

EXISTING CONDITIONS ANALYSES

Proper identification of needed improvements to the BI 20 corridor required analysis of existing conditions along the corridor. The data initially collected in this study was used to analyze the existing conditions and determine issues along the corridor.

Field observations were also conducted along the BI 20 corridor. Based on these observations and data, there are several perceived issues along the corridor. These include:

- Inconsistent traffic control at crossovers and intersections
- Two-way frontage road
- Inconsistent use of frontage road (through route vs. business access only)
- High speeds on frontage road
- Access management concerns

The following information regarding existing traffic conditions in the study area is included in this section:

- AM and PM peak hour traffic volume counts at 32 locations;
- 24-hour traffic volume counts at six locations;
- 7-day traffic volume counts at one location;
- Intersection capacity analyses for study intersections;
- Summary of accident data along the corridor;
- Summary of speed data collected along the corridor; and
- Input received at TAC Meeting #2 and Public Forum #1.

The results of the existing conditions analysis were presented to the TAC (TAC meeting # 2) and at a public forum (Public Forum # 1) on January 19, 2005.


Existing (2004) Traffic Volumes

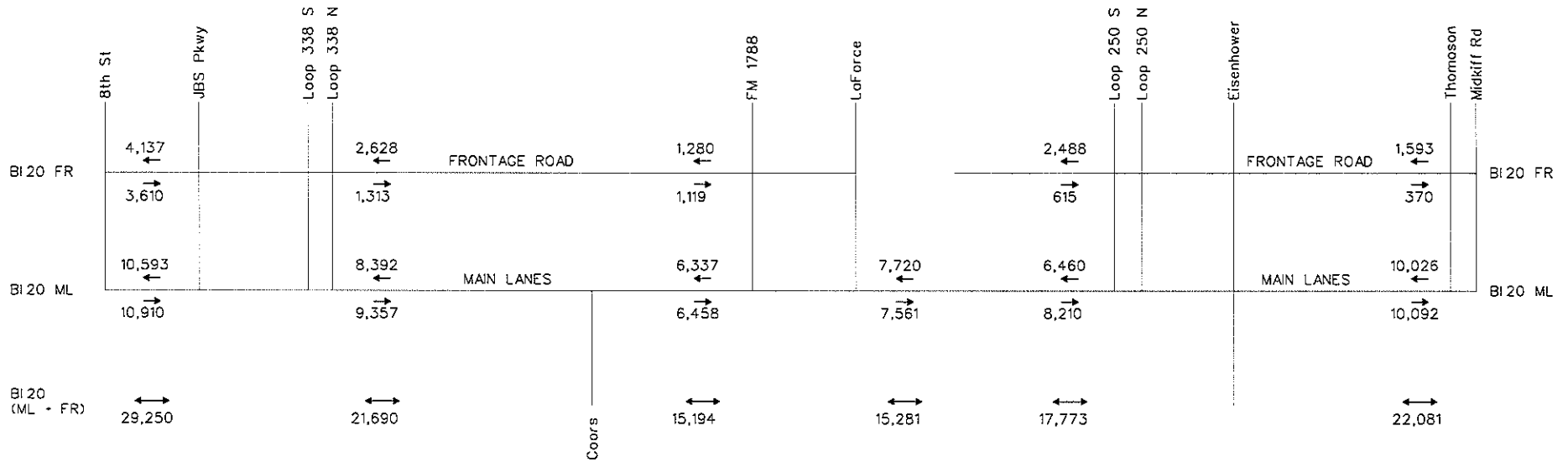
The existing peak hour turning movement counts at the 32 study area locations were collected during the AM and PM peak periods on Thursday, November 4, 2004 and Wednesday, December 15, 2004. The results of these counts are presented in Figures A1 to A22 in the Appendix of this report. These figures were also provided as handouts at the first public forum on Wednesday, January 19, 2005, and were available for viewing and downloading on the project website: www.business20trafficstudy.com. While levels of service and accident data also appear on these sheets, a more thorough explanation of these values will follow in later sections of this report. Additional intersections were included in the accident data summary and are not shown in the figures in the Appendix; this additional information will be presented in subsequent sections of this report.

The 24-hour traffic volumes were collected at the six (6) locations identified previously in the Data Collection section on Thursday, November 4, 2004. A summary of the 24-hour traffic volumes along the corridor are presented in Figure 1. This figure indicates higher traffic volumes approaching the city limits, with approximately 29,250 vehicles per day between 8th Street and JBS Parkway in Odessa, and approximately 22,081 vehicles per day between Thomason and Midkiff Road in Midland. Approximately 15,281 vehicles utilized the corridor daily just east of LaForce Drive, between the two cities.

The 7-day counts were collected on BI 20 east of Loop 338 from Thursday, November 4, 2004 to Wednesday, November 10, 2004. Figures 2 to 5 summarize the 7-day counts by location. As shown in these figures, traffic patterns are typically steady across each of the five weekdays in both eastbound and westbound directions. Peak hours occur at approximately 7:00 AM and 5:00 PM for each of the weekdays. Saturday traffic volumes tend to be greater than Sunday volumes, with traffic peaking on both days between 12:00 noon and 3:00 PM. On the weekend figures (Figures 4 and 5), the average weekday and weekend traffic volumes are also presented to show the difference between weekday and weekend traffic volumes at this location on BI 20.

