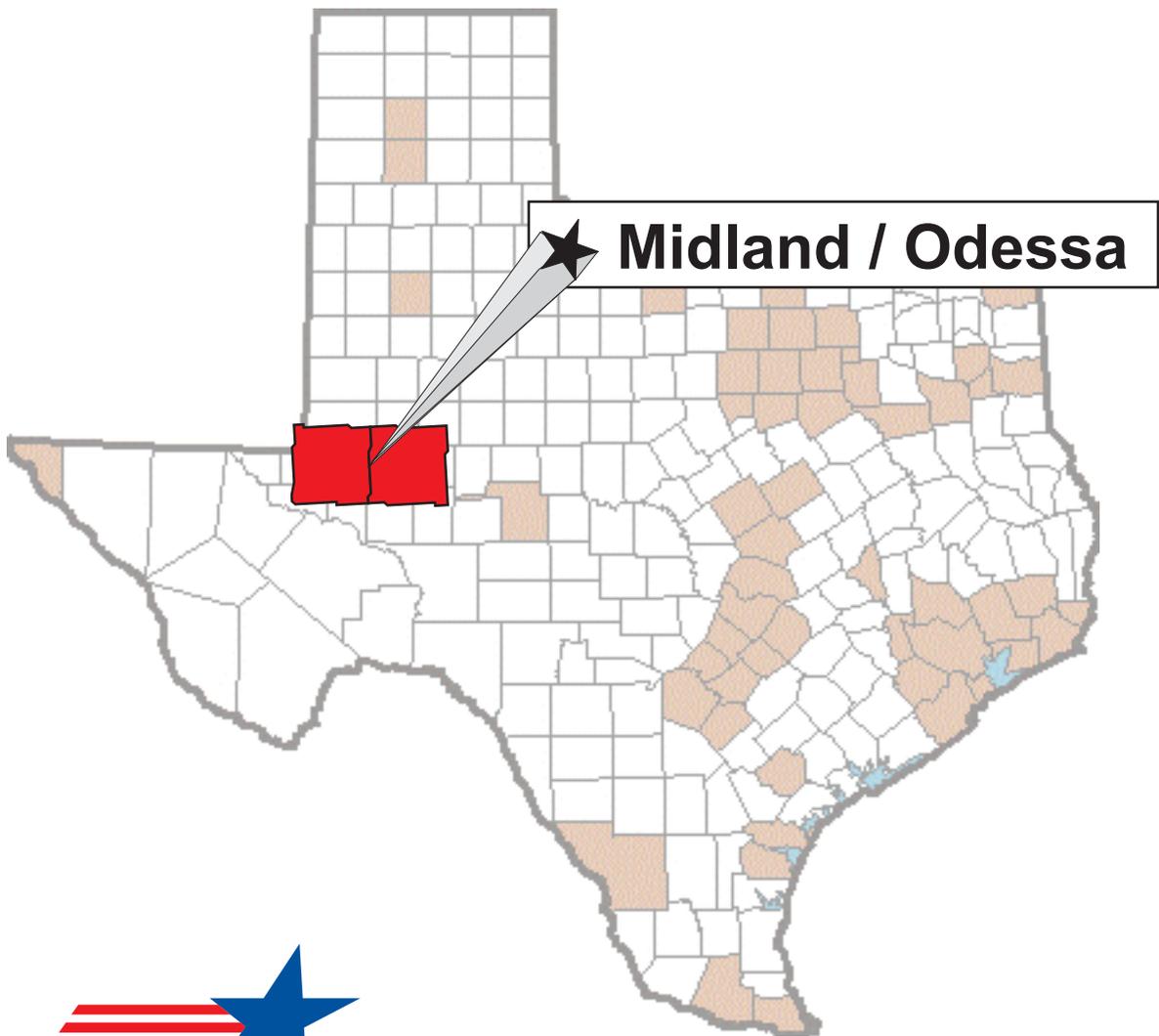


# 2003 Midland / Odessa Commercial Vehicle Survey Technical Summary



Prepared by the  
Texas Transportation Institute  
November 2004



# **2003 Midland/Odessa Commercial Vehicle Survey**

## **TECHNICAL SUMMARY**

**Texas Department of Transportation Travel Survey Program**

**Prepared by**

**Stephen P. Farnsworth  
Assistant Research Scientist**

**And**

**Haobo Ren  
Graduate Assistant Researcher**

**of the  
Texas Transportation Institute**

**November 2004**



## **Acknowledgements**

There were a number of individuals who contributed to and assisted with this study and the preparation of the technical summary. Charlie Hall, the TxDOT project director, provided guidance and assistance throughout the duration of the study. Gary Lobaugh, of the Texas Transportation Institute, helped with the preparation of the report. The contributions of these individuals are acknowledged and appreciated.



## **INTRODUCTION**

In 2003 the Transportation Planning and Programming (TPP) Division of the Texas Department of Transportation (TxDOT) funded a commercial vehicle travel survey in Ector and Midland Counties, the Permian Basin Regional Planning Commission (PBRPC) study area. The PBRPC commercial vehicle survey measured commercial vehicle travel patterns in Midland and Ector Counties. The purpose of the survey is to provide data that allows TxDOT to forecast commercial vehicle demand and travel patterns within the area.

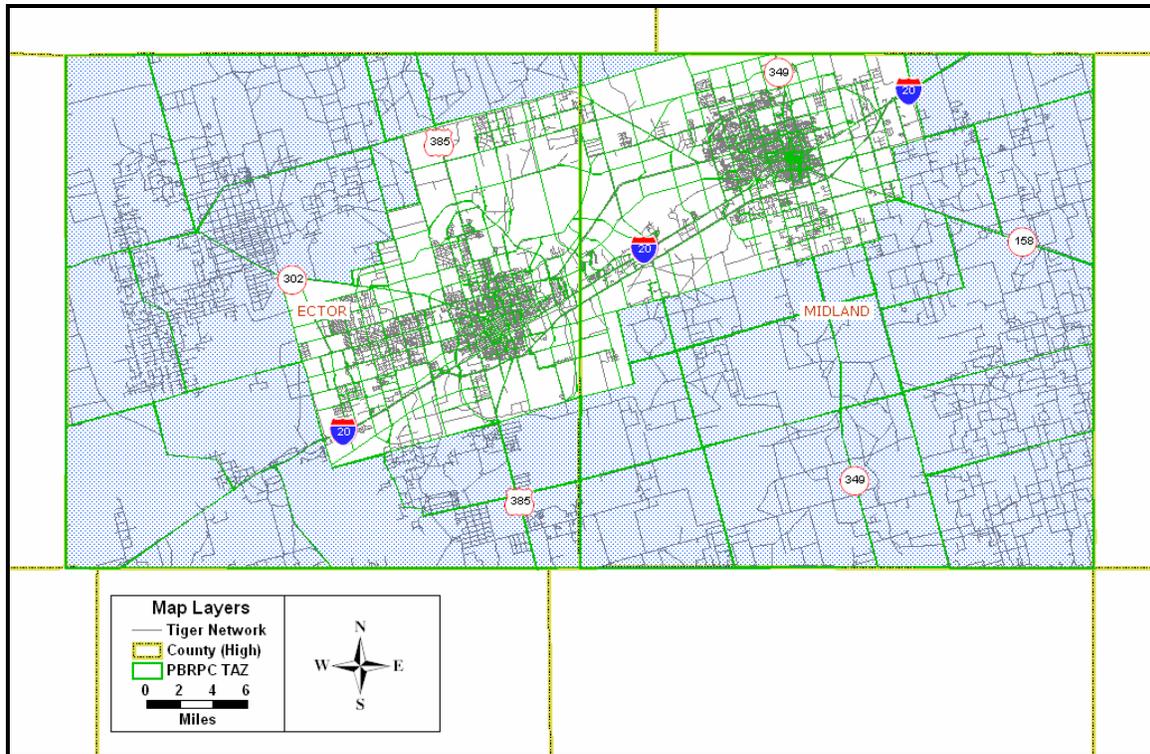
This report presents a Technical Summary of the 2003 Midland/Odessa Commercial Vehicle Survey and documents the data collected and the analysis results for the Midland and Ector County area. The summary is organized into seven sections. The first section presents a brief description of the PBRPC study 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 Midland/Odessa Commercial Vehicle survey are provided in the Appendix.

