




# BULLOCH COUNTY / CITY OF STATESBORO

## 2035 LONG RANGE TRANSPORTATION PLAN

Origin-Destination Survey Report

HNTB

# Bulloch County / City of Statesboro 2035 Long Range Transportation Plan

## Origin – Destination Survey Report

***Prepared for:***

Bulloch County

115 North Main Street

Statesboro, Georgia 30459

City of Statesboro

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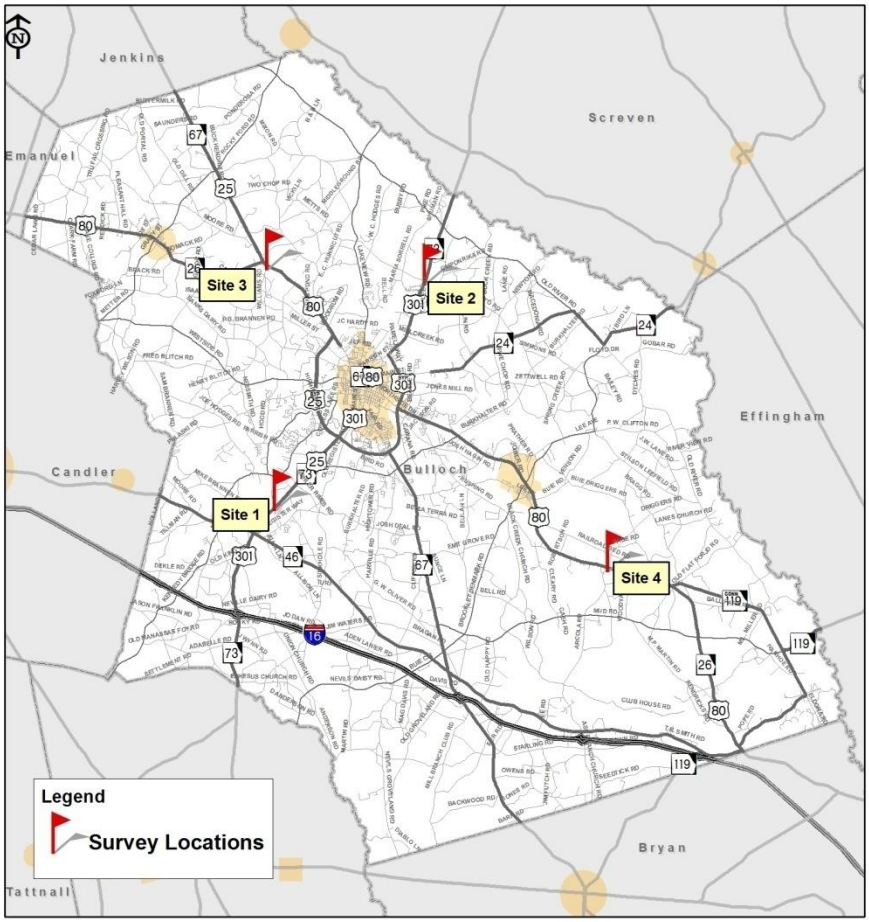
# ORIGIN-DESTINATION SURVEY

## 1.0 Introduction

A series of origin and destination (OD) surveys was conducted in January 2009 as part of the Bulloch County / City of Statesboro 2035 Long Range Transportation Plan. The intent of the surveys was to gather insight into commuter travel patterns in Bulloch County for the purpose of validating trip distribution in Bulloch County's travel demand model. The OD surveys were conducted as roadside intercept surveys at four sites located on major roadways in Bulloch County. Locations were identified in coordination with GDOT and Bulloch County. For each site, surveys were conducted during the morning and afternoon peak travel periods. The surveys were structured to capture the inbound traffic to Statesboro in the morning and the outbound traffic from Statesboro in the evening. Details of the survey process can be found in Appendix A – *Bulloch County Origin Destination Survey Field Report*.

**Figure 1.1 Bulloch County OD Survey Locations**



The survey sites included:

- Site 1 – US 301 south of Statesboro
    - Northbound surveys conducted during the AM Peak
    - Southbound surveys conducted during the PM Peak
- Site 2 – US 301 north of Statesboro
    - Northbound surveys conducted during the PM Peak
    - Southbound surveys conducted during the AM Peak
- Site 3 – US 80 west of Statesboro
    - Westbound surveys conducted during the PM peak
    - Eastbound surveys conducted during the AM peak
- Site 4 – US 80 west of Arcola Road
    - Westbound surveys conducted during the AM peak
    - Eastbound surveys conducted during the PM peak

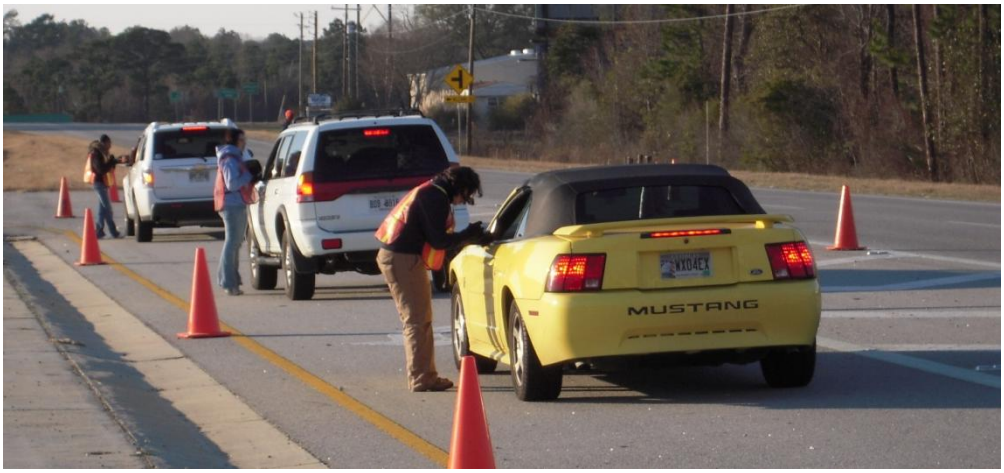
Figure 1.2 shows a picture of the surveyors at Site 1; US 301 NB south of Statesboro (northbound surveys conducted during the AM peak). The picture shows the Bulloch County officials regulating traffic while employees are surveying the cars that were pulled over at random.

**Figure 1.2 Bulloch OD Surveyors at Site 1**

Figure 1.3 and Figure 1.4 illustrate vehicles surveyed at site 3. This shows US 80 West of Statesboro (westbound surveys conducted during the PM peak). At this site, there was sufficient space for large trucks to sufficiently enter and exit in addition to passenger cars.

**Figure 1.3 Bulloch OD Surveyors at Site 3**

**Figure 1.4 Bulloch OD Surveyors at Site 3**



# 2.0 Model Comparison

In order to get a handle on how well the Bulloch County travel demand model replicates the trip distribution occurring in Bulloch County, the model data was compared to the OD survey data. The comparison methodology and results are discussed in the sections below.

## Comparison Methodology

Travel shed analysis was conducted based on the Bulloch County existing travel demand model. Travel shed analysis is a tool, similar to OD studies, utilizing the travel demand model to track trips along a particular roadway link, or through a particular point. The travel shed analysis uses the "select link" function in the travel demand model. This function provides an opportunity to "tag" trips and determine the routes taken for vehicle trips between origins and destinations. The origins and destinations consist of the traffic analysis zones (TAZ) used by the travel demand model. Analyzing the daily trip patterns and TAZs for the "tagged" vehicle established an influence area, or travel shed, composed of the ODs for the select link trips. This reveals how trips utilize the roadway network in accessing key origins and destinations. Travel shed analysis was performed for each of the four survey locations.

Trip origins and destinations were geocoded from address or landmark information provided in the OD survey. The detailed methodology and results are described in Appendix A. All ODs within the Bulloch County were assigned to corresponding TAZs. ODs outside of Bulloch County were aggregated and assigned to corresponding external stations. TAZ level OD trips help to understand how trips are distributed and also help to compare the OD survey data to travel shed analysis results.

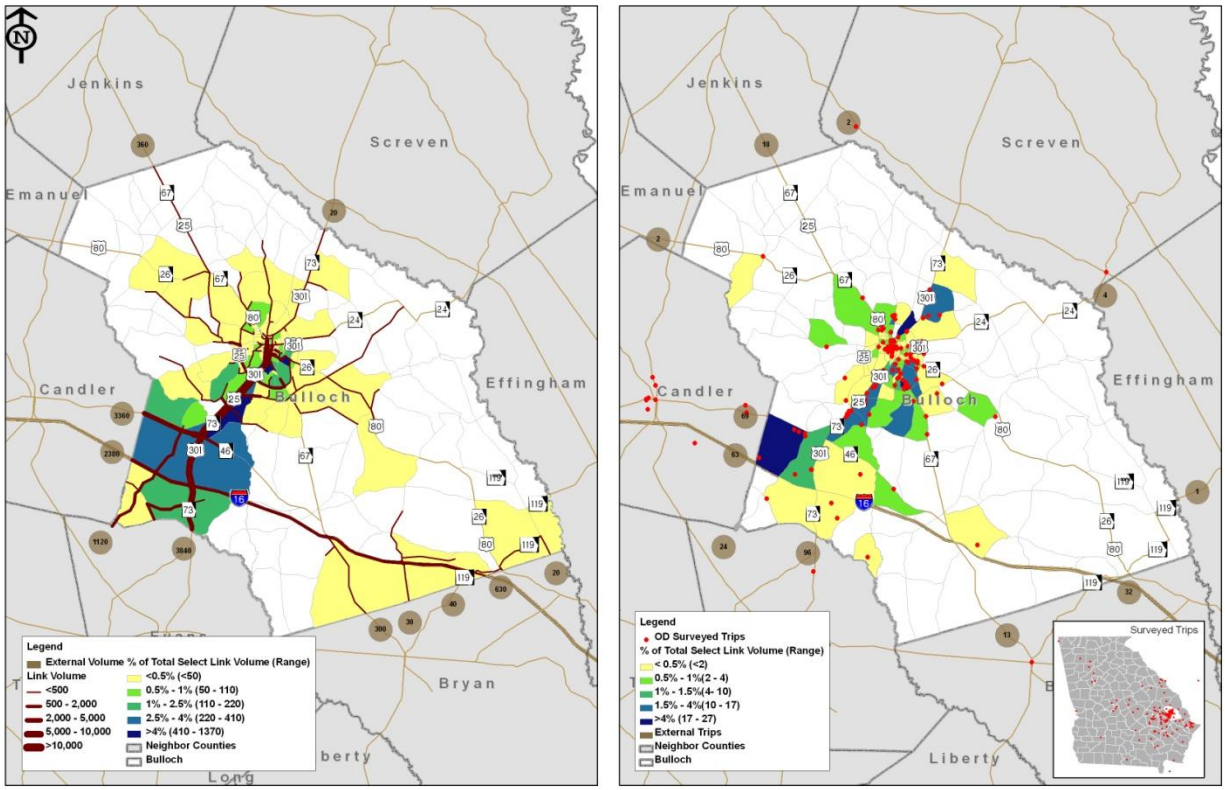
## Site 1 – US 301 South of Statesboro

The northbound surveys were conducted along US 301 just north of milepost 8 near Goldkist Road during the AM peak period. The southbound surveys were conducted between Jimps Road and AJ Riggs Road during the PM peak period.