FIGURE 1 BUSINESS 20 AVERAGE DAILY TRAFFIC VOLUMES


 NOT TO SCALE



BI 20 FR - Business 20 Frontage Road
 BI 20 ML - Business 20 Main Lanes



Figure 2
Business 20
Weekday Eastbound Traffic Volumes

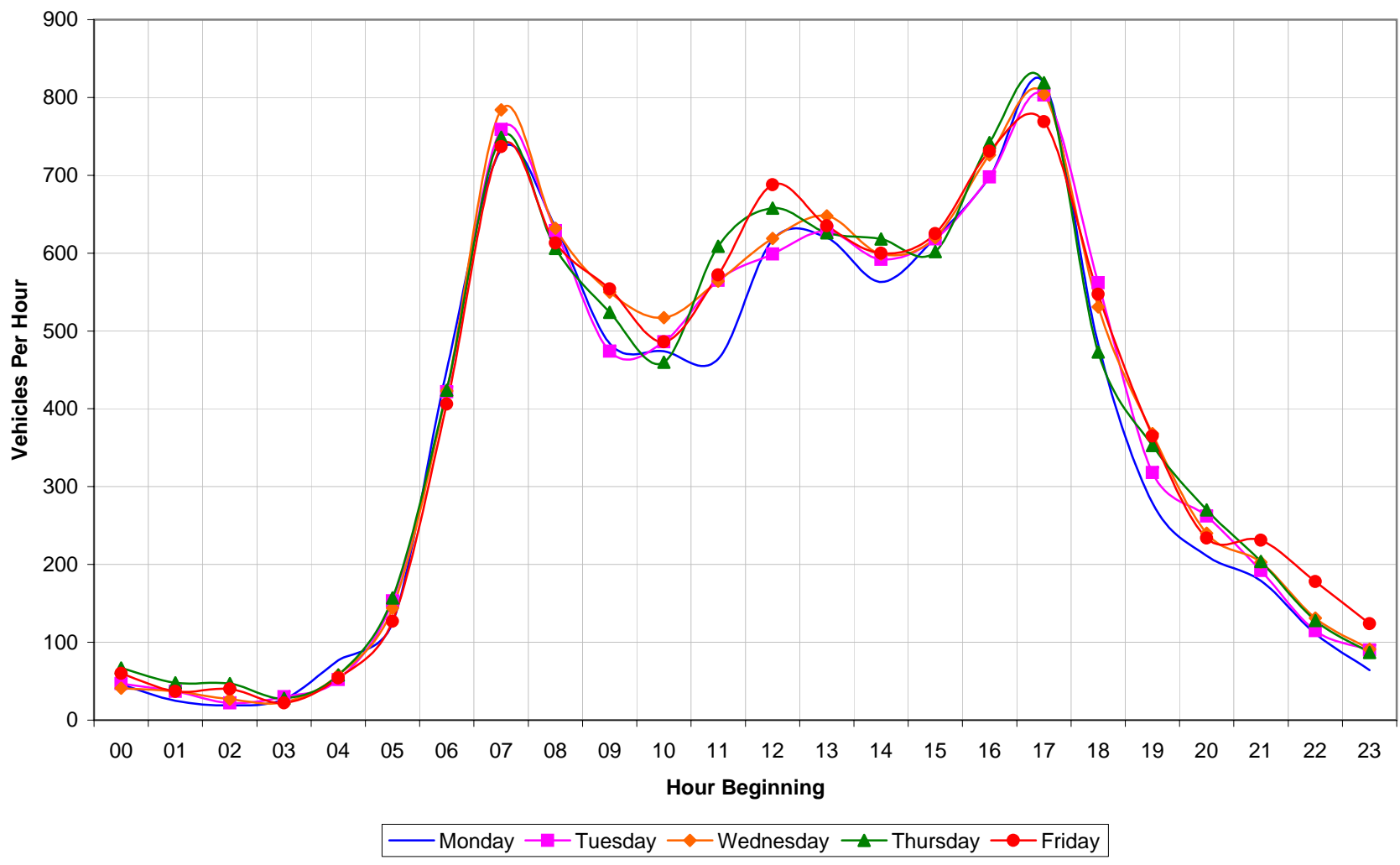


