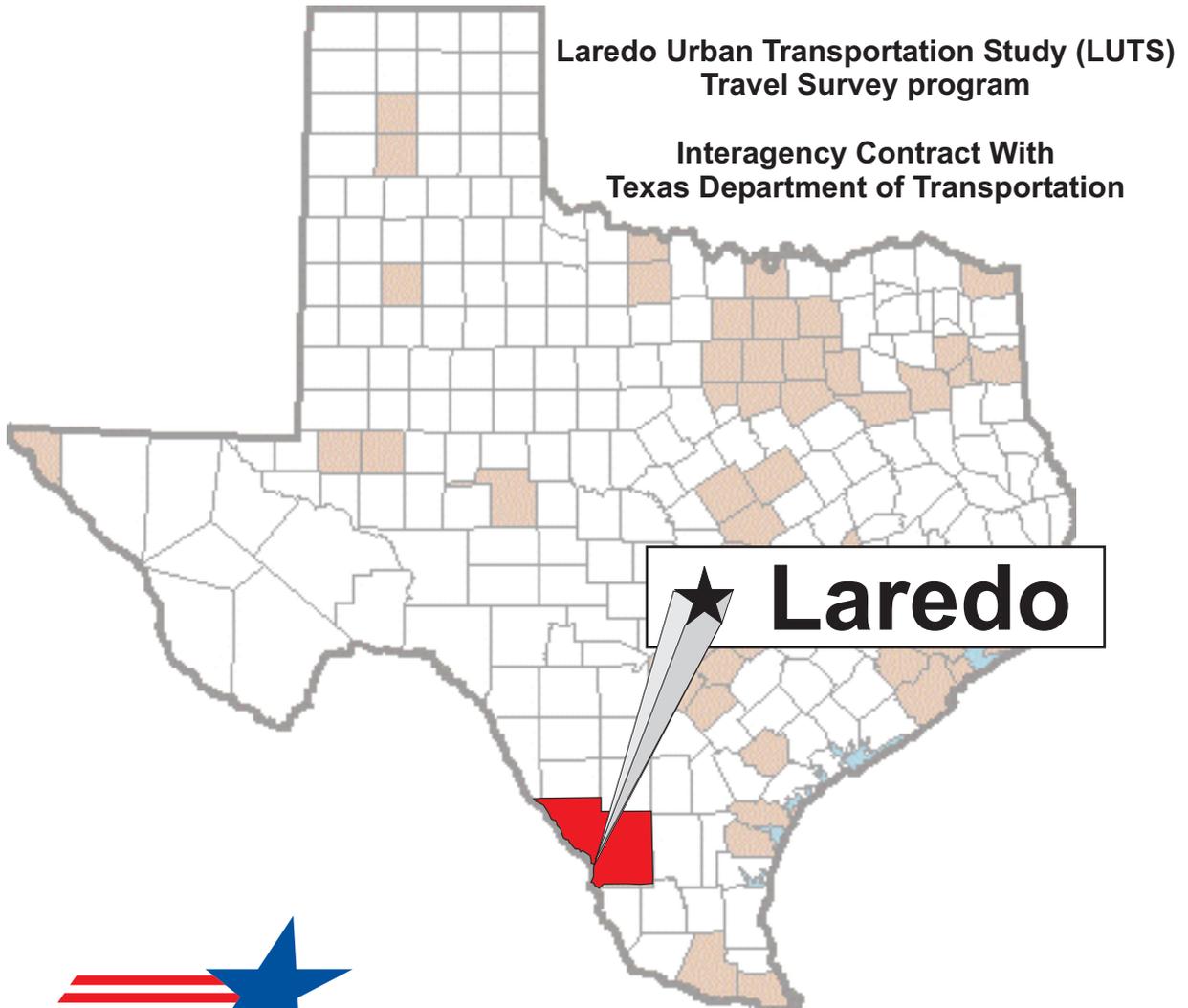


# 2003 Laredo/Webb County Commercial Vehicle Travel Survey Technical Summary



Prepared by the  
Texas Transportation Institute  
Revised May 2005



# **2003 Laredo Commercial Vehicle Survey**

## **TECHNICAL SUMMARY**

**Texas Department of Transportation Travel Survey Program**

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**Revised May 2005**



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## **INTRODUCTION**

In 2003 the Transportation Planning and Programming (TPP) Division of the Texas Department of Transportation (TxDOT) funded a commercial vehicle travel survey in Webb County, the Laredo Urban Transportation Study (LUTS) area. The LUTS commercial vehicle survey measured commercial vehicle travel patterns in Webb County. The purpose of the survey is to provide data that allows TxDOT to forecast commercial vehicle demand and travel patterns within the area.

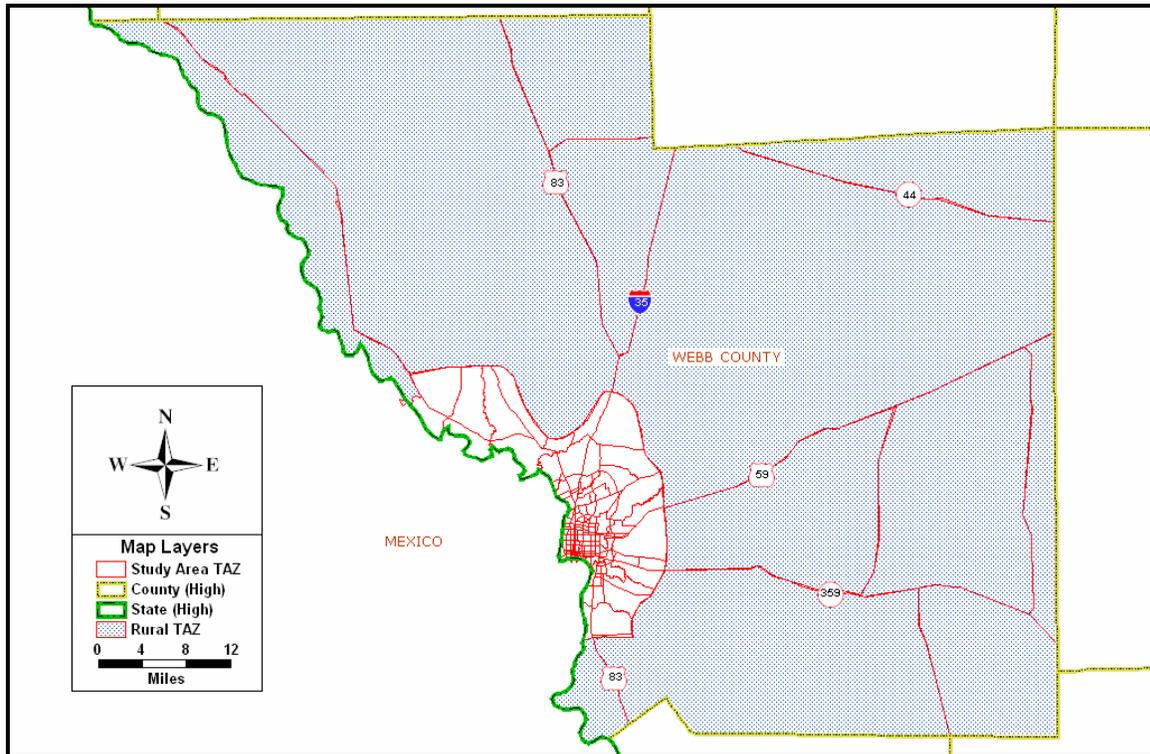
This report presents a Technical Summary of the 2003 Laredo Commercial Vehicle Survey and documents the data collected and the analysis results for the Webb County area. The summary is organized into seven sections. The first section presents a brief description of the LUTS study area. The second discusses the survey methodology. The third section describes the data editing that was done, the fourth provides an overview of external commercial vehicle data, and the fifth presents summaries of the survey data. The sixth section discusses the methodology utilized to expand the survey data and also provide expanded survey results. The final section presents recommendations for use of the data in travel demand models. Additionally, survey instruments utilized for the Laredo Commercial Vehicle survey are provided in the Appendix.

## **LAREDO STUDY AREA**

The boundary established for the Laredo commercial vehicle survey was Webb County. The study area, as shown in Figure 1, is located in south Texas along the Texas/Mexico border. For travel demand modeling purposes, urban areas are typically divided into small geographic sections called traffic analysis zones (TAZ). Each zone is normally bound by transportation facilities and/or geographic features (e.g. bodies of water, parks, etc), and the activity that occurs within that area is typically somewhat homogenous. Zones are categorized by the density of activity associated with them. The zonal density is measured in terms of population and employment relative to the area in acres. The Laredo Metropolitan Planning Organization (MPO) defined the TAZ structure and subsequent study area boundary for the city. The general area of the study area for Laredo

is provided in Figure 1. Additionally, a rural TAZ structure (shaded area in Figure 1) was developed in conjunction with other travel surveys in the LUTS area.

**Figure 1. Webb County Study Area.**



According to the 2000 census, the population of the entire Webb County study area was approximately 193,000 persons. There were nearly 51,000 households in Webb County in 2000. The average household size according to this census was 3.75 persons per household.

## **SURVEY METHODOLOGY**

The sample of survey vehicles was randomly selected from motor carrier and vehicle registration databases provided by TxDOT. For the purpose of the survey, commercial vehicles were defined as any vehicle having six or more tires, a gross vehicle weight of over 8,500 pounds, and primarily used for commercial purposes. Alliance Transportation Group (ATG) conducted the commercial vehicle survey in Laredo. Selected businesses were contacted by ATG and asked to participate in the survey effort. Those businesses

agreeing to participate were provided with survey packets to distribute to drivers and were provided with instructions on how the survey forms should be filled out. After the survey of a business was complete, a representative from ATG would retrieve all survey packets. A total of 524 vehicle surveys were obtained from 196 participating businesses during the conduct of the LUTS commercial vehicle survey. It is worth noting that some totals (such as the number of vehicles in Table 2) will not always match this total exactly. This is a result of non-response to certain questions on the survey instrument.