Figure 2.1 displays a comparison of the travel shed analysis results and the OD survey data. The left-side figure is the travel shed analysis results for Site 1 in both directions. It can be seen that trips entering and leaving Site 1 mainly traveled to southwest Bulloch County on US 301, SR 46, Kenney Bridge Rd and I-16 and southwest of the City of Statesboro on the US 301 Bypass. The right-side figure is the distribution of the OD surveyed trips entering and leaving Site 1.

## Figure 2.1 Site1 - US 301 South of Statesboro

**Travel Shed Analysis** **Survey Responses**




As seen in Figure 2.1, the model is replicating the trip distribution from the collected OD surveys reasonably well. Higher volume arterials indicated by the model match those in the OD surveys. The correlation is most notably observed by looking at the percentage of total select link volume ranges color-coded on the map. The model does a good job predicting the heavy flow along US 301 from downtown Statesboro to I-16. This correlation is illustrated in the OD survey map's corresponding frequency of origin and destination points, and through the higher total select link volume ranges along that corridor. Additionally, the modeled traffic flows along SR 46 and I-16 matches the OD survey observations.

In addition, the model replicates the OD point source location couplets. A similar percentage of the OD distribution is found within each modeled TAZ. The model matches the survey results' emphasis on locations leading south of Statesboro towards I-16, as well as a few TAZ locations within Statesboro proper.

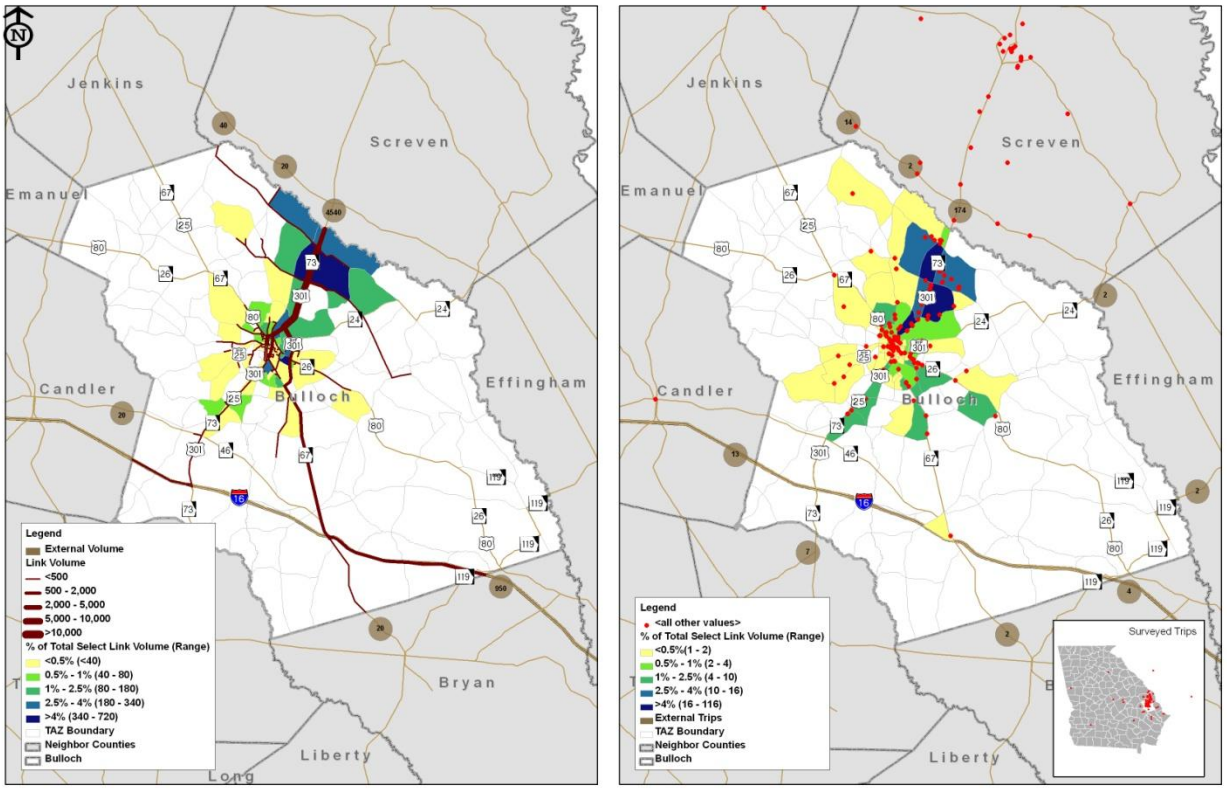
## Site 2 – US 301 North of Statesboro

The northbound surveys were conducted along US 301 just south of Clito Road during the PM peak period. The southbound surveys were conducted at Randy Lowery Road/Newsome Road during the AM peak period.

Figure 2.2 displays a comparison of the travel shed analysis results compared to the OD survey data. The left-side figure is the travel shed analysis results for Site 2 in both directions. Trips entering and leaving Site 2 mainly traveled to northeast Bulloch County on US 301 and to the southeast on SR 67. The right-side figure is the distribution of the surveyed OD pairs entering and leaving Site 2.

## Figure 2.2 Site 2- US 301 North of Statesboro

**Travel Shed Analysis** **Survey Responses**




As seen in Figure 2.2, the model is replicating the trip distribution from the collected OD surveys reasonably well. As in the Site 1 (US 301 South of Statesboro) results, the higher volume arterials indicated by the model match those in the OD surveys. The correlation is most notably observed by looking at the percentage of total select link volume ranges color-coded on the map. The model does a good job predicting the higher volume along US 301 from north of downtown Statesboro to the Screven County border. Additionally, modeled traffic flows from I-16, along the bypass and north on US 301 matches well with the select link volume percentages established by the OD survey. The moderate traffic flow along SR 17 north of Statesboro is also noticeable on both the OD survey and the modeled results.

In addition, the model replicates the OD point source location couplets. A similar percentage of the OD distribution is found within each modeled TAZ. The model matches the survey results' emphasis on TAZ locations north of Statesboro towards Screven County, as well as a few locations south of Statesboro along US 301/US 25, SR 67 and US 80.

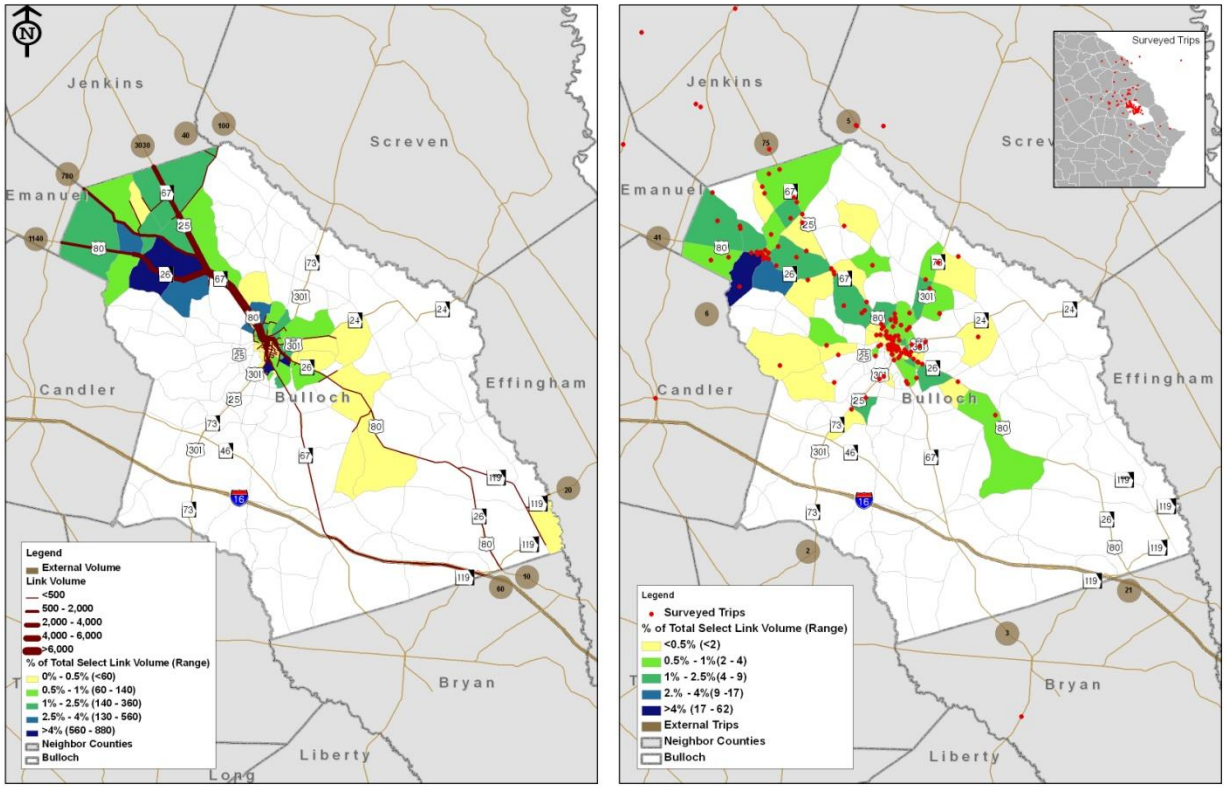
## Site 3 – US 80 West of Statesboro

The westbound surveys were conducted east of Hopulikit Lane/Williams Road during the PM peak period. The eastbound surveys were conducted at Williams Road during the AM peak period.