Figure 3
Business 20
Weekday Westbound Traffic Volumes

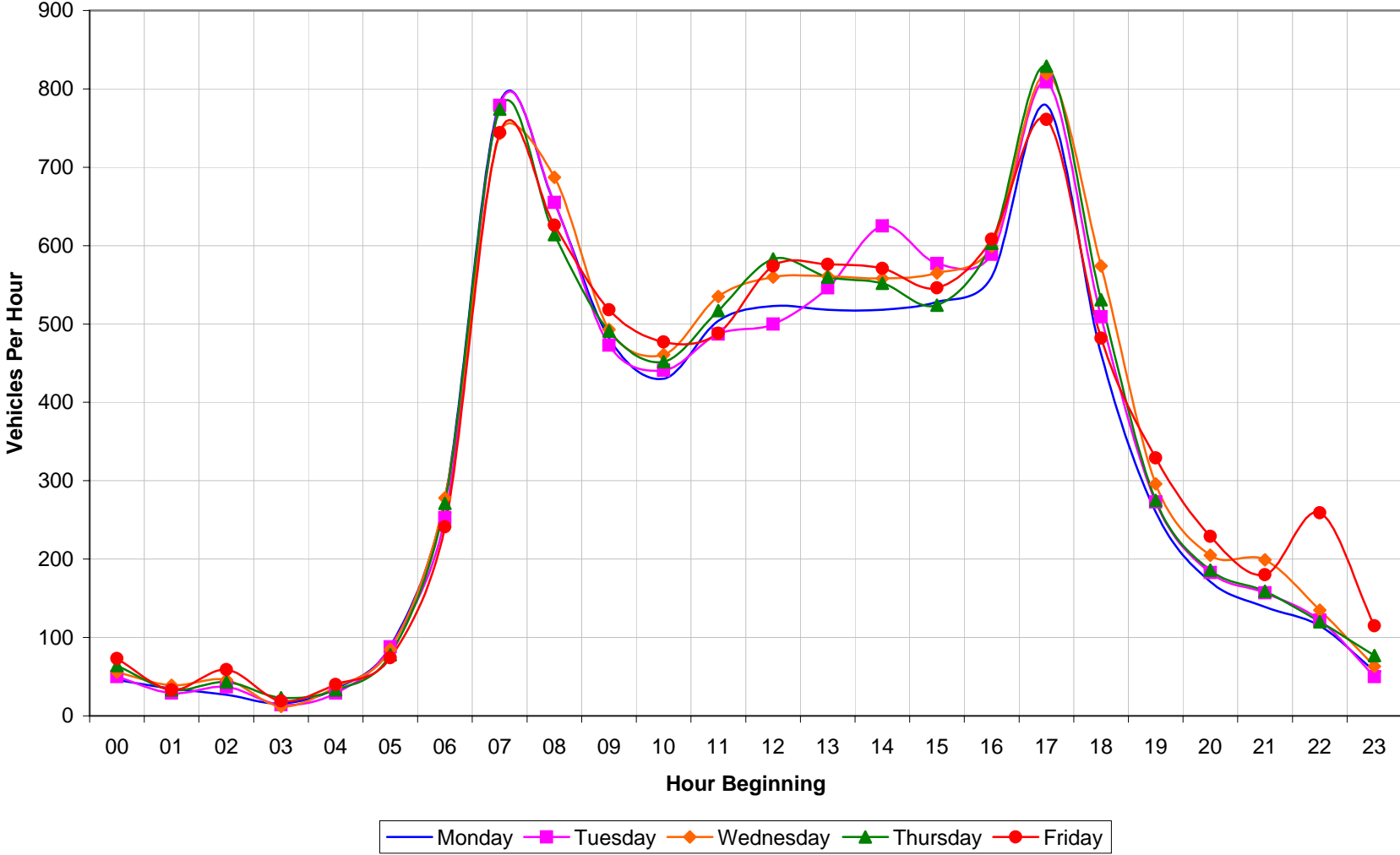


Figure 4
Business 20
Weekend Eastbound Traffic Volumes

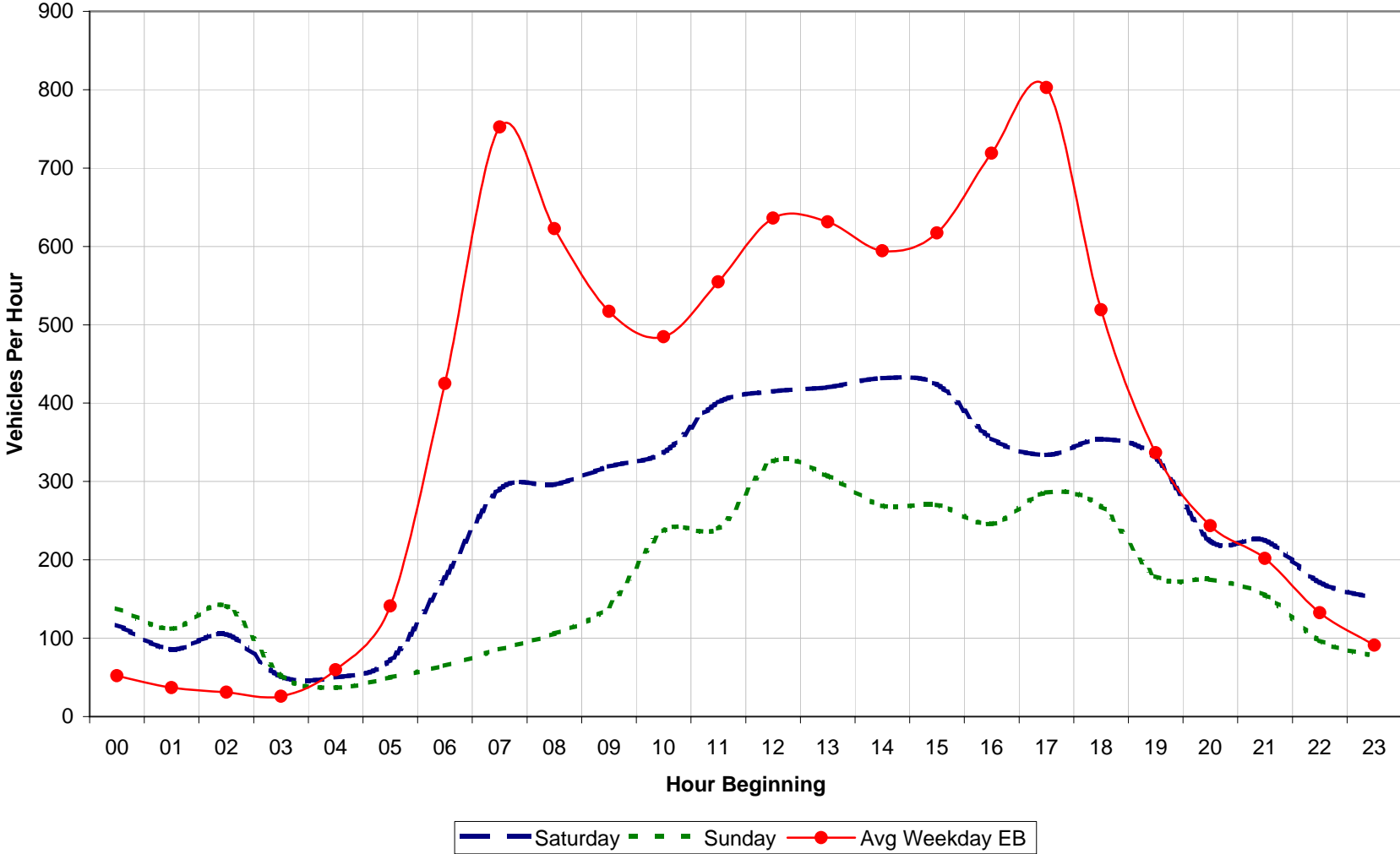
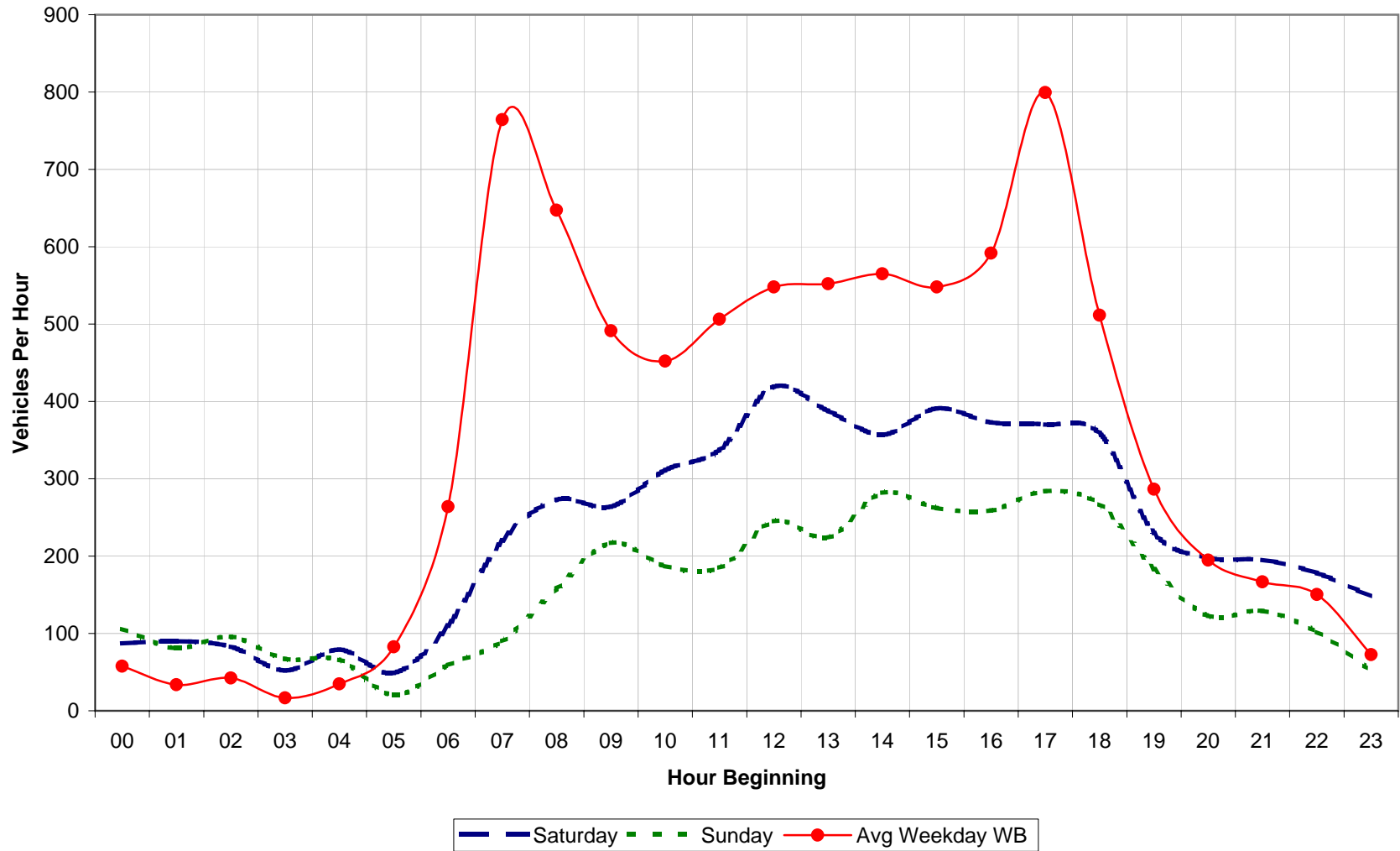