## **DATA EDITING**

Data editing consisted primarily of reviewing the database to ensure that it was complete and followed guidelines set forth in the bid specification issued by TxDOT. A program was utilized to perform checks relative to geocoding of locations as well as perform logic checks of survey responses. The majority of the data errors were corrected prior to the data being submitted by ATG. However, there was one prevalent error that was not correctable. It is not uncommon for there to be a misunderstanding between transportation planners and the general public as to the definition of a trip. In travel surveys, a trip is defined as the journey from one location to another. The trip ends consist of the last location where a driver got into the vehicle (the origin) and the next location that the driver will stop or exit the vehicle (the destination). However, to the general public a trip is often interpreted as a “round-trip” where the origin and destination are the same location and any stops in between are omitted. In the LUTS commercial vehicle survey, there were over 400 trips with the same TAZ for the origin and destination location. Each trip was reviewed to ascertain whether the address and/or location provided were identical for each trip end. If identical origin and destination information was given, then the trip was removed from the analysis. If multiple instances of duplicate origin/destination information were given for a vehicle, then the vehicle data were removed from the analysis. As a result of this review, three vehicles were dropped from the analysis. The rationale for dropping these vehicles from the analysis is that the trip specific information is not accurate and therefore could compromise the analysis results.

## **TRIP TYPE INFORMATION**

For the purpose of this analysis, two primary trip types are utilized. Those trip types are internal trips and external trips. Internal trips are those with both trip ends (origin and destination) inside the study area. External trips are those where one or both trip ends are located outside of the study area. The primary purpose of the commercial vehicle analysis is to ascertain commercial vehicle characteristics and movements within a study area. Therefore, with the exception of trip tour characteristics, trip data for vehicles having one trip end outside of the study area (external trips) were removed from the analysis of trip related characteristics.

Certain data quality elements preclude a detailed analysis of external trip data. For instance, trip information relative to reported departure and arrival times as well as odometer readings are historically inaccurate. For internal trips, trip lengths and travel times from one TAZ to another can be estimated from network travel time and distance matrices developed from data from the transportation network for Laredo. However, this type of information is not available for locations outside of a specific study area. As a result, external trips were categorized into one of four groups.

- Rural Webb County
- Texas (non-Webb County)
- Mexico
- United States (non-Texas)

Using these groups, trips were summarized by origin and destination and the results are provided in Table 1. As shown in Table 1, 2820 of the 3137 trips (89.89%) were internal trips (both the origin and destination were within the study area). Of those internal trips, 2432 (86.24%) were inter-zonal and 388 (13.76%) were intra-zonal.

External trips (one or both trip ends outside of the study area) comprised 317 of the total 3137 trips (10.11%). Of those 317 trips, 279 (88.01%) had only one trip end outside the study area, and 38 trips (11.99%) had both trip ends outside of the study area. Three trips

ended within the United States (non-Texas) and no trips were reported having an origin or destination in Mexico.

**Table 1. Trips by Origin and Destination.**

Trip Origin	Trip Destination					Total
	Rural Webb County	Texas (non-Webb)	Mexico	United States (non-Texas)	Internal	
Rural Webb County	8	2	0	0	106	116
Texas (non-Webb)	3	25	0	0	32	60
Mexico	0	0	0	0	0	0
United States (non-Texas)	0	0	0	0	3	3
Internal	98	37	0	3	2820	2958
Total Trips	109	64	0	3	2961	3137

## **SURVEY SUMMARIES**

### Survey Sample Fleet Characteristics

Since the survey methodology employs a random selection process, it is presumed that each commercial vehicle in the study area has the same non-zero probability of being selected to participate in the survey. A more detailed discussion of the sampling methodology can be found in ATG's final report<sup>1</sup>. Using a random sampling of vehicles provides a means for expanding the data that were obtained through the survey to the entire population of vehicles operating within the study area.

As previously mentioned, a total of 524 commercial vehicles were surveyed. However, two commercial vehicles reported making only external trips on the survey day and two vehicles had no trip data. As a result, the vehicle data for those four vehicles were not included in the following sections.

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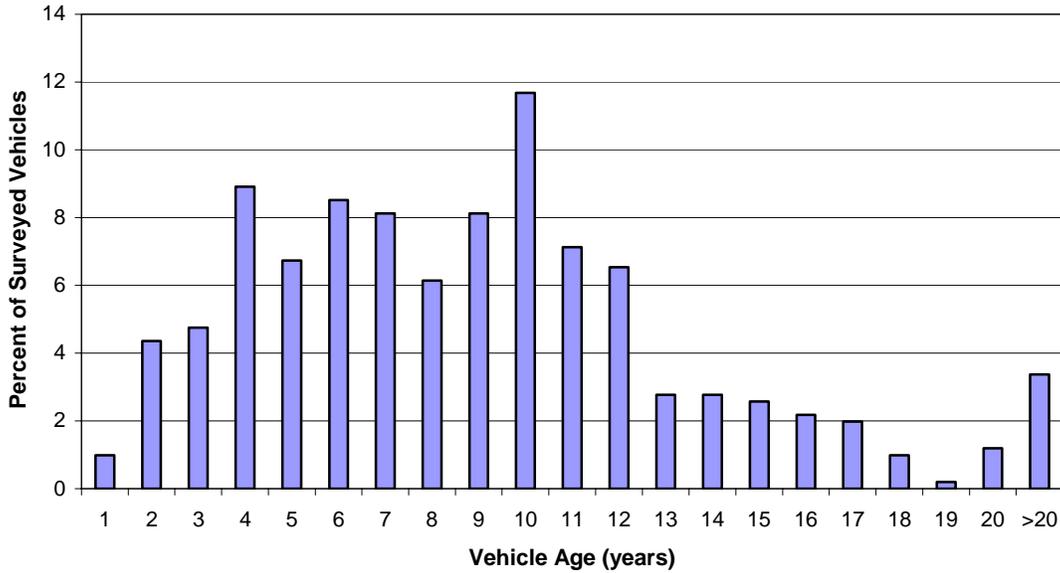
<sup>1</sup> Laredo Urban Transportation Study Commercial Vehicle Survey – Final Report. Alliance Transportation Group, Inc. April 2003.

As part of the survey, information relative to the year, make and model, odometer reading, and fuel type of each vehicle surveyed was collected. This provides an indication of the distribution of vehicles traveling in the study area by type, age, and condition (as implied by the number of miles on the vehicle). Table 2 below shows the age distribution of the surveyed vehicles. Figure 2 and Figure 3 provide the distribution and cumulative distribution of surveyed vehicles by age. Vehicles five years old or less comprised the first age distribution quartile, while the second (50%) and third (75%) consisted of three year increments at 8 years old and 11 years old, respectively. A total of 505 vehicles responded to the age of vehicle question, and 388 vehicles (76.83%) reported odometer values. The average odometer value for all vehicles was 325,477 miles per vehicle and the average vehicle age was 9.04 years.

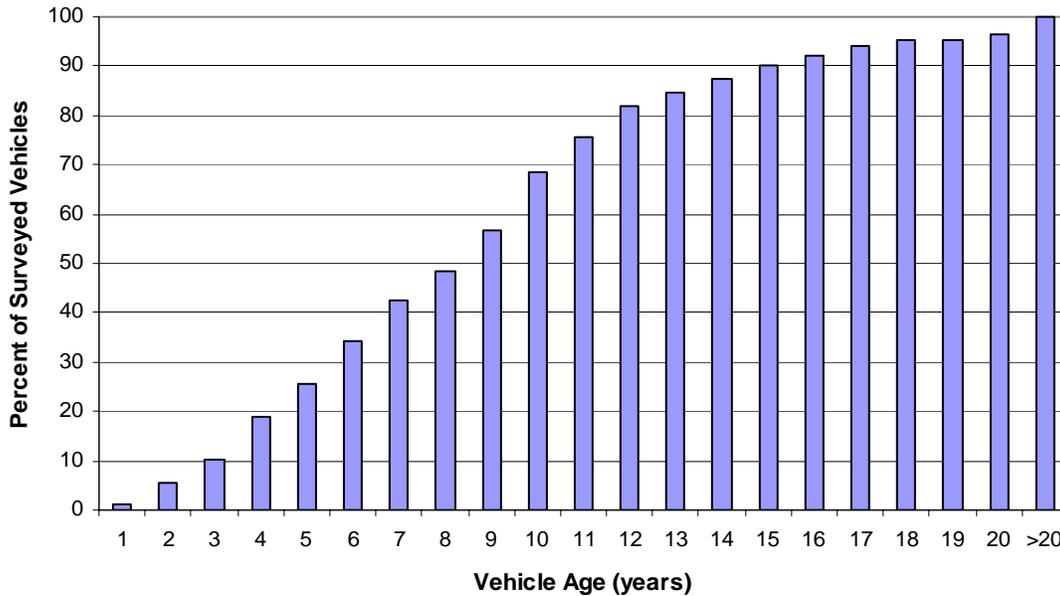
**Table 2. Commercial Vehicle Age Distribution.**

Age	Number of Vehicles	Percent of Total	Cumulative Percent of Total	Vehicles with Odometer Values Reported	Percent of Total	Average Reported Odometer Value
1	5	0.99	0.99	4	1.03	325
2	22	4.36	5.35	17	4.38	14,321
3	24	4.75	10.10	20	5.15	123,276
4	45	8.91	19.01	37	9.54	77,066
5	34	6.73	25.74	25	6.44	60,139
6	43	8.51	34.26	31	7.99	308,431
7	41	8.12	42.38	33	8.51	146,280
8	31	6.14	48.51	24	6.19	285,104
9	41	8.12	56.63	36	9.28	369,965
10	59	11.68	68.32	39	10.05	556,406
11	36	7.13	75.45	30	7.73	344,851
12	33	6.53	81.98	24	6.19	603,724
13	14	2.77	84.75	9	2.32	339,712
14	14	2.77	87.52	7	1.80	342,061
15	13	2.57	90.10	10	2.58	1,145,190
16	11	2.18	92.28	11	2.84	176,636
17	10	1.98	94.26	10	2.58	271,652
18	5	0.99	95.25	4	1.03	1,071,100
19	1	0.20	95.45	1	0.26	237,000
20	6	1.19	96.63	3	0.77	86,286
>20	17	3.37	100.00	13	3.35	907,053
Total	505	100.00		388	100.00	

**Figure 2. Commercial Vehicle Age Distribution.**



**Figure 3. Cumulative Vehicle Age Distribution.**



The majority of the respondents surveyed listed diesel as the fuel utilized by the vehicle. Diesel accounted for 92.17 percent of the fuel types, followed by unleaded gasoline at 7.63 percent, and one vehicle (0.20%) used leaded gasoline. Nine vehicles did not provide fuel type information.

Single unit 2-axle vehicles comprised 42.80 percent of the sample, with single unit 3-axle vehicles accounting for 26.80 percent of the sample. Twenty vehicles did not provide information relating to the vehicle classification. The distribution of vehicle classification information is provided in Table 3.