Figure 2.3 displays a comparison of the model data compared to the OD survey data. The left-side figure is the travel shed analysis results for Site 3 in both directions. Trips entering and leaving Site 3 traveled mainly to northwest Bulloch County on US 80, US 25 and Moore Road. The right-side figure is the distribution of the OD surveyed trips entering and leaving Site 3.

**Figure 2.3 Site 3 - US 80 West of Statesboro**

**Travel Shed Analysis** **Survey Responses**




As seen in Figure 2.3, the model is replicating the trip distribution from the collected OD surveys for US 80 West of Statesboro site reasonably well. The higher volume arterials indicated by the model match those in the OD surveys. The correlation is most notably observed by looking at the percentage of total select link volume ranges color-coded on the map. The model matches the OD survey's results for high traffic volumes along US 80 west of Statesboro to Portal. The dispersion of origins and destinations along three primary routes in northwestern Bulloch County (US 80, US 25 and Moore Road) matches reasonably well with the modeled link and select link volumes. Additional survey flow from east of Statesboro around to the west end of the county is also captured in the modeled output, particularly when select link flow is considered.

In addition, the model replicates the OD point source location couplets. A similar percentage of the OD distribution is found within each modeled TAZ. The model matches the survey results' emphasis on TAZ locations northwest of Statesboro towards Jenkins and Emmanuel Counties, as well as a few locations southeast of Statesboro along US 80. The model does a good job showing Portal as a major trip generator/attractor for trips along this route of US 80 / US 25.

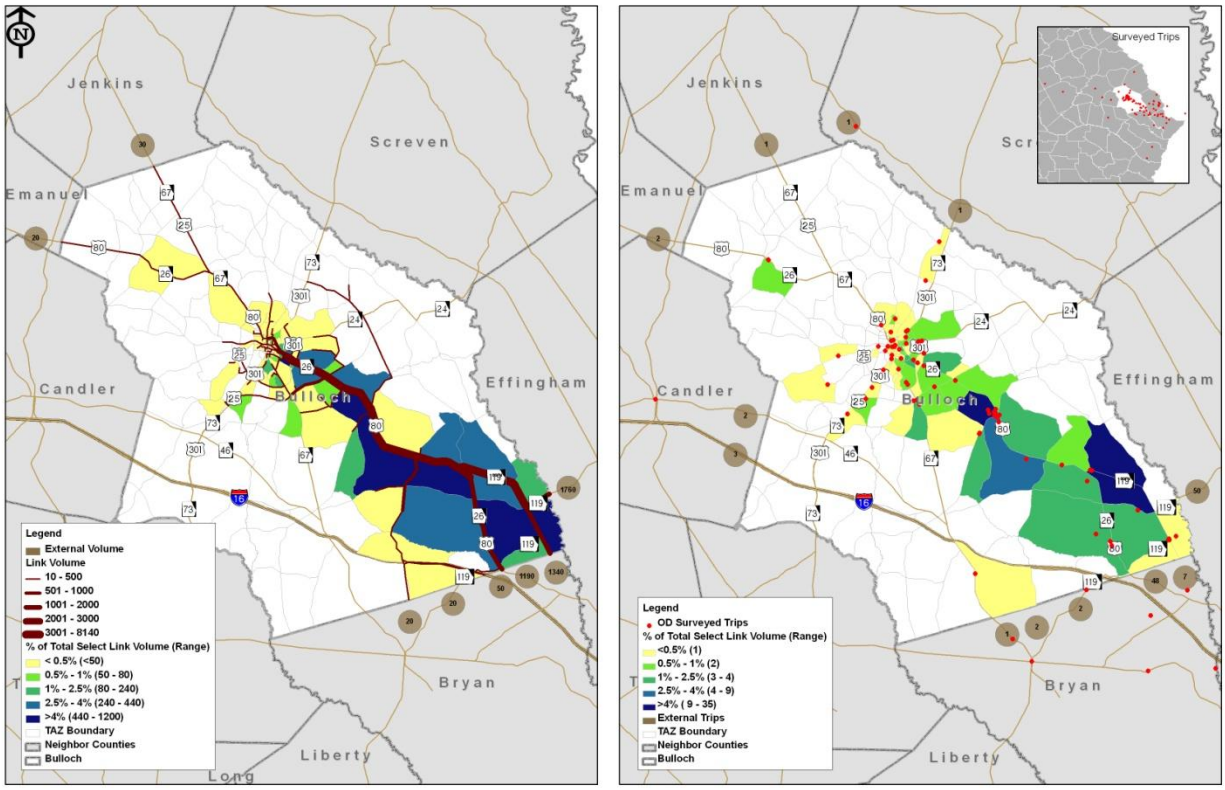
## Site 4 – US 80 East of Statesboro

The westbound surveys were conducted along US 80 at Arcola Road during the PM peak period. The southbound surveys were also conducted at Arcola Road during the AM peak period.

Figure 2.4 displays a comparison of the travel shed analysis compared to the OD survey data. The left-side figure is the travel shed analysis results for Site 4 in both directions. Trips entering and leaving Site 4 traveled mainly to southeast Bulloch County on US 80 and SR 119. The right-side figure is the distribution of the OD surveyed trips entering and leaving Site 4.

**Figure 2.4 Site 4 - US 80 East of Statesboro**

**Travel Shed Analysis** **Survey Responses**




As seen in Figure 2.4, the model is replicating the trip distribution from the collected OD surveys for the US 80 East of Statesboro site reasonably well. The higher volume arterials indicated by the model match those in the OD surveys. The correlation is most notably observed by looking at the percentage of total select link volume ranges color-coded on the map. The model matches the OD survey's results for high volume along US 80 east of Statesboro towards the Bryan and Effingham County lines.

In addition, the model replicates the OD point source location couplets. A similar percentage of the OD distribution is found within each modeled TAZ. The model matches the survey results' emphasis on TAZ locations southeast of Statesboro towards Brian and Effingham Counties, as well as a few locations south of Statesboro along US 301 / US 25 and SR 67. Origins and destinations are clustered in Statesboro, Brooklet and scattered towards Savannah. This observation correlates well with both the modeled and surveyed results.

The Bulloch County Travel Demand Model was also validated based on a comparison of estimated traffic volumes, average trip length, and vehicle miles of travel to observed values. For a complete review of the model validation process, see the *Bulloch County / City of Statesboro 2035 Long Range Transportation Plan Model Development Technical Memorandum.*

# 3.0 Survey Statistics

The OD survey consisted of a series of questions asked in order to ascertain the following pieces of information:

- Origin of one-way trip
- Destination of one-way trip
- Frequency of the trip
- Number of vehicle occupants
- Vehicle type
- Trip purpose

A copy of the survey instrument can be found in the field report in Appendix A. Each question is an important consideration in the development of the transportation model. Transportation models, in general, are created based on trip generators and attractors. Frequency of the trip was asked to determine how often trips to the origin-destination pair. This process helps to categorize a portion of the trips as routine and a portion as variable. Travel demand models are developed to account for the variations in these trip frequencies.

In addition, surveyors were asked to count the number of occupants in each vehicle and to ascertain the type of vehicle surveyed. Vehicle occupancy provides insight the total number of people that rely on a corridor. Also, vehicle occupancy counts are useful in running carpooling and ride-sharing statistics for a region. Vehicle type was determined to classify a share of the trips as personal vehicle versus light commercial or heavy commercial truck. The origins, destinations and travel patterns for these vehicles often have unique characteristics.

### Site 1 – US 301 South of Statesboro

Surveys were conducted during both the AM and PM peak periods. Table 3.1.1 illustrates the percentage of total vehicles surveyed.

**Table 3.1.1 Site 1 – US 301 South of Statesboro Quantity of Passing Vehicles Surveyed**

| Time Period | Survey Period | Number Surveyed | Total Vehicle Count | Percent Surveyed |
|---|---|---|---|---|
| AM Inbound | 7:45am – 9:30am | 165 | 1,982 | 8.3% |
| PM Outbound | 3:55pm – 6:00pm | 193 | 2,408 | 8.0% |

Figures 3.1.1 and 3.1.2 illustrate the number of surveys collected for both the AM and PM period. Trip types were aggregated to the following categories: home, work, other and didn't know/refused to answer. AM trips from south of town inbound to Statesboro were primarily from home to work or other locations. PM trips outbound from Statesboro were from a mix of locations, but primarily en route to home.

