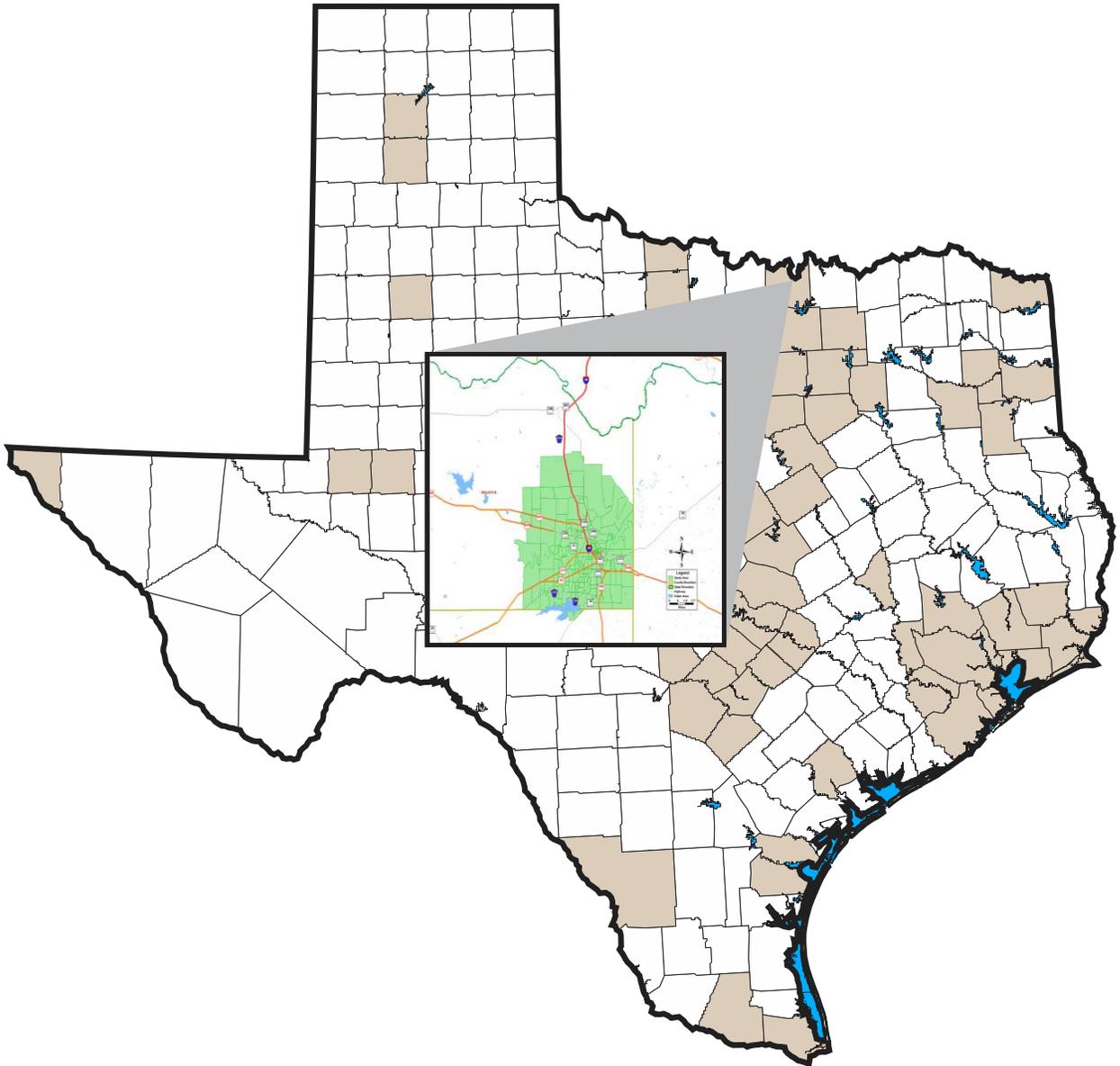


# 2011 Sherman-Denison Work Place and Special Generator Travel Survey Technical Summary



Prepared by the  
Texas A&M Transportation Institute  
January 2014



**2011 Sherman-Denison  
Work Place and Special Generator  
Travel Survey**

**TECHNICAL SUMMARY**

**Texas Department of Transportation Travel Survey Program**

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## **DISCLAIMER**

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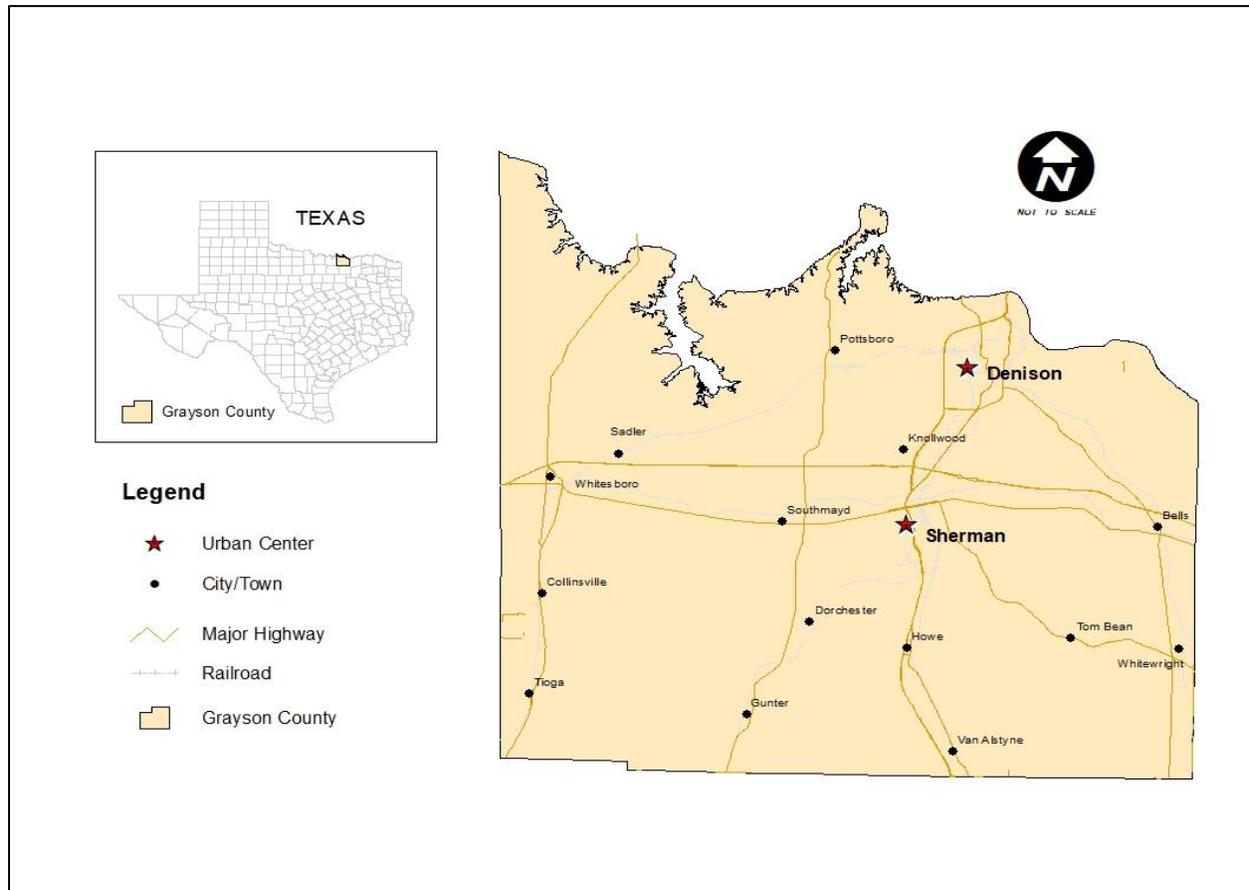
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## INTRODUCTION

In 2011, the Transportation Planning and Programming (TPP) Division of the Texas Department of Transportation (TxDOT) funded a work place and special generator survey in the Sherman-Denison Metropolitan Planning Organization (SDMPO) 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 will enable TxDOT to develop and/or update trip attraction models to forecast travel demand within the study area.

The study area, shown in Figure 1, covered Grayson County and included the cities of Sherman and Denison as urban centers. Based on 2011 estimates from the American Community Survey (ACS), Grayson County has a total population of 121,419, total land area of 979 square miles, and population density of 124 persons per square mile.



**Figure 1. Sherman-Denison Work Place Survey Area.**

This report presents a technical summary of the work place and special generator surveys. It documents the data collected and presents the results of the data analysis. The forms used in the surveys are included in Appendix A of this report.

## **SURVEY METHODOLOGY**

The work place and special generator travel surveys were conducted during the period between September 2011 through November 2011. TxDOT contracted with GRAM Traffic Counting, Inc. (GRAM) to conduct the Sherman-Denison Work Place Survey. The Texas Transportation Institute (TTI) provided technical assistance to both TxDOT and GRAM in the effort.

The SDMPO 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 (i.e., points of vehicle access and parking were clearly established and were designed to serve that work place only) or non-free standing (i.e., 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 entered and/or exited the establishments. Survey participants were randomly selected, and 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). 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 (CVs) accessing the establishment (i.e., making deliveries or pick-ups or other purposes) using ACRs, video cameras, or manual counts.

The surveyed establishments were classified according to their free standing or non-free standing status, and further distinguished as either full survey sites or partial survey sites. Full survey sites included all the previously mentioned data collection activities, while partial survey sites only collected general information (i.e., 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. These categories are based on the North American Industry Classification System (NAICS) code for establishments as Table 1 shows.

**Table 1. NAICS Groupings by Employment Type.**

<b>Employment Type</b>	<b>NAICS Code</b>	<b>Industry Group</b>
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 (except 491)
	5111	Newspaper Publishers/Book Publishers/Directory Publishers
	5112	Software Publishers
	512	Motion Picture and Sound Recording (except 51213)
	5151	Radio and TV Broadcasting
	5152	TW Cable
	5173	Telecommunications Resellers
	5174	Satellite Network
5175	Cable and Other Program Distribution	
Retail	44-45	Retail
	51213	Motion Picture Theaters
	71	Arts, Entertainment, and Recreation
	722	Food Service and Drinking Places
	491	Post Offices
Service	516 - 5172	Internet Publishing and Telecommunications
	5179	Other Telecommunications
	518-519	Internet Service Providers and New Syndicates
	52	Finance and Insurance
	53	Real Estate and Rental and Leasing
	54	Professional, Scientific, and Technical Services
	55-56	Company Management and Administrative Support
	6114-6116	Business, Technical Trade, and Other Schools
	6117	Educational Support Services
	62	Health Care and Social Assistance (including hospitals)
	721	Accommodations (hotels)
	81	Other Service, Repair, and Maintenance
92	Public Administration (including Justice, Public Order, and Safety)	
9999	Unknown	
Education	6111	Elementary and Secondary Schools
	6112-6113	Junior Colleges, Colleges, Universities and Professional Schools

Source: TxDOT, 2004.

## SAMPLING AND RECRUITMENT

The sampling plan included 150 full surveys and 150 partial surveys. 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	25	25
Retail	50	50
Service	60	60
Education	15	15
<b>Total</b>	<b>150</b>	<b>150</b>

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 2,671 work places were included in the list, which consisted of 649 basic, 1,312 retail, 624 service, and 86 education types of establishments.

Overall, 958 establishments were contacted as part of the SDMPO Work Place Survey recruitment. Table 3 shows a summary of the work place survey recruitment by employment type and business location, and contacts were tracked based on the following two categories:

- *Agreed to Participate.* The establishment is located within the study area and agreed to participate as a full or partial survey.
- *Refused to Participate.* The establishment refused to participate in the survey and may or may not have provided general data.

**Table 3. Work Place Survey Recruitment.**

Employment Type	Agreed to Participate	Refused to Participate	Total
Basic	53	150	203
Retail	103	210	313
Service	122	281	403
Education	32	7	39
<b>Total</b>	<b>310</b>	<b>648</b>	<b>958</b>

## SURVEY RESULTS

Table 4 shows the actual distribution of the full and partial survey sites by employment type and establishment type.

**Table 4. Distribution of Surveys by Employment Type and Establishment Type.**

Employment Type	Full Survey			Partial Survey			All Surveys		
	FS <sup>1</sup>	NFS <sup>1</sup>	Total	FS <sup>1</sup>	NFS <sup>1</sup>	Total	FS <sup>1</sup>	NFS <sup>1</sup>	Total
Basic	21	4	25	22	3	25	43	7	50
Retail	32	18	50	32	18	50	64	36	100
Service	28	32	60	34	26	60	62	58	120
Education	12	3	15	15	0	15	27	3	30
<b>Total</b>	<b>93</b>	<b>57</b>	<b>150</b>	<b>103</b>	<b>47</b>	<b>150</b>	<b>196</b>	<b>104</b>	<b>300</b>

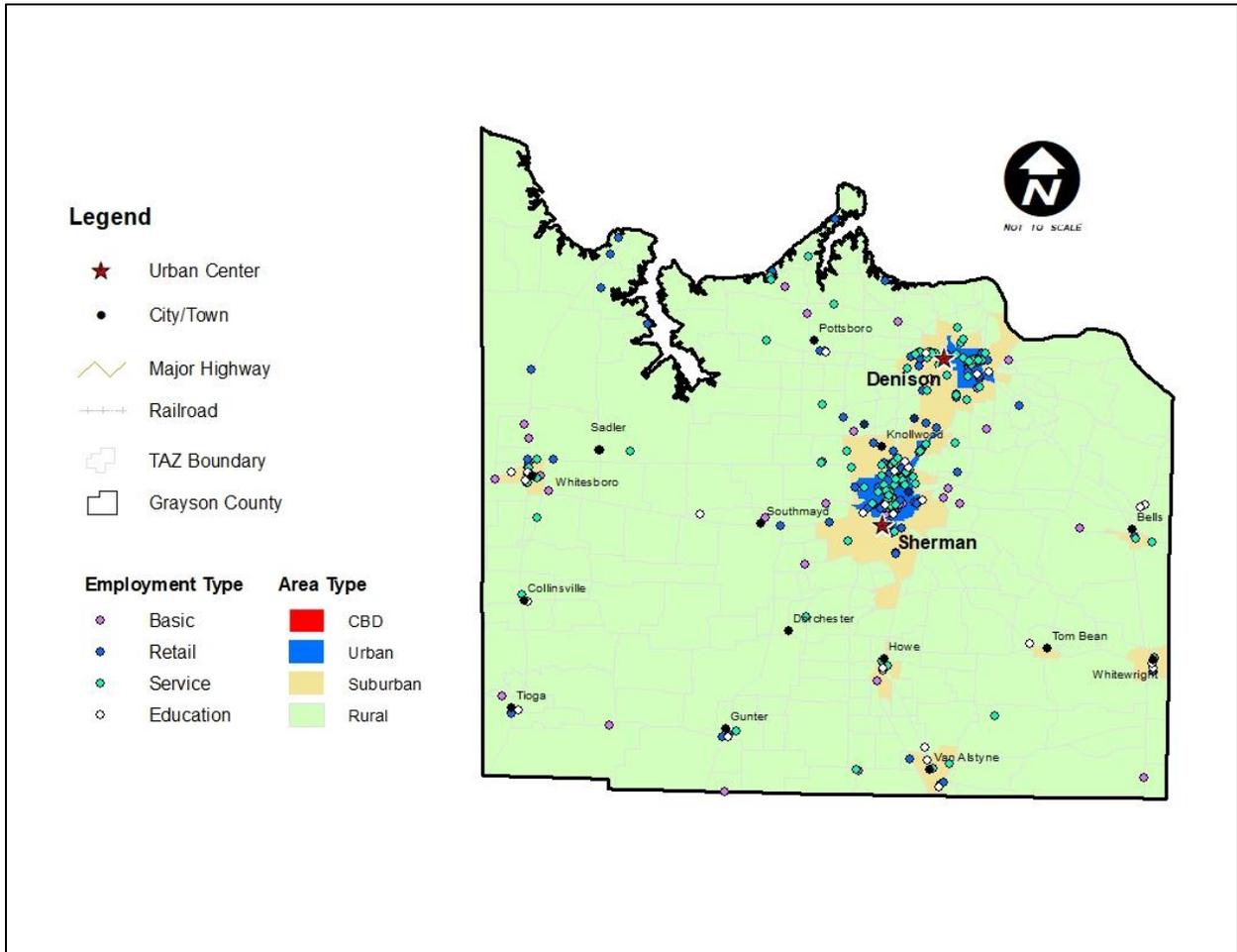
<sup>1</sup> FS – Free Standing, NFS – Non-Free Standing.

The full survey sites consisted of 93 free standing and 57 non-free standing sites, with a total reported employment of 2,007 employees. There were 905 employees and 2,444 non-employees (referred to in this report as visitors) who participated in the intercept interview. The employee surveys represented approximately 54 percent of total number of employees that were reported to be at work during the travel survey day.

The partial survey sites consisted of 103 free standing and 47 non-free standing sites. The total employment reported for these sites was 2,556. No intercept surveys were conducted at these sites but general information about the establishments was collected.

The Sherman-Denison MPO boundary consisted of four area types — Central Business District (CBD), Urban, Suburban, and Rural. Area types that are generally determined by land use activity within a Traffic Analysis Zone (TAZ) are measured based on a combination of population and employment density in the zone.

Figure 2 shows the general locations of surveyed establishments in the study area, color-coded by employment type and corresponding area type based on 2003 TAZ geography. Table 5 and Table 6 provide information on the total surveys, counts, and employment data collected from the full and partial establishment surveys.



**Figure 2. Sherman-Denison MPO Work Place Survey Locations.**

**Table 5. Sherman-Denison Full Establishment Survey.**

<b>Area Type</b>	<b>Item</b>	<b>Basic</b>	<b>Retail</b>	<b>Service</b>	<b>Education</b>	<b>Total</b>
CBD	Number of sites	1	7	15	1	24
	Surveyed employees	1	15	91	18	125
	Surveyed visitors	3	85	104	24	216
	Person counts	24	104	942	0	1,070
	Non-CV counts	0	264	506	1,246	2,016
	CV counts	1	8	12	5	26
	Total employment	2	38	216	85	341
	Employees at work	2	32	165	85	284
Urban	Number of sites	4	13	14	3	34
	Surveyed employees	17	79	48	47	191
	Surveyed visitors	5	709	109	15	838
	Person counts	20	1,202	836	0	2,058
	Non-CV counts	136	9,024	224	3,277	12,661
	CV counts	3	15	12	9	39
	Total employment	25	203	73	196	497
	Employees at work	22	115	64	193	394
Sub-Urban	Number of sites	3	18	17	6	44
	Surveyed employees	5	90	119	96	310
	Surveyed visitors	16	642	119	21	798
	Person counts	14	3,680	742	1,182	5,618
	Non-CV counts	48	2,960	808	3,202	7,018
	CV counts	4	36	8	9	57
	Total employment	6	203	187	236	632
	Employees at work	6	161	151	236	554
Rural	Number of sites	17	12	14	5	48
	Surveyed employees	62	52	110	55	279
	Surveyed visitors	64	436	60	36	596
	Person counts	148	766	268	40	1,222
	Non-CV counts	428	3,246	516	2,344	6,534
	CV counts	14	21	10	10	55
	Total employment	92	116	216	113	537
	Employees at work	85	83	174	113	455
<b>All Area Types</b>	<b>Number of sites</b>	<b>25</b>	<b>50</b>	<b>60</b>	<b>15</b>	<b>150</b>
	<b>Surveyed employees</b>	<b>85</b>	<b>236</b>	<b>368</b>	<b>216</b>	<b>905</b>
	<b>Surveyed visitors</b>	<b>88</b>	<b>1,872</b>	<b>392</b>	<b>96</b>	<b>2,448</b>
	<b>Person counts</b>	<b>206</b>	<b>5,752</b>	<b>2,788</b>	<b>1,222</b>	<b>9,968</b>
	<b>Non-CV counts</b>	<b>612</b>	<b>15,494</b>	<b>2,054</b>	<b>10,069</b>	<b>28,229</b>
	<b>CV counts</b>	<b>22</b>	<b>80</b>	<b>42</b>	<b>33</b>	<b>177</b>
	<b>Total employment</b>	<b>125</b>	<b>560</b>	<b>692</b>	<b>630</b>	<b>2,007</b>
	<b>Employees at work</b>	<b>115</b>	<b>391</b>	<b>554</b>	<b>627</b>	<b>1,687</b>

**Table 6. Sherman-Denison Partial Establishment Survey.**

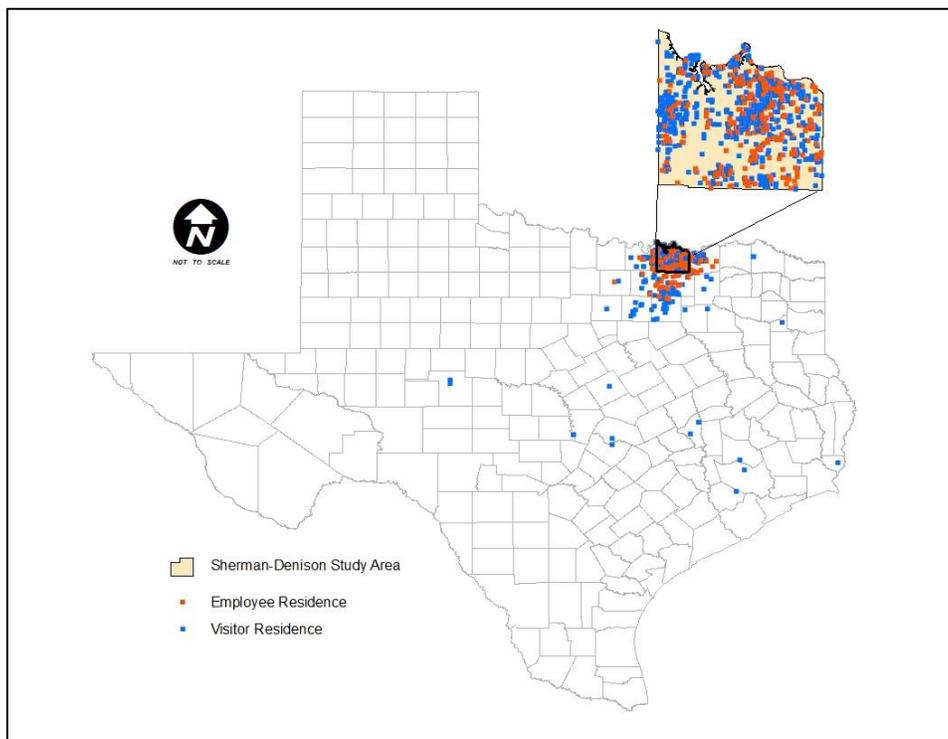
<b>Area Type</b>	<b>Item</b>	<b>Basic</b>	<b>Retail</b>	<b>Service</b>	<b>Education</b>	<b>Total</b>
CBD	Number of sites	3	5	13	0	21
	Person counts	46	122	834	0	1,002
	Non-CV counts	28	236	50	0	314
	CV counts	6	10	10	0	26
	Total employment	16	18	102	0	136
	Employees at work	10	15	78	0	103
Urban	Number of sites	11	22	23	2	58
	Person counts	110	3,166	1,934	0	5,210
	Non-CV counts	1,496	6,568	2,060	706	10,830
	CV counts	81	45	35	5	166
	Total employment	206	233	233	195	867
	Employees at work	183	171	195	195	744
Sub-Urban	Number of sites	2	11	16	9	38
	Person counts	0	2,948	440	0	3,388
	Non-CV counts	84	4,264	1,588	11,305	17,241
	CV counts	6	23	28	28	85
	Total employment	30	260	162	623	1,075
	Employees at work	6	150	126	603	885
Rural	Number of sites	9	12	8	4	33
	Person counts	0	738	178	0	916
	Non-CV counts	332	1,530	528	1,404	3,794
	CV counts	12	20	14	12	58
	Total employment	106	194	67	111	478
	Employees at work	101	86	57	106	350
<b>Total</b>	<b>Number of sites</b>	<b>25</b>	<b>50</b>	<b>60</b>	<b>15</b>	<b>150</b>
	<b>Person counts</b>	<b>156</b>	<b>6,974</b>	<b>3,386</b>	<b>0</b>	<b>10,516</b>
	<b>Non-CV counts</b>	<b>1,940</b>	<b>12,598</b>	<b>4,226</b>	<b>13,415</b>	<b>32,179</b>
	<b>CV counts</b>	<b>105</b>	<b>98</b>	<b>87</b>	<b>45</b>	<b>335</b>
	<b>Total employment</b>	<b>358</b>	<b>705</b>	<b>564</b>	<b>929</b>	<b>2,556</b>
	<b>Employees at work</b>	<b>300</b>	<b>422</b>	<b>456</b>	<b>904</b>	<b>2,082</b>

## Trip Characteristics

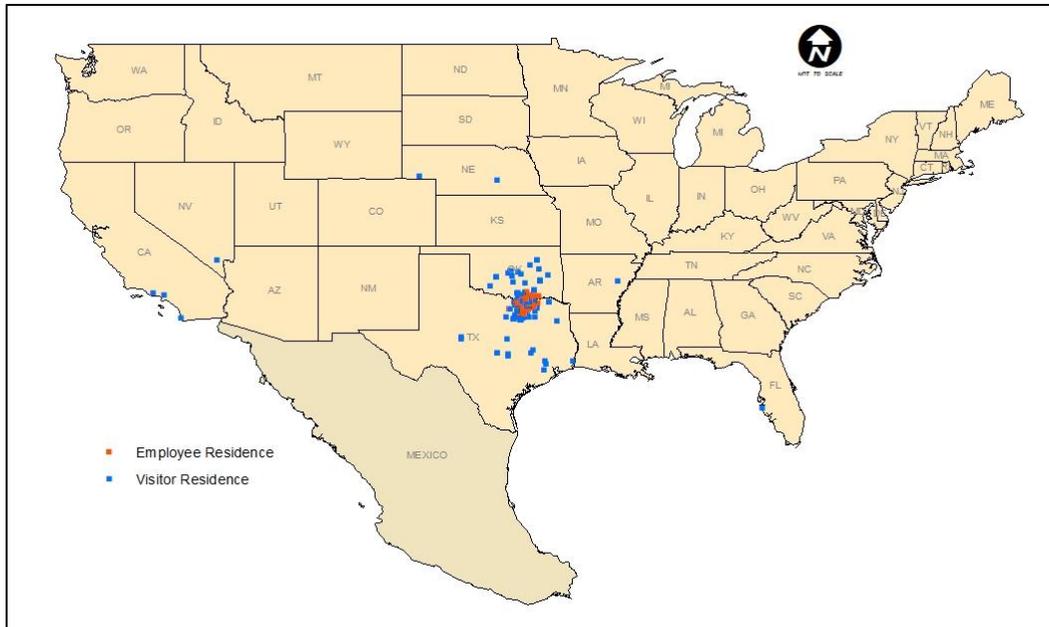
This section presents the trip characteristics of persons entering or exiting the surveyed work places. Information on residency, trip purpose, mode of travel and occupancy, trip origins, and trip destinations were analyzed to measure the amount of trip attractions to the sites.

