

# *APPENDIX E: Existing Conditions Traffic Analysis Report and Proposed Conditions*



## *APPENDIX E.1: Existing Conditions Report*



## *Guadalupe Corridor - Existing Conditions Assessment*

The Guadalupe Corridor Development Program recommend improvements for a corridor that will improve the mobility, safety, and quality of life along the corridor. The planning effort analyzes the stretch of the Guadalupe Boulevard Corridor from MLK Boulevard to W 29th Street as well as the 24<sup>th</sup> Street corridor from N Lamar Boulevard to Guadalupe Street. This memorandum documents the existing state of the corridor in regard to the vehicular level of service analysis, multimodal level of service (MMLOS), and corridor crash history analysis.

## ANALYSIS METHODOLOGY

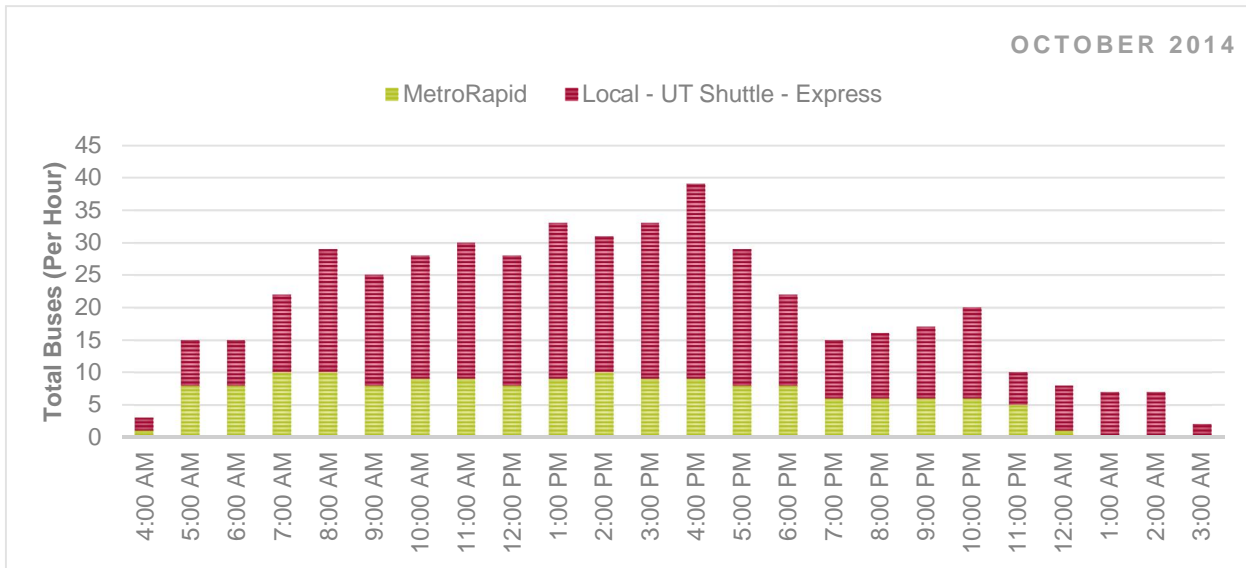
The intersections were analyzed using Synchro 8 TM software and the Complete Streets software for the MMLOS analysis. Traffic counts at the intersections were collected on weekdays in October 2014 during the AM peak period (7:00 – 9:00 AM) and the PM peak period (4:00 – 6:00 PM). The peak hour traffic counts are displayed as an **Attachment**. Existing intersection geometries were field verified. Existing traffic signal timings were obtained from the City of Austin.

The intersections analyzed using Synchro during the AM and PM peak hours are the following:

- Guadalupe at MLK Boulevard
- Guadalupe at 21<sup>st</sup> Street
- Guadalupe at 22<sup>nd</sup> Street
- Guadalupe at 24<sup>th</sup> Street
- Guadalupe at Dean Keeton Street
- Guadalupe at 26<sup>th</sup> Street
- Guadalupe at 27<sup>th</sup> Street
- Guadalupe at 29<sup>th</sup> Street

## EXISTING CONDITIONS

The Guadalupe corridor, within the study limits, operates on a coordinated traffic signal network maintained by the City of Austin. The corridor is directly adjacent to the University of Texas campus which greatly contributes to the context, constraints, and character of the corridor. The existing pedestrian volume counts crossing the corridor on this stretch are likely some of the highest in the state of Texas. The City has also made a substantial investment in bicycle accommodations along the corridor, this has contributed to the already high bicycle traffic already using the corridor. All of these modes interact along the corridor, to create a complex mix of multimodal traffic. Lastly the amount of transit traffic on the corridor is the highest in Austin and may also be one of the highest in the state. Below in **Figure 1** is a summary provided by Capital Metro documenting the amount of buses traveling along the corridor on a typical weekday in 2014.



**Figure 1:** Typical Buses Traveling Along the Guadalupe Corridor by Hour

## EXISTING BUS SIGNAL PRIORITIZATION

Due to the many modes of travel and high number of rush hour transit buses, the corridor operates with bus prioritization phasing. The priority phasing works by making transit buses along the corridor a high priority by increasing the green time in the direction the bus is traveling to allow enough time for the bus to pass through the upstream intersection. The prioritization occurs if a transit bus is running behind schedule, in this case the intersection can reallocate up to 7 seconds of additional green time to the direction the bus is traveling in. This is a small adjustment, but can help to improve the transit operations along the corridor.

To better understand the operations of the bus priority signal timing, five days of data was pulled during the AM and PM peak hour to evaluate how frequently each study intersection experienced the priority phase. The results are as follows in **Table 1**.

**Table 1: Bus Call and Prioritization Summary**

Intersection Name	Total Calls	Calls with Prioritization	Percent of Total Cycles
<b>AM Peak Hour Summary By Intersection (28 Cycles Per Hour)</b>			
Guadalupe St at MLK Blvd	32	0	0.0%
Guadalupe St at 21st St	26	8	33%
Guadalupe St at 22nd St	47	16	66%
Guadalupe St at 24th St	21	13	54%
Guadalupe St at Dean Keeton/26 <sup>th</sup> St	49	20	83%
Guadalupe St at 27th St	33	0	0.0%
Guadalupe St at 29th St	35	0	0.0%
<b>PM Peak Hour Summary By Intersection (24 Cycles Per Hour)</b>			
Guadalupe St at MLK Blvd	43	0	0%
Guadalupe St at 21st St	38	7	29%
Guadalupe St at 22nd St	70	12	50%
Guadalupe St at 24th St	31	5	21%
Guadalupe St at Dean Keeton/26 <sup>th</sup> St	50	7	29%
Guadalupe St at 27th St	30	0	0%
Guadalupe St at 29th St	27	2	8%

## CRASH DATA ANALYSIS

Crash data was collected from 2011 to 2014 for the length of the corridor. This data included vehicular crash data as well as pedestrian and bicycle crash data. The vehicular crash data was sorted by severity of crash; unknown severity, non-injury, possible injury, non-incapacitated, and incapacitated. The crash severity was then used to create a heat map, **Attached**, to further evaluate where the great amount of crashes and severity occurred. The result of the evaluation showed that the north half of the intersection contained greater crash quantity and severity compared to the entire corridor. The intersection of Guadalupe at Dean Keeton, 27<sup>th</sup> and 28<sup>th</sup> Street seemed to have the highest quantity of crashes as well as the highest severity along the corridor in the last three years.

As part of the Health Impact Assessment (HIA), additional data was obtained in regards to the pedestrian and bicycle related crashes from 2009 to 2013. This map is also **Attached**, and displays the pedestrian and bicycle crashes separately on two different maps. From the data, it is clear that 24<sup>th</sup> street and Guadalupe are major pedestrian and bicycle routes as a majority of the crashes occur on the two corridors.

## LEVEL OF SERVICE ANALYSIS AND VEHICULAR TRAVEL TIME RUNS

Using Synchro 8<sup>TM</sup> software, the existing vehicular level of service was analyzed along the corridor. The existing signal timing was used as provided by the City of Austin. As previously mentioned the corridor uses bus prioritization along the corridor at the study intersections. To analyze this feature of the corridor, the existing corridor was analyzed with and without the 7 second reallocation of the signal timing. Then, based on the percent that the prioritization occurred, the delay and level of service was adjusted to more accurately display the level of service shown below in **Table 2**.

**Table 2:** Intersection Level of Service Analysis (Synchro 8™)

Intersection	Existing Conditions Analysis WITHOUT Transit Priority				Existing Conditions With ONLY Transit Priority				Average Existing Conditions with Actual Average Transit Priority Usage			
	AM		PM		AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Guadalupe St @ MLK Blvd*	19.9	B	32.9	C	19.9	B	32.9	C	19.9	B	32.9	C
Guadalupe St @ 21 <sup>st</sup> St	13.3	B	32.6	C	9.3	A	23.6	C	12.0	B	30.0	C
Guadalupe St @ 22nd St	3.8	A	2.4	A	3.1	A	2.2	A	3.3	A	2.3	A
Guadalupe St @ UT Pedestrian Crossing*	1.5	A	0.2	A	1.5	A	0.2	A	1.5	A	0.2	A
Guadalupe St @ 24 <sup>th</sup> St	22.8	C	47.4	D	20.1	C	39.1	D	21.3	C	45.7	C
Guadalupe St @ Dean Keeton St	21.6	C	26.7	C	22.6	C	26.4	C	22.4	C	26.6	C
Guadalupe St @ 26 <sup>th</sup> St	11.7	B	27.0	C	11.9	B	30.2	C	11.8	B	27.7	C
Guadalupe St @ 27 <sup>th</sup> St	7.7	A	22.6	C	7.4	A	22.3	C	7.7	A	22.6	C
Guadalupe St @ 29 <sup>th</sup> St*	15.5	C	23.6	C	14.7	C	21.3	C	15.5	C	23.4	C
Rio Grande St @ MLK Blvd *	4.0	A	2.0	C	4.0	A	2.0	A	4.0	A	2.0	A
Rio Grande St @ 24 <sup>th</sup> St *	41.8	D	26.2	C	41.4	D	25.9	C	41.6	D	26.1	C
Rio Grande St @ 29 <sup>th</sup> St *	13.2	B	8.1	A	13.6	B	8.1	A	13.4	B	8.1	A
*There is not transit priority at this intersection, however the transit priority functionality at adjacent intersection affected the intersection operations.												

The software platform used for analysis is limited in understanding a corridor as unique as Guadalupe Street. The delay and level of service is not entirely representative of how the corridor operations. Additional factors play a role in the vehicular operations of the corridor besides just the volume and signal timings, some of those influences that cannot be accounted for in Synchro are as follows:

- Queued traffic that has to wait more than one cycle at MLK Boulevard and 29<sup>th</sup> Street entering the corridor
- Parking along the corridor
- Pedestrian influence on traffic
- High transit buses on the corridor, dwell time, and ridership
- Midblock driveway influence

These influences further decreases the vehicular operations of the road. This was illustrated in the travel time runs in the corridor, as shown in **Figure 2** and **Figure 3**.