Figure 5
Business 20
Weekend Westbound Traffic Volumes



Existing Traffic Control Summary

The existing traffic control and spacing between crossovers were documented and are presented in Table 1. For analysis purposes, BI 20 was divided into eight sections using major intersections as break points. The crossovers were numbered in order from west to east, identifying existing traffic control at those crossovers inventoried. The figure below serves as a legend for reference to the existing traffic control at the crossovers.

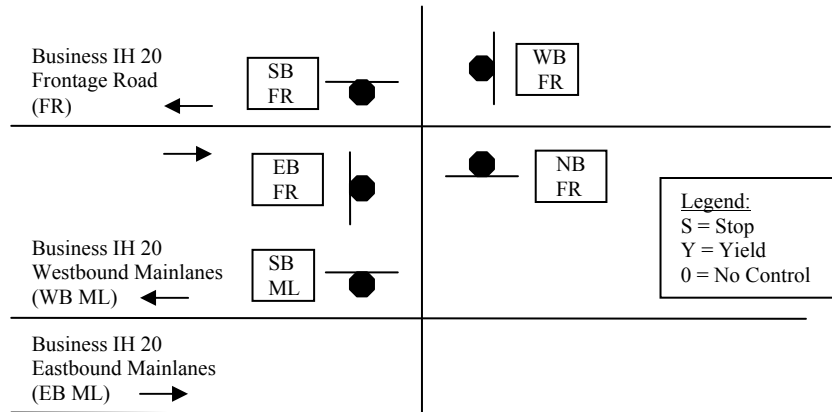
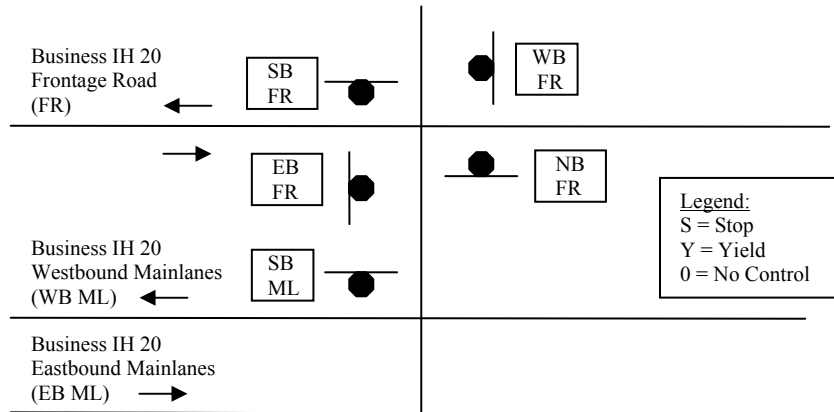