### *Residence*

Approximately 88 percent of the survey participants were residents of the study area, 35 percent of which lived in Sherman and 27 percent were from Denison. Figure 3 shows the residence locations of the survey participants within and outside the study area but within Texas. Figure 4 provides an overview of where the visitors were coming from outside of Texas, with several of them coming from Oklahoma.



**Figure 3. Residence Locations of Survey Participants.**



**Figure 4. Residence Locations of Survey Participants within and outside Texas.**

### *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.

- 1) 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.
- 2) 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.
- 3) 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.
- 4) 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.

- 5) External trip destination (EXT-D) – when the destination was outside the study area when leaving the establishment.
- 6) External trip origin (EXT-O) – when the origin was outside the study area.
- 7) Non-resident (NON-RES) – when the person making the trip to and/or from the establishment lived outside the study area and the origin/destination of the trip was inside the study area.

Table 7 shows the number and percentage of trips by trip purposes to and from the work place. Table 8 provides the distribution of survey trip purposes by area type and employment type. There were 29 trips that were reported as “not the first store visited” at non-free standing establishments. These were not counted as trip attractions. Note that these percentages could significantly change after weighting is applied to the raw data during the survey expansion process.

**Table 7. Survey Trip Purposes to and from the Work Place.**

<b>Trip Purpose</b>	<b>Number of Trips</b>	<b>Percent of Total</b>
HBW	1,384	20.73
HBNW	3,302	49.45
NHB-D	469	7.02
NHB -O	687	10.29
EXT-D	24	0.36
EXT-O	52	0.78
NON RES	759	11.37
<b>Total</b>	<b>6,677</b>	<b>100.00</b>

**Table 8. Survey Trips by Purpose, Area Type and Employment Type.**

Area Type	Employment Type	Trip Purpose							Total
		HBW	HBNW	NHB-D	NHB-O	EXT-D	EXT-O	NON-RES	
CBD	Basic	7	0	0	1	0	0	0	8
	Retail	27	111	16	28	0	0	16	198
	Service	145	170	16	26	0	2	30	389
	Education	33	41	0	10	0	0	0	84
Urban	Basic	18	6	2	8	0	0	10	44
	Retail	132	816	181	205	8	15	216	1,573
	Service	84	166	28	26	0	0	8	312
	Education	73	23	7	19	0	0	2	124
Sub-Urban	Basic	9	19	2	4	0	0	8	42
	Retail	129	941	100	148	6	9	113	1,446
	Service	183	198	19	37	3	1	34	475
	Education	133	28	8	15	1	5	44	234
Rural	Basic	120	99	4	13	0	2	14	252
	Retail	58	553	59	96	4	14	192	976
	Service	165	81	17	34	2	3	37	339
	Education	68	50	10	17	0	1	35	181
Total	Basic	154	124	8	26	0	2	32	346
	Retail	346	2,421	356	477	18	38	537	4,193
	Service	577	615	80	123	5	6	109	1,515
	Education	307	142	25	61	1	6	81	623
<b>Total Trips</b>		<b>1,384</b>	<b>3,302</b>	<b>469</b>	<b>687</b>	<b>24</b>	<b>52</b>	<b>759</b>	<b>6,677</b>

### *Mode of Travel and Vehicle Occupancy*

Table 9 shows the distribution of surveyed trips by mode of travel to and from the work place. The majority of trips were made by drivers of cars, trucks, or vans, with an average occupancy of 1.33 persons.

**Table 9. Survey Modes of Travel to and from the Work Place.**

<b>Mode</b>	<b>Number of Trips</b>	<b>Percent of Total Trips</b>
Driver (car/truck/van)	6,380	95.14
Passenger (car/truck/van)	230	3.43
Walk	60	0.89
Bicycle	6	0.09
Transit Bus	0	0.00
School Bus	4	0.06
Commercial Cargo Transport Vehicle	12	0.18
Commercial Service Vehicle	4	0.06
Motorcycle	8	0.12
Other	2	0.03
<b>Total</b>	<b>6,706</b>	<b>100.00</b>

### *Trip Length*

Each trip in the survey, based on its reported origin location and destination location, was geocoded either to a TAZ system for the 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 available for the SDMPPO study area that provides the zone-to-zone trip lengths and travel times based on network speeds.

The analyses of trip length presented in this section pertain only to inter-zonal trips by the auto driver mode of travel to and from the work place since the SDMPPO network only provides distances and travel times between zones and not within zones (i.e., intra-zonal). Table 10 shows the trip lengths by trip purpose, while Table 11 and Table 12 show the trip length frequency distributions (TLFDs), grouped at five-mile intervals. Table 13 shows the ungrouped results of TLFDs for person and vehicle trips. The average trip length was around 5.5 miles per trip, with average travel time of 9.5 minutes.

**Table 10. Survey Inter-Zonal Trip Lengths to and from the Work Place.**

<b>Trip Purpose</b>	<b>Total Person Miles</b>	<b>Number of Person Trips</b>	<b>Average Person Miles</b>	<b>Total Vehicle Miles</b>	<b>Number of Vehicle Trips</b>	<b>Average Vehicle Miles</b>
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HBW	10,447	1,463	7.14	9,089	1,257	7.23
HBNW	22,264	4,370	5.09	14,832	2,911	5.10
NHB	3,598	731	4.93	2,467	509	4.85
NON-RES	1,218	227	5.37	720	137	5.26
<b>Total</b>	<b>37,527</b>	<b>6,791</b>	<b>5.53</b>	<b>27,108</b>	<b>4,814</b>	<b>5.63</b>

**Table 11. Survey Person Trip TLFDs (Grouped).**

Trip Length	Trip Purpose				Total
	HBW	HBNW	NHB	NON-RES	
Less than 5 miles	859	3,149	534.5	166	4,709
5 to <10 miles	286	669	122	32	1,109
10 to <15 miles	116	274	20.5	8	419
15 to <20 miles	140	185	32.5	8	366
20 to <25 miles	24	55	5.5	2	87
25 to <30 miles	20	23	10	10	63
30+ miles	18	15	5.5	1	40
<b>Total</b>	<b>1,463</b>	<b>4,370</b>	<b>731</b>	<b>227</b>	<b>6,791</b>

**Table 12. Survey Vehicle Trips TLFDs (Grouped).**

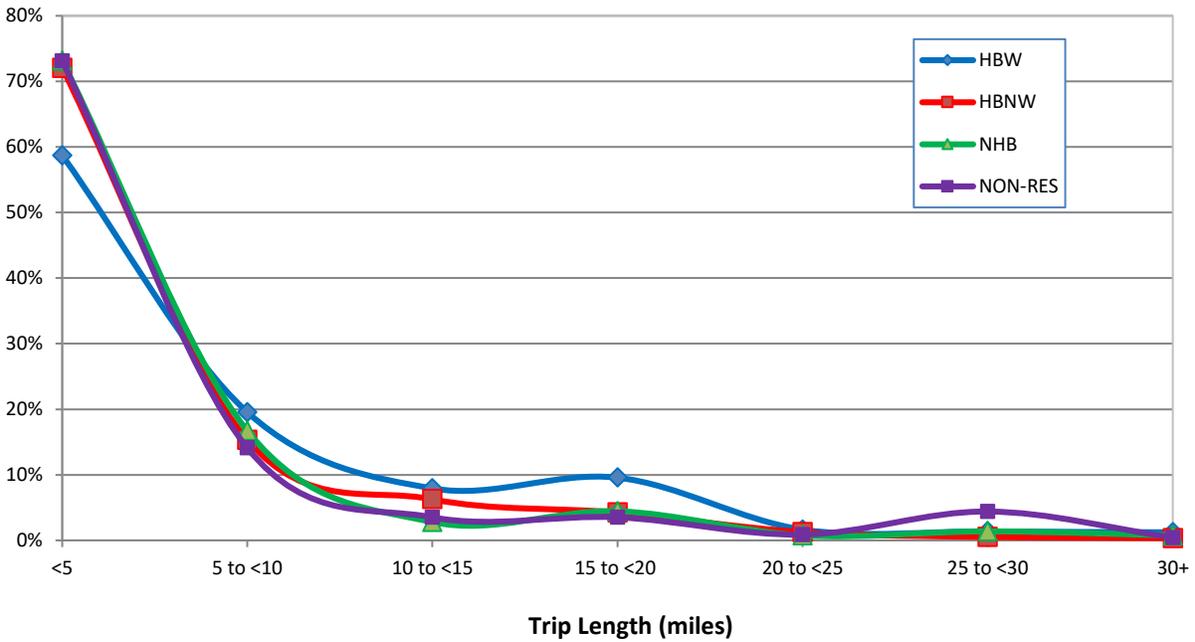
Trip Length	Trip Purpose				Total
	HBW	HBNW	NHB	NON-RES	
Less than 5 miles	728	2,089	373	98	3,288
5 to <10 miles	255	463	84	21	823
10 to <15 miles	101	175	16	7	299
15 to <20 miles	118	127	21.5	5	272
20 to <25 miles	22	30	4	2	58
25 to <30 miles	20	18	6	3	47
30+ miles	13	9	4	1	27
<b>Total</b>	<b>1,257</b>	<b>2,911</b>	<b>509</b>	<b>137</b>	<b>4,814</b>

**Table 13. Survey Person and Vehicle Trip TLFDs (Ungrouped).**

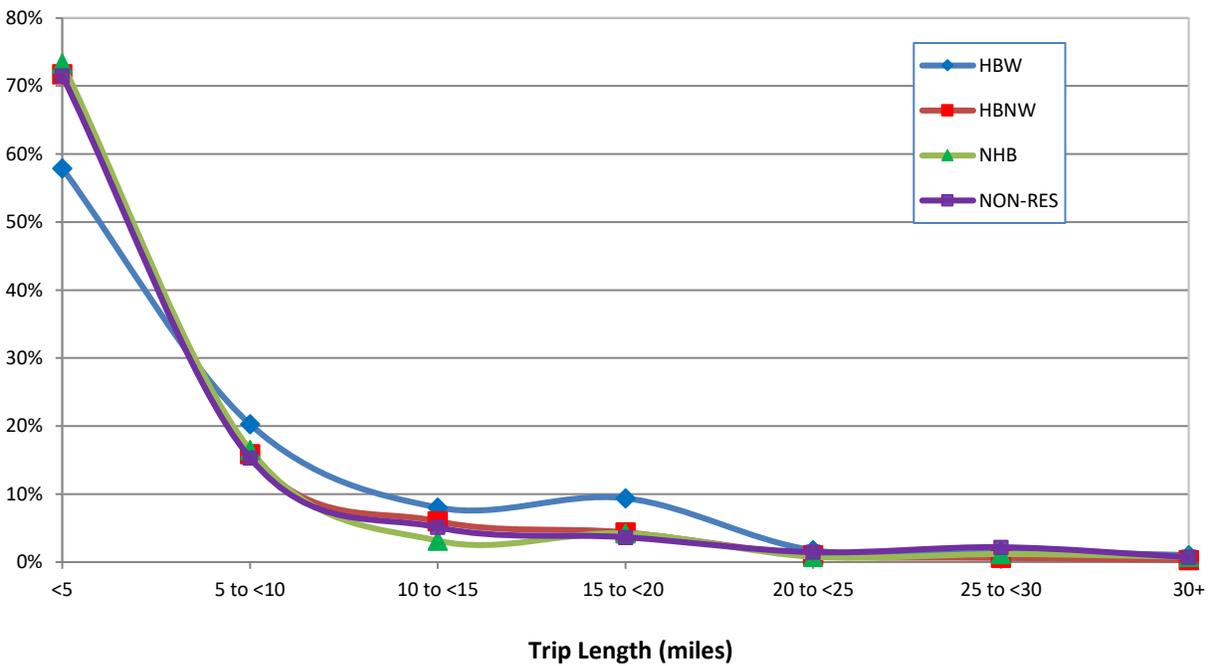
Trip Length (miles)	Trip Purpose							
	Person Trips				Vehicle Trips			
	HBW	HBNW	NHB	NON-RES	HBW	HBNW	NHB	NON-RES
1	316	1,444	302	80	261	965	214	51
2	238	802	101.5	58	200	517	71	26
3	148	477	68	22	124	333	46	15
4	103	259	38	4	93	169	24	4
5	54	167	25	2	50	105	19	2
6	51	145	22	4	45	100	17	4
7	69	125	22.5	8	59	80	17	6
8	57	160	28	14	57	110	20	6
9	53	134	35	3	47	92	21	3
10	56	105	14.5	3	47	81	10	2
11	37	82	5.5	3	27	58	4	3
12	26	28	3.5	1	26	20	4	1
13	12	79	3.5	0	12	43	3	0
14	26	51	4	0	22	27	3	0
15	15	34	4	4	14	27	3	3
16	18	37	1	2	18	28	1	1
17	41	36	15.5	5	31	21	9	3
18	28	63	7	1	25	42	6	1
19	32	22	5.5	0	29	17	3	0
20	21	27	3.5	0	15	19	4	0
21	7	13	2.5	0	5	7	2	0
22	6	8	0.5	1	6	5	1	1
23	3	16	0	1	3	6	0	1
24	3	5	2.5	0	3	4	2	0
25	5	13	0	0	5	8	0	0
26	9	8	6	8	9	6	3	2
27	5	11	2	0	5	9	2	0
28	3	2	2	2	3	2	2	1
29	3	2	0	0	3	1	0	0
30+	18	15	5.5	1	13	9	4	1
<b>Total</b>	<b>1,463</b>	<b>4,370</b>	<b>731</b>	<b>227</b>	<b>1,257</b>	<b>2,911</b>	<b>515</b>	<b>137</b>

Figure 5 (a and b) illustrate the TLFDs by purpose for person and vehicle trips to and from the work place that were included in Table 11 and Table 12. Similarly, Figure 6 (a and b) show the ungrouped TLFDs that were included in Table 13.

**(a) Person Trips**

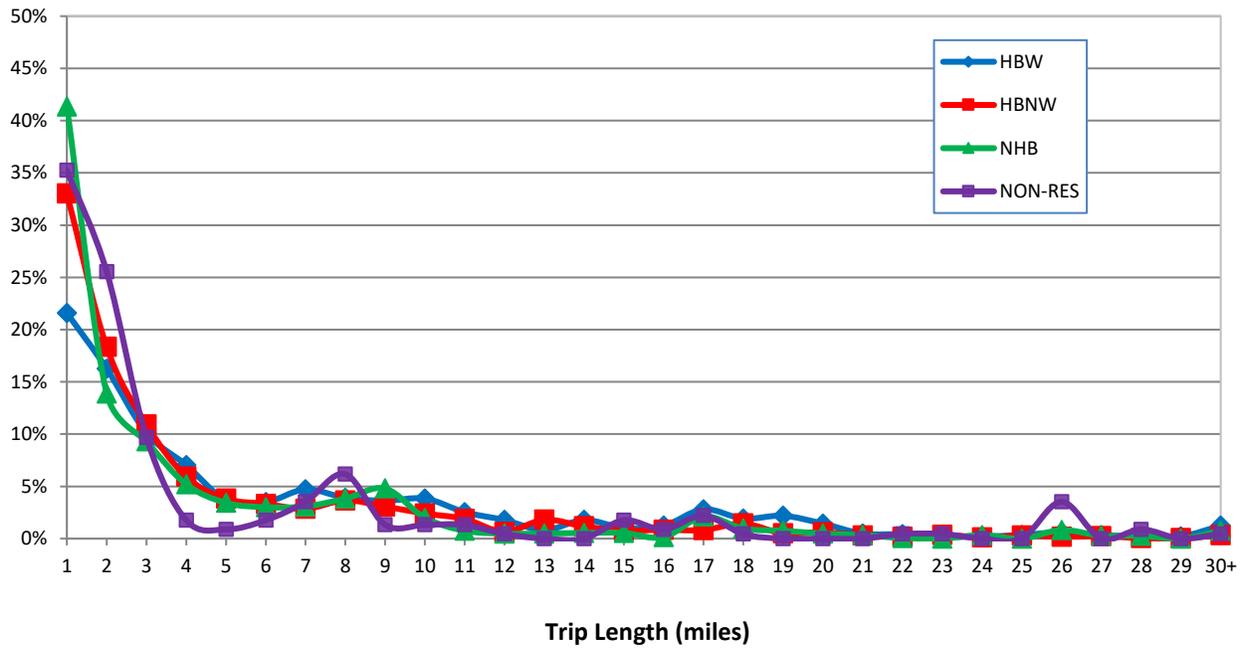


**(b) Vehicle Trips**

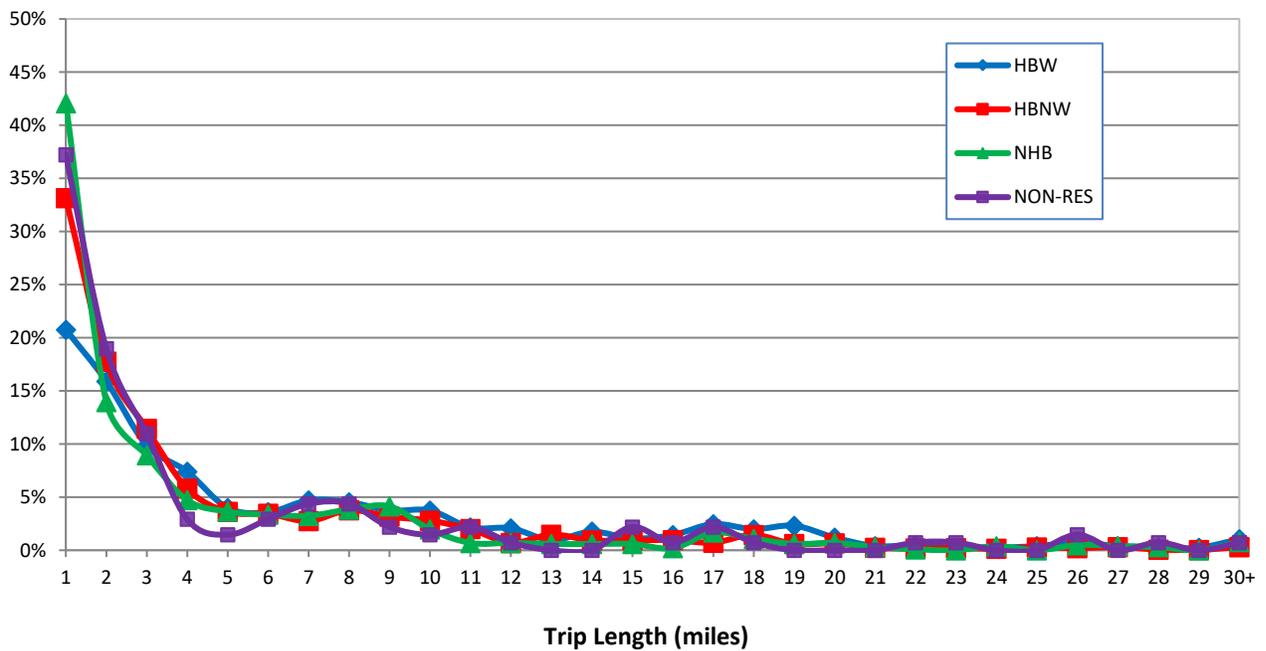


**Figure 5. TLFDs of Person and Vehicle Trips to and from the Work Place (Distance – Grouped).**

**(a) Person Trips**



**(b) Vehicle Trips**



**Figure 6. TLFDS of Person and Vehicle Trips to and from the Workplace (Distance – Ungrouped).**

Table 14 shows the travel times to and from the work place by surveyed trip purpose. Table 15 and Table 16 show the travel times, grouped at five-minute intervals. Table 17 shows the ungrouped results of travel times for person and vehicle trips.