**Table 3. Vehicle Classification Distribution.**

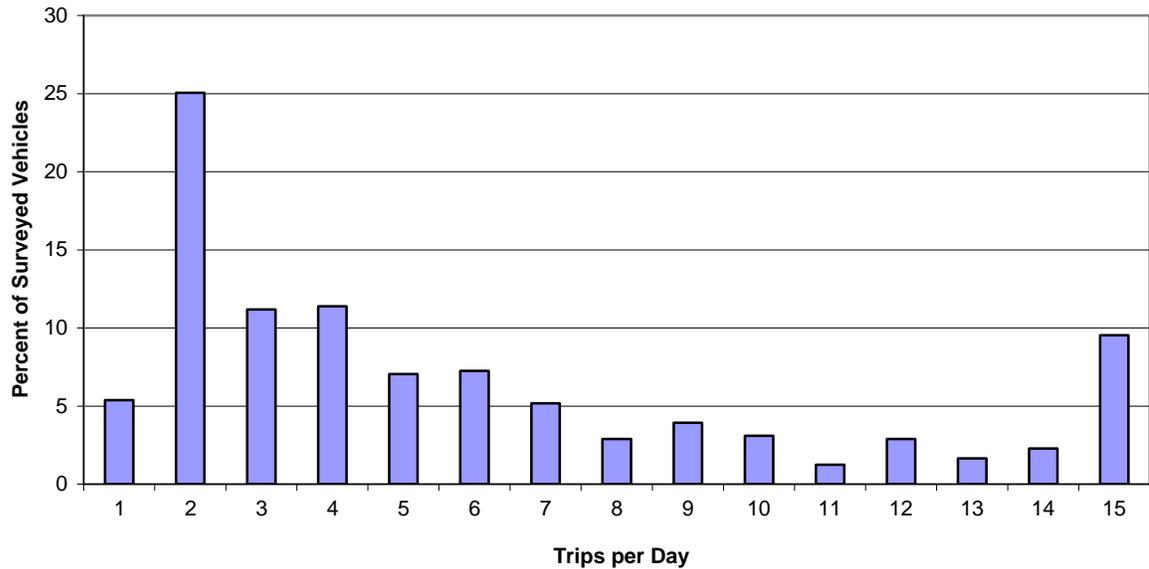
Vehicle Classification	Number of Vehicles	Percent of Total	Cumulative Number	Cumulative Percent
Single Unit 2-axle (6 wheels)	214	42.80	214	42.80
Single Unit 3-axle (10 wheels)	134	26.80	348	69.60
Single Unit 4-axle (14 wheels)	10	2.00	358	71.60
Semi (all tractor-trailer combinations)	131	26.20	489	97.80
Other	11	2.20	500	100.00
Total	500	100.00		

The distribution of the number of trips per day for commercial vehicles is provided in Table 4 and Figure 4. The greatest percentage of vehicles (25.05%) made only two trips and approximately half (53.00%) made four or fewer trips per day. Nearly twenty percent (20.70%) of the vehicles made 10 or more trips per day. Interestingly, 46 vehicles (9.52%) made 15 trips in one day. The average number of trips per day per vehicle was 5.99.

**Table 4. Distribution of Vehicles by Total Number of Trips.**

Number of Trips per Day	Number of Vehicles	Percent of Total	Cumulative Total	Number of Trips per Day	Number of Vehicles	Percent of Total	Cumulative Total
1	26	5.38	5.38	9	19	3.93	79.30
2	121	25.05	30.43	10	15	3.11	82.40
3	54	11.18	41.61	11	6	1.24	83.64
4	55	11.39	53.00	12	14	2.90	86.54
5	34	7.04	60.04	13	8	1.66	88.20
6	35	7.25	67.29	14	11	2.28	90.48
7	25	5.18	72.46	15	46	9.52	100.00
8	14	2.90	75.36	Total	483	100.00	

**Figure 4. Vehicle Trip Count Distribution.**



The number of trips per day by vehicle classification is provided in Table 5. Due to similarities among certain classes of vehicles, the classification groups provided in Table 3 are aggregated into three new groups. For the remainder of the analysis, all of the single unit multi-axle vehicles are aggregated into a “small-medium” classification. Semi/tractor-trailer combinations are listed as the “large” classification, and any vehicles listed as other are categorized as “other”. 69.98 percent of the trips shown in Table 5 were made by vehicles in the small-medium category. Large vehicles accounted for 24.43 percent of the trips and other vehicles amounted to 5.59 percent.

**Table 5. Distribution of Total Number of Trips by Vehicle Classification.**

Number of Trips per Day	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	
1	13	3.85	12	10.17	1	3.70	26
2	88	26.04	27	22.88	6	22.22	121
3	37	10.95	17	14.41	0	0.00	54
4	35	10.36	19	16.10	1	3.70	55
5	27	7.99	4	3.39	3	11.11	34
6	27	7.99	6	5.08	2	7.41	35
7	20	5.92	4	3.39	1	3.70	25
8	7	2.07	6	5.08	1	3.70	14
9	14	4.14	5	4.24	0	0.00	19
10	13	3.85	2	1.69	0	0.00	15
11	4	1.18	2	1.69	0	0.00	6
12	12	3.55	1	0.85	1	3.70	14
13	4	1.18	3	2.54	1	3.70	8
14	7	2.07	3	2.54	1	3.70	11
15	30	8.88	7	5.93	9	33.33	46
Total	338	100.00	118	100.00	27	100.00	483

Trip Purpose and Cargo Characteristics

An analysis of the distribution of trip productions and attractions disaggregated by land use type are provided in Table 6. The largest percentage of trip productions and attractions were to industrial land use type (28.69% and 32.62%, respectively). Industrial, retail, and office building land use types accounted for 60.46 percent of the productions and 71.35 percent of the attractions. The survey instrument provided two educational land use categories (12<sup>th</sup> grade or less and college/trade/etc.), but for the purpose of the analysis, the two categories were combined into one.

**Table 6. Distribution of Trip Productions and Attractions by Land Use Activity.**

Land Use Type	Productions	Percent of Total	Attractions	Percent of Total
Office Building	451	15.99	609	21.60
Retail	445	15.78	483	17.13
Industrial	809	28.69	920	32.62
Medical	11	0.39	11	0.39
Educational	33	1.17	38	1.35
Government	23	0.82	25	0.89
Residential	324	11.49	338	11.99
Other	341	12.09	373	13.23
Refused/Unknown	383	13.58	23	0.82
Total	2820	100.00	2820	100.00

Approximately two-thirds (70.11%) of the trip productions and attractions were for the small-medium vehicle classification. Large vehicles accounted for 21.63 percent of the trip productions and attractions. Table 7 provides the trip productions by land use type and vehicle classification while Table 8 provides the trip attractions for the same categories.

**Table 7. Distribution of Trip Productions by Land Use Type and Vehicle Classification.**

Land Use Type	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	
Office Building	317	16.03	48	7.87	86	36.91	451
Retail	354	17.91	87	14.26	4	1.72	445
Industrial	456	23.07	273	44.75	80	34.33	809
Medical	10	0.51	1	0.16	0	0.00	11
Educational	32	1.62	0	0.00	1	0.43	33
Government	23	1.16	0	0.00	0	0.00	23
Residential	295	14.92	12	1.97	17	7.30	324
Other	234	11.84	98	16.07	9	3.86	341
Refused/Unknown	256	12.95	91	14.92	36	15.45	383
Total	1977	100.00	610	100.00	233	100.00	2820

**Table 8. Distribution of Trip Attractions by Land Use Type and Vehicle Classification.**

Land Use Type	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	
Office Building	431	21.80	81	13.28	97	41.63	609
Retail	387	19.58	91	14.92	5	2.15	483
Industrial	524	26.50	312	51.15	84	36.05	920
Medical	10	0.51	1	0.16	0	0.00	11
Educational	38	1.92	0	0.00	0	0.00	38
Government	25	1.26	0	0.00	0	0.00	25
Residential	305	15.43	15	2.46	18	7.73	338
Other	254	12.85	109	17.87	10	4.29	373
Refused/Unknown	3	0.15	1	0.16	19	8.15	23
Total	1977	100.00	610	100.00	233	100.00	2820

Table 9 summarizes the analysis of trip purposes reported in the survey in terms of the trip origin and destination. The majority of the trip purposes at both the origin and destination were reported as delivery. A more detailed breakdown by vehicle classification is provided in Table 10.

**Table 9. Trip Purpose Origin – Destination Summary.**

Trip Origin Purpose	Trip Destination Purpose								Total
	Base Location/Return to Base	Delivery	Pick-up	Vehicle Maintenance	Driver Needs	To Home	Other	No Response	
Base Location/Return to Base	4	403	108	16	10	0	58	5	604
Delivery	322	1050	170	3	19	3	8	6	1581
Pick-up	84	158	151	3	6	0	14	3	419
Vehicle Maintenance	8	3	4	12	4	1	5	0	37
Driver Needs	16	6	7	3	2	1	5	0	40
To Home	0	0	0	0	0	0	0	0	0
Other	48	21	10	2	5	2	32	0	120
No Response	3	4	0	0	0	0	0	12	19
Total Trips	485	1645	450	39	46	7	122	26	2820

**Table 10. Trip Purpose Origin – Destination Summary by Vehicle Classification.**

<b>Small-Medium Vehicles</b>									
Trip Origin Purpose	Trip Destination Purpose								
	Base Location/ Return to Base	Delivery	Pick-up	Vehicle Maintenance	Driver Needs	To Home	Other	No Response	Total
Base Location/Return to Base	3	291	63	10	9	0	45	4	425
Delivery	235	725	103	3	14	1	5	5	1091
Pick-up	47	98	128	3	2	0	11	2	291
Vehicle Maintenance	7	1	4	12	4	0	3	0	31
Driver Needs	11	4	5	3	0	1	5	0	29
To Home	0	0	0	0	0	0	0	0	0
Other	38	15	5	1	5	2	31	0	97
No Response	3	2	0	0	0	0	0	8	13
<b>Total Trips</b>	<b>344</b>	<b>1136</b>	<b>308</b>	<b>32</b>	<b>34</b>	<b>4</b>	<b>100</b>	<b>19</b>	<b>1977</b>
<b>Large Vehicles</b>									
Trip Origin Purpose	Trip Destination Purpose								
	Base Location/ Return to Base	Delivery	Pick-up	Vehicle Maintenance	Driver Needs	To Home	Other	No Response	Total
Base Location/Return to Base	1	95	40	5	1	0	10	0	152
Delivery	80	195	43	0	4	2	2	1	327
Pick-up	33	35	23	0	4	0	3	0	98
Vehicle Maintenance	0	2	0	0	0	1	1	0	4
Driver Needs	5	2	1	0	2	0	0	0	10
To Home	0	0	0	0	0	0	0	0	0
Other	7	6	4	0	0	0	1	0	18
No Response	0	1	0	0	0	0	0	0	1
<b>Total Trips</b>	<b>126</b>	<b>336</b>	<b>111</b>	<b>5</b>	<b>11</b>	<b>3</b>	<b>17</b>	<b>1</b>	<b>610</b>

