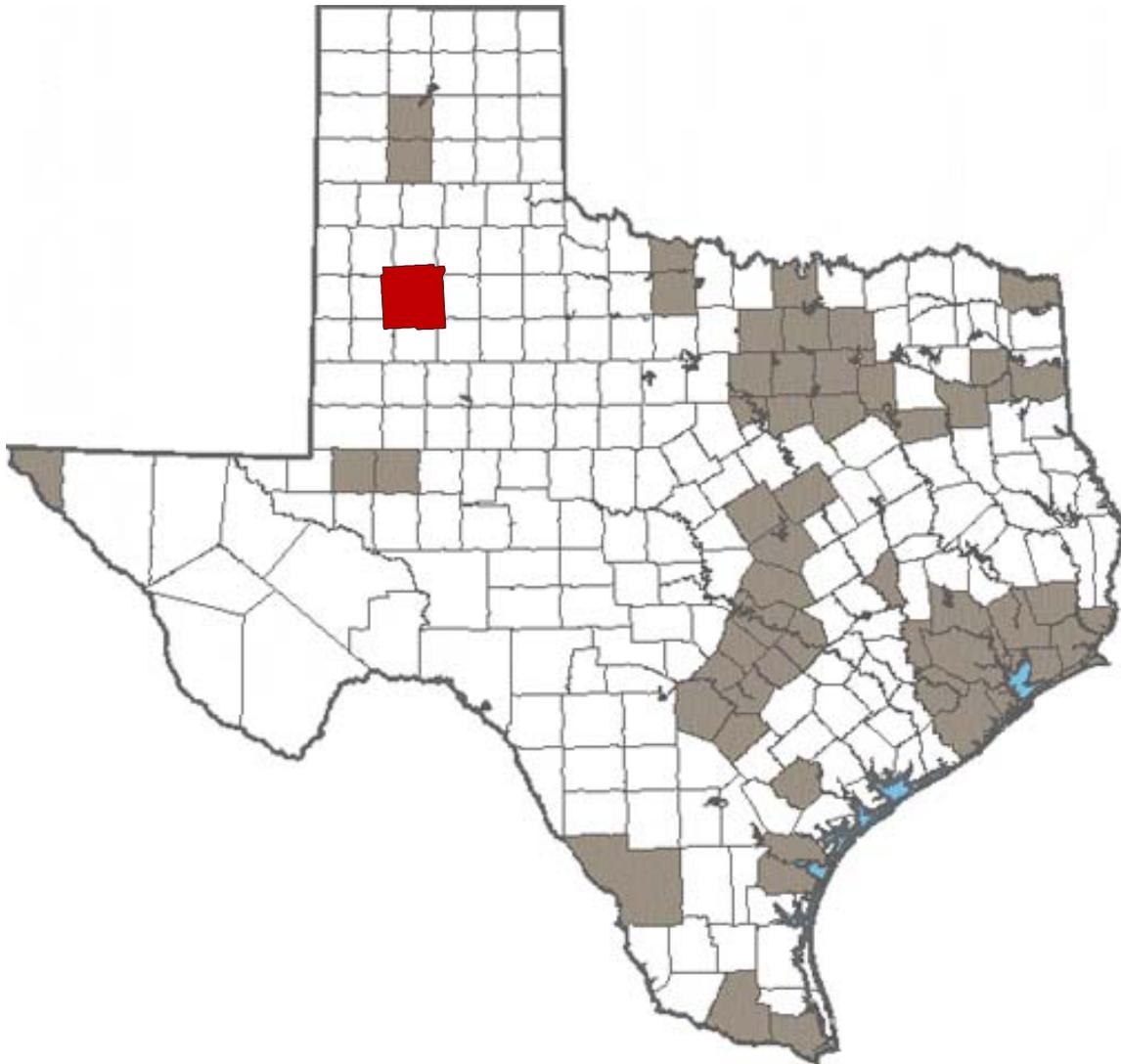


2010 Lubbock Work Place Travel Survey Technical Summary



Prepared by the
Texas Transportation Institute
March 2012

2010 Lubbock Work Place Travel Survey

TECHNICAL SUMMARY

Texas Department of Transportation Travel Survey Program

Prepared by

Stella Amor F. Nepal
Associate Transportation Researcher

and

David F. Pearson, Ph.D., P.E.
Research Engineer

of the
Texas Transportation Institute

March 2012

TEXAS TRANSPORTATION INSTITUTE
The Texas A&M University System
College Station, Texas 77843-3135

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TABLE OF CONTENTS

List of Figures	vii
List of Tables	viii
Introduction.....	1
Survey Methodology.....	3
Sampling Plan and Recruitment.....	4
Survey Results	8
Trip Characteristics.....	11
Residence	11
Trip Purpose	12
Mode of Travel and Vehicle Occupancy.....	13
Trip Length.....	14
Special Generators	21
Lubbock International Airport.....	22
Texas Tech University.....	24
Commercial Vehicle Counts	26
Survey Data Expansion.....	27
Model Rate Development	36
Survey Summary.....	44
Appendix A: Work Place Survey Forms.....	47
Appendix B: ASCII File Formats	59

LIST OF FIGURES

Figure 1. Lubbock MPO Study Area.	2
Figure 2. Lubbock MPO Area Types.	6
Figure 3. Lubbock Study Area - Site Locations Contacted During Recruitment.	7
Figure 4. Lubbock Study Area - Surveyed Work Place Locations.	8
Figure 5. TLFDs of Person and Vehicle Trips to the Work Place.	17
Figure 6. Travel Times of Person and Vehicle Trips to the Work Place.	20
Figure 7. Lubbock Special Generators.	21
Figure 8. Mode of Travel to the Lubbock International Airport.	22
Figure 9. Mode of Travel to Texas Tech University.	24
Figure 10. Commercial Vehicle Counts by Employment Type.	26

LIST OF TABLES

Table 1. NAICS Groupings by Employment Type.....	4
Table 2. Sampling Targets by Employment Category and Survey Type.....	4
Table 3. Work Place Survey Recruitment Participation.	5
Table 4. Work Place Survey Recruitment Contacts by Area Type and Employment Category.....	7
Table 5. Distribution of Full and Partial Surveys by Area Type and Employment Type.....	9
Table 6. Full Establishment Surveys.....	9
Table 7. Partial Establishment Surveys.....	10
Table 8. Residence Locations of Surveyed Residents.	11
Table 9. Residence Locations of Surveyed Non-Residents.	11
Table 10. Surveyed Trip Purposes to and from the Work Place.....	12
Table 11. Surveyed Trip Purposes to and from the Work Place by Area and Employment Types.	13
Table 12. Mode of Travel to the Work Place.....	14
Table 13. Surveyed Inter-Zonal Trip Lengths to the Work Place by Trip Purpose.	15
Table 14. Surveyed Person Trip TLFDs (Grouped).....	15
Table 15. Surveyed Vehicle Trip TLFDs (Grouped).....	15
Table 16. Person and Vehicle Trip TLFDs (Ungrouped).	16
Table 17. Surveyed Inter-Zonal Trip Times to the Work Place by Trip Purpose.....	18
Table 18. Surveyed Person Trips Travel Times (Grouped).	18
Table 19. Surveyed Vehicle Trips Travel Times (Grouped).....	18
Table 20. Person and Vehicle Trips Travel Time (Ungrouped).....	19
Table 21. Surveyed Trip Purposes to and from the Lubbock International Airport.	23
Table 22. Surveyed Inter-Zonal Trip Lengths to the Lubbock International Airport by Trip Purpose.....	23
Table 23. Surveyed Trip Purposes to and from Texas Tech University.	25
Table 24. Surveyed Inter-Zonal Trip Lengths to Texas Tech University by Trip Purpose.	25
Table 25. Commercial Vehicle Counts by Area and Employment Types.	26
Table 26. Work Place Survey Data Summary by Area Type and Employment Type.....	29
Table 27. Raw Person Trip Attractions by Trip Purpose, Area Type and Employment Type.....	31
Table 28. Raw Vehicle Trip Attractions by Trip Purpose, Area Type, and Employment Type.....	32
Table 29. Raw Person Trip Attraction Rates.	33
Table 30. Raw Vehicle Trip Attraction Rates.....	34
Table 31. Raw Commercial Vehicle Attraction Rates.	34
Table 32. Lubbock International Airport Raw Person and Vehicle Trips and Attraction Rates.....	35
Table 33. Texas Tech University Raw Person and Vehicle Trips and Attraction Rates.....	35
Table 34. Raw Total Person Trip Attractions by Employment Type and Trip Purpose.....	36
Table 35. Raw Total Vehicle Trip Attractions by Employment Type and Trip Purpose.....	36
Table 36. Raw Total Person Trip Attraction Rates by Employment Type and Trip Purpose.....	37
Table 37. Raw Total Vehicle Trip Attraction Rates by Employment Type and Trip Purpose.	37
Table 38. Total Employment in the Lubbock Study Area by Area Type and Employment Type.....	37
Table 39. Total Person Trip Attractions by Employment Type and Trip Purpose.	38
Table 40. Total Vehicle Trip Attractions by Employment Type and Trip Purpose.....	38
Table 41. Total Commercial Vehicle Trip Attractions by Employment Type.....	38
Table 42. Raw Travel Estimates for Lubbock Study Area.	39
Table 43. Recommended Person Trip Attraction Rates.....	41
Table 44. Recommended Vehicle Trip Attraction Rates.	42
Table 45. Recommended Commercial Vehicle Trip Attraction Rates.....	43

INTRODUCTION

From 2005 to 2010, the Transportation Planning and Programming (TPP) Division of the Texas Department of Transportation (TxDOT) sponsored a comprehensive set of travel surveys in the Lubbock Metropolitan Planning Organization (MPO) study area. The purpose of the surveys was to collect data and information needed as input to the Lubbock MPO travel demand model for Lubbock County in northwest Texas. The model is an important planning tool used to forecast future traffic levels on area roadways, evaluate the region's transportation plan, and aid in the region's air quality conformity analyses. Most urbanized areas in Texas (as well as in the U.S. and abroad) rely on travel forecasting models as a tool in their transportation planning and air quality analysis efforts. Since modeling results may be used in determining the conformity or non-conformity status of transportation plans to federal clean air regulations, the use of accurate and up-to-date data from the regional travel surveys is important to TxDOT and MPOs across the state.

This report summarizes the results of the work place and special generator surveys for the Lubbock MPO study area. A variety of work place and special generator summary information is presented in this report. The summary information is subject to modification as the survey data are further evaluated and analyzed within the context of all the travel surveys conducted. The purpose of the survey was to collect data on the travel characteristics of employees and non-employees at basic, retail, service, and education establishments that will enable TxDOT to develop and/or update trip attraction models to forecast travel demand within the Lubbock MPO study area.

The study area, shown in Figure 1, is located in northwest Texas, which covers all of Lubbock County, and includes the city of Lubbock as its urban center. Based on the 2010 Census, Lubbock County has a total population of 278,831, a total land area of 896 square miles and a population density of 311 persons per square mile. The city of Lubbock has a total population of 229,573, a total land area of 122 square miles, and population density of 1,875 persons per square mile.

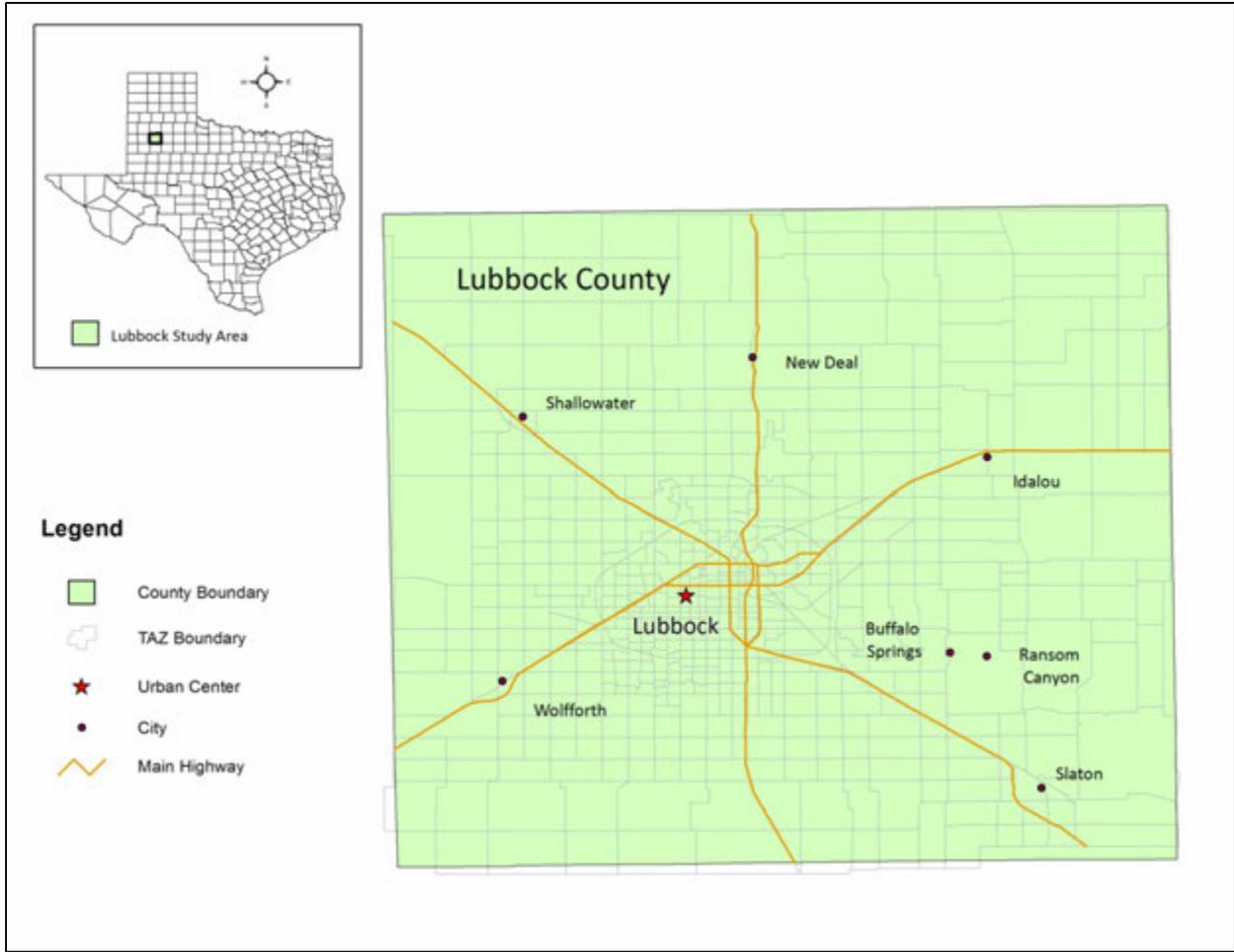


Figure 1. Lubbock MPO Study Area.

SURVEY METHODOLOGY

The work place and special generators travel surveys were conducted between March and May 2010. TxDOT contracted with Alliance Transportation Group, Inc. (ATG) to conduct the Lubbock Work Place Survey. The Texas Transportation Institute (TTI) provided technical assistance to both TxDOT and ATG in the effort.

The Lubbock work place survey consisted of the following four data collection efforts:

- Establishment Survey. This survey determined whether the status of the work place was free standing (e.g., points of vehicle access and parking were clearly established and were designed to serve that work place only), or non-free standing (e.g., vehicle access points and parking were designed to serve more than one establishment). Data on total employment, number of employees at work during the travel survey day, amount of parking, number of daily deliveries, hours of operation, and other general information were collected from this survey.
- Intercept Interview Survey. This survey involved an intercept interview of persons as they exited the establishments. All survey participants were randomly selected, and they included both employees and non-employees.
- Person or Vehicle Count. This task involved counting all vehicles entering and exiting surveyed establishments during their normal operating hours using Accumulative Count Recorders (ACRs) or video cameras. For those sites not suitable for vehicle counts, manual counts of persons were conducted. The counts were performed at each entrance and exit beginning a minimum of one hour prior to the location's normal operating hours and ending no later than one hour after normal operating hours.
- Commercial Vehicle Count. This task involved counting the number of commercial vehicles making deliveries or pick-ups at the establishment using ACRs, video cameras, or manual counts.

The surveyed establishments were classified as either full survey sites or partial survey sites, and distinguished according to their free-standing or non-free standing status. Full survey sites included all the aforementioned data collection activities, while partial survey sites only collected general information (e.g., establishment survey) and did not include intercept interview surveys. Counts were conducted at all surveyed sites.

The establishments were grouped into four types of employment: basic, retail, service, and education, based on the North American Industry Classification System (NAICS) code for establishments shown in Table 1.

Table 1. NAICS Groupings by Employment Type.

Employment Type	NAICS Code	Industry Group
Basic	11	Agriculture, Forestry, Fishing and Hunting
	21	Mining, Quarrying, and Oil and Gas Extraction
	22	Utilities
	23	Construction
	31-33	Manufacturing
	42	Wholesale Trade
	48-49	Transportation and Warehousing
Retail	44-45	Retail trade
	71	Arts, Entertainment, and Recreation
	72	Accommodation and Food Services
	721	Accommodation (except Hotels) and Food Services
Service	51	Information
	52	Finance and Insurance
	53	Real Estate and Rental and Leasing
	54	Professional, Scientific, and Technical Services
	55	Management of Companies and Enterprises
	56	Administrative and Support and Waste Management and Remediation Services
	62	Health Care and Social Assistance
	721	Accommodation (Hotels)
	81	Other Services (except Public Administration)
	92	Public Administration
Education	61	Educational Services
	6117	Educational Support Services

SAMPLING PLAN AND RECRUITMENT

The sampling plan included 100 full surveys and 200 partial surveys. A greater number of partial surveys were used to control costs but still obtain adequate data for modeling purposes. Table 2 shows the sampling targets for each employment category by type of survey.

Table 2. Sampling Targets by Employment Category and Survey Type.

Employment Type	Type of Survey	
	Full	Partial
Basic	20	30
Retail	30	70
Service	30	70
Education	20	30
Total	100	200

The survey sample was drawn from a listing of establishments generated from the Texas Workforce Commission (TWC) database. The establishments were sorted by work place category and then placed in random order for sampling. Each listing included the name, address, and NAICS code of the work place. A total of 6,735 work places were included in the list, which consisted of 1,825 basic, 1,369 retail, 3,405 service, and 136 education types of establishments.

Overall, 600 establishments were successfully contacted as part of the Lubbock work place survey recruitment. Table 3 shows a distribution of establishments by employment type and business location, and recruitment participation was based on the following three categories:

- Agreed to Participate. The establishment is located within the study area and agreed to participate to a full or partial survey.
- Refused with Data. The establishment refused to participate in the survey but provided general data.
- Refused without Data. The establishment refused to participate in the survey and did not provide general data.

Table 3. Work Place Survey Recruitment Participation.

Employment Type	Recruitment Category			
	Agreed to Participate	Refused with Data	Refused without Data	Total
Basic	60	2	71	133
Retail	107	3	74	184
Service	101	0	125	226
Education	56	0	1	57
Total	324	5	271	600
Business Location				
Study Area	324	5	257	586
Unknown Location	0	0	14	14
Total	324	5	271	600

The longitude and latitude coordinates, zone, and area types of the establishments were not collected during the work place recruitment survey. Hence, a geocoding tool was used to generate the longitude and latitude coordinates for each site to determine the zone where it was located, and to determine its area type.

Area type is generally determined by land use activity within a Traffic Analysis Zone (TAZ). It is measured based on a combination of population and employment density in the zone. The density factors are classified into ranges of values that define each area type depending on the size of the urban area. Typically, the area types consist of a Central Business District (CBD), a CBD Fringe and/or Urban area, a Suburban and/or a Suburban Fringe area, and a Rural area.