**Table 14. Survey Person and Vehicle Travel Time by Trip Purpose.**

<b>Trip Purpose</b>	<b>Total Person Minutes</b>	<b>Number of Person Trips</b>	<b>Average Person Minutes</b>	<b>Total Vehicle Minutes</b>	<b>Number of Vehicle Trips</b>	<b>Average Vehicle Minutes</b>
HBW	17,389	1,463	11.89	15,123	1,257	12.06
HBNW	38,248	4,370	8.75	25,446	2,911	8.90
NHB	6,110	731	8.36	4,200	509	8.33
NON-RES	2,019	227	8.89	1,199	137	8.71
<b>Total</b>	<b>63,766</b>	<b>6,791</b>	<b>9.39</b>	<b>45,968</b>	<b>4,814</b>	<b>9.55</b>

**Table 15. Survey Person Trip Travel Time Frequency Distribution (Grouped).**

<b>Trip Length</b>	<b>HBW</b>	<b>HBNW</b>	<b>NHB</b>	<b>NON-RES</b>	<b>Total</b>
<5	543	2,232	406	133	3,314
5 to <10	328	998	142	36	1,504
10 to <15	201	455	87	26	769
15 to <20	143	304	34	7	488
20 to <25	69	153	25	7	254
25 to <30	100	120	17	5	242
30 to <35	30	56	5	1	92
35 to <40	21	31	10	9	71
40 to <45	10	7	3	2	22
45 to <50	9	8	1	0	18
50 to <55	9	6	4	0	19
55 to <60	0	0	0	1	1
60+	0	0	1	0	1
<b>Total</b>	<b>1,463</b>	<b>4,370</b>	<b>735</b>	<b>227</b>	<b>6,795</b>

**Table 16. Survey Vehicle Trip Travel Time Frequency Distribution (Grouped).**

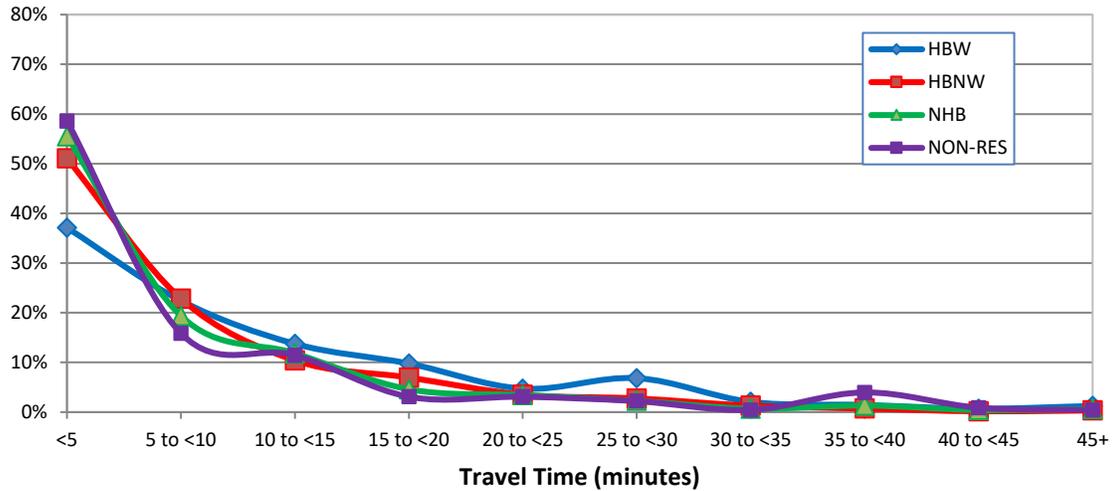
<b>Trip Length</b>	<b>HBW</b>	<b>HBNW</b>	<b>NHB</b>	<b>NON-RES</b>	<b>Total</b>
<5	448	1,493	283	77	2,301
5 to <10	292	658	101	24	1,075
10 to <15	181	300	61	16	558
15 to <20	122	214	22	6	364
20 to <25	60	99	15	6	180
25 to <30	86	79	13	2	180
30 to <35	24	33	3	1	61
35 to <40	21	21	6	3	51
40 to <45	10	6	2	1	19
45 to <50	5	4	1	0	10
50 to <55	8	4	3	0	15
55 to <60	0	0	0	1	1
60+	0	0	1	0	1
<b>Total</b>	<b>1,257</b>	<b>2,911</b>	<b>511</b>	<b>137</b>	<b>4,816</b>

**Table 17. Survey Person and Vehicle Trips Travel Time Frequency Distribution (Ungrouped).**

Trip Duration (minutes)	Trip Purpose							
	Person Trips				Vehicle Trips			
	HBW	HBNW	NHB	NON-RES	HBW	HBNW	NHB	NON-RES
1	125	553	118.5	30	94	342	88.5	19
2	72	355	94.5	22	61	251	69	16
3	80	395	74.5	20	70	267	49.5	12
4	136	481	47	33	117	340	30	16
5	130	448	71	28	106	293	46	14
6	101	297	37	14	90	177	26	6
7	81	270	37.5	10	68	186	26.5	8
8	63	149	29	9	56	102	18.5	7
9	57	131	23	2	52	90	17.5	2
10	26	151	15	1	26	103	12	1
11	32	98	17.5	3	28	62	13.5	3
12	59	88	16	3	52	57	10	3
13	45	109	17.5	7	40	81	11	5
14	37	90	24.5	4	34	57	17	4
15	28	70	11	9	27	43	9.5	1
16	45	90	15	2	39	66	7	1
17	34	80	10.5	4	29	59	7.5	4
18	31	39	5.5	0	23	31	4	0
19	22	60	0.5	0	20	38	1	0
20	11	35	2	1	11	20	2	1
21	8	21	3.5	2	6	14	2.5	1
22	12	25	3.5	1	12	13	2.5	1
23	16	37	3	1	15	25	2	1
24	16	31	6	2	12	17	3.5	1
25	17	39	9	1	15	30	4.5	2
26	26	31	3	4	22	21	2.5	1
27	24	30	4	1	18	20	2.5	1
28	22	31	3.5	0	22	20	3.5	0
29	13	15	6	0	12	10	4.5	0
30	15	13	0	0	12	8	0	0
31	9	19	1.5	1	7	11	1	1
32	11	4	2.5	0	7	4	1.5	0
33	4	9	0	0	4	9	0	0
34	3	13	1	0	3	4	0.5	0
35	3	11	0	0	3	5	0	0
36	7	10	3	0	7	4	1	0
37	2	7	0.5	9	2	6	0.5	3
38	4	10	2.5	0	4	7	2	0
39	5	2	2	0	5	2	1	0
40	3	2	1.5	0	3	2	1.5	0
41	1	2	0.5	0	1	2	0.5	0
42	5	0	1	2	5	0	0.5	1
43	4	0	0.5	0	4	0	0.5	0
44	0	2	0	0	0	2	0	0
45+	18	17	5.5	1	13	10	4	1
<b>Total</b>	<b>1,463</b>	<b>4,370</b>	<b>731</b>	<b>227</b>	<b>1,257</b>	<b>2,911</b>	<b>509</b>	<b>137</b>

Figure 7 (a and b) illustrate the travel times by purpose for person and vehicle trips to and from the work place that were included in Table 15 and Table 16. Similarly, Figure 8 (a and b) show the ungrouped travel times that were included in Table 17.

(a) Person Trips



(b) Vehicle Trips

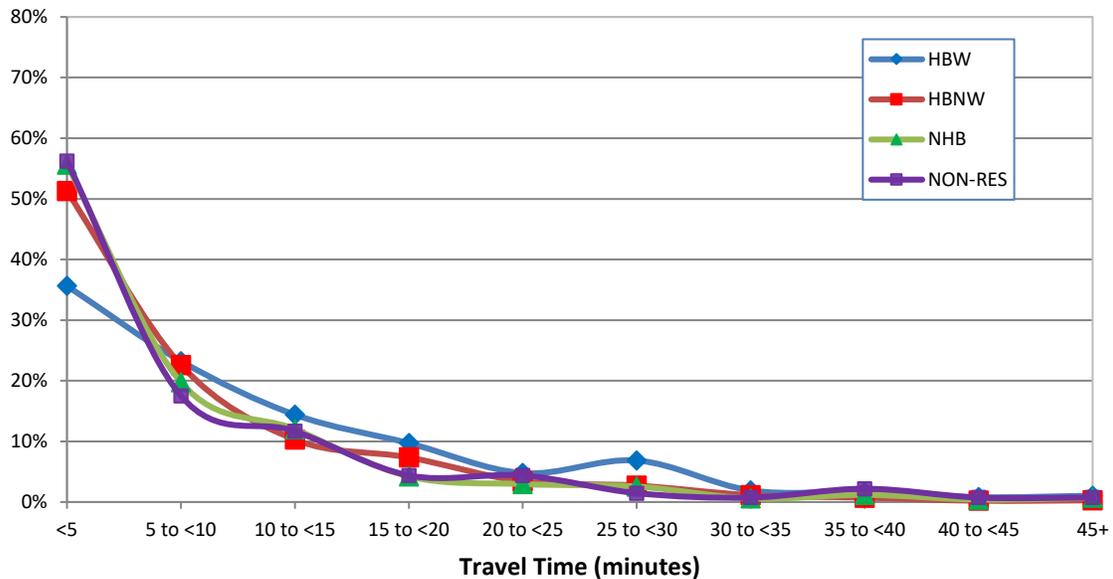
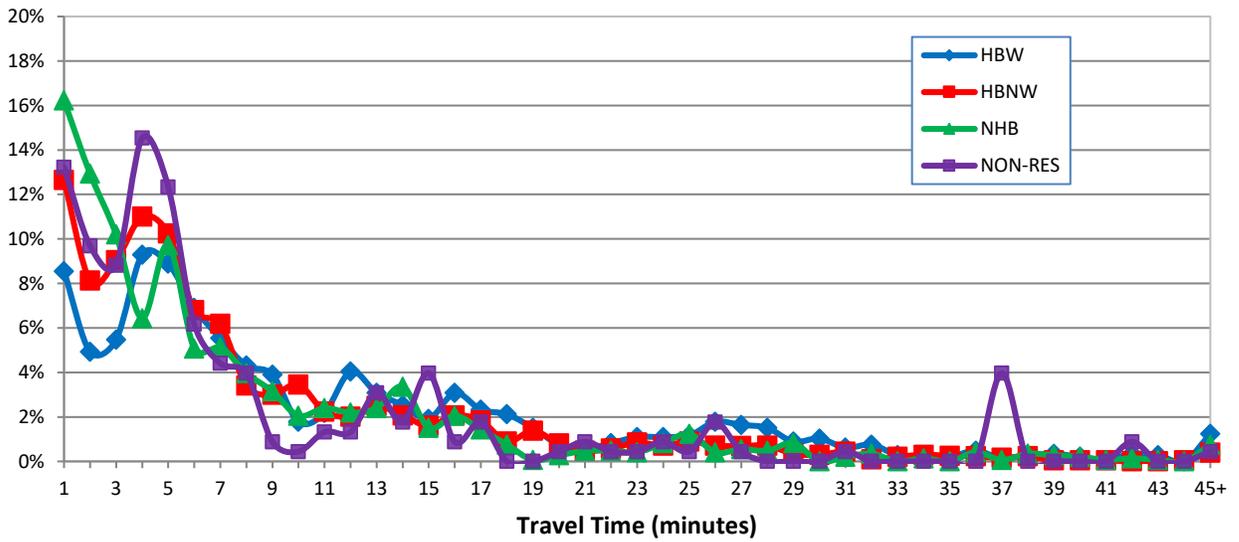
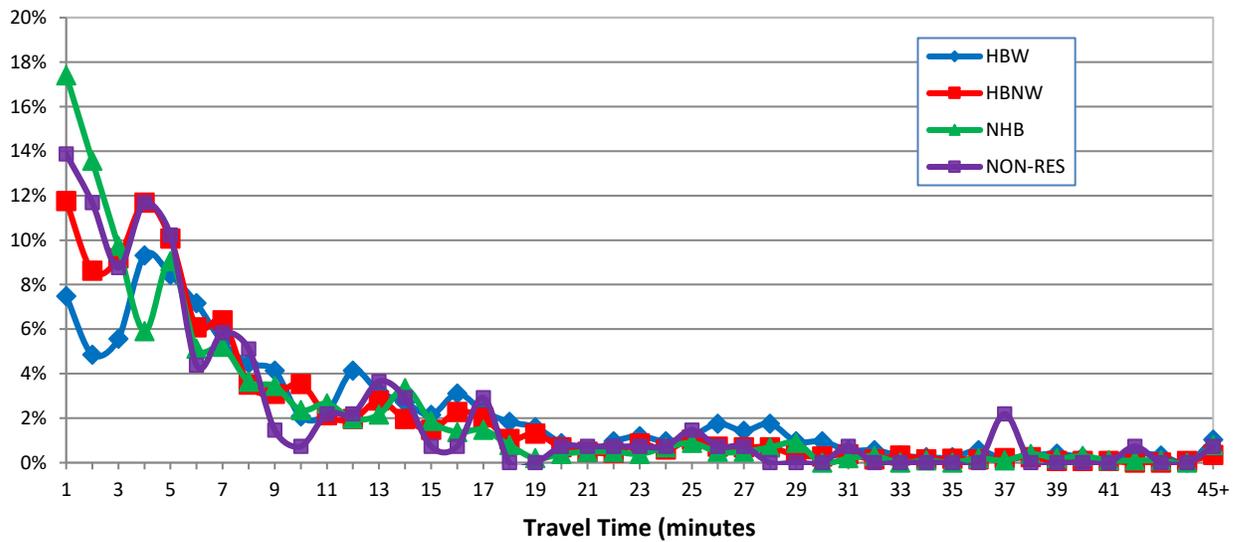


Figure 7. Travel Times of Person and Vehicle Trips to and from the Work Place (Time – Grouped).

**(a) Person Trips**



**(b) Vehicle Trips**

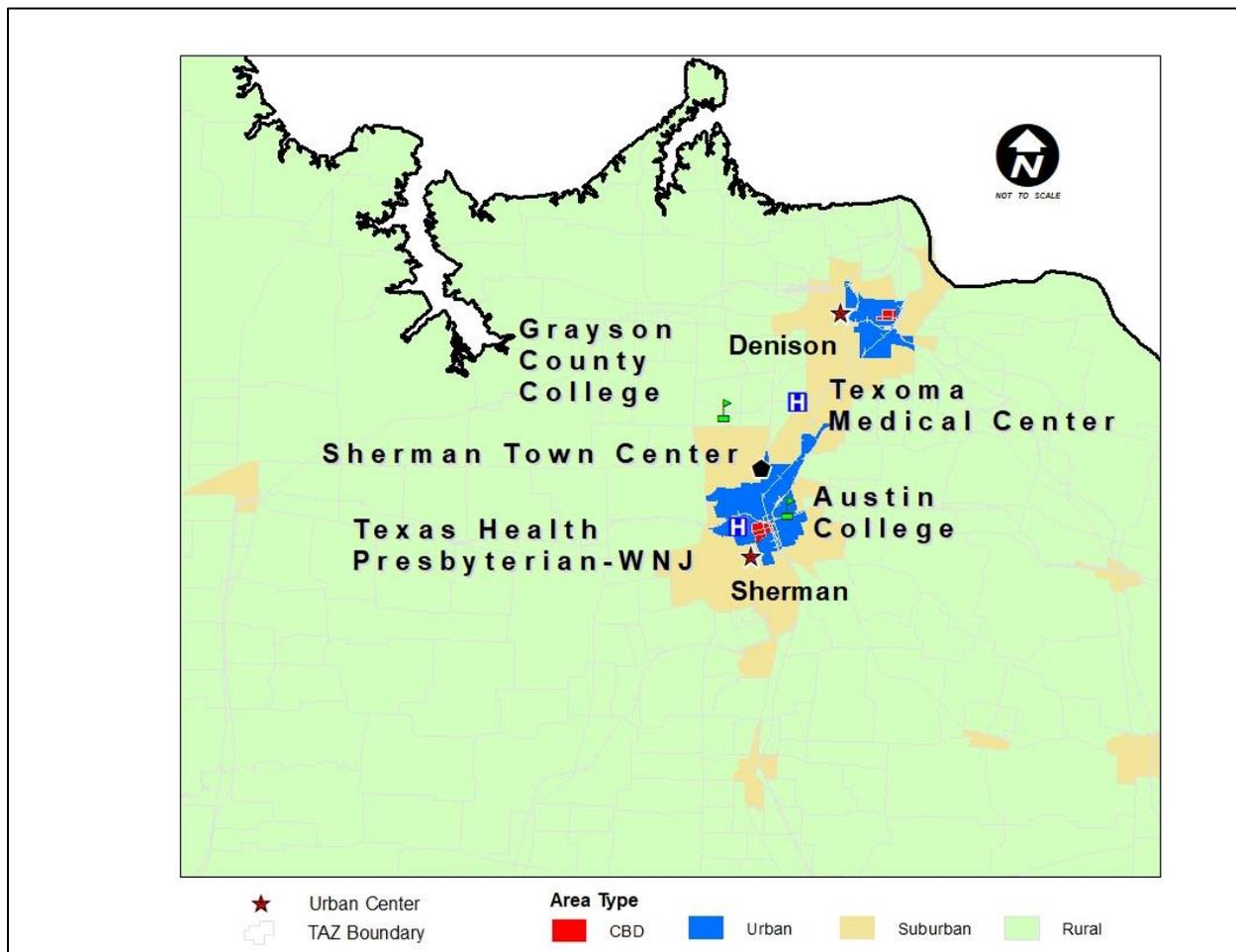


**Figure 8. Travel Times of Person and Vehicle Trips to and from the Work Place (Time - Ungrouped).**

## SPECIAL GENERATORS

Special generators are those establishments that are considered unique trip attractors. These may include major shopping centers, 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.

Five special generators were surveyed in the Sherman-Denison study area. These included two colleges (Grayson County College and Austin College), two health facilities (Texas Health Presbyterian-WNJ and Texoma Medical Center), and one shopping center (Sherman Town Center). Figure 9 shows their locations and corresponding area types.



**Figure 9. Sherman-Denison Special Generators.**

The methodology used to survey special generators was the same as that used for full work place surveys. It includes a general survey, an intercept survey, person and/or vehicle counts, and CV counts. Table 18 provides a summary of the general data collected from the special generator surveys.

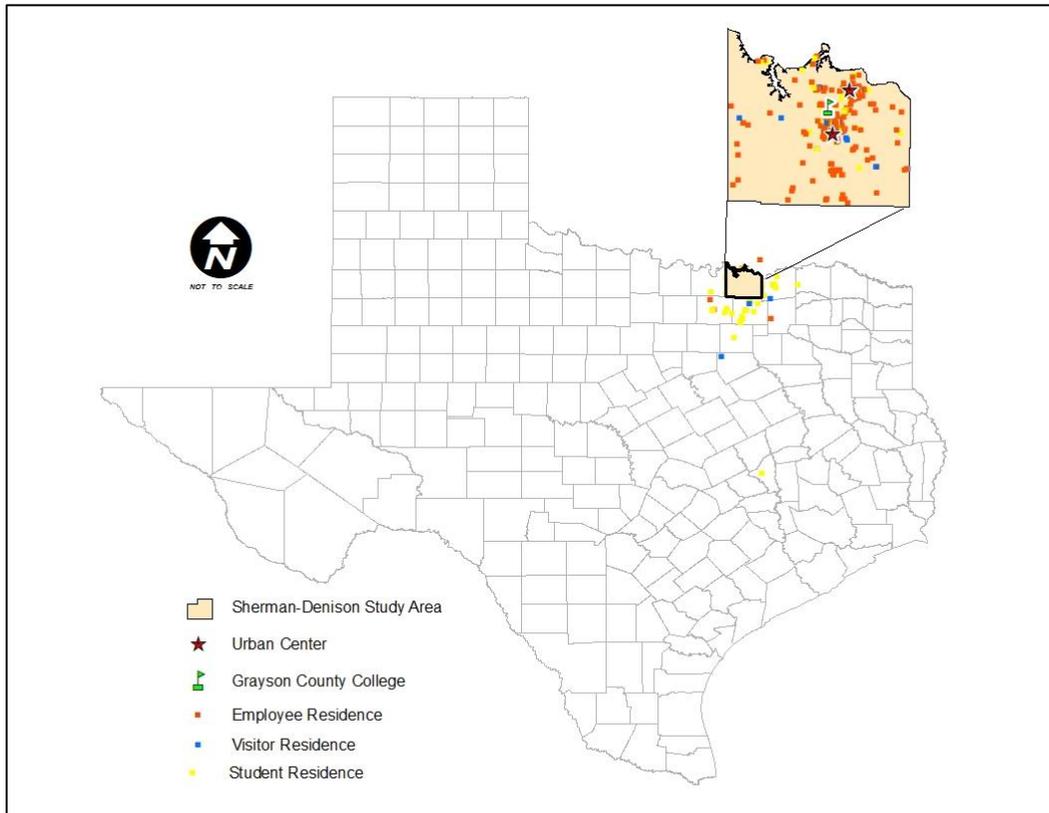
**Table 18. Sherman-Denison Special Generators Data Summary.**

<b>Data Elements</b>	<b>Grayson County College</b>	<b>Texoma Medical Center</b>	<b>Texas Health Presbyterian- WNJ</b>	<b>Austin College</b>	<b>Sherman Town Center</b>
Total Employment	400	,1100	1,000	300	623
Employees at Work	390	950	700	295	450
CV Counts	8	10	12	-	27
Non-CV Counts	6,607	5,235	3,609	2,479	23,801
Person Counts	-	-	-	-	-
Employee Surveys	60	281	163	111	35
Visitor Surveys	28	157	201	21	665
Student Surveys	312	-	-	75	-

The trip characteristics observed from each special generator are described by mode of travel, trip purpose, trip length, and travel time. The analyses of trip length pertain to inter-zonal trips since the transportation network matrix provides only distances and travel times between zones and not within zones based on vehicle speeds. It is important to note that the results presented throughout this section were based on raw trip data. These results may change after weighting was applied to the raw data during the survey expansion.

## Grayson County College

A total of 60 employees, 312 students and 28 visitors, participated in the survey. There were 6,607 non-CVs and eight commercial vehicles counted at the establishment during the travel survey day. Figure 10 shows the residence locations of the Grayson County College survey participants. Approximately 82 percent of them resided in the Sherman-Denison study area, 13 percent lived in nearby counties within Texas, and the remaining 5 percent came from Oklahoma.



**Figure 10. Residence Location of Survey Participants – Grayson County College.**

Table 19 shows the modes of travel to and from the college. Approximately 85 percent were drivers of cars, trucks or vans, close to 9 percent were passengers, and 5 percent rode a transit bus. The average vehicle occupancy was estimated at 1.12 persons. Table 20 shows the distribution of trip purposes. Table 21 and Table 22 show the inter-zonal trip lengths and travel times to and from Grayson County College by trip purpose for person and vehicle trips, respectively. The average trip length was approximately 9 miles per trip, with average travel time of 15 minutes.

**Table 19. Survey Modes of Travel to and from Grayson County College.**

Mode	To Work Place	From Work Place	Total Trips	Percent of Total
Driver (car/truck/van)	342	341	683	85.38
Passenger (car/truck/van)	34	35	69	8.63
Transit Bus	23	22	45	5.63
Commercial Cargo Transport Vehicle		1	1	0.13
Motorcycle	1	1	2	0.25
<b>Total</b>	<b>400</b>	<b>400</b>	<b>800</b>	<b>100.00*</b>

\*Values do not sum to 100 percent due to rounding.