**Table 10. Trip Purpose Origin – Destination Summary by Vehicle Classification (cont.).**

Other Vehicles									
Trip Origin Purpose	Trip Destination Purpose								
	Base Location/Return to Base	Delivery	Pick-up	Vehicle Maintenance	Driver Needs	To Home	Other	No Response	Total
Base Location/Return to Base	0	17	5	1	0	0	3	1	27
Delivery	7	130	24	0	1	0	1	0	163
Pick-up	4	25	0	0	0	0	0	1	30
Vehicle Maintenance	1	0	0	0	0	0	1	0	2
Driver Needs	0	0	1	0	0	0	0	0	1
To Home	0	0	0	0	0	0	0	0	0
Other	3	0	1	1	0	0	0	0	5
No Response	0	1	0	0	0	0	0	4	5
Total Trips	15	173	31	2	1	0	5	6	233

Drivers of commercial vehicles were asked to provide the type of cargo being delivered or picked up at each stop. The results of the responses are provided in Table 11. Miscellaneous shipments accounted for approximately twenty percent of cargo types at both the origin and destination (20.57% and 19.01%, respectively). Respondents reported not carrying any cargo at 8.11 percent of the origins and 7.34 percent of the destinations. The total for cargo types at the origin is less than the total at the destination due to respondents not entering a cargo type for the origin of the first listed trip of the day.

**Table 11. Distribution of Cargo Types by Origin and Destination.**

Cargo Description		Surveyed Cargo at Origin	Percent of Total	Surveyed Cargo at Destination	Percent of Total
1	— Farm Products	6	0.25	6	0.21
2	— Forest Products	16	0.68	16	0.57
3	— Marine Products	0	0.00	1	0.04
4	— Metals and Minerals	68	2.87	81	2.87
5	— Food, Health, and Beauty Products	271	11.44	285	10.11
6	— Tobacco Products	1	0.04	1	0.04
7	— Textiles	59	2.49	61	2.16
8	— Wood Products	79	3.34	82	2.91
9	— Printer Matter	16	0.68	17	0.60
10	— Chemical Products	12	0.51	14	0.50
11	— Refined Petroleum or Coal Products	22	0.93	24	0.85
12	— Rubber, Plastic, and Styrofoam Products	49	2.07	51	1.81
13	— Clay, Concrete, Glass, or Stone	149	6.29	161	5.71
14	— Manufactured Goods/Equipment	159	6.71	175	6.21
15	— Wastes	164	6.93	174	6.17
16	— Miscellaneous Shipments	487	20.57	536	19.01
17	— Hazardous Materials	20	0.84	20	0.71
18	— Unclassified Cargo	33	1.39	37	1.31
19	— Driver Refused to Answer	131	5.53	145	5.14
20	— Unknown to Driver	111	4.69	166	5.89
21	— Empty	192	8.11	207	7.34
22	— Other	323	13.64	560	19.86
Total		2368	100.00	2820	100.00

### Survey Trip Length Characteristics

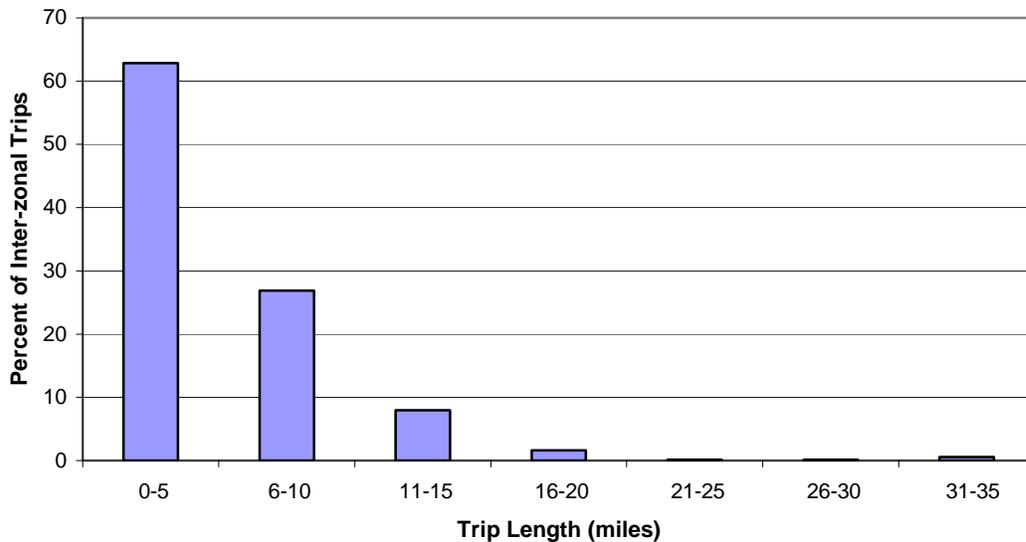
As part of the survey, respondents were asked to provide odometer readings at the beginning and end of each trip. This data can be useful in estimating the trip lengths of external and intra-zonal trips. Reported trip lengths for inter-zonal trips can also be compared with trips lengths provided in network travel time and distance matrices. However, when reviewing the completed data set a high number of inconsistent and inaccurate odometer values were observed. In an effort to not compromise the integrity of the analysis, reported odometer values were not used in the analysis of trip length measurements. As a result, trip length frequency distribution results are based on network travel time and distance matrices and contain information on only local (inter-zonal) trips. The results of this analysis are provided in Table 12 and in Figure 5. The majority of the

trips (62.87%) were less than five miles in length. Approximately one-tenth of the trips (10.28%) were longer than ten miles. The average trip length for all trips was 5.58 miles.

**Table 12. Trip Length Frequency Distribution for Local Trips (grouped intervals).**

Trip Length (miles)	Number of Trips	Percent of Trips
0-5	1529	62.87
6-10	653	26.85
11-15	193	7.94
16-20	39	1.60
21-25	2	0.08
26-30	2	0.08
31-35	14	0.58
Total	2432	100.00

**Figure 5. Trip Length Frequency Distribution for Local Trips (grouped intervals).**



In order to provide a more detailed summary, Table 13 provides the grouped interval trip length frequency distribution by vehicle classification. Additionally, trip length frequency distribution information is also provided in an ungrouped format in Table 14 and Figure 6.

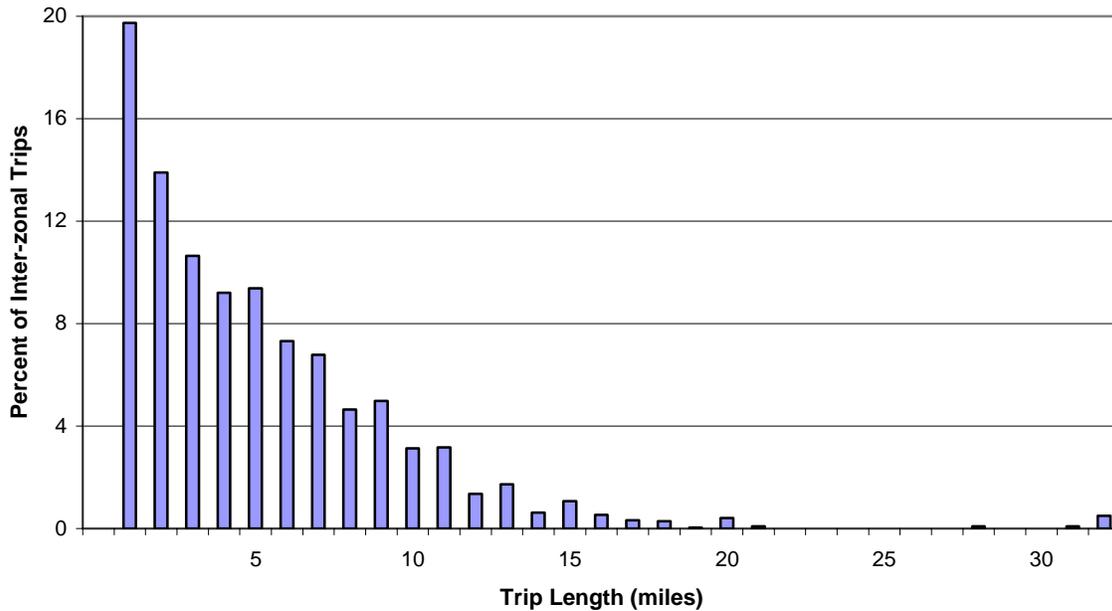
**Table 13. Trip Length Frequency Distribution by Vehicle Classification for Local Trips.**

Trip Length (miles)	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	
0-5	1111	64.37	276	54.33	142	71.72	1529
6-10	454	26.30	156	30.71	43	21.72	653
11-15	121	7.01	63	12.40	9	4.55	193
16-20	24	1.39	13	2.56	2	1.01	39
21-25	2	0.12	0	0.00	0	0.00	2
26-30	2	0.12	0	0.00	0	0.00	2
31-35	12	0.70	0	0.00	2	1.01	14
Total	1726	100.00	508	100.00	198	100.00	2432

**Table 14. Ungrouped Trip Length Frequency Distribution for Local Trips.**

Trip Length (miles)	Number of Trips	Percent of Trips	Trip Length (miles)	Number of Trips	Percent of Trips
1	480	19.74	17	8	0.33
2	338	13.90	18	7	0.29
3	259	10.65	19	1	0.04
4	224	9.21	20	10	0.41
5	228	9.38	21	2	0.08
6	178	7.32	22	0	0.00
7	165	6.78	23	0	0.00
8	113	4.65	24	0	0.00
9	121	4.98	25	0	0.00
10	76	3.13	26	0	0.00
11	77	3.17	27	0	0.00
12	33	1.36	28	2	0.08
13	42	1.73	29	0	0.00
14	15	0.62	30	0	0.00
15	26	1.07	31	2	0.08
16	13	0.53	32	12	0.49
			Total	2432	100.00

**Figure 6. Ungrouped Trip Length Frequency Distribution for Local Trips.**



Mean trip lengths for internal trips by land use type at the destination are presented in Table 15. The table also provides the mean trip lengths by vehicle classification. Internal (local) trip lengths are typically relatively small, and in Laredo the overall average was 5.58 miles. The averages ranged from 3.34 miles for government land uses to 6.68 miles for industrial land use destinations. The shortest and longest mean trip length for land use types was more varied when the data were disaggregated by vehicle classification. For example, in the “small-medium” classification, the shortest mean trip length was for the retail land use type (3.19 miles) and the longest mean trip length was 12.19 miles for the “refused/unknown” category.