In the case of Lubbock County, there were four area types, which included CBD, Urban, Suburban, and Rural. The density factors for each area type are CBD (density > 20), Urban (density between 10 and 20), Suburban (density between 1 and 10), and Rural (density < 1). The area types were based on 2006 data that were being used and carried forward for all transportation planning forecasts by the Lubbock MPO. Figure 2 shows the area types in the Lubbock study area.

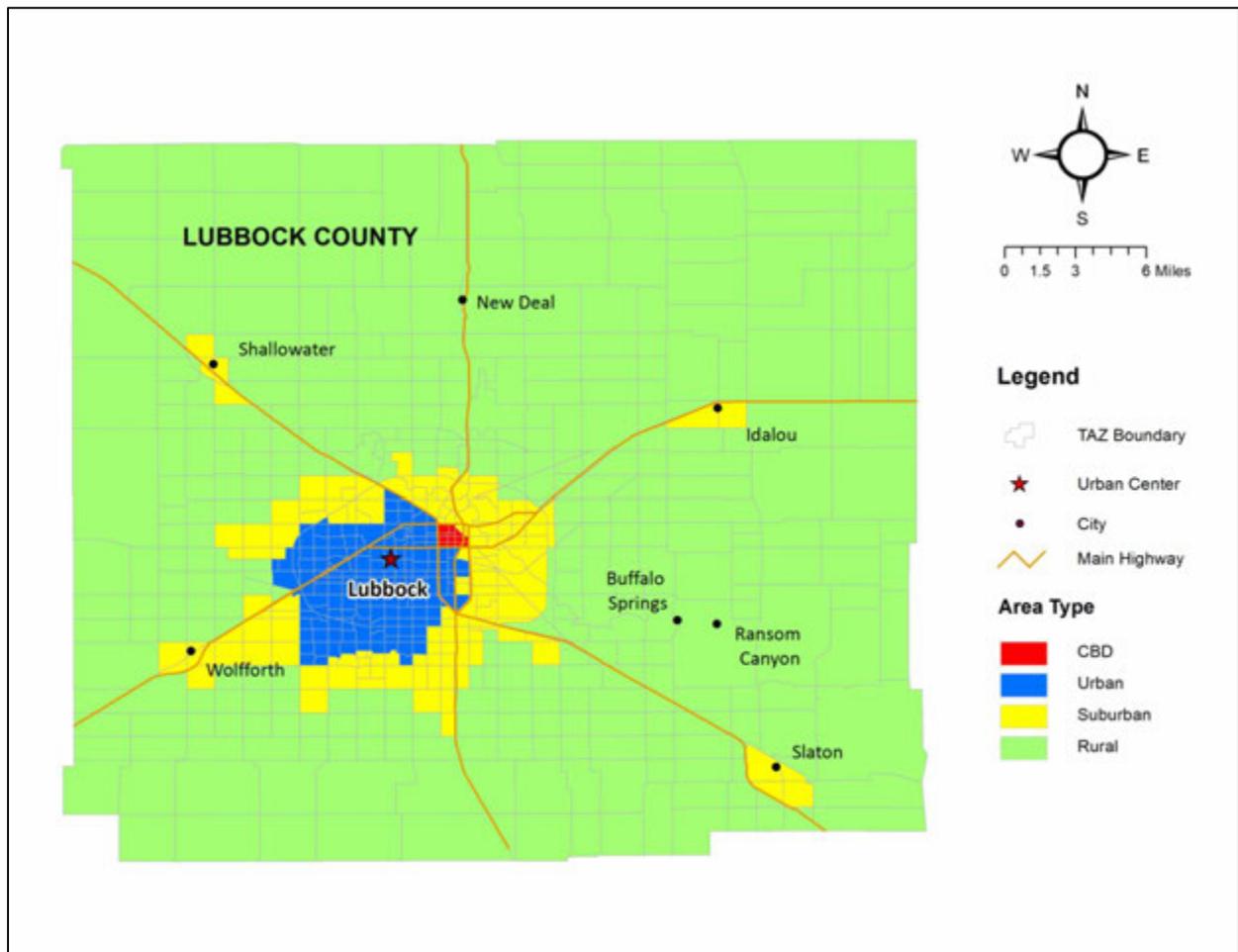


Figure 2. Lubbock MPO Area Types.

Figure 3 shows the locations of the 600 work place survey sites contacted as part of recruitment within the study area, while Table 4 shows the distribution of the sites by area type and employment type.

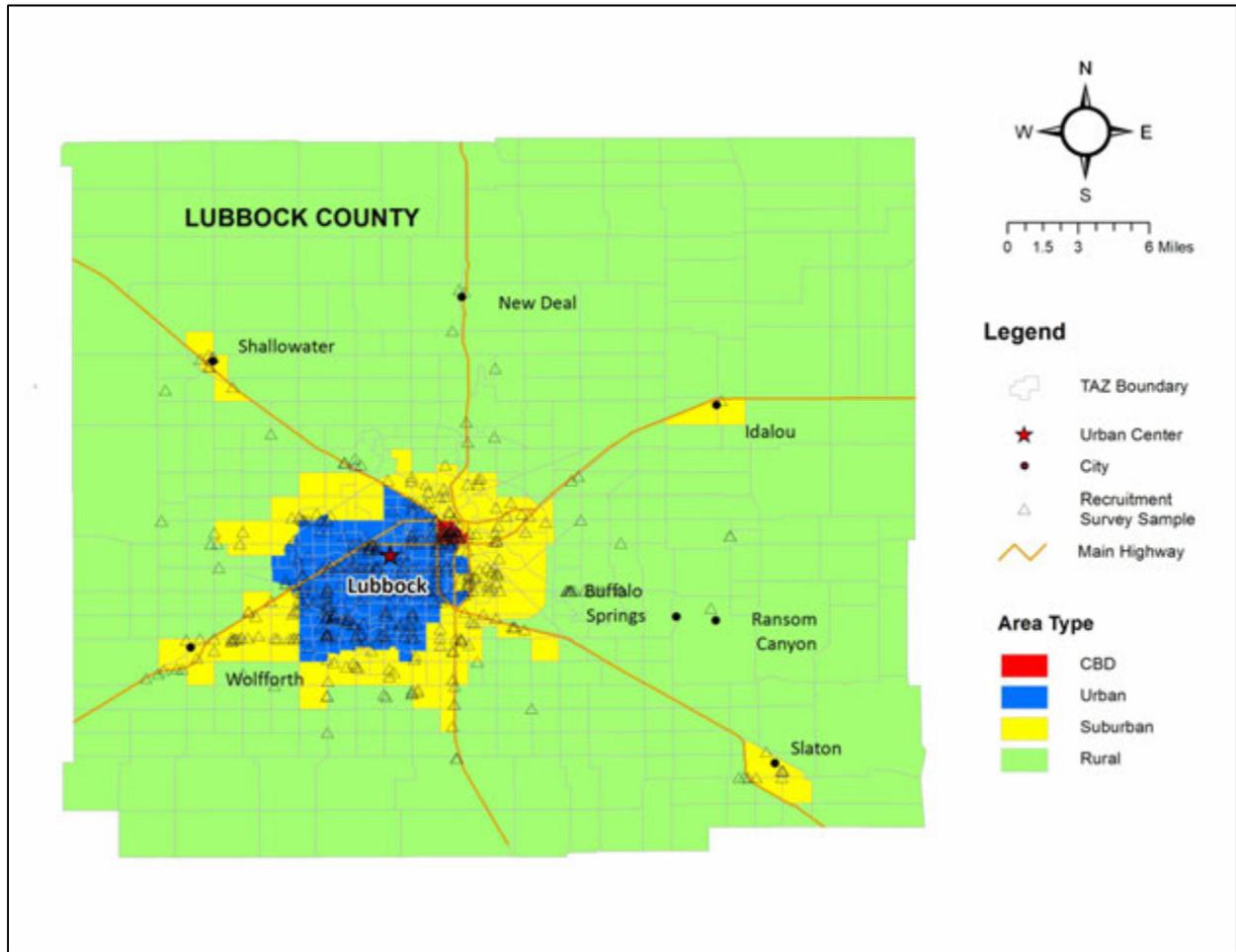


Figure 3. Lubbock Study Area - Site Locations Contacted During Recruitment.

Table 4. Work Place Survey Recruitment Contacts by Area Type and Employment Category.

Area Type	Basic	Retail	Service	Education	Total
CBD	15	7	19	1	42
Urban	27	126	137	25	315
Suburban	61	36	46	21	164
Rural	25	13	17	10	65
Total	128	182	219	57	586
Unclassified Area	5	2	7	0	14

SURVEY RESULTS

A total of 309 establishments and two special generator surveys were completed in the Lubbock work place survey. Excluding special generators, there were 112 full sites surveyed and 197 partial sites surveyed. The distribution of surveyed work places by employment type slightly differed from the pre-determined sample targets. There were initially 324 establishments that agreed to participate during work place survey recruitment, however, 16 establishments were either late refusals (dropped out) or were determined to be no longer needed to fulfill the survey sample requirements.

Figure 4 shows the general locations of surveyed establishments in the Lubbock study area by area and employment types. Table 5 shows the distribution of the full and partial work place sites by area and employment types. Tables 6 and 7 provide further details on key outcomes of full and partial survey sites, respectively. The results from the special generator survey are presented in another section of this report.

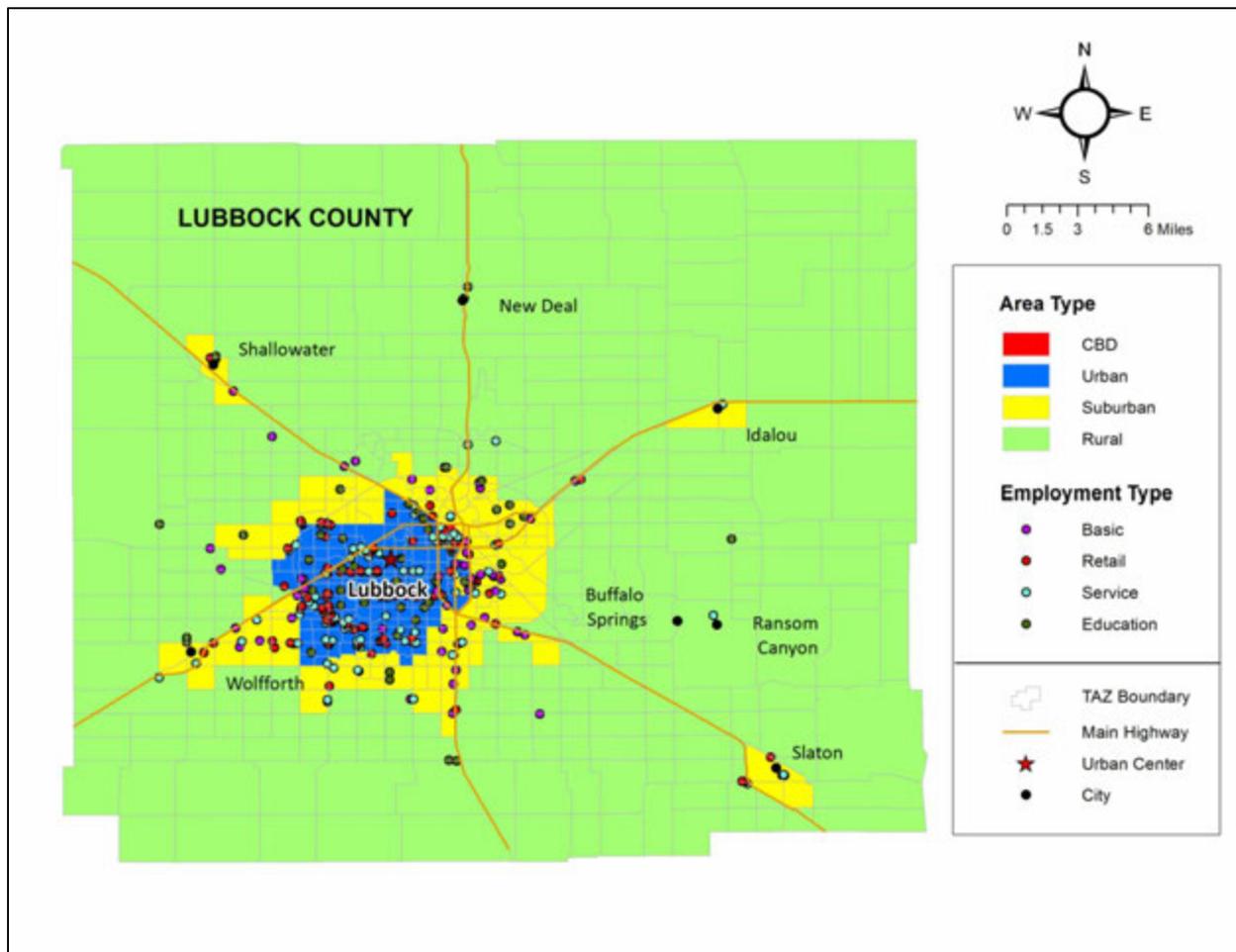


Figure 4. Lubbock Study Area - Surveyed Work Place Locations.

Table 5. Distribution of Full and Partial Surveys by Area Type and Employment Type.

Area Type	Basic		Retail		Service		Education		Total	
	Full	Partial	Full	Partial	Full	Partial	Full	Partial	Full	Partial
CBD	1	2	4	1	2	7	0	0	7	10
Urban	6	5	25	44	13	44	12	14	56	107
Suburban	12	20	8	17	10	15	6	10	36	62
Rural	4	4	0	5	2	3	7	6	13	18
Total	23	31	37	67	27	69	25	30	112	197

Table 6. Full Establishment Surveys.

Area Type	Item	Basic	Retail	Service	Education	Total
CBD	Number of sites	1	4	2	0	7
	Surveyed employees	8	69	17	0	94
	Surveyed visitors	0	223	8	0	231
	Total employment	30	95	37	0	162
	Employees at work	30	88	36	0	154
Urban	Number of sites	6	25	13	12	56
	Surveyed employees	16	119	74	404	613
	Surveyed visitors	14	1,019	87	160	1,280
	Total employment	27	513	262	743	1,545
	Employees at work	25	315	235	743	1,318
Suburban	Number of sites	12	8	10	6	36
	Surveyed employees	113	75	65	117	370
	Surveyed visitors	31	186	127	96	440
	Total employment	212	222	78	337	849
	Employees at work	209	184	75	337	805
Rural	Number of sites	4	0	2	7	13
	Surveyed employees	36	0	8	253	297
	Surveyed visitors	11	0	51	25	87
	Total employment	106	0	16	502	624
	Employees at work	106	0	12	502	620
Total	Number of sites	23	37	27	25	112
	Surveyed employees	173	263	164	774	1,374
	Surveyed visitors	56	1,428	273	281	2,038
	Total employment	375	830	393	1,582	3,180
	Employees at work	370	587	358	1,582	2,897

Table 7. Partial Establishment Surveys.

Area Type	Item	Basic	Retail	Service	Education	Total
CBD	Number of sites	2	1	7	0	10
	Total employment	31	8	132	0	171
	Employees at work	31	8	127	0	166
Urban	Number of sites	5	44	44	14	107
	Total employment	19	1,061	1,190	669	2,939
	Employees at work	17	557	1,129	637	2,340
Suburban	Number of sites	20	17	15	10	62
	Total employment	243	599	140	543	1,525
	Employees at work	224	229	130	543	1,126
Rural	Number of sites	4	5	3	6	18
	Total employment	49	47	20	347	463
	Employees at work	49	38	16	344	447
Total	Number of sites	31	67	69	30	197
	Total employment	342	1,715	1,482	1,559	5,098
	Employees at work	321	832	1,402	1,524	4,079

The 112 full survey sites consisted of 82 free standing and 30 non-free standing sites that reported a total employment of 3,180. A total of 1,374 employees and 2,038 non-employees (referred to in this report as visitors) participated in the intercept survey at the full survey sites. The surveyed employees represented approximately 47 percent of the total 2,897 employees reported to be at work during the travel survey day.

The 197 partial survey sites consisted of 128 free standing and 69 non-free standing sites that reported a total employment of 5,098, of which 4,079 employees were reported to be at work during the travel survey day. No intercept surveys were conducted at these sites, but general information about the establishments was collected.

Trip Characteristics

This section presents the trip characteristics of persons entering or exiting the surveyed work places. Information on residency, trip purpose, mode of travel and occupancy, trip origins, and trip destinations were analyzed to measure the amount of trip attractions to the sites.

Residence

For all work place locations combined, the survey found that 96 percent of surveyed employees and 88 percent of surveyed visitors were residents of the study area. The remaining 4 percent of surveyed employees and 12 percent of surveyed visitors were non-residents. Tables 8 and 9 provide a summary of resident and non-resident locations of survey participants, respectively. The majority of residents lived in the city of Lubbock. Other residence locations within the study area included Wolfforth, Slaton, and Idalou. Approximately 38 percent of the surveyed non-resident employees were from Crosby and Hockley counties, while nearly 70 percent of surveyed non-resident visitors were from Midland, Lamb, Hale and Flynn counties. A number of out-of-state visitors came from New Mexico and Oklahoma.

Table 8. Residence Locations of Surveyed Residents.

Location	Employees		Visitors		Total	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Lubbock City	1,246	94.82	1,663	92.65	2,909	93.57
Idalou	16	1.22	23	1.28	39	1.25
Slaton	11	0.84	58	3.23	69	2.22
Wolfforth	26	1.98	36	2.01	62	1.99
Other (within study area)	15	1.14	15	0.84	30	0.96
Total	1,314	100.00	1,795	100.00	3,109	100.00

Table 9. Residence Locations of Surveyed Non-Residents.

Location	Employees		Visitors		Total	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Crosby	11	18.33	9	3.70	20	6.60
Hockley	12	20.00	27	11.11	39	12.87
Other (within Texas)	37	61.67	169	69.55	206	67.99
Outside Texas	0	0	38	15.64	38	12.54
Total	60	100.00	243	100.00	303	100.00

Trip Purpose

The trip purposes to the work place were identified as work-related, school-related, social/recreational visit, shop, eat out, personal business, pick-up/drop-off passenger, change travel mode, delivery, and other. In the analysis, the trip purposes were classified according to the following trip categories.

- Home-based work (HBW) - when the purpose was work-related, the origin or destination was the home, and the origin or destination was located within the study area.
- Home-based non-work (HBNW) - when the purpose was not work-related, the origin or destination was the home, and the origin or destination was located within the study area.
- Non home-based destination (NHB-D) - when the origin was not the home, the destination was the establishment being surveyed, and the origin was located within the study area.
- Non home-based origin (NHB-O) – when the reported destination when leaving the establishment being surveyed was not the home, and the destination was located within the study area.
- External trip destination (EXT-D) – when the destination was outside the study area when leaving the establishment.
- External trip origin (EXT-O) – when the origin was outside the study area.
- Non-resident (NON-RES) - when the person making the trip to and from the establishment lived outside the study area.

Table 10 shows the number and percentages of trip purposes to and from the work place. Note that these percentages significantly change after weighting is applied to the raw data during the survey expansion process.

Table 10. Surveyed Trip Purposes to and from the Work Place.

Trip Purpose	Number of Trips	Percent of Total
HBW	2,093	30.94
HBNW	2,078	30.73
NHB-D	839	12.41
NHB -O	1,115	16.49
EXT-D	8	0.12
EXT-O	24	0.35
NON RES	606	8.96
Total	6,763	100.00

Table 11 provides the breakdown of surveyed trips by trip purpose and by area and employment types. Sixty-one (61) trips were not counted because they were reported as “not the first establishment visited” and therefore were not attractions to the work place.

Table 11. Surveyed Trip Purposes to and from the Work Place by Area and Employment Types.