**Table 20. Survey Total Trips to and from Grayson County College.**

Trip Purpose	To Work Place	From Work Place	Total Trips	Percent of Total
HBW	47	43	90	11.25
HBNW	245	242	487	60.88
NHB-D	33	-	33	4.13
NHB-O	-	41	41	5.13
EXT-O	1	-	1	0.13
EXT -D	-	-	0	0.00
NON RES	74	74	148	18.50
<b>Total</b>	<b>400</b>	<b>400</b>	<b>800</b>	<b>100.00</b>

**Table 21. Survey Inter-Zonal Trip Lengths to and from Grayson County College by Trip Purpose.**

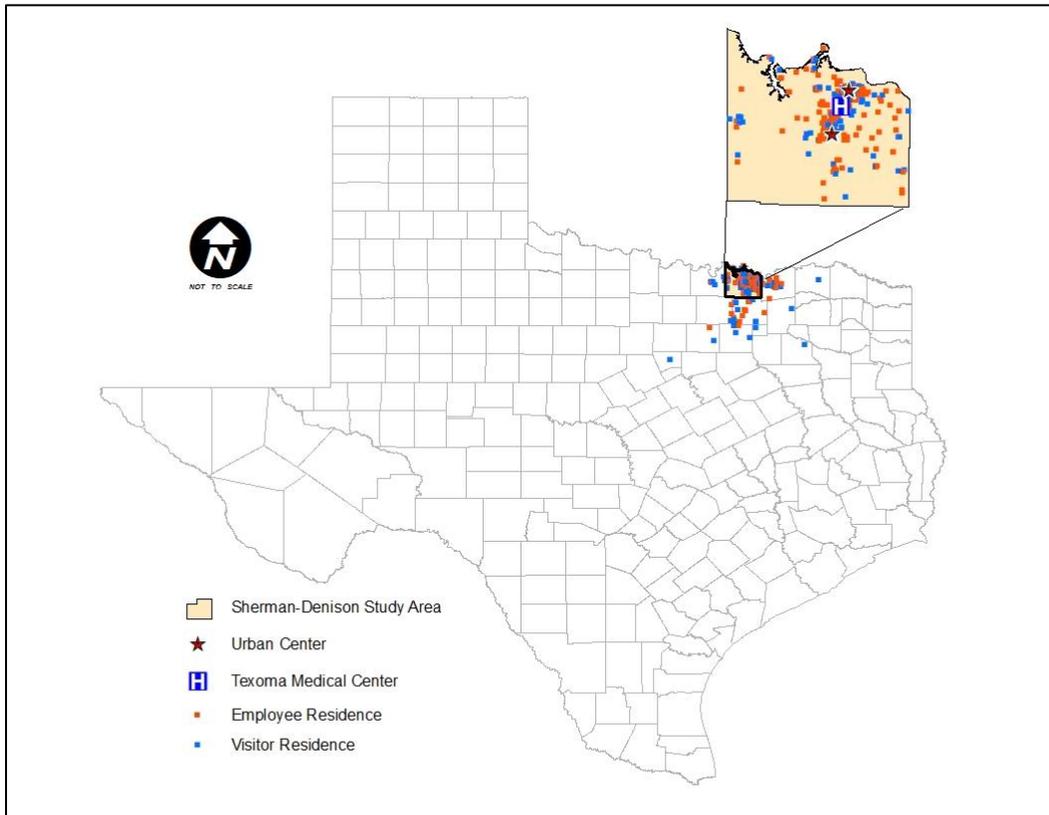
Trip Purpose	Total Person Miles	Number of Person Trips	Average Person Miles	Total Vehicle Miles	Number of Vehicle Trips	Average Vehicle Miles
HBW	809	104	7.77	585	78	7.50
HBNW	5,623	587	9.58	3,855	406	9.49
NHB	275	45	6.11	213	34	6.36
NON RES	131	19	6.90	85	13	6.53
<b>Total</b>	<b>6,838</b>	<b>755</b>	<b>9.06</b>	<b>4,738</b>	<b>531</b>	<b>8.93</b>

**Table 22. Survey Inter-Zonal Travel Times to and from Grayson County College 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	1,354	104	13.02	967	78	12.40
HBNW	9,266	587	15.79	6,323	406	15.57
NHB	481	45	10.69	371	34	11.09
NON RES	223	19	11.73	148	13	11.36
<b>Total</b>	<b>11,324</b>	<b>755</b>	<b>15.00</b>	<b>7,819</b>	<b>531</b>	<b>14.72</b>

## Texoma Medical Center

A total of 281 employees and 157 non-employees participated in the survey. There were 5,235 non-CVs counted at the facility during the travel survey day. Figure 11 shows the residence locations of the Texoma Medical Center survey participants. Approximately 71 percent resided in the Sherman-Denison study area, 15 percent lived in nearby counties, and the remaining 14 percent lived outside of Texas, mainly in Oklahoma.



**Figure 11. Residence Locations of Survey Participants – Texoma Medical Center.**

Table 23 shows the arrival mode of travel to the health facility used by the survey participants. Approximately 95 percent were drivers of cars, trucks or vans, and more than 4 percent were passengers. The average vehicle occupancy was estimated at 1.25 persons. Table 24 shows the distribution of trip purposes. Table 25 and Table 26 show the inter-zonal trip lengths and travel times by trip purpose for person and vehicle trips, respectively. The average trip length was close to 8 miles per trip, with average travel time of 13 minutes.

**Table 23. Survey Modes of Travel to the Texoma Medical Center.**

Mode	Total Trips	Percent of Total
Driver (car/truck/van)	413	94.29
Passenger (car/truck/van)	20	4.57
Walk	1	0.23
Transit Bus	1	0.23
Taxi/Limo	3	0.68
<b>Total</b>	<b>438</b>	<b>100.00</b>

**Table 24. Survey Total Trips to and from the Texoma Medical Center.**

Trip Purpose	To Work Place	From Work Place	Total Trips	Percent of Total
HBW	202	188	390	44.52
HBNW	80	81	161	18.38
NHB-D	24	0	24	2.74
NHB-O	0	38	38	4.34
EXT-O	3	0	3	0.34
EXT -D	0	2	2	0.23
NON RES	129	129	258	29.45
<b>Total</b>	<b>438</b>	<b>438</b>	<b>876</b>	<b>100.00</b>

**Table 25. Survey Inter-Zonal Trip Lengths to and from the Texoma Medical Center by Trip Purpose.**

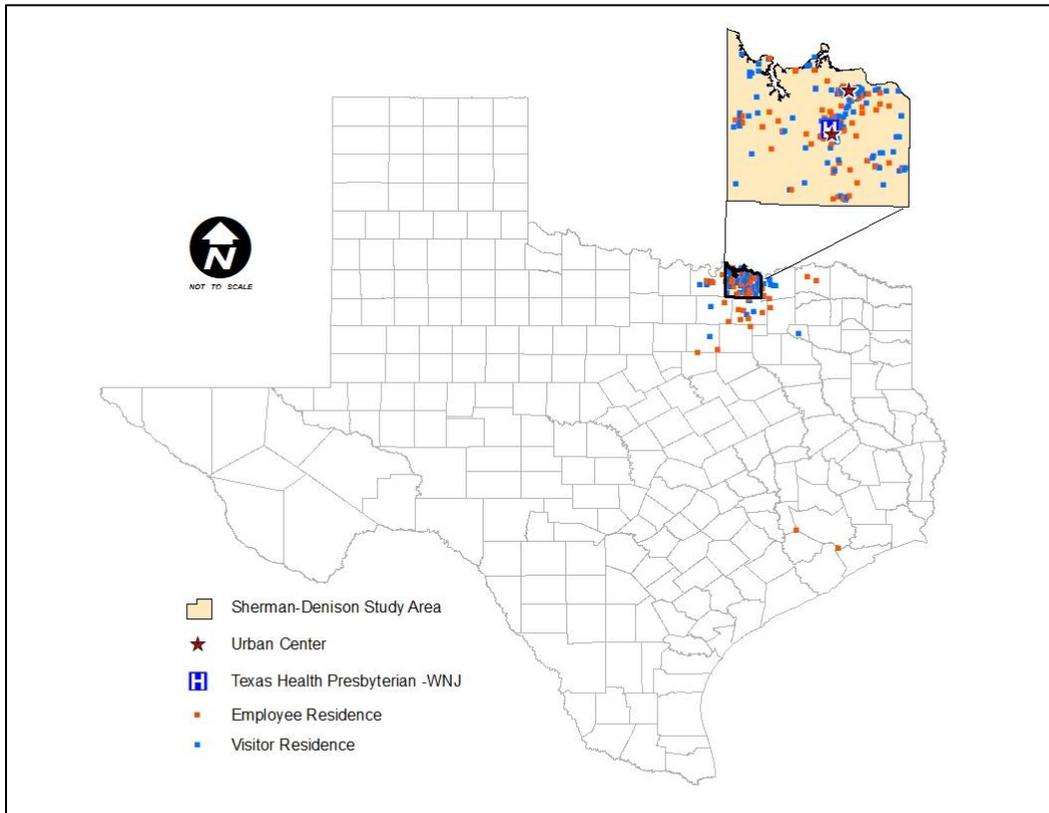
Trip Purpose	Total Person Miles	Number of Person Trips	Average Person Miles	Total Vehicle Miles	Number of Vehicle Trips	Average Vehicle Miles
HBW	3,358	424	7.92	2,971	384	7.74
HBNW	2,122	242	8.77	1,304	140	9.32
NHB	184	38	4.89	152	30	5.16
NON RES	143	23	6.22	128	20	6.38
<b>Total</b>	<b>5,807</b>	<b>727</b>	<b>7.99</b>	<b>4,555</b>	<b>574</b>	<b>7.94</b>

**Table 26. Survey Inter-Zonal Travel Times to and from the Texoma Medical Center 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	5,454	424	12.86	4,853	384	12.64
HBNW	3,440	242	14.22	2,097	140	14.98
NHB	313	38	8.35	258	30	8.74
NON RES	226	23	9.84	203	20	10.13
<b>Total</b>	<b>9,433</b>	<b>727</b>	<b>12.99</b>	<b>7,411</b>	<b>574</b>	<b>12.92</b>

## Texas Health Presbyterian – WNJ

A total of 163 employees, and 201 non-employees participated in the survey. There were 3,609 non-CVs counted at the facility during the travel survey day. Figure 12 shows the residence locations of the Texas Health Presbyterian survey participants. Approximately 83 percent were residents of the Sherman-Denison study area, 13 percent lived in nearby counties, with a few as far as Galveston, and 4 percent came from outside Texas, mainly from the states of Oklahoma, Mississippi, and Illinois.



**Figure 12. Residence Locations of the Survey Participants – Texas Health Presbyterian – WNJ.**

Table 27 shows the arrival mode of travel to the health facility used by the survey participants. Approximately 95 percent were drivers of cars, trucks or vans, and more than 4 percent were passengers. Table 28 shows the distribution of trip purposes. **Error! Reference source not found. 29****Error! Reference source not found.** and Table 30 show the inter-zonal trip lengths and travel times by trip purpose for person and vehicle trips, respectively. The average trip length was close to 9 miles per trip, with average travel time of around 14 minutes.

**Table 27. Survey Modes of Travel to the Texas Health Presbyterian-WNJ Hospital.**

<b>Mode</b>	<b>Total Trips</b>	<b>Percent of Total</b>
Driver (car/truck/van)	314	95.33
Passenger (car/truck/van)	17	4.67
<b>Total</b>	<b>331</b>	<b>100.00</b>

**Table 28. Survey Total Trips to and from the Texas Health Presbyterian-WNJ Hospital.**

<b>Trip Purpose</b>	<b>To Work Place</b>	<b>From Work Place</b>	<b>Number of Trips</b>	<b>Percent of Total</b>
HBW	118	98	216	29.7
HBNW	170	151	321	44.1
NHB-D	14	0	14	1.9
NHB-O	0	52	52	7.1
EXT-D	0	1	1	0.1
EXT-O	0	0	0	0.0
NON RES	62	62	124	17.0
<b>Total</b>	<b>364</b>	<b>364</b>	<b>728</b>	<b>100.0</b>

**Table 29. Survey Inter-Zonal Trip Lengths to and from the Texas Health Presbyterian-WNJ Hospital by Trip Purpose.**

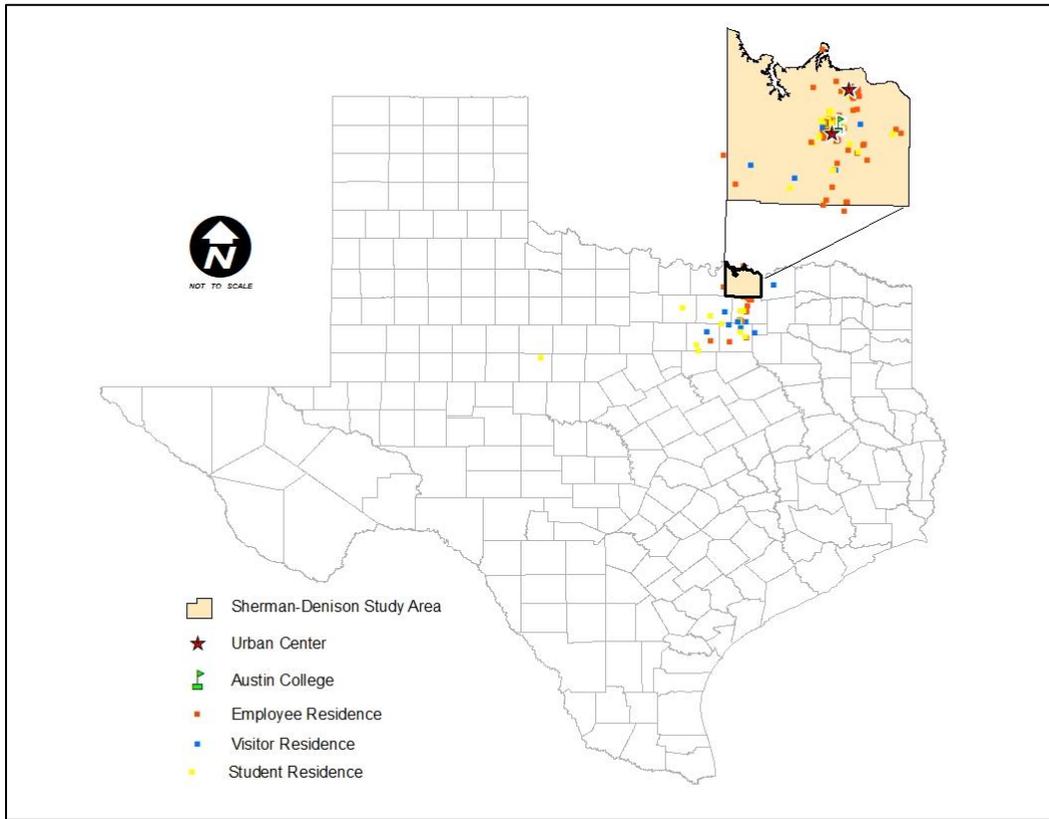
<b>Trip Purpose</b>	<b>Total Person Miles</b>	<b>Number of Person Trips</b>	<b>Average Person Miles</b>	<b>Total Vehicle Miles</b>	<b>Number of Vehicle Trips</b>	<b>Average Vehicle Miles</b>
HBW	1,869	218	8.57	1,721	200	8.61
HBNW	4,290	433	9.91	2,709	296	9.15
NHB	174	44	3.96	119	31	3.89
NON RES	110	25	4.41	85	15	5.64
<b>Total</b>	<b>6,443</b>	<b>720</b>	<b>8.95</b>	<b>4,634</b>	<b>542</b>	<b>8.56</b>

**Table 30. Survey Inter-Zonal Travel Times to and from the Texas Health Presbyterian-WNJ Hospital by Trip Purpose.**

<b>Trip Purpose</b>	<b>Total Person Minutes</b>	<b>Number of Person Trips</b>	<b>Average Person Minutes</b>	<b>Total Vehicle Minutes</b>	<b>Number of Vehicle Trips</b>	<b>Average Vehicle Minutes</b>
HBW	3,038	218	13.94	2,817	200	14.09
HBNW	6,879	433	15.89	4,403	296	14.87
NHB	327	44	7.42	222	31	7.29
NON RES	206	25	8.22	149	15	9.91
<b>Total</b>	<b>10,450</b>	<b>720</b>	<b>14.51</b>	<b>7,591</b>	<b>542</b>	<b>14.02</b>

## Austin College

A total of 111 employees, 75 students, and 21 visitors participated in the survey. There were 2,479 non-CVs counted at the facility during the travel survey day. Figure 13 shows the residence locations of Austin College survey participants. Approximately 85 percent lived in the Sherman-Denison study area, and the remaining 15 percent lived in nearby counties within Texas.



**Figure 13. Residence Locations of Survey Participants – Austin College.**

Table 31 shows the arrival mode of travel to Austin College used by the survey participants. Approximately 85 percent were drivers of cars, trucks, or vans, 5 percent were passengers, 5 percent walked and 2 percent rode bicycles. The average vehicle occupancy was estimated at 1.12 persons. Table 32 shows the distribution of trip purposes. Table 33 and Table 34 show the inter-zonal trip lengths and travel times by trip purpose for person and vehicle trips, respectively. The average trip length was approximately 4.7 miles per trip, with average travel time close to 9.0 minutes per trip.

**Table 31. Survey Modes of Travel to and from Austin College.**

Mode	To Work Place	From Work Place	Total Trips	Percent of Total
Driver (car/truck/van)	183	183	366	88.41
Passenger (car/truck/van)	9	10	19	4.59
Walk	11	10	21	5.07
Bicycle	4	4	8	1.93
<b>Total</b>	<b>207</b>	<b>207</b>	<b>414</b>	<b>100.00</b>

**Table 32. Survey Total Trips to and from Austin College.**

Trip Purpose	To Work Place	From Work Place	Number of Trips	Percent of Total
HBW	89	81	170	41.06
HBNW	69	53	122	29.47
NHB-D	15	-	15	3.62
NHB-O	-	37	37	8.94
EXT-O	-	-	0	0.00
EXT-D	-	2	2	0.48
NON RES	34	34	68	16.43
<b>Total</b>	<b>207</b>	<b>207</b>	<b>414</b>	<b>100.00</b>

**Table 33. Survey Inter-Zonal Trip Lengths to Austin College by Trip Purpose.**

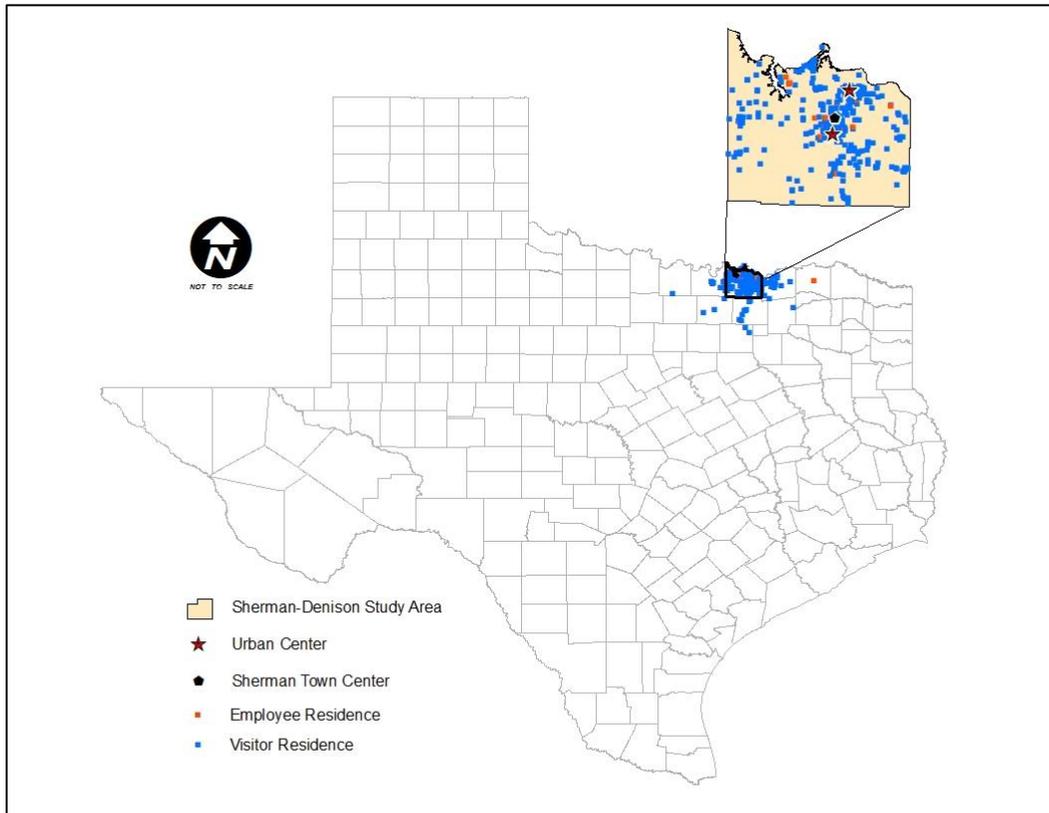
Trip Purpose	Total Person Miles	Number of Person Trips	Average Person Miles	Total Vehicle Miles	Number of Vehicle Trips	Average Vehicle Miles
HBW	981	184	5.33	822	145	5.67
HBNW	546	134	4.08	365	95	3.84
NHB	90	29	3.16	83	25	3.32
NON RES	6	4	1.58	6	4	1.58
<b>Total</b>	<b>1,623</b>	<b>351</b>	<b>4.63</b>	<b>1,276</b>	<b>269</b>	<b>4.75</b>

**Table 34. Survey Inter-Zonal Travel Times to Austin College 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	1,831	184	9.95	1,515	145	10.45
HBNW	1,040	134	7.76	710	95	7.47
NHB	192	29	6.73	175	25	7.01
NON RES	15	4	3.72	15	4	3.72
<b>Total</b>	<b>3,078</b>	<b>351</b>	<b>8.78</b>	<b>2,415</b>	<b>269</b>	<b>8.98</b>

## Sherman Town Center

A total of 35 employees, and 665 non-employees participated in the survey. There were 23,801 non-CVs and 27 CVs counted at the Town Center during the travel survey day. Figure 14 shows the residence location of Sherman Town Center survey participants. Approximately 88 percent were residents of the Sherman-Denison study area, 8 percent lived in nearby counties but within Texas, 4 percent came from nearby state of Oklahoma, and a number in Arkansas and Missouri.



**Figure 14. Residence Locations of Survey Participants – Sherman Town Center.**

Table 35 shows the modes of travel used by the survey participants to the Town Center. Approximately 92 percent were drivers of cars, trucks, or vans, and more than 7 percent were passengers, and less than half a percent either walked or rode a transit bus. The average vehicle occupancy was estimated at 1.5 persons. Table 36 shows the distribution of trip purposes. Table 37 and Table 38 show the inter-zonal trip lengths and travel times by trip purpose for person and vehicle trips, respectively. The average trip length was 7.4 miles per trip, with average travel time of 12.0 minutes.