Table 1. Summary of Existing BI 20 Traffic Control

Section	Crossover ID	Location Description	NB FR	SB ML	SB FR	WB FR	EB FR	Distance to Next Crossover (ft)
1	1.1	8 th Street	SIGNALIZED					690
	1.2	Big J Mobile Homes	Y	S	No street	0	0	1820
	1.3	W of Motel 1	S	S	No street	0	0	735
2	2.4	JBS Parkway	SIGNALIZED					1060
	2.5	Parkway Inn	Y	S	No street	0	0	1850
	2.6	TxDOT Odessa	S	S	No street	0	0	945
3	3.7 / 3.8	Loop 338	SIGNALIZED					800 / 1740
	3.9	Country Club	Y	S	S	0	0	2290
	3.10	Newell	Y	S	S	0	0	1400
	3.11	E Edge of Sunset Memorial Gardens	Y	S	No street	0	0	1740
	3.12	Club	S	S	S	S	S	1745
	3.13	Odessa Country Club	Y	S	No street	0	0	4030
4	4.14	FM 588/Faudree	S	S	S	S	S	2435
	4.15	Fina	Y	S	No street	0	0	4470
	4.16	Mainlane Crossover	-	-	-	-	-	-
	4.17	CR 1308	S	S	S	S	S	1948
	4.18	CR 1305	Y	S	S	0	0	1400
	4.19	Xtreme Cycles & Customs	Y	S	No street	0	0	3000
	4.20	E of CR 1295	Y	S	No street	0	0	2970
5	5.21	Coors	MAINLANE SIGNALIZED					1640
	5.22	Thermo King	Y	S	No street	0	0	13,385
	5.23	Airport (FR Dead-End)	Y	S	No street	0	0	2530
	5.24	Airport	Y	S	Airport	0	0	1885
	5.25	Duncan Disposal	Y	S	No street	0	0	1850

Table 1. Summary of Existing BI 20 Traffic Control (continued)

Section	Crossover ID	Location Description	NB FR	SB ML	SB FR	WB FR	EB FR	Distance to Next Crossover (ft)	
5	5.26	La Bodega	Y	S	No street	0	0	1840	
	5.27	Vacant Club/Café	Y	S	No street	0	0	786	
	5.28	RR Crossing to South	-	-	-	-	-	2259	
	5.29	CR 1246	Y	S	S	0	0	2475	
	5.30	Steel Yard	Y	S	No street	0	0	1735	
	5.31	Vacant Land	Y	S	No street	0	0	2585	
	5.32	W of Honda	Y	S	No street	0	0	2500	
6	6.33 / 6.34	Loop 250	SIGNALIZED						1315 / 3190
7	7.35	Eisenhower	SIGNALIZED						1115
	7.36	Witt International	Y	S	No street	0	0	2750	
	7.37	La Quinta	Y	S	No street	0	0	1170	
	7.38	Bankhead Highway	Y	S	No street	0	0	980	
	7.39	Best Western	Y	S	No street	0	0	795	
	7.40	Sleep Inn	Y	S	No street	0	0	960	
8	8.41	Thomason	SIGNALIZED						540
	8.42	Metro Inn / DQ	Y	S	No street	0	0	410	
	8.43	Midkiff	SIGNALIZED						N/A



Existing (2004) Intersection Capacity Analyses

The process of modeling the existing traffic conditions involved the use of Synchro 5, a traffic analysis and simulation modeling software. The lane configurations, traffic volumes, traffic control, and signal operations (for signalized intersections) were coded for each study intersection, based on information obtained from field observations. Additionally, computer simulation was run to visually inspect the operation at the study intersections for concurrence with existing operation in the field.

For each of the study area intersections where peak hour turning movement volumes were collected, capacity analyses were performed to identify the level of service at which the intersections currently operate, and to identify those intersections where capacity may be an issue.

The Level of Service (LOS) of an intersection is a qualitative measure of capacity and operating conditions and is directly related to vehicle delay, as indicated in Table 2 and Table 3. The LOS criteria for a signalized intersection is shown in Table 2. LOS is given a letter designation from A to F, with LOS A representing very short delays (less than 10 seconds of average control delay per vehicle) and LOS F representing very long delays (more than 80 seconds of average control delay per vehicle). LOS D, ranging from 35 to 50 seconds of average control delay per vehicle, is typically the minimum acceptable condition.

For unsignalized intersections, the levels of service, as shown in Table 3, are defined by average control delay in seconds per vehicle. In unsignalized analyses, LOS D is considered the limit of acceptable operation in an urban environment.

Table 2. Level of Service Criteria for Signalized Intersections

Level-of-Service (LOS)	Average Control Delay (seconds/vehicle)	Description
A	≤ 10.0	Very low vehicle delays, free flow, signal progression extremely favorable, most vehicles arrive during given signal phase.
B	10.1 to 20.0	Good signal progression, more vehicles stop and experience higher delays than for LOS A.
C	20.1 to 35.0	Stable flow, fair signal progression, significant number of vehicles stop at signals.
D	35.1 to 55.0	Congestion noticeable, longer delays and unfavorable signal progression, many vehicles stop at signals.
E	55.1 to 80.0	Limit of acceptable delay, unstable flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.
F	> 80.0	Unacceptable delays, extremely unstable flow and congestion, traffic exceeds roadway capacity, stop-and-go conditions.

SOURCE: *Highway Capacity Manual, HCM 2000*, Transportation Research Board, 2000.

Table 3. Level of Service Criteria for Unsignalized Intersections

Level-of-Service (LOS)	Average Control Delay (seconds/vehicle)	Description
A	≤ 10.0	No delays at intersections with continuous flow of traffic. Uncongested operations: high frequency of long gaps available for all left and right turning traffic. No observable queues.
B	10.1 to 15.0	No delays at intersections with continuous flow of traffic. Uncongested operations: high frequency of long gaps available for all left and right turning traffic. No observable queues.
C	15.1 to 25.0	Moderate delays at intersections with satisfactory to good traffic flow. Light congestion; infrequent backups on critical approaches.
D	25.1 to 35.0	Increased probability of delays along every approach. Significant congestion on critical approaches, but intersection functional. No standing long lines formed.
E	35.1 to 50.0	Heavy traffic flow condition. Heavy delays probable. No available gaps for cross-street traffic or main street turning traffic. Limit of stable flow.
F	> 50.0	Unstable traffic flow. Heavy congestion. Traffic moves in forced flow condition. Average delays greater than one minute highly probable. Total breakdown.