**Figure 3.1.1** **Site 1 - US 301 South of Statesboro AM Inbound Trip Origins & Destinations**

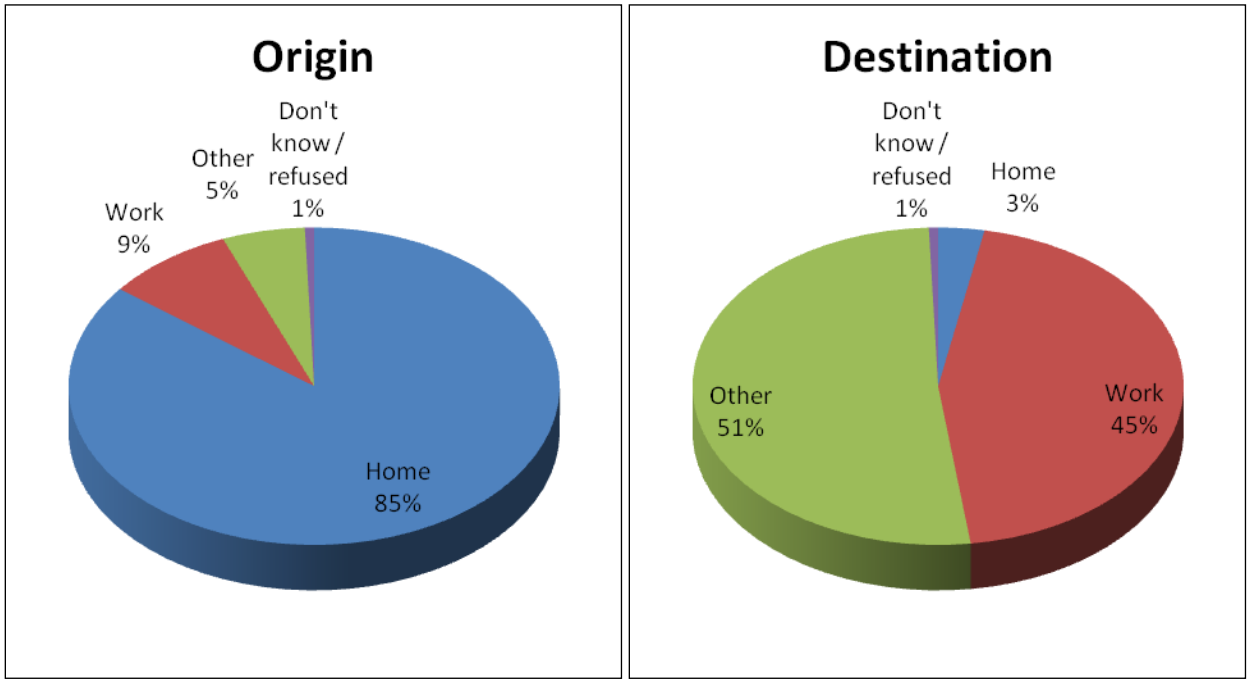
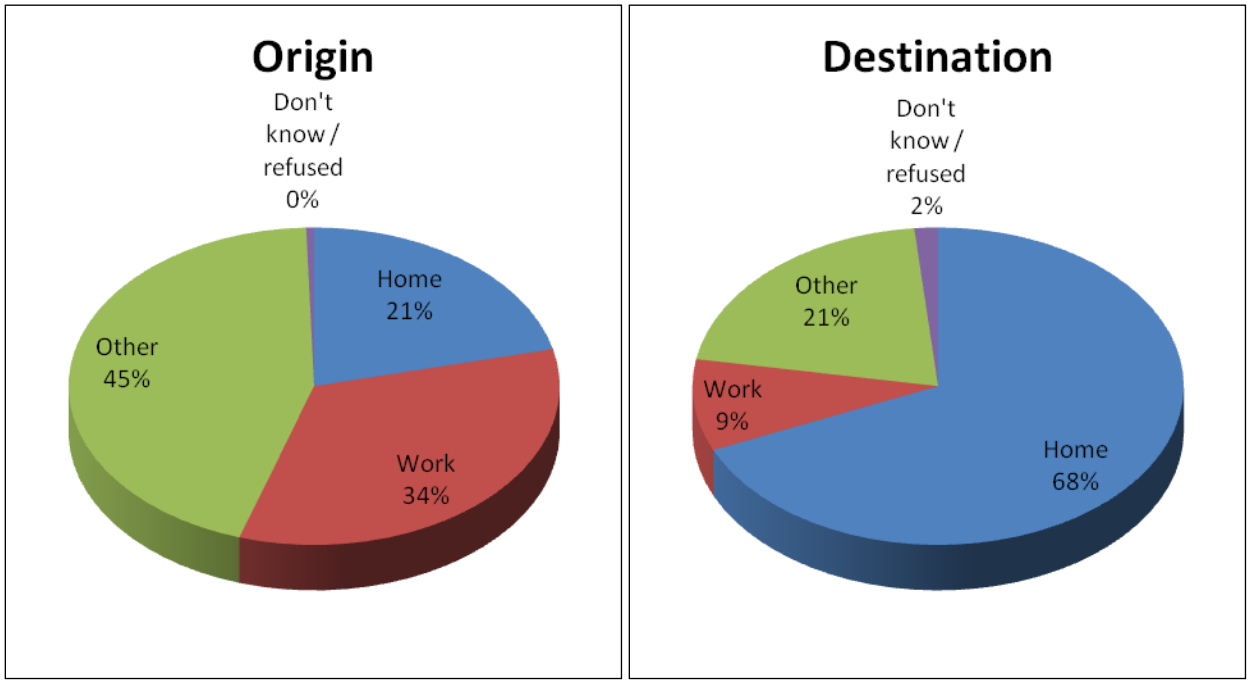
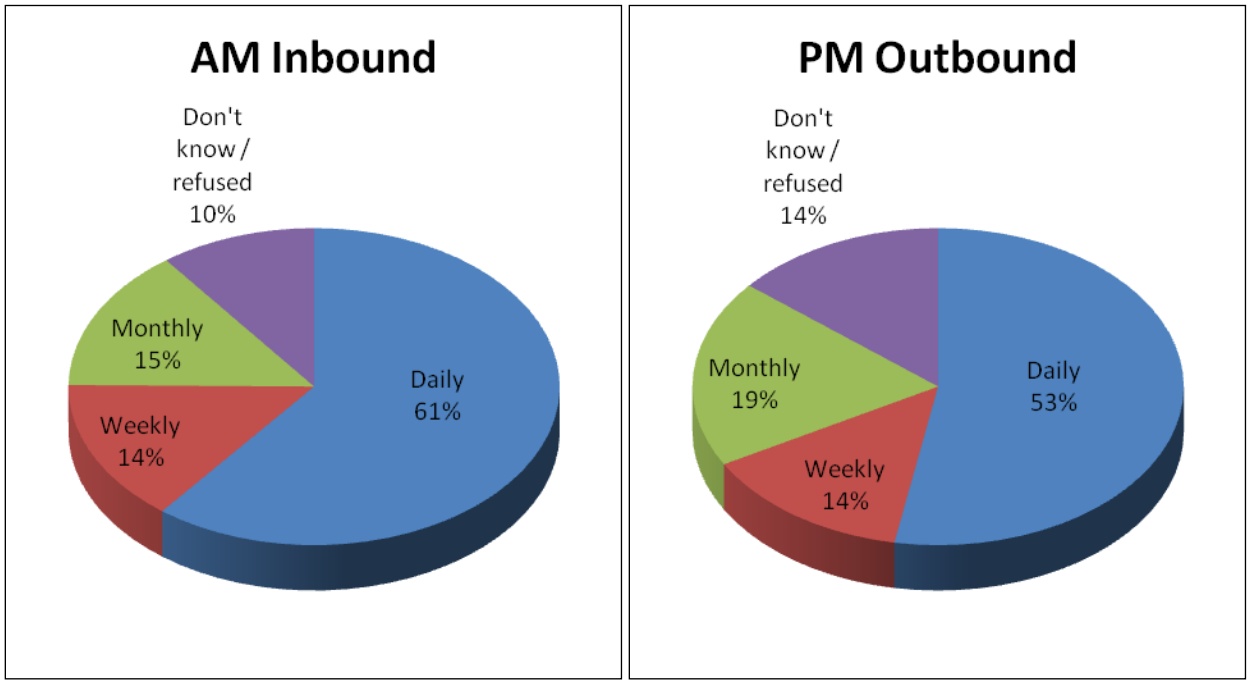



**Figure 3.1.2** **Site 1 - US 301 South of Statesboro PM Outbound Trip Origins & Destinations**



Respondents were then asked to describe the frequency of the surveyed trip. Responses included daily (more than 3 times per week), weekly (one or two times per week), monthly (one or two times per month), or didn't know/refused to answer. These results are illustrated in Figure 3.1.3. Most surveyed trips along US 301 south of Statesboro were occurring at a regular daily interval, characteristic of a commuting pattern. However, many observed trips fell into the summation of the other categories.

**Figure 3.1.3 Site 1 - US 301 South of Statesboro Surveyed Trip Frequency**




Two final characteristics assessed were the number of occupants and the vehicle type. The AM and PM results for these two variables are illustrated in Table 3.1.2 below. At this location, there was not sufficient space to safely pull over and survey trucks. As a result, vehicle type is constrained to personal and small commercial.

**Table 3.1.2 Site 1 – US 301 South of Statesboro Surveyed Vehicle Occupancy and Type by Percent**

| Time Period | Number of Vehicle Occupants | | | Vehicle Type | |
|---|---|---|---|---|---|
| | 1 | 2 | 3+ | Personal | Commercial |
| AM Inbound | 76 % | 19 % | 5 % | 91 % | 9 % |
| PM Outbound | 68 % | 23 % | 9 % | 98 % | 2 % |

## Site 2 – US 301 North of Statesboro

Surveys were conducted during both the AM and PM peak periods. Table 3.2.1 illustrates the percentage of total vehicles surveyed north of Statesboro along US 301.

**Table 3.2.1 Site 2 – US 301 North of Statesboro Quantity of Passing Vehicles Surveyed**

| Time Period | Survey Period | Number Surveyed | Total Vehicle Count | Percent Surveyed |
|---|---|---|---|---|
| AM Inbound | 7:20am – 9:20am | 138 | 759 | 18.2 % |
| PM Outbound | 3:55pm – 5:45pm | 153 | 844 | 18.1 % |

Figures 3.2.1 and 3.2.2 illustrate the trip origin and destination responses for both the AM and PM period. Trip types were aggregated to the following categories: home, work, other and didn't know/refused to answer. AM trips from north of town inbound to Statesboro were mostly from home to work or other locations. PM trips outbound from Statesboro were primarily from work or other locations, but mostly en route to home.