**Table 35. Survey Modes of Travel to the Sherman Town Center.**

Mode	Total Trips	Percent of Total
Driver (car/truck/van)	646	92.29
Passenger (car/truck/van)	52	7.43
Walk	1	0.14
Transit Bus	1	0.14
<b>Total</b>	<b>700</b>	<b>100.00</b>

**Table 36. Survey Total Trips to and from the Sherman Town Center.**

Trip Purpose	To Work Place	From Work Place	Number of Trips	Percent of Total
HBW	26	21	47	3.36
HBNW	531	464	995	71.07
NHB-D	56	0	56	4.00
NHB-O	0	129	129	9.21
EXT-O	0	2	2	0.14
EXT-D	3	0	3	0.21
NON RES	84	84	168	12.00
<b>Total</b>	<b>700</b>	<b>700</b>	<b>1,400</b>	<b>100.00</b>

**Table 37. Survey Inter-Zonal Trip Lengths to the Sherman Town Center 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	443	73	6.07	394	64	6.15
HBNW	11,575	1,434	8.07	7,224	903	8.00
NHBD	364	130	2.80	256	85	3.01
NON RES	242	61	3.96	125	28	4.47
<b>Total</b>	<b>12,624</b>	<b>1,698</b>	<b>7.43</b>	<b>7,999</b>	<b>1,080</b>	<b>7.41</b>

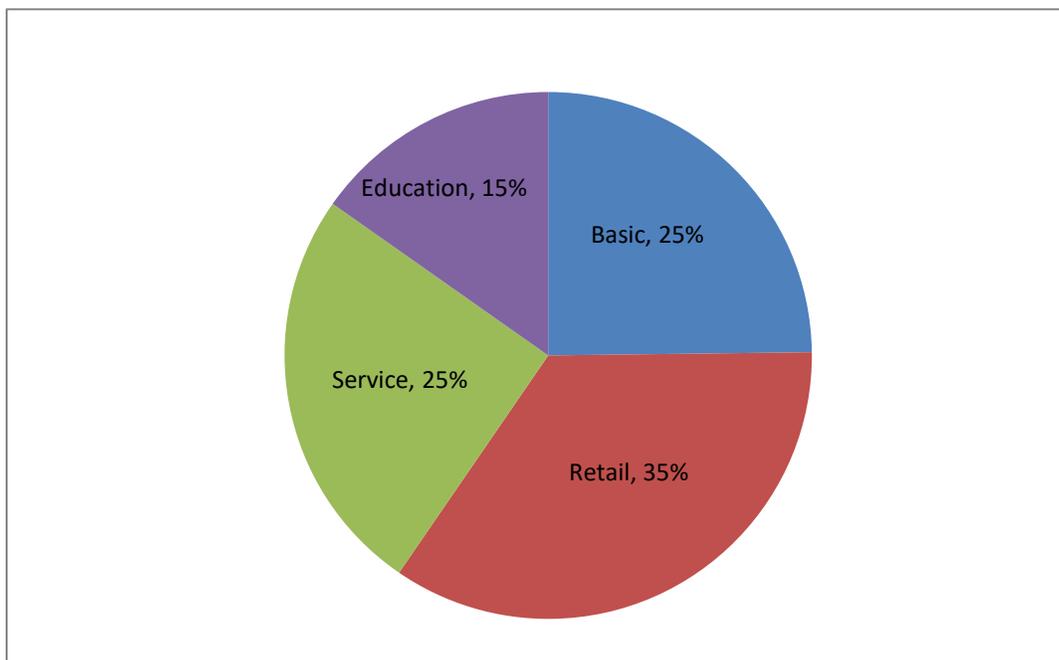
**Table 38. Survey Inter-Zonal Travel Times to the Sherman Town Center by Trip Purpose.**

Trip Purpose	Total Person Minutes	Number of Person Trips	Average Person Minutes	Total Vehicle Minutes	Number of Vehicle Trips	Average Vehicle Minutes
HBW	760	73	10.42	675	64	10.54
HBNW	18,718	1,434	13.05	11,746	903	13.01
NHBD	688	130	5.29	477	85	5.61
NON RES	422	61	6.92	214	28	7.66
<b>Total</b>	<b>20,588</b>	<b>1,698</b>	<b>12.13</b>	<b>13,112</b>	<b>1,080</b>	<b>12.14</b>

## COMMERCIAL VEHICLE COUNTS

The CV counts involved counting the number of cargo and service vehicles traveling to or from the surveyed establishments during the work place travel survey day. The counts were conducted using ACRs or manual counts. The counts were initiated one hour prior to intercept surveying and completed one hour after intercept surveying.

Figure 15 shows the percentage of CV counts by employment type. Table 39 shows the distribution of CV counts by area type and employment type. The results show that half of the total CV counts were at suburban establishments.



**Figure 15. Commercial Vehicle Counts by Employment Type.**

**Table 39. Commercial Vehicle Counts by Area Type and Employment Type.**

Area Type	Basic	Retail	Service	Education	Total
CBD	7	18	22	5	52
Urban	84	60	47	14	205
Sub-Urban	10	59	36	37	142
Rural	26	41	24	22	113
<b>Total</b>	<b>127</b>	<b>178</b>	<b>129</b>	<b>78</b>	<b>512</b>

## **DATA EXPANSION**

The expansion of work place and special generator survey data involved a series of procedures. This section provides a general description of the expansion process.

The full survey trip data were aggregated by site and then linked with the employment and count data collected from the establishment survey. The person and vehicle counts at each site were used to expand the survey trip data. The total trips were counted separately for employees and visitors at free standing and non-free standing establishments, and distinguished between residents and non-residents of the study area. The total trips were classified by purpose, both from the origin to the work place and from the work place to the next destination. They were summed as person trips (all travel modes, including walking and bicycle trips) and auto-driver trips (all trips by drivers and passengers of cars, trucks, and vans, including commercial cargo transport and service vehicles) for each trip purpose category.

The survey employee trips were expanded first to estimate the total employee person trips and employee auto-driver trips by purpose. The process involved dividing the survey employee trips for each category purpose by the number of employee surveys and then multiplying this number by the total number of employees reported to be at work during the survey day. The expanded employee person/auto-driver trips were subtracted from the total person/vehicle count at the site to yield the total visitor person/auto-driver trips to the site.

The survey visitor person/auto-driver trips were used to establish the proportion of visitor trips for each trip purpose category. These percentages were applied to the total estimated visitor trips to yield the visitor person/auto-driver trips by purpose. The average visitor vehicle occupancy rates were based on the auto-driver mode of travel and were calculated for each trip purpose. These occupancy rates were used to convert the expanded visitor person trips to auto-driver trips, or visitor auto-driver trips to person trips, depending on whether a vehicle count or a person count was conducted at the site.

After the data were expanded for each site, the results were aggregated by employment category and area type. The results from the full survey sites were then used to estimate the number of employee and visitor trips by purpose and employment category at the partial survey sites. The person and vehicle counts at each partial survey site were used to expand the trip estimates. Table 40 provides the Sherman-Denison work place survey data summary by area type and employment type.

**Table 40. Work Place Survey Data Summary by Area Type and Employment Type.**

<b>Area Type</b>	<b>Item</b>	<b>Basic</b>	<b>Retail</b>	<b>Service</b>	<b>Education</b>	<b>Total</b>
<b>CBD</b>	Number of sites	4	12	28	1	<b>45</b>
	Total employment	18	56	318	85	<b>477</b>
	Employees at work	12	47	243	85	<b>387</b>
	Total person count	98	765	2334	1,344	<b>4,541</b>
	Total vehicle count	98	720	2254	1,246	<b>4,318</b>
	Total CV count	7	18	22	5	<b>52</b>
<b>Urban</b>	Number of sites	15	35	37	5	<b>92</b>
	Total employment	231	436	306	391	<b>1,364</b>
	Employees at work	205	286	259	388	<b>1,138</b>
	Total person count	1,762	20,502	5155	3,998	<b>31,417</b>
	Total vehicle count	1,762	19,744	4943	3,983	<b>30,432</b>
	Total CV count	84	60	47	14	<b>205</b>
<b>Suburban</b>	Number of sites	5	29	33	15	<b>82</b>
	Total employment	36	463	349	859	<b>1,707</b>
	Employees at work	12	311	277	839	<b>1,439</b>
	Total person count	160	14,291	3774	15,730	<b>33,955</b>
	Total vehicle count	146	13,426	3498	15,689	<b>32,759</b>
	Total CV count	10	59	36	37	<b>142</b>
<b>Rural</b>	Number of sites	26	24	22	9	<b>81</b>
	Total employment	198	310	283	224	<b>1,015</b>
	Employees at work	186	169	231	219	<b>805</b>
	Total person count	918	6,765	1517	3,828	<b>13,028</b>
	Total vehicle count	908	6,128	1479	3,783	<b>12,298</b>
	Total CV count	26	41	24	22	<b>113</b>
<b>All Area Types</b>	Number of sites	<b>50</b>	<b>100</b>	<b>120</b>	<b>30</b>	<b>300</b>
	Total employment	<b>483</b>	<b>1,265</b>	<b>1256</b>	<b>1,559</b>	<b>4,563</b>
	Employees at work	<b>415</b>	<b>813</b>	<b>1010</b>	<b>1,531</b>	<b>3,769</b>
	Total person count	<b>2,938</b>	<b>42,323</b>	<b>12780</b>	<b>24,900</b>	<b>82,941</b>
	Total vehicle count	<b>2,914</b>	<b>40,018</b>	<b>12174</b>	<b>24,701</b>	<b>79,807</b>
	Total CV count	<b>127</b>	<b>178</b>	<b>129</b>	<b>78</b>	<b>512</b>

Table 41 and Table 42 show the expanded person and vehicle trip attraction rates, respectively. Table 43 shows the expanded CV trip attraction rates. The external trips have been removed from the remaining

tables, because they are estimated using the external survey data in conjunction with the work place survey and input to the travel demand model directly.

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. The NHB trips represented the average of the NHB origin and destination trips. The NON-RES trips were divided by two to develop a rate for non-resident trip attractions. The CV trips represented the CVs counted at the facilities, and the trip rates were calculated by dividing the CV counts by the total employment.

**Table 41. Sherman-Denison Work Place Survey Person Trip Attraction Rates.**

Trip Purpose	Area Type	Person Trips Per Employee			
		Basic	Retail	Service	Education
HBW	CBD	1.444	1.478	1.239	1.833
	Urban	1.047	1.106	1.482	1.569
	Suburban	0.583	2.040	1.311	1.945
	Rural	1.868	0.648	1.275	1.534
HBNW	CBD	2.667	8.245	4.721	11.796
	Urban	3.392	26.425	10.638	6.191
	Suburban	2.298	19.739	7.142	11.334
	Rural	2.056	13.600	2.301	11.609
NHB	CBD	0.389	1.279	0.468	1.090
	Urban	0.948	6.290	1.961	1.213
	Suburban	0.393	2.688	0.580	1.229
	Rural	0.200	1.498	0.555	1.225
NON-RES	CBD	0.250	0.510	0.206	0.000
	Urban	0.646	3.110	0.208	0.019
	Suburban	0.394	1.479	0.515	1.262
	Rural	0.127	2.096	0.220	0.690

Note: Attraction rates represent observed rates.

**Table 42. Sherman-Denison Work Place Survey Auto-Driver Trip Attraction Rates.**

Trip Purpose	Area Type	Auto-Driver Trips Per Employee			
		Basic	Retail	Service	Education
HBW	CBD	1.443	1.405	1.208	1.833
	Urban	1.042	1.002	1.433	1.530
	Suburban	0.581	2.040	1.248	1.897
	Rural	1.864	0.597	1.246	1.534
HBNW	CBD	2.656	7.617	4.603	11.220
	Urban	3.385	25.529	10.177	6.191
	Suburban	2.087	18.421	6.633	11.334
	Rural	2.017	12.383	2.250	11.609
NHB	CBD	0.380	1.218	0.409	0.851
	Urban	0.939	6.022	1.854	1.210
	Suburban	0.390	2.487	0.508	1.226
	Rural	0.190	1.348	0.548	1.217
NON-RES	CBD	0.249	0.505	0.206	0.000
	Urban	0.642	3.005	0.206	0.015
	Suburban	0.294	1.445	0.472	1.261
	Rural	0.114	1.870	0.206	0.601

Note: Attraction rates represent observed rates.

**Table 43. Work Place Survey Commercial Vehicle Attraction Rates.**

Area Type	CV Trips Per Employee			
	Basic	Retail	Service	Education
CBD	0.389	0.321	0.069	0.059
Urban	0.364	0.138	0.154	0.036
Suburban	0.278	0.127	0.103	0.043
Rural	0.131	0.132	0.085	0.098
<b>All</b>	<b>0.263</b>	<b>0.141</b>	<b>0.103</b>	<b>0.050</b>

Note: Attraction rates represent observed rates.

Table 44 shows the expanded survey trip attractions and attraction rates by purpose for each special generator. The expansion procedures used were similar to the full work place survey sites. The attraction rates were developed by dividing the expanded trips by purpose by the total employment at the special generator. The external trips were removed from the analysis. The NHB trips represented the average of the NHB origin and destination trips. The NON-RES trips were divided by two to develop a rate for non-resident trip attractions. The CV trips represented the CVs counted at the facilities.

**Table 44. Sherman-Denison Special Generator Trip Attractions and Rates.**

Trip Purpose	Grayson County College			
	Total Person Trips	Person Trips Per Employee	Total Auto-Driver Trips	Auto-Driver Trips Per Employee
HBW	672	1.680	593	1.483
HBNW	4,699	11.748	4,153	10.382
NHB	316	0.790	297	0.741
NON-RES	687	1.718	629	1.573
CV	8	0.020	8	0.020
Trip Purpose	Texoma Medical Center			
	Total Person Trips	Person Trips Per Employee	Total Auto-Driver Trips	Auto-Driver Trips Per Employee
HBW	1,614	1.467	1,528	1.389
HBNW	2,078	1.889	1,500	1.364
NHB	258	0.235	206	0.187
NON-RES	1,129	1.026	871	0.792
CV	10	0.009	10	0.009
Trip Purpose	Texas Health Presbyterian - WNJ			
	Total Person Trips	Person Trips Per Employee	Total Auto-Driver Trips	Auto-Driver Trips Per Employee
HBW	946	0.946	917	0.917
HBNW	2,315	2.315	1,764	1.764
NHB	201	0.201	162	0.162
NON-RES	357	0.357	299	0.299
CV	12	0.012	12	0.012
Trip Purpose	Austin College			
	Total Person Trips	Person Trips Per Employee	Total Auto-Driver Trips	Auto-Driver Trips Per Employee
HBW	487	1.623	432	1.441
HBNW	1,394	4.647	1,138	3.793
NHB	174	0.581	171	0.569
NON-RES	266	0.887	272	0.907
CV	0	0.000	0	0.000
Trip Purpose	Sherman Town Center			
	Total Person Trips	Person Trips Per Employee	Total Auto-Driver Trips	Auto-Driver Trips Per Employee
HBW	995	1.598	893	1.434
HBNW	25,458	40.864	16,867	27.074
NHB	2,387	3.832	1,599	2.567
NON-RES	2,171	3.485	1,374	2.206
CV	27	0.043	27	0.043

## 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 attractions per employee, were developed for each trip purpose, area type, and employment type. The NHB origin and destination trips were combined and divided by two to develop an attraction rate for NHB trips. The NON-RES trips were divided by two to develop an attraction rate for non-resident travel.

Table 45 and Table 46 show the total person and auto-driver trip attraction rates by purpose and employment type for all area types, as calculated from the survey trip data, respectively.

**Table 45. Sherman-Denison Work Place Survey Person Trip Rates.**

<b>Employment Category</b>	<b>HBW</b>	<b>HBNW</b>	<b>NHB</b>	<b>NON-RES</b>
Basic	1.364	2.736	0.579	0.400
Retail	1.352	20.030	3.576	2.149
Service	1.326	6.290	0.883	0.296
Education (K to12)	1.785	10.109	1.217	0.799

**Table 46. Sherman-Denison Work Place Survey Auto-Driver Trip Rates.**

<b>Employment Category</b>	<b>HBW</b>	<b>HBNW</b>	<b>NHB</b>	<b>NON-RES</b>
Basic	1.360	2.700	0.570	0.385
Retail	1.301	18.913	3.370	2.045
Service	1.283	5.995	0.820	0.280
Education (K to12)	1.749	10.078	1.200	0.785

The next step in model rate development involved applying the survey attraction rates to the overall employment estimates for the study area. However, the current available data were based on 2003 TAZ geography. Table 47 provides the employment estimates for the SDMPO study area that was used to estimate the total trip attractions shown in Table 48 and Table 49, and develop the attraction rates by area type for each category of employment in Table 50 and Table 51.

**Table 47. Total Employment Estimates by Area Type and Employment Type.**

Area Type	Total Employment				Total
	Basic	Retail	Service	Education (K-12)*	
CBD	537	572	1,656	95	2,860
Urban	1,997	3,553	5,258	584	11,392
Suburban	4,441	3,112	2,990	1,184	11,727
Rural	3,265	1,212	1,683	756	6,916
<b>All Area Types</b>	<b>10,240</b>	<b>8,449</b>	<b>11,587</b>	<b>2,619</b>	<b>32,895</b>

Source: SDMPO. Employment estimates based on 2003 TAZ geography.

**Table 48. SDMPO Study Area Total Person Trip Attractions by Employment Category and Trip Purpose.**

Employment Category	HBW	HBNW	NHB	NON-RES	Total
Basic	13,966	28,018	5,931	4,094	52,009
Retail	11,423	169,233	30,214	18,157	229,027
Service	15,364	72,882	10,231	3,430	101,907
Education (K to12)	4,675	26,475	3,187	2,093	36,430
<b>All Employment</b>	<b>45,428</b>	<b>296,608</b>	<b>49,563</b>	<b>27,774</b>	<b>419,373</b>

**Table 49. SDMPO Study Area Total Auto-Driver Trip Attractions by Employment Category and Trip Purpose.**

<b>Employment Category</b>	<b>HBW</b>	<b>HBNW</b>	<b>NHB</b>	<b>NON-RES</b>	<b>Total</b>
Basic	13,926	27,648	5,837	3,942	51,353
Retail	10,992	159,796	28,473	17,278	216,539
Service	14,866	69,464	9,501	3,244	97,075
Education (K to12)	4,581	26,394	3,143	2,056	36,174
<b>All Employment</b>	<b>44,365</b>	<b>283,302</b>	<b>46,954</b>	<b>26,520</b>	<b>401,141</b>

**Table 50. SDMPO Study Area Person Trip Attraction Rates.**

<b>Trip Purpose</b>	<b>Area Type</b>	<b>Person Trips Per Employee</b>			
		<b>Basic</b>	<b>Retail</b>	<b>Service</b>	<b>Education</b>
HBW	CBD	1.746	1.418	1.197	1.883
	Urban	1.265	1.061	1.432	1.611
	Suburban	0.705	1.957	1.266	1.997
	Rural	2.258	0.622	1.231	1.576
HBNW	CBD	2.974	7.905	3.867	11.596
	Urban	3.783	25.335	8.713	6.086
	Suburban	2.562	18.925	5.850	11.142
	Rural	2.293	13.039	1.885	11.412
NHB	CBD	0.512	1.161	0.348	1.088
	Urban	1.249	5.713	1.458	1.211
	Suburban	0.518	2.441	0.431	1.227
	Rural	0.263	1.361	0.413	1.223
NON-RES	CBD	0.285	0.501	0.211	0.020
	Urban	0.737	3.055	0.213	0.020
	Suburban	0.449	1.453	0.528	1.302
	Rural	0.145	2.059	0.225	0.712

**Table 51. SDMPO Auto-Driver Trip Attraction Rates.**

Trip Purpose	Area Type	Auto-Driver Trips Per Employee			
		Basic	Retail	Service	Education
HBW	CBD	1.744	1.350	1.169	1.878
	Urban	1.260	0.966	1.386	1.567
	Suburban	0.702	1.957	1.208	1.943
	Rural	2.252	0.574	1.206	1.571
HBNW	CBD	2.869	7.272	3.773	11.018
	Urban	3.768	24.370	8.341	6.079
	Suburban	2.524	17.585	5.436	11.130
	Rural	2.259	11.821	1.844	11.400
NHB	CBD	0.500	1.103	0.302	0.846
	Urban	1.238	5.449	1.369	1.204
	Suburban	0.513	2.250	0.375	1.219
	Rural	0.250	1.220	0.405	1.211
NON-RES	CBD	0.280	0.492	0.210	0.016
	Urban	0.693	2.929	0.210	0.016
	Suburban	0.436	1.408	0.485	1.300
	Rural	0.144	1.822	0.204	0.670

Table 52 shows the estimated CV trip attraction rates for the SDMPO study area by area type for each category of employment.

**Table 52. SDMPO Commercial Vehicle Trip Attraction Rates.**

Area Type	Commercial Vehicle Trips			
	Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee
CBD	0.403	0.311	0.060	0.051
Urban	0.377	0.133	0.133	0.031
Suburban	0.288	0.123	0.089	0.037
Rural	0.136	0.128	0.073	0.085
<b>All Area Types</b>	<b>0.263</b>	<b>0.141</b>	<b>0.103</b>	<b>0.050</b>

The total trip attractions estimated from the work place survey were then compared and balanced with the estimated total trip productions from the household survey and CV survey to develop the recommended trip rates for the SDMPO travel demand model. Table 53 provides a summary of travel estimates from the travel surveys conducted in the SDMPO study area.

**Table 53. Travel Estimates from the Sherman-Denison Travel Surveys.**

Trip Purpose	Work Place Survey (2011)		Household Survey (2011/2012)		Commercial Vehicle Survey (2012)
	Person	Vehicle	Person	Vehicle	Vehicle
HBW	45,429	44,365	73,812	67,827	-
HBNW Retail	169,233	159,796	81,049	57,949	-
HBNW Other	100,900	97,112	87,129	57,506	-
HBNW School	26,475	26,394	96,033	40,239	-
NHB	49,563	46,954	123,512	85,806	-
NON-RES	27,773	26,521	-	-	-
Commercial Vehicles	-	5,202	-	-	63,383

The attraction rates by trip purpose from the work place survey required some adjustments to balance the aggregate estimates of trip attractions with the aggregate estimates of trip productions from the household survey and CV survey. The balancing factors for HBW and HBNW person/auto-driver trips were calculated by dividing the number of person/auto-driver trips from the household survey with the number of person/auto-driver 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 trip attractions and matched with the NHB 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. A general estimate for non-resident travel in the SDMPO urban area is about 5-10 percent of the household internal travel. The total non-resident trips from the Sherman-Denison work place surveys, when converted to trip productions and attractions, yield an estimate of 27,773 person trips and 26,521 auto-driver trips, approximately 6 percent and 8 percent of the total internal household trips, respectively. These estimates are recommended for use in the travel demand model for non-resident travel.

Table 54 and Table 55 provide the recommended person and auto-driver trip attraction rates to be used for the SDMPO travel demand model, respectively. The attraction rates per household for each category of trip purpose were assumed to be constant across area types. It is recognized that trip rate smoothing and adjustments across area types for each category of employment may be necessary to achieve more reasonable rates for the model.

**Table 54. 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	CBD	2.836	2.303	1.944	3.059	0.041
	Urban	2.055	1.723	2.326	2.617	0.041
	Suburban	1.145	3.179	2.056	3.244	0.041
	Rural	3.668	1.010	1.944	2.560	0.041
HBNW Retail	CBD		3.786			
	Urban		12.133			
	Suburban		9.063			
	Rural		6.244			
HBNW Other	CBD	2.568		3.339		0.357
	Urban	3.267		7.524		0.357
	Suburban	2.213		5.052		0.357
	Rural	1.980		1.628		0.357
HBNW School	CBD				42.062	0.002
	Urban				22.076	0.002
	Suburban				40.415	0.002
	Rural				41.395	0.002
NHB	CBD	1.277	2.894	0.868	2.711	0.232
	Urban	3.114	14.242	3.636	3.018	0.232
	Suburban	1.291	6.085	1.075	3.058	0.232
	Rural	0.657	3.393	1.030	3.048	0.232
NON-RES	CBD	0.285	0.501	0.211	0.020	
	Urban	0.737	3.055	0.213	0.020	
	Suburban	0.449	1.453	0.528	1.302	
	Rural	0.145	2.059	0.225	0.712	

Note: Attraction rates represent balanced and adjusted rates to match the trip production estimates from the 2011/2012 Sherman-Denison Household Travel Survey. The NON RES trips were developed from the work place survey.

**Table 55. Recommended Auto-Driver Trip Attraction Rates.**

Trip Purpose	Area Type	Auto-Driver Trips				
		Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee	Per Household
HBW	CBD	0.849	0.953	1.169	2.287	0.034
	Urban	1.976	1.263	1.514	2.908	0.034
	Suburban	0.834	1.825	1.324	2.048	0.034
	Rural	1.013	1.010	1.202	0.943	0.034
HBNW Retail	CBD		4.559			
	Urban		5.653			
	Suburban		3.318			
	Rural		2.777			
HBNW Other	CBD	1.291		1.802		0.214
	Urban	1.050		3.173		0.214
	Suburban	0.137		1.698		0.214
	Rural	1.193		1.923		0.214
HBNW School	CBD				14.076	0.000
	Urban				10.413	0.000
	Suburban				17.290	0.000
	Rural				12.478	0.000
NHB	CBD	0.592	4.886	1.125	3.425	0.154
	Urban	1.088	4.416	1.711	3.750	0.154
	Suburban	0.379	2.683	1.535	3.270	0.154
	Rural	0.812	2.917	1.305	2.885	0.154
NON-RES	CBD	0.228	2.079	0.238	0.449	
	Urban	0.286	2.256	1.111	0.405	
	Suburban	0.165	2.617	1.563	0.425	
	Rural	0.896	4.244	1.358	0.760	

Note: Attraction rates represent balanced and adjusted rates to match the trip production estimates from the 2011/2012 Sherman-Denison Household Travel Survey. The NON RES trips were developed from the work place survey.