## **MIDLAND/ODESSA STUDY AREA**

The boundary established for the Midland/Odessa commercial vehicle survey was Midland and Ector Counties. The study area, as shown in Figure 1, is located in west Texas near the Texas/New 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 Permian Basin Regional Planning

Commission defined the TAZ structure and subsequent study area boundary for the city. The general area of the study area for Midland/Odessa 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 PBRPC area.

**Figure 1. Midland/Ector County Study Area.**



According to the 2000 census, the population of the entire PBRPC study area was approximately 237,000 persons. There were nearly 87,000 households in the two counties in 2000. The average household size according to this census was 2.72 persons per household in Ector County and 2.68 persons per household in Midland County.

## **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 Midland/Odessa. 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 547 vehicle surveys were obtained from 222 participating businesses during the conduct of the PBRPC 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 PBRPC commercial vehicle survey, there were a number of 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 the data review, one vehicle was dropped

from the analysis. The rationale for dropping the vehicle 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 trips 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 Midland/Odessa. 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 three groups.

- Texas (non-Midland/Odessa 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, 2474 of the 3022 trips (82%) were internal trips (both the origin and destination were within the study area). Of those internal trips, 2290 (93%) were inter-zonal and 184 (7%) were intra-zonal.

External trips (one or both trip ends outside of the study area) comprised 548 of the total 3022 trips (18%). Of those 548 trips, 454 (83%) had only one trip end outside the study area, and 94 trips (17%) had both trip ends outside of the study area. Eleven 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
	External (Texas)	Mexico	External (non-Texas)	Internal	
External (Texas)	87	0	3	217	307
Mexico	0	0	0	0	0
External (non-Texas)	4	0	0	6	10
Internal	223	0	8	2474	2705
Total Trips	314	0	11	2697	3022

## **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 547 commercial vehicles were surveyed. However, one commercial vehicle had no trip records and therefore, the vehicle data for that vehicle was not included in the analysis.

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

---

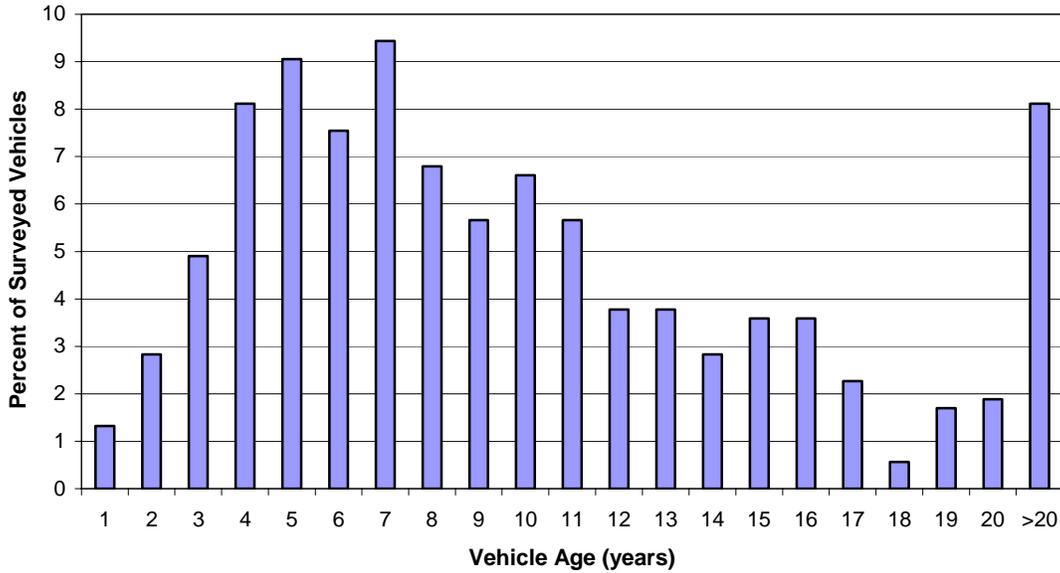
<sup>1</sup> Midland-Odessa Urban Transportation Study Commercial Vehicle Survey – Final Report. Alliance Transportation Group, Inc. April 2004.

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%) quartile was at eight years and third (75%) quartile was at thirteen years. A total of 530 vehicles responded to the age of vehicle question, and 277 vehicles (52%) reported odometer values. The average reported odometer value for all vehicles was 278,578 miles per vehicle and the average vehicle age was 10.1 years. The median vehicle age was 8.5 years

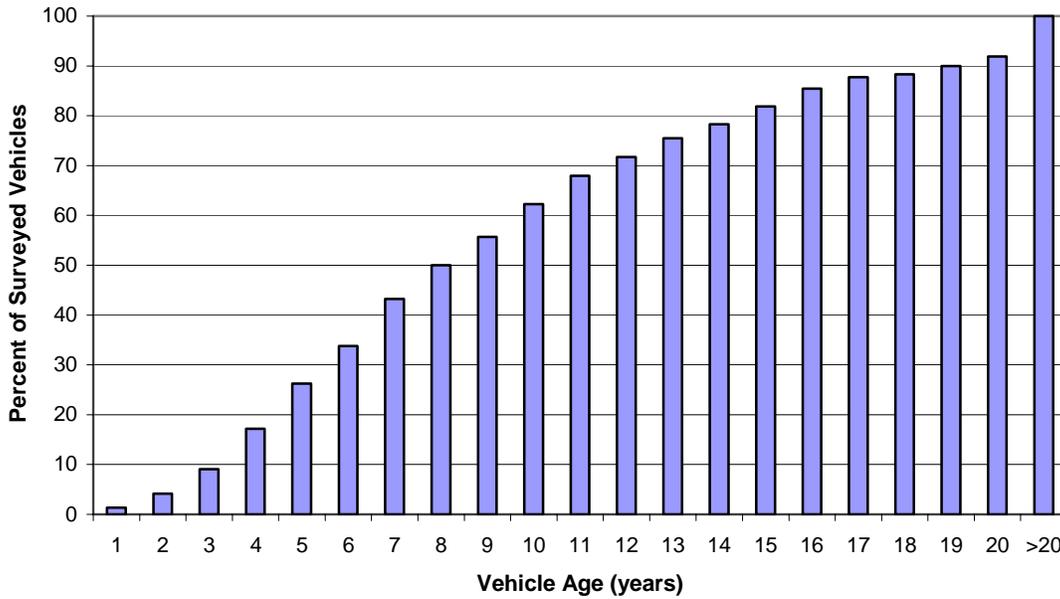
**Table 2. Commercial Vehicle Age Distribution.**

Age	Number of Vehicles	Percent of Total	Cumulative Percent of Total	Vehicles with Odometer Values Reported	Percent of Total	Average Reported Odometer Value
1	7	1.32	1.32	4	1.44	11,821
2	15	2.83	4.15	12	4.33	48,122
3	26	4.91	9.06	10	3.61	35,732
4	43	8.11	17.17	19	6.86	126,688
5	48	9.06	26.23	23	8.30	239,142
6	40	7.55	33.77	25	9.03	274,324
7	50	9.43	43.21	23	8.30	338,335
8	36	6.79	50.00	21	7.58	258,931
9	30	5.66	55.66	18	6.50	512,039
10	35	6.60	62.26	20	7.22	235,734
11	30	5.66	67.92	14	5.05	335,348
12	20	3.77	71.70	9	3.25	255,164
13	20	3.77	75.47	10	3.61	515,917
14	15	2.83	78.30	11	3.97	228,705
15	19	3.58	81.89	10	3.61	447,881
16	19	3.58	85.47	7	2.53	356,438
17	12	2.26	87.74	9	3.25	320,682
18	3	0.57	88.30	1	0.36	37,941
19	9	1.70	90.00	7	2.53	357,878
20	10	1.89	91.89	4	1.44	116,308
>20	43	8.11	100.00	20	7.22	336,671
Total	530	100.00		277	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 93 percent of the fuel types, followed by unleaded gasoline at 5 percent. Two vehicles reported using leaded gasoline and one vehicle reported using propane. Two vehicles did not provide fuel type information.