**Figure 2: Travel Time Runs: AM**

			29th Street	27th St	26th St	Dean Keaton	24th St	Ped Crossing	22nd St	21st St	MLK
Tuesday Jan 27th 7:49	1 (Run SB 1)	SB (Arrive at Queue) SB (Pass Stop Bar) Notes	0  	35  	54  	1:00  	1:22  	1:35  	1:47 2:15	2:31  	2:40 3:01 15 Vehicle queue
Tuesday Jan 27th 7:56	3 (Run SB 2)	SB (Arrive at Queue) SB (Pass Stop Bar) Notes	0  	39  	53 1:12 queuing	1:17  	1:24 2:57 queuing whole block	3:15  	3:23  	3:28 3:53 queuing	4:20  
Tuesday Jan 27th 8:09	5 (Run SB 3)	SB (Arrive at Queue) SB (Pass Stop Bar) Notes	0  	29  	42 1:02 queuing	1:08  	1:26  	1:45  	1:55 2:28 queuing red light	2:41  	2:50 4:49 Queuing, all the way to 21st Street, green did not clear queue on MLK at 3:33
Tuesday Jan 27th 8:38	8 (Run 4 SB)	SB (Arrive at Queue) SB (Pass Stop Bar) Notes	0  	31 40 queuing	52 1:07 queuing 3 cars	1:14  	1:33  	1:43 2:31 queuing, 1:43 back of queue 1:47 hit red light	2:43  	2:58 3:34 red Light, 1 car in front in queue	3:58 4:43 red light 3 car queue
Tuesday Jan 27th 8:51	10 (Run 5 SB)	SB (Arrive at Queue) SB (Pass Stop Bar) Notes	0  	34  	50 1:07 queuing	1:10  	1:30  	1:49  	1:59 2:28 red light, 1 car in front of queue	2:43  	3:02 3:46 queue of 4 in LT lane
Tuesday Jan 27th 7:52	2 (NB 1)	NB (Arrive at Queue) NB (Pass Stop Bar) Notes	2:37  	2:09  	1:59  	1:40 1:51 queuing	1:25  	1:12  	1:08  	26 52 Queuing, red light	0:00  
Tuesday Jan 27th 8:04	4 (Run NB 2)	NB (Arrive at Queue) NB (Pass Stop Bar) Notes	3:34  	3:06  	2:55  	2:39 2:46 Queuing	2:22  	2:10  	2:04  	16 1:48 red light no queuing	0:00  
Tuesday Jan 27th 8:17	6 (Run NB 3)	NB (Arrive at Queue) NB (Pass Stop Bar) Notes	3:21  	2:45  	2:34  	2:21 2:29 queuing	2:05  	1:53  	1:46  	18 1:28 Queuing, red light	0:00  
Tuesday Jan 27th 8:32	7 (Run 4 NB)	NB (Arrive at Queue) NB (Pass Stop Bar) Notes	3:51  	3:20  	3:18 3:24 red	3:05  	2:42 2:58 queuing, red light	2:27  	2:08 2:14 queuing, bus has to be in left lane to make right turn	22 1:55  	0:00  
Tuesday Jan 27th 8:45	9 (Run 5 NB)	NB (Arrive at Queue) NB (Pass Stop Bar) Notes	2:58  	2:30  	2:18  	2:09  	1:49  	1:36  	1:28  	20 1:16 red light no queue	0:00  

Figure 3: Travel Time Runs: PM

			29th Street	27th St	26th St	Dean Keaton	24th St	Ped Crossing	22nd St	21st St	MLK
Thursday Jan 22nd		SB (Initial)	0	33	1:06	1:27	1:46	1:59	2:06	2:18	4:22
		SB (Through)		50	1:21					2:56	
	2 (Run SB 1)	Notes		no queue, but red light	queue red light				queue 3 cars red light		
Thursday Jan 22nd		SB (Initial)	0	24	58	1:23	1:38		1:46	1:59	2:42
	6 (Run SB 3)	SB (Through)		42	1:05					2:25	3:27
		Notes		red light	red, quuing				queuing signal	queuing at signal	
Thursday Jan 22nd		SB (Initial)	0	32	48	52	1:08	2:34	2:53	3:02	3:31
	8 (Run 4 SB)	SB (Through)					2:17	2:42			4:52
		Notes				hit red light, ped actuated				red light	
Thursday Jan 22nd		SB (Initial)	0	32	1:07	1:30	1:53	2:16	2:25	2:35	4:12
	10 (Run 5 SB)	SB (Through)		52	1:21					3:57	
		Notes		red light	red light, 3 car queue				queuing, red light, stuck behind left turning vehicle		
Thursday Jan 22nd		NB (Initial)	2:42	2:14	2:04	1:28	1:18	1:10	58	16	0:00
	1 (NB 1)	NB (Through)				1:57				49	
		Notes				queuing, red light			queuing 5 cars, red light		
Thursday Jan 22nd		NB (Initial)	5:59	5:24	5:14	4:33	2:04	55	35	23	0:00
	3 (Run NB 2)	NB (Through)				5:07	4:15	1:50	42		
		Notes			queuing and red light, green at 4:48	queuing, red light, queuing block ahead as well at 2:45 green light but blocked intersection, red at 3:18	queuing but green, then red at 1:20	queuing but green			
Thursday Jan 22nd		NB (Initial)	9:52	9:10	8:59	7:59	4:06	3:10	51	19	0:00
	5 (Run NB 3)	NB (Through)				8:51	7:43	3:58	3:05	42	
		Notes			Queuing at next signal	queuing, entire block, red at 6:30 queuing from next block prevented from going through intersection	queuing entire block, but green	queuing but green, red at 2:06, did not clear queue due to upstream queue, green at 2:42 still queuing	queuing but green		
Thursday Jan 22nd		NB (Initial)	9:03	8:08	7:23	6:30	4:35	2:26	1:06	29	0:00
	7 (Run 4 NB)	NB (Through)	9:23	8:27	7:53	7:14	6:20	4:24	2:20	1:00	
		Notes	red light, 4 cars queued	queuing, and red light	stopped at red light, pedestrians crossing	queue entire next block	queue entire next block	queue entire next block	queue entire next block	queue, red light	
Thursday Jan 22nd		NB (Initial)	7:06	6:17	5:26	5:20	2:35	2:15	1:32	32	0:00
	9 (Run 5 NB)	NB (Through)	7:28	6:32	5:58		4:12			1:18	
		Notes	red light, 4 cars	queuing and red light	red light, peds		queuing, half block		red light		

The vehicle travel time runs showed that the southbound morning and evening travel time runs were fairly consistent and averaged between three and five minutes regardless of the peak hour. On the other hand, the northbound travel time runs showed a significant difference between the morning and evening peak hours. The evening travel time runs were approximately twice as long as the morning travel time runs. The data from the travel time runs can be reference below in **Table 3** and **Table 4**.

**Table 3:** Travel Time Runs: Times Stopped and Time Spent Stopped

Intersection Name	Morning - AM (Travel Runs)		Evening - PM (Travel Runs)	
	Times Stopped (5 Runs)	Avg. Time Stopped (Seconds)	Times Stopped (5 Runs)	Avg. Time Stopped (Seconds)
<b>Southbound Travel Time Runs</b>				
Guadalupe St at MLK Blvd	4	58 s	2	63 s
Guadalupe St at 21st St	2	31 s	3	49 s
Guadalupe St at 22nd St	3	30 s	0	-
Guadalupe St at Pedestrian Crossing	1	48 s	1	8 s
Guadalupe St at 24th St	1	93 s	1	69 s
Guadalupe St at Dean Keeton	0	-	0	-
Guadalupe St at 26 <sup>th</sup> St	4	17 s	3	12 s
Guadalupe St at 27th St	1	9 s	3	18 s
Guadalupe St at 29th St	0	-	0	-
<b>Northbound Travel Time Runs</b>				
Guadalupe St at MLK Blvd	0	-	0	-
Guadalupe St at 21st St	5	67 s	3	44 s
Guadalupe St at 22nd St	1	6 s	2	108 s
Guadalupe St at Pedestrian Crossing	0	-	3	74 s
Guadalupe St at 24th St	1	16 s	4	138 s
Guadalupe St at Dean Keeton	3	9 s	4	40 s
Guadalupe St at 26 <sup>th</sup> St	1	6 s	3	21 s
Guadalupe St at 27th St	0	-	2	17 s
Guadalupe St at 29th St	0	-	2	21 s

**Table 4:** Travel Time Runs: Total Time to Travel Corridor

Run Number	Southbound Travel Time Runs		Northbound Travel Time Runs	
	AM	PM	AM	PM
Travel Time Runs in Minutes/Seconds (#m #s)				
Run 1	3 m 1 s	4 m 22 s	2 m 37 s	2 m 42 s
Run 2	4 m 20 s	3 m 27 s	3 m 34 s	5 m 59 s
Run 3	4 m 49 s	4 m 52 s	3 m 21 s	9 m 52 s
Run 4	4 m 43 s	4 m 12 s	3 m 51 s	9 m 23 s
Run 5	3 m 46 s	-	2 m 58 s	7 m 28 s
<b>Average Time</b>	<b>4 m 8 s</b>	<b>4 m 13 s</b>	<b>3 m 16 s</b>	<b>7 m 5 s</b>

## MULTI-MODAL LEVEL OF SERVICE ANALYSIS

The Multimodal Level of Service (MMLOS) is another form of corridor analysis that takes into account many inputs, and analyzes multiple modes of travel (Transit, Pedestrian, Bicycle, and Auto). The inputs for the MMLOS include roadway and sidewalk geometry, parking, driveway spacing and width, transit information, and traffic signal related capacity values. This all combines to calculate a LOS for each use for each segment as well a combined LOS for the corridor. The transit LOS is mainly based on the bus headways, number of stops, and conditions of stops. The Pedestrian LOS is mainly based on the width of sidewalk, type and size of buffer between the sidewalk and roadway, and driveway spacing along the corridor. The Bicycle level of service takes into account the roadway condition and cross section, facility type, and access spacing. The auto LOS takes into account the cross section, intersection signal timings, and intersection spacing. The auto LOS is based on outputs from Synchro 8<sup>TM</sup>, but the LOS is not the same as the Synchro 8<sup>TM</sup> outputs.

The MMLOS analysis was performed for the PM peak hour when the corridor is most constrained and delay is the highest. The results of the MMLOS are shown below in **Table 5 and Table 6**.