Table 56 shows the recommended CV trip attraction rates. These rates were developed using the CV trip rates from the work place survey and were adjusted and balanced with the total internal CV trip estimates developed from the 2012 Commercial Vehicle Survey.

**Table 56. Recommended Commercial Vehicle Trip Attraction Rates.**

Area Type	Commercial Trips				
	Per Basic Employee	Per Retail Employee	Per Service Employee	Per Education Employee	Per Household
CBD	4.912	3.786	0.730	0.619	0.380
Urban	4.593	1.621	1.622	0.377	0.380
Sub-Urban	3.509	1.501	1.089	0.453	0.380
Rural	1.659	1.558	0.895	1.033	0.380
<b>All Area Types</b>	<b>3.204</b>	<b>1.714</b>	<b>1.251</b>	<b>0.610</b>	<b>0.380</b>

Note: Attraction rates represent balanced and adjusted rates to match the total CV trip estimates from the 2012 Sherman-Denison Commercial Vehicle Survey.

## **SURVEY SUMMARY**

The TPP Division of TxDOT funded the Sherman-Denison work place and special generator survey during the period of September 2011 through November 2011. 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 study area.

The work place survey consisted of four data collection efforts, which involved a general establishment survey, an intercept interview survey, a person or vehicle count, and a CV count. The survey establishments were classified as either full survey sites or partial survey sites. The full survey sites consisted of 150 establishments with a total reported employment of 2,007. A total of 905 employees and 2,448 non-employees/visitors participated in the intercept interviews. The partial survey sites consisted of 150 establishments with a total reported employment of 2,556. The partial sites did not include intercept interview surveys. The survey findings indicated that approximately 83,000 persons and 79,800 non-CVs were traveling to and from the surveyed establishments during the travel survey period. There were 512 CVs counted at the surveyed establishments during their normal operating hours.

The special generator survey included five special generators – Grayson County College, Texoma Medical Center, Texas Health Presbyterian-WNJ, Austin College, and Sherman Town Center. A combined total of 650 employees, 387 students, and 1,072 visitors participated in the intercept interview survey. Approximately 41,700 non-CVs and 57 CVs were observed to be entering and exiting the surveyed establishments during their normal operating hours.

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 Sherman-Denison Work Place Survey were compared with the aggregate estimates of trip productions from the 2011/2012 Household Survey. Adjustments and balancing factors were applied to match the total trip attractions with the total trip productions. The CV trip attraction rates were developed to match the total 63,383 internal trip estimates from the 2012 Commercial Vehicle Survey.

The total non-resident trip attractions amounted to approximately 27,800 person trips and 26,500, which represented about 6 percent and 8 percent of the total household internal trips estimated in the Sherman-Denison study area, respectively.

Adjustments made to the observed trip rates are highly sensitive to the amount of employment and distribution of employment. The MPO employment data that was used as the basis in developing the trip rates and estimating the total attractions were based on 2003 TAZ geography, given that this was the most current data that was available during the time of analysis. It is anticipated that the attraction rates presented in this report may require smoothing and further adjustments, during the calibration phase of the travel demand model for the Sherman-Denison study area after updated employment estimates are made available.



**APPENDIX A:  
WORK PLACE SURVEY FORMS**



WORK PLACE RECRUITMENT AND GENERAL SURVEY

Form A

---

SAMPLE NUMBER: \_\_\_\_\_ RECRUITER: \_\_\_\_\_  
DATE: \_\_\_\_/\_\_\_\_/\_\_\_\_ COMPANY NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
CONTACT NAME / POSITION: \_\_\_\_\_ / \_\_\_\_\_  
COMPANY PHONE: \_\_\_\_\_ FAX NUMBER: \_\_\_\_\_  
EMPLOYMENT TYPE: \_\_\_\_\_ TRANSPORTATION ANALYSIS ZONE (TAZ #): \_\_\_\_\_

---

Hello, my name is \_\_\_\_\_ from (vendor name). We are working with the Texas Department of Transportation to collect travel data at area businesses. May I speak to the owner or manager, please?

**(If you have to call back, get):**

The manager or owner's name: \_\_\_\_\_

And, a good time to call back: \_\_\_\_\_

(If you are transferred to the owner or manager, repeat):

Hello, my name is \_\_\_\_\_ from (vendor name). We are working with the Texas Department of Transportation to collect travel data at area businesses. Your business has been randomly selected to participate in this data collection effort because TxDOT needs information about where traffic is being generated. Do you have time for me to explain how the data collection would work? It will take about 3 minutes.

**If yes, continue. If NO, when can I call back?** \_\_\_\_\_

**If a refusal, ask if they can provide some information to assist in this study, if yes ask preliminary questions, if no thank them.**

- For one single day, we would have a person outside of your business, a discrete distance away from your business. After visitors and employees leave your business, we would ask them politely to answer a few questions about where they came from and where they are going to.

Would you be willing to participate in this data collection effort?

**If yes, ask:**

We'll need to coordinate with someone at your workplace on the survey day. Should we coordinate with you or is there someone else you would like us coordinate with on the day of the survey?

**(Name: \_\_\_\_\_). Then ask the Preliminary Questions.**

**If no, ask:** I just explained the longer version of our data collection effort. Would you be willing to allow us to just place traffic counters at the entrances to your business? In this case no one would ask your visitors or employees any questions, but we could still get data on the amount of traffic your business generates each day.

**If the answer is yes,**

We'll need to coordinate with someone at your workplace on the survey day. Should we coordinate with you or is there someone else you would like us coordinate with on the day of the survey?

**(Name: \_\_\_\_\_). Tell them that we will call them back in a couple of days to let them know the day we will be there to perform the counts. Thank them and ask the Preliminary Questions.**

**Sherman Denison Workplace Recruitment and General Survey Form A (English) - Continued**

If they have agreed to participate in the survey, tell them you need to get some preliminary information from them to assist in planning the data collection effort at their location.

If they did not agree to participate in the survey, tell them they can assist the study by answering a few questions about their business and where it is located.

**PRELIMINARY QUESTIONS**

First, let me verify your address (**front page**).

---

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1. How many full and part time employees are located at your site? EMPLOYEES \_\_\_\_\_ #

2. On a typical week day, how many persons visit this location? VISITORS \_\_\_\_\_ #

3. On a typical week day, how many employees do you have working at this location? \_\_\_\_\_ #

4. What are your hours of operation? FROM \_\_\_\_\_ am/pm, TO \_\_\_\_\_ am/pm

5. Are you in a shopping center or in an office building? \_\_\_\_\_.

If yes, are any other companies in the shopping center or office building?

Yes No (circle one)

6. Does the building you are in have its own parking lot? Yes No (circle one)

Is this parking shared between your business and other businesses? Yes No (circle one)

Do people use your parking lot **or driveway** as a cut through to access other businesses?

Yes No (circle one)

7. How many deliveries are made at this location on an average day? \_\_\_\_\_ #

8. What are the delivery hours? FROM \_\_\_\_\_:\_\_\_\_\_ am/pm, TO \_\_\_\_\_:\_\_\_\_\_ am/pm

9. As part of the survey, it is important that we survey persons from all entry and exit points to the building. Do you have a special door for deliveries or for employees? Yes No (circle one)

10. How many vehicles are owned and/or leased by your company for business use in this area? \_\_\_\_\_ #

How many of these are:

\_\_\_\_\_ passenger car or sport utility vehicle

\_\_\_\_\_ pickup truck

\_\_\_\_\_ van used for cargo delivery or pickup

\_\_\_\_\_ van used as a service vehicle

If not one of the above categories, how many of these are:

\_\_\_\_\_ cargo transport vehicles

\_\_\_\_\_ vehicles used for service or other business purposes

Thank you very much. We will call you in a day or two to schedule an exact date for the data collection. If you have any questions about the survey, please don't hesitate to call \_\_\_\_\_ at ###-####.



**Sherman-Denison Workplace Recruitment and General Survey Form A (English) - Continued**

CALL DISPOSITION LOG

Company Name: \_\_\_\_\_

Keep a record of the calls made to this company below. Indicate if it is an initial call, a call back, a reminder call, a follow-up call, or a form retrieval call. Record notes about what happened during the call.

DATE	CALLS
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began	_____ am / _____ pm	_____ am / _____ pm
Time interview ended	_____ am / _____ pm	_____ am / _____ pm
1. Do you work in this building or at this location?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. In what city or county do you live?		
3a. Is that in Grayson county? (If YES, go to question 4)  3b. If NO, which roadway did you use to enter the area? (airport is an option)	a. <input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 3b)  b. _____	a. <input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 3b)  b. _____
4. What is your home address or the names of the nearest two intersecting streets?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
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 the trip that brought you to _____?	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 5b)  b. _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 5b)  b. _____ (Address or nearest intersection)
6a. Is that location in:  6b. If outside of Grayson county, what street or highway were you on when you entered the Sherman or Denison area?	a. <input type="checkbox"/> Grayson County <input type="checkbox"/> Other county (enter name) _____  b. _____	a. <input type="checkbox"/> Grayson County <input type="checkbox"/> Other county (enter name) _____  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)	Arrival Option #: _____ Other: _____	Arrival Option #: _____ Other: _____
Arrival Options: 1) Driver (car/truck/van)                      5) Transit Bus                                      9) Commercial Service Vehicle 2) Passenger (car/truck/van)                6) School Bus                                      10) Motorcycle 3) Walk    7) Taxi/Paid Limousine                        11) Other (Specify) 4) Bicycle     8) Commercial Cargo Transport Vehicle    99) Refused		
9a. If car/truck/van, ask: How many people, including you, were in the vehicle?  9b. If bus, ask: What fare did you pay?	a) # of People _____  b) Fare \$ _____	a) # of People _____  b) Fare \$ _____



<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began	_____ am / _____ pm	_____ am / _____ pm
Time interview ended	_____ am / _____ pm	_____ am / _____ pm
1. Do you work in this building or at this location?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. In what city or county do you live?		
3a. Is that in Grayson county? (If YES, go to question 4)  3b. If NO, which roadway did you use to enter the area? (airport is an option)	a. <input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 3b)  b. _____	a. <input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 3b)  b. _____
4. What is your home address or the names of the nearest two intersecting streets?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
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 the trip that brought you to _____?	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 5b)  b. _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 5b)  b. _____ (Address or nearest intersection)
6a. Is that location in:  6b. If outside of Grayson county, what street or highway were you on when you entered the Sherman or Denison area?	a. <input type="checkbox"/> Grayson County <input type="checkbox"/> Other county (enter name) _____  b. _____	a. <input type="checkbox"/> Grayson County <input type="checkbox"/> Other county (enter name) _____  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)	Arrival Option #: _____ Other: _____	Arrival Option #: _____ Other: _____
Arrival Options: 12) Driver (car/truck/van) 13) Passenger (car/truck/van) 14) Walk 15) Bicycle 16) Transit Bus 17) School Bus 18) Taxi/Paid Limousine 19) Commercial Cargo Transport Vehicle 20) Commercial Service Vehicle 21) Motorcycle 22) Other (Specify) 99) Refused		
9a. If car/truck/van, ask: How many people, including you, were in the vehicle?  9b. If bus, ask: What fare did you pay?	a) # of People _____  b) Fare \$ _____	a) # of People _____  b) Fare \$ _____

Sherman/Denison Work Place Intercept Survey, Record 10, Form B - Continued

Questions	Person 1	Person 2
10. What is the reason for coming here today? (Choose from Trip Purpose Options)	Trip Purpose Option #: _____ Other: _____	Trip Purpose Option #: _____ Other: _____
Trip Purpose Options: 5) Return Home 6) Work Related 7) School 8) Social/Recreational/Visit 9) Shop 10) Eat Out 11) Personal Business 12) Pick Up/Drop Off Passenger 12) Change Travel Mode 13) Delivery – Pick Up/Drop Off Cargo 14) Other (Specify) 100) Refused		
11. When you leave here are you going straight home with no stops?	<input type="checkbox"/> Yes (Go to 14) <input type="checkbox"/> No (Go to 12)	<input type="checkbox"/> Yes (Go to 14) <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)
13a. Is that location in:  13b. If outside of Grayson County, what street or highway will you be on when you leave this area?	a. <input type="checkbox"/> Grayson County <input type="checkbox"/> Other county (enter name) _____ b. _____	a. <input type="checkbox"/> Grayson County <input type="checkbox"/> Other county (enter name) _____ b. _____
14. How often do you travel to the Austin-San Antonio area?	<input type="checkbox"/> Never <input type="checkbox"/> 1 - 2 times per year <input type="checkbox"/> 1 - 2 times every 6 months <input type="checkbox"/> 1 - 2 times every 3 months <input type="checkbox"/> 1 or more times every month <input type="checkbox"/> 1 or more times every week	<input type="checkbox"/> Never <input type="checkbox"/> 1 - 2 times per year <input type="checkbox"/> 1 - 2 times every 6 months <input type="checkbox"/> 1 - 2 times every 3 months <input type="checkbox"/> 1 or more times every month <input type="checkbox"/> 1 or more times every week
15. How often do you travel to the Dallas-Ft. Worth area?	<input type="checkbox"/> Never <input type="checkbox"/> 1 - 2 times per year <input type="checkbox"/> 1 - 2 times every 6 months <input type="checkbox"/> 1 - 2 times every 3 months <input type="checkbox"/> 1 or more times every month <input type="checkbox"/> 1 or more times every week	<input type="checkbox"/> Never <input type="checkbox"/> 1 - 2 times per year <input type="checkbox"/> 1 - 2 times every 6 months <input type="checkbox"/> 1 - 2 times every 3 months <input type="checkbox"/> 1 or more times every month <input type="checkbox"/> 1 or more times every week
16. How often do you travel to the Houston area?	<input type="checkbox"/> Never <input type="checkbox"/> 1 - 2 times per year <input type="checkbox"/> 1 - 2 times every 6 months <input type="checkbox"/> 1 - 2 times every 3 months <input type="checkbox"/> 1 or more times every month <input type="checkbox"/> 1 or more times every week	<input type="checkbox"/> Never <input type="checkbox"/> 1 - 2 times per year <input type="checkbox"/> 1 - 2 times every 6 months <input type="checkbox"/> 1 - 2 times every 3 months <input type="checkbox"/> 1 or more times every month <input type="checkbox"/> 1 or more times every week
17. If passenger rail service were available to Austin-San Antonio or to Houston, would you use rail to travel to these areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possibly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possibly
18. If commuter rail service were available to Dallas or Ft. Worth, would you use rail to travel to these areas?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possibly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possibly
19. Thank them for their time and participation.		

**AUSTIN COLLEGE**  
SPECIAL GENERATOR INTERCEPT SURVEY

Form B

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

TAZ #: \_\_\_\_\_

Survey Area: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Location on Campus: \_\_\_\_\_

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began	_____ am / _____ pm	_____ am / _____ pm
Time interview ended	_____ am / _____ pm	_____ am / _____ pm
1. Are you a student here?	<input type="checkbox"/> Yes (Go to 2) <input type="checkbox"/> No (Go to 3)	<input type="checkbox"/> Yes (Go to 2) <input type="checkbox"/> No (Go to 3)
2. Do you live on campus?	<input type="checkbox"/> Yes (Terminate Interview) <input type="checkbox"/> No (Go to 3)	<input type="checkbox"/> Yes (Terminate Interview) <input type="checkbox"/> No (Go to 3)
3. Do you work here at the college or are you visiting the college?	<input type="checkbox"/> Employee <input type="checkbox"/> Visitor	<input type="checkbox"/> Employee <input type="checkbox"/> Visitor
4. In what city or county do you live?	_____	_____
5. Is that in Grayson county?	<input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 6)	<input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 6)
If they live outside Grayson county, ask: 6. Which roadway did you use to enter the Sherman/Denison area? (airport is an option)	_____ _____	_____ _____
If they live in Grayson county, ask: 7. What is your home address or nearest two intersecting streets?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
8. How did you arrive here at the university today? (Choose from Arrival Options)	Arrival Option # _____ Other _____	Arrival Option # _____ Other _____
Arrival Options: 1) Driver (car/truck/van)                      5) Transit Bus                                      9) Commercial Service Vehicle 2) Passenger (car/truck/van)                6) School Bus                                      10) Motorcycle 3) Walk    7) Taxi/Paid Limousine                        11) Other (Specify) 4) Bicycle    8) Commercial Cargo Transport Vehicle    99) Refused		
9a. If arrival was by car/truck/van, how many people, including you, were in the vehicle when you arrived at the college? 9b. Where did you park?	a. # of People _____ b. 1) On-Campus    2) Off Campus Parking Lot 3) Off Campus in Street Designated Parking Spot 4) Other (specify) _____	a. # of People _____ b. 1) On-Campus    2) Off Campus Parking Lot 3) Off Campus in Street Designated Parking Spot 4) Other (specify) _____
10a. Did you travel directly from your home to the college with no stops? 10b. If NO, where did you start the trip that brought you to the college?	a. <input type="checkbox"/> Yes (Go to 12) <input type="checkbox"/> No (Go to 10b) b. _____ _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes (Go to 12) <input type="checkbox"/> No (Go to 10b) b. _____ _____ (Address or nearest intersection)
11a. Is that location in Grayson county? 11b. If NO, what street or highway were you on when you entered the Sherman/Denison area?	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (enter name of county) b. _____ _____	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (enter name of county) b. _____ _____







**SHERMAN TOWN CENTER**  
SPECIAL GENERATOR INTERCEPT SURVEY

Form B

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

TAZ #: \_\_\_\_\_

Survey Area: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Location at Mall: \_\_\_\_\_

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began	_____ am / _____ pm	_____ am / _____ pm
Time interview ended	_____ am / _____ pm	_____ am / _____ pm
1. Do you work in this Mall?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. In what city or county do you live?		
3a. Is that in Grayson county? (If YES, go to question 4) 3b. If NO, which roadway did you use to enter the Sherman/Denison area? (airport is an option)	a. <input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 3b) b. _____	a. <input type="checkbox"/> Yes (Go to 4) <input type="checkbox"/> No (Go to 3b) b. _____
4. What is your home address or nearest two intersecting streets?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
5a. Did you travel directly from your home to the Mall with no stops? 5b. If NO, where did you start the trip that brought you to the Mall?	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 5b) b. _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 5b) b. _____ (Address or nearest intersection)
6a. Is that location in Grayson county? 6b. If NO, what street or highway were you on when you entered the Sherman/Denison area?	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (enter name of county) _____ b. _____	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (enter name of county) _____ b. _____
7. What approximate time did you arrive at the Mall today?	_____ am / _____ pm	_____ am / _____ pm
8. How did you arrive at the Mall today? (Choose from Arrival Options)	Arrival Option # _____ Other _____	Arrival Option # _____ Other _____
Arrival Options: 1) Driver (car/truck/van)                      5) Transit Bus                                      9) Commercial Service Vehicle 2) Passenger (car/truck/van)                6) School Bus                                      10) Motorcycle 3) Walk    7) Taxi/Paid Limousine                        11) Other (Specify) 4) Bicycle    8) Commercial Cargo Transport Vehicle   99) Refused		
9a. If car/truck/van, ask: How many people, including you, were in the vehicle? 9b. If bus, ask: What fare did you pay?	a. # of People _____ b. Fare \$ _____	a. # of People _____ b. Fare \$ _____



Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

TAZ #: \_\_\_\_\_

Survey Area: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Location on Campus: \_\_\_\_\_

<u>Questions</u>	<u>Person 1</u>	<u>Person 2</u>
Time interview began	_____ am / _____ pm	_____ am / _____ pm
Time interview ended	_____ am / _____ pm	_____ am / _____ pm
1. Are you a student here?	<input type="checkbox"/> Yes (Go to 2) <input type="checkbox"/> No (Go to 3)	<input type="checkbox"/> Yes (Go to 2) <input type="checkbox"/> No (Go to 3)
2. Do you live on campus?	<input type="checkbox"/> Yes (Terminate Interview) <input type="checkbox"/> No (Go to 3)	<input type="checkbox"/> Yes (Terminate Interview) <input type="checkbox"/> No (Go to 3)
3. Do you work here at the college or are you visiting the college?	<input type="checkbox"/> Employee <input type="checkbox"/> Visitor	<input type="checkbox"/> Employee <input type="checkbox"/> Visitor
4. In what city or county do you live?	_____	_____
5. Is that in Grayson county?	<input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 6)	<input type="checkbox"/> Yes (Go to 7) <input type="checkbox"/> No (Go to 6)
If they live outside Grayson county, ask: 6. Which roadway did you use to enter the Sherman/Denison area? (airport is an option)	_____ _____	_____ _____
If they live in Grayson county, ask: 7. What is your home address or nearest two intersecting streets?	_____ _____ (Address or nearest intersection)	_____ _____ (Address or nearest intersection)
8. How did you arrive here at the college today? (Choose from Arrival Options)	Arrival Option # _____ Other _____	Arrival Option # _____ Other _____
Arrival Options: 1) Driver (car/truck/van)                      5) Transit Bus                                      9) Commercial Service Vehicle 2) Passenger (car/truck/van)                6) School Bus                                      10) Motorcycle 3) Walk    7) Taxi/Paid Limousine                        11) Other (Specify) 4) Bicycle    8) Commercial Cargo Transport Vehicle    99) Refused		
9a. If arrival was by car/truck/van, how many people, including you, were in the vehicle when you arrived at the university? 9b. Where did you park?	a. # of People _____ b. 1) On-Campus    2) Off Campus Parking Lot 3) Off Campus in Street Designated Parking Spot 4) Other (specify) _____	a. # of People _____ b. 1) On-Campus    2) Off Campus Parking Lot 3) Off Campus in Street Designated Parking Spot 4) Other (specify) _____
10a. Did you travel directly from your home to the college with no stops? 10b. If NO, where did you start the trip that brought you to the college?	a. <input type="checkbox"/> Yes (Go to 12) <input type="checkbox"/> No (Go to 10b) b. _____ _____ (Address or nearest intersection)	a. <input type="checkbox"/> Yes (Go to 12) <input type="checkbox"/> No (Go to 10b) b. _____ _____ (Address or nearest intersection)
11a. Is that location in Grayson county? 11b. If NO, what street or highway were you on when you entered the Sherman/Denison area?	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (enter name of county) b. _____ _____	a. <input type="checkbox"/> Yes <input type="checkbox"/> No (enter name of county) b. _____ _____









**APPENDIX B:  
ASCII FILE FORMATS**



## Work Place General Survey, Form A File Format

This file will contain the general information data collected using Form A, Work Place General Survey. The data should be in an ASCII data file.