Single unit 2-axle vehicles comprised 43 percent of the sample, with single unit 3-axle vehicles accounting for 16 percent of the sample. Tractor-trailers accounted for an additional 38 percent of the sample. The distribution of vehicle classification information is provided in Table 3.

**Table 3. Vehicle Classification Distribution.**

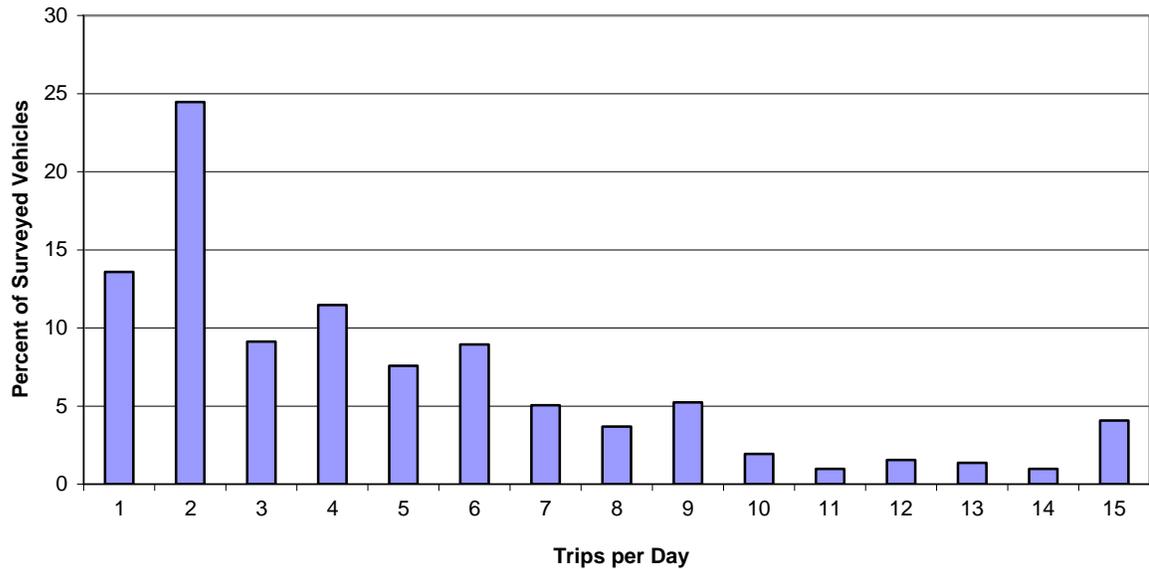
Vehicle Classification	Number of Vehicles	Percent of Total	Cumulative Number	Cumulative Percent
Single Unit 2-axle (6 wheels)	234	42.86	234	42.86
Single Unit 3-axle (10 wheels)	88	16.12	322	58.97
Single Unit 4-axle (14 wheels)	8	1.47	330	60.44
Semi (all tractor-trailer combinations)	208	38.10	538	98.53
Other	8	1.47	546	100.00
<b>Total</b>	<b>546</b>	<b>100.00</b>		

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 (24%) made only two trips and approximately half (47%) made three or fewer trips per day. Nearly eleven percent of the vehicles made 10 or more trips per day. Interestingly, 21 vehicles (4%) made 15 trips in one day. The average number of trips per day per vehicle was 4.8.

**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	70	13.59	13.59	9	27	5.24	89.13
2	126	24.47	38.06	10	10	1.94	91.07
3	47	9.13	47.18	11	5	0.97	92.04
4	59	11.46	58.64	12	8	1.55	93.59
5	39	7.57	66.21	13	7	1.36	94.95
6	46	8.93	75.15	14	5	0.97	95.92
7	26	5.05	80.19	15	21	4.08	100.00
8	19	3.69	83.88	<b>Total</b>	<b>515</b>	<b>100.00</b>	

**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”. Sixty-three percent of the trips shown in Table 5 were made by vehicles in the small-medium category. Large vehicles accounted for 35 percent of the trips and other vehicles amounted to 2 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	25	7.74	43	23.50	2	22.22	70
2	75	23.22	47	25.68	4	44.44	126
3	27	8.36	20	10.93	0	0.00	47
4	45	13.93	13	7.10	1	11.11	59
5	25	7.74	13	7.10	1	11.11	39
6	28	8.67	17	9.29	1	11.11	46
7	19	5.88	7	3.83	0	0.00	26
8	15	4.64	4	2.19	0	0.00	19
9	20	6.19	7	3.83	0	0.00	27
10	8	2.48	2	1.09	0	0.00	10
11	3	0.93	2	1.09	0	0.00	5
12	7	2.17	1	0.55	0	0.00	8
13	4	1.24	3	1.64	0	0.00	7
14	2	0.62	3	1.64	0	0.00	5
15	20	6.19	1	0.55	0	0.00	21
Total	323	100.00	183	100.00	9	100.00	515

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 was classified as ‘refused/unknown’ (24%) and the largest percentage of trip attractions was the office building land use type (21%). Industrial, retail, residential, and office building land use types accounted for 49 percent of the productions and 63 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	277	11.20	520	21.02
Retail	267	10.79	288	11.64
Industrial	326	13.18	393	15.89
Medical	18	0.73	19	0.77
Educational	6	0.24	6	0.24
Government	43	1.74	46	1.86
Residential	344	13.90	363	14.67
Airport	3	0.12	3	0.12
Eating Establishment	105	4.24	106	4.28
Mining/Extraction	42	1.70	39	1.58
Other	440	17.78	484	19.56
Refused/Unknown	603	24.37	207	8.37
Total	2474	100.00	2474	100.00

Approximately two-thirds (70%) of the trip productions and attractions were for the small-medium vehicle classification. Large vehicles accounted for 29 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	234	13.46	41	5.77	2	8.00	277
Retail	175	10.06	89	12.54	3	12.00	267
Industrial	165	9.49	156	21.97	5	20.00	326
Medical	11	0.63	6	0.85	1	4.00	18
Educational	5	0.29	1	0.14	0	0.00	6
Government	33	1.90	10	1.41	0	0.00	43
Residential	313	18.00	29	4.08	2	8.00	344
Airport	2	0.12	0	0.00	1	4.00	3
Eating Estab.	101	5.81	4	0.56	0	0.00	105
Mining/Extraction	7	0.40	35	4.93	0	0.00	42
Other	302	17.37	135	19.01	3	12.00	440
Refused/Unknown	391	22.48	204	28.73	8	32.00	603
Total	1739	100.00	710	100.00	25	100.00	2474

**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	403	23.17	113	15.92	4	16.00	520
Retail	192	11.04	92	12.96	4	16.00	288
Industrial	204	11.73	180	25.35	9	36.00	393
Medical	12	0.69	6	0.85	1	4.00	19
Educational	5	0.29	1	0.14	0	0.00	6
Government	36	2.07	10	1.41	0	0.00	46
Residential	327	18.80	35	4.93	1	4.00	363
Airport	2	0.12	0	0.00	1	4.00	3
Eating Estab.	103	5.92	3	0.42	0	0.00	106
Mining/Extraction	7	0.40	32	4.51	0	0.00	39
Other	326	18.75	154	21.69	4	16.00	484
Refused/Unknown	122	7.02	84	11.83	1	4.00	207
Total	1739	100.00	710	100.00	25	100.00	2474