**Table 5: PM Peak Hour Segment Multimodal Level of Service Analysis (Southbound)**

Intersection Segment	Auto		Transit		Bike		Pedestrian	
	Score	LOS	Score	LOS	Score	LOS	Score	LOS
To Guadalupe St @ 29 <sup>th</sup> St to 27 <sup>th</sup> St	0.54	C	2.10	B	5.40	F	3.75	D
To Guadalupe St @ 26 <sup>th</sup> St	0.59	C	3.52	S	4.96	E	3.81	D
To Guadalupe St @ Dean Keeton	0.64	C	1.94	A	5.22	F	3.46	C
To Guadalupe St @ 24 <sup>th</sup> St	0.56	C	2.21	B	4.5	E	3.49	C
To Guadalupe St @ 22nd St	0.53	C	2.06	B	3.78	D	3.34	C
To Guadalupe St @ 21 <sup>st</sup> St	0.62	C	0.35	A	2.41	B	3.12	C
To Guadalupe St @ MLK	0.57	C	1.91	A	4.06	D	3.24	C
<b>Total Corridor</b>	<b>0.56</b>	<b>C</b>	<b>2.08</b>	<b>B</b>	<b>4.44</b>	<b>E</b>	<b>3.50</b>	<b>C</b>

**Table 6:** PM Peak Hour Segment Multimodal Level of Service Analysis (Northbound)

Intersection Segment	Auto		Transit		Bike		Pedestrian	
	Score	LOS	Score	LOS	Score	LOS	Score	LOS
Guadalupe St from MLK to 21 <sup>st</sup> St	0.56	C	-0.10	A	4.48	E	3.21	C
To Guadalupe St @ 22 <sup>nd</sup> St	0.62	C	0.48	A	3.23	C	3.37	C
To Guadalupe St @ 24 <sup>th</sup> St	0.53	C	1.39	A	4.47	E	4.25	D
To Guadalupe St @ Dean Keeton	0.55	C	1.18	A	4.09	D	3.8	D
To Guadalupe St @ 26 <sup>th</sup> St	0.65	C	1.88	A	3.18	C	3.22	C
To Guadalupe St @ 27 <sup>th</sup> St	0.59	C	1.29	A	3.76	D	3.62	D
To Guadalupe St @ 29 <sup>th</sup> St	0.54	C	1.16	A	4.77	E	3.68	D
<b>Total Corridor</b>	<b>0.56</b>	<b>C</b>	<b>1.01</b>	<b>A</b>	<b>4.24</b>	<b>D</b>	<b>3.69</b>	<b>D</b>

## CTR MODELING – CALIBRATION STUDY

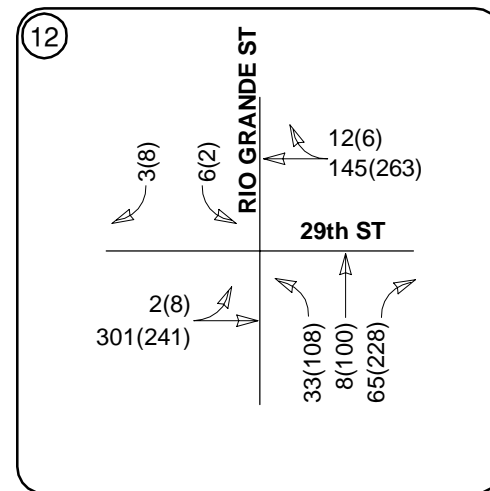
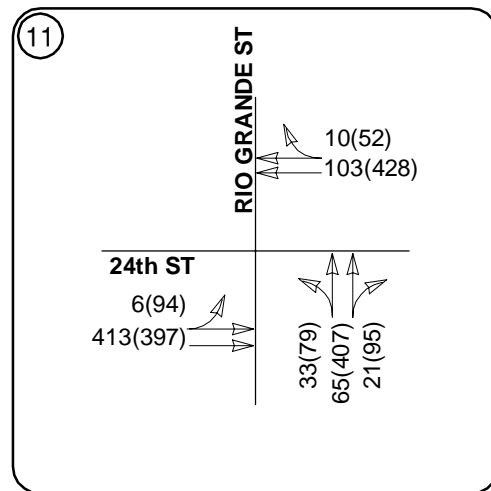
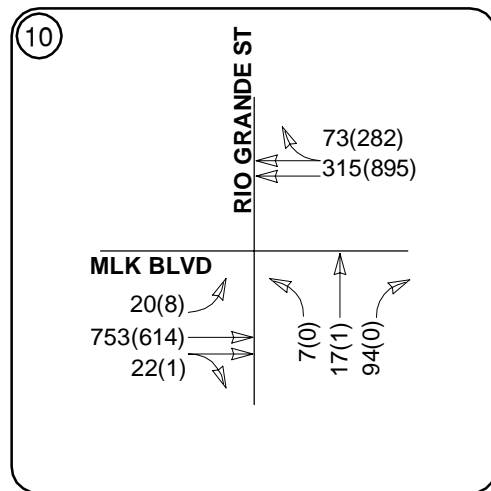
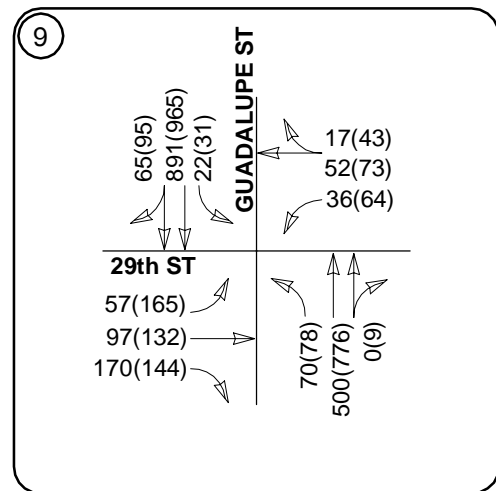
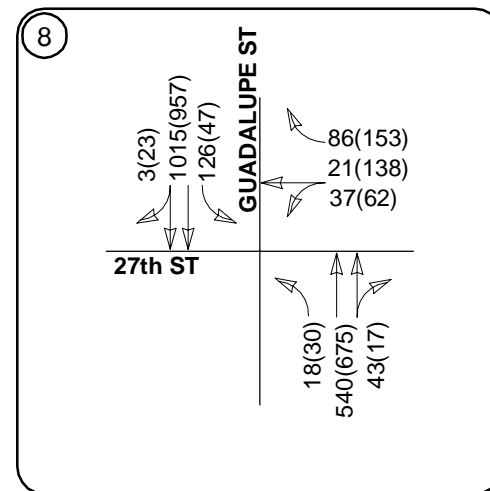
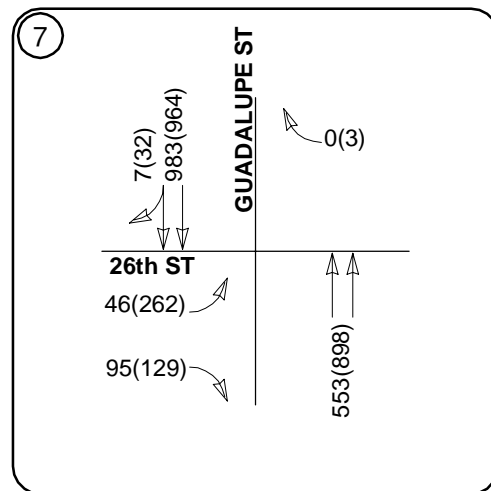
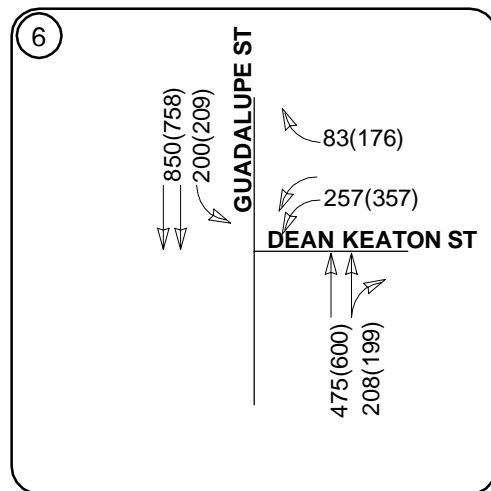
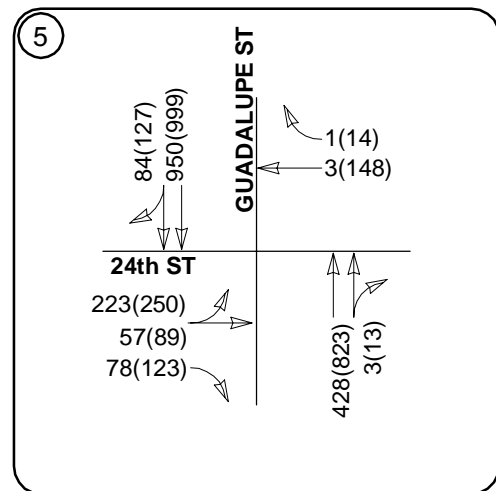
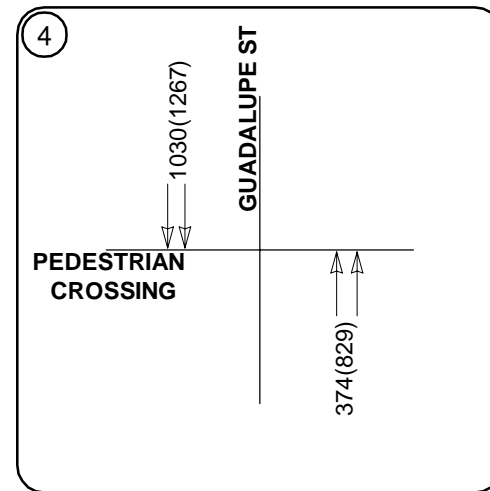
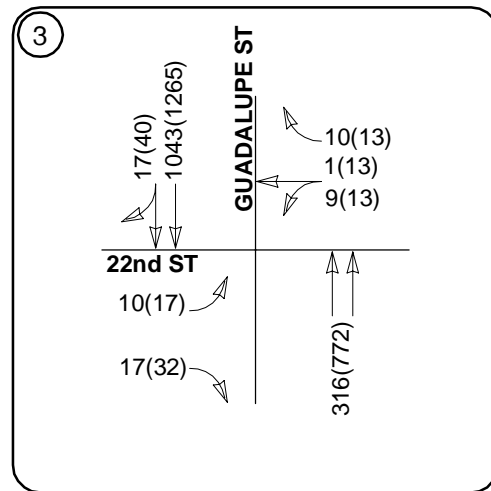
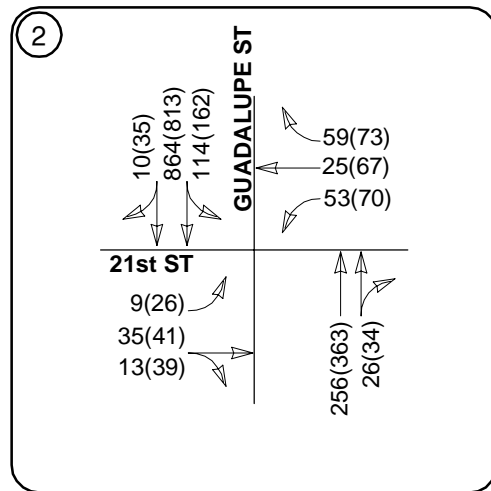
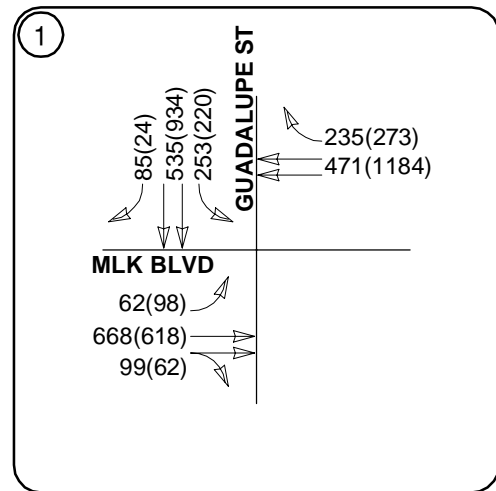
In addition to the intersection analysis, the Center for Transportation Research (CTR) as part of University of Texas, Austin completed a macro-simulation model analysis of the corridor. An existing model calibration study from CTR is **Attached**.