<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 indicating type of record. Here it should be 9.
2. Contact Month	4	5	Numeric RJ	I2	Month work place was contacted.
3. Contact Day	6	7	Numeric RJ	I2	Day of month work place was contacted.
4. Contact Year	8	11	Numeric RJ	I4	Year work place was contacted.
5. Site Number	12	16	Numeric RJ	I5	Unique non - zero number assigned to each work place.
6. NAICS Code	17	22	Numeric RJ	I6	North American Industrial Classification System code of the workplace.
7. Work Place Name	23	52	Alphanum. LJ	A30	Name of work place.
8. Work Place Address	53	112	Alphanum. LJ	A60	Address of work place.
9. Work Place City	113	142	Alphanum. LJ	A30	City where work place is located.
10. Work Place State	143	157	Alphanum. LJ	A15	State where work place is located.
11. Work Place Zip Code	158	162	Numeric RJ	I5	Zip code for work place.
12. Work Place County	163	164	Numeric RJ	I2	Code indicating county in which work place is located: 1 - Grayson County.
13. Work Place Longitude	165	174	Numeric RJ	F10.6	Longitude of work place location. Those locations within the study area but unknown should be coded 888.888888. All work places must be within the study area.
14. Work Place Latitude	175	184	Numeric RJ	F10.6	Latitude of work place location. Those locations within the study area but unknown should be coded 888.888888. All work places must be within the study area.
15. Work Place Study Area	185	186	Alphanum. LJ	A2	Code indicating study area in which work place is located. Use 'SD' for zones in the Sherman - Denison/Grayson County study area. All work places must be within the study area.
16. Work Place Zone	187	191	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where work place is located. If unknown but in the study area, it should be coded 88888. All work places must be within the study area.
17. Employment Type	192	193	Numeric RJ	I2	Code indicating the type of employment at the workplace. See code descriptions.
18. Other Employment Type	194	253	Alphanum. LJ	A60	If employment type is coded as 96 - Other, this field contains a description of the employment type.
19. Employment Sector	254	256	Numeric RJ	I3	Code indicating the sector of employment at the work place. 1 - Basic, 2 - Retail, 3 - Service, 4 - Education, 96 - Other
20. Other Employment Sector	257	286	Alphanum. LJ	A30	If employment sector is coded as other, this field contains a description of the employment type.
21. Work Place Phone No.	287	298	Alphanum. LJ	I12	Phone number of work place.
22. Number of Attempts	299	301	Numeric RJ	I3	Number of attempts made to contact work place.
23. Call Disposition Code	302	303	Numeric RJ	I2	Code indicating final result of call attempts. See code definitions.
24. Other Call Disposition	304	333	Alphanum. LJ	A30	If call disposition code is "other", this field contains a description of the call disposition.
25. Recruitment	334	335	Numeric RJ	I2	Code indicating results of recruitment attempts. 1 - Full Survey, 2 - Partial Survey, 3 - Refusal w/Data, 4 - Refusal w/No data, 5 - contact never made - no data
26. Total Employment	336	341	Numeric RJ	I6	Total number of full and part time employees at this location.
27. Estimate of Visitors	342	346	Numeric RJ	I5	Estimated average number of visitors to the work place on a typical weekday.
28. Estimated No. Employees	347	351	Numeric RJ	I5	Average number of employees at work on a typical weekday.
29. Begin Operations	352	356	Numeric RJ	I5	Normal time (military) operations begin at work place.
30. End Operations	357	361	Numeric RJ	I5	Normal time (military) operations end at work place.
31. Workplace Type	362	363	Numeric RJ	I2	Code indicating the type of workplace. 1 - free standing, 2 - non - free standing
32. Location Code	364	365	Numeric RJ	I2	Code indicating type of location. 1 - Shopping center or office building, 2 - Other
33. Others at Location	366	367	Numeric RJ	I2	Code indicating if other businesses are located at the same location. 1 - Yes, 2 - No
34. Parking	368	369	Numeric RJ	I2	Code indicating if work place has its own parking. 1 - Yes, 2 - No
35. Cut Thru Traffic	370	371	Numeric RJ	I2	Code indicating if traffic cuts through parking lot to access other businesses. 1 - Yes, 2 - No
36. Estimate of Deliveries	372	374	Numeric RJ	I3	Estimated number of deliveries on an average week day.
37. From Delivery Hours	375	378	Numeric RJ	I4	Beginning time for deliveries in military time.

38. To Deliver Hours	379	382	Numeric RJ	14	Ending time for deliveries in military time.
39. Special Access	383	384	Numeric RJ	12	Code indicating if special access is provided for deliveries or employees. 1 - Yes, 2 - No
40. Business Vehicles	385	391	Numeric RJ	17	Total Number of vehicles owned or leased by work place for business purposes (all types).
41. Cars / SUVs	392	396	Numeric RJ	15	Number of cars and SUVs owned or leased by work place for business purposes.
42. Pickup Trucks	397	401	Numeric RJ	15	Number of pickup trucks owned or leased by work place for business purposes.
43. Cargo Vans	402	406	Numeric RJ	15	Number of vans owned or leased by work place used for delivery or pick up of cargo.
44. Service Vans	407	411	Numeric RJ	15	Number of vans owned or leased by work place used for commercial service or other purposes.
45. Cargo Vehicles	412	416	Numeric RJ	15	Number of cargo transport vehicles owned or leased by work place for business purposes that do not fall into the other categories.
46. Service Vehicles	417	421	Numeric RJ	15	Number of service vehicles owned or leased by work place for business purposes that do not fall into the other categories.
47. Survey Month	422	423	Numeric RJ	12	Month work place was surveyed.
48. Survey Day	424	425	Numeric RJ	12	Day of month work place was surveyed.
49. Survey Year	426	429	Numeric RJ	14	Year work place was surveyed.
50. Employees at Work	430	434	Numeric RJ	15	Total number of employees at work on the day that the travel survey was conducted.
51. Count of Deliveries	435	437	Numeric RJ	13	Total number of commercial vehicles making deliveries or pick - ups to workplace on survey day beginning 1 hour before and ending 1 hour after operations. Count is for 24 - hours if workpalce is open 24 hours.
52. Count of Persons	438	443	Numeric RJ	16	Total number of persons counted entering and exiting the workplace beginning 1 hour before and ending 1 hour after operations. Count is for 24 - hours if workplace is open 24 hours.
53. Count of Vehicles	444	449	Numeric RJ	16	Total number of vehicles counted entering and exiting the workplace beginning 1 hour before and ending 1 hour after operations. Count is for 24 - hours if workplace is open 24 hours.
FINAL CALL DISPOSITION CODES			EMPLOYMENT TYPE		9 - Grocery Store
1 - Contact Made			1 - Office (Non Government)		10 - Restaurant/Fast Food/Bar & Grill
2 - No Answer			2 - Retail		11 - Bank/Financial Institution
3 - Phone Disconnected			3 - Industrial		12 - Manufacturing
4 - Answering Machine			4 - Medical		13 - Wholesale Trade
5 - Busy			5 - Education - Day Care /K - 12th		14 - Construction
6 - Non - Business			6 - Education - College, trade, other		96 - Other
7 - Computer/Fax			7 - Gov't/City/County/State/Federal Offices		98 - Unknown
96 - Other			8 - Convenience Store/Gas Station		99 - Refused

## Work Place Intercept Survey, Free Standing Work Place, Form B Format

This file contains the travel data for employees and visitors at surveyed free standing work places using Form B, Intercept Travel Survey, Free Standing Work Place. 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 10.
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. Year	8	11	Numeric RJ	I4	Year work place was surveyed.
5. Site Number	12	16	Numeric RJ	I5	Unique non - zero number assigned to the work place where these interviews were conducted.
6. Form Number	17	22	Numeric RJ	I6	Survey form number which contains raw survey data.
7. Person Number	23	23	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
8. Time Began	24	28	Numeric RJ	I5	Time interview began. Military time
9. Time Ended	29	33	Numeric RJ	I5	Time interview ended. Military time
10. Person Interviewed	34	35	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 - Employee, 2 - Visitor
11. Residence	36	95	Alphanum. LJ	A60	Name of city, county or country where person lives.
12. Residence Code	96	97	Numeric RJ	I2	Code indicating if residence is located in the study area the work place is located. 1 - Yes, 2 - No, 98 - Unknown, 99 - Refused
13. Home Entry Facility	98	157	Alphanum. LJ	A60	If person does not live in the study area the work place is located, this field should contain the name of the street/highway/bridge the person was on when they entered the study area the work place is located. If person stayed over night, this field should be blank. Note that airport is a valid entry.
14. Home Entry Zone	158	162	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number associated with the street/highway/bridge person was on when they entered the study area the work place is located. If person lives in study area, this field should be blank.
15. Home Address	163	222	Alphanum. LJ	A60	Address where respondent lives. If person gives nearest intersecting streets, both street names are listed here.
16. Home City	223	252	Alphanum. LJ	A30	City (or nearest city/town) where respondent lives.
17. Home State	253	267	Alphanum. LJ	A15	State where respondent lives.
18. Home Zip	268	272	Numeric RJ	I5	Zip code where respondent lives.
19. Home County	273	274	Numeric RJ	I2	Code indicating county/area where respondent's home is. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
20. Home - County Other	275	304	Alphanum. LJ	A30	If county location is coded as other, this field should contain the name of the county where location is.
21. Home Study Area	305	306	Alphanum. LJ	A2	Code indicating study area in which home address/TAZ zone is located. Use 'SD' if zone is in the Sherman/Denison Grayson County study area. If home address is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
22. Home Zone	307	311	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number of home address. If in the study area being surveyed but location unknown, it should be coded 88888. Locations in Mexico should be coded 77777 and addresses outside of the study area being surveyed, but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study area being surveyed but within the state of Texas should be coded 66666. Addresses outside of Texas and Mexico should be coded using 99999.
23. Home Longitude	312	321	Numeric RJ	F10.6	Longitude of home address If within the study area being surveyed but unknown, it should be coded 888.8888. If outside the study area being surveyed but within Texas and unknown, it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
24. Home Latitude	322	331	Numeric RJ	F10.6	Latitude of home address If within the study area being surveyed, but unknown it should be coded 888.8888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
25. Origin Code	332	333	Numeric RJ	I2	Code indicating origin of trip. 1 - Home, 2 - Other
26. Origin Address	334	393	Alphanum. LJ	A60	Origin address. If person gives nearest intersecting streets, both street names are listed here.
27. Origin City	394	423	Alphanum. LJ	A30	Origin city.
28. Origin State	424	438	Alphanum. LJ	A15	Origin state.
29. Origin Zip	439	443	Numeric RJ	I5	Origin zip code.
30. Origin County	444	446	Numeric RJ	I3	Code indicating county/area where trip originated. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused

**Work Place Intercept Survey, Free Standing Work Place, Form B Format - Continued.**

31. Other Origin County	447	476	Alphanum. LJ	A30	If county origin/location is coded as "other", this field contains the name of the county or location.
32. Origin Study Area	477	478	Alphanum. LJ	A2	Code indicating study area in which trip originated is located. Use 'SD' if zone is in the Sherman/Denison Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
33. Origin Zone	479	483	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where trip originated. Locations in Mexico should be coded 77777. Locations outside of these study areas, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers outside of the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
34. Origin Longitude	484	493	Numeric RJ	F10.6	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
35. Origin Latitude	494	503	Numeric RJ	F10.6	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
36. Entry Facility	504	563	Alphanum. LJ	A60	If origin is outside the study area the work place is located, this field should contain the name of the bridge, street, or highway used to enter the study area.
37. Entry Study Area	564	565	Alphanum. LJ	A2	If origin is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. SD - Sherman/Denison
38. Entry External Zone	566	570	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If origin is outside the study area in which the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
39. Arrival Hour	571	573	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
40. Arrival Minute	574	576	Numeric RJ	I3	Minute person arrived at this site.
41. Mode	577	578	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
42. Other Mode	579	608	Alphanum. LJ	A30	If mode is coded "other", this field should contain a description of the mode given.
43. Number Persons	609	610	Numeric RJ	I2	If car/truck/van, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
44. Fare	611	616	Numeric RJ	F6.2	If mode of travel was bus, this is the fare paid.
45. Trip Purpose	617	618	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
46. Other Purpose	619	648	Alphanum. LJ	A30	If purpose is coded as "other", this contains description of purpose given.
47. Depart Destination	649	650	Numeric RJ	I2	Code indicating destination when person departs from this site. 1 - Home, 2 - Other
48. Destination Address	651	710	Alphanum. LJ	A60	Destination address or cross streets.
49. Destination City	711	740	Alphanum. LJ	A30	Destination city.
50. Destination State	741	755	Alphanum. LJ	A15	Destination state.
51. Destination Zip	756	760	Numeric RJ	I5	Destination zip code.
52. Destination County	761	763	Numeric RJ	I3	Code indicating county/area of trip destination. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
53. Other Destination County	764	793	Alphanum. LJ	A30	If county destination/location is coded as "other", this field contains the name of the county or location.
54. Destination Study Area	794	795	Alphanum. LJ	A2	Code indicating study area of trip destination. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
55. Destination Zone	796	800	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where individual is going when they leave this location. Locations in Mexico should be coded 77777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers not in the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
56. Destination Longitude	801	810	Numeric RJ	F10.6	Longitude of destination location. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
57. Destination Latitude	811	820	Numeric RJ	F10.6	Latitude of destination location. If address is in Mexico, this should be coded 777.777777. If address is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.

**Work Place Intercept Survey, Free Standing Work Place, Form B Format - Continued.**

58. Exit Facility	821	880	Alphanum. LJ	A60	If destination is outside of the study area the work place is located, this field should contain the name of the bridge, street, or highway used to leave the study area.
59. Exit Study Area	881	882	Alphanum. LJ	A2	If destination is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. SD - Sherman/Denison
60. Exit External Zone	883	887	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If destination is outside the study area the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to exit the study area.
61. Travel to Austin - San Antonio	888	889	Numeric RJ	I2	Code indicating frequency of travel to Austin - San Antonio. See options below.
62. Travel to Dallas - Ft. Worth	890	891	Numeric RJ	I2	Code indicating frequency of travel to Dallas - Ft. Worth. See options below.
63. Travel to Houston	892	893	Numeric RJ	I2	Code indicating frequency of travel to Houston. See options below.
64. Passenger Rail to Austin - San Antonio or Houston	894	895	Numeric RJ	I2	Code indicating whether respondent would use passenger rail service to Austin - San Antonio or Houston. 1 - Yes, 2 - No, 3 - Possibly
65. Commuter Rail to Dallas - Ft. Worth	896	897	Numeric RJ	I2	Code indicating whether respondent would use commuter rail service to Dallas - Ft. Worth. 1 - Yes, 2 - No, 3 - Possibly

**MODE OF TRANSPORTATION CODES**

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

## Work Place Intercept Survey, Non-Free Standing Work Place, Form C Format

This file contains the travel data for employees and visitors at surveyed non-free standing work places using Form C, Intercept Travel Survey, Non-Free Standing Work Place. The data is 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 11.
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. Year	8	11	Numeric RJ	I4	Year work place was surveyed.
5. Site Number	12	16	Numeric RJ	I5	Unique non - zero number assigned to the work place where these interviews were conducted.
6. Form Number	17	22	Numeric RJ	I6	Survey form number which contains raw survey data.
7. Person Number	23	23	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
8. Time Began	24	28	Numeric RJ	I5	Time interview began. Military time
9. Time Ended	29	33	Numeric RJ	I5	Time interview ended. Military time
10. Person Interviewed	34	35	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 - Employee, 2 - Visitor
11. Residence	36	95	Alphanum. LJ	A60	Name of city, county or country where person lives.
12. Residence Code	96	97	Numeric RJ	I2	Code indicating if residence is located inside the study area the work place is located. 1 - Yes, 2 - No, 98 - Unknown, 99 - Refused
13. Home Entry Facility	98	157	Alphanum. LJ	A60	If person does not live in the study area the work place is located, this field should contain the name of the street/highway/bridge the person was on when they entered the study area the work place is located. If person stayed over night, this field should be blank. Note that airport is a valid entry.
14. Home Entry Zone	158	162	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number associated with the street/highway/bridge person was on when they entered the study area the work place is located. If person lives in study area, this field should be blank.
15. Home Address	163	222	Alphanum. LJ	A60	Address where respondent lives. If person gives nearest intersecting streets, both street names are listed here.
16. Home City	223	252	Alphanum. LJ	A30	City where respondent lives.
17. Home State	253	267	Alphanum. LJ	A15	State where respondent lives.
18. Home Zip	268	272	Numeric RJ	I5	Zip code where respondent lives.
19. Home County	273	274	Numeric RJ	I2	Code indicating county/area where respondent's home is. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
20. Home - Other County	275	304	Alphanum. LJ	A30	If county location is coded as other, this field should contain the name of the county where location is.
21. Home Study Area	305	306	Alphanum. LJ	A2	Code indicating study area in which home address/TAZ zone is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If home address is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
22. Home Zone	307	311	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number of home address. If in the study area being surveyed but location unknown, it should be coded 88888. Locations in Mexico should be coded 77777 and addresses outside of the study area being surveyed, but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study area being surveyed but within the state of Texas should be coded 66666. Addresses outside of Texas and Mexico should be coded using 99999.
23. Home Longitude	312	321	Numeric RJ	F10.6	Longitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
24. Home Latitude	322	331	Numeric RJ	F10.6	Latitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
25. Origin Code	332	333	Numeric RJ	I2	Code indicating origin of trip. 1 - Home, 2 - Other
26. Origin Address	334	393	Alphanum. LJ	A60	Origin address. If person gives nearest intersecting streets, both street names are listed here.
27. Origin City	394	423	Alphanum. LJ	A30	Origin city.
28. Origin State	424	438	Alphanum. LJ	A15	Origin state.
29. Origin Zip	439	443	Numeric RJ	I5	Origin zip code.
30. Origin County	444	446	Numeric RJ	I3	Code indicating county/area where trip originated. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused

**Work Place Intercept Survey, Non-Free Standing Work Place, Form C Format - Continued.**

31. Other Origin County	447	476	Alphanum. LJ	A30	If county origin/location is coded as "other", this field contains the name of the county or location.
32. Origin Study Area	477	478	Alphanum. LJ	A2	Code indicating study area in which trip originated is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
33. Origin Zone	479	483	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where trip originated. Locations in Mexico should be coded 77777. Locations outside of these study areas, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers outside of the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
34. Origin Longitude	484	493	Numeric RJ	F10.6	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
35. Origin Latitude	494	503	Numeric RJ	F10.6	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
36. Entry Facility	504	563	Alphanum. LJ	A60	If origin is outside the study area the work place is located, this field should contain the name of the bridge, street, or highway used to enter the study area.
37. Entry Study Area	564	565	Alphanum. LJ	A2	If origin is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. SD - Sherman/Denison
38. Entry External Zone	566	570	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If origin is outside the study area in which the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
39. Arrival Hour	571	573	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
40. Arrival Minute	574	576	Numeric RJ	I3	Minute person arrived at this site.
41. Mode	577	578	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
42. Other Mode	579	608	Alphanum. LJ	A30	If mode is coded "other", this field should contain a description of the mode given.
43. Number Persons	609	610	Numeric RJ	I2	If car/truck/van, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
44. Fare	611	616	Numeric RJ	F6.2	If mode of travel was bus, this is the fare paid.
45. Trip Purpose	617	618	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
46. Other Purpose	619	648	Alphanum. LJ	A30	If purpose is coded as "other", this contains description of purpose given.
47. First Store	649	650	Numeric RJ	I2	Code indicating if this store/work place is the first visited in the location since arriving. 1 - Yes, 2 - No, 98 - Unknown, 99 - Refused
48. Number Visited	651	652	Numeric RJ	I2	Number of stores/work places visited in this location including this establishment.
49. More Visits	653	654	Numeric RJ	I2	Number of additional stores/work places in this location person plans on visiting during this trip.
50. Depart Destination	655	656	Numeric RJ	I2	Code indicating destination when person departs from this site. 1 - Home, 2 - Other
51. Destination Address	657	716	Alphanum. LJ	A60	Destination address or cross streets.
52. Destination City	717	746	Alphanum. LJ	A30	Destination city.
53. Destination State	747	761	Alphanum. LJ	A15	Destination state.
54. Destination Zip	762	766	Numeric RJ	I5	Destination zip code.
55. Destination County	767	769	Numeric RJ	I3	Code indicating county/area of trip destination. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
56. Other Destination County	770	799	Alphanum. LJ	A30	If county destination/location is coded as "other", this field contains the name of the county or location.
57. Destination Study Area	800	801	Alphanum. LJ	A2	Code indicating study area of trip destination. Use 'SD' if zone is in the SD/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
58. Destination Zone	802	806	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where individual is going when they leave this location. Locations in Mexico should be coded 77777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers not in the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.

**Work Place Intercept Survey, Non-Free Standing Work Place, Form C Format - Continued.**

59. Destination Longitude	807	816	Numeric RJ	F10.6	Longitude of destination location. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
60. Destination Latitude	817	826	Numeric RJ	F10.6	Latitude of destination location. If address is in Mexico, this should be coded 777.777777. If address is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
61. Exit Facility	827	886	Alphanum. LJ	A60	If destination is outside of the study area the work place is located, this field should contain the name of the bridge, street, or highway used to leave the study area.
62. Exit Study Area	887	888	Alphanum. LJ	A2	If destination is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. SD - Sherman - Denisons
63. Exit External Zone	889	893	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If destination is outside the study area the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to exit the study area.
64. Travel to Austin - San Antonio	894	895	Numeric RJ	I2	Code indicating frequency of travel to Austin - San Antonio. See options below.
65. Travel to Dallas - Ft. Worth	896	897	Numeric RJ	I2	Code indicating frequency of travel to Dallas - Ft. Worth. See options below.
66. Travel to Houston	898	899	Numeric RJ	I2	Code indicating frequency of travel to Houston. See options below.
67. Passenger Rail to Austin - San Antonio or Houston	900	901	Numeric RJ	I2	Code indicating whether respondent would use passenger rail service to Austin - San Antonio or Houston. 1 - Yes, 2 - No, 3 - Possibly
68. Commuter Rail to Dallas - Ft. Worth	902	903	Numeric RJ	I2	Code indicating whether respondent would use commuter rail service to Dallas - Ft. Worth. 1 - Yes, 2 - No, 3 - Possibly

**MODE OF TRANSPORTATION CODES**

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

**MODE OF TRANSPORTATION CODES**

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

**FREQUENCY OF TRAVEL OPTIONS**

- 1 - Never
- 2 - 1 to 2 times per year
- 3 - 1 to 2 times every 6 months
- 4 - 1 to 2 times every 3 months
- 5 - 1 or more times every month
- 6 - 1 or more times every week

## Work Place Intercept Survey, Special Generator, University, Form B Format

This file contains the travel data for employees and visitors surveyed at special generator work places using Form B, Special Generator Intercept Travel Survey. 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 SU.
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. Year	8	11	Numeric RJ	I4	Year work place was surveyed.
5. Name of Generator	12	61	Alphanum. LJ	A50	Name of special generator that was surveyed.
6. Campus Location	62	111	Alphanum. LJ	A50	Location on campus where interviews are being conducted.
7. Site Number	112	116	Numeric RJ	I5	Unique non - zero number assigned to the university where these interviews were conducted.
8. Form Number	117	122	Numeric RJ	I6	Survey form number which contains raw survey data.
9. Person Number	123	123	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
10. Time Began	124	128	Numeric RJ	I5	Time interview began. Military time
11. Time Ended	129	133	Numeric RJ	I5	Time interview ended. Military time
12. Person Interviewed	134	135	Numeric RJ	I2	Code indicating if person being interviewed is a student, employee or a visitor. 1 - Student, 2 - Employee, 3 - Visitor
13. Campus Resident	136	137	Numeric RJ	I2	Code indicating if person lives on campus. 1 - Yes, 2 - No
14. Residence	138	197	Alphanum. LJ	A60	Name of city, county or country where person lives.
15. Residence Code	198	199	Numeric RJ	I2	Code indicating if residence is located inside the study area the generator is located. 1 - Yes, 2 - No, 98 - Unknown, 99 - Refused
16. Home Entry Facility	200	259	Alphanum. LJ	A60	If person does not live in the study area the college/university is located, this field should contain the name of the street/highway/bridge the person was on when they entered the study area the work place is located. If person stayed over night, this field should be blank. Note that airport is a valid entry.
17. Home Entry Zone	260	264	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number associated with the street/highway/bridge person was on when they entered the study area the work place is located. If person lives in study area, this field should be blank.
18. Home Address	265	324	Alphanum. LJ	A60	Address where respondent lives. If person gives nearest intersecting streets, both street names are listed here.
19. Home City	325	354	Alphanum. LJ	A30	City where respondent lives.
20. Home State	355	369	Alphanum. LJ	A15	State where respondent lives.
21. Home Zip	370	374	Numeric RJ	I5	Zip code where respondent lives.
22. Home County	375	376	Numeric RJ	I2	Code indicating county/area where respondent's home is. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
23. Home - Other County	377	406	Alphanum. LJ	A30	If county location is coded as other, this field should contain the name of the county where location is.
24. Home Study Area	407	408	Alphanum. LJ	A2	Code indicating study area in which home address/TAZ zone is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If home address is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
25. Home Zone	409	413	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number of home address. If in the study area being surveyed but location unknown, it should be coded 888888. Locations in Mexico should be coded 777777 and addresses outside of the study area being surveyed, but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study area being surveyed but within the state of Texas should be coded 666666. Addresses outside of Texas and Mexico should be coded using 999999.
26. Home Longitude	414	423	Numeric RJ	F10.6	Longitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
27. Home Latitude	424	433	Numeric RJ	F10.6	Latitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
28. Origin Code	434	435	Numeric RJ	I2	Code indicating origin of trip. 1 - Home, 2 - Other
29. Origin Address	436	495	Alphanum. LJ	A60	Origin address. If person gives nearest intersecting streets, both street names are listed here.
30. Origin City	496	525	Alphanum. LJ	A30	Origin city.