SOURCE: *Highway Capacity Manual, HCM2000*, Transportation Research Board, 2000.

Table 4 on the next page presents the results of the capacity analyses of the study intersections, including delay (sec/veh) and Level-of-Service (LOS) for each approach. Approaches currently operating at borderline (LOS D) or poor (LOS E or F) levels of service are highlighted. The capacity analysis results for each of these intersections are also provided with the existing traffic volumes in Figures A1 to A22 in the Appendix.

Table 4. Existing Capacity Analysis Results for Study Intersections

8th Street at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	8.5 (A) ²	5.3 (A)	6.4 (A)	-	24.0 (C)
PM Peak	8.3 (A)	6.1 (A)	5.0 (A)	-	23.6 (C)
8th Street at BI 20 FR³					
		EB	WB	NB	SB
AM Peak		-	13.1 (B)	-	8.6 (A)
PM Peak		-	13.9 (B)	-	9.7 (A)
JBS Parkway at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	17.4 (B)	24.1 (C)	22.7 (C)	4.4 (A)	17.6 (B)
PM Peak	17.1 (B)	24.2 (C)	14.9 (B)	1.9 (A)	22.2 (C)
JBS Parkway at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	13.1 (B)	8.4 (A)	18.7 (B)	-	13.8 (B)
PM Peak	14.8 (B)	14.5 (B)	15.8 (B)	-	11.5 (B)
Loop 338 SB at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	18.0 (B)	17.8 (B)	13.4 (B)	5.0 (A)	21.6 (C)
PM Peak	19.7 (B)	17.5 (B)	16.4 (B)	12.2 (B)	27.6 (C)
Loop 338 SB at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	8.8 (A)	6.7 (A)	13.0 (B)	-	0.1 (A)
PM Peak	8.9 (A)	6.5 (A)	12.5 (B)	-	0.2 (A)
Loop 338 NB at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	15.5 (B)	15.9 (B)	13.1 (B)	11.0 (B)	24.0 (C)
PM Peak	15.8 (B)	19.3 (B)	9.5 (A)	13.0 (B)	29.3 (C)
Loop 338 NB at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	7.4 (A)	3.9 (A)	10.8 (B)	-	10.8 (B)
PM Peak	9.5 (A)	6.1 (A)	13.7 (B)	-	0.0 (A)
Newell at BI 20 FR					
		EB	WB	NB	SB
AM Peak		7.4 (A)	7.5 (A)	10.6 (B)	11.5 (B)
PM Peak		7.8 (A)	7.4 (A)	14.9 (B)	12.4 (B)
Newell at BI 20					
		EB	WB	NB	SB
AM Peak		9.5 (A)	-	-	22.5 (C)
PM Peak		12.9 (B)	-	-	38.7 (E)

¹ Signalized Intersection

² Delay in seconds / vehicle (LOS)

³ FR = Frontage Road

Table 4. Existing Capacity Analysis Results for Study Intersections (continued)

Club Drive at BI 20 FR					
		EB	WB	NB	SB
AM Peak		7.8 (A)	7.5 (A)	8.3 (A)	7.7 (A)
PM Peak		8.7 (A)	8.6 (A)	8.6 (A)	8.7 (A)
Club Drive at BI 20					
		EB	WB	NB	SB
AM Peak		9.7 (A)	-	-	26.5 (D)
PM Peak		10.9 (B)	-	-	97.7 (F)
FM 588 / Faudree at BI 20 FR					
		EB	WB	NB	SB
AM Peak		8.4 (A)	8.6 (A)	8.4 (A)	9.0 (A)
PM Peak		9.8 (A)	10.6 (B)	9.5 (A)	9.6 (A)
FM 588 / Faudree at BI 20					
		EB	WB	NB	SB
AM Peak		9.4 (A)	-	-	42.6 (E)
PM Peak		13.1 (B)	-	-	149.4 (F)
CR 1308 at BI 20 FR					
		EB	WB	NB	SB
AM Peak		7.5 (A)	7.4 (A)	7.7 (A)	7.6 (A)
PM Peak		7.3 (A)	7.7 (A)	7.9 (A)	7.7 (A)
CR 1308 at BI 20					
		EB	WB	NB	SB
AM Peak		9.2 (A)	-	-	16.2 (C)
PM Peak		11.1 (B)	-	-	32.3 (D)
Coors at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	10.7 (B)	9.6 (A)	10.3 (B)	15.8 (B)	-
PM Peak	11.63 (B)	12.0 (B)	8.1 (A)	15.8 (B)	-
FM 1788 at BI 20 NFR					
		EB	WB	NB	SB
AM Peak		10.1 (B)	9.4 (A)	7.6 (A)	-
PM Peak		9.8 (A)	9.6 (A)	7.9 (A)	-
LaForce at BI 20 NFR					
		EB	WB	NB	SB
AM Peak		-	9.6 (A)	7.5 (A)	-
PM Peak		-	9.2 (A)	8.2 (A)	-

¹ Signalized Intersection

² Delay in seconds / vehicle (LOS)

³ FR = Frontage Road

Table 4. Existing Capacity Analysis Results for Study Intersections (continued)

