	88.9	16	95.2	17	80.0	18

Queuing and Blocking Report
Baseline

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Intersection: 1: Bingle Rd & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	T	T	T	T	T	R	L	L	T
Maximum Queue (ft)	230	211	146	134	645	630	594	426	5	30	21
Average Queue (ft)	157	136	79	59	466	428	381	122	0	4	1
95th Queue (ft)	231	199	126	116	706	663	630	334	4	18	9
Link Distance (ft)	170	170	170	170	654	654	654	654	424	424	424
Upstream Blk Time (%)	6	3	0	0	5	2	1	0			
Queuing Penalty (veh)	11	6	0	0	0	0	0	0			
Storage Bay Dist (ft)											
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 2: Bingle Rd & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	T	T	R	L	L	T	T	T	T	R
Maximum Queue (ft)	146	144	147	136	134	25	31	36	190	343	445	323
Average Queue (ft)	115	129	126	87	84	2	3	2	101	155	192	212
95th Queue (ft)	156	138	145	142	139	12	18	16	161	266	363	368
Link Distance (ft)	69	69	69	69	69	424	424	424				680
Upstream Blk Time (%)	40	79	56	25	16							
Queuing Penalty (veh)	121	235	167	75	47							
Storage Bay Dist (ft)									300	300		250
Storage Blk Time (%)										0	0	6
Queuing Penalty (veh)										0	2	39

Intersection: 3: Bingle Rd & W Memorial Park Dr

Movement	WB	WB	NB	SB	SB
Directions Served	L	R	T	L	T
Maximum Queue (ft)	233	83	453	82	325
Average Queue (ft)	117	33	217	16	133
95th Queue (ft)	200	68	397	53	270
Link Distance (ft)	602	602	680		667
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				60	
Storage Blk Time (%)				1	11
Queuing Penalty (veh)				10	2

Queuing and Blocking Report
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Intersection: 4: Bingle Rd & Winningham Ln

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	12	31	38	28	42	219	40	179
Average Queue (ft)	0	7	8	3	9	60	5	35
95th Queue (ft)	6	29	31	16	33	184	25	120
Link Distance (ft)		227		343		667		388
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	25		200		150		150	
Storage Blk Time (%)	0	1				1		0
Queuing Penalty (veh)	0	0				0		0

Intersection: 5: Bingle Rd & Burkhart Rd

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	56	109	31	71
Average Queue (ft)	14	10	4	5
95th Queue (ft)	43	56	22	33
Link Distance (ft)	564	388		593
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Bingle Rd & Merlin Dr

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	77	90	30	50
Average Queue (ft)	31	5	2	3
95th Queue (ft)	65	38	13	24
Link Distance (ft)	598	275		285
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			150	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Bingle Rd & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	NB	B30	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	T	L	T	TR
Maximum Queue (ft)	174	293	174	318	84	349	175	126	145	423	402
Average Queue (ft)	29	166	91	148	48	183	143	11	46	276	187
95th Queue (ft)	105	268	166	258	90	326	205	75	131	453	400
Link Distance (ft)		1171		1489		283		285		422	422
Upstream Blk Time (%)						2		0		6	2
Queuing Penalty (veh)						24		0		0	0
Storage Bay Dist (ft)	100		100		60		150		70		
Storage Blk Time (%)		34	7	20	4	29	6		1	43	
Queuing Penalty (veh)		9	23	29	33	173	26		2	19	

Intersection: 8: Voss Rd/Bracher St & Westview Dr

Movement	EB	EB	WB	WB	NB	SB
Directions Served	LT	R	LT	R	LTR	LTR
Maximum Queue (ft)	126	29	110	57	47	63
Average Queue (ft)	58	3	62	20	25	27
95th Queue (ft)	96	17	96	49	44	48
Link Distance (ft)	3858		1171		582	500
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		110		110		
Storage Blk Time (%)	0		0			
Queuing Penalty (veh)	0		0			

Intersection: 9: Campbell Dr & Westview Dr

Movement	EB	EB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	TR	L	TR	L	TR
Maximum Queue (ft)	95	203	185	219	124	256	149	256
Average Queue (ft)	25	104	83	96	17	114	34	117
95th Queue (ft)	64	181	145	180	61	207	91	209
Link Distance (ft)		982		3858		3114		575
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	110		200		75		75	
Storage Blk Time (%)	0	7	0	0	0	15	0	15
Queuing Penalty (veh)	0	3	0	1	0	3	1	8