**Figure 3.2.1 Site 2 - US 301 North of Statesboro AM Inbound Trip Origins & Destinations**

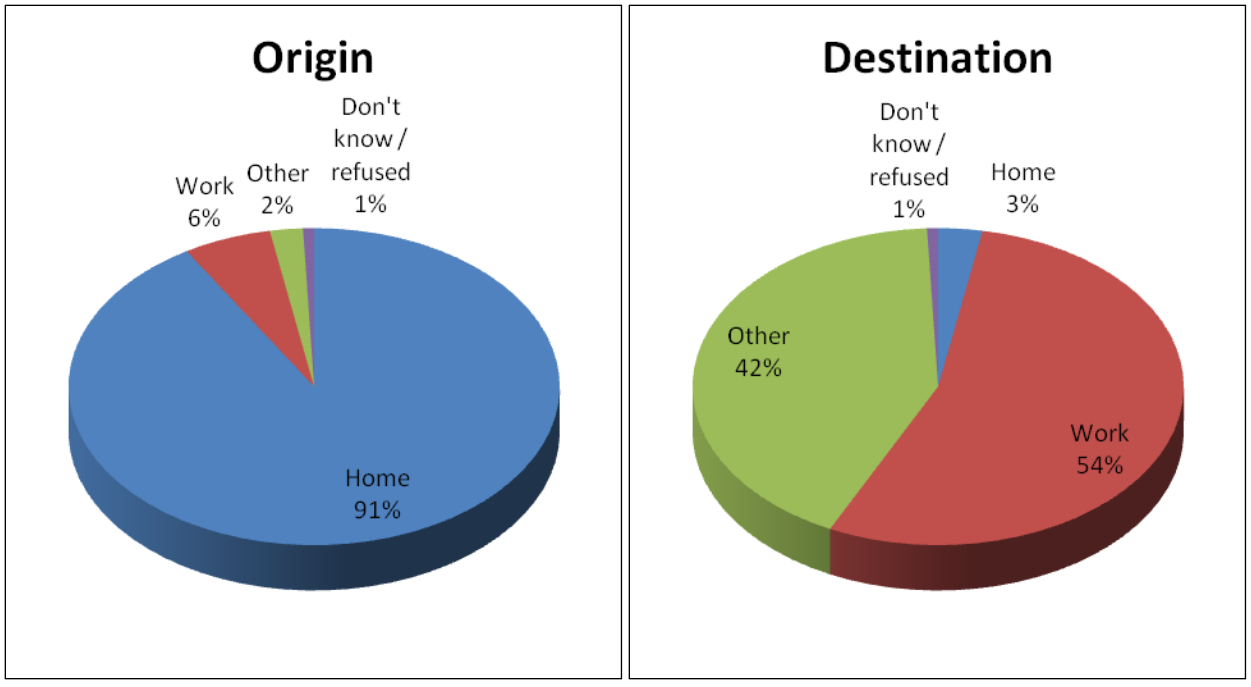
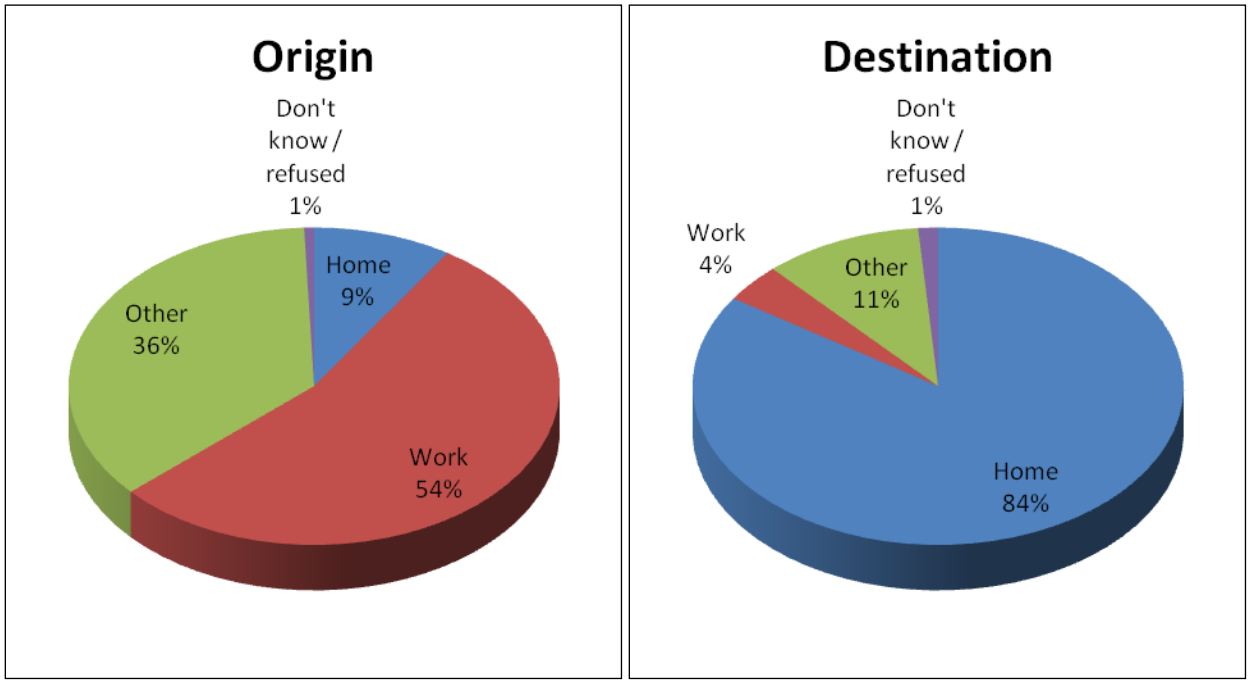
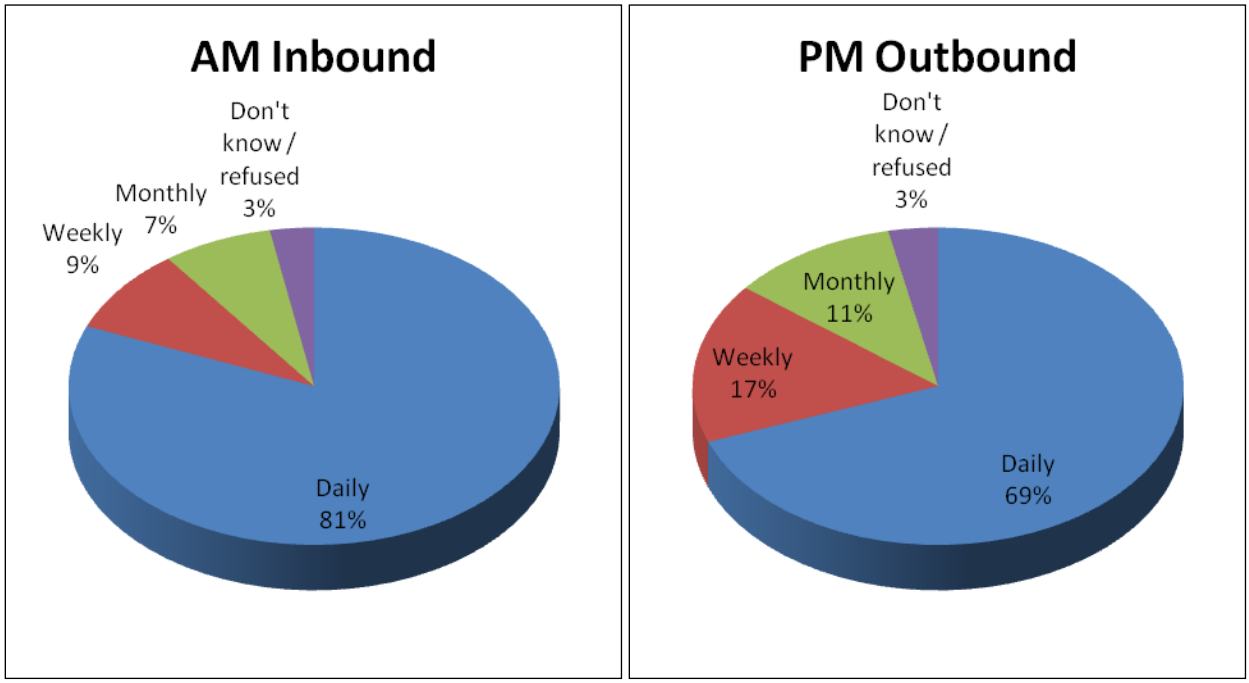


**Figure 3.2.2 Site 2 - US 301 North of Statesboro PM Outbound Trip Origins & Destinations**




Respondents were then asked to describe the frequency of the surveyed trip. Responses included daily (more than 3 times per week), weekly (one or two times per week), monthly (one or two times per month), or didn't know/refused to answer. These results are illustrated in Figure 3.2.3. Most surveyed trips along US 301 north of Statesboro were occurring at a regular daily interval, characteristic of a commuting pattern. However, some observed trips fell into the summation of the other categories.

**Figure 3.2.3 Site 2 - US 301 North of Statesboro Surveyed Trip Frequency**




Two final characteristics assessed were the number of occupants and the vehicle type. The AM and PM results for these two variables are illustrated in Table 3.2.2 below. At this location, there was not sufficient space to safely pull over and survey trucks. As a result, vehicle type is constrained to personal and small commercial.

**Table 3.2.2 Site 2 – US 301 North of Statesboro Surveyed Vehicle Occupancy and Type by Percent**

| Time Period | Number of Vehicle Occupants | | | Vehicle Type | |
|---|---|---|---|---|---|
| | 1 | 2 | 3+ | Personal | Commercial |
| AM Inbound | 74 % | 18 % | 8 % | 91 % | 9 % |
| PM Outbound | 76 % | 14 % | 10 % | 96 % | 4 % |

## Site 3 – US 80 West of Statesboro

Surveys were conducted during both the AM and PM peak periods. Table 3.3.1 illustrates the percentage of total vehicles surveyed west of Statesboro along US 80.

**Table 3.3.1 Site 3 – US 80 West of Statesboro Quantity of Passing Vehicles Surveyed**

| Time Period | Survey Period | Number Surveyed | Total Vehicle Count | Percent Surveyed |
|---|---|---|---|---|
| AM Inbound | 7:30am – 9:30am | 105 | 863 | 12.2 % |
| PM Outbound | 3:45pm – 5:45pm | 156 | 895 | 17.4 % |

Figures 3.3.1 and 3.3.2 illustrate the trip origin and destination responses for both the AM and PM period. Trip types were aggregated to the following categories: home, work, other and didn't know/refused to answer. AM trips from west of town inbound to Statesboro were mostly from home to work or other locations. PM trips outbound from Statesboro were primarily from work or other locations, but mostly en route to home.