Area Type	Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total
CBD	Basic	14	0	0	2	0	0	0	16
	Retail	117	129	52	78	0	1	202	579
	Service	27	4	8	9	0	0	2	50
	Education	0	0	0	0	0	0	0	0
Urban	Basic	24	18	8	10	0	0	0	60
	Retail	196	1,099	352	398	1	4	190	2,240
	Service	127	64	44	55	1	2	26	319
	Education	624	196	107	175	0	6	20	1,128
Suburban	Basic	164	12	48	29	3	2	30	288
	Retail	117	211	74	87	0	1	32	522
	Service	89	140	52	72	1	0	30	384
	Education	166	123	31	87	2	3	14	426
Rural	Basic	45	5	15	16	0	3	10	94
	Retail	0	0	0	0	0	0	0	0
	Service	6	54	9	14	0	0	18	101
	Education	377	23	39	83	0	2	32	556
Total	Basic	247	35	71	57	3	5	40	458
	Retail	430	1,439	478	563	1	6	424	3,341
	Service	249	262	113	150	2	2	76	854
	Education	1,167	342	177	345	2	11	66	2,110
Total Trips		2,093	2,078	839	1,115	8	24	606	6,763

Mode of Travel and Vehicle Occupancy

Table 12 shows the distribution of surveyed trips by mode of travel to the work place. Approximately 91 percent of surveyed trips to the workplaces were made by drivers of cars, trucks, or vans. Nearly five percent were passengers of a vehicle, and more than two percent walked. The average occupancy was estimated at 1.42 persons per vehicle.

Table 12. Mode of Travel to the Work Place.

Mode	Number of Trips	Percent of Total Trips	Average Vehicle Occupancy
Driver (car/truck/van)	3,104	90.97	1.37
Passenger (car/truck/van)	167	4.89	2.24
Walk	87	2.55	-
Bicycle	7	0.21	-
Transit Bus	10	0.29	-
School Bus	5	0.15	-
Taxi/Limo	3	0.09	2.00
Commercial Cargo Transport Vehicle	8	0.23	1.50
Commercial Service Vehicle	9	0.26	1.33
Motorcycle	8	0.24	1.38
Other/Unknown	4	0.12	-
Total	3,412	100.00	1.42

Trip Length

Each trip in the survey, based on its reported origin location and destination location, was geocoded to either a TAZ system for the Lubbock study area, or to the statewide TAZ system when the location was outside the study area (but within the state of Texas). After the trips were geocoded, the travel distance and travel time for each trip to the surveyed work place was estimated using the transportation network matrix available for the Lubbock study area that provides the zone-to-zone trip lengths and times.

The analyses of trip lengths presented in this section pertain only to inter-zonal trips by the auto-driver mode of travel to the work place, since the Lubbock network matrix only provides distances between zones and not within zones (e.g., intra-zonal).

Table 13 shows the trip lengths to the work place by surveyed trip purpose, while Tables 14 and 15 show the trip length frequency distributions (TLFDs), grouped at five-mile intervals. Table 16 shows the ungrouped results of the TLFDs for person and vehicle trips. The average inter-zonal trip length to the work place was 5.12 miles per person trip and 5.09 miles per vehicle trip. More than 70 percent of the observed trips traveled a distance of less than five miles, and 22 percent had trip lengths between five and 10 miles.

Table 13. Surveyed Inter-Zonal Trip Lengths to the Work Place by Trip Purpose.

Trip Purpose	Total Person Miles	Number of Person Trips	Average Person Miles	Total Vehicle Miles	Number of Vehicle Trips	Average Vehicle Miles
HBW	1,695	322	5.26	1,380	264	5.23
HBNW	2,596	495	5.24	1,631	312	5.23
NHB-D	3,565	736	4.84	2,626	544	4.83
NON-RES	413	63	6.56	274	41	6.69
Total	8,269	1,616	5.12	5,911	1,161	5.09

Table 14. Surveyed Person Trip TLFDs (Grouped).

Trip Length	HBW	HBNW	NHB-D	NON-RES	Total
Less than 5 miles	216	341	542	41	1,140
5 to 9 miles	81	125	151	11	368
10 to 14 miles	20	17	28	4	69
15 to 19 miles	1	11	15	6	33
20 to 24 miles	2	1	0	0	3
25 to 30 miles	2	0	0	1	3
Total	322	495	736	63	1,616

Table 15. Surveyed Vehicle Trip TLFDs (Grouped).

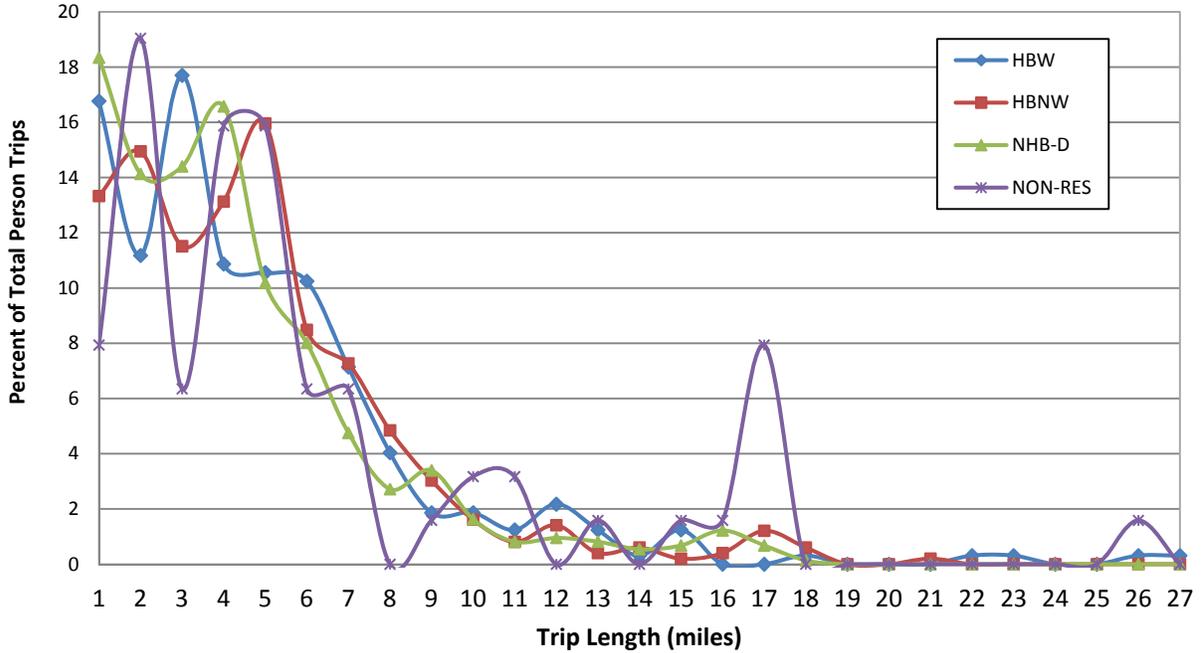
Trip Length	HBW	HBNW	NHB-D	NON-RES	Total
Less than 5 miles	177	219	405	24	825
5 to 9 miles	66	70	108	10	254
10 to 14 miles	16	13	18	4	51
15 to 19 miles	1	9	13	2	25
20 to 24 miles	2	1	0	0	3
25 to 30 miles	2	0	0	1	3
Total	264	312	544	41	1,161

Table 16. Person and Vehicle Trip TLFDs (Ungrouped).

Miles	Person Trips				Vehicle Trips			
	HBW	HBNW	NHB-D	NON-RES	HBW	HBNW	NHB-D	NON-RES
1	54	66	135	5	52	46	100	4
2	36	74	104	12	33	50	82	6
3	57	57	106	4	42	38	73	2
4	35	65	122	10	28	45	87	6
5	34	79	75	10	22	40	63	6
6	33	42	59	4	25	22	41	4
7	23	36	35	4	18	22	25	3
8	13	24	20	0	11	14	16	0
9	6	15	25	1	6	7	19	1
10	6	8	12	2	6	5	7	2
11	4	4	6	2	4	3	3	2
12	7	7	7	0	5	4	6	0
13	4	2	6	1	3	2	3	1
14	1	3	4	0	1	3	3	0
15	4	1	5	1	3	1	3	1
16	0	2	9	1	0	1	8	1
17	0	6	5	5	0	5	4	1
18	1	3	1	0	1	3	1	0
19	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
21	0	1	0	0	0	1	0	0
22	1	0	0	0	1	0	0	0
23	1	0	0	0	1	0	0	0
24	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0
26	1	0	0	1	1	0	0	1
27	1	0	0	0	1	0	0	0
Total	322	495	736	63	264	312	544	41

Figures 5a and 5b show the ungrouped TLFDs by percentage of total person and vehicle trips by trip purpose, respectively.

(a) Person Trips



(b) Vehicle Trips

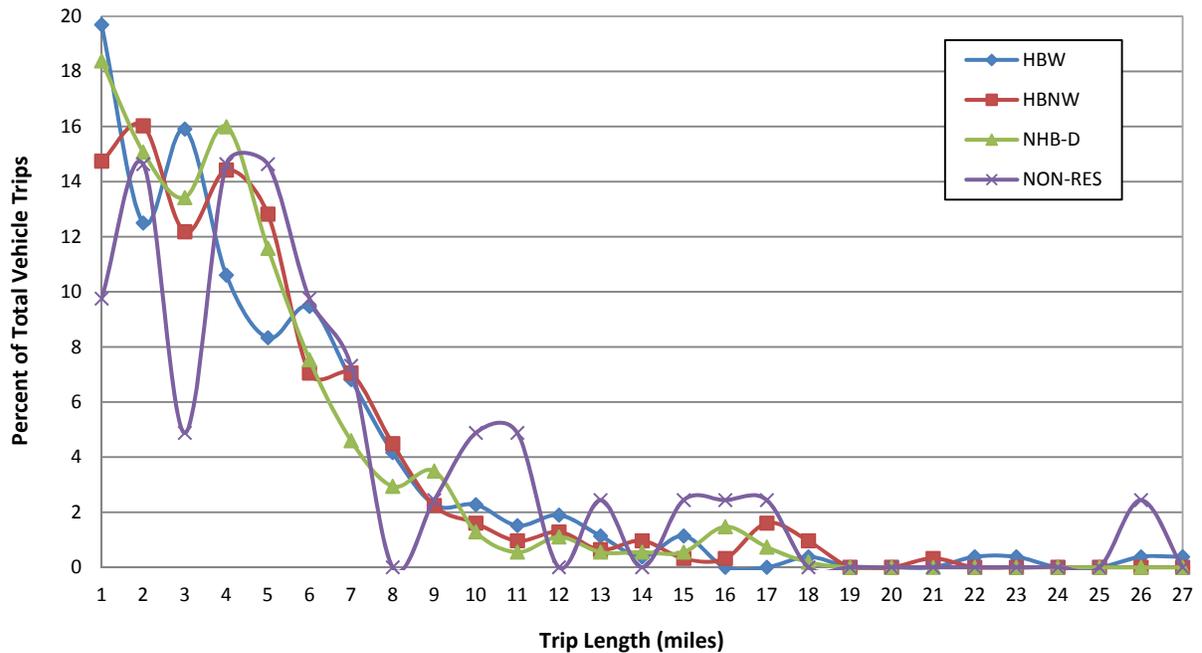


Figure 5. TLFDs of Person and Vehicle Trips to the Work Place.

Table 17 shows the travel times to the workplace by trip purpose, while Tables 18 and 19 show the travel times, grouped at five-minute intervals, while Table 20 shows the ungrouped results. The average travel time to the workplace was 8.28 minutes per person trip and 8.23 minutes per vehicle trip.

Table 17. Surveyed Inter-Zonal Trip Times to the Work Place by Trip Purpose.

Trip Purpose	Total Person Minutes	Number of Person Trips	Average Person Minutes	Total Vehicle Minutes	Number of Vehicle Trips	Average Vehicle Minutes
HBW	2,693	322	8.36	2,194	264	8.31
HBNW	4,242	495	8.57	2,655	312	8.51
NHB-D	5,847	736	7.94	4,302	544	7.91
NON-RES	606	63	9.62	407	41	9.92
Total	13,388	1,616	8.28	9,557	1,161	8.23

Table 18. Surveyed Person Trips Travel Times (Grouped).

Travel Time	HBW	HBNW	NHB-D	NON-RES	Total
Less than 5 minutes	121	162	284	21	588
5 to 9 minutes	121	210	300	24	655
10 to 14 minutes	57	95	103	8	263
15 to 19 minutes	16	12	28	4	60
20 to 24 minutes	3	13	21	5	42
25 to 29 minutes	2	3	0	0	5
30 to 34 minutes	1	0	0	1	2
35 to 40 minutes	1	0	0	0	1
Total	322	495	736	63	1,616

Table 19. Surveyed Vehicle Trips Travel Times (Grouped).

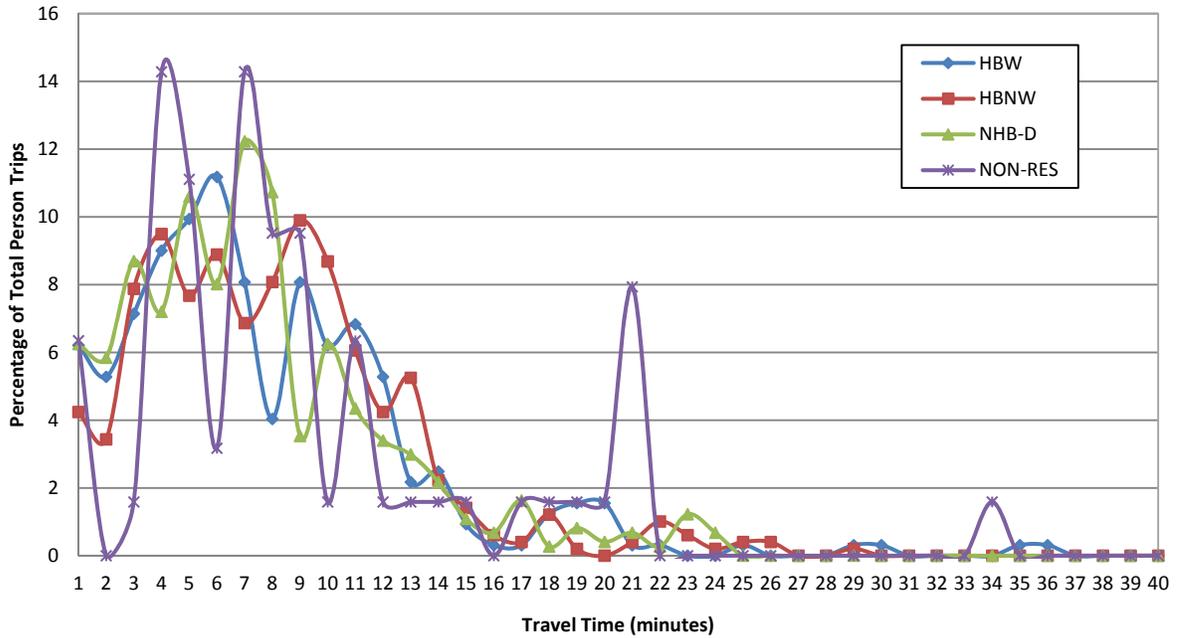
Travel Time	HBW	HBNW	NHB-D	NON-RES	Total
Less than 5 minutes	106	109	215	12	442
5 to 9 minutes	91	129	220	16	456
10 to 14 minutes	48	52	75	7	182
15 to 19 minutes	12	8	18	4	42
20 to 24 minutes	3	11	16	1	31
25 to 29 minutes	2	3	0	0	5
30 to 34 minutes	1	0	0	1	2
35 to 40 minutes	1	0	0	0	1
Total	264	312	544	41	1,161

Table 20. Person and Vehicle Trips Travel Time (Ungrouped).

Minutes	Person Trips				Vehicle Trips			
	HBW	HBNW	NHB-D	NON-RES	HBW	HBNW	NHB-D	NON-RES
1	20	21	46	4	18	16	35	3
2	17	17	43	0	17	14	31	0
3	23	39	64	1	22	23	50	1
4	29	47	53	9	21	32	42	4
5	32	38	78	7	28	24	57	4
6	36	44	59	2	27	31	40	1
7	26	34	90	9	20	24	59	5
8	13	40	79	6	10	23	64	4
9	26	49	26	6	19	25	22	5
10	20	43	46	1	15	26	35	1
11	22	30	32	4	16	16	22	3
12	17	21	25	1	15	12	19	1
13	7	26	22	1	7	13	15	1
14	8	11	16	1	7	7	12	1
15	3	7	8	1	3	4	7	1
16	1	3	5	0	1	2	5	0
17	1	2	12	1	1	1	5	1
18	4	6	2	1	3	4	2	1
19	5	1	6	1	3	1	3	1
20	5	0	3	1	4	0	3	1
21	1	2	5	5	1	2	3	1
22	1	5	2	0	1	3	2	0
23	0	3	9	0	0	3	6	0
24	0	1	5	0	0	1	5	0
25	1	2	0	0	1	2	0	0
26	0	2	0	0	0	2	0	0
27	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0
29	1	1	0	0	1	1	0	0
30	1	0	0	0	1	0	0	0
31	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0
34	0	0	0	1	0	0	0	1
35	1	0	0	0	1	0	0	0
36	1	0	0	0	1	0	0	0
37	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
Total	322	495	736	63	264	312	544	41

Figures 6a and 6b show the ungrouped travel times in percentage values of total person and vehicle trips by trip purpose.

(a) Person Trips



(b) Vehicle Trips

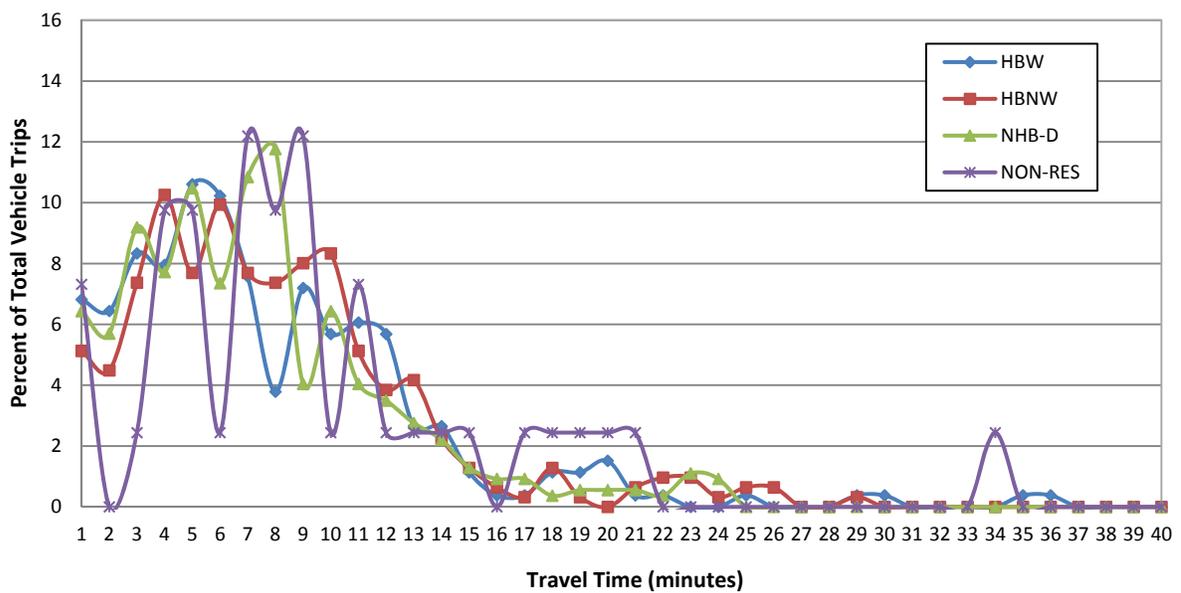


Figure 6. Travel Times of Person and Vehicle Trips to the Work Place.

SPECIAL GENERATORS

Special generators are those establishments that are considered unique trip attractors. These may include regional shopping malls, hospitals, colleges/universities, recreational facilities, military bases, airports, and other land use developments that have unique trip generation characteristics and therefore require modeling outside the typical travel demand modeling framework.

Two special generators were surveyed in the Lubbock study area. These included the Lubbock International Airport and Texas Tech University. Figure 7 shows their locations and corresponding area types.