**Table 15. Mean Trip Length for Local Trips.**

Land Use Type	Overall Mean Trip Length (miles)	Mean Trip Length (miles)		
		Small-Medium Vehicles	Large Vehicles	Other Vehicles
Office Building	5.74	5.51	7.88	4.87
Retail	3.42	3.19	4.29	4.07
Industrial	6.68	6.59	7.20	5.58
Medical	5.11	5.11	—	—
Educational	5.30	5.30	—	—
Government	3.34	3.34	—	—
Residential	4.93	5.02	5.93	2.29
Other	6.49	6.74	5.48	9.68
Refused/Unknown	3.77	12.19	—	2.65
Average	5.58	5.38	6.47	5.03

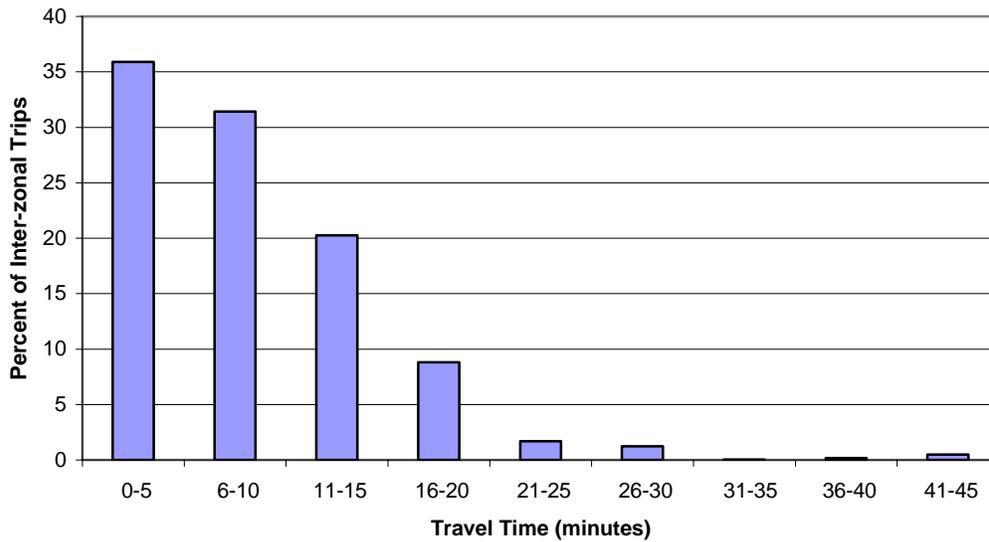
### Survey Travel Time and Speed Characteristics

Survey respondents were also asked to provide arrival and departure times for each logged trip on the survey day. Since external and intra-zonal travel time data is not provided in network travel time and distance matrices, reported travel times can provide information useful in estimating travel times for these types of trips. Additionally, reported travel times for inter-zonal trips can be compared to travel times provided in network travel time and distance matrices. However, much like the reported trip length information, reported travel time data in Laredo was found to be illogical and inaccurate. For instance, there were numerous occasions where a trip would be reported to arrive at the next location before it left the previous location. Additionally, it was observed that the time information provided for arrivals and departures was almost always rounded off. Most often the times were rounded off to either 15 or 30 minute increments. As a result, reported travel time information was not utilized in the analysis of travel time characteristics. All travel time results are for inter-zonal trips and are based on network travel time matrices. The results of this analysis are provided in Table 16 and Figure 7. The largest percentage of trips (35.90%) was less than five minutes. Trips less than ten minutes accounted for 67.31 percent of all trips. Only 3.62 percent of the trips were longer than twenty minutes.

**Table 16. Travel Time Frequency Distribution for Local Trips (grouped intervals).**

Travel Time (minutes)	Number of Trips	Percent of Trips
0-5	873	35.90
6-10	764	31.41
11-15	493	20.27
16-20	214	8.80
21-25	41	1.69
26-30	30	1.23
31-35	1	0.04
36-40	4	0.16
41-45	12	0.49
Total	2432	100.00

**Figure 7. Travel Time Frequency Distribution for Local Trips (grouped intervals).**



In order to provide a more detailed analysis, Table 17 provides the grouped interval travel time frequency distribution by vehicle classification. Additionally, travel time frequency distribution information is also provided in an ungrouped format in Table 18 and Figure 8.

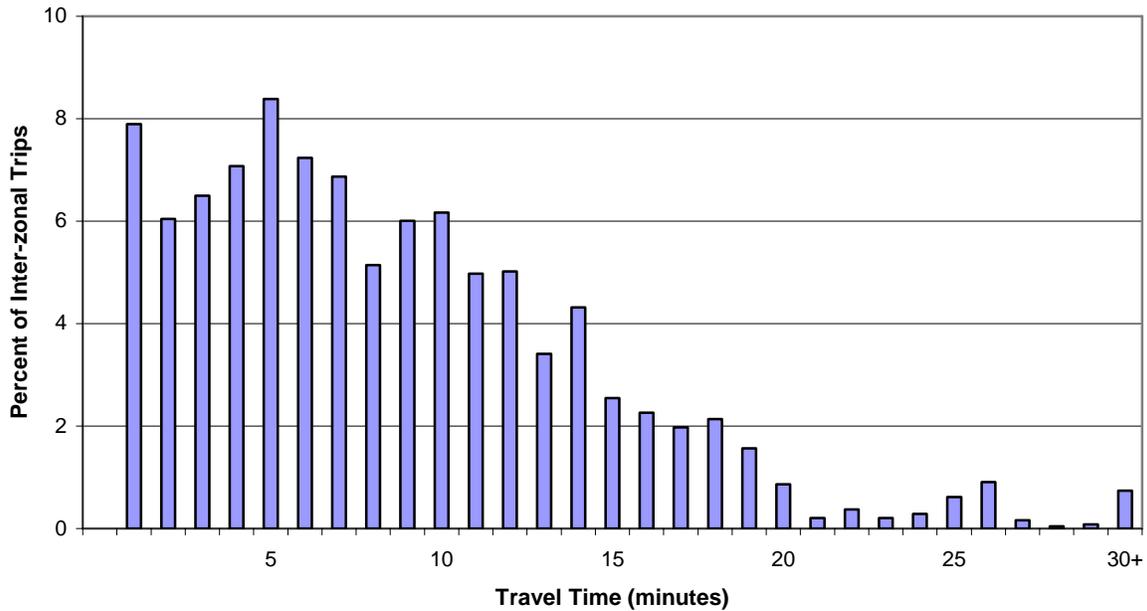
**Table 17. Travel Time Frequency Distribution by Vehicle Classification for Local Trips.**

Travel Time (minutes)	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	
0-5	665	38.53	130	25.59	78	39.39	873
6-10	504	29.20	189	37.20	71	35.86	764
11-15	356	20.63	106	20.87	31	15.66	493
16-20	142	8.23	63	12.40	9	4.55	214
21-25	25	1.45	14	2.76	2	1.01	41
26-30	19	1.10	6	1.18	5	2.53	30
31-35	1	0.06	0	0.00	0	0.00	1
36-40	2	0.12	0	0.00	2	1.01	4
41-45	12	0.70	0	0.00	0	0.00	12
Total	1726	100.00	508	100.00	198	100.00	2432

**Table 18. Ungrouped Travel Time Frequency Distribution for Local Trips.**

Travel Time (minutes)	Number of Trips	Percent of Trips	Travel Time (minutes)	Number of Trips	Percent of Trips
1	192	7.89	16	55	2.26
2	147	6.04	17	48	1.97
3	158	6.50	18	52	2.14
4	172	7.07	19	38	1.56
5	204	8.39	20	21	0.86
6	176	7.24	21	5	0.21
7	167	6.87	22	9	0.37
8	125	5.14	23	5	0.21
9	146	6.00	24	7	0.29
10	150	6.17	25	15	0.62
11	121	4.98	26	22	0.90
12	122	5.02	27	4	0.16
13	83	3.41	28	1	0.04
14	105	4.32	29	2	0.08
15	62	2.55	30+	18	0.74
			Total	2432	100.00

**Figure 8. Ungrouped Travel Time Frequency Distribution for Local Trips.**



Mean travel times for local trips by land use type at the destination are provided in Table 19. The table also provides the mean travel times by vehicle classification. As with trip lengths, the minimum and maximum values were observed in the government and industrial land use types (6.07 minutes and 10.63 minutes, respectively).

**Table 19. Mean Travel Times for Local Trips.**

Land Use Type	Overall Mean Travel Time (minutes)	Mean Travel Time (minutes)		
		Small-Medium Vehicles	Large Vehicles	Other Vehicles
Office Building	9.41	9.11	12.35	8.15
Retail	6.13	5.79	7.39	7.51
Industrial	10.63	10.61	10.96	9.71
Medical	9.10	9.10	—	—
Educational	8.76	8.76	—	—
Government	6.07	6.07	—	—
Residential	8.73	8.89	10.18	4.50
Other	10.39	10.69	8.97	15.91
Refused/Unknown	6.57	17.93	—	5.06
Average	9.20	10.18	10.18	8.67

In Laredo, the overall mean travel time was 9.20 minutes and the overall average speed for local trips was 34.19 mph. Mean travel speeds for local trips by land use at the destination are provided in Table 20. The table also provides the travel speeds for each land use type by vehicle classification. Government land use types had the lowest average travel speed (30.81 mph) and industrial land use types had the highest average travel speed (35.73 mph).

**Table 20. Mean Travel Speed for Local Trips.**

Land Use Type	Overall Mean Speed (miles per hour)	Mean Speed (miles per hour)		
		Small-Medium Vehicles	Large Vehicles	Other Vehicles
Office Building	34.70	34.61	37.41	32.48
Retail	31.13	30.72	32.73	31.76
Industrial	35.73	34.98	37.92	33.19
Medical	32.60	32.60	—	—
Educational	35.42	35.42	—	—
Government	30.81	30.81	—	—
Residential	33.06	33.22	34.42	29.00
Other	35.13	35.17	34.90	36.02
Refused/Unknown	31.90	40.42	—	30.77
Average	34.19	33.74	36.36	32.55

Given the geographic size of the study area, mean trip length, travel time, and speed values seem reasonable. However, until better methods are available to provide more accurate reported odometer readings and arrival and departure times, there is a limited ability to compare the difference between observed values and transportation network travel time and distance matrices. Additionally, external and intra-zonal trip lengths and travel times can not be determined.