**Figure 3.3.1 Site 3 - US 80 West of Statesboro AM Inbound Trip Origins & Destinations**

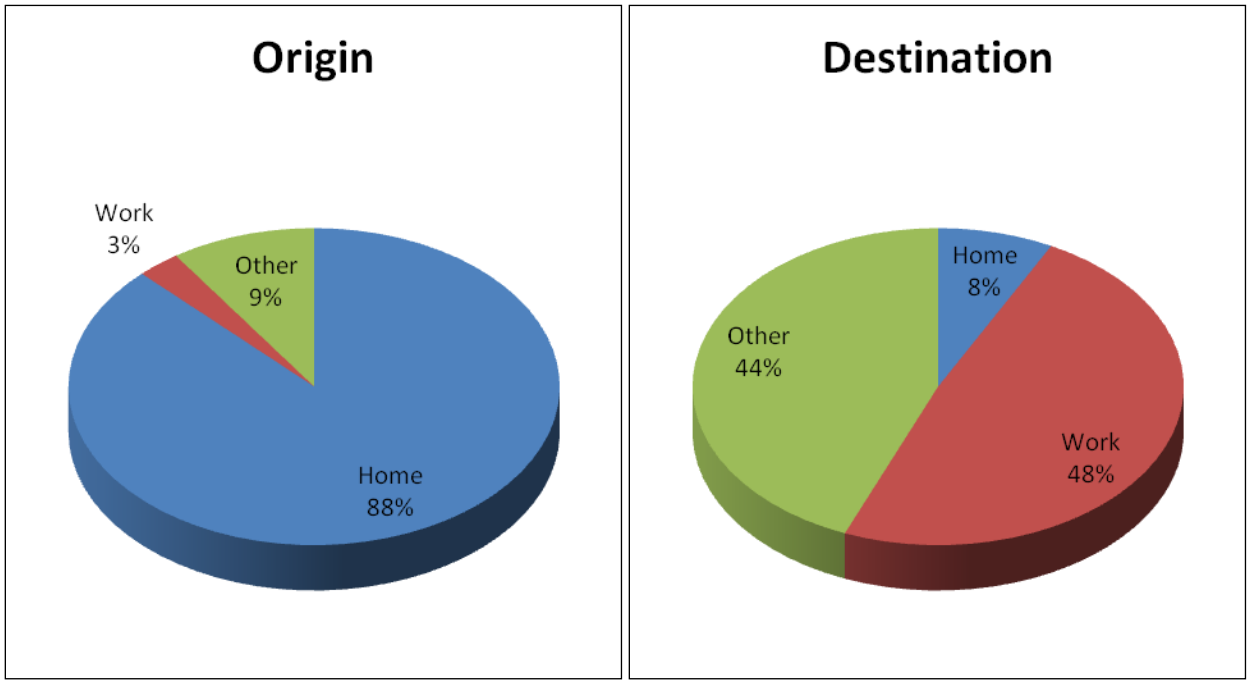
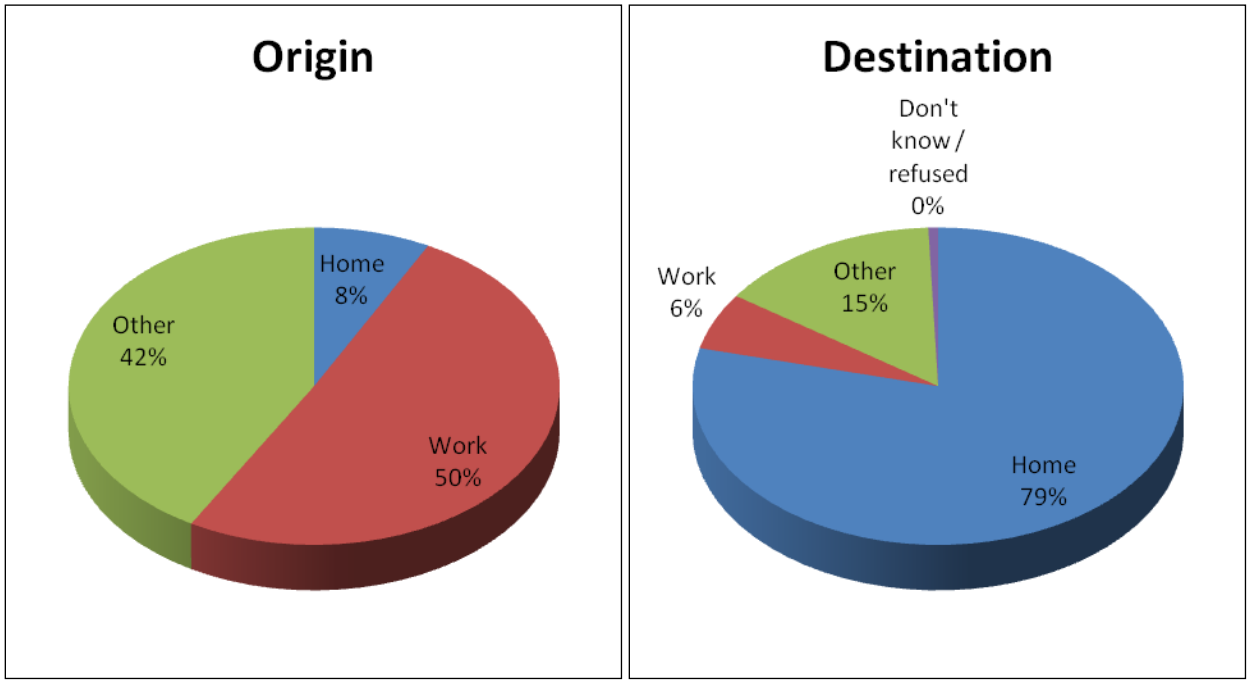
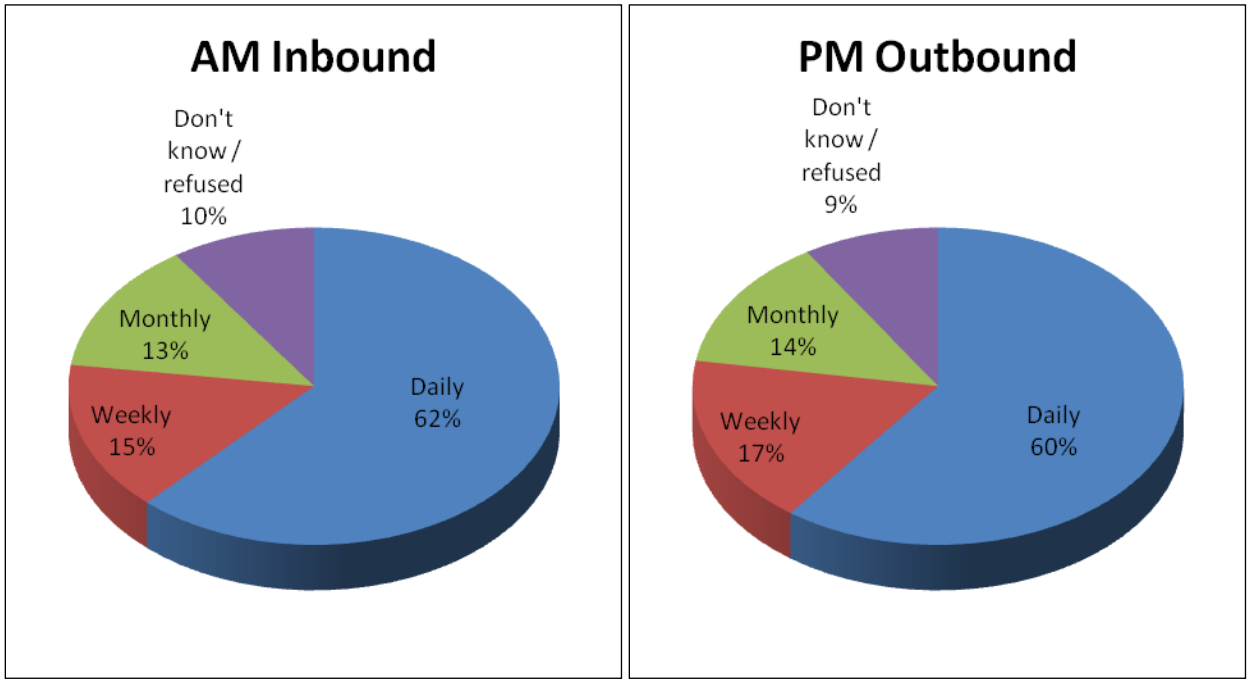


**Figure 3.3.2 Site 3 - US 80 West of Statesboro PM Outbound Trip Origins & Destinations**




Respondents were then asked to describe the frequency of the surveyed trip. Responses included daily (more than 3 times per week), weekly (one or two times per week), monthly (one or two times per month), or didn't know/refused to answer. These results are illustrated in Figure 3.3.3. Most surveyed trips along US 80 west of Statesboro were occurring at a regular daily interval, characteristic of a commuting pattern. However, many observed trips fell into the summation of the other categories.

**Figure 3.3.3 Site 3 - US 80 West of Statesboro Surveyed Trip Frequency**




Two final characteristics assessed were the number of occupants and the vehicle type. The AM and PM results for these two variables are illustrated in Table 3.3.2 below. At the AM location, there was not sufficient space to safely pull over and survey trucks. However, the PM survey location was able to stop and query truck drivers. As a result, vehicle type is constrained to personal and small commercial only in the AM inbound scenario for Site 3.

**Table 3.3.2 Site 3 – US 80 West of Statesboro Surveyed Vehicle Occupancy and Type by Percent**

| Time Period | Number of Vehicle Occupants | | | Vehicle Type | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3+ | Personal | Commercial | Large Truck | Container Truck |
| AM Inbound | 74 % | 19 % | 7 % | 89 % | 11 % | - | - |
| PM Outbound | 74 % | 17 % | 9 % | 86 % | 8 % | 3 % | 3 % |

## Site 4 – US 80 East of Statesboro

Surveys were conducted during both the AM and PM peak periods. Table 3.3.1 illustrates the percentage of total vehicles surveyed west of Statesboro along US 80.