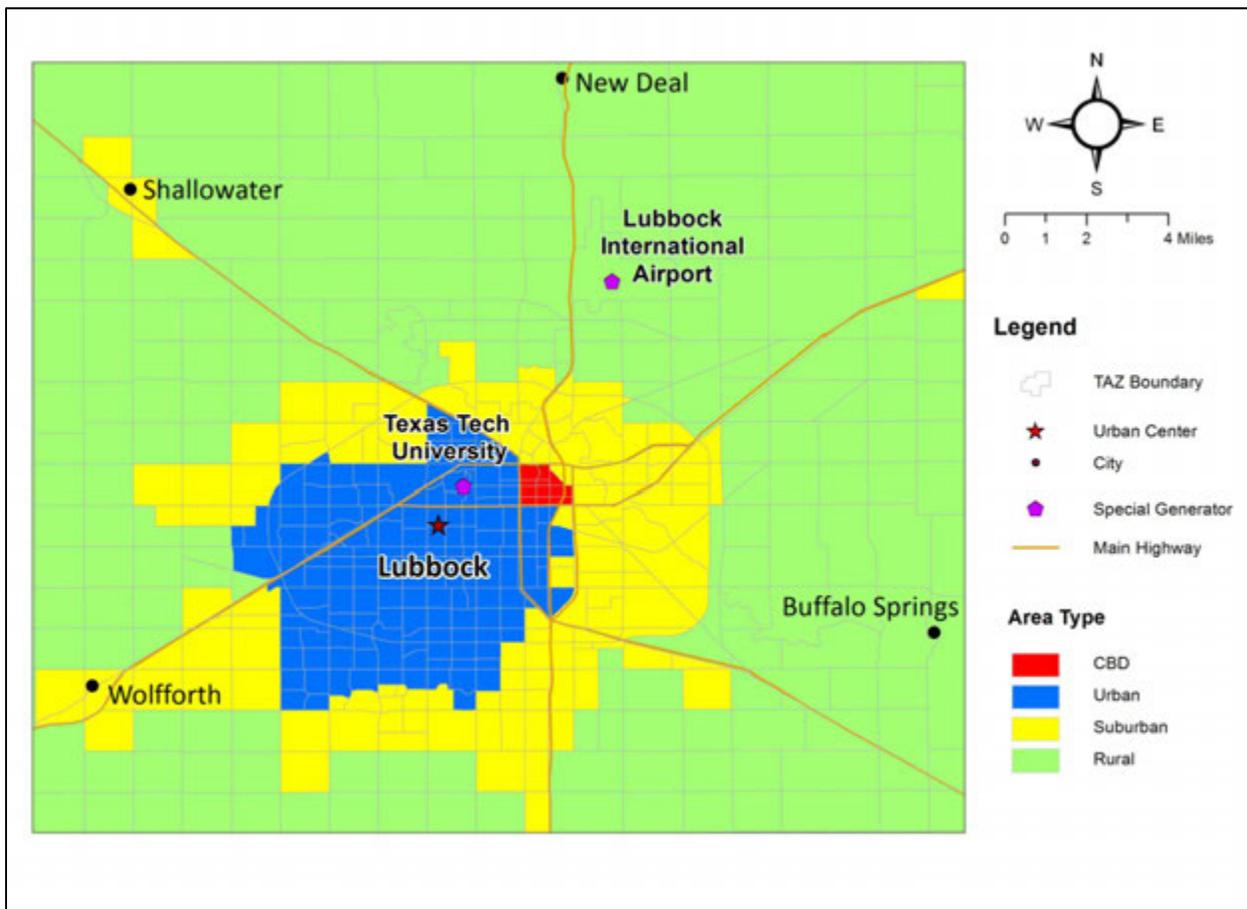


Figure 7. Lubbock Special Generators.

The methodology used to survey special generators was the same as that used for full work place surveys, except to a much larger scale (see page 3 of this report). It included a general survey, an intercept survey, vehicle counts, and commercial vehicle counts.

The trip characteristics observed from each special generator are described by mode of travel, trip purpose, and trip length. The analyses of trip lengths pertain to inter-zonal trips since the Lubbock network matrix provides only distances between zones and not within zones, and for the auto-driver mode only. Note that the results presented throughout this section are based on raw trip data. These results significantly change after weighting is applied to the raw data during the survey expansion.

Lubbock International Airport

The Lubbock International Airport had a reported total employment of 700, with 250 of these employees estimated to be at work during the travel survey day. A total of 56 employees and 168 visitors participated in the survey. The surveyed employees represented 22 percent of the total employees at work. Vehicle counts were conducted for a 12-hour period (7:00 a.m. to 7:00 p.m.), with a total count of 4,378 non-commercial vehicles and 29 commercial vehicles (11 cargo vehicles and 18 service vehicles).

Figure 8 shows the mode of travel used by survey participants to travel to the airport. Approximately 46 percent arrived by airplane, 43 percent were drivers of cars, trucks, or vans, 10 percent were passengers, and less than one percent drove a motorcycle. The average occupancy for the auto-driver mode of travel was 1.1 persons for employee trips and 1.6 persons for visitor trips.

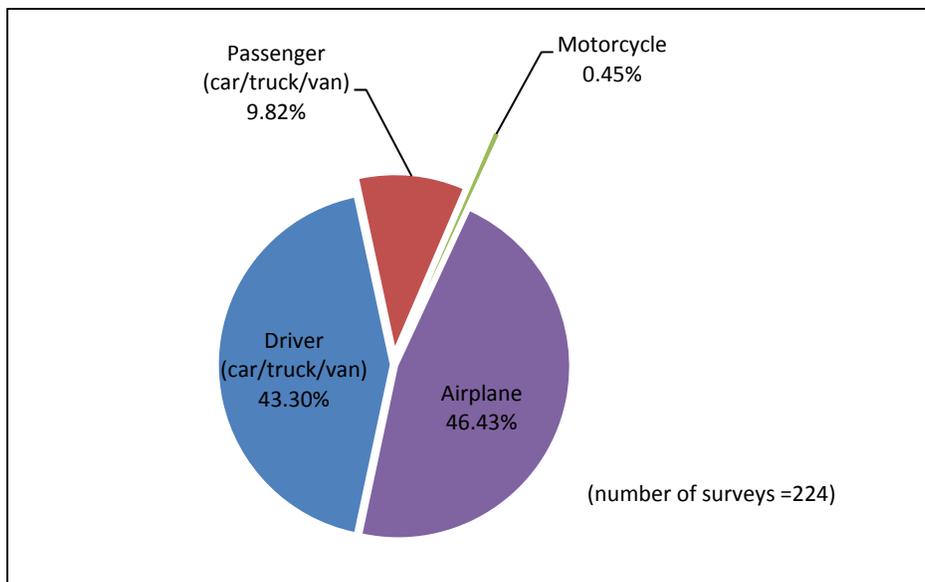


Figure 8. Mode of Travel to the Lubbock International Airport.

Table 21 shows the number and percentage of surveyed trips to and from the airport by trip purpose. Table 22 shows the inter-zonal trip length to the airport by trip purpose for person and vehicle trips for the auto-driver mode of travel only. The average trip length was 5.7 miles per person trip and 5.6 miles per vehicle trip. Note that the number of person and vehicle trips shown in Table 22 is low compared to the total trips provided in Table 21. This is because nearly half of the total number of observed trips were by airplane mode of travel, and while more than 40 percent of the observed trips were by the auto-driver mode, only 15 percent of the total auto-driver trips were inter-zonal and the remaining 61 percent and 24 percent were intra-zonal trips and external trips, respectively.

Table 21. Surveyed Trip Purposes to and from the Lubbock International Airport.

Trip Purpose	To Work Place	From Work Place	Total Trips	Percent of Total
HBW	55	92	147	32.81
HBNW	55	22	77	17.19
NHB-D	8	0	8	1.79
NHB-O	0	18	18	4.02
EXT-D	29	0	29	6.47
EXT -O	0	15	15	3.34
NON RES	77	77	154	34.38
Total	224	224	448	100.00

Table 22. Surveyed Inter-Zonal Trip Lengths to the Lubbock International Airport by Trip Purpose.

Trip Purpose	Total Person Miles	Number of Person Trips	Average Person Miles	Total Vehicle Miles	Number of Vehicle Trips	Average Vehicle Miles
HBW	24.42	6	4.07	20.67	5	4.13
HBNW	54.93	8	6.87	29.16	4	7.29
NHB-D	25.93	5	5.19	13.51	3	4.50
NON-RES	48.50	8	6.06	15.04	2	7.52
Total	153.78	27	5.70	78.38	14	5.60

Texas Tech University

Texas Tech University had a reported total employment of 12,097. This total consisted of 9,037 at the main campus, which included student workers, and 2,790 at the Health Science Center. The special generator survey randomly interviewed 60 employees and 449 visitors (403 students and 46 non-employees). Vehicle counts were conducted for a 12-hour period from 7:00 a.m. to 7:00 p.m., with a total count of 78,918 non-commercial vehicles and 926 commercial vehicles.

Out of the total surveyed, 66 were residents on campus and their trip characteristics were not surveyed. Therefore, the analysis of trips presented in this section pertains only to 443 surveys, and not the survey sample of 509.

Figure 9 shows the mode of travel used by the survey participants to travel to the university. Approximately 66 percent were drivers of cars, trucks, or vans; 14 percent were passengers; 12 percent rode a bus or public transit; and three percent either rode a bicycle or school bus. The average vehicle occupancy was 1.1 persons for employee trips and 1.2 persons for visitor trips.

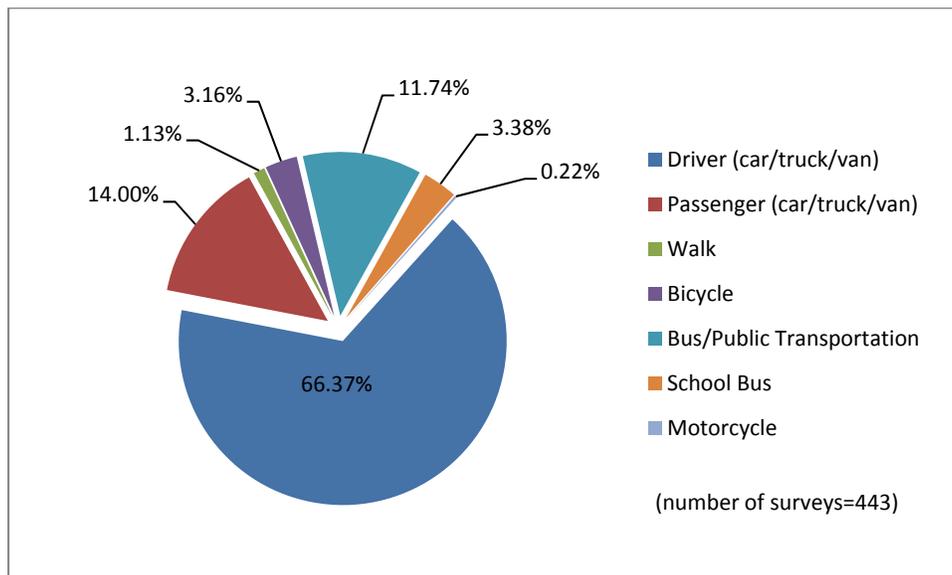


Figure 9. Mode of Travel to Texas Tech University.

Table 23 shows the number and percentage of surveyed trips to and from the university by purpose. There were 66 surveys that were not included in the trip analysis because the participants were residents on campus. Table 24 shows the inter-zonal trip lengths to the university by trip purpose for person and vehicle trips for the auto-driver mode of travel only. The average trip length per person trip was 4.9 miles and 4.7 miles per vehicle trip.

Table 23. Surveyed Trip Purposes to and from Texas Tech University.

Trip Purpose	To Work Place	From Work Place	Total Trips	Percent of Total
HBW	50	42	92	10.38
HBNW	342	311	653	73.70
NHB-D	43	81	124	14.00
NHB-O	0	0	0	0.00
EXT-D	1	0	1	0.11
EXT -O	0	2	2	0.23
NON RES	7	7	14	1.58
Total	443	443	886	100.00

Table 24. Surveyed Inter-Zonal Trip Lengths to Texas Tech University by Trip Purpose.

Trip Purpose	Total Person Miles	Number of Person Trips	Average Person Miles	Total Vehicle Miles	Number of Vehicle Trips	Average Vehicle Miles
HBW	96.12	13	7.39	66.05	11	6.00
HBNW	185.00	39	4.74	149.08	31	4.81
NHB-D	124.72	32	3.90	83.94	23	3.65
NON-RES	16.74	2	8.37	8.37	1	8.37
Total	422.58	86	4.91	307.44	66	4.66

COMMERCIAL VEHICLE COUNTS

The commercial vehicle counts involved counting the number of cargo and service vehicles making deliveries or pick-ups at the surveyed establishments during the work place travel survey day. The counts were conducted using ACRs, video cameras, or manual counts. The counts were conducted for a 12-hour period beginning at 7:00 a.m. and ending at 7:00 p.m. on the day of the survey. It is important to note that the commercial vehicle count data from the Lubbock work place survey were quite low. Only 850 commercial vehicles were counted at 99 out of the total 309 surveyed sites. It was not certain whether the remaining 210 sites did or did not have commercial vehicles entering/exiting the establishments. However, there were reported issues on counters that failed to capture or adequately count the number of commercial vehicles traveling to and from the sites. Based on the total counts, approximately 43 percent were at education establishments (most of these may have been school buses), 23 percent were at basic, 20 percent were at retail, and the remaining 13 percent were at service establishments. Figure 10 and Table 25 show the distribution of commercial vehicle counts by employment type and area type for the Lubbock study area.

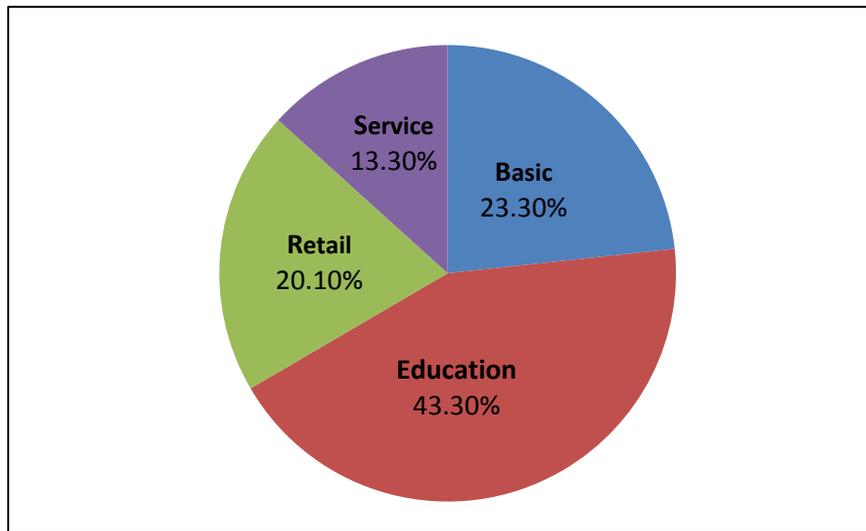


Figure 10. Commercial Vehicle Counts by Employment Type.

Table 25. Commercial Vehicle Counts by Area and Employment Types.

Area Type	Basic	Retail	Service	Education	Total
CBD	0	6	2	0	8
Urban	1	92	80	86	259
Suburban	170	65	15	109	359
Rural	27	8	16	173	224
Total	198	171	113	368	850

SURVEY DATA EXPANSION

The expansion of work place and special generator survey data involved a series of procedures. The surveyed trips for each site were counted separately for employees and visitors. Each trip was classified by trip purpose, both from the origin to the work place and from the work place to the destination. The trips for each site were then summed and stratified by area type and employment type to develop the trip rate estimates for each category of trip purpose based on employment data.

The steps used to expand the work place survey data are listed below.

1. Count the number of employee trips at each site by trip purpose. The trip purpose categories included HBW, HBNW, NHB-D, NHB-O, EXT-D, EXT-O, and NON-RES. Each trip was counted by purpose from the origin to the work place and from the work place to the next destination. These raw employee trips were treated as employee vehicle trips and were later weighted by the number of employee surveys, and expanded using employment data for each site.
2. Estimate the average vehicle occupancy for each site by trip purpose and by the auto-driver mode of travel only. All other vehicle modes of travel were not included in the analysis to avoid the possibility of double counting the number of persons for each reported trip. The average vehicle occupancy was estimated separately for resident and non-resident employee and visitor trips for each site. Note that the average vehicle occupancy for employee trips was assumed to be one person per employee trip, regardless of the employee vehicle occupancy that was reported. Since the trip purposes of the other occupants traveling with the employee could not be determined from the survey, it was assumed that such trips were non-work related.
3. Based on the results in Step 2, estimate the average vehicle occupancy for each site. Each site conducted either a vehicle count or a person count, but not both. If a vehicle count was conducted, the total person count was determined by multiplying the vehicle count with the average vehicle occupancy. If a person count was conducted, the total vehicle count was estimated by dividing the total person count by the average vehicle occupancy.
4. Based on the results in Steps 1 and 2, multiply the raw employee vehicle trips by trip purpose with the average employee vehicle occupancy by trip purpose for each site to estimate the total employee person trips by trip purpose. The total employee vehicle and person trips were later subtracted from the total vehicle and person counts determined in Step 3 to estimate the visitor vehicle and person trips for each site. Note that the average visitor vehicle occupancy that was estimated for each site was mainly used in the estimation of the average vehicle occupancy and not in the estimation of visitor person trips.

5. The estimated visitor vehicle and person trips developed in Step 4 were not stratified by trip purpose. To establish the proportion of visitor trips for each category of trip purpose, the number of surveyed visitor trips was counted by trip purpose and divided by the total number of raw visitor trips. The resulting percentages were applied to the total visitor vehicle and person trips for each site to estimate the number of visitor and person trips by trip purpose.
6. For those visitors at non-free standing establishments who reported that the site was not their first stop, such trips were counted separately and were not included in the analysis. These “not-counted” trips represented trips that were not attracted to the establishment. However, when these trips left the establishment, they were considered as trip productions and were included in the analysis in this capacity.
7. For each category of trip purpose, the employee trip rate was developed by dividing the number of raw employee trips with the total number of employees surveyed at each site. This rate by trip purpose was applied to the total number of employees at work at each site to estimate the expanded number of employee vehicle trips by trip purpose per site. The expanded employee person trips by trip purpose were estimated by multiplying the employee vehicle trips by trip purpose with the average employee vehicle occupancy for each site.
8. The survey data expansion was first performed by individual site and then later aggregated by area type and employment type to estimate the total vehicle and person trips. Employee trip rates were not computed directly from aggregated raw employee trips and employment data by area type and employment type because of discrepancies in the trip totals resulting from the data aggregation. To avoid any discrepancies in the estimation of total trips and trip rates, data aggregation was only performed based on the data expansion procedure by site.
9. The employee and visitor trips by trip purpose for each site were then summed by area type and employment type. The employee and visitor trips by trip purpose for each site were also summed by employment type.
10. For each category of area type and employment type, the number of employees at work, total employment, vehicle counts, and person counts were summed for all establishments. Table 26 shows the work place survey data summary by area type and employment type.
11. For those sites that were identified as partial survey sites and where no intercept surveys were conducted, the expansion procedure was based on the average vehicle occupancy rates, trip rates, and proportion of visitor trips that were observed from the full survey sites.

Table 26. Work Place Survey Data Summary by Area Type and Employment Type.