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								
	Base Location/Return to Base	Delivery	Pick-up	Vehicle Maintenance	Driver Needs	To Home	Other	No Response	Total
Base Location/Return to Base	16	296	151	15	8	4	100	18	608
Delivery	312	663	165	4	14	4	13	11	1186
Pick-up	77	211	77	3	8	3	8	1	388
Vehicle Maintenance	14	2	1	6	0	0	2	0	25
Driver Needs	3	11	9	1	1	1	6	2	34
To Home	2	0	2	0	0	0	0	0	4
Other	86	10	7	2	5	2	85	2	199
No Response	9	10	2	1	0	0	1	7	30
Total Trips	519	1203	414	32	36	14	215	41	2474

**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	8	218	76	7	7	4	76	12	408
Delivery	200	577	83	0	12	1	9	7	889
Pick-up	51	100	67	3	5	2	5	0	233
Vehicle Maintenance	8	1	0	4	0	0	2	0	15
Driver Needs	3	6	7	1	1	0	6	2	26
To Home	2	0	1	0	0	0	0	0	3
Other	66	9	4	2	5	1	57	2	146
No Response	7	6	2	0	0	0	1	3	19
<b>Total Trips</b>	<b>345</b>	<b>917</b>	<b>240</b>	<b>17</b>	<b>30</b>	<b>8</b>	<b>156</b>	<b>26</b>	<b>1739</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	8	72	72	8	1	0	22	6	189
Delivery	107	85	82	4	2	3	4	4	291
Pick-up	23	111	10	0	2	1	3	1	151
Vehicle Maintenance	6	1	1	2	0	0	0	0	10
Driver Needs	0	5	1	0	0	0	0	0	6
To Home	0	0	0	0	0	0	0	0	0
Other	19	1	3	0	0	1	28	0	52
No Response	2	4	0	1	0	0	0	4	11
<b>Total Trips</b>	<b>165</b>	<b>279</b>	<b>169</b>	<b>15</b>	<b>5</b>	<b>5</b>	<b>57</b>	<b>15</b>	<b>710</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	6	3	0	0	0	2	0	11
Delivery	5	1	0	0	0	0	0	0	6
Pick-up	3	0	0	0	1	0	0	0	4
Vehicle Maintenance	0	0	0	0	0	0	0	0	0
Driver Needs	0	0	1	0	0	1	0	0	2
To Home	0	0	1	0	0	0	0	0	1
Other	1	0	0	0	0	0	0	0	1
No Response	0	0	0	0	0	0	0	0	0
Total Trips	9	7	5	0	1	1	2	0	25

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 (21% and 20%, respectively). Respondents reported not carrying any cargo at 7 percent of the origins and 14 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	0	0.00	0	0.00
2	— Forest Products	10	0.50	10	0.40
3	— Marine Products	0	0.00	0	0.00
4	— Metals and Minerals	27	1.34	33	1.33
5	— Food, Health, and Beauty Products	228	11.31	248	10.02
6	— Tobacco Products	0	0.00	0	0.00
7	— Textiles	9	0.45	9	0.36
8	— Wood Products	21	1.04	22	0.89
9	— Printer Matter	1	0.05	1	0.04
10	— Chemical Products	31	1.54	31	1.25
11	— Refined Petroleum or Coal Products	29	1.44	32	1.29
12	— Rubber, Plastic, and Styrofoam Products	11	0.55	11	0.44
13	— Clay, Concrete, Glass, or Stone	207	10.27	213	8.61
14	— Manufactured Goods/Equipment	157	7.79	169	6.83
15	— Wastes	58	2.88	71	2.87
16	— Miscellaneous Shipments	425	21.08	486	19.64
17	— Hazardous Materials	71	3.52	80	3.23
18	— Transportation	51	2.53	58	2.34
19	— Unclassified/Other Cargo	310	15.38	352	14.23
20	— Driver Refused to Answer	100	4.96	160	6.47
21	— Unknown to Driver	32	1.59	41	1.66
22	— Empty	149	7.39	349	14.11
23	— Crude Petroleum Products	45	2.23	51	2.06
24	— Fresh Water	28	1.39	31	1.25
25	— Brine Water	16	0.79	16	0.65
	<b>Total</b>	<b>2016</b>	<b>100.00</b>	<b>2474</b>	<b>100.00</b>

### Survey Trip Length Characteristics

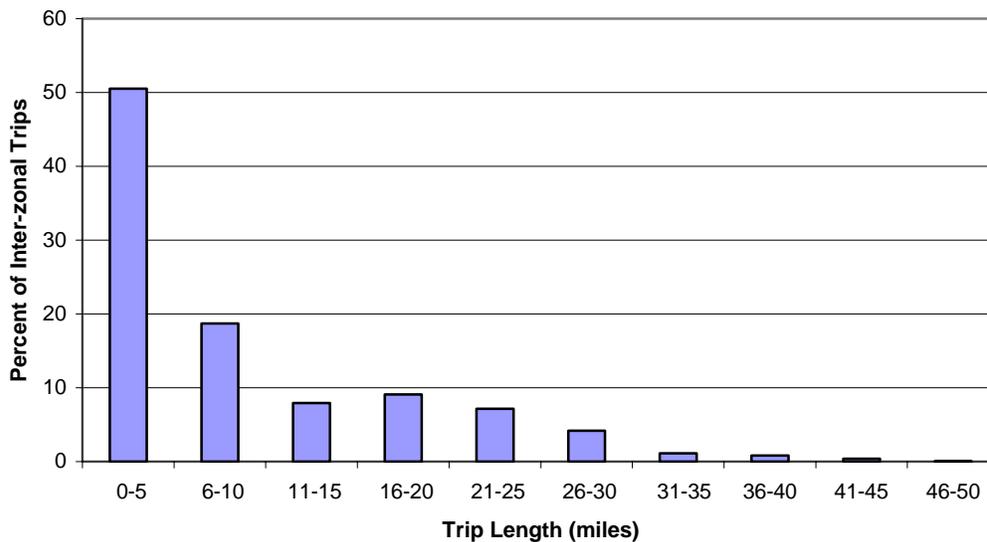
As part of the survey, respondents were asked to provide odometer readings at the beginning and end of each trip. This data can be useful in estimating the trip lengths of external and intra-zonal trips. Reported trip lengths for inter-zonal trips can also be compared with trips lengths provided in network 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. Nearly half of the trips

(51%) were less than five miles in length. Nearly one quarter of the trips (23%) were longer than fifteen miles. The average trip length for all trips was 9.4 miles.

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

Trip Length (miles)	Number of Trips	Percent of Trips
0-5	1157	50.52
6-10	428	18.69
11-15	182	7.95
16-20	208	9.08
21-25	164	7.16
26-30	96	4.19
31-35	26	1.14
36-40	19	0.83
41-45	9	0.39
46-50	1	0.04
Total	2290	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.