LaForce at BI 20 SFR					
		EB	WB	NB	SB
AM Peak		8.0 (A)	-	-	8.0 (A)
PM Peak		8.2 (A)	-	-	10.1 (B)
CR 1246 at BI 20 FR					
		EB	WB	NB	SB
AM Peak		7.4 (A)	7.3 (A)	10.1 (B)	11.0 (B)
PM Peak		7.3 (A)	7.3 (A)	10.4 (B)	10.3 (B)
CR 1246 at BI 20					
		EB	WB	NB	SB
AM Peak		10.5 (B)	-	-	68.8 (F)
PM Peak		9.3 (A)	-	-	37.4 (E)
Loop 250 SB at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	18.7 (B)	31.0 (C)	28.1 (C)	0.0 (A)	16.9 (B)
PM Peak	16.6 (B)	31.6 (C)	24.2 (C)	0.3 (A)	14.8 (B)
Loop 250 SB at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	17.1 (B)	23.3 (C)	30.1 (C)	-	1.7 (A)
PM Peak	19.5 (B)	17.9 (B)	27.6 (C)	-	1.2 (A)
Loop 250 NB at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	7.7 (A)	29.9 (C)	16.0 (B)	0.4 (A)	23.5 (C)
PM Peak	5.6 (A)	31.9 (C)	10.2 (B)	1.2 (A)	26.4 (C)
Loop 250 NB at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	14.6 (B)	10.3 (B)	22.0 (C)	-	0.4 (A)
PM Peak	31.4 (C)	15.5 (B)	51.8 (C)	-	0.0 (A)
Eisenhower at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	27.2 (C)	29.4 (C)	23.1 (C)	0.7 (A)	38.4 (D)
PM Peak	20.9 (C)	30.9 (C)	28.9 (C)	12.5 (B)	30.9 (C)

¹ Signalized Intersection

² Delay in seconds / vehicle (LOS)

³ FR = Frontage Road

Table 4. Existing Capacity Analysis Results for Study Intersections (continued)

Eisenhower at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	22.0 (C)	23.2 (C)	21.3 (C)	29.4 (C)	14.9 (B)
PM Peak	42.2 (D)	47.5 (D)	22.3 (C)	79.6 (E)	13.4 (B)
Thomason at BI 20 FR¹					
	Intersection	EB	WB	NB	SB
AM Peak	15.5 (B)	20.8 (C)	23.1 (C)	1.1 (A)	28.5 (C)
PM Peak	16.1 (B)	23.7 (C)	22.6 (C)	1.1 (A)	33.0 (C)
Thomason at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	10.6 (B)	11.0 (B)	11.3 (B)	-	4.9 (A)
PM Peak	13.7 (B)	11.4 (B)	16.2 (B)	-	10.2 (B)
Midkiff at BI 20 FR					
	EB	WB	NB	SB	
AM Peak	8.4 (A)	-	-	-	
PM Peak	8.3 (A)	-	-	-	
Midkiff at BI 20¹					
	Intersection	EB	WB	NB	SB
AM Peak	29.3 (C)	34.2 (C)	19.3 (B)	33.1 (C)	25.2 (C)
PM Peak	27.7 (C)	21.1 (C)	28.0 (C)	30.8 (C)	33.0 (C)

¹ Signalized Intersection² Delay in seconds / vehicle (LOS)³ FR = Frontage Road

Based on these results and field observations, significant capacity issues do not currently exist along the majority of BI 20. However, as shown in Table 2, the following approaches currently operate at unacceptable levels of service (LOS E or F) during the specified peak periods:

- Newell at BI 20 mainlanes – Southbound approach (PM peak hour)
- Club Drive at BI 20 mainlanes – Southbound approach (PM peak hour)
- FM 588 / Faudree at BI 20 mainlanes – Southbound approach (AM and PM peak hours)
- CR 1246 at BI 20 mainlanes – Southbound approach (AM and PM peak hour)
- Eisenhower at BI 20 mainlanes – Northbound approach (PM peak hour)

Four of the intersections currently operating at poor levels of service are unsignalized intersections, while the remaining intersection (Eisenhower) is signalized. All are located in or near the City of Odessa, with the exception of Eisenhower, which is within the City of Midland. All of the poor operations occur at the cross street intersection with the BI 20 mainlanes.

Accident Summary

To help identify locations along BI 20 which may be experiencing safety issues, the most recent available traffic accident data and reports were obtained from TxDOT and the Cities of Midland and Odessa. TxDOT provided accident data from 1999 to 2001, while the Cities of Midland and Odessa provided additional accident data from 2001 to 2003 at selected locations. A comprehensive summary of the accidents along the BI 20 corridor is presented in Table 5. Accident data is also included on Figures A1 to A22 at those intersections where traffic volumes were obtained.

Table 5. Summary of BI 20 Traffic Accident Data (1999 – 2003)

City	Location / Intersection	SUM OF ACCIDENTS			Total
		FR	ML	Crossover	
Odessa	8 th Street Mainlanes	-	15	0	15
	8 th Street Frontage Road ¹	4	-	1	5
	Reed Street	1	13	0	14
	Crossover W of JBS	2	1	0	3
	JBS Pkwy	23	20	0	43
	Mile marker 12.8 ¹	3	2	0	5
	Crossover W of 338 (W Ramp) ¹	1	2	1	4
	338 (W Ramp) ¹	5	12	10	27
	338 (E Ramp)	9	8	2	19
	Country Club ¹	20	3	0	23
Rocky Lane Road	2	-	-	2	
Newell ¹	6	3	0	9	
Midland	FM 588 ¹	0	5	0	5
	Coors ¹	3	1	0	4
	Crossover W of 250 (W Ramp) ¹	2	1	0	3
	250 (W Ramp)	6	4	1	11
	250 (E Ramp)	6	8	1	15
	Eisenhower	3	21	0	24
	Crossover E of Midland Rd. ¹	2	9	0	9
	Thomason	3	44	0	47
	Crossover W of Midkiff ¹	1	1	0	2
Midkiff	3	83	0	86	

¹Accident data only available from 1999-2001

As shown in Table 3, Midkiff, Thomason, and JBS Parkway have the highest accident totals of the corridor's intersections. These intersections also fall within the city limits of either city and carry higher traffic volumes than the other study intersections along the corridor between Midland and Odessa. The top five accident locations are all at signalized locations.

Table 6 summarizes the accident data further by separating the accidents by city and type of traffic control.