Area Type	Item	Basic	Retail	Service	Education	Total
CBD	Number of sites	3	5	9	0	17
	Total employment	61	103	169	0	333
	Employees at work	61	96	163	0	320
	Total person count	274	3,201	819	0	4,294
	Total vehicle count	254	2,584	728	0	3,566
	Total commercial vehicle count	0	6	2	0	8
Urban	Number of sites	11	69	57	26	163
	Total employment	46	1,574	1,452	1,412	4,484
	Employees at work	42	872	1,364	1,380	3,658
	Total person count	388	65,343	12,627	46,513	124,871
	Total vehicle count	356	50,839	11,123	34,648	96,966
	Total commercial vehicle count	1	92	80	86	259
Suburban	Number of sites	32	25	25	16	98
	Total employment	455	821	218	880	2,374
	Employees at work	433	413	205	880	1,931
	Total person count	3,473	24,719	2,661	15,833	46,682
	Total vehicle count	3,137	19,524	2,278	11,438	36,377
	Total commercial vehicle count	170	65	15	109	359
Rural	Number of sites	8	5	5	13	31
	Total employment	155	47	36	849	1,087
	Employees at work	155	38	28	846	1,067
	Total person count	955	2,251	559	17,783	21,548
	Total vehicle count	868	1,777	446	14,088	17,179
	Total commercial vehicle count	27	8	16	173	224
Total	Number of sites	54	104	96	55	309
	Total employment	717	2,545	1,875	3,141	8,278
	Employees at work	691	1,419	1,760	3,106	6,976
	Total person count	5,090	95,515	16,666	80,128	197,399
	Total vehicle count	4,615	74,724	14,575	60,174	154,088
	Total commercial vehicle count	198	171	113	368	850

12. The average vehicle occupancy rates from the full survey sites that were developed for each category of employment were used in each partial survey site of the same employment type. These rates were used to estimate the total vehicle count in sites where vehicle counts were conducted or to estimate the total person count in sites where person counts were conducted. The resulting estimates were the total vehicle counts and total person counts in each partial survey site.

13. The trip rates from the full survey sites that were developed for each category of area and employment type were used in each partial survey site of the same area and employment type. These rates were multiplied by the total number of employees at work at each partial survey site to estimate the expanded number of employee vehicle trips by trip purpose. The average employee vehicle occupancy by employment type from the full survey sites was applied to the number of employee vehicle trips for each category of trip purpose to estimate the expanded number of employee person trips at each partial survey site.
14. The total number of vehicle and person visitor trips in partial survey sites were estimated by subtracting the number of employee vehicle trips from the total vehicle counts, and subtracting the employee person trips from the total person counts, respectively. The resulting estimates were the total number of visitor vehicle trips and visitor person trips at each partial survey site.
15. The proportion of raw visitor trips by trip purpose from the full survey sites were estimated by area type and employment type, and were used in each partial survey site of the same area and employment type. The resulting percentages of visitor trips by trip purpose were multiplied to the total visitor vehicle and person trips in partial survey sites, respectively, to estimate the visitor vehicle and person trips by trip purpose.
16. The total number of vehicle and person trips by trip purpose for the study area were estimated by summing the total vehicle trips and total person trips from the full and partial survey sites, respectively. The results were then aggregated by area type and employment type for all sites to establish the trip rates by trip purpose. Trip rates were calculated by dividing the number of vehicle and person trips by trip purpose for each category of area type and employment type with the total employment of the same area type and employment type.
17. The trip rates for commercial vehicles were calculated by dividing the commercial vehicle counts by the total employment. In view of the insufficient count data collected during the travel survey, the commercial vehicle attraction rates were based on total employment of 99 surveyed sites that reported commercial vehicle counts. The other surveyed sites with zero commercial counts were excluded from the commercial vehicle trip rate estimation and therefore the total employment for these sites were not included in this estimation.

Tables 27 through 31 provide the Lubbock work place survey data expansion results. Tables 27 and 28 show the raw person and vehicle trip attractions for each category of employment by area type and trip purpose, respectively. Tables 29 and 30 show the raw person and vehicle trip attraction rates, respectively. Table 31 shows the raw commercial vehicle trip attraction rates.

Table 27. Raw Person Trip Attractions by Trip Purpose, Area Type and Employment Type.

Area Type	BASIC							Total Person Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	127	48	32	45	1	0	21	274
Urban	100	109	70	75	2	0	32	388
Suburban	919	685	638	613	48	17	551	3,471
Rural	277	187	161	156	5	15	156	957
Total	1,423	1,029	901	889	56	32	760	5,090
Area Type	RETAIL							Total Person Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	215	962	402	526	0	6	1,062	3,173
Urban	2,020	33,220	10,002	10,919	33	119	7,970	64,283
Suburban	873	12,050	3,962	4,335	7	50	3,154	24,431
Rural	82	1,089	345	391	1	5	308	2,221
Total	3,190	47,321	14,711	16,171	41	180	12,494	94,108
Area Type	SERVICE							Total Person Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	293	216	109	128	1	0	56	803
Urban	2,444	4,689	1,786	2,265	16	31	1,056	12,287
Suburban	378	1,120	372	505	7	0	226	2,608
Rural	33	243	69	90	0	0	68	503
Total	3,148	6,268	2,336	2,988	24	31	1,407	16,201
Area Type	EDUCATION							Total Person Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	0	0	0	0	0	0	0	0
Urban	5,873	23,428	5,553	7,818	50	354	3,438	46,514
Suburban	2,219	8,402	1,612	3,004	47	101	447	15,832
Rural	4,226	6,787	1,713	2,057	14	64	2,921	17,782
Total	12,318	38,617	8,878	12,879	111	519	6,806	80,128

Table 28. Raw Vehicle Trip Attractions by Trip Purpose, Area Type, and Employment Type.

Area Type	BASIC							Total Vehicle Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	123	41	28	41	1	0	19	253
Urban	96	93	65	71	2	0	29	356
Suburban	882	568	583	554	36	17	498	3,138
Rural	271	166	143	146	4	10	121	861
Total	1,372	868	819	812	43	27	667	4,608
Area Type	RETAIL							Total Vehicle Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	207	731	285	387	0	5	947	2,561
Urban	1,822	25,592	7,804	8,527	24	91	6,173	50,033
Suburban	798	9,453	3,116	3,397	6	42	2,487	19,299
Rural	73	853	271	308	1	5	242	1,753
Total	2,900	36,629	11,476	12,619	31	142	9,849	73,646
Area Type	SERVICE							Total Vehicle Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	280	172	98	115	1	0	51	717
Urban	2,295	4,038	1,562	1,977	14	29	915	10,830
Suburban	357	921	317	432	6	0	196	2,230
Rural	31	184	59	77	0	0	55	405
Total	2,963	5,315	2,036	2,601	21	29	1,217	14,182
Area Type	EDUCATION							Total Vehicle Trips
	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	0	0	0	0	0	0	0	0
Urban	4,638	17,186	4,204	5,806	39	249	2,526	34,648
Suburban	1,808	5,954	1,148	2,103	31	70	324	11,438
Rural	3,702	5,022	1,261	1,513	10	49	2,531	14,088
Total	10,148	28,162	6,613	9,422	80	368	5,381	60,174

Table 29. Raw Person Trip Attraction Rates.

Trip Purpose	Area Type	Person Trips			
		Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee
HBW Attractions	CBD	2.08	2.08	1.73	0.00
	Urban	2.18	1.28	1.68	4.16
	Suburban	2.02	1.06	1.73	2.52
	Rural	1.79	1.74	0.92	4.98
HBNW Retail	CBD		9.34		
	Urban		21.11		
	Suburban		14.68		
	Rural		23.17		
HBNW Other Attractions	CBD	0.79		1.28	
	Urban	2.38		3.23	
	Suburban	1.51		5.14	
	Rural	1.20		6.74	
HBNW School Attractions	CBD				0.00
	Urban				16.59
	Suburban				9.55
	Rural				7.99
NHB-D	CBD	0.52	3.91	0.65	0.00
	Urban	1.51	6.35	1.23	3.93
	Suburban	1.40	4.83	1.71	1.83
	Rural	1.04	7.33	1.90	2.02
NHB-O	CBD	0.73	5.11	0.76	0.00
	Urban	1.64	6.94	1.56	5.54
	Suburban	1.35	5.28	2.31	3.41
	Rural	1.01	8.33	2.50	2.42
EXT-D	CBD	0.02	0.00	0.00	0.00
	Urban	0.04	0.02	0.01	0.04
	Suburban	0.11	0.01	0.03	0.05
	Rural	0.03	0.02	0.01	0.02
EXT-O	CBD	0.00	0.06	0.00	0.00
	Urban	0.00	0.08	0.02	0.25
	Suburban	0.04	0.06	0.00	0.11
	Rural	0.10	0.12	0.00	0.08
NON-RES	CBD	0.35	10.31	0.34	0.00
	Urban	0.69	5.06	0.73	2.43
	Suburban	1.21	3.84	1.04	0.51
	Rural	1.01	6.55	1.90	3.44

Table 30. Raw Vehicle Trip Attraction Rates.

Trip Purpose	Area Type	Vehicle Trips			
		Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee
HBW Attractions	CBD	2.02	2.01	1.65	0.00
	Urban	2.10	1.16	1.58	3.28
	Suburban	1.94	0.97	1.64	2.05
	Rural	1.75	1.56	0.87	4.36
HBNW Retail	CBD		7.09		
	Urban		16.26		
	Suburban		11.51		
	Rural		18.16		
HBNW Other Attractions	CBD	0.68		1.02	
	Urban	2.02		2.78	
	Suburban	1.25		4.23	
	Rural	1.07		5.11	
HBNW School Attractions	CBD				0.00
	Urban				12.17
	Suburban				6.77
	Rural				5.92
NHB-D	CBD	0.46	2.77	0.58	0.00
	Urban	1.41	4.96	1.08	2.98
	Suburban	1.28	3.80	1.45	1.30
	Rural	0.92	5.76	1.63	1.49
NHB-O	CBD	0.67	3.75	1.09	2.11
	Urban	1.55	5.42	1.28	5.09
	Suburban	1.22	4.14	1.29	0.21
	Rural	0.94	6.56	1.83	1.11
EXT-D	CBD	0.02	0.00	0.00	0.00
	Urban	0.04	0.02	0.01	0.03
	Suburban	0.08	0.01	0.03	0.03
	Rural	0.03	0.01	0.01	0.01
EXT-O	CBD	0.00	0.04	0.00	0.00
	Urban	0.00	0.06	0.02	0.18
	Suburban	0.04	0.05	0.00	0.08
	Rural	0.07	0.10	0.00	0.06
NON-RES	CBD	0.31	9.20	0.30	0.00
	Urban	0.62	3.92	0.63	1.79
	Suburban	1.10	3.03	0.90	0.37
	Rural	0.78	5.15	1.53	2.98

Table 31. Raw Commercial Vehicle Attraction Rates.

Area Type	Commercial Vehicle Trips			
	Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee
CBD	0.00	0.00	0.08	0.00
Urban	0.25	0.31	0.14	0.73
Suburban	0.89	0.14	0.30	0.40
Rural	1.08	0.44	1.00	2.04

Tables 32 and 33 show the Lubbock special generator survey data expansion results for the Lubbock International Airport and Texas Tech University, respectively. The expansion procedures used were

similar to the full work place sites, except that the survey trips were stratified only by trip purpose since the area type and employment type for each special generator were previously established.

Table 32. Lubbock International Airport Raw Person and Vehicle Trips and Attraction Rates.

Trip Purpose	Person Trips	Person Trip Rates	Vehicle Trips	Vehicle Trip Rates
HBW	1,266	1.81	1,031	1.47
HBNW	1,272	1.82	889	1.27
NHB-D	95	0.14	71	0.10
NHB-O	221	0.32	165	0.24
EXT-D	452	0.65	328	0.47
EXT-O	217	0.31	159	0.23
NON-RES	2,409	3.44	1,735	2.48
Commercial Vehicle Trips	29	0.04	29	0.04
Total	5,961	8.52	4,407	6.30

Table 33. Texas Tech University Raw Person and Vehicle Trips and Attraction Rates.

Trip Purpose	Person Trips	Person Trip Rates	Vehicle Trips	Vehicle Trip Rates
HBW	15,317	1.27	15,257	1.26
HBNW	61,147	5.05	49,895	4.12
NHB-D	4,884	0.40	4,221	0.35
NHB-O	9,024	0.75	7,779	0.64
EXT-D	91	0.01	76	0.01
EXT-O	278	0.02	246	0.02
NON-RES	1,593	0.13	1,444	0.12
Commercial Vehicle Trips	926	0.08	926	0.08
Total	93,260	7.71	79,844	6.60

Model Rate Development

The work place survey data must be converted into recommended attraction rates to be used as inputs to the travel demand model. Attraction rates, defined as the estimated number of trips per employee attracted to a site and/or zone, were developed for each trip purpose, area type, and employment type. The attractions and rates shown in Tables 34 through 37 were based on raw trip data.

Tables 34 and 35 show the raw total person and vehicle trip attractions for all area types by employment type and trip purpose, respectively.

Table 34. Raw Total Person Trip Attractions by Employment Type and Trip Purpose.

Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total Person Trips
Basic	1,423	1,029	901	889	56	32	760	5,090
Retail	3,190	47,321	14,711	16,171	41	180	12,494	94,108
Service	3,148	6,268	2,336	2,988	24	31	1,406	16,201
Education	12,318	38,617	8,878	12,879	111	519	6,806	80,128
Total	20,079	93,235	26,826	32,927	232	762	21,466	195,527*

*Excluding 1,872 trips that were considered as trip productions.

Table 35. Raw Total Vehicle Trip Attractions by Employment Type and Trip Purpose.

Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total Vehicle Trips
Basic	1,372	868	819	812	43	27	667	4,608
Retail	2,900	36,629	11,476	12,619	31	142	9,849	73,646
Service	2,963	5,315	2,036	2,601	21	29	1,217	14,182
Education	10,148	28,162	6,613	9,422	80	368	5,381	60,174
Total	17,383	70,974	20,944	25,454	175	566	17,114	152,610*

*Excluding 1,478 trips that were considered as trip productions.

Tables 36 and 37 show the raw total person and vehicle trip attraction rates for all area types by employment type and trip purpose, respectively.

Table 36. Raw Total Person Trip Attraction Rates by Employment Type and Trip Purpose.

Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total Person Trips
Basic	1.99	1.43	1.26	1.24	0.08	0.04	1.06	7.10
Retail	1.25	18.59	5.78	6.35	0.02	0.07	4.91	36.97
Service	1.68	3.34	1.25	1.59	0.01	0.02	0.75	8.64
Education	3.92	12.29	2.83	4.10	0.04	0.17	2.17	25.52

Table 37. Raw Total Vehicle Trip Attraction Rates by Employment Type and Trip Purpose.

Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total Vehicle Trips
Basic	1.91	1.21	1.14	1.13	0.06	0.04	0.93	6.42
Retail	1.14	14.39	4.51	4.96	0.01	0.06	3.87	28.94
Service	1.58	2.83	1.09	1.39	0.01	0.02	0.65	7.57
Education	3.23	8.97	2.11	3.00	0.03	0.12	1.71	19.17

The next step in the development of trip rates involved estimating the total person and vehicle trips by applying the trip attraction rates provided in Tables 36 and 37 to the total employment estimates for the Lubbock study area, shown in Table 38.

Table 38. Total Employment in the Lubbock Study Area by Area Type and Employment Type.

Area Type	Total Employment				
	Basic	Retail	Service	Education	Total
CBD	1,496	858	6,432	250	9,036
Urban	5,567	22,761	37,815	10,608	76,751
Suburban	14,484	5,580	10,654	2,399	33,117
Rural	4,702	873	1,356	1,901	8,832
Total	26,249	30,072	56,257	15,158	127,736

Source: Lubbock MPO, 2006.

Tables 39 and 40 show the estimated total person and vehicle trip attractions by employment type and trip purpose for the Lubbock study area, respectively.

Table 39. Total Person Trip Attractions by Employment Type and Trip Purpose.

Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total Person Trips
Basic	52,112	37,665	32,967	32,547	2,058	1,152	27,816	186,317
Retail	37,692	559,146	173,830	191,083	482	2,129	147,624	1,111,986
Service	94,452	188,050	70,088	89,661	726	923	42,199	486,098
Education	59,447	186,357	42,843	62,153	539	2,506	32,844	386,690
Total	243,703	971,218	319,728	375,444	3,805	6,710	250,483	2,171,091

Table 40. Total Vehicle Trip Attractions by Employment Type and Trip Purpose.

Employment Type	HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	Total Vehicle Trips
Basic	50,239	31,780	29,995	29,740	1,560	983	24,416	168,713
Retail	34,268	432,812	135,603	149,102	361	1,683	116,376	870,205
Service	88,901	159,471	61,083	78,034	640	865	36,528	425,522
Education	48,971	135,908	31,912	45,469	387	1,777	25,968	290,393
Total	222,379	759,971	258,593	302,345	2,948	5,308	203,288	1,754,832

Table 41 shows the commercial vehicle trip attraction rates and total commercial vehicle attractions by employment type. Note that the estimates may not be representative of the actual commercial vehicle movement in the study area given the insufficient count data from the work place surveys. The attraction rates were based on employment of surveyed sites with reported commercial vehicle counts only.

Table 41. Total Commercial Vehicle Trip Attractions by Employment Type.

Employment Type	Total Commercial Vehicle Trip Attraction Rates	Total Commercial Vehicle Trip Attractions
Basic	0.90	23,732
Retail	0.22	6,652
Service	0.17	9,335
Education	0.77	11,719
Total	2.06	51,438

The estimated total trip attractions from the work place survey were then compared with the estimated total trip productions from the household survey. Table 42 provides a summary of the raw travel estimates from the travel surveys conducted in the Lubbock study area. The results show significant differences in the HBNW and NHB trips from the work place survey compared to these same estimates from the household survey, specifically in the retail establishments, which generated the most number of attractions. The estimates of external trips and non-resident trips were shown for informational purposes only since the current travel demand model does not use external trip rates. The estimate of commercial vehicle trips from the work place survey was about half of the total commercial vehicle estimate from the commercial vehicle survey.

Table 42. Raw Travel Estimates for Lubbock Study Area.

Trip Purpose	Work place Survey		Household Survey		External Survey		Commercial Vehicle Survey
	Person	Vehicle	Person	Vehicle	Person	Vehicle	Vehicle
HBW	243,702	222,379	139,385	126,726	-	-	-
HBNW Retail	559,146	432,812	209,474	147,379	-	-	-
HBNW Other	225,715	191,251	205,450	143,069	-	-	-
HBNW School	186,357	135,908	186,768	90,706	-	-	-
NHB-D	319,728	258,593	96,965	83,409	-	-	-
NHB-O	375,444	302,345	234,053	152,573	-	-	-
EXT-D	3,805	2,948	-	-	91,979	70,545	-
EXT-O	6,710	5,308	-	-	91,979	70,545	-
NON-RES	250,483	203,288	-	-	-	-	-
Commercial Vehicles	-	51,438	-	-	-	-	111,129

The attraction rates by trip purpose from the work place survey required further adjustments to balance the aggregate estimates of trip attractions with the aggregate estimates of trip productions from the household survey. Correction factors for HBW and HBNW trips were calculated by dividing the number of person and vehicle trips from the household survey with the number of person and vehicle trips from the work place survey for HBW and HBNW trips, respectively. The NHB destination and origin trips from the work place survey were summed and averaged to reflect the adjustment when calculating the correction factor for NHB destination trips from the household survey. The NON-RES trips from the work place survey were calculated, summed, and divided by the total employment. The resulting rates

were applied to the employment data to develop an estimate of the total internal trips made by persons that did not live in the study area. The estimates of non-resident travel appear unusually high, making up more than 20 percent of the total household trips estimated from the household survey. A general estimate for non-resident travel in an urban area is about 10 percent of the household internal travel. Applying this percentage to the total household trips of 1,079,095 yields an estimate of 107,210, and this amount is recommended for use in the travel demand model for non-resident travel.

In addition to the adjustment factors developed from the trip balancing, manual smoothing of trip rates was also used in developing the recommended attraction rates. This procedure was by no means ideal, and required careful judgment based on visual plots of the trip rates by trip purpose, area type, and employment type, and making adjustments to produce smoother curves and yield trip estimates that matched the initial total trip attraction estimates.