**Table 3.4.1 Site 4 – US 80 East of Statesboro Quantity of Passing Vehicles Surveyed**

| Time Period | Survey Period | Number Surveyed | Total Vehicle Count | Percent Surveyed |
|---|---|---|---|---|
| AM Inbound | 8:00am – 9:20am | 90 | 274 | 32.8 % |
| PM Outbound | 3:55pm – 5:30pm | 72 | 315 | 22.9 % |

Figures 3.4.1 and 3.4.2 illustrate the trip origin and destination responses for both the AM and PM period. Trip types were aggregated to the following categories: home, work, other and didn't know/refused to answer. AM trips from east of town inbound to Statesboro were mostly from home to work or other locations. Compared to other survey locations, a disproportionate number of trips were heading to "other" locations. PM trips outbound from Statesboro were primarily from work or other locations, but mostly en route to home. As in the AM scenario, more trips than observed in other survey locations were originating from "other" locations.

**Figure 3.4.1 Site 4 - US 80 East of Statesboro AM Inbound Trip Origins & Destinations**

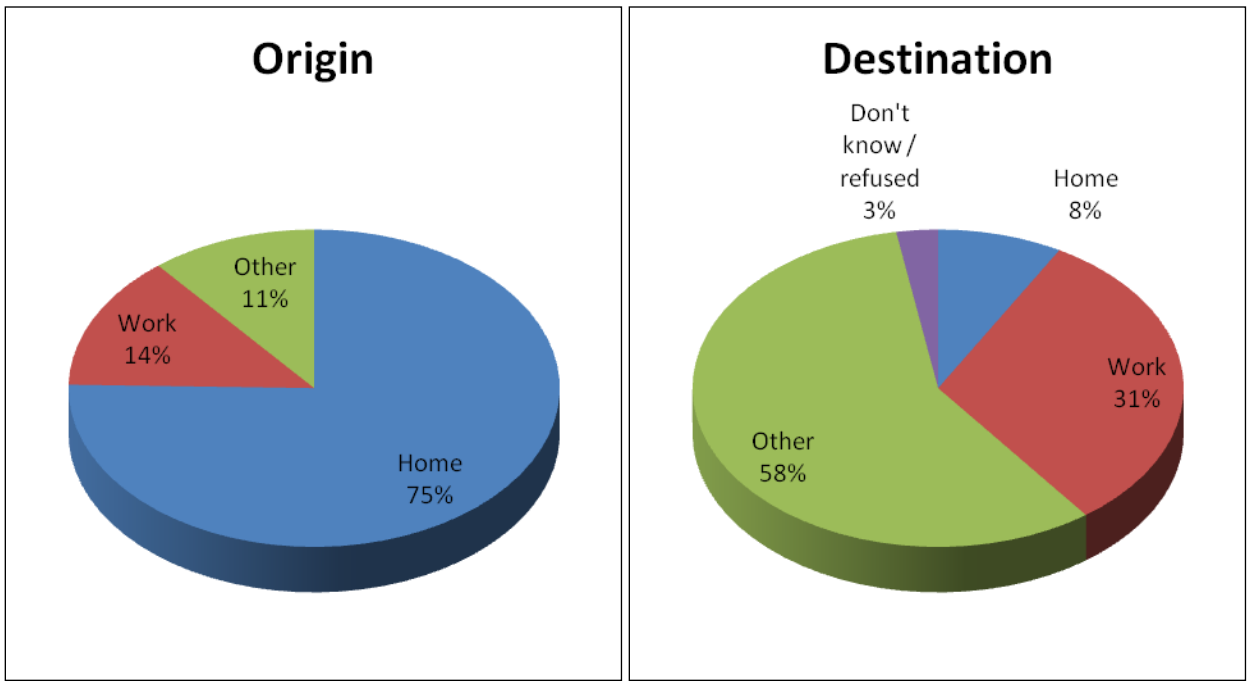
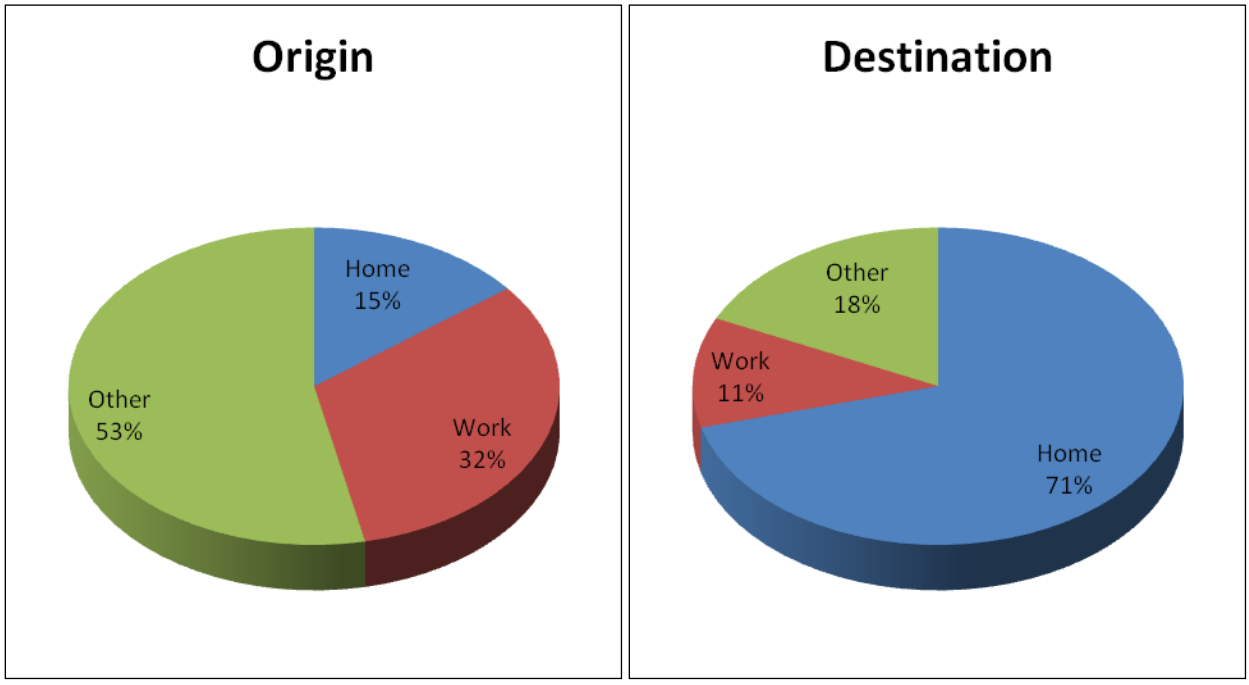
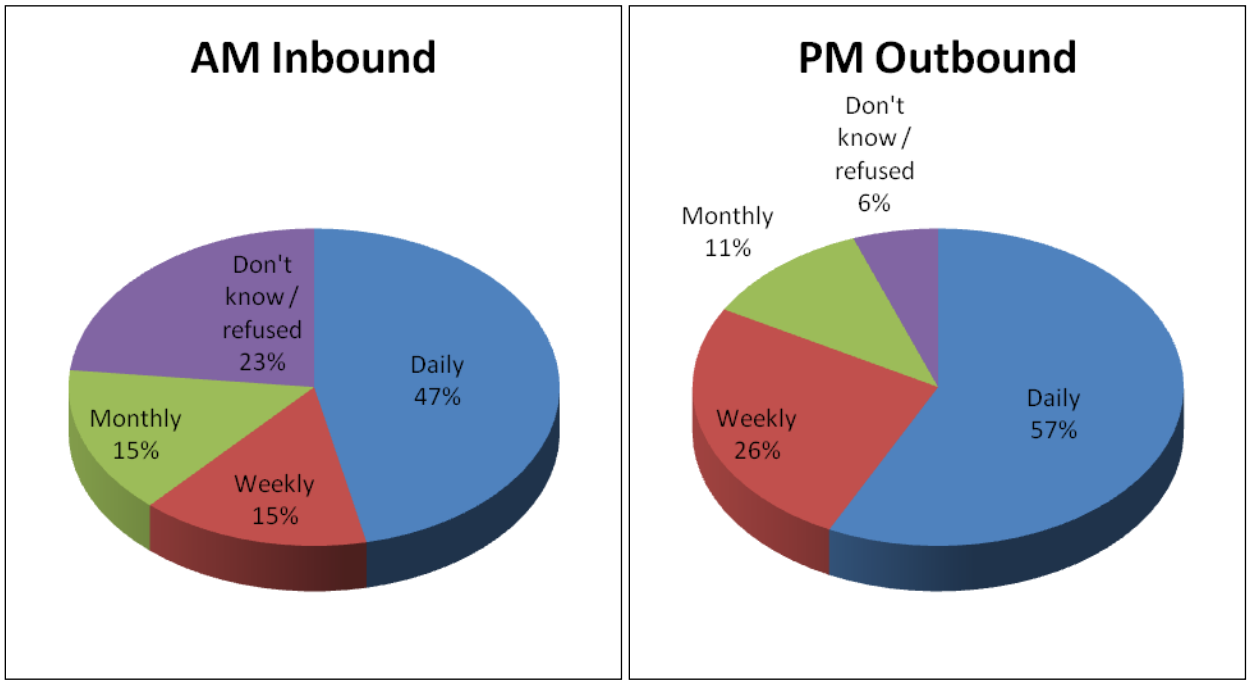


**Figure 3.4.2 Site 4 - US 80 East of Statesboro PM Outbound Trip Origins & Destinations**




Respondents were then asked to describe the frequency of the surveyed trip. Responses included daily (more than 3 times per week), weekly (one or two times per week), monthly (one or two times per month), or didn't know/refused to answer. These results are illustrated in Figure 3.4.3. Most surveyed trips along US 80 east of Statesboro were occurring at a regular daily interval, characteristic of a regular commuting pattern. However, many observed trips fell into the summation of the other categories.

**Figure 3.4.3 Site 4 - US 80 East of Statesboro Surveyed Trip Frequency**




Two final characteristics collected were the number of occupants and the vehicle type. The AM and PM results for these two variables are illustrated in Table 3.4.2 below. At this location, there was not sufficient space to safely pull over and survey trucks. As a result, vehicle type is constrained to personal and small commercial.