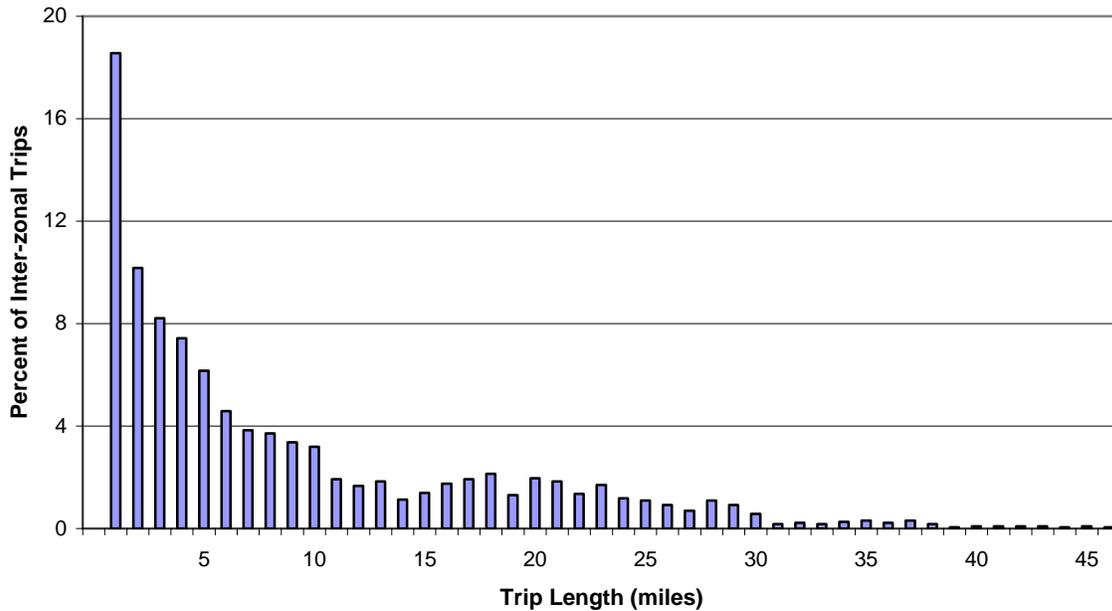
**Table 13. Trip Length Frequency Distribution by Vehicle Classification for Local Trips.**

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	907	55.82	236	36.82	14	58.33	1157
6-10	296	18.22	125	19.50	7	29.17	428
11-15	128	7.88	53	8.27	1	4.17	182
16-20	123	7.57	83	12.95	2	8.33	208
21-25	81	4.98	83	12.95	0	0.00	164
26-30	65	4.00	31	4.84	0	0.00	96
31-35	13	0.80	13	2.03	0	0.00	26
36-40	8	0.49	11	1.72	0	0.00	19
41-45	4	0.25	5	0.78	0	0.00	9
46-50	0	0.00	1	0.16	0	0.00	1
Total	1625	100.00	641	100.00	24	100.00	2290

**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	425	18.56	24	27	1.18
2	233	10.17	25	25	1.09
3	188	8.21	26	21	0.92
4	170	7.42	27	16	0.70
5	141	6.16	28	25	1.09
6	105	4.59	29	21	0.92
7	88	3.84	30	13	0.57
8	85	3.71	31	4	0.17
9	77	3.36	32	5	0.22
10	73	3.19	33	4	0.17
11	44	1.92	34	6	0.26
12	38	1.66	35	7	0.31
13	42	1.83	36	5	0.22
14	26	1.14	37	7	0.31
15	32	1.40	38	4	0.17
16	40	1.75	39	1	0.04
17	44	1.92	40	2	0.09
18	49	2.14	41	2	0.09
19	30	1.31	42	2	0.09
20	45	1.97	43	2	0.09
21	42	1.83	44	1	0.04
22	31	1.35	45	2	0.09
23	39	1.70	46	1	0.04
			Total	2290	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 Midland/Odessa the overall average was 9.4 miles. The averages ranged from 5.2 miles for retail land uses to 18.8 miles for mining/extraction 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 ‘large vehicle’ classification, the shortest mean trip length was for the government land use type (0.8 miles) and the longest mean trip length was 25.4 miles for the educational 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	10.05	9.36	12.56	6.73
Retail	5.16	4.73	5.94	3.09
Industrial	11.08	9.54	13.21	5.28
Medical	13.73	14.63	14.53	1.63
Educational	12.72	9.56	25.36	—
Government	5.20	6.50	0.81	—
Residential	6.74	6.05	12.98	—
Airport	12.66	15.70	—	—
Eating Establishment	5.65	5.39	14.27	—
Mining/Extraction	18.75	19.22	18.59	—
Other	12.70	11.69	15.06	4.18
Refused/Unknown	9.47	7.92	11.98	—
Average	9.44	8.35	12.32	4.79

### Survey Travel Time and Speed Characteristics

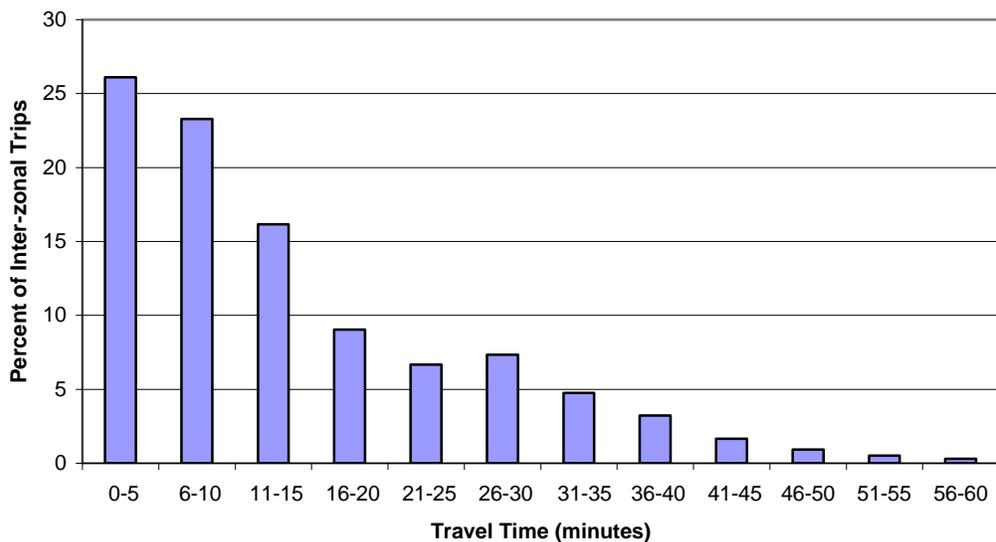
Survey respondents were also asked to provide arrival and departure times for each logged trip on the survey day. Since external and intra-zonal travel time data is not provided in network travel time and distance matrices, reported travel times can provide information useful in estimating travel times 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 Midland/Odessa 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 (26%) was less than five minutes. Trips less than ten minutes accounted for 49 percent of all trips. Approximately eleven percent of the trips were longer than thirty minutes.

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

Travel Time (minutes)	Number of Trips	Percent of Trips
0-5	598	26.11
6-10	533	23.28
11-15	370	16.16
16-20	207	9.04
21-25	153	6.68
26-30	168	7.34
31-35	109	4.76
36-40	74	3.23
41-45	38	1.66
46-50	21	0.92
51-55	12	0.52
56-60	7	0.31
Total	2290	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.