Tables 43 and 44 show the recommended person and vehicle trip attraction rates by area type for each category of trip purpose and employment type, including households, respectively. Since no surveys of education facilities were conducted in the CBD, average attraction rates were used for education in the CBD. This insures that if future education employment is allocated to the CBD, the model will still be applicable. The attraction rates per household were developed from the 2005 Lubbock Household Survey, based on the total trip attractions to residential land use by trip purpose and divided by the total number of households. These rates were assumed to be the same across all area types. The household sample in the survey was too small to develop rates by area type.

Table 43. Recommended Person Trip Attraction Rates.

Trip Purpose	Area Type	Person Trips				
		Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee	Per Household
HBW Attractions	CBD	1.09	0.60	1.06	2.20	0.07
	Urban	1.23	0.74	0.96	2.36	0.07
	Suburban	1.14	0.67	0.93	1.96	0.07
	Rural	1.03	0.60	0.73	2.26	0.07
HBNW Retail	CBD	6.68				
	Urban	7.37				
	Suburban	5.53				
	Rural	5.99				
HBNW Other Attractions	CBD	1.12		2.57		0.64
	Urban	1.56		2.99		0.64
	Suburban	1.28		3.42		0.64
	Rural	1.15		3.74		0.64
HBNW School Attractions	CBD				10.13	0.02
	Urban				14.33	0.02
	Suburban				8.50	0.02
	Rural				7.55	0.02
NHB Attractions	CBD	0.93	4.59	1.09	2.95	0.20
	Urban	1.43	6.04	1.25	3.65	0.20
	Suburban	1.16	4.89	1.79	2.81	0.20
	Rural	1.06	5.76	1.87	2.38	0.20

Table 44. Recommended Vehicle Trip Attraction Rates.

Trip Purpose	Area Type	Vehicle Trips				
		Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee	Per Household
HBW Attractions	CBD	1.09	0.57	1.04	1.82	0.06
	Urban	1.15	0.67	0.90	1.92	0.06
	Suburban	1.10	0.59	0.83	1.72	0.06
	Rural	0.98	0.50	0.80	1.82	0.06
HBNW Retail	CBD	4.62				
	Urban	5.20				
	Suburban	3.76				
	Rural	4.62				
HBNW Other Attractions	CBD	0.79		1.58		0.42
	Urban	1.01		1.98		0.42
	Suburban	0.91		2.81		0.42
	Rural	0.80		3.20		0.42
HBNW School Attractions	CBD				4.62	0.01
	Urban				7.16	0.01
	Suburban				4.03	0.01
	Rural				2.68	0.01
NHB Attractions	CBD	0.85	2.94	0.86	1.92	0.15
	Urban	1.16	4.18	1.03	2.38	0.15
	Suburban	0.95	3.33	1.15	1.75	0.15
	Rural	0.77	4.11	1.21	1.63	0.15

Table 45 shows the recommended commercial vehicle (CV) trip attraction rates stratified by area type for each category of employment and household. These rates were developed using data from the 2005 Lubbock Commercial Vehicle Survey and 2010 Waco Work Place Survey to develop more acceptable results.

The number of observed trips to different land uses at the destination from the CV survey were used to compute the percentage of trips for each employment category and household. The land use types were classified to the categories of basic, retail, service, education, and household. The CV trips to each category were then summed and divided by the total trips from the survey to calculate the percentage of trips for each employment category and household. These percentages were applied to the total CV trip estimates of 111,129 from the CV survey to estimate the CV attractions in each category of employment and household. These totals were divided by the total employment (and households) to calculate the overall attraction rate in each category.

Since the data from the Lubbock work place survey were too sparse to produce the CV rates by area type, it was necessary to use developed CV trip rates from another study area (Waco) that has the same urban form as Lubbock. The distribution of CV rates from the 2010 Waco Work Place Survey were used to develop the Lubbock CV rates by area type. The overall attraction rate for Lubbock in each employment category was divided by the weighted CV rate for Waco, and then multiplied by the rate in that employment category for each area type. The results are the recommended attraction rates by employment category stratified by area type. The CV rates for households were held constant across area types.

Table 45. Recommended Commercial Vehicle Trip Attraction Rates.

Area Type	Commercial Vehicle Trips				
	Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee	Per Household
CBD	0.91	1.38	0.11	0.08	0.13
Urban	1.69	1.02	0.21	0.12	0.13
Suburban	3.38	0.90	0.15	0.31	0.13
Rural	1.28	1.16	0.16	0.30	0.13
All Area Types	2.10	1.00	0.17	0.22	0.13

SURVEY SUMMARY

In 2010, the TPP Division of TxDOT funded a work place and special generator survey in the Lubbock MPO study area. The purpose of the survey was to collect data on the travel characteristics of employees and non-employees at basic, retail, service, and education establishments that would enable TxDOT to develop and/or update trip attraction models to forecast travel demand within the Lubbock urban areas.

The work place survey consisted of four data collection efforts which included a general establishment survey, an intercept interview survey, a person or vehicle count, and a commercial vehicle count. The surveyed establishments were classified as either full survey sites or partial survey sites. The full survey sites consisted of 112 establishments with a total reported employment of 3,180 persons. A total of 1,374 employees and 2,038 non-employees/visitors participated in the intercept interviews. The partial survey sites consisted of 197 establishments with a total reported employment of 5,098 persons. The partial sites did not include intercept interview surveys. The survey findings indicated that approximately 197,396 persons and 154,090 non-commercial vehicles were traveling to and from the surveyed establishments during the travel survey period. The number of commercial vehicles that were counted at the surveyed establishments during their normal operating hours was found to be low. Only 850 commercial vehicles were reported from the survey. Based on the low counts, it is possible that some of the counters failed to capture or adequately count the number of commercial vehicles.

Two special generators were surveyed in the Lubbock study area: Lubbock International Airport and Texas Tech University. A total of 56 employees and 168 non-employees participated in the Lubbock International Airport intercept interview survey. At Texas Tech University, there were 60 employees and 383 non-employees survey participants. There were 78,918 non-commercial vehicles and 926 commercial vehicles observed to be entering and exiting the Lubbock International Airport during their normal operating hours. A total of 4,378 non-commercial vehicles and 29 commercial vehicles were counted at Texas Tech University.

The expansion of work place and special generator survey data involved a series of procedures to develop the trip rate estimates for each category of trip purpose based on employment data. In the final analysis, the aggregate estimates of trip attractions from the work place survey were compared with the aggregate estimates of trip productions from the household survey, and further adjustments were made to balance the estimated trip attractions with the estimated trip productions. In addition to the adjustment factors developed from the trip balancing, manual smoothing of trip rates was also used in developing the recommended attraction rates. Since no surveys of education facilities were conducted in the CBD,

average attraction rates were used for education in the CBD. This insures that if future education employment is allocated to the CBD, the model will still be applicable.

The non-resident trip estimates from the work place survey appear unusually high, more than 20 percent of the total household trip estimates from the household survey. A general estimate for non-resident travel in an urban area is about 10 percent of the household internal travel. This percentage was therefore applied to the total household trips, and the resulting estimate was recommended for use in the travel demand model for non-resident travel.

The commercial vehicle trip attraction rates were initially developed using commercial vehicle counts from the surveyed establishments, and were adjusted using the total commercial vehicle trips from the commercial vehicle survey. Given the known problems with the counts in both surveys (work place and commercial vehicle surveys), it was necessary to explore several methods that produced the most realistic results when compared to those found in other study areas. Data from the 2005 Lubbock Commercial Vehicle Survey and 2010 Waco Work Place Survey were used in the development of attraction rates recommended for use in the travel demand model for commercial vehicle travel.

Adjustments made to the observed trip rates are highly sensitive to the amount of employment and distribution of employment. Therefore, the recommended attraction rates presented in this report may require further adjustments during the calibration phase of the travel demand model for the Lubbock study area to achieve more acceptable results.

**APPENDIX A:
WORK PLACE SURVEY FORMS**

Record Type 9

**WORKPLACE GENERAL SURVEY
Form A**

NAICS Code: _____

TAZ No. _____

Employment Type: _____

Free Standing

Non-Free Standing

Name

Street Address

City

State

Zip Code

Telephone

CEO/Administrator

Name: _____ Telephone: _____

Title: _____

Personnel Manager

Name: _____ Telephone: _____

or Other Contact

Title: _____

Security Director

Name: _____ Telephone: _____

Title: _____

Weekday Hours of Operation: _____

Commercial Vehicle Count _____ Non-Commercial Vehicle Count _____ Person Count _____

Total Employees (Full and part time): _____ Number at Work on Survey Day: _____

Delivery Hours (If Restricted) _____ No. of Deliveries _____ on Day of Survey _____

Number/Type of Vehicles owned/Leased for Commercial/Business Purposes

_____ Commercial Cargo Transport Vehicles _____ Commercial Service Vehicles

_____ Cars/SUVs _____ Cargo Vans _____ Service Vans _____ Pickup Trucks

**LUBBOCK WORKPLACE
INTERCEPT TRAVEL SURVEY
Form B**

Free Standing Workplace

TAZ _____ Survey Area _____
 Site # _____
 Date: ____/____/____
 Interviewer _____
 Employment Type _____

Address: _____

Date: _____ Location: _____

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time Interview Began		
Time Interview Ended		
1. Do you work in this building or at this location?	1) Yes 2) No	1) Yes 2) No
2. In what city or county do you live?		
3a. Is that outside of Lubbock County? (If NO go to question 4) 3b. If YES – Which roadway did you use to enter Lubbock County? (airport is an option)	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If NO go to Question 4) b. _____	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If NO go to Question 4) b. _____
4. What is your home address or nearest two intersecting streets?		
5a. Did you travel here directly from your home with no stops? (if YES go to Question 7) 5b. If NO where did you start your trip that brought you to _____?	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No b. _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No b. _____ (Address or nearest intersection)
6a. Is that location: 6b. If outside of Lubbock County, what street or highway were you on when you entered the area?	a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other b. _____	a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other b. _____
7. What approximate time did you arrive at this location today?	_____ am / _____ pm	_____ am / _____ pm
8. How did you arrive here at the _____? (Choose from arrival options)		
9a. If car/truck/van ask: How many people, including yourself, were in the vehicle? 9b. If bus, ask: What fare did you pay?	a) # people _____ b) Fare \$ _____.	a) # people _____ b) Fare \$ _____.
10. What is the reason for coming here today? (Choose from trip purpose options)	Number _____ Other _____	Number _____ Other _____
11. When you leave here are you going straight home with no stops?	<input type="checkbox"/> Yes (Terminate interview) <input type="checkbox"/> No (Go to 12)	<input type="checkbox"/> Yes (Terminate interview) <input type="checkbox"/> No (Go to 12)
12. What is the address of the place you will be going?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)

Workplace Intercept Survey, Form B Continued

Questions	Person 1	Person 2
<p>13a. Is that location:</p> <p>13b. If outside of Lubbock County what street or highway will you be on when you leave this area?</p>	<p>a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other</p> <p>b. _____</p>	<p>a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other</p> <p>b. _____</p>

<u>Arrival Option</u>	<u>Trip Purpose Options</u>	
<p>Driver (car/truck/van) Passenger (car/truck/van) Walk Bicycle Bus School Bus Taxi/Paid Limousine Commercial Cargo Transport Vehicle Commercial Service Vehicle Motorcycle Other – specify in block 99) Non-Response</p>	<p>Work related School Social/recreational/visit Shop Eat out Pick up/drop off passenger Change travel mode Delivery – pick up/drop off Other – specify in block 99) Non-response</p>	

LUBBOCK WORKPLACE

Record Type L11

**INTERCEPT TRAVEL SURVEY
Form C**

Non-Free Standing Workplace

TAZ _____ Survey Area _____
 Site # _____
 Date: ____/____/____
 Interviewer _____
 Employment Type _____

Address: _____

Date: _____ Location: _____

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began		
Time interview ended		
1. Do you work in this building or at this location?	1) Yes 2) No	1) Yes 2) No
2. In what city or county do you live?		
3a. Is that outside of Lubbock County? (If NO go to question 4) 3b. If YES – Which roadway did you use to enter the area? (airport is an option)	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If NO go to Question 4) b. _____	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If NO go to Question 4) b. _____
4. What is your home address or nearest two intersecting streets?		
5a. Did you travel here directly from your home with no stops? (if YES go to Question 7) 5b. If NO where did you start your trip that brought you to _____?	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If YES go to Question 7) b. _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If YES go to Question 7) b. _____ (Address or nearest intersection)
6a. Is that location in Lubbock County? 6b. If outside of Lubbock County, what street or highway were you on when you entered this area?	a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other b. _____	a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other b. _____
7. What approximate time did you arrive at this location today?	_____ am / _____ pm	_____ am / _____ pm
8. How did you arrive here at the _____ today? (Choose from arrival options)		
9a. If car/truck/van ask: How many people, including yourself, were in the vehicle? 9b. If bus, ask: What fare did you pay?	a) # people _____ b) Fare \$ _____.	a) # people _____ b) Fare \$ _____.
10. What is the reason for coming here today? (Choose from trip purpose options)	Number _____ Other _____	Number _____ Other _____
11. Is this the 1 st store / establishment you have visited since arriving at this location?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Workplace Intercept Survey, Form C Continued

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
12. How many stores/ establishments have you visited in this center during this trip?		
13. How many more stores or businesses do you plan to visit in this center / building?		
14. When you leave here are you going straight home with no stops?	<input type="checkbox"/> Yes (Terminate interview) <input type="checkbox"/> No (Go to 15)	<input type="checkbox"/> Yes (Terminate interview) <input type="checkbox"/> No (Go to 15)
15. What is the address of the place you will be going?	<p>_____</p> <p>_____</p> <p>(Address or nearest intersection)</p>	<p>_____</p> <p>_____</p> <p>(Address or nearest intersection)</p>
16a. Is that location in: 16c. If outside Lubbock County, what street or highway will you be on when you leave this area.?	a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other b. _____	a. <input type="checkbox"/> In Lubbock County? <input type="checkbox"/> Other b. _____

<u>Arrival Option</u>	<u>Trip Purpose Options</u>	
Driver (car/truck/van) Passenger (car/truck/van) Walk Bicycle Bus School Bus Taxi/Paid Limousine Commercial Cargo Transport Vehicle Commercial Service Vehicle Motorcycle Other – specify in block 99) Non-Response	Work related School Social/recreational/visit Shop Eat out Pick up/drop off passenger Change travel mode Delivery – pick up/drop off Other – specify in block 99) Non-response	

Record Type SLA

**Lubbock International Airport Intercept Survey
Form B**

Date: ____/____/____

Interviewer _____ Location: _____

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began		
Time interview ended		
1. Do you work here at the airport?	1) Yes 2) No	1) Yes 2) No
2. In what city or county do you live?		
3. Is that outside Lubbock County?	<input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 5)	<input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 5)
If they live outside the Lubbock County area, ask:		
4. Which roadway did you use to enter the Lubbock County area?	_____	_____
If they live in the Lubbock County area, ask:		
5. What is your home address or nearest two intersecting streets?	_____	_____
6. How did you arrive here at the airport today? (Choose from arrival options below) If by airplane, go to 10	Arrival Option # _____ Other _____ If by airplane, go to 10	Arrival Option # _____ Other _____ If by airplane, go to 10
Arrival Options: 3) Walk 6) School bus 9) Commercial Service Vehicle 12) Hotel/Motel Shuttle Bus 1) Driver (car/truck/van) 4) Bicycle 7) Taxi/Paid Limousine 10) Motorcycle 13) Other Parking Shuttle 2) Passenger (car/truck/van) 5) Metro Bus 8) Commercial Cargo Vehicle 11) Airplane 14) Other – Specify in box 99) Refused		
7. If arrival was by car/truck/van, How many people, including yourself were in the vehicle when you arrived at the airport? If arrival was by bus or taxi, what fare did you pay?	# of People _____ Fare \$ _____	# of People _____ Fare \$ _____
8. Did you travel here directly from your home to the airport with no stops? If NO where did you start your trip that brought you to the airport?	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If YES go to Question 9) _____ _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If YES go to Question 9) _____ _____ (Address or nearest intersection)
9. Is that location in Lubbock County? If No, what street or highway were you on when you entered Lubbock County?	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	<input type="checkbox"/> Yes <input type="checkbox"/> No _____

Lubbock International Airport Intercept Survey Form B – Continued

10. What approximate time did you arrive at the airport today?	_____ am / _____ pm	_____ am / _____ pm
11. What is the reason for coming here today? (Choose from trip purpose options below)	Number _____ Other _____	Number _____ Other _____
Trip Purpose Options: 1) Return Home 4) Social Recreation/Visit 7) Personal Business 10) Delivery – pick up or drop off 2) Work Related 5) Shop 8) Pick Up/Drop Off Passenger 11) Other – specify in block 3) School 6) Eat Out 9) Change Travel Mode 99) Refused		
12. When you leave the airport, what mode will you use? (Choose from options below)	Option # _____ Other _____	Option # _____ Other _____
Departure Options: 1) Driver (car/truck/van) 4) Bicycle 3) Walk 6) School bus 9) Commercial Service Vehicle 12) Hotel/Motel Shuttle Bus 2) Passenger (car/truck/van) 5) Metro Bus 7) Taxi/Paid Limousine 10) Motorcycle 13) Other Parking Shuttle 99) Refused 8) Commercial Cargo Vehicle 11) Airplane 14) Other – Specify in box		
13. When you leave the airport are you going straight home with no stops?	<input type="checkbox"/> Yes (Terminate Interview) <input type="checkbox"/> No (Go to 14)	<input type="checkbox"/> Yes (Terminate Interview) <input type="checkbox"/> No (Go to 14)
14. What is the name and address of the place you will be going?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
15. Is that outside Lubbock County? If no, what street or highway will you be on when you leave the Lubbock County area?	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	<input type="checkbox"/> Yes <input type="checkbox"/> No _____

Record Type STT

**TEXAS TECH UNIVERSITY INTERCEPT SURVEY
Form B**

Date: ____/____/____

Interviewer _____ Location: _____

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began		
Time interview ended		
1 Are you a student here at the university?	1) Yes (Go to Question 2) 2) No (Go to Question 3)	1) Yes (Go to Question 2) 2) No (Go to Question 3)
2 Do you live on campus?	1) Yes (Terminate Interview) 2) No (Go to Question 3)	1) Yes (Terminate Interview) 2) No (Go to Question 3)
3. Do you work here at the university or are you visiting the university?	1) Employee 2) Visitor	1) Employee 2) Visitor
4. In what city or county do you live?		
5. Is that outside Lubbock County?	<input type="checkbox"/> Yes (go to 6) <input type="checkbox"/> No (go to 7)	<input type="checkbox"/> Yes <input type="checkbox"/> No
If they live outside Lubbock County, ask: 6. Which roadway did you use to enter Lubbock County?	_____ _____	_____ _____
If they live in Lubbock County, ask: 7. What is your home address or nearest two intersecting streets?	_____ _____	_____ _____
8. How did you arrive here at the university today? (Choose from arrival options below)	Arrival Option # _____ Other _____	Arrival Option # _____ Other _____
Arrival Options:	3) Walk 1) Driver (car/truck/van) 2) Passenger (car/truck/van)	6) School bus 7) Taxi/Paid Limousine 8) Commercial Cargo Vehicle
	5) Metro Bus	9) Commercial Service Vehicle 10) Motorcycle 11) Other – Specify in box
9. If arrival was by car/truck/van, How many people, including yourself were in the vehicle when you arrived at the university? Where did you park?	# of People _____ 1) On-Campus 2) Off Campus Parking Lot 3) Off Campus in Street Designated Parking Spot 4) Other (specify) _____	# of People _____ 1) On-Campus 2) Off Campus Parking Lot 3) Off Campus in Street Designated Parking Spot 4) Other (specify) _____
10. Did you travel here directly from your home to the university with no stops? If NO where did you start your trip that brought you to the university?	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If YES go to Question 12) _____ _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (If YES go to Question 12) _____ _____ (Address or nearest intersection)
11. Is that location in Lubbock County? If No, what street or highway were you on when you entered the area?	<input type="checkbox"/> Yes <input type="checkbox"/> No _____	<input type="checkbox"/> Yes <input type="checkbox"/> No _____