## ATTACHMENTS

Traffic Count Exhibit

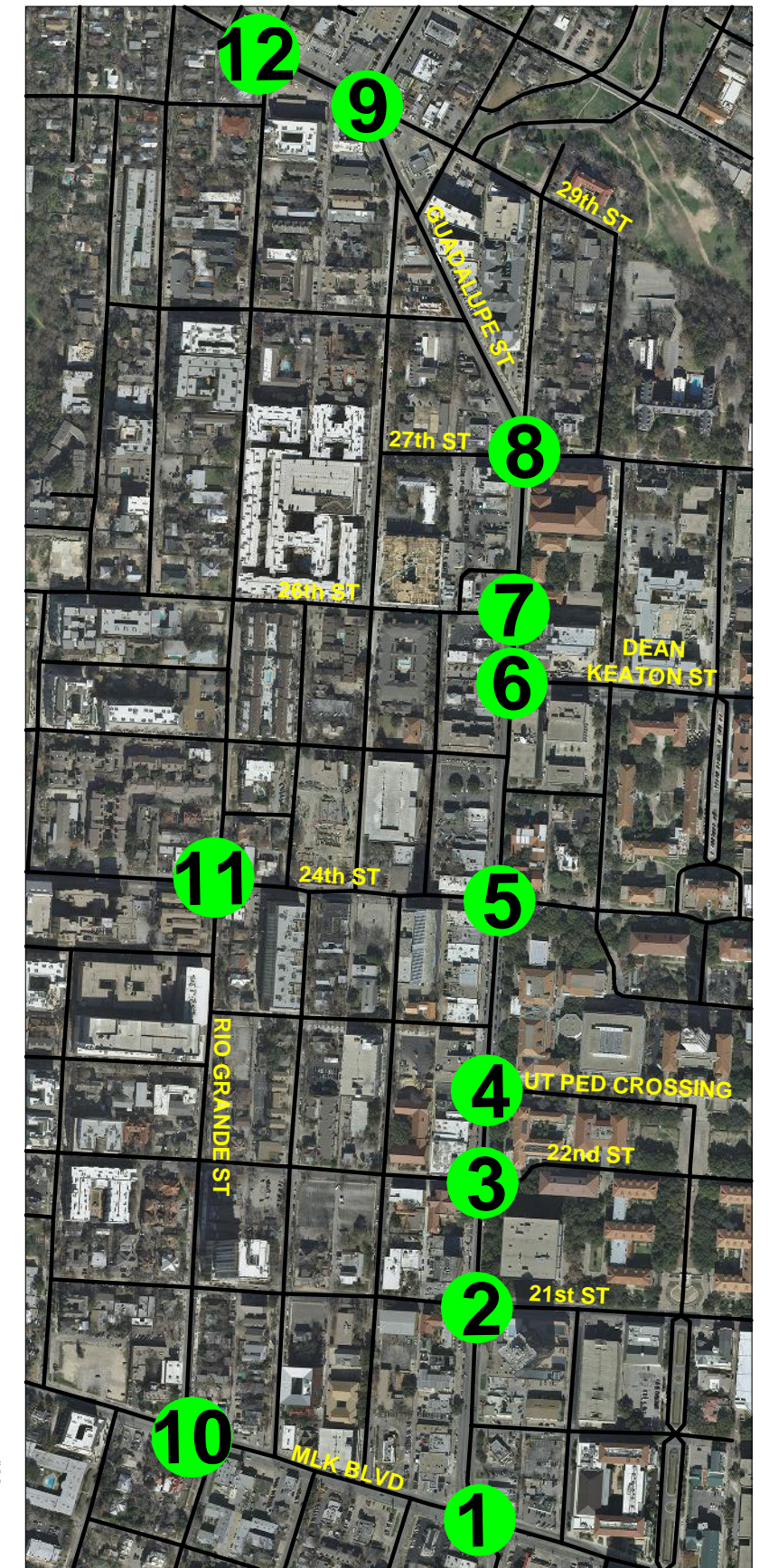
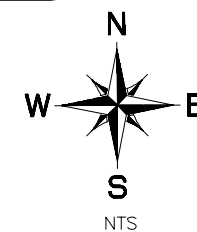
Crash Maps



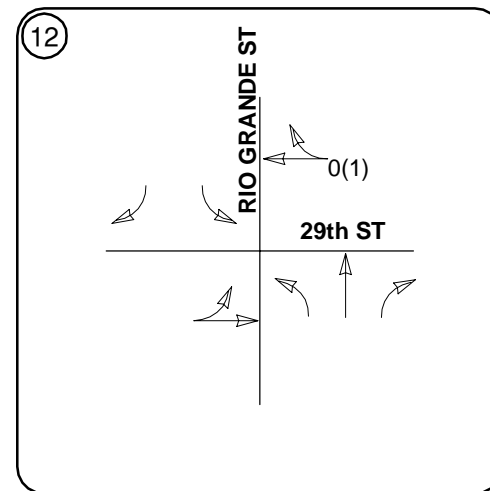
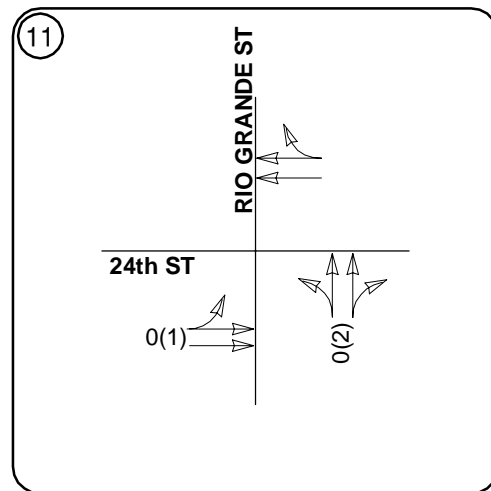
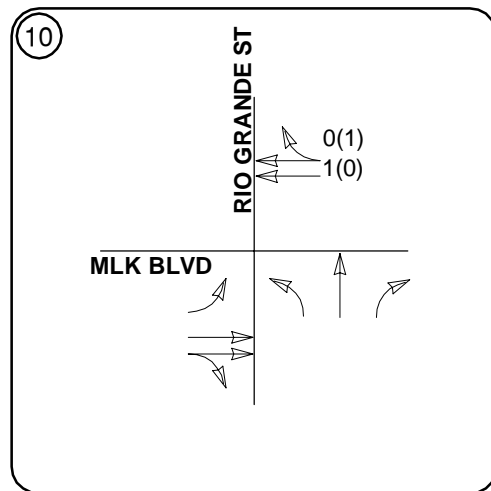
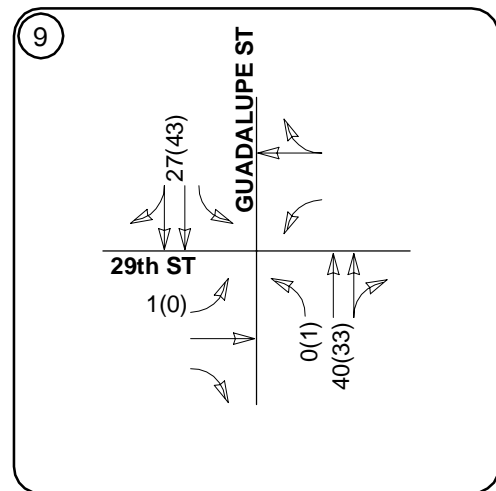
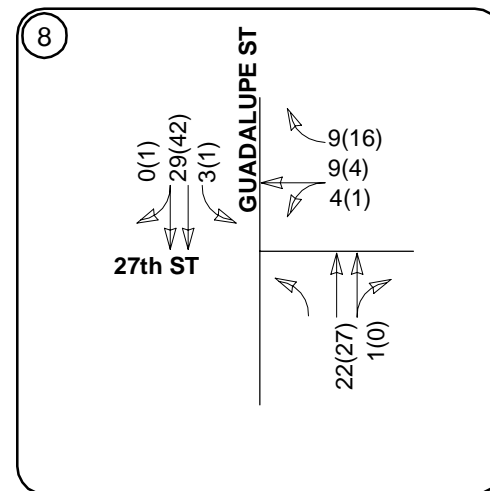
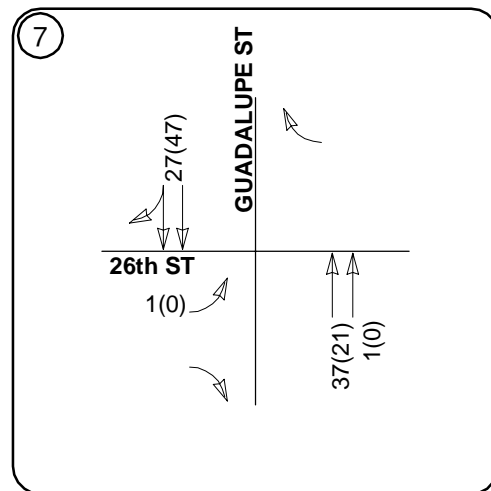
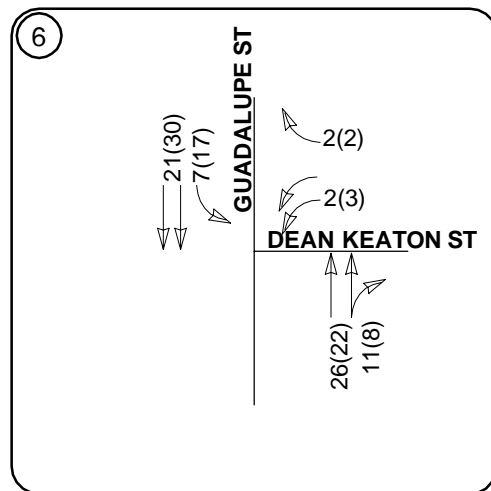
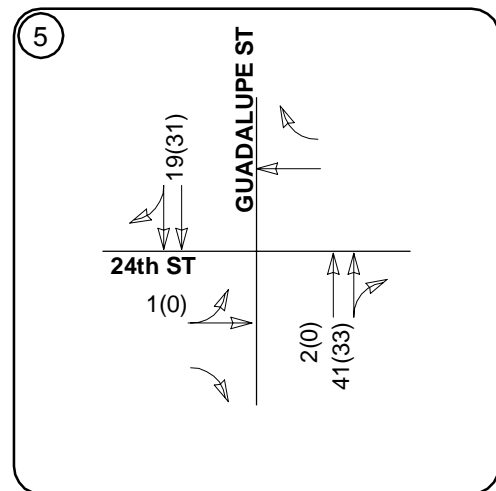
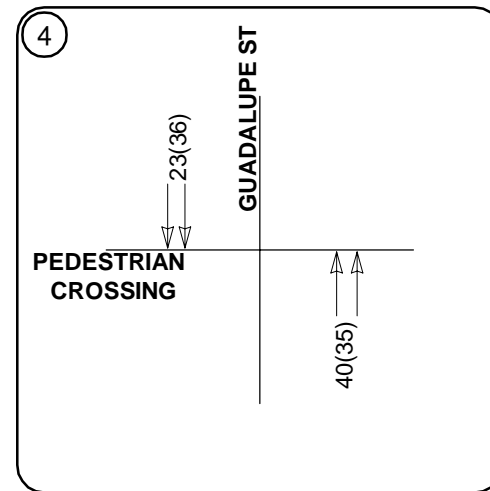
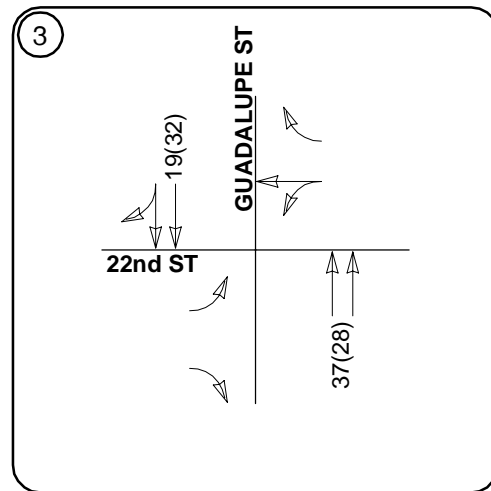
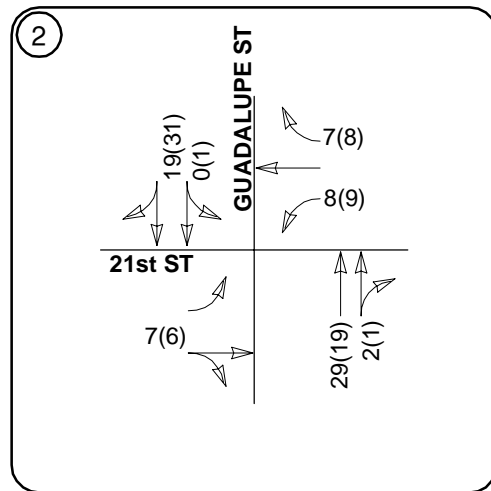
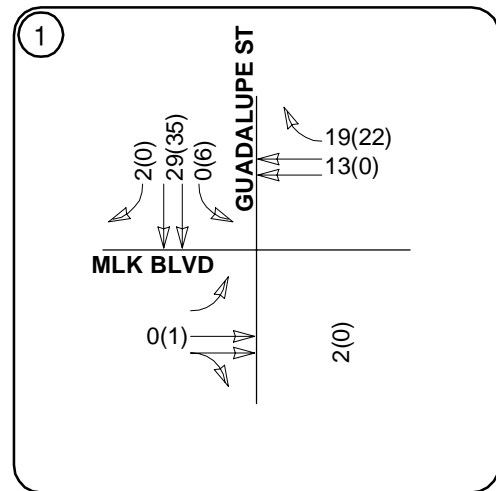