Table 6. Summary of BI 20 Traffic Accident Data – Signalized vs. Unsignalized

City	Location / Intersection	SUM OF ACCIDENTS			Total
		FR	ML	Crossover	
Odessa	SIGNALIZED				
	8 th Street Mainlanes	-	10	0	10
	JBS Pkwy	23	20	0	43
	338 (W Ramp) ¹	5	12	10	27
	338 (E Ramp)	9	8	2	19
	Total	37	50	12	99
	% of Odessa Total	49%	68%	86%	60%
	UNSIGNALIZED				
	8 th Street Frontage Road ¹	4	-	1	5
	Reed Street	1	13	0	14
	Crossover W of JBS	2	1	0	3
	Mile marker 12.8 ¹	3	2	0	5
	Crossover W of 338 (W Ramp) ¹	1	2	1	4
	Country Club ¹	20	3	0	23
	Rocky Lane Road	2	-	-	2
	Newell ¹	6	3	0	9
	Total	39	24	2	65
% of Odessa Total	51%	32%	14%	40%	
Midland	SIGNALIZED				
	Coors ¹	3	1	0	4
	250 (W Ramp)	6	4	1	11
	250 (E Ramp)	6	8	1	15
	Eisenhower	3	21	0	24
	Thomason	3	44	0	47
	Midkiff	3	83	0	86
	Total	24	161	2	187
	% of Midland Total	83%	91%	100%	91%
	UNSIGNALIZED				
	FM 588 ¹	0	5	0	5
	Crossover W of 250 (W Ramp) ¹	2	1	0	3
	Crossover E of Midland Rd. ¹	2	9	0	9
	Crossover W of Midkiff ¹	1	1	0	2
Total	5	16	0	19	
% of Midland Total	17%	9%	0%	9%	

¹Accident data only available from 1999-2001

As shown in Table 6, the signalized intersections account for a significant majority of the accidents along the corridor.

Speed Data

Table 7 presents the average observed speed and the posted speed limits at nine locations along the corridor. The average observed speed is a rough estimate of the speeds motorists are traveling along the corridor. Posted speed limits are typically set at the 85th percentile speed, which is the speed at or below which 85 percent of the vehicles travel. This differs from the average speed, which is simply an average of the speeds of observed vehicles on the roadway. Average speeds which are lower than the posted speed do not

necessarily indicate that posted speeds should be lowered. However, average speeds higher than the posted speed indicate speeding concerns. A comprehensive speed study was not performed at each location, as the average observed speed presented in this table were calculated using the speeds of approximately ten (10) free-flowing vehicles at each location. Before any changes to any posted speed limits are implemented, a more detailed and comprehensive study (for example, collection of speeds of approximately 125 vehicles in each direction) should be conducted.

For each of these locations, data is shown for the eastbound frontage road (EBFR), westbound frontage road (WBFR), eastbound mainlanes (EBML), and westbound mainlanes (WBML). If no vehicles were observed along a particular stretch of roadway, "N/A" appears in the box. Note that a positive difference (+) denotes an average observed speed *greater than* the posted speed limit, while a negative difference (-) denotes an average observed speed *less than* the posted speed limit.

Of the 261 vehicles observed in this study, 30 were observed traveling faster than the posted speed limit. Three of these vehicles were on the frontage road sections, while the remaining 27 were traveling on the mainlanes. However, the frontage road sample represented only 29 percent of the total vehicles observed.

Table 7. BI 20 Speed Data

8th Street & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	N/A	36	53	51
Posted Speed Limit (mph)	45	45	55	55
Difference	-	-9	-2	-4
JBS Parkway & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	40	39	55	55
Posted Speed Limit (mph)	45	45	55	55
Difference	-5	-6	0	0
Newell & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	47	48	64	63
Posted Speed Limit (mph)	50	50	70	70
Difference	-3	-2	-6	-7
Club Drive & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	46	48	61	67
Posted Speed Limit (mph)	55	55	70	70
Difference	-9	-7	-9	-3
FM 588 / Faudree & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	N/A	N/A	65	62
Posted Speed Limit (mph)	55	55	70	70
Difference	-	-	-5	-8
E of CR 1308 & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	45	45	66	67
Posted Speed Limit (mph)	55	55	70	70
Difference	-10	-10	-4	-3
W of Coors & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	40	N/A	65	64
Posted Speed Limit (mph)	55	55	70	70
Difference	-15	-	-5	-6
FM 1788 & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	N/A	49	67	68
Posted Speed Limit (mph)	55	55	70	70
Difference	-	-6	-3	-2
W of Loop 250 (W Ramp) & BI 20				
Speed	EBFR	WBFR	EBML	WBML
Average Observed Speed (mph)	48	51	68	66
Posted Speed Limit (mph)	55	55	70	70
Difference	-7	-4	-2	-4

As shown in Table 7, observed average speeds using the limited amount of data collected for portions of BI 20 (mainlanes and frontage road) were less than the posted speed limits. However, excessive speed is still a concern of many residents and local officials.

Public Forum #1 Input

A number of concerns were raised at the first public forum held on Wednesday, January 19, 2005 at the MCM Grande Hotel. Additionally, several comments were received via the Business 20 Traffic Study website. These include:

- Southbound right turning vehicles at JBS Parkway, 338 (W ramp), 250 (W ramp), and Midkiff will avoid traffic signals and turn right (west) onto the frontage road. They will then utilize the first crossover to access the mainlanes.
- Concerns were raised regarding the future overpass to be constructed at JBS Parkway, and its impact on surrounding neighborhoods. The JBS Parkway overpass is a separate project from the BI 20 study.
- Midland Road appears to be underutilized, due to the fact that it does not connect to the BI 20 mainlanes. North-South traffic appears to utilize Midkiff Road, instead.
- It was determined that future public meetings should be held at a more centralized location midway between Midland and Odessa and should not be held on a Wednesday evening (due to church patronage).

Hard copies of written public comments received throughout the course of the study are available in Appendix C.