University Intercept Survey Form B – Continued

12. What approximate time did you arrive at the university today?	_____ am / _____ pm	_____ am / _____ pm
13. What is the reason for coming here today? (Choose from trip purpose options below)	Number _____ Other _____	Number _____ Other _____
Trip Purpose Options: 1) Return Home 4) Social Recreation/Visit 7) Personal Business 10) Delivery – pick up or drop off 2) Work Related 5) Shop 8) Pick Up/Drop Off Passenger 11) Other – specify in block 3) School 6) Eat Out 9) Change Travel Mode 99) Refused		
14. When you leave the university, what mode will you use? (Choose from options below)	Option # _____ Other _____	Option # _____ Other _____
Departure Options: 3) Walk 6) School bus 9) Commercial Service Vehicle 99) Refused 1) Driver (car/truck/van) 4) Bicycle 7) Taxi/Paid Limousine 10) Motorcycle 2) Passenger (car/truck/van) 5) Metro Bus 8) Commercial Cargo Vehicle 11) Other – Specify in box		
15. When you leave the university are you going straight home with no stops?	<input type="checkbox"/> Yes (Stop Interview) <input type="checkbox"/> No (If NO go to Question 16)	<input type="checkbox"/> Yes(Stop Interview) <input type="checkbox"/> No (If NO go to Question 16)
16. What is the name and address of the place you will be going?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
17. Is that outside Lubbock County? If yes, what street or highway will you be on when you leave this area?	<input type="checkbox"/> Yes <input type="checkbox"/> No _____ _____	<input type="checkbox"/> Yes <input type="checkbox"/> No _____ _____

**APPENDIX B:
ASCII FILE FORMATS**

Workplace Recruitment Survey Form G File Format

This file contains the recruitment information, call disposition results, and data collected during recruitment using Form G: Workplace Recruitment Survey. The data are in ASCII file format.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns</u>	
				<u>Format</u>	<u>Description</u>
1. Record Type	1	3	Alphanum. LJ	A3	Code indicating type of record. Here it should be RS.
2. Month	4	5	Numeric RJ	I2	Month establishment was contacted.
3. Day	6	7	Numeric RJ	I2	Day of month establishment was contacted.
4. Site Number	8	12	Numeric RJ	I5	Unique non-zero number assigned to each workplace.
5. Name	13	62	Alphanum. LJ	A50	Name of establishment.
6. Address	63	112	Alphanum. LJ	A50	Address of establishment.
7. City	113	137	Alphanum. LJ	A25	City where establishment is located.
8. Employment Type	138	140	Numeric RJ	I3	Code indicating the type of employment at the workplace. 1 – Basic; 2 – Retail; 3 – Service; 4 – Education; 5 – Other.
9. Other Employment Type	141	170	Alphanum. LJ	A30	If employment type is coded as other, this field contains a description of the employment type.
10. Study Area	171	172	Alphanum. LJ	A2	Code indicating study area workplace is located. A – Amarillo; L – Lubbock.
11. Zone	173	177	Numeric RJ	I5	Transportation analysis zone where workplace is located.
12. Phone No.	178	187	Numeric RJ	I10	Phone number of workplace.
13. Number of Attempts	188	190	Numeric RJ	I3	Number of attempts made to contact workplace.
14. Call Disposition Code	191	192	Numeric RJ	I2	Code indicating results of call attempts. See code definitions.
15. Recruitment	193	194	Numeric RJ	I2	Code indicating results of recruitment attempts. 1 – Full Survey; 2 – Partial Survey; 3 – Refusal w/Data; 4 – Refusal w/No data.
16. Employment	195	200	Numeric RJ	I6	Total number of full and part time employees.
17. No. Visitors	201	205	Numeric RJ	I5	Average number of visitors to workplace during weekday.
18. No. Employees	206	210	Numeric RJ	I5	Average number of employees at work during weekday.
19. Begin Operations	211	215	Numeric RJ	I5	Normal time (military) operations begin at workplace.
20. End Operations	216	220	Numeric RJ	I5	Normal time (military) operations end at workplace.
21. Location Code	221	222	Numeric RJ	I2	Code indicating type of location. 1 – Shopping center or office building; 2 – Other.
22. Others at Location	223	224	Numeric RJ	I2	Code indicating if other businesses are located at the same location. 1 – Yes; 2 – No.
23. Parking	225	226	Numeric RJ	I2	Code indicating if workplace has its own parking. 1 – Yes; 2 – No.
24. Cut Thru Traffic	227	228	Numeric RJ	I2	Code indicating if traffic cuts through parking lot to access other businesses. 1 – Yes; 2 – No.
25. Arrival Time	229	233	Numeric RJ	I5	Normal time of arrival for first employee.
26. Departure Time	234	238	Numeric RJ	I5	Normal time of departure for last employee.
27. Deliveries	239	241	Numeric RJ	I3	Number of deliveries on an average week day.
28. Special Access	242	243	Numeric RJ	I2	Code indicating if special access is provided for deliveries or employees. 1 – Yes; 2 – No.
29. Business Vehicles	244	250	Numeric RJ	I7	Number of vehicles owned or leased by workplace for business purposes.
30. Cars / SUVs	251	255	Numeric RJ	I5	Number of cars and SUVs owned or leased by workplace for business purposes.
31. Pickup Trucks	256	260	Numeric RJ	I5	Number of pickup trucks owned or leased by workplace for business purposes.
32. Cargo Vans	261	265	Numeric RJ	I5	Number of vans owned or leased by workplace used for delivery or pick up of cargo.
33. Service Vans	266	270	Numeric RJ	I5	Number of vans owned or leased by workplace used for commercial service or other purposes.
34. Cargo Vehicles	271	275	Numeric RJ	I5	Number of cargo transport vehicles owned or leased by workplace for business purposes that do not fall into the other categories.
35. Service Vehicles	276	280	Numeric RJ	I5	Number of service vehicles owned or leased by workplace for business purposes that do not fall into the other categories.

Call Disposition Codes

1 – Contact Made	6 – Non-Business
2 – No Answer	7 – Computer/Fax
3 – Phone Disconnected	8 – Other
4 – Answering Machine	
5 – Busy	

Workplace General Survey Form A File Format

This file contains the recruitment information, call disposition results, and data collected during recruitment using Form A: Workplace General Survey. The data are in ASCII file format.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns</u>	
				<u>Format</u>	<u>Description</u>
1. Record Type	1	3	Alphanum. LJ	A3	Code indicating type of record. Here it should be 9.
2. Month	4	5	Numeric RJ	I2	Month workplace was surveyed.
3. Day	6	7	Numeric RJ	I2	Day of month workplace was surveyed.
4. Site Number	8	12	Numeric RJ	I5	Unique non-zero number assigned to each workplace.
5. NAICS Code	13	17	Numeric RJ	I5	North American Industrial Classification System code of the workplace.
6. Establishment Type	18	19	Numeric RJ	I2	Code indicating the type of workplace; 1- free standing, 2- non-free standing.
7. Employment Type	20	21	Numeric RJ	I2	Code indicating the type of employment at the workplace. See code descriptions.
8. Name	22	51	Alphanum. LJ	A30	Name of workplace.
9. Address	52	81	Alphanum. LJ	A30	Address of workplace.
10. City	82	96	Alphanum. LJ	A15	City where workplace is located.
11. Zip Code	97	101	Numeric RJ	I5	Zip code for workplace location.
12. Phone No.	102	111	Numeric RJ	I10	Phone number for workplace.
13. Longitude	112	121	Numeric RJ	F10.0	Longitude of workplace address. If unknown, it should be coded 888.888888.
14. Latitude	122	131	Numeric RJ	F10.0	Latitude of workplace address. If unknown, it should be coded 888.888888.
15. Area Location	132	133	Alphanum. LJ	A2	Code indicating location of workplace. A – Amarillo study area; L – Lubbock study area.
16. Zone	134	138	Numeric RJ	I5	Zone where workplace is located.
17. Hours of Operation	139	140	Numeric RJ	I2	Number of hours in operation during a normal weekday.
18. Number of Vehicles	141	146	Numeric RJ	I6	Total number of non-commercial vehicles entering and exiting the workplace during the 24 hours the travel survey was conducted.
19. Number of Persons	147	153	Numeric RJ	I7	Total number of persons counted entering and exiting the workplace during the 24 hours the travel survey was conducted.
20. Commercial Vehicles	154	158	Numeric RJ	I5	Total number of commercial vehicles counted entering and exiting the workplace during the 24 hours the travel survey was conducted.
21. Total Employment	159	163	Numeric RJ	I5	Total number of persons (full and part time) employed at the establishment.
22. Employees at Work	164	168	Numeric RJ	I5	Total number of employees at work on day the travel survey was conducted.
23. Deliveries	169	171	Numeric RJ	I3	Number of deliveries to workplace on day of travel survey.
24. Delivery Hours	172	174	Numeric RJ	I3	Hours allowed for deliveries.
25. Cars & SUVs	175	179	Numeric RJ	I5	Number of cars and SUVs owned or leased by workplace for business purposes.
26. Cargo Transport Vans	180	184	Numeric RJ	I5	Number of vans owned or leased by workplace for business cargo delivery and pick up purposes.
27. Service Vans	185	189	Numeric RJ	I5	Number of vans owned or leased by workplace for business service purposes.
28. Pickup Trucks	190	194	Numeric RJ	I5	Number of pickup trucks owned or leased by workplace for business purposes.
29. Cargo Transport Vehicles	195	199	Numeric RJ	I5	Number of cargo transport vehicles owned or leased by workplace for business purposes.
30. Service Vehicles	200	204	Numeric RJ	I5	Number of service vehicles owned or leased by workplace for business purposes.
31. Other Employment Type	205	254	Alphanum. LJ	A50	If employment type is coded as 15- Other, this field contains a description of the employment type at the workplace.

Employment Type

1 – Office (Non Government)	7 – Government/City/County/State/Federal Offices	13 – Wholesale Trade
2 – Retail	8 – Convenience Store/Gas Station	14 – Construction
3 – Industrial	9 – Grocery Store	15 – Other
4 – Medical	10 – Restaurant/Fast Food/Bar & Grill	99 – Unknown/Refused
5 – Education – Day Care / K-12 th	11 – Bank/Financial Institution	
6 – Education – College, trade, other	12 – Manufacturing	

Workplace Intercept Survey, Free Standing Workplace Form B File Format

This file contains the travel data for employees and visitors at surveyed free standing workplaces using Form B, Intercept Travel Survey, Free Standing Workplace. The data are in ASCII file format.

<u>Item</u>	<u>Field Columns</u>				<u>Description</u>
	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Format</u>	
1. Record Type	1	3	Alphanum. LJ	A3	Code which indicates the type of record. Here it should be A10 or L10 depending on area workplace is located.
2. Month	4	5	Numeric RJ	I2	Month workplace was surveyed.
3. Day	6	7	Numeric RJ	I2	Day of the month workplace was surveyed.
4. Site Number	8	12	Numeric RJ	I5	Unique non-zero number assigned to the establishment where these interviews were conducted.
5. Person Number	13	13	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
6. Time Began	14	18	Numeric RJ	I5	Time interview began. Military time.
7. Time Ended	19	23	Numeric RJ	I5	Time interview ended. Military time.
8. Person Interviewed	24	25	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 – employee; 2 – visitor.
9. Residence	26	50	Alphanum. LJ	A25	Name of city, county or country where person lives.
10. Residence Code	51	52	Numeric RJ	I2	Code indicating if residence is not located within a county in the study area. 1-Yes, 2-No, 99-Refused / Unknown.
11. Entry Road	53	82	Alphanum. LJ	A30	If person does not live in study area, this field should contain the name of the street/highway/bridge the person was on when they entered the study area. If person stayed overnight, this field should be blank. Note that airport is a valid entry.
12. Study Area	83	84	Alphanum. LJ	A2	Code indicating study area where person entered. If person lives in study area, this field should be blank.
13. Entry Zone	85	89	Numeric RJ	I5	Zone number associated with the street/highway/bridge person was on when they entered study area. If person lives in study area, this field should be blank.
14. Home Address	90	119	Alphanum. LJ	A30	Address where person lives. If person gives nearest intersecting streets, this should be the first street name.
15. Intersecting Street	120	149	Alphanum. LJ	A30	If person gave nearest intersecting streets for their home address, this field should have the second street name, otherwise it is blank.
16. Longitude	150	159	Numeric RJ	F10.0	Longitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
17. Latitude	160	169	Numeric RJ	F10.0	Latitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
18. Zone Location	170	171	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock, If address is not located in a study area but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
19. Zone	172	176	Numeric RJ	I5	Zone number where person lives. Locations in Mexico should be coded 7777. Locations outside of the study area but within Texas, should be coded to the state zone system. Unknown zone numbers in within a study area county should be coded as 8888. Unknown zone numbers outside of the study area but within Texas should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
20. Origin Code	177	178	Numeric RJ	I2	Code indicating origin of trip; 1-Home, 2-Other.
21. Origin Location	179	238	Alphanum. LJ	A60	Location that trip originated from (i.e. name, address, etc).

Intercept Survey, Free Standing Workplace Survey, Form B Format, Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	Field Columns <u>Format</u>	<u>Description</u>
22. Longitude	239	248	Numeric RJ	F10.0	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
23. Latitude	249	258	Numeric RJ	F10.0	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
24. Zone Location	259	260	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address not located in a county within the study area, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
25. Origin Zone	261	265	Numeric RJ	I5	Zone where trip originated. Locations in Mexico should be coded 7777. Locations outside of the study area, but within Texas, should be coded to the state zone system. Unknown zone numbers in a study area county should be coded as 8888. Unknown zone numbers outside of the study area, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
26. Entry Facility	266	295	Alphanum. LJ	A30	If origin is outside of a study area county, this field should contain the name of the bridge, street, or highway used to enter the study area.
27. Entry Study Area	296	297	Alphanum. LJ	A2	If origin is outside of a study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. A – Amarillo; L – Lubbock.
28. Entry External Zone	298	302	Numeric RJ	I5	If origin is outside of the study area, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
29. Arrival Hour	303	305	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
30. Arrival Minute	306	308	Numeric RJ	I3	Minute person arrived at this site.
31. Mode	309	310	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
32. Other Mode	311	320	Alphanum. LJ	A10	If mode is coded “other,” this field should contain a description of the mode given.
33. Number Persons	321	322	Numeric RJ	I2	If mode of travel was driver, passenger, taxi, commercial vehicle or motorcycle, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
34. Bus Fare	323	328	Numeric RJ	F6.2	If mode of travel was bus, this is the bus fare paid.
35. Trip Purpose	329	330	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
36. Other Purpose	331	340	Alphanum. LJ	A10	If purpose is coded as “other,” this contains description of purpose given.
37. Depart Destination	341	342	Numeric RJ	I2	Code indicating destination when person departs from this site; 1-Home, 2-Other.
38. Destination Location	343	402	Alphanum. LJ	A60	Location of destination person is going.

Intercept Survey, Free Standing Workplace Survey Form B Format Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns</u> <u>Format</u>	<u>Description</u>
39. Destination Longitude	403	412	Numeric RJ	F10.0	Longitude of destination location. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
40. Destination Latitude	413	422	Numeric RJ	F10.0	Latitude of destination location. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
41. Zone Location	423	424	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address is not in a study area county, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
42. Destination Zone	425	429	Numeric RJ	I5	Zone where individual is going when they leave this location. Locations in Mexico should be coded 7777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in a study area county should be coded as 8888. Unknown zone numbers not in a study area county but within Texas should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
43. Exit Facility	430	459	Alphanum. LJ	A30	If destination is outside of the study area, this field should contain the name of the bridge, street, or highway used to enter the study area.
44. Exit Study Area	460	461	Alphanum. LJ	A2	If destination is outside of the study area, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. A – Amarillo; L – Lubbock.
45. Exit External Zone	462	466	Numeric RJ	I5	If destination is outside of a study area county this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
46. Form Number	467	472	Numeric RJ	I6	Survey form number which contains raw survey data.

Item 31. Mode of Transportation Codes

- 1 – Driver (car/truck/van)
- 2 – Passenger (car/truck/van)
- 3 – Walk
- 4 – Bicycle
- 5 – Bus / Public Transportation
- 6 – School Bus
- 7 – Taxi / Limo
- 8 – Commercial Cargo Transport Vehicle
- 9 – Commercial Service Vehicle
- 10 – Motorcycle
- 11 – Other
- 99. No Response

Item 35. Trip Purpose Codes

- 1 – Work Related
- 2 – School Related
- 3 – Social / Recreational / Visit
- 4 – Shop
- 5 – Eat Out
- 6 – Pick Up / Drop Off Passenger
- 7 – Change Travel Mode
- 8 – Delivery – Pick Up / Drop Off
- 9 – Other
- 99 – Non-Response

Workplace Intercept Survey, Non Free Standing Workplace Form C Format

This file contains the travel data for employees and visitors at surveyed non-free standing workplaces using Form C, Intercept Travel Survey, Non-Free Standing Workplace. The data are in ASCII file format.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Format</u>	<u>Description</u>
1. Record Type	1	3	Alphanum. LJ	A3	Code which indicates the type of record. Here it should be A11 or L11 depending on area workplace is located.
2. Month	4	5	Numeric RJ	I2	Month workplace was surveyed.
3. Day	6	7	Numeric RJ	I2	Day of the month workplace was surveyed.
4. Site Number	8	12	Numeric RJ	I5	Unique non-zero number assigned to the workplace where these interviews were conducted.
5. Person Number	13	13	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
6. Time Began	14	18	Numeric RJ	I5	Time interview began. Military time.
7. Time Ended	19	23	Numeric RJ	I5	Time interview ended. Military time.
8. Person Interviewed	24	25	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 – employee; 2 – visitor.
9. Residence	26	50	Alphanum. LJ	A25	Name of city, county or country where person lives.
10. Residence Code	51	52	Numeric RJ	I2	Code indicating if residence is not located within a county in the study area. 1-Yes, 2-No, 99-Refused / Unknown.
11. Entry Road	53	82	Alphanum. LJ	A30	If person does not live in study area, this field should contain the name of the street/highway/bridge the person was on when they entered the study area. If person stayed overnight, this field should be blank. Note that airport is a valid entry.
12. Study Area	83	84	Alphanum. LJ	A2	Code indicating study area where person entered. If person lives in study area, this field should be blank.
13. Entry Zone	85	89	Numeric RJ	I5	Zone number associated with the street/highway/bridge person was on when they entered study area. If person lives in study area, this field should be blank.
14. Home Address	90	119	Alphanum. LJ	A30	Address where person lives. If person gives nearest intersecting streets, this should be the first street name.
15. Intersecting Street	120	149	Alphanum. LJ	A30	If person gave nearest intersecting streets for their home address, this field should have the second street name, otherwise it is blank.
16. Longitude	150	159	Numeric RJ	F10.0	Longitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
17. Latitude	160	169	Numeric RJ	F10.0	Latitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
18. Zone Location	170	171	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address is not located in a study area but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
19. Zone	172	176	Numeric RJ	I5	Zone number where person lives. Locations in Mexico should be coded 7777. Locations outside of the study area, but within Texas, should be coded to the state zone system. Unknown zone numbers in within a study area county should be coded as 8888. Unknown zone numbers outside of the study area, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
20. Origin Code	177	178	Numeric RJ	I2	Code indicating origin of trip; 1-Home, 2-Other.
21. Origin Location	179	238	Alphanum. LJ	A60	Location that trip originated from (i.e. name, address, etc).