LEGEND:

- LANE ASSIGNMENT  
 STUDY INTERSECTIONS  
XX AM PEAK-HR VEHICLES  
(XX) PM PEAK-HR VEHICLES

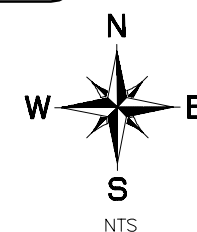




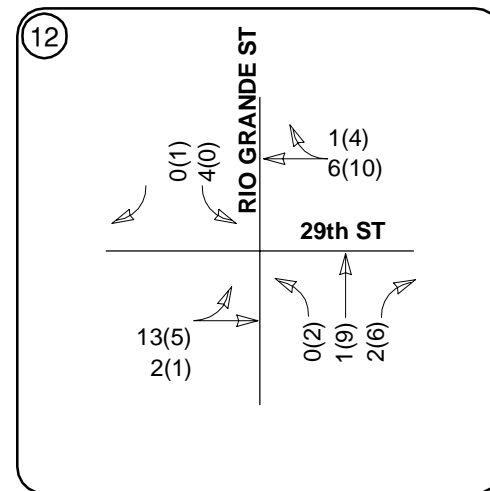
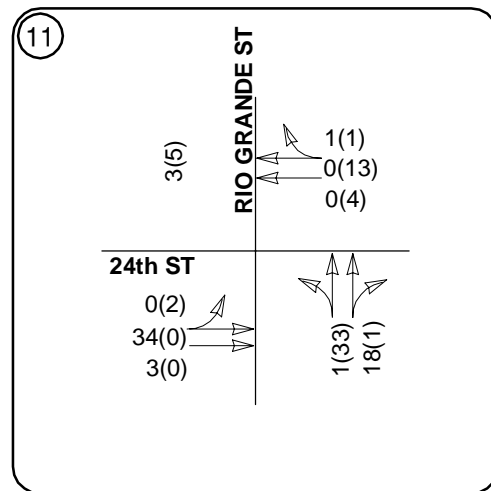
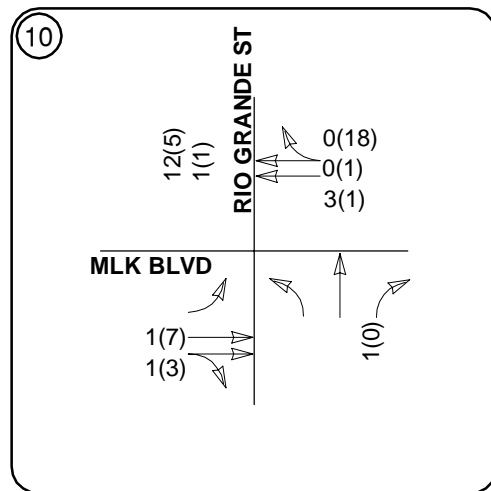
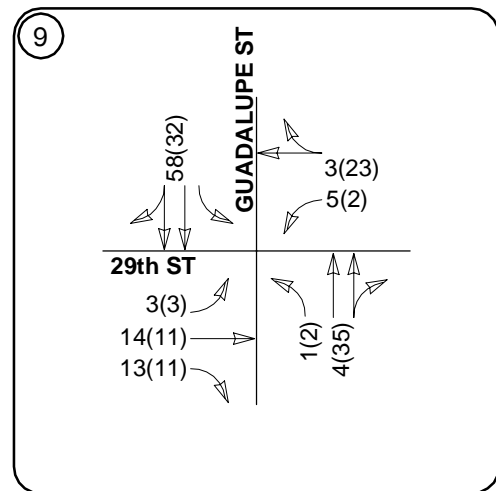
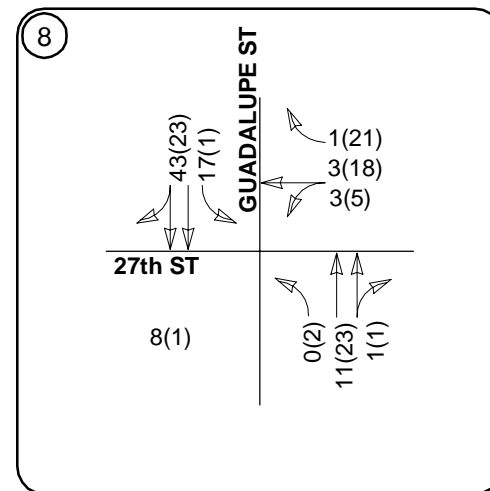
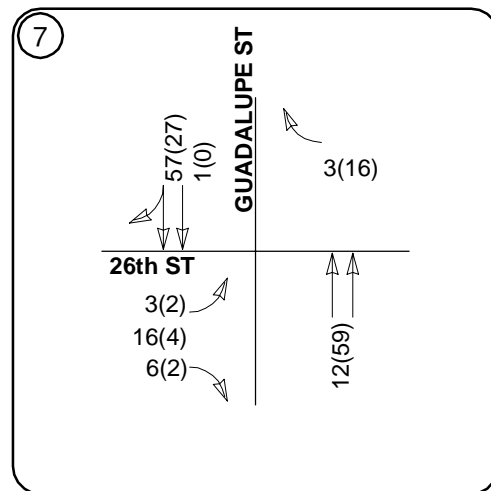
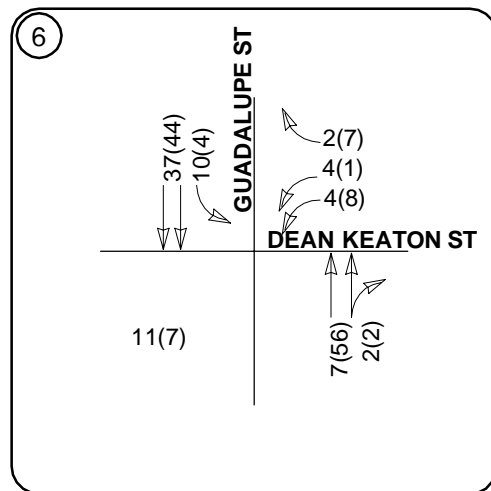
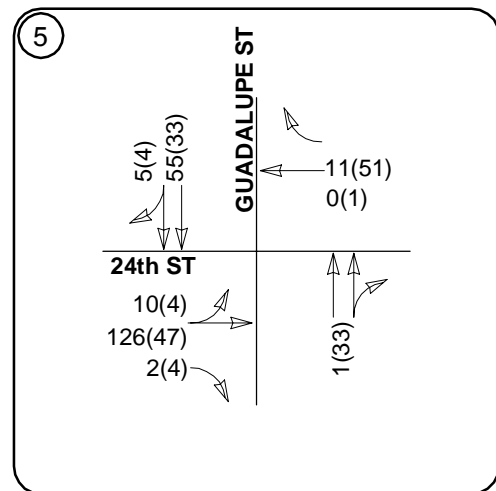
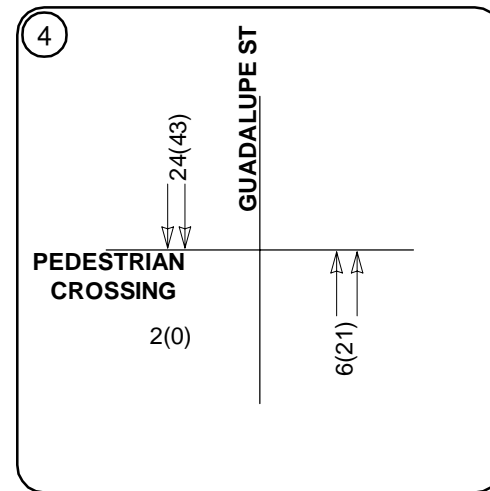
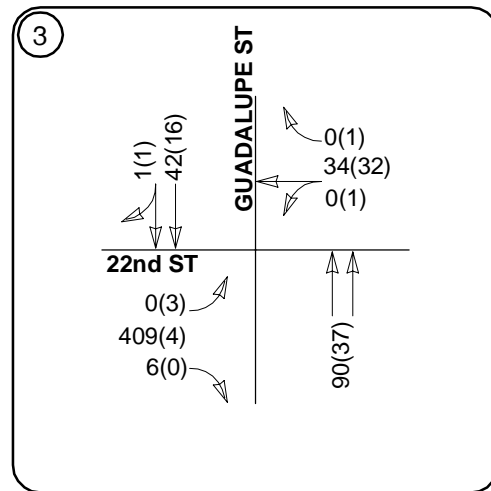
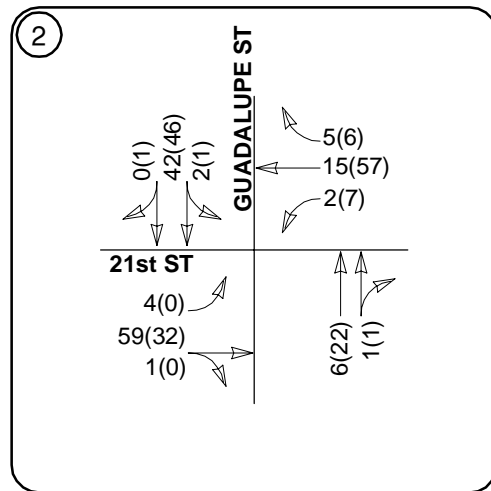
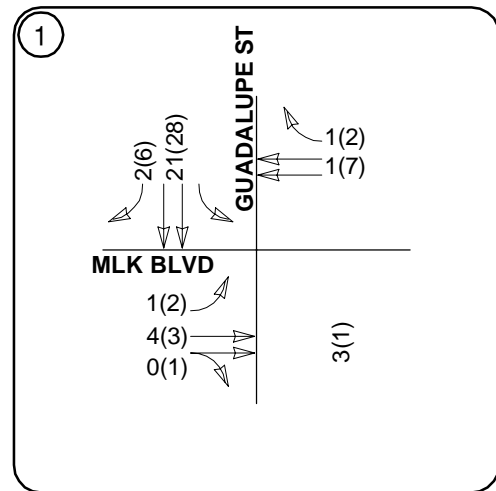