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Intersection: 10: Campbell Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	LTR
Maximum Queue (ft)	40	24	24	204
Average Queue (ft)	12	4	2	26
95th Queue (ft)	36	19	14	120
Link Distance (ft)	198	318	260	3114
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Campbell Dr & WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	LT	T	T	R	L	T	T	T	TR
Maximum Queue (ft)	96	123	123	127	119	48	6	30	270	287
Average Queue (ft)	51	87	91	97	67	7	0	2	141	201
95th Queue (ft)	93	121	127	129	111	29	4	12	243	294
Link Distance (ft)	58	58	58	58	58	480	480	480	260	260
Upstream Blk Time (%)	5	25	26	31	11				1	5
Queuing Penalty (veh)	8	39	39	47	17				2	15
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 12: Campbell Dr & EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB	NB	NB	SB
Directions Served	L	LT	T	T	R	T	TR	LT
Maximum Queue (ft)	111	151	146	118	89	112	111	18
Average Queue (ft)	49	125	115	50	42	49	44	1
95th Queue (ft)	98	135	151	99	72	95	91	10
Link Distance (ft)	65	65	65	65	65	343	343	480
Upstream Blk Time (%)	8	74	40	9	1			
Queuing Penalty (veh)	16	146	80	17	2			
Storage Bay Dist (ft)								
Storage Blk Time (%)								
Queuing Penalty (veh)								

Queuing and Blocking Report
Baseline

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Intersection: 28: Bingle Rd & Cedarbrake Dr

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	52	35
Average Queue (ft)	12	5
95th Queue (ft)	38	25
Link Distance (ft)	220	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 101: EB I10 Frontage Rd

Movement	EB
Directions Served	T
Maximum Queue (ft)	50
Average Queue (ft)	3
95th Queue (ft)	24
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 102:

Movement	SE
Directions Served	L
Maximum Queue (ft)	77
Average Queue (ft)	31
95th Queue (ft)	67
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
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Intersection: 111: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	4	41	66	72	30
Average Queue (ft)	0	3	7	13	2
95th Queue (ft)	4	21	36	48	17
Link Distance (ft)		5272	5272	5272	5272
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 112: WB I10 Frontage Rd

Movement	NB
Directions Served	L
Maximum Queue (ft)	44
Average Queue (ft)	11
95th Queue (ft)	36
Link Distance (ft)	489
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 121: EB I10 Frontage Rd

Movement	EB	EB	EB	EB	EB
Directions Served	T	T	T	T	T
Maximum Queue (ft)	271	342	287	102	9
Average Queue (ft)	131	216	145	6	0
95th Queue (ft)	280	301	261	53	6
Link Distance (ft)		692	692	692	692
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	200				
Storage Blk Time (%)	0	12			
Queuing Penalty (veh)	0	43			

Queuing and Blocking Report
Baseline

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Intersection: 122: EB I10 Frontage Rd

Movement	SB
Directions Served	L
Maximum Queue (ft)	116
Average Queue (ft)	53
95th Queue (ft)	95
Link Distance (ft)	474
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 201: WB I10 Frontage Rd

Movement	WB	WB	WB	WB	WB	WB
Directions Served	L	T	T	T	T	T
Maximum Queue (ft)	52	290	330	277	188	123
Average Queue (ft)	2	182	234	177	40	14
95th Queue (ft)	37	282	303	259	145	66
Link Distance (ft)			1060	1060	1060	1060
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)	225	225				
Storage Blk Time (%)		0	8			
Queuing Penalty (veh)		1	47			

Intersection: 202: WB I10 Frontage Rd

Movement	WB	WB	WB	NW
Directions Served	T	T	T	L
Maximum Queue (ft)	14	55	124	193
Average Queue (ft)	0	5	9	106
95th Queue (ft)	8	29	58	169
Link Distance (ft)	109	109	109	578
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			2	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 1590

Appendices

- Appendix A Turning Movement Counts
- Appendix B SimTraffic Modeling Results