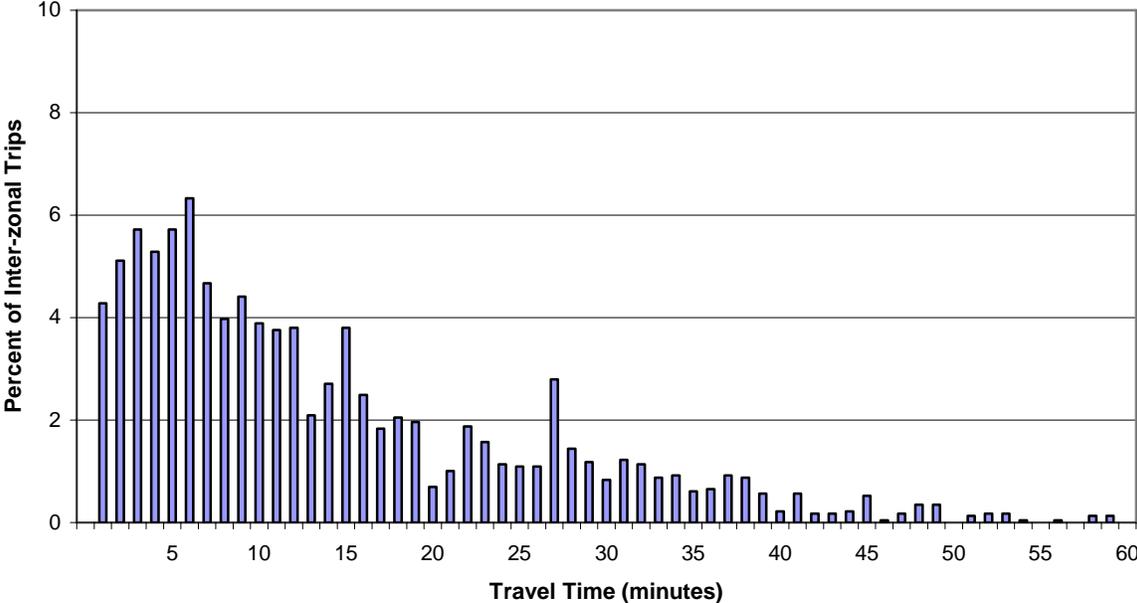
**Table 17. Travel Time Frequency Distribution by Vehicle Classification for Local Trips.**

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	463	28.49	127	19.81	8	33.33	598
6-10	412	25.35	115	17.94	6	25.00	533
11-15	264	16.25	100	15.60	6	25.00	370
16-20	149	9.17	56	8.74	2	8.33	207
21-25	98	6.03	54	8.42	1	4.17	153
26-30	89	5.48	78	12.17	1	4.17	168
31-35	64	3.94	45	7.02	0	0.00	109
36-40	51	3.14	23	3.59	0	0.00	74
41-45	14	0.86	24	3.74	0	0.00	38
46-50	11	0.68	10	1.56	0	0.00	21
51-55	8	0.49	4	0.62	0	0.00	12
56-60	2	0.12	5	0.78	0	0.00	7
Total	1625	100.00	641	100.00	24	100.00	2290

**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	98	4.28	31	28	1.22
2	117	5.11	32	26	1.14
3	131	5.72	33	20	0.87
4	121	5.28	34	21	0.92
5	131	5.72	35	14	0.61
6	145	6.33	36	15	0.66
7	107	4.67	37	21	0.92
8	91	3.97	38	20	0.87
9	101	4.41	39	13	0.57
10	89	3.89	40	5	0.22
11	86	3.76	41	13	0.57
12	87	3.80	42	4	0.17
13	48	2.10	43	4	0.17
14	62	2.71	44	5	0.22
15	87	3.80	45	12	0.52
16	57	2.49	46	1	0.04
17	42	1.83	47	4	0.17
18	47	2.05	48	8	0.35
19	45	1.97	49	8	0.35
20	16	0.70	50	0	0.00
21	23	1.00	51	3	0.13
22	43	1.88	52	4	0.17
23	36	1.57	53	4	0.17
24	26	1.14	54	1	0.04
25	25	1.09	55	0	0.00
26	25	1.09	56	1	0.04
27	64	2.79	57	0	0.00
28	33	1.44	58	3	0.13
29	27	1.18	59	3	0.13
30	19	0.83	60	0	0.00
			Total	2290	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 retail and mining/extraction land use types (9.2 minutes and 26.4 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	15.50	14.74	18.34	9.73
Retail	9.20	8.57	10.32	6.57
Industrial	16.87	15.11	19.35	8.90
Medical	19.57	20.62	20.82	3.67
Educational	18.55	14.83	33.44	—
Government	9.54	11.74	2.04	—
Residential	11.46	10.65	18.82	—
Airport	20.39	24.21	—	—
Eating Establishment	9.76	9.44	20.10	—
Mining/Extraction	26.44	27.90	25.96	—
Other	18.78	17.55	21.67	8.42
Refused/Unknown	14.99	13.23	17.84	—
Average	14.74	13.46	18.17	8.20

In Midland/Odessa, the overall mean travel time was 14.7 minutes and the overall average speed for local trips was 33.0 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. Eating establishment land use types had the lowest average travel speed (28.3 mph) and mining/extraction land use types had the highest average travel speed (40.3 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	33.99	32.98	37.62	30.23
Retail	28.89	28.15	30.24	26.40
Industrial	35.62	34.16	37.52	33.39
Medical	38.47	40.05	38.34	26.58
Educational	35.54	33.05	45.50	—
Government	30.66	32.67	23.81	—
Residential	29.48	28.54	37.89	—
Airport	35.19	37.26	—	—
Eating Establishment	28.27	28.00	37.16	—
Mining/Extraction	40.29	38.38	40.93	—
Other	35.51	34.57	37.62	29.53
Refused/Unknown	33.44	31.18	37.10	—
Average	33.00	31.67	36.42	30.22

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 3022 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 Midland/Odessa, there were a total of 1,476 base trips (49%) and 1,546 non-base trips (51%). Table 21 provides a breakdown of base and non-base trip by vehicle classification.

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

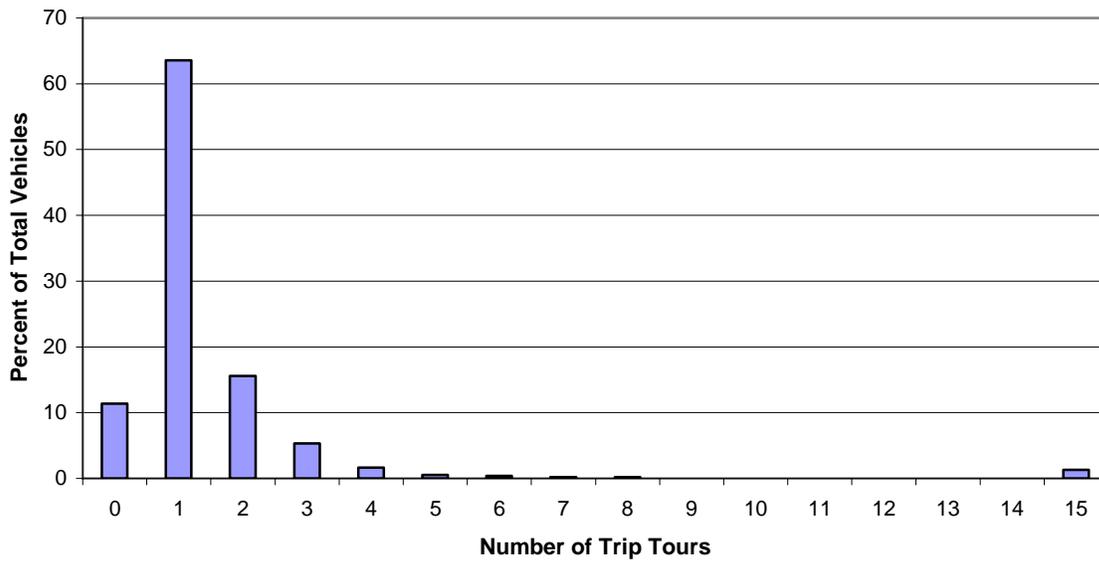
Trip Type	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Number of Trips	Percent of Total	Number of Trips	Percent of Total	Number of Trips	Percent of Total	
Base	942	49.16	510	47.53	24	72.73	1476
Non-Base	974	50.84	563	52.47	9	27.27	1546
Total	1916	100.00	1073	100.00	33	100.00	3022