### Trip Tour Characteristics

In an effort to ascertain the amount of circuitous travel performed by commercial vehicles, analyses of trip tours were conducted. Trip tours may be defined as a combination (or chaining) of trips in which a surveyed vehicle leaves and returns to a common point, typically the vehicle's

base location. In order to accurately analyze trip tour information, external trips had to be added back into the analysis. As a result, there are a total of 3137 trips recorded. This was done since it is possible for trip tours to begin within the study area, travel outside of the study area, and return back during the one-day survey period. Therefore, to exclude external trip data would significantly reduce the accuracy of trip tour analyses.

For each trip recorded, information was provided on whether or not the trip origin location was the vehicle’s base location. This served as the basis for determining if the trip was a base trip or non-base trip. For a trip to be a base trip, either the origin or destination of the trip had to be at the base location. If neither trip end was at the base location, then the trip was a non-base trip. In Laredo, there were a total of 1,508 base trips (48.07%) and 1,629 non-base trips (51.93%). Table 21 provides a breakdown of base and non-base trip by vehicle classification.

**Table 21. Base vs. Non-Base Trips by Functional Classification.**

Trip Type	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Trips	Percent of Total	Number of Trips	Percent of Total	Number of Trips	Percent of Total	
Base	1002	46.56	408	56.04	98	38.13	1508
Non-Base	1150	53.44	320	43.96	159	61.87	1629
Total	2152	100.00	728	100.00	257	100.00	3137

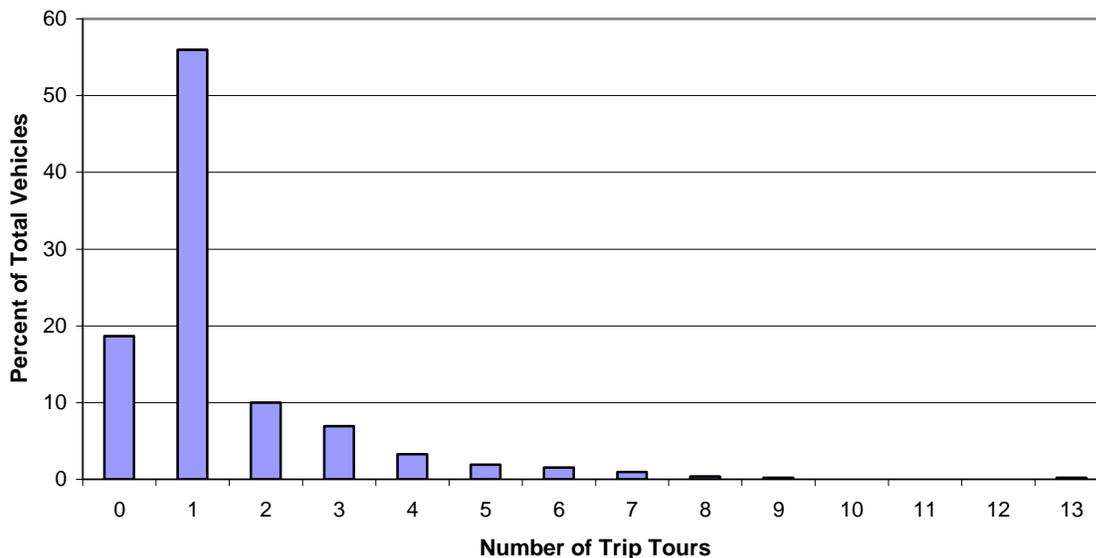
The sequence of trips provided by survey respondents was analyzed in order to determine the total number of trip tours that were made on the survey day as well as ascertain the number and type of trips made during each respective trip tour. The 520 commercial vehicles included in the analysis reported making 742 trip tours. A breakdown of the number and percent of tours performed per vehicle is provided in Table 22 and in Figure 9. A detailed breakdown by vehicle classification is provided in Table 23. The majority of the vehicles (55.96%) made only one trip tour on the survey day. Over ninety percent (91.54%) made three or less trip tours on the survey day. Ninety-seven vehicles reported making no trip tours and one vehicle reported making thirteen tours. The average number of tours per vehicle was 1.43. Additionally, there were 112 instances where a vehicle reported leaving a base location and it did not return to the base on the survey day. Reasons for this include a trip tour that involved traveling out of the study area and

not returning until the next day, or instances when the vehicle operator took the vehicle to the person's residence at the end of the day.

**Table 22. Number and Percent of Trips Tours per Vehicle.**

Number of Trip Tours	Number of Vehicles	Percent of Total	Cumulative Number	Cumulative Percent	Total Number of Tours
0	97	18.65	97	18.65	0
1	291	55.96	388	74.62	291
2	52	10.00	440	84.62	104
3	36	6.92	476	91.54	108
4	17	3.27	493	94.81	68
5	10	1.92	503	96.73	50
6	8	1.54	511	98.27	48
7	5	0.96	516	99.23	35
8	2	0.38	518	99.62	16
9	1	0.19	519	99.81	9
10	0	0.00	519	99.81	0
11	0	0.00	519	99.81	0
12	0	0.00	519	99.81	0
13	1	0.19	520	100.00	13
Total	520	100.00			742

**Figure 9. Number and Percent of Trip Tours per Vehicle.**



**Table 23. Number and Percent of Trips Tours per Vehicle by Vehicle Classification.**

Number of Trip Tours	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	Number of Vehicles	Percent of Total	
0	73	20.39	13	9.92	11	35.48	97
1	202	56.42	78	59.54	11	35.48	291
2	31	8.66	18	13.74	3	9.68	52
3	25	6.98	9	6.87	2	6.45	36
4	10	2.79	6	4.58	1	3.23	17
5	8	2.23	2	1.53	0	0.00	10
6	5	1.40	1	0.76	2	6.45	8
7	2	0.56	2	1.53	1	3.23	5
8	2	0.56	0	0.00	0	0.00	2
9	0	0.00	1	0.76	0	0.00	1
10	0	0.00	0	0.00	0	0.00	0
11	0	0.00	0	0.00	0	0.00	0
12	0	0.00	0	0.00	0	0.00	0
13	0	0.00	1	0.76	0	0.00	1
Total	358	100.00	131	100.00	31	100.00	520

Knowing the number of trip tours that were made is useful, but it does not reveal the total amount and type of travel that occurred during the course of the tour. Therefore, the analysis also ascertained the number and type of trips that were made in the trip tours. The review of trip tour data was divided into three components; the number of non-base trips within trip tours, the number of external trips within trip tours, and the number of internal trips within trip tours. The analysis provides the frequency that a particular vehicle made a specific number of trip types (i.e. non-base, external, and internal). In Table 24, the number of non-base trips that occurred within trip tours is provided. As shown in the table, there were 88 trip tours (11.86%) that had one non-base trip and 654 tours (88.14%) that had two non-base trips. The number of non-base trips within trip tours by vehicle classification is provided in Table 25.

**Table 24. Number and Percent of Non-Base Trips Within Trip Tours.**

Number of Trips	Frequency	Percent of Total	Cumulative Number	Cumulative Percent
0	0	0.00	0	0.00
1	88	11.86	88	11.86
2	654	88.14	742	100.00
Total	742	100.00		

**Table 25. Number and Percent of Non-Base Trips Within Trip Tours by Vehicle Classification.**

Number of Trips	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Frequency	Percent of Total	Frequency	Percent of Total	Frequency	Percent of Total	
0	0	0.00	0	0.00	0	0.00	0
1	36	7.52	46	21.20	6	13.04	88
2	443	92.48	171	78.80	40	86.96	654
Total	479	100.00	217	100.00	46	100.00	742

The number and percent of external trips within trip tours is provided in Table 26, while Table 27 provides the information by vehicle classification. The majority of trip tours (82.08%) did not have any external trips. Two external trips within a tour was the second most common occurrence (12.94%). This is logical since each trip leaving the study area needs to have a trip returning to the study area in order to make a completed tour possible. However, there were sixteen instances (2.16%) that recorded only one external trip. This appears to be an illogical event.

**Table 26. Number and Percent of External Trips Within Trip Tours.**

Number of Trips	Frequency	Percent of Total	Cumulative Number	Cumulative Percent
0	609	82.08	609	82.08
1	16	2.16	625	84.23
2	96	12.94	721	97.17
3	10	1.35	731	98.52
4	6	0.81	737	99.33
5	3	0.40	740	99.73
6	2	0.27	742	100.00
Total	742	100.00		

**Table 27. Number and Percent of External Trips Within Trip Tours by Vehicle Classification.**

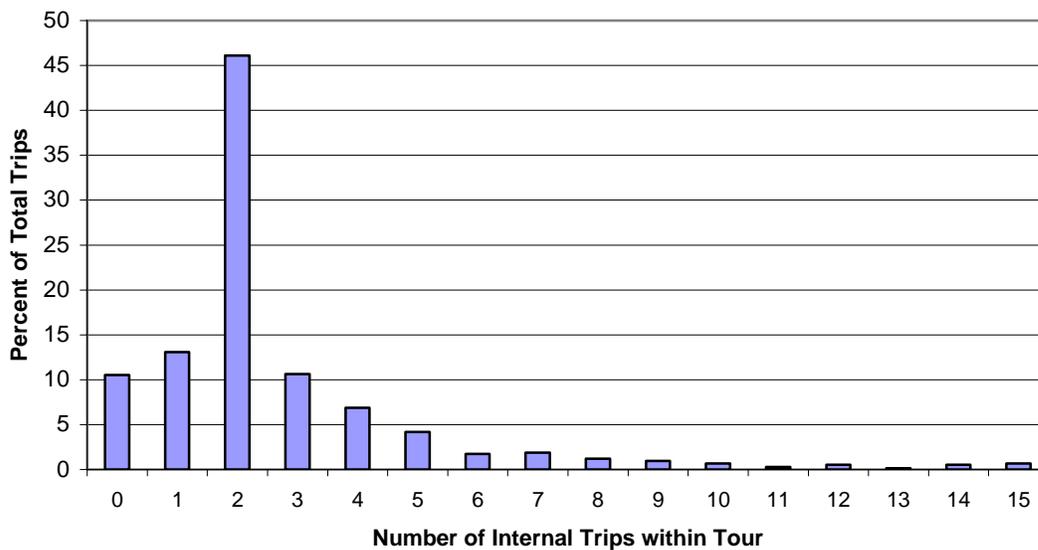
Number of Trips	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Frequency	Percent of Total	Frequency	Percent of Total	Frequency	Percent of Total	
0	405	84.55	171	78.80	33	71.74	609
1	9	1.88	3	1.38	4	8.70	16
2	57	11.90	31	14.29	8	17.39	96
3	5	1.04	5	2.30	0	0.00	10
4	1	0.21	4	1.84	1	2.17	6
5	1	0.21	2	0.92	0	0.00	3
6	1	0.21	1	0.46	0	0.00	2
Total	479	100.00	217	100.00	46	100.00	742

The number and percent of internal trips within trip tours is provided in Table 28 and Figure 10. The largest percentage of trip tours (46.09%) had two internal trips. One internal trip within a tour was the second most common occurrence (13.07%). Over ninety percent (91.37%) had five or less internal trips within their respective trip tours. Twenty-one of the trip tours (2.83%) had ten or more internal trips.