LEGEND:



- LANE ASSIGNMENT  
 STUDY INTERSECTIONS  
XX AM PEAK-HR BUSES  
(XX) PM PEAK-HR BUSES

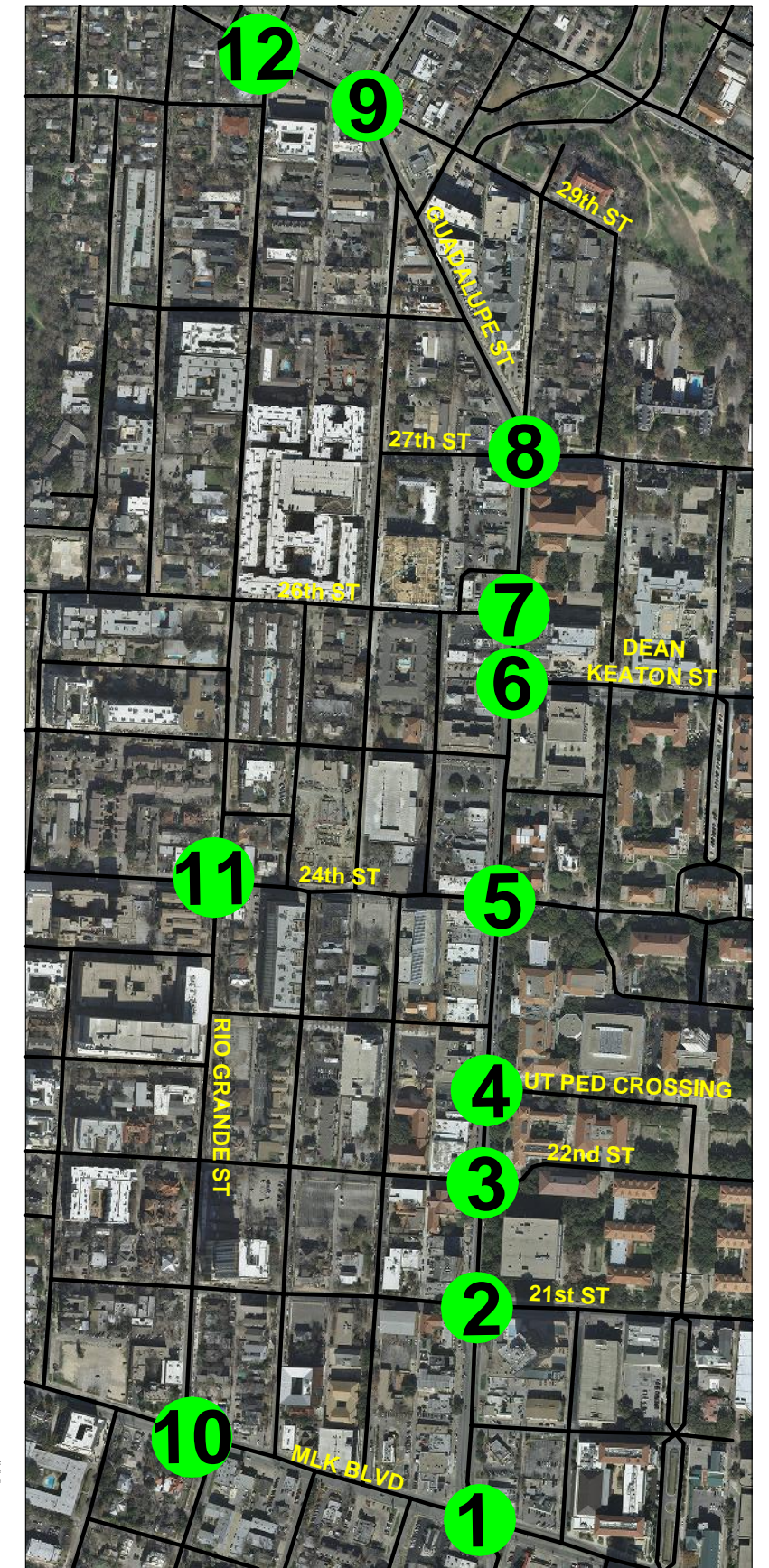
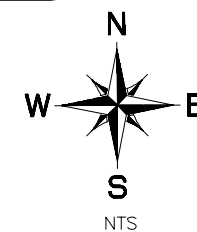




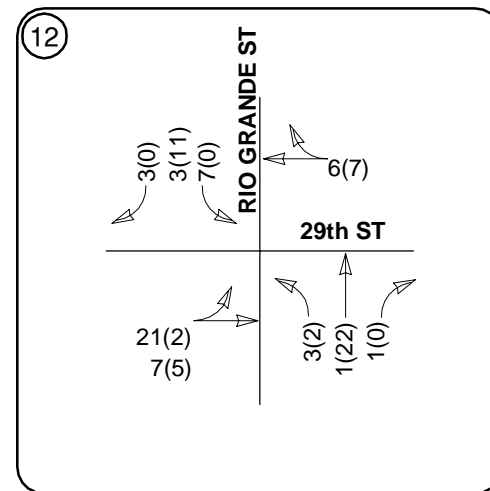
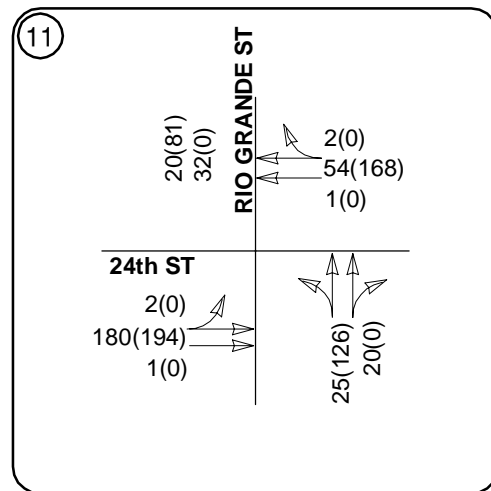
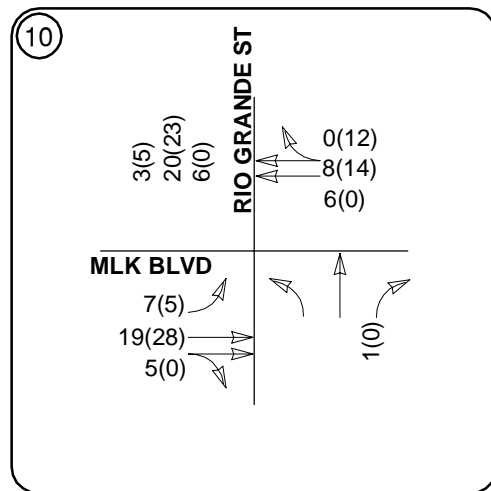
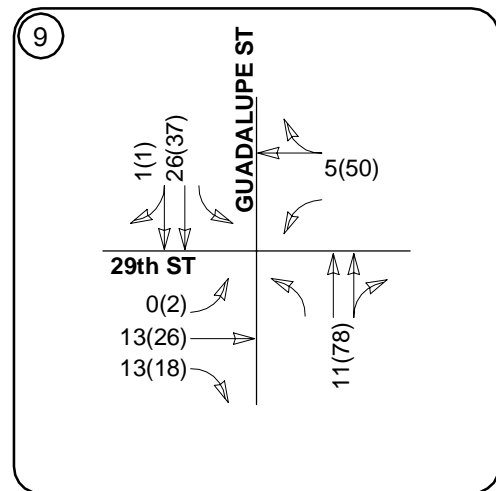
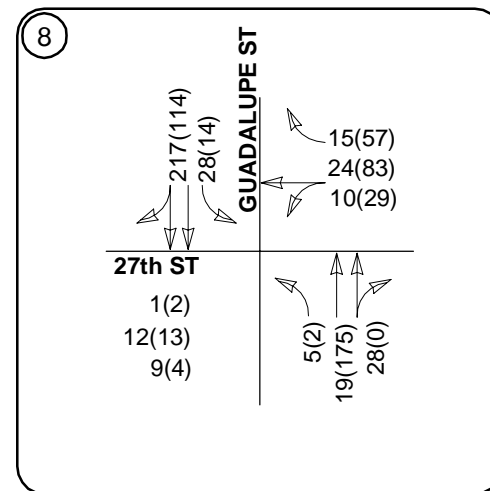
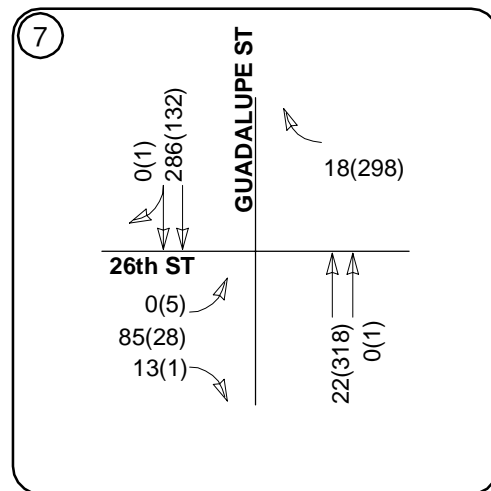
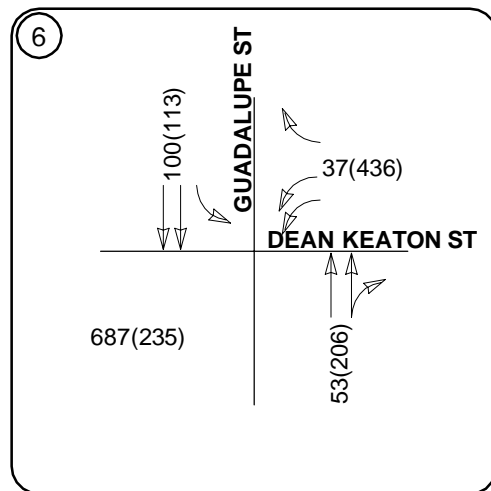
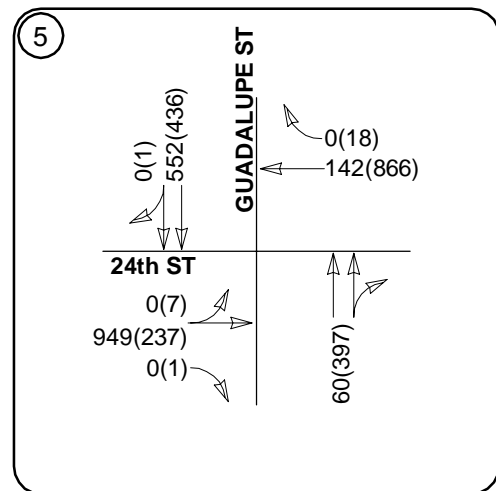
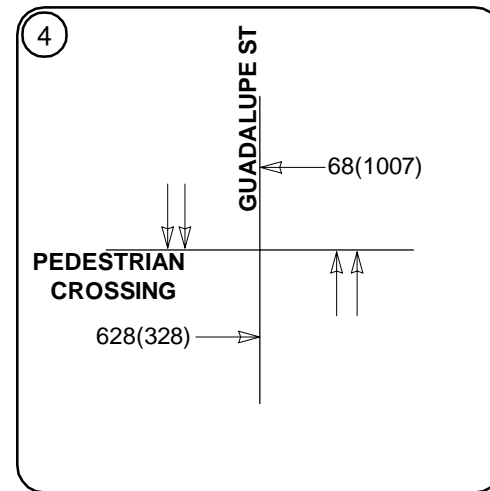
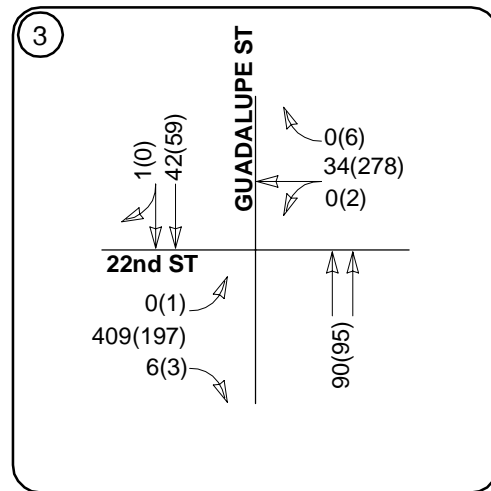
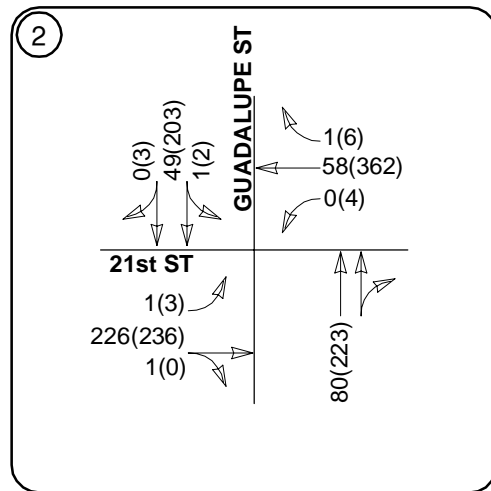
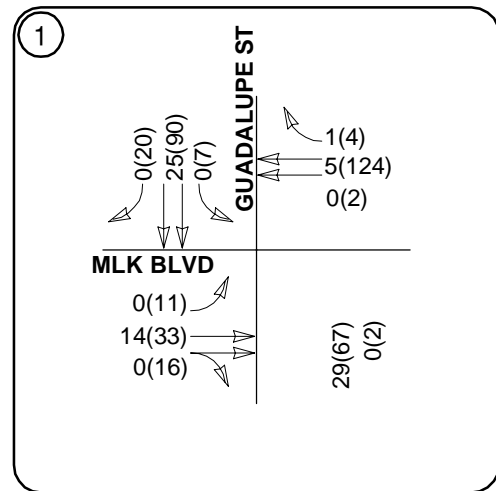