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 546 commercial vehicles included in the analysis reported making 787 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 (64%) made only one trip tour on the survey day. Over ninety percent made two or less trip tours on the survey day. Sixty-two vehicles (11%) reported making no trip tours and seven vehicles (1%) reported making fifteen tours. The average number of tours per vehicle was 1.4. Additionally, there were 76 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	62	11.36	62	11.36	0
1	347	63.55	409	74.91	347
2	85	15.57	494	90.48	170
3	29	5.31	523	95.79	87
4	9	1.65	532	97.44	36
5	3	0.55	535	97.99	15
6	2	0.37	537	98.35	12
7	1	0.18	538	98.53	7
8	1	0.18	539	98.72	8
9	0	0.00	539	98.72	0
10	0	0.00	539	98.72	0
11	0	0.00	539	98.72	0
12	0	0.00	539	98.72	0
13	0	0.00	539	98.72	0
14	0	0.00	539	98.72	0
15	7	1.28	546	100.00	105
Total	546	100.00			787

**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	43	13.03	18	8.70	1	11.11	62
1	207	62.73	135	65.22	5	55.56	347
2	42	12.73	42	20.29	1	11.11	85
3	17	5.15	10	4.83	2	22.22	29
4	8	2.42	1	0.48	0	0.00	9
5	2	0.61	1	0.48	0	0.00	3
6	2	0.61	0	0.00	0	0.00	2
7	1	0.30	0	0.00	0	0.00	1
8	1	0.30	0	0.00	0	0.00	1
9	0	0.00	0	0.00	0	0.00	0
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	0	0.00	0	0.00	0
14	0	0.00	0	0.00	0	0.00	0
15	7	2.12	0	0.00	0	0.00	7
Total	330	100.00	207	100.00	9	100.00	546

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 174 trip tours (22%) that had one non-base trip and 613 tours (78%) 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	174	22.11	174	22.11
2	613	77.89	787	100.00
3	0	0.00	787	100.00
Total	787	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	145	28.10	26	10.08	3	23.08	174
2	371	71.90	232	89.92	10	76.92	613
Total	516	100.00	258	100.00	13	100.00	787

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 (78%) did not have any external trips. Two external trips within a tour was the second most common occurrence (13%). 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 fifteen instances (2%) 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	612	77.76	612	77.76
1	15	1.91	627	79.67
2	103	13.09	730	92.76
3	14	1.78	744	94.54
4	22	2.80	766	97.33
5	7	0.89	773	98.22
6	10	1.27	783	99.49
7	1	0.13	784	99.62
8	2	0.25	786	99.87
9	0	0.00	786	99.87
10	1	0.13	787	100.00
Total	787	100.00		

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

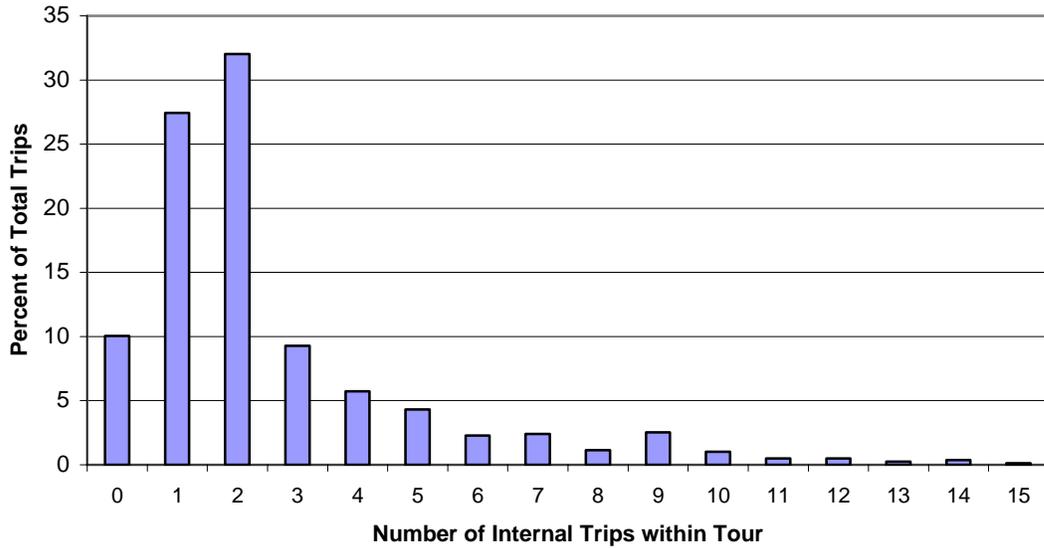
Number of Trips	Small-Medium Vehicles		Large Vehicles		Other Vehicles		Total
	Frequency	Percent of Total	Frequency	Percent of Total	Frequency	Percent of Total	
0	449	87.02	155	60.08	8	61.54	612
1	3	0.58	10	3.88	2	15.38	15
2	48	9.30	52	20.16	3	23.08	103
3	5	0.97	9	3.49	0	0.00	14
4	7	1.36	15	5.81	0	0.00	22
5	3	0.58	4	1.55	0	0.00	7
6	0	0.00	10	3.88	0	0.00	10
7	1	0.19	0	0.00	0	0.00	1
8	0	0.00	2	0.78	0	0.00	2
9	0	0.00	0	0.00	0	0.00	0
10	0	0.00	1	0.39	0	0.00	1
Total	516	100.00	258	100.00	13	100.00	787

The number and percent of internal trips within trip tours is provided in Table 28 and Figure 10. The largest percentage of trip tours (32%) had two internal trips. One internal trip within a tour was the second most common occurrence (27%). Over ninety percent had six or less internal trips within their respective trip tours. Twenty-two of the trip tours (3%) 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	79	10.04	79	10.04
1	216	27.45	295	37.48
2	252	32.02	547	69.50
3	73	9.28	620	78.78
4	45	5.72	665	84.50
5	34	4.32	699	88.82
6	18	2.29	717	91.11
7	19	2.41	736	93.52
8	9	1.14	745	94.66
9	20	2.54	765	97.20
10	8	1.02	773	98.22
11	4	0.51	777	98.73
12	4	0.51	781	99.24
13	2	0.25	783	99.49
14	3	0.38	786	99.87
15	1	0.13	787	100.00
Total	787	100.00		

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

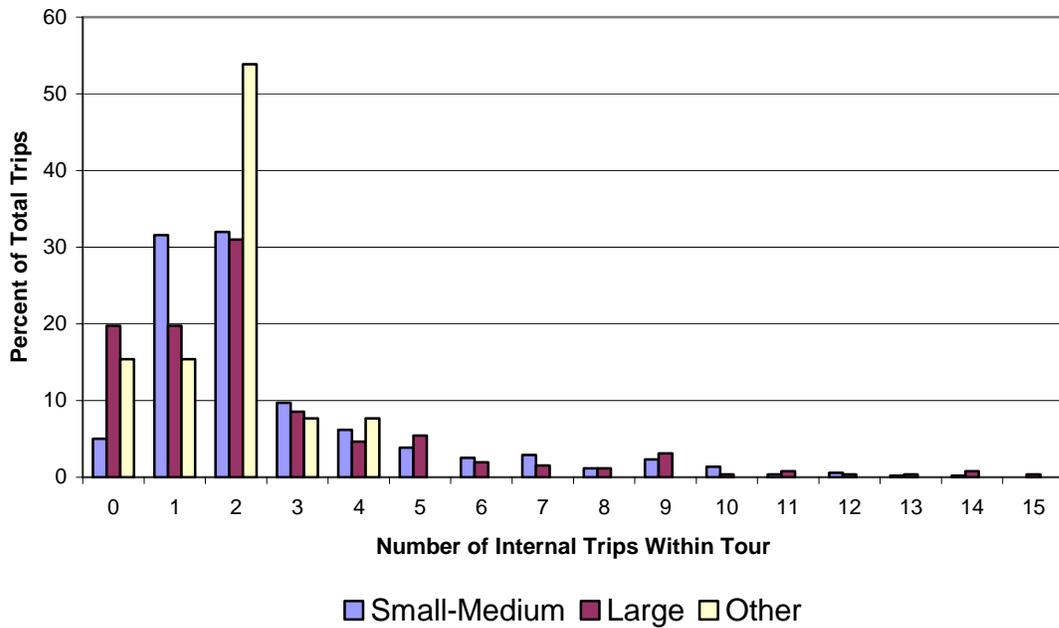


The number and percent of internal trips within trip tours are disaggregated by vehicle classification and are provided in Table 29 and Figure 11.