**Table 28. Number and Percent of Internal Trips Within Trip Tours.**

Number of Trips	Frequency	Percent of Total	Cumulative Number	Cumulative Percent
0	78	10.51	78	10.51
1	97	13.07	175	23.58
2	342	46.09	517	69.68
3	79	10.65	596	80.32
4	51	6.87	647	87.20
5	31	4.18	678	91.37
6	13	1.75	691	93.13
7	14	1.89	705	95.01
8	9	1.21	714	96.23
9	7	0.94	721	97.17
10	5	0.67	726	97.84
11	2	0.27	728	98.11
12	4	0.54	732	98.65
13	1	0.13	733	98.79
14	4	0.54	737	99.33
15	5	0.67	742	100.00
Total	742	100.00		

**Figure 10. Number and Percent of Internal Trips Within Trip Tours.**

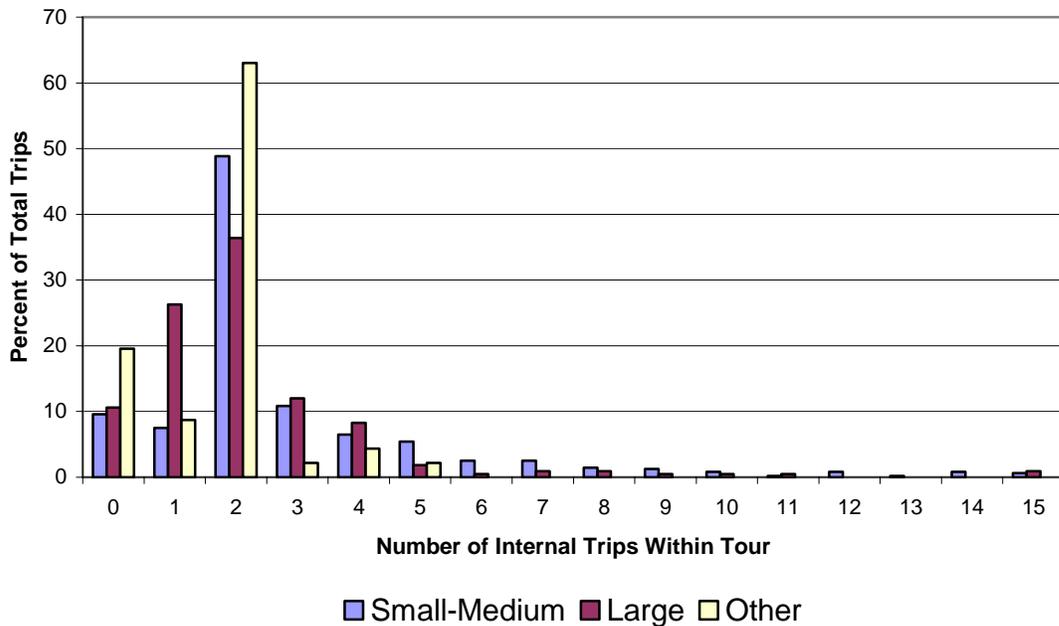


The number and percent of internal trips within trip tours are disaggregated by vehicle classification and are provided in Table 29 and Figure 11.

**Table 29. Number and Percent of Internal Trips Within Trip Tours by Vehicle Classification.**

Number of Trips	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Frequency	Percent of Total	Frequency	Percent of Total	Frequency	Percent of Total	
0	46	9.60	23	10.60	9	19.57	78
1	36	7.52	57	26.27	4	8.70	97
2	234	48.85	79	36.41	29	63.04	342
3	52	10.86	26	11.98	1	2.17	79
4	31	6.47	18	8.29	2	4.35	51
5	26	5.43	4	1.84	1	2.17	31
6	12	2.51	1	0.46	0	0.00	13
7	12	2.51	2	0.92	0	0.00	14
8	7	1.46	2	0.92	0	0.00	9
9	6	1.25	1	0.46	0	0.00	7
10	4	0.84	1	0.46	0	0.00	5
11	1	0.21	1	0.46	0	0.00	2
12	4	0.84	0	0.00	0	0.00	4
13	1	0.21	0	0.00	0	0.00	1
14	4	0.84	0	0.00	0	0.00	4
15	3	0.63	2	0.92	0	0.00	5
Total	479	100.00	217	100.00	46	100.00	742

**Figure 11. Number and Percent of Internal Trips Within Trip Tours by Vehicle Classification.**



**SURVEY EXPANSION**

Expansion of the commercial vehicle survey data was performed in an indirect manner. Typically, an estimate of the population being sampled is known and the survey data are expanded to represent that population. However, the population of commercial vehicles operating in the LUTS area is unknown. Vehicle registration was not considered a viable basis for estimation purposes due to the proximity of the study area to Mexico. Additionally, vehicles registered in counties outside of Webb County may be operating within the study area.

The methodology utilized for expanding the survey data was vehicle miles of travel estimates from the Highway Performance Monitoring System (HPMS) combined with vehicle classification counts by functional classification. Essentially, an estimate of the commercial vehicle miles of travel is developed from the HPMS data and is then used to expand the vehicle miles of travel observed from sampled commercial vehicles.

HPMS data contains annual average daily traffic (AADT) estimates of the total vehicle miles of travel by functionally classified facilities. Since AADT includes weekend traffic, a correction

factor was applied to the data in order to obtain average week day volumes. Then the data were grouped into four categories (freeway, arterial, collector, and local). Vehicle classification counts were performed throughout the LUTS area in 2002. 24-hour vehicle classification counts were performed at a total of 99 randomly selected locations. This data provided an estimate of the percentage of vehicles operating on each of the four functionally classified categories being used in the analysis. Table 30 provides the percent of commercial and non-commercial vehicles by functional classification as determined with the counts performed in 2002.

The percentage of commercial vehicles on freeways is unusually high. In Laredo, Interstate 35 is the only freeway facility, and a total of six locations were selected to be counted during the vehicle classification counts performed in 2002. However, only two of the counts were able to be completed. As a result, the percent of commercial vehicles for these two locations were checked against the percentage distribution of commercial vehicles for the external station survey and found to be consistent. Therefore, it was assumed that the percentage of commercial vehicles operating on freeways (51.12%) was reasonable.

**Table 30. Vehicle Classification Counts by Functional Classification.**

Functional Classification	Percentage of Commercial Vehicles	Percentage of Non-Commercial Vehicles
Freeway	51.12	48.88
Arterial	15.29	84.71
Collector	9.29	90.71
Local	7.35	92.65

An assumption is made that the amount of vehicle miles of travel on each facility by functional classification is equivalent to the percentage of vehicles counted on that facility. For example, since 15.29 percent of the vehicles counted on arterials were commercial vehicles, it is assumed that 15.29 percent of the vehicle miles of travel on arterials is being made by commercial vehicles. The estimate of commercial vehicle miles of travel within the study area may be developed by multiplying the percentages provided in Table 30 with the 2002 HPMS vehicle miles of travel estimates which are provided in Table 31.

**Table 31. 2002 HPMS Estimates of Week Day Vehicle Miles of Travel.**

Functional Classification	Week Day Vehicle Miles of Travel
Freeway	731,235
Arterial	1,819,465
Collector	448,046
Local	547,963
Total	3,546,708

An adjustment must be made to these estimates in order to account for intra-zonal and external travel. The HPMS data includes all vehicle miles of travel. However, data from the commercial vehicle survey approximates vehicle miles of travel based on zone to zone distances as measured from the transportation network travel time and distance matrices used for travel demand modeling. Intra-zonal trips in the survey do not have an estimate of vehicle miles of travel because the travel distance associated with these trips via the transportation network is not known. The amount of vehicle miles of travel associated with intra-zonal commercial vehicle trips is not known, and it is assumed to be a relatively small amount. Therefore, for the purpose of this analysis, the vehicle miles of travel attributed to intra-zonal commercial vehicle trips is not removed from the HPMS totals.

However, vehicle miles of travel attributable to external commercial vehicles was removed in order to provide a more accurate estimate of vehicle miles of travel within the study area. In order to ascertain the estimated vehicle miles of travel for external commercial vehicles, the average trip length for external commercial vehicles was multiplied by the total number of commercial vehicles recorded at external stations in the LUTS area. Using this methodology, it was estimated that there were 436,209 vehicle miles of travel attributed to external commercial vehicles.

The percentages of commercial vehicles provided in Table 30 were multiplied by the vehicle miles of travel by functional classification. The result is the estimated total week day commercial vehicle miles of travel by functional classification. This information is provided in Table 32. The internal commercial vehicle miles of travel is estimated by subtracting the external related

commercial vehicle miles of travel of 436,209 from the total estimate of commercial vehicle miles of travel of 733,901. The result is 297,692.

**Table 32. Estimates of Commercial Vehicle Miles of Travel.**

Functional Classification	Percentage of Commercial Vehicles	HPMS Vehicle Miles of Travel	Estimated Commercial Vehicle Miles of Travel
Freeway	51.12	731,235	373,807
Arterial	15.29	1,819,465	278,196
Collector	9.29	448,046	41,635
Local	7.35	547,963	40,271
	Total	3,367,170	733,901

The next step is the computation of the survey expansion factor. The commercial vehicle survey had a total of 520 respondents with useable data. There was a total of 3,137 total trips recorded, of which 2,820 (89.89%) were internal. Of the internal trips, 2,432 (86.24%) were inter-zonal and 388 (13.76%) were intra-zonal. The amount of commercial vehicle miles of travel for surveyed vehicles was determined by summing the distance between all inter-zonal trip ends. Using lengths provided in the transportation network travel distance matrix, a total of 13,573 vehicle miles were attributed to surveyed commercial vehicles. The resulting average vehicle miles traveled per trip was 5.58 miles. To obtain the survey expansion factor, the population vehicle miles of travel (297,692) is divided by the survey vehicle miles of travel (13,573). The resulting expansion factor is 21.93.