## Work Place Intercept Survey, Special Generator, University, Form B Format-Continued

31. Origin State	526	540	Alphanum. LJ	A15	Origin state.
32. Origin Zip	541	545	Numeric RJ	I5	Origin zip code.
33. Origin County	546	548	Numeric RJ	I3	Code indicating county/area where trip originated. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
34. Other Origin County	549	578	Alphanum. LJ	A30	If county origin/location is coded as "other", this field contains the name of the county or location.
35. Origin Study Area	579	580	Alphanum. LJ	A2	Code indicating study area in which trip originated is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
36. Origin Zone	581	585	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where trip originated. Locations in Mexico should be coded 77777. Locations outside of these study areas, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers outside of the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
37. Origin Longitude	586	595	Numeric RJ	F10.6	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
38. Origin Latitude	596	605	Numeric RJ	F10.6	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
39. Entry Facility	606	665	Alphanum. LJ	A60	If origin is outside the study area the work place is located, this field should contain the name of the bridge, street, or highway used to enter the study area.
40. Entry Study Area	666	667	Alphanum. LJ	A2	If origin is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. SD - Sherman - Denison
41. Entry External Zone	668	672	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If origin is outside the study area in which the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
42. Arrival Hour	673	675	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
43. Arrival Minute	676	678	Numeric RJ	I3	Minute person arrived at this site.
44. Arrival Mode	679	680	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
45. Other Arrival Mode	681	710	Alphanum. LJ	A30	If mode is coded "other", this field should contain a description of the mode given.
46. Number Persons	711	712	Numeric RJ	I2	If car/truck/van, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
47. Fare	713	718	Numeric RJ	F6.2	If mode of travel was bus, this is the fare paid.
48. Park Location	719	720	Numeric RJ	I2	Code indicating where person parked. See code definitions below.
49. Other Parking	721	770	Alphanum. LJ	A50	If park location is coded as other, this field contains description of where person parked.
50. Trip Purpose	771	772	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
51. Other Purpose	773	802	Alphanum. LJ	A30	If purpose is coded as "other", this contains description of purpose given.
52. Departure Mode	803	804	Numeric RJ	I2	Code indicating mode of departure from this airport/air base. See definitions below.
53. Departure Mode Other	805	834	Alphanum. LJ	A30	If departure mode is coded "other", this field should contain a description of the mode given.
54. Depart Destination	835	836	Numeric RJ	I2	Code indicating destination when person departs from this site. 1 - Home, 2 - Other
55. Destination Address	837	896	Alphanum. LJ	A60	Destination address or cross streets.
56. Destination City	897	926	Alphanum. LJ	A30	Destination city.
57. Destination State	927	941	Alphanum. LJ	A15	Destination state.
58. Destination Zip	942	946	Numeric RJ	I5	Destination zip code.
59. Destination County	947	949	Numeric RJ	I3	Code indicating county/area of trip destination. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
60. Other Destination County	950	979	Alphanum. LJ	A30	If county destination/location is coded as "other", this field contains the name of the county or location.

## Work Place Intercept Survey, Special Generator, University, Form B Format-Continued

61. Destination Study Area	980	981	Alphanum. LJ	A2	Code indicating study area of trip destination. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
62. Destination Zone	982	986	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where individual is going when they leave this location. Locations in Mexico should be coded 77777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers not in the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
63. Destination Longitude	987	996	Numeric RJ	F10.6	Longitude of destination location. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
64. Destination Latitude	997	1006	Numeric RJ	F10.6	Latitude of destination location. If address is in Mexico, this should be coded 777.777777. If address is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
65. Exit Facility	1007	1066	Alphanum. LJ	A60	If destination is outside of the study area the work place is located, this field should contain the name of the bridge, street, or highway used to leave the study area.
66. Exit Study Area	1067	1068	Alphanum. LJ	A2	If destination is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. SD - Sherman/Denison
67. Exit External Zone	1069	1073	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If destination is outside the study area the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to exit the study area.
68. Travel to Austin - San Antonio	1074	1075	Numeric RJ	I2	Code indicating frequency of travel to Austin - San Antonio. See options below.
69. Travel to Dallas - Ft. Worth	1076	1077	Numeric RJ	I2	Code indicating frequency of travel to Dallas - Ft. Worth. See options below.
70. Travel to Houston	1078	1079	Numeric RJ	I2	Code indicating frequency of travel to Houston. See options below.
71. Passenger Rail to Austin - San Antonio or Houston	1080	1081	Numeric RJ	I2	Code indicating whether respondent would use passenger rail service to Austin - San Antonio or Houston. 1 - Yes, 2 - No, 3 - Possibly
72. Commuter Rail to Dallas - Ft. Worth	1082	1083	Numeric RJ	I2	Code indicating whether respondent would use commuter rail service to Dallas - Ft. Worth. 1 - Yes, 2 - No, 3 - Possibly

### MODE OF TRANSPORTATION CODES

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

### 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
- 96 - Other

FREQUENCY OF TRAVEL OPTIONS

- 1 - Never
- 2 - 1 to 2 times per year
- 3 - 1 to 2 times every 6 months
- 4 - 1 to 2 times every 3 months
- 5 - 1 or more times every month
- 6 - 1 or more times every week

PARK LOCATION CODES

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

## Work Place Intercept Survey, Special Generator, Hospital, Form B Format

This file contains the travel data for employees and visitors surveyed at special generator work places using Form B, Special Generator Intercept Travel Survey. 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 SH.
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. Year	8	11	Numeric RJ	I4	Year work place was surveyed.
5. Name of Generator	12	61	Alphanum. LJ	A50	Name of special generator that was surveyed.
6. Location of Interview	62	111	Alphanum. LJ	A50	Location in special generator where interviews were conducted.
7. Site Number	112	116	Numeric RJ	I5	Unique non - zero number assigned to the establishment where these interviews were conducted.
8. Form Number	117	122	Numeric RJ	I6	Survey form number which contains raw survey data.
9. Person Number	123	123	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
10. Time Began	124	128	Numeric RJ	I5	Time interview began. Military time
11. Time Ended	129	133	Numeric RJ	I5	Time interview ended. Military time
12. Person Interviewed	134	135	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 - Employee, 2 - Visitor
13. Residence	136	195	Alphanum. LJ	A60	Name of city, county or country where person lives.
14. Residence Code	196	197	Numeric RJ	I2	Code indicating if residence is located inside the study area the generator is located. 1 - Yes, 2 - No, 98 - Unknown, 99 - Refused
15. Home Entry Facility	198	257	Alphanum. LJ	A60	If person does not live in the study area in which the generator is located, this field should contain the name of the street/highway/bridge the person was on when they entered the study area the work place is located. If person stayed over night, this field should be blank. Note that airport is a valid entry.
16. Home Entry Zone	258	262	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTL. Zone number associated with the street/highway/bridge person was on when they entered the study area the work place is located. If person lives in study area, this field should be blank.
17. Home Address	263	322	Alphanum. LJ	A60	Address where respondent lives. If person gives nearest intersecting streets, both street names are listed here.
18. Home City	323	352	Alphanum. LJ	A30	City where respondent lives.
19. Home State	353	367	Alphanum. LJ	A15	State where respondent lives.
20. Home Zip	368	372	Numeric RJ	I5	Zip code where respondent lives.
21. Home County	373	374	Numeric RJ	I2	Code indicating county/area where respondent's home is. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
22. Home - Other County	375	404	Alphanum. LJ	A30	If county location is coded as other, this field should contain the name of the county where location is.
23. Home Study Area	405	406	Alphanum. LJ	A2	Code indicating study area in which home address/TAZ zone is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If home address is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
24. Home Zone	407	411	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTL. Zone number of home address. If in the study area being surveyed but location unknown, it should be coded 88888. Locations in Mexico should be coded 77777 and addresses outside of the study area being surveyed, but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study area being surveyed but within the state of Texas should be coded 66666. Addresses outside of Texas and Mexico should be coded using 99999.
25. Home Longitude	412	421	Numeric RJ	F10.6	Longitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
26. Home Latitude	422	431	Numeric RJ	F10.6	Latitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
27. Origin Code	432	433	Numeric RJ	I2	Code indicating origin of trip. 1 - Home, 2 - Other
28. Origin Address	434	493	Alphanum. LJ	A60	Origin address. If person gives nearest intersecting streets, both street names are listed here.
29. Origin City	494	523	Alphanum. LJ	A30	Origin city.
30. Origin State	524	538	Alphanum. LJ	A15	Origin state.

**Work Place Intercept Survey, Special Generator, Hospital, Form B Format - Continued.**

31. Origin Zip	539	543	Numeric RJ	I5	Origin zip code.
32. Origin County	544	546	Numeric RJ	I3	Code indicating county/area where trip originated. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
33. Other Origin County	547	576	Alphanum. LJ	A30	If county origin/location is coded as "other", this field contains the name of the county
34. Origin Study Area	577	578	Alphanum. LJ	A2	Code indicating study area in which trip originated is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
35. Origin Zone	579	583	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where trip originated. Locations in Mexico should be coded 77777. Locations outside of these study areas, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers outside of the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
36. Origin Longitude	584	593	Numeric RJ	F10.6	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
37. Origin Latitude	594	603	Numeric RJ	F10.6	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
38. Entry Facility	604	663	Alphanum. LJ	A60	If origin is outside the study area the work place is located, this field should contain the name of the bridge, street, or highway used to enter the study area.
39. Entry Study Area	664	665	Alphanum. LJ	A2	If origin is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. SD - Sherman/Denison
40. Entry External Zone	666	670	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If origin is outside the study area in which the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
41. Arrival Hour	671	673	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
42. Arrival Minute	674	676	Numeric RJ	I3	Minute person arrived at this site.
43. Arrival Mode	677	678	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
44. Other Arrival Mode	679	708	Alphanum. LJ	A30	If mode is coded "other", this field should contain a description of the mode given.
45. Number Persons	709	710	Numeric RJ	I2	If car/truck/van, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
46. Fare	711	716	Numeric RJ	F6.2	If mode of travel was bus, this is the fare paid.
47. Trip Purpose	717	718	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
48. Other Purpose	719	748	Alphanum. LJ	A30	If purpose is coded as "other", this contains description of purpose given.
49. Depart Destination	749	750	Numeric RJ	I2	Code indicating destination when person departs from this site. 1 - Home, 2 - Other
50. Destination Address	751	810	Alphanum. LJ	A60	Destination address or cross streets.
51. Destination City	811	840	Alphanum. LJ	A30	Destination city.
52. Destination State	841	855	Alphanum. LJ	A15	Destination state.
53. Destination Zip	856	860	Numeric RJ	I5	Destination zip code.
54. Destination County	861	863	Numeric RJ	I3	Code indicating county/area of trip destination. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
55. Other Destination County	864	893	Alphanum. LJ	A30	If county destination/location is coded as "other", this field contains the name of the county or location.
56. Destination Study Area	894	895	Alphanum. LJ	A2	Code indicating study area of trip destination. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
57. Destination Zone	896	900	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where individual is going when they leave this location. Locations in Mexico should be coded 77777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers not in the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
58. Destination Longitude	901	910	Numeric RJ	F10.6	Longitude of destination location. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
59. Destination Latitude	911	920	Numeric RJ	F10.6	Latitude of destination location. If address is in Mexico, this should be coded 777.777777. If address is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
60. Exit Facility	921	980	Alphanum. LJ	A60	If destination is outside of the study area the work place is located, this field should contain the name of the bridge, street, or highway used to leave the study area.

**Work Place Intercept Survey, Special Generator, Hospital, Form B Format - Continued.**

61. Exit Study Area	981	982	Alphanum. LJ	A2	If destination is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. SD - Sherman/Denison
62. Exit External Zone	983	987	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If destination is outside the study area the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to exit the study area.
63. Travel to Austin - San Antonio	988	989	Numeric RJ	I2	Code indicating frequency of travel to Austin - San Antonio. See options below.
64. Travel to Dallas - Ft. Worth	990	991	Numeric RJ	I2	Code indicating frequency of travel to Dallas - Ft. Worth. See options below.
65. Travel to Houston	992	993	Numeric RJ	I2	Code indicating frequency of travel to Houston. See options below.
66. Passenger Rail to Austin - San Antonio or Houston	994	995	Numeric RJ	I2	Code indicating whether respondent would use passenger rail service to Austin - San Antonio or Houston. 1 - Yes, 2 - No, 3 - Possibly
67. Commuter Rail to Dallas - Ft. Worth	996	997	Numeric RJ	I2	Code indicating whether respondent would use commuter rail service to Dallas - Ft. Worth. 1 - Yes, 2 - No, 3 - Possibly

**MODE OF TRANSPORTATION CODES**

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

**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
- 96 - Other
- 99 - No Response

**FREQUENCY OF TRAVEL OPTIONS**

- 1 - Never
- 2 - 1 to 2 times per year
- 3 - 1 to 2 times every 6 months
- 4 - 1 to 2 times every 3 months
- 5 - 1 or more times every month
- 6 - 1 or more times every week

## Work Place Intercept Survey, Special Generator, Mall, Form B Format

This file contains the travel data for employees and visitors surveyed at special generator work places using Form B, Special Generator Intercept Travel Survey. 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 SM.
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. Year	8	11	Numeric RJ	I4	Year work place was surveyed.
5. Name of Generator	12	61	Alphanum. LJ	A50	Name of special generator that was surveyed.
6. Location of Interview	62	111	Alphanum. LJ	A50	Location in special generator where interviews were conducted.
7. Site Number	112	116	Numeric RJ	I5	Unique non - zero number assigned to the establishment where these interviews were conducted.
8. Form Number	117	122	Numeric RJ	I6	Survey form number which contains raw survey data.
9. Person Number	123	123	Numeric RJ	I1	Number of person being interviewed. This corresponds to the column number on the interview form.
10. Time Began	124	128	Numeric RJ	I5	Time interview began. Military time
11. Time Ended	129	133	Numeric RJ	I5	Time interview ended. Military time
12. Person Interviewed	134	135	Numeric RJ	I2	Code indicating if person being interviewed is an employee or a visitor. 1 - Employee, 2 - Visitor
13. Residence	136	195	Alphanum. LJ	A60	Name of city, county or country where person lives.
14. Residence Code	196	197	Numeric RJ	I2	Code indicating if residence is located inside the study area the generator is located. 1 - Yes, 2 - No, 98 - Unknown, 99 - Refused
15. Home Entry Facility	198	257	Alphanum. LJ	A60	If person does not live in the study area in which the generator is located, this field should contain the name of the street/highway/bridge the person was on when they entered the study area the work place is located. If person stayed over night, this field should be blank. Note that airport is a valid entry.
16. Home Entry Zone	258	262	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number associated with the street/highway/bridge person was on when they entered the study area the work place is located. If person lives in study area, this field should be blank.
17. Home Address	263	322	Alphanum. LJ	A60	Address where respondent lives. If person gives nearest intersecting streets, both street names are listed here.
18. Home City	323	352	Alphanum. LJ	A30	City where respondent lives.
19. Home State	353	367	Alphanum. LJ	A15	State where respondent lives.
20. Home Zip	368	372	Numeric RJ	I5	Zip code where respondent lives.
21. Home County	373	374	Numeric RJ	I2	Code indicating county/area where respondent's home is. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
22. Home - County Other	375	404	Alphanum. LJ	A30	If county location is coded as other, this field should contain the name of the county where location is.
23. Home Study Area	405	406	Alphanum. LJ	A2	Code indicating study area in which home address/TAZ zone is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If home address is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
24. Home Zone	407	411	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone number of home address. If in the study area being surveyed but location unknown, it should be coded 88888. Locations in Mexico should be coded 77777 and addresses outside of the study area being surveyed, but within Texas should be coded using the Statewide Zone System. Unknown locations outside of the study area being surveyed but within the state of Texas should be coded 66666. Addresses outside of Texas and Mexico should be coded using 99999.
25. Home Longitude	412	421	Numeric RJ	F10.6	Longitude of home address If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
26. Home Latitude	422	431	Numeric RJ	F10.6	Latitude of home address. If within the study area being surveyed, but unknown it should be coded 888.888888. If outside the study area being surveyed but within Texas and unknown it should be coded as 666.666666. Locations in Mexico should be coded 777.777777 and addresses outside of Texas and Mexico should be coded 999.999999.
27. Origin Code	432	433	Numeric RJ	I2	Code indicating origin of trip. 1 - Home, 2 - Other
28. Origin Address	434	493	Alphanum. LJ	A60	Origin address. If person gives nearest intersecting streets, both street names are listed here.
29. Origin City	494	523	Alphanum. LJ	A30	Origin city.
30. Origin State	524	538	Alphanum. LJ	A15	Origin state.

**Work Place Intercept Survey, Special Generator, Mall, Form B Format - Continued.**

31. Origin Zip	539	543	Numeric RJ	I5	Origin zip code.
32. Origin County	544	546	Numeric RJ	I3	Code indicating county/area where trip originated. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
33. Other Origin County	547	576	Alphanum. LJ	A30	If county origin/location is coded as "other", this field contains the name of the county or location.
34. Origin Study Area	577	578	Alphanum. LJ	A2	Code indicating study area in which trip originated is located. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
35. Origin Zone	579	583	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where trip originated. Locations in Mexico should be coded 77777. Locations outside of these study areas, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers outside of the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
36. Origin Longitude	584	593	Numeric RJ	F10.6	Longitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
37. Origin Latitude	594	603	Numeric RJ	F10.6	Latitude of location trip originated from. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in the study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
38. Entry Facility	604	663	Alphanum. LJ	A60	If origin is outside the study area the work place is located, this field should contain the name of the bridge, street, or highway used to enter the study area.
39. Entry Study Area	664	665	Alphanum. LJ	A2	If origin is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to enter is located. SD - Sherman/Denison
40. Entry External Zone	666	670	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If origin is outside the study area in which the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to enter the study area.
41. Arrival Hour	671	673	Numeric RJ	I3	Hour person arrived at this site. This hour should be in terms of military time.
42. Arrival Minute	674	676	Numeric RJ	I3	Minute person arrived at this site.
43. Arrival Mode	677	678	Numeric RJ	I2	Code indicating mode of travel to this location. See definitions below.
44. Other Arrival Mode	679	708	Alphanum. LJ	A30	If mode is coded "other", this field should contain a description of the mode given.
45. Number Persons	709	710	Numeric RJ	I2	If car/truck/van, this is the number of persons in the vehicle including the person being interviewed. This field is blank for all other modes.
46. Fare	711	716	Numeric RJ	F6.2	If mode of travel was bus, this is the fare paid.
47. Trip Purpose	717	718	Numeric RJ	I2	Code indicating purpose of trip. See code definitions below.
48. Other Purpose	719	748	Alphanum. LJ	A30	If purpose is coded as "other", this contains description of purpose given.
49. Depart Destination	749	750	Numeric RJ	I2	Code indicating destination when person departs from this site: 1 - Home, 2 - Other.
50. Destination Location	751	810	Alphanum. LJ	A60	Location of destination person is going.
51. Destination Address	811	870	Alphanum. LJ	A60	Destination address or cross streets.
52. Destination City	871	900	Alphanum. LJ	A30	Destination city.
53. Destination State	901	915	Alphanum. LJ	A15	Destination state.
54. Destination Zip	916	920	Numeric RJ	I5	Destination zip code.
55. Destination County	921	923	Numeric RJ	I3	Code indicating county/area of trip destination. 1 - Grayson County, 96 - Other, enter name of county in next field, 98 - Unknown, 99 - Refused
56. Other Destination County	924	953	Alphanum. LJ	A30	If county destination/location is coded as "other", this field contains the county
57. Destination Study Area	954	955	Alphanum. LJ	A2	Code indicating study area of trip destination. Use 'SD' if zone is in the Sherman - Denison/Grayson County study area. If trip origin is outside the study area being surveyed but within Texas, this field should be coded 'TX' to indicate the zone number in the next field is a state zone number. If location is outside Texas, 'XX' should be coded in this field.
58. Destination Zone	956	960	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. Zone where individual is going when they leave this location. Locations in Mexico should be coded 77777. Locations not in a study area county, but within Texas should be coded to the state zone system. Unknown zone numbers in the study area the work place is located should be coded as 88888. Unknown zone numbers not in the study area the work place is located but within Texas should be coded as 66666. Locations outside Texas and not in Mexico should be coded as 99999.
59. Destination Longitude	961	970	Numeric RJ	F10.6	Longitude of destination location. If location is in Mexico, this should be coded 777.777777. If location is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.
60. Destination Latitude	971	980	Numeric RJ	F10.6	Latitude of destination location. If address is in Mexico, this should be coded 777.777777. If address is outside Texas, this should be coded 999.999999. If unknown but in study area the work place is located, it should be coded 888.888888. If unknown but in Texas, it should be coded as 666.666666.

**Work Place Intercept Survey, Special Generator, Mall, Form B Format - Continued.**

61. Exit Facility	981	1040	Alphanum. LJ	A60	If destination is outside of the study area the work place is located, this field should contain the name of the bridge, street, or highway used to leave the study area.
62. Exit Study Area	1041	1042	Alphanum. LJ	A2	If destination is outside of the study area county, this field should contain a code indicating the study area where the bridge, street, or highway used to exit is located. SD - Sherman/Denison
63. Exit External Zone	1043	1047	Numeric RJ	I5	Leave blank - to be completed by TxDOT or TTI. If destination is outside the study area the work place is located, this field should contain the external station number associated with the bridge, street, or highway used to exit the study area.
64. Travel to Austin - San Antonio	1048	1049	Numeric RJ	I2	Code indicating frequency of travel to Austin - San Antonio. See options below.
65. Travel to Dallas - Ft. Worth	1050	1051	Numeric RJ	I2	Code indicating frequency of travel to Dallas - Ft. Worth. See options below.
66. Travel to Houston	1052	1053	Numeric RJ	I2	Code indicating frequency of travel to Houston. See options below.
67. Passenger Rail to Austin - San Antonio or Houston	1054	1055	Numeric RJ	I2	Code indicating whether respondent would use passenger rail service to Austin - San Antonio or Houston. 1 - Yes, 2 - No, 3 - Possibly
68. Commuter Rail to Dallas - Ft. Worth	1056	1057	Numeric RJ	I2	Code indicating whether respondent would use commuter rail service to Dallas - Ft. Worth. 1 - Yes, 2 - No, 3 - Possibly

**MODE OF TRANSPORTATION CODES**

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

**MODE OF TRANSPORTATION CODES**

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

**FREQUENCY OF TRAVEL OPTIONS**

- 1 - Never
- 2 - 1 to 2 times per year
- 3 - 1 to 2 times every 6 months
- 4 - 1 to 2 times every 3 months
- 5 - 1 or more times every month
- 6 - 1 or more times every week