**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	26	5.04	51	19.77	2	15.38	79
1	163	31.59	51	19.77	2	15.38	216
2	165	31.98	80	31.01	7	53.85	252
3	50	9.69	22	8.53	1	7.69	73
4	32	6.20	12	4.65	1	7.69	45
5	20	3.88	14	5.43	0	0.00	34
6	13	2.52	5	1.94	0	0.00	18
7	15	2.91	4	1.55	0	0.00	19
8	6	1.16	3	1.16	0	0.00	9
9	12	2.33	8	3.10	0	0.00	20
10	7	1.36	1	0.39	0	0.00	8
11	2	0.39	2	0.78	0	0.00	4
12	3	0.58	1	0.39	0	0.00	4
13	1	0.19	1	0.39	0	0.00	2
14	1	0.19	2	0.78	0	0.00	3
15	0	0.00	1	0.39	0	0.00	1
Total	516	100.00	258	100.00	13	100.00	787

**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 by combining survey data results with secondary data estimates. 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 PBRPC area is unknown. Vehicle registration was not considered a viable basis for estimation purposes since vehicles registered in counties outside of Midland and Ector Counties 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). As part of an external station motorist intercept survey, vehicle classification counts were performed throughout the PBRPC area in 2002. 24-hour vehicle classification counts were performed at a total of 122 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.

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

Functional Classification	Percentage of Commercial Vehicles	Percentage of Non-Commercial Vehicles
Freeway	26.75	73.25
Arterial	8.09	91.91
Collector	5.66	94.34
Local	6.56	93.44

An assumption is made that the amount of travel on each facility by functional classification is equivalent to the percentage of vehicles counted on that facility. For example, since 8.09 percent of the vehicles counted on arterials were commercial vehicles, it is assumed that 8.09 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	1,478,403
Arterial	2,938,705
Collector	788,825
Local	401,226
Total	5,607,159

An adjustment must be made to these estimates in order to account for intra-zonal and external travel. The HPMS estimates include 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 trip length for each external trip was multiplied by the total number of commercial vehicle trips recorded at external stations in the PBRPC area. Using this methodology, it was estimated that there were 418,800 vehicle miles of travel attributed to external commercial vehicles.

The percentages of commercial vehicles by functional classification provided in Table 30 were then 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.

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

Functional Classification	Percentage of Commercial Vehicles	Adjusted Vehicle Miles of Travel	Estimated Commercial Vehicle Miles of Travel
Freeway	26.75	1,478,403	395,473
Arterial	8.09	2,938,705	237,741
Collector	5.66	788,825	44,647
Local	6.56	401,226	26,320
Total		5,607,159	704,182

Next, the external related commercial vehicle miles of travel (418,800) was removed to provide the total internal vehicle miles of travel attributable to commercial vehicles. The resulting vehicle miles of travel is 285,382.

The next step is the computation of the survey expansion factor. The commercial vehicle survey had a total of 546 respondents with useable data. There was a total of 3,022 total trips recorded, of which 2,474 (82%) were internal. Of the internal trips, 2,290 (93%) were inter-zonal and 184 (7%) 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 13,811 vehicle miles were attributed to surveyed commercial vehicles. The resulting average vehicle miles traveled per trip was 9.4 miles. To obtain the survey expansion factor, the population vehicle miles of travel (285,382) is divided by the survey vehicle miles of travel (13,811). The resulting expansion factor is 20.7.

The expansion factor is then applied to the total number of inter-zonal commercial vehicle trips (2290) to yield a total of 47,403 daily inter-zonal commercial vehicle trips in the PBRPC area. The expansion factor is assumed to be reasonable for intra-zonal trips also. With approximately seven percent of the trips being intra-zonal, a total of 3,809 commercial trips in the study area are estimated to be intra-zonal. The inter-zonal and intra-zonal trips combined amounts to 51,212. Since the average number of trips per commercial vehicle in the PBRPC area is 4.8, the resulting average number of commercial vehicles operating within the study area on an average week day is 10,669.

## **SURVEY SUMMARY**

The 2003 Midland/Odessa Commercial Vehicle Survey for the PBRPC area provides information relative to the operating characteristics of commercial vehicles. Through the analysis of 546 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 285,382 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 10,669 commercial vehicles operating within the PBRPC 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 10 years and the average reported odometer reading was 278,578. A majority of the trips (51%) were non-base trips, nearly half the vehicles (47%) made three or fewer trips per day, and 64 percent of the vehicles made only one trip tour on the survey day. Additionally, the average trip length was 9.4 miles and the average travel time per trip was 14.7 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 PBRPC 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 :

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

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

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

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

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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) _____  <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water  Haz-Mat Placard # _____	To be provided
	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)	a.m.  p.m.  Depart ____:____  a.m.  p.m.					
	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>2</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? _____</p> <p>(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 ____:_____</p> <p>a.m. p.m.</p> <hr/> <p>Depart ____:_____</p> <p>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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
<b>3</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? _____</p> <p>(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 ____:_____</p> <p>a.m. p.m.</p> <hr/> <p>Depart ____:_____</p> <p>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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided

## 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? _____</p> <p>_____ (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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
<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? _____</p> <p>_____ (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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided

## 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>	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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
	Address, nearest intersection, landmark	Depart ____:____ a.m. p.m.				
	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 _____					
<b>7</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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
	Address, nearest intersection, landmark	Depart ____:____ a.m. p.m.				
	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 _____					

## 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>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? _____</p> <p>_____ (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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
<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? _____</p> <p>_____ (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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided

## 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>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 <p>_____</p>	<input type="checkbox"/> (1) Office building (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) <p>_____</p> <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
<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 <p>_____</p>	<input type="checkbox"/> (1) Office building (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) <p>_____</p> <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided

## 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>12</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? _____</p> <p>(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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
<b>13</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? _____</p> <p>(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 (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify)  _____ <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided

## 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>14</b>	<p style="text-align: center;">Name of Place</p> <hr/> <p style="text-align: center;">Address, nearest intersection, landmark</p> <hr/> <p style="text-align: center;">City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area?</p> <hr/> <p style="text-align: center;">(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</p> <p>____:____ a.m.                   p.m.</p> <hr/> <p>Depart</p> <p>____:____ 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 <hr/>	<input type="checkbox"/> (1) Office building (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) <hr/> <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided
<b>15</b>	<p style="text-align: center;">Name of Place</p> <hr/> <p style="text-align: center;">Address, nearest intersection, landmark</p> <hr/> <p style="text-align: center;">City/County/State/Zip</p> <p>If location written above is not Webb county, which road did you use to leave the county area?</p> <hr/> <p style="text-align: center;">(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</p> <p>____:____ a.m.                   p.m.</p> <hr/> <p>Depart</p> <p>____:____ 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 <hr/>	<input type="checkbox"/> (1) Office building (Non Gov'mnt) <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) Office Building (Government) <input type="checkbox"/> (8) Residential <input type="checkbox"/> (9) Airport <input type="checkbox"/> (10) Eating Establishment <input type="checkbox"/> (11) Mining/Extraction <input type="checkbox"/> (12) Other (Specify) <hr/> <input type="checkbox"/> (99) Unknown/Refused	<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 / Other Cargo <input type="checkbox"/> (20) Driver Refused to Answer <input type="checkbox"/> (21) Unknown to Driver <input type="checkbox"/> (22) Empty <input type="checkbox"/> (23) Crude Petroleum Products <input type="checkbox"/> (24) Fresh Water <input type="checkbox"/> (25) Brine Water	To be provided

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