**Table 3.4.2 Site 4 – US 80 East of Statesboro Surveyed Vehicle Occupancy and Type by Percent**

| Time Period | Number of Vehicle Occupants | | | Vehicle Type | |
|---|---|---|---|---|---|
| | 1 | 2 | 3+ | Personal | Commercial |
| AM Inbound | 79 % | 18 % | 3 % | 96 % | 4 % |
| PM Outbound | 71 % | 22 % | 6 % | 98 % | 1 % |

# 4.0 Traffic Counts

In addition to the OD surveys, 24-hour classification counts were collected at the survey sites. This allowed OD data survey data to be scaled to a 24-hour period for analysis purposes. Traffic Statistics for the O&D sites include:

**Table 4.1 24-Hour Traffic Counts at the O&D Sites**

| Location | Total Daily Traffic | NB/SB Split | % Traffic in AM Peak | % Traffic in PM Peak | % Split AM Peak | % Split PM Peak | % Trucks |
|---|---|---|---|---|---|---|---|
| US 301 North of Jimps Rd | 14,732 | 7,353 NB 7,359 SB | 6.3% | 7.9% | 55.7% NB | 51.3% NB | 19.2% |
| US 301 North of Mill Creek Rd | 8,850 | 4,446 NB 4,404 SB | 6.6% | 8.7% | 61.7% SB | 63.5% NB | 14.6% |
| US 80 East of Williams Rd | 9,058 | 4,578 EB 4,480 WB | 7.1% | 8.5% | 64.4% EB | 67.2% WB | 15.2% |
| US 80 West of Arcola Rd | 5,466 | 2,797 EB 2,669 WB | 9.4% | 8.7% | 55.5% WB | 53.8% WB | 17.2% |

A complete break-down of the 24-hour traffic counts can be found in Appendix B.

# 5.0 Summary

Based on the travel shed analysis, the comparison of the OD survey results to the travel demand model reveals that the replicated trip distribution patterns closely correlate with the observed travel patterns in Bulloch County. The OD survey effort accomplishes the following goals: further validation of the Bulloch County Travel Demand Model, supporting the needs analysis for potential roadway improvements projects, and providing updated data inputs for the Bulloch County / City of Statesboro 2035 Long Range Transportation Plan.

# Appendix A

## Bulloch County Origin Destination Survey Field Report

Georgia DOT

# Bulloch County Origin Destination Survey Field Report

**Prepared for HNTB**

February 18, 2009

GeoStats

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Atlanta, Georgia
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www.geostats.com

# Table of Contents

# Introduction

In December 2008, HNTB contracted GeoStats LP to conduct an origin-destination survey in Bulloch County. The purpose of this study is to validate trip replication in the travel demand model. Data collected as a result of this survey may also be used for purposes of off-model analysis including the identification of key freight and commuter routes.

GeoStats was asked to conduct roadside intercept surveys at four sites strategically located on major roadway facilities in Bulloch County. Locations were identified in cooperation with HNTB, the Georgia Department of Transportation, and Bulloch County. For each site, surveys were scheduled during two 2-hour peak periods on an "average" weekday, one during inbound travel in the morning (7AM – 9AM) the other during outbound travel in the evening (4PM – 6PM).

Once data collection was complete, GeoStats was tasked with compiling the collected questionnaire data; to quality check, edit, and geocode the data, and to submit a field report and dataset to HNTB. Trip origins and destinations needed to be provided as coordinates (geocoded from provided address or landmark information) and as a Traffic Analysis Zone (TAZ) identifier (with TAZs to be provided by HNTB).

Deliverables for this scope of work included coordination with GDOT District 5 and local law enforcement; survey logistics including site recommendations, recruitment and training of surveyors and field management; survey methodology; survey questionnaire implemented on a Tablet PC or PDA; survey administration; an origin-destination database, and a field report. This document serves as the field report.

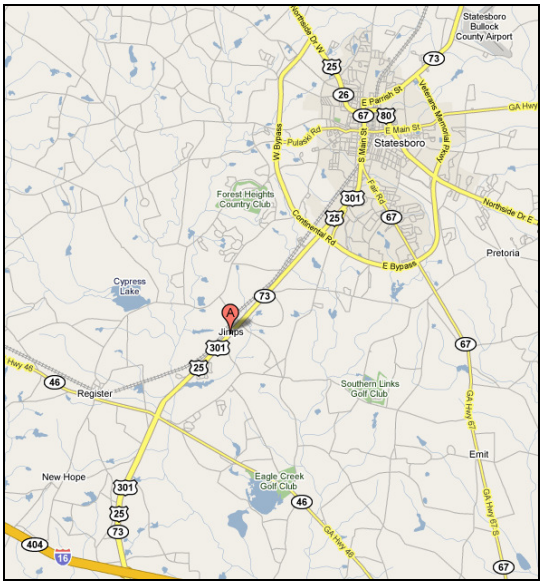
# Data Collection Field Notes

Surveys were conducted by a field team led by GeoStats LP on behalf of the Georgia Department of Transportation during the week of January 12, 2009. This origin-destination survey of motorists at four roadside locations in Bulloch County will support the development of the Bulloch County/City of Statesboro 2035 Long Range Transportation Plan by providing detail on the travel patterns of commuters in the Bulloch County region. Drivers were to be stopped at random (directed to the survey site by a police officer) and asked to provide information on the start and end points of their trip.

All four locations were successfully surveyed. These four locations consisted of eight sites given separate inbound and outbound survey positions. The peak period survey times were adjusted at some sites due to safety issues including darkness and weather. The following sections give details of the data collection efforts by site and travel direction.

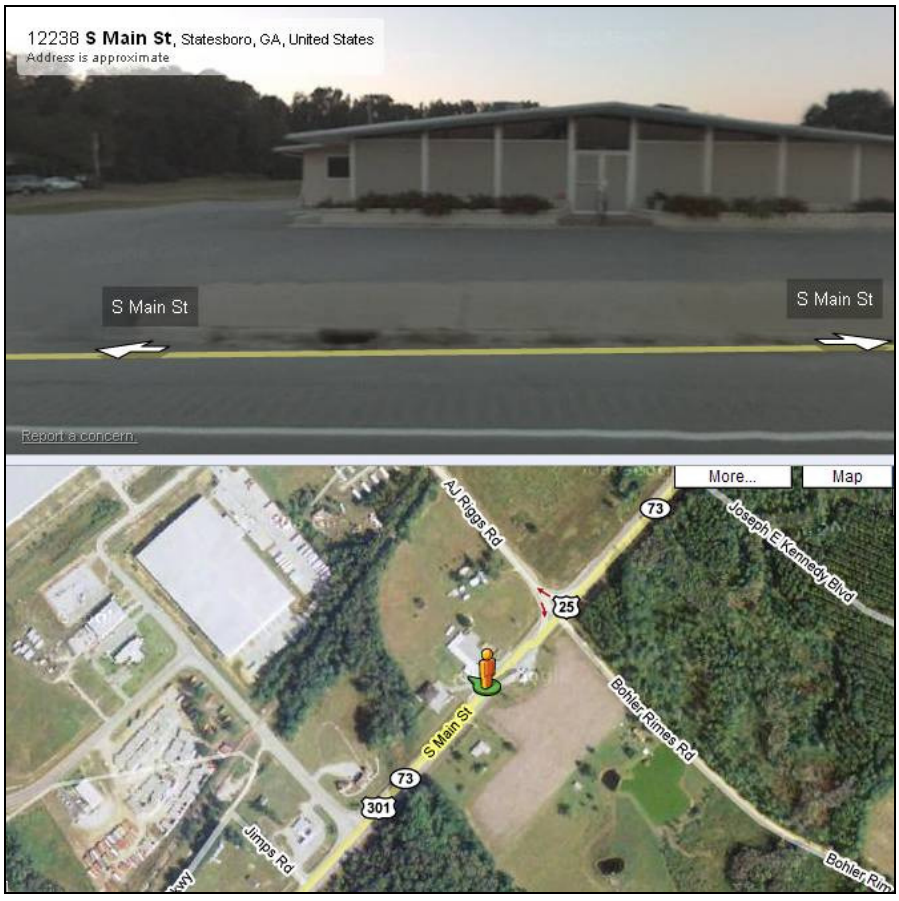
# Site 1: US 301 SB / Outbound, South of Statesboro

**Site 1 Map. US 301 between Jimps Rd and AJ Riggs Road (Southbound)**



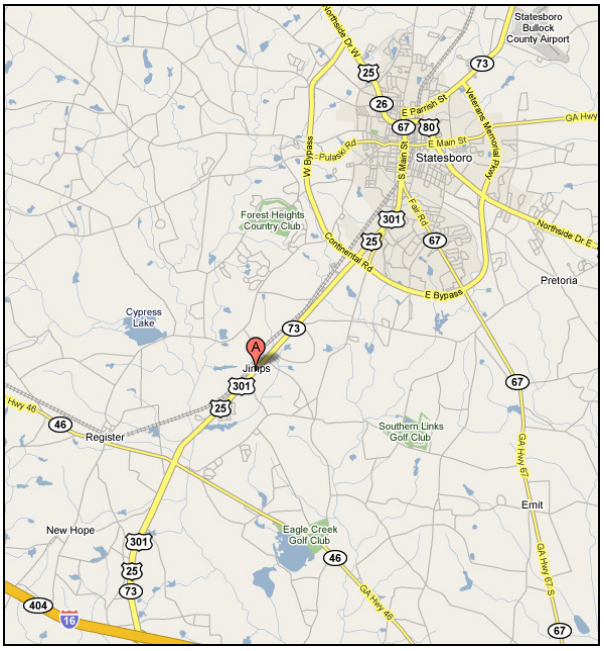

**Scheduled Date & Time: Jan 12, 4:00 PM – 6:00 PM**
**Actual Date & Time: Jan 12, 3:55 PM – 6:00 PM**

Training began at 3:00 pm. It was determined by the site crew that this site did not have adequate space for large trucks to safely enter and exit, so the flagman did not pull large trucks over for the survey. There were four surveyors available (in addition to the field supervisor). Four persons surveyed for the majority of the shift. Informal counts of passing vehicles were done by the HNTB team member present during this survey period. On average, 20 vehicles passed for every four that were pulled over to survey, so it is estimated that 20% of vehicles were surveyed at this location. There were 194 vehicles surveyed.



# Site 2: US 301 NB / Inbound, South of Statesboro

**Site 2 Map. US 301 North of Mile Post 8 near Goldkist Rd (Northbound)**