LEGEND:



-  LANE ASSIGNMENT  
 STUDY INTERSECTIONS  
XX AM PEAK-HR BICYCLES  
(XX) PM PEAK-HR BICYCLES

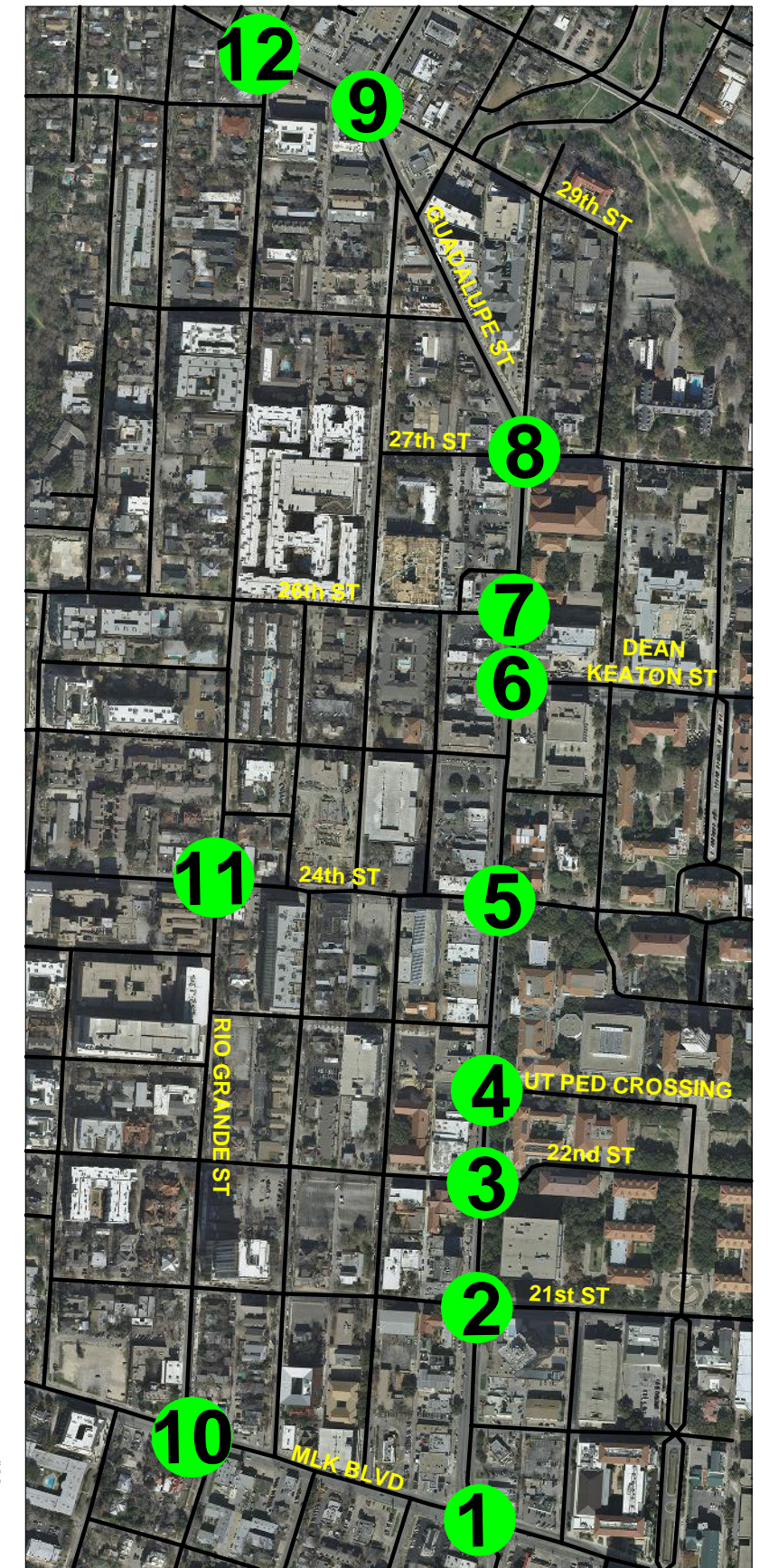
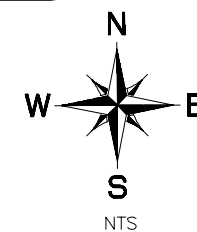






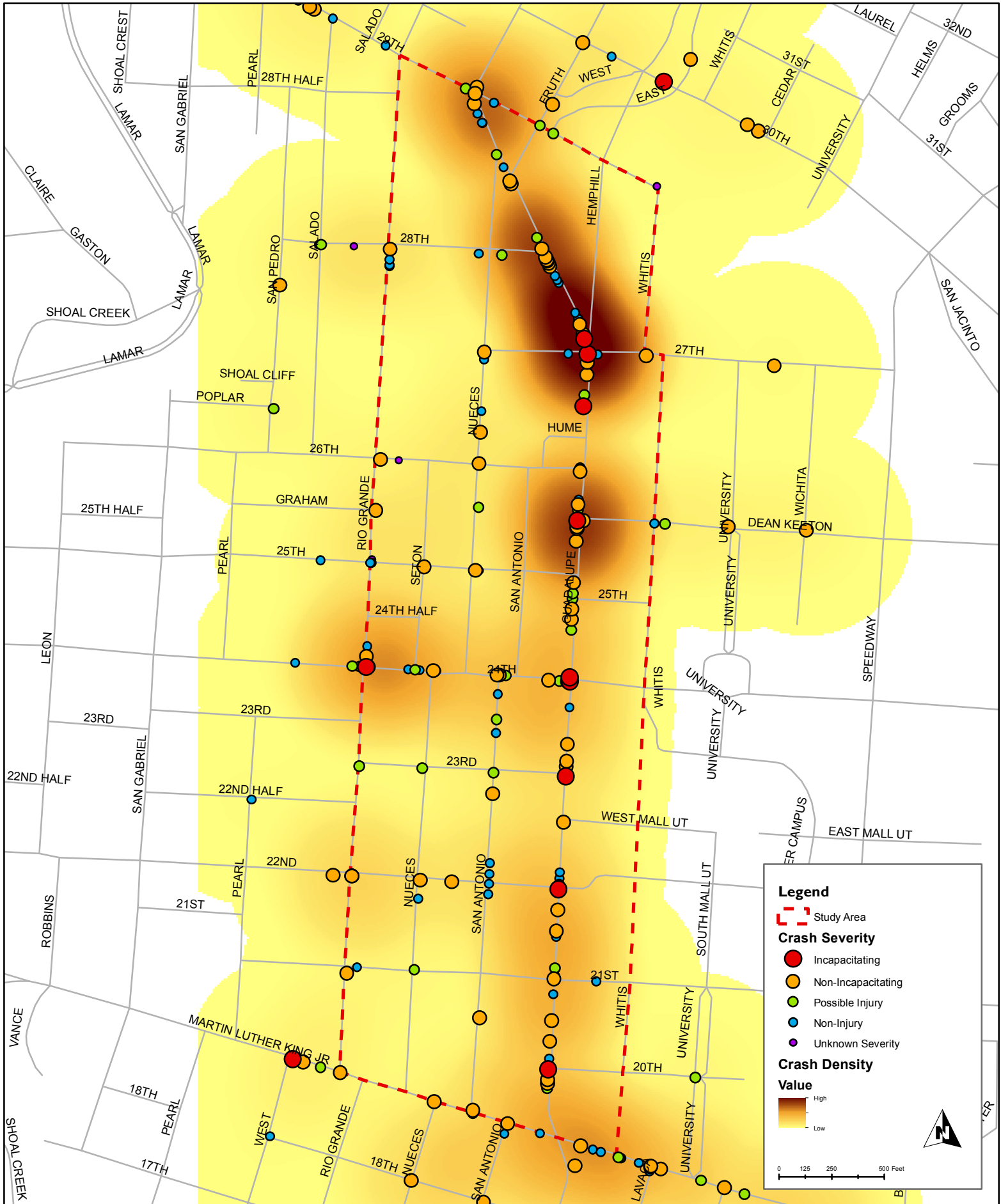
LEGEND:

-  LANE ASSIGNMENT  
 STUDY INTERSECTIONS  
XX AM PEAK-HR PEDESTRIANS  
(XX) PM PEAK-HR PEDESTRIANS



# Crash Severity and Crash Density, 2011-2014

## Guadalupe St., MLK to 29th, Austin TX



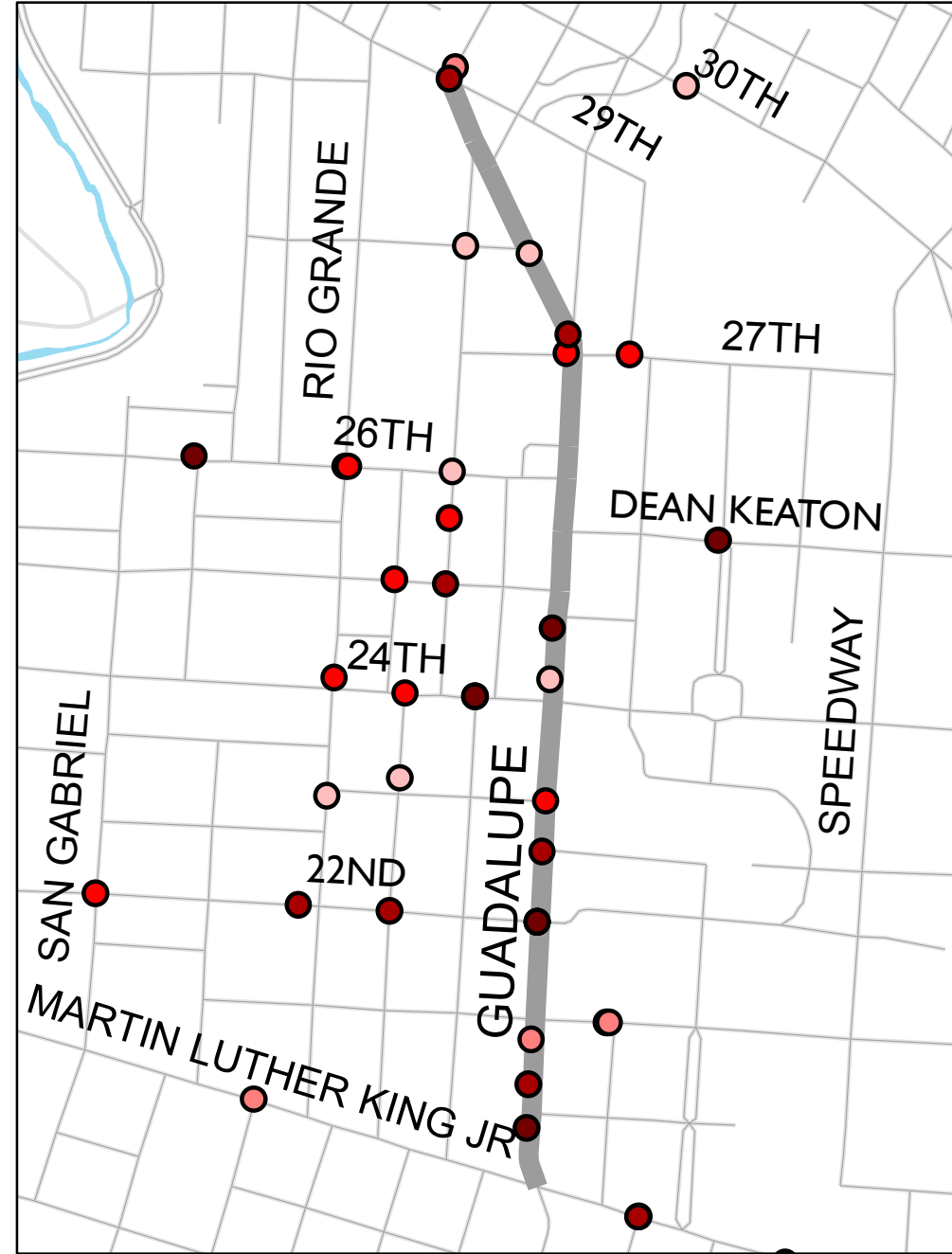
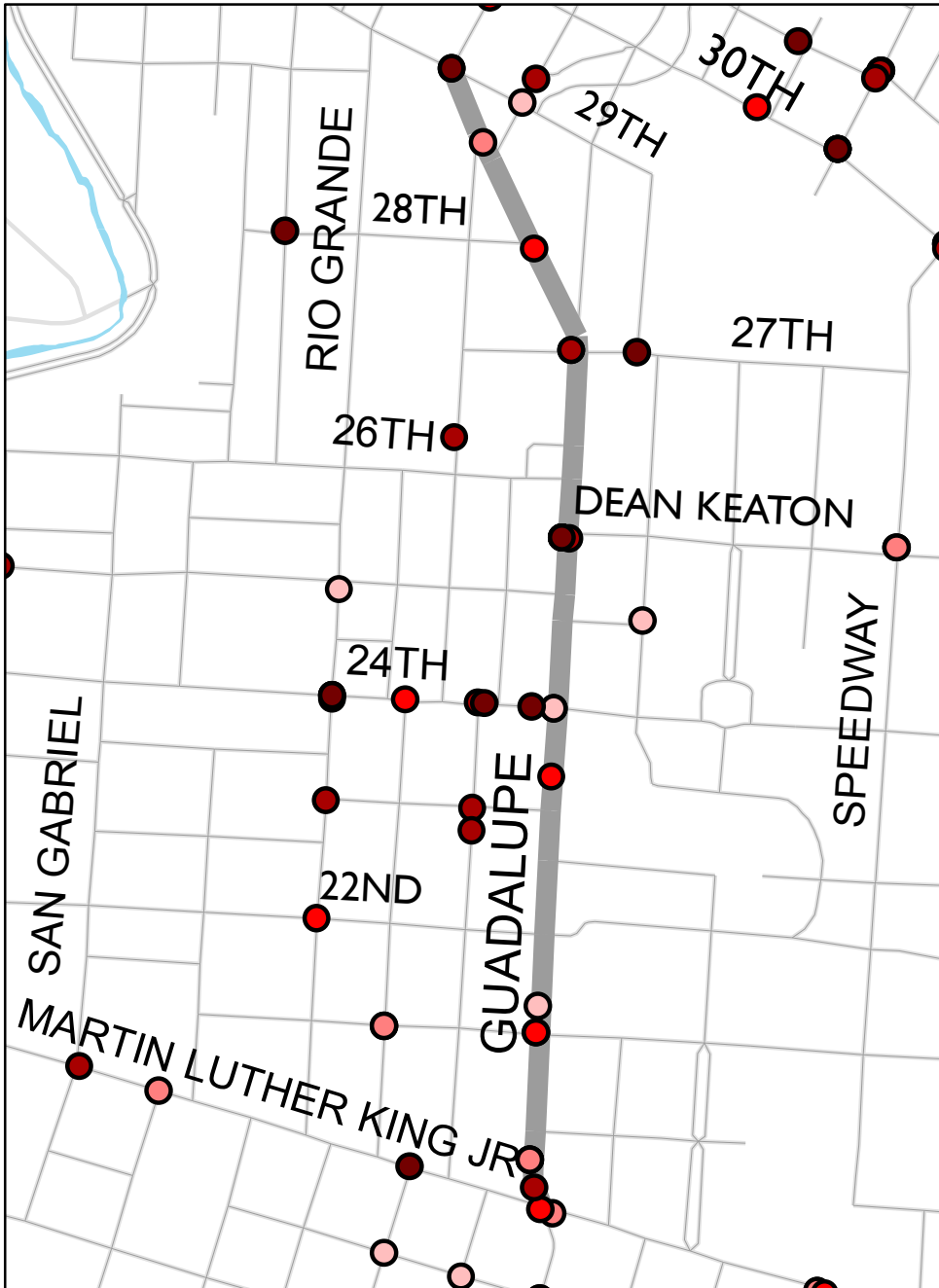


# Bicycle and Pedestrian Crash Locations, 2009-2013

Guadalupe St., MLK to 29th, Austin TX

Bicycle

Pedestrian



● 2009 ● 2010 ● 2011 ● 2012 ● 2013

0 0.1 0.2 0.3 0.4 0.5 Miles

## *APPENDIX E.2: Proposed Conditions Analysis*



## Existing and Proposed Intersection Level of Service Analysis

Intersection	Existing Conditions				Preferred Scenario			
	AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Signalized Intersections								
Guadalupe St @ MLK Blvd	19.9	B	32.9	C	31.7	C	46.7	D
Guadalupe St @ 21 <sup>st</sup> St	16.7	B	36.4	D	11.3	B	52.5	D
Guadalupe St @ 22 <sup>nd</sup> St	4.1	A	6.6	A	12.5	B	34.3	C
Guadalupe St @ UT Pedestrian Crossing	6.9	A	0.3	A	10.4	B	3.0	A
Guadalupe St @ 24 <sup>th</sup> St	34.5	C	53.9	D	64.4	E	53.1	D
Guadalupe St @ Dean Keaton St	21.7	C	24.4	C	37.9	D	46.7	D
Guadalupe St @ 26 <sup>th</sup> St	12.2	B	17.8	B	56.8	E	30.6	C
Guadalupe St @ 27 <sup>th</sup> St	7.4	A	21.6	C	27.8	C	40.1	D
Guadalupe St @ Nueces St	Currently Unsignalized				67.1	E	76.8	E
Guadalupe St @ 29 <sup>th</sup> St	15.2	B	23.8	C	32.2	C	53.1	D
Rio Grande St @ 24 <sup>th</sup> St	15.0	B	22.7	C	17.3	B	22.4	C
San Antonio St @ 24 <sup>th</sup> St	9.2	A	12.3	B	12.8	B	23.2	C
East Nueces St @ 24 <sup>th</sup> St	5.4	A	6.5	A	7.3	A	14.7	B
West Nueces St @ 24 <sup>th</sup> St	1.1	A	2.7	A	2.3	A	3.9	A
San Gabriel St @ 24 <sup>th</sup> St	27.0	C	34.2	C	12.2	B	48.4	D
N Lamar St @ 24 <sup>th</sup> St	56.7	E	66.9	E	57.1	E	61.0	E



## Existing and Proposed Multi Modal Level of Service Analysis

Corridor	Existing Conditions				Preferred Scenario			
Guadalupe Street Southbound			Score	Facility LOS			Score	Facility LOS
	Facility	Auto	0.56	C	Facility	Auto	0.56	C
		Transit	2.09	B		Transit	2.1	B
		Bike	4.5	E		Bike	4.4	E
		Ped	3.5	C		Ped	3.55	D
		Overall	0	C		Overall	0	D
	These are facility levels of service combining segment and intersection experience for the entire street.							
Guadalupe Street Northbound			Score	Facility LOS			Score	Facility LOS
	Facility	Auto	0.56	C	Facility	Auto	0.56	C
		Transit	0.95	A		Transit	0.95	A
		Bike	4.1	D		Bike	4.09	D
		Ped	3.54	D		Ped	3.54	D
		Overall	0	C		Overall	0	C
	These are facility levels of service combining segment and intersection experience for the entire street.							
24 <sup>th</sup> Street Eastbound			Score	Facility LOS			Score	Facility LOS
	Facility	Auto	0.79	B	Facility	Auto	0.56	C
		Transit	6.37	F		Transit	0.95	A
		Bike	4.33	E		Bike	4.09	D
		Ped	3.25	C		Ped	3.54	D
		Overall	0	D		Overall	0	C
	These are facility levels of service combining segment and intersection experience for the entire street.							
24 <sup>th</sup> Street Westbound			Score	Facility LOS			Score	Facility LOS
	Facility	Auto	0.78	B	Facility	Auto	0.89	A
		Transit	6.4	F		Transit	6.49	F
		Bike	5.59	F		Bike	5.58	F
		Ped	3.3	C		Ped	3.55	D
		Overall	0	D		Overall	0	D
	These are facility levels of service combining segment and intersection experience for the entire street.							