Intercept Survey, Non-Free Standing Workplace Survey, Form C Format, Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns Format</u>	<u>Description</u>
22. Longitude	239	248	Numeric RJ	F10.0	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
23. Latitude	249	258	Numeric RJ	F10.0	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
24. Zone Location	259	260	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address not located in a county within the study area, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
25. Origin Zone	261	265	Numeric RJ	I5	Zone where trip originated. Locations in Mexico should be coded 7777. Locations outside of the study area, but within Texas should be coded to the state zone system. Unknown zone numbers in a study area county should be coded as 8888. Unknown zone numbers outside of the study area but within Texas should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
26. Entry Facility	266	295	Alphanum. LJ	A30	If origin is outside of a study area county, this field should contain the name of the bridge, street, or highway used to enter the study area.
27. Entry Study Area	296	297	Alphanum. LJ	A2	If origin is outside of a study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. A – Amarillo; L – Lubbock.
28. Entry External Zone	298	302	Numeric RJ	I5	If origin is outside of the study area, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
29. Arrival Hour	303	305	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
30. Arrival Minute	306	308	Numeric RJ	I3	Minute person arrived at this site.
31. Mode	309	310	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
32. Other Mode	311	320	Alphanum. LJ	A10	If mode is coded “other,” this field should contain a description of the mode given.
33. Number Persons	321	322	Numeric RJ	I2	If mode of travel was driver, passenger, taxi, commercial vehicle or motorcycle, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
34. Bus Fare	323	328	Numeric RJ	F6.2	If mode of travel was bus, this is the bus fare paid.
35. Trip Purpose	329	330	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
36. Other Purpose	331	340	Alphanum. LJ	A10	If purpose is coded as “other,” this contains description of purpose given.
37. First Store	341	342	Numeric RJ	I2	Code indicating if this store/workplace is the first visited in the location since arriving. 1 – Yes, 2 – No, 99 – Refused/Unknown.
38. Number Visited	343	344	Numeric RJ	I2	Number of stores/workplaces visited in this location.
39. More Visits	345	346	Numeric RJ	I2	Number of stores/workplaces in this location person plans on visiting during this trip.
40. Depart Destination	347	348	Numeric RJ	I2	Code indicating destination when person departs from this site; 1-Home, 2-Other.
41. Destination Location	349	408	Alphanum. LJ	A60	Name and address of destination person is going.

Intercept Survey, Non-Free Standing Workplace Survey Form C Format Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns</u> <u>Format</u>	<u>Description</u>
42. Destination Longitude	409	418	Numeric RJ	F10.0	Longitude of destination location. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
43. Destination Latitude	419	428	Numeric RJ	F10.0	Latitude of destination location. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
44. Zone Location	429	430	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address is not in a study area county, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
45. Destination Zone	431	435	Numeric RJ	I5	Zone where individual is going when they leave this location. Locations in Mexico should be coded 7777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in a study area county should be coded as 8888. Unknown zone numbers not in a study area county but within Texas should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
46. Exit Facility	436	465	Alphanum. LJ	A30	If destination is outside of the study area, this field should contain the name of the bridge, street, or highway used to enter the study area.
47. Exit Study Area	466	467	Alphanum. LJ	A2	If destination is outside of the study area, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. A – Amarillo; L – Lubbock.
48. Exit External Zone	468	472	Numeric RJ	I5	If destination is outside of a study area county this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
49. Form Number	473	478	Numeric RJ	I6	Survey form number which contains raw survey data.

Item 31. Mode of Transportation Codes

- 1 – Driver (car/truck/van)
- 2 – Passenger (car/truck/van)
- 3 – Walk
- 4 – Bicycle
- 5 – Bus / Public Transportation
- 6 – School Bus
- 7 – Taxi / Limo
- 8 – Commercial Cargo Transport Vehicle
- 9 – Commercial Service Vehicle
- 10 – Motorcycle
- 11 – Other
- 99. No Response

Item 35. Trip Purpose Codes

- 1 – Work Related
- 2 – School Related
- 3 – Social / Recreational / Visit
- 4 – Shop
- 5 – Eat Out
- 6 – Pick Up / Drop Off Passenger
- 7 – Change Travel Mode
- 8 – Delivery – Pick Up / Drop Off
- 9 – Other
- 99 – Non-Response

Special Generator Intercept Survey, Airport Workplace Form B Format

This file contains the travel data for employees and visitors at surveyed special generator workplaces using Form B, Intercept Travel Survey, Airport Workplace. The data are in ASCII file format.

<u>Item</u>	<u>Field Columns</u>				<u>Description</u>
	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Format</u>	
1. Record Type	1	3	Alphanum. LJ	A3	Code which indicates the type of record. Here it should be SAA or SLA depending on area airport is located.
2. Month	4	5	Numeric RJ	I2	Month workplace was surveyed.
3. Day	6	7	Numeric RJ	I2	Day of the month workplace was surveyed.
4. Site Number	8	12	Numeric RJ	I5	Unique non-zero number assigned to the airport where these interviews were conducted.
5. Person Number	13	13	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
6. Time Began	14	18	Numeric RJ	I5	Time interview began. Military time.
7. Time Ended	19	23	Numeric RJ	I5	Time interview ended. Military time.
8. Person Interviewed	24	25	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 – employee; 2 – visitor.
9. Residence	26	50	Alphanum. LJ	A25	Name of city, county or country where person lives.
10. Residence Code	51	52	Numeric RJ	I2	Code indicating if residence is not located within a county in the study area. 1-Yes, 2-No, 99-Refused / Unknown.
11. Entry Road	53	82	Alphanum. LJ	A30	If person does not live in study area, this field should contain the name of the street/highway/bridge the person was on when they entered the study area. Note that airport is a valid entry.
12. Study Area	83	84	Alphanum. LJ	A2	Code indicating study area where person entered. If person lives in study area, this field should be blank.
13. Entry Zone	85	89	Numeric RJ	I5	Zone number associated with the street/highway/bridge person was on when they entered study area. If person lives in study area, this field should be blank.
14. Home Address	90	119	Alphanum. LJ	A30	Address where person lives. If person gives nearest intersecting streets, this should be the first street name.
15. Intersecting Street	120	149	Alphanum. LJ	A30	If person gave nearest intersecting streets for their home address, this field should have the second street name, otherwise it is blank.
16. Longitude	150	159	Numeric RJ	F10.0	Longitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
17. Latitude	160	169	Numeric RJ	F10.0	Latitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
18. Zone Location	170	171	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address is not located in a study area but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
19. Zone	172	176	Numeric RJ	I5	Zone number where person lives. Locations in Mexico should be coded 7777. Locations outside of the study area, but within Texas, should be coded to the state zone system. Unknown zone numbers in within a study area county should be coded as 8888. Unknown zone numbers outside of the study area, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
20. Arrival Mode	177	178	Numeric RJ	I2	Code indicating mode of arrival at this airport. See definitions below.

Intercept Survey, Airport Workplace Survey, Form B Format, Continued.

Item	Begin	End	Type	Field Columns Format	Description
21. Other Arrival Mode	179	188	Alphanum. LJ	A10	If arrival mode is coded "other," this field should contain a description of the mode given.
22. Number Persons	189	190	Numeric RJ	I2	If mode of travel was driver, passenger, taxi, commercial vehicle or motorcycle, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
23. Bus Fare	191	196	Numeric RJ	F6.2	If mode of travel was bus, this is the bus fare paid.
24. Origin Code	197	198	Numeric RJ	I2	Code indicating origin of trip; 1-Home, 2-Other.
25. Origin Location	199	258	Alphanum. LJ	A60	Location that trip originated from (i.e. name, address, etc).
26. Longitude	259	268	Numeric RJ	F10.0	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
27. Latitude	269	278	Numeric RJ	F10.0	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
28. Zone Location	279	280	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address not located in a county within the study area, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
29. Origin Zone	281	285	Numeric RJ	I5	Zone where trip originated. Locations in Mexico should be coded 7777. Locations outside of the study area, but within Texas, should be coded to the state zone system. Unknown zone numbers in a study area county should be coded as 8888. Unknown zone numbers outside of the study area, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
30. Entry Facility	286	315	Alphanum. LJ	A30	If origin is outside of a study area county, this field should contain the name of the bridge, street, or highway used to enter the study area.
31. Entry Study Area	316	317	Alphanum. LJ	A2	If origin is outside of a study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. A – Amarillo; L – Lubbock.
32. Entry External Zone	318	322	Numeric RJ	I5	If origin is outside of the study area, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
33. Arrival Hour	323	325	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
34. Arrival Minute	326	328	Numeric RJ	I3	Minute person arrived at this site.
35. Trip Purpose	329	330	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
36. Other Purpose	331	340	Alphanum. LJ	A10	If purpose is coded as "other," this contains description of purpose given.
37. Departure Mode	341	342	Numeric RJ	I2	Code indicating mode of departure from this airport. See definitions below.
38. Departure Mode Other	343	352	Alphanum. LJ	A10	If departure mode is coded "other," this field should contain a description of the mode given.
39. Depart Destination	353	354	Numeric RJ	I2	Code indicating destination when person departs from this site; 1-Home, 2-Other.
40. Destination Location	355	414	Alphanum. LJ	A60	Location of destination person is going.

Intercept Survey, Airport Workplace Survey Form B Format Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns Format</u>	<u>Description</u>
41. Destination Longitude	415	424	Numeric RJ	F10.0	Longitude of destination location. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
42. Destination Latitude	425	434	Numeric RJ	F10.0	Latitude of destination location. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in study area, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
43. Zone Location	435	436	Alphanum. LJ	A2	Code indicating location of address. A – Amarillo; L – Lubbock. If address is not in a study area county, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
44. Destination Zone	437	441	Numeric RJ	I5	Zone where individual is going when they leave this location. Locations in Mexico should be coded 7777. Locations not in a study area county, but within Texas, should be coded to the state zone system. Unknown zone numbers in a study area county should be coded as 8888. Unknown zone numbers not in a study area county, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
45. Exit Facility	442	471	Alphanum. LJ	A30	If destination is outside of the study area, this field should contain the name of the bridge, street, or highway used to enter the study area.
46. Exit Study Area	472	473	Alphanum. LJ	A2	If destination is outside of the study area, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. A – Amarillo; L – Lubbock.
47. Exit External Zone	474	478	Numeric RJ	I5	If destination is outside of a study area county this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
48. Form Number	479	484	Numeric RJ	I6	Survey form number which contains raw survey data.

Items 20 & 37. Mode of Transportation Codes

- 1 – Driver (car/truck/van)
- 2 – Passenger (car/truck/van)
- 3 – Walk
- 4 – Bicycle
- 5 – Bus / Public Transportation
- 6 – School Bus
- 7 – Taxi / Limo
- 8 – Commercial Cargo Transport Vehicle
- 9 – Commercial Service Vehicle
- 10 – Motorcycle
- 11 – Airplane
- 12 – Hotel/Motel Shuttle Bus
- 13 – Other Parking Shuttle
- 14 – Other
- 99. No Response

Item 35. Trip Purpose Codes

- 1 – Return Home
- 2 – Work Related
- 3 – School Related
- 4 – Social / Recreational / Visit
- 5 – Shop
- 6 – Eat Out
- 7 – Personal Business
- 8 – Pick Up / Drop Off Passenger
- 9 – Change Travel Mode
- 10 – Delivery – Pick Up / Drop Off
- 11 – Other
- 99 – Non-Response

Special Generator Intercept Survey, Texas Tech University Form B Format

This file contains the travel data for employees and visitors surveyed at special generator workplaces using Form B, Intercept Travel Survey, Texas Tech University. The data are in ASCII file format.

<u>Item</u>	<u>Field Columns</u>				<u>Description</u>
	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Format</u>	
1. Record Type	1	3	Alphanum. LJ	A3	Code which indicates the type of record. Here it should be STT.
2. Month	4	5	Numeric RJ	I2	Month workplace was surveyed.
3. Day	6	7	Numeric RJ	I2	Day of the month workplace was surveyed.
4. Site Number	8	12	Numeric RJ	I5	Unique non-zero number assigned to the university where these interviews were conducted.
5. Person Number	13	13	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
6. Time Began	14	18	Numeric RJ	I5	Time interview began. Military time.
7. Time Ended	19	23	Numeric RJ	I5	Time interview ended. Military time.
8. Person Interviewed	24	25	Numeric RJ	I2	Code indicating if person being interviewed is an employee, a student, or a visitor. 1 – employee; 2 – student; 3 - visitor
9. Campus Resident	26	27	Numeric RJ	I2	Code indicating if person lives on campus. 1 – Yes; 2 - No
10. Residence	28	52	Alphanum. LJ	A25	Name of city, county or country where person lives.
11. Residence Code	53	54	Numeric RJ	I2	Code indicating if residence is not located within Lubbock County. 1-Yes, 2-No, 99-Refused / Unknown.
12. Entry Road	54	84	Alphanum. LJ	A30	If person does not live in Lubbock County, this field should contain the name of the street/highway/bridge the person was on when they entered Lubbock County. Note that airport is a valid entry.
13. Entry Zone	85	89	Numeric RJ	I5	Zone number associated with the street/highway/bridge person was on when they entered Lubbock County. If person lives in Lubbock County, this field should be blank.
14. Home Address	90	119	Alphanum. LJ	A30	Address where person lives. If person gives nearest intersecting streets, this should be the first street name.
15. Intersecting Street	120	149	Alphanum. LJ	A30	If person gave nearest intersecting streets for their home address, this field should have the second street name, otherwise it is blank.
16. Longitude	150	159	Numeric RJ	F10.0	Longitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas this should be coded 999.9999. If unknown but in Lubbock County, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
17. Latitude	160	169	Numeric RJ	F10.0	Latitude of person's home address. If address is in Mexico, this should be coded 777.7777. If address is outside Texas , this should be coded 999.9999. If unknown but in Lubbock County, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
18. Zone Location	170	171	Alphanum. LJ	A2	Code indicating location of address. L – Lubbock. If address is not located in Lubbock County but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
19. Zone	172	176	Numeric RJ	I5	Zone number where person lives. Locations in Mexico should be coded 7777. Locations outside of Lubbock County, but within Texas, should be coded to the state zone system. Unknown zone numbers within Lubbock County should be coded as 8888. Unknown zone numbers outside of Lubbock County, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
20. Arrival Mode	177	178	Numeric RJ	I2	Code indicating mode of arrival at the university. See definitions below.

Intercept Survey, Texas Tech University Survey, Form B Format, Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	Field Columns <u>Format</u>	<u>Description</u>
21. Other Arrival Mode	179	188	Alphanum. LJ	A10	If arrival mode is coded "other," this field should contain a description of the mode given.
22. Number Persons	189	190	Numeric RJ	I2	If mode of travel was driver, passenger, taxi, commercial vehicle or motorcycle, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
23. Park Location	191	192	Numeric RJ	I2	Code indicating where person parked. See definitions.
24. Other Parking	193	242	Alphanum. LJ	A50	If park location is coded as other, this field contains description of where person parked.
24. Origin Code	243	244	Numeric RJ	I2	Code indicating origin of trip; 1-Home, 2-Other.
25. Origin Location	245	304	Alphanum. LJ	A60	Location that trip originated from (i.e. name, address, etc).
26. Longitude	305	314	Numeric RJ	F10.0	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in Lubbock County, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
27. Latitude	315	324	Numeric RJ	F10.0	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in Lubbock County, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
28. Zone Location	325	326	Alphanum. LJ	A2	Code indicating location of address. L – Lubbock County. If address not located in Lubbock County, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
29. Origin Zone	327	331	Numeric RJ	I5	Zone where trip originated. Locations in Mexico should be coded 7777. Locations outside of Lubbock County, but within Texas, should be coded to the state zone system. Unknown zone numbers in Lubbock County should be coded as 8888. Unknown zone numbers outside of Lubbock County, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
30. Entry Facility	332	361	Alphanum. LJ	A30	If origin is outside of Lubbock County, this field should contain the name of the bridge, street, or highway used to enter Lubbock County.
31. Entry Study Area	362	363	Alphanum. LJ	A2	If origin is outside of Lubbock County, this field should contain a code indicating where the bridge, street, or highway used to enter is located. L – Lubbock.
32. Entry External Zone	364	368	Numeric RJ	I5	If origin is outside of Lubbock County, this field should contain the external station number associated with the bridge, street, or highway used to enter Lubbock County.
33. Arrival Hour	369	371	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
34. Arrival Minute	372	374	Numeric RJ	I3	Minute person arrived at this site.
35. Trip Purpose	375	376	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
36. Other Purpose	377	386	Alphanum. LJ	A10	If purpose is coded as "other," this contains description of purpose given.
37. Departure Mode	387	388	Numeric RJ	I2	Code indicating mode of departure from the university. See definitions below.
38. Departure Mode Other	389	398	Alphanum. LJ	A10	If departure mode is coded "other," this field should contain a description of the mode given.
39. Depart Destination	399	400	Numeric RJ	I2	Code indicating destination when person departs from the university; 1-Home, 2-Other.
40. Destination Location	401	460	Alphanum. LJ	A60	Name and address of destination person is going.

Intercept Survey, Texas Tech University Survey Form B Format Continued.

<u>Item</u>	<u>Begin</u>	<u>End</u>	<u>Type</u>	<u>Field Columns</u> <u>Format</u>	<u>Description</u>
41. Destination Longitude	461	470	Numeric RJ	F10.0	Longitude of destination location. If location is in Mexico, this should be coded 777.7777. If location is outside Texas, this should be coded 999.9999. If unknown but in Lubbock County, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
42. Destination Latitude	471	480	Numeric RJ	F10.0	Latitude of destination location. If address is in Mexico, this should be coded 777.7777. If address is outside Texas, this should be coded 999.9999. If unknown but in Lubbock County, it should be coded 888.8888. If unknown but in Texas, it should be coded as 666.6666.
43. Zone Location	481	482	Alphanum. LJ	A2	Code indicating location of address. L – Lubbock. If address is not in Lubbock County, but within Texas, this field should contain the number 1 indicating the zone number in the next field is for the state zone system. Otherwise this field should be blank.
44. Destination Zone	483	487	Numeric RJ	I5	Zone where individual is going when they leave this location. Locations in Mexico should be coded 7777. Locations not in Lubbock County, but within Texas, should be coded to the state zone system. Unknown zone numbers in Lubbock County should be coded as 8888. Unknown zone numbers not in Lubbock County, but within Texas, should be coded as 6666. Locations outside Texas and not in Mexico should be coded as 9999.
45. Exit Facility	488	517	Alphanum. LJ	A30	If destination is outside of Lubbock County, this field should contain the name of the bridge, street, or highway used to exit Lubbock County.
46. Exit Study Area	518	519	Alphanum. LJ	A2	If destination is outside of Lubbock County, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. L – Lubbock.
47. Exit External Zone	520	524	Numeric RJ	I5	If destination is outside of Lubbock County this field should contain the external station number associated with the bridge, street, or highway used to exit Lubbock County.
48. Form Number	525	530	Numeric RJ	I6	Survey form number which contains raw survey data.

Items 20 & 37. Mode of Transportation Codes

- 1 – Driver (car/truck/van)
- 2 – Passenger (car/truck/van)
- 3 – Walk
- 4 – Bicycle
- 5 – Bus / Public Transportation
- 6 – School Bus
- 7 – Taxi / Limo
- 8 – Commercial Cargo Transport Vehicle
- 9 – Commercial Service Vehicle
- 10 – Motorcycle
- 11 – Other
- 99. No Response

Item 23: Park Location Codes

- 1 – On-Campus
- 2 – Off Campus Parking Lot
- 3 – Off Campus in Street Designated Parking Spot
- 4 – Other

Item 35. Trip Purpose Codes

- 1 – Return Home
- 2 – Work Related
- 3 – School
- 4 – Social / Recreational / Visit
- 5 – Shop
- 6 – Eat Out
- 7 – Personal Business
- 8 – Pick Up / Drop Off Passenger
- 9 – Change Travel Mode
- 10 – Delivery – Pick Up / Drop Off
- 11 – Other
- 99 – Non-Response