The expansion factor is then applied to the total number of inter-zonal commercial vehicle trips (2432) to yield a total of 53,334 daily inter-zonal commercial vehicle trips in the LUTS area. The expansion factor is assumed to be reasonable for intra-zonal trips also. With nearly fourteen percent (13.76%) of the trips being intra-zonal, a total of 8,509 commercial trips in the study area are estimated to be intra-zonal. The inter-zonal and intra-zonal trips combined amounts to 61,843. Since the average number of trips per commercial vehicle in the LUTS area is 5.99, the resulting average number of commercial vehicles operating within the study area on an average week day is 10,324.

## **SURVEY SUMMARY**

The 2003 Laredo Commercial Vehicle Survey for the LUTS area provides information relative to the operating characteristics of commercial vehicles. Through the analysis of 520 commercial vehicles that participated in the survey, estimates of the total amount of commercial vehicles operating in the study area were developed. Survey data was combined with HPMS data to estimate that 297,692 internal vehicle miles of travel can be attributed to commercial vehicles on a daily basis. Additionally, the expansion of the survey data also provides an estimate of 10,324 commercial vehicles operating within the LUTS area each day.

In addition to providing expanded results related to vehicle miles of travel and number of commercial vehicles operating in the area, the survey provided valuable insight into the composition of the fleet, types of trips being made, and cargo related information. The average vehicle age was 9.04 years and the average reported odometer reading was 325,477. A majority of the trips (51.93%) were non-base trips, over half the vehicles (53.00%) made four or fewer trips per day, and 55.96 percent of the vehicles made only one trip tour on the survey day. Additionally, the average trip length was 5.58 miles and the average travel time per trip was 9.20 minutes.

While the information provided in this analysis summarizes responses from portion of the commercial vehicles operating within the study area, it is possible to presume that the results can be viewed as representative of the commercial fleet as a whole. However, due to unique characteristics of the LUTS area, the survey results are not applicable to other study areas. Each urbanized area needs to have an individual analysis conducted in order to ascertain the amount and characteristics of commercial vehicles in that area.

## **APPENDIX**



Record Type 20

(Example Only)

**COMMERCIAL VEHICLE SURVEY  
PART 1: VEHICLE INFORMATION**

(If you have participated in prior surveys, please fill out this form anyway.)

Vehicle ID#: \_\_\_\_\_

Vehicle License # : \_\_\_\_\_

Survey Location (zone): \_\_\_\_\_

SIC Code: \_\_\_\_\_

Travel Day: \_\_\_\_\_  
Month / Day

Company or Name of Owner (name on registration):  
\_\_\_\_\_

Address of location where vehicle was based at beginning of travel day:  
\_\_\_\_\_

(Street Address or Nearest Intersection)

City

State

ZIP

Vehicle Make: \_\_\_\_\_

Vehicle Model: \_\_\_\_\_

Vehicle Year: \_\_\_\_\_

Vehicle Fuel Type: 1)  Leaded Gas 2)  Unleaded Gas 3)  Diesel 4)  Propane

5)  Other \_\_\_\_\_(Specify)

Vehicle Classification: 1)  Single Unit 2-axle (6 wheels)  
2)  Single Unit 3-axle (10 wheels)  
3)  Single Unit 4-axle (14 wheels)  
4)  Semi (all Tractor-Trailer combinations)  
5)  Other \_\_\_\_\_

Gross Vehicle Weight: \_\_\_\_\_ pounds

Beginning Odometer Reading: \_\_\_\_\_

(Example Only)  
**COMMERCIAL VEHICLE SURVEY**  
**PART 2: TRIP INFORMATION**

VEHICLE LICENSE #: \_\_\_\_\_  
 BEGINNING ODOMETER READING: \_\_\_\_\_

**BEGIN:** MY FIRST TRIP TODAY BEGAN AT:  (1) Base Location     (6) Home     (7) Other Location    PLEASE ENTER YOUR :

TRAVEL DAY \_\_\_\_\_  
 Month / Day

\_\_\_\_\_  
 (Fill in address)

DEPARTURE TIME: \_\_\_\_\_ am  
 \_\_\_\_\_ pm

\_\_\_\_\_  
 (Place/address or nearest intersection, city, county, state, zip code)

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Stop (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>1</b>  <b>FIRST I WENT TO:</b>	Name of Place _____	Arrive _____:_____	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify)  <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark _____ City/County/State/Zip _____ If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name) Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No Odometer reading _____	a.m. p.m. Depart ____:_____ a.m. p.m.				

**We are collecting 'complete' information on all travel during the day. Please include ANY and ALL stops including lunch, restroom, convenient store, rest stops, etc. Please be sure to mark the 'OTHER' box under 'Purpose of Stop' and specify in the space provided. We appreciate your cooperation.**

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Stop (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>2</b>  <b>THEN I WENT TO:</b>	Name of Place	Arrive ____:____	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark	a.m.  p.m.				
	City/County/State/Zip	Depart ____:____				
	If location written above is not Webb county, which road did you use to leave the county area?	a.m.  p.m.				
	(Road name)					
	Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No					
	Odometer reading					
<b>3</b>  <b>THEN I WENT TO:</b>	Name of Place	Arrive ____:____	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark	a.m.  p.m.				
	City/County/State/Zip	Depart ____:____				
	If location written above is not Webb county, which road did you use to leave the county area?	a.m.  p.m.				
	(Road name)					
	Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No					
	Odometer reading					

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Stop (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>4</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <hr/> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
<b>5</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <hr/> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Stop (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>6</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
<b>7</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Trip (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>8</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
<b>9</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Trip (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>10</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  _____	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify)  _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products  <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
<b>11</b>  <b>THEN I WENT TO:</b>	<p>_____ Name of Place</p> <p>_____ Address, nearest intersection, landmark</p> <p>_____ City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area? _____ (Road name)</p> <p>Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Odometer reading _____</p>	<p>Arrive ____:____ a.m. p.m.</p> <p>Depart ____:____ a.m. p.m.</p>	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  _____	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify)  _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products  <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Trip (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>12</b>  <b>THEN I WENT TO:</b>	Name of Place	Arrive ____:____ a.m. p.m.	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark  City/County/State/Zip  If location written above is not Webb county, which road did you use to leave the county area?  (Road name)  Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No  Odometer reading _____	Depart ____:____ a.m. p.m.				
<b>13</b>  <b>THEN I WENT TO:</b>	Name of Place	Arrive ____:____ a.m. p.m.	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify) _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark  City/County/State/Zip  If location written above is not Webb county, which road did you use to leave the county area?  (Road name)  Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No  Odometer reading _____	Depart ____:____ a.m. p.m.				

## COMMERCIAL VEHICLE SURVEY PART 2: TRIP INFORMATION

Stop Number	Location Address	When did you Arrive/Depart?	Purpose of Trip (check one)	Type of Activity at This Location (check one)	Type of Cargo (check one)	Facilities Used
<b>14</b>  <b>THEN I WENT TO:</b>	Name of Place	Arrive ____:____ a.m. p.m.	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  _____	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify)  _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products  <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark	Depart ____:____ a.m. p.m.				
	(Road name)					
	Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No					
	Odometer reading _____					
<b>15</b>  <b>THEN I WENT TO:</b>	Name of Place	Arrive ____:____ a.m. p.m.	<input type="checkbox"/> (1) Base Location / Return to Base Location <input type="checkbox"/> (2) Delivery <input type="checkbox"/> (3) Pick-up <input type="checkbox"/> (4) Maintenance (fuel, oil, etc.) <input type="checkbox"/> (5) Driver Needs (lunch, etc.) <input type="checkbox"/> (6) To Home <input type="checkbox"/> (7) Other  _____	<input type="checkbox"/> (1) Office building <input type="checkbox"/> (2) Retail <input type="checkbox"/> (3) Industrial/Manufacturing site <input type="checkbox"/> (4) Medical <input type="checkbox"/> (5) Educational (12th grade or < ) <input type="checkbox"/> (6) Educational (College, trade, etc.) <input type="checkbox"/> (7) Government <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Other (Specify)  _____ <input type="checkbox"/> (99) Do not know	<input type="checkbox"/> (1) Farm Products <input type="checkbox"/> (2) Forest Products <input type="checkbox"/> (3) Marine Products <input type="checkbox"/> (4) Metals & Minerals <input type="checkbox"/> (5) Food, Health & Beauty Products <input type="checkbox"/> (6) Tobacco Products <input type="checkbox"/> (7) Textiles <input type="checkbox"/> (8) Wood Products <input type="checkbox"/> (9) Printed Matter <input type="checkbox"/> (10) Chemical Products <input type="checkbox"/> (11) Refined Petroleum or Coal Products  <input type="checkbox"/> (12) Rubber, Plastic or Styrofoam Products <input type="checkbox"/> (13) Clay, Concrete, Glass or Stone <input type="checkbox"/> (14) Manufactured Goods / Equipment <input type="checkbox"/> (15) Wastes <input type="checkbox"/> (16) Miscellaneous <input type="checkbox"/> (17) Hazardous Materials <input type="checkbox"/> (18) Transportation <input type="checkbox"/> (19) Unclassified Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty	<input type="checkbox"/> (1) I-35 N <input type="checkbox"/> (2) Juarez-Lincoln Bridge <input type="checkbox"/> (3) America's Bridge (Convent) <input type="checkbox"/> (4) Solidarity Bridge <input type="checkbox"/> (5) World Trade Bridge <input type="checkbox"/> (6) Loop 20 <input type="checkbox"/> (7) US 83 <input type="checkbox"/> (8) SH 359 <input type="checkbox"/> (9) US 59 <input type="checkbox"/> (10) FM 1472 <input type="checkbox"/> (11) SH 400 <input type="checkbox"/> (12) Del Mar Blvd <input type="checkbox"/> (13) McPherson <input type="checkbox"/> (14) FM3464 <input type="checkbox"/> (99) None
	Address, nearest intersection, landmark	Depart ____:____ a.m. p.m.				
	(Road name)					
	Is this vehicle usually based at or out of this location? <input type="checkbox"/> Yes <input type="checkbox"/> No					
	Odometer reading _____					

**16) HOW MANY MORE TRIPS WILL YOU MAKE TODAY?** \_\_\_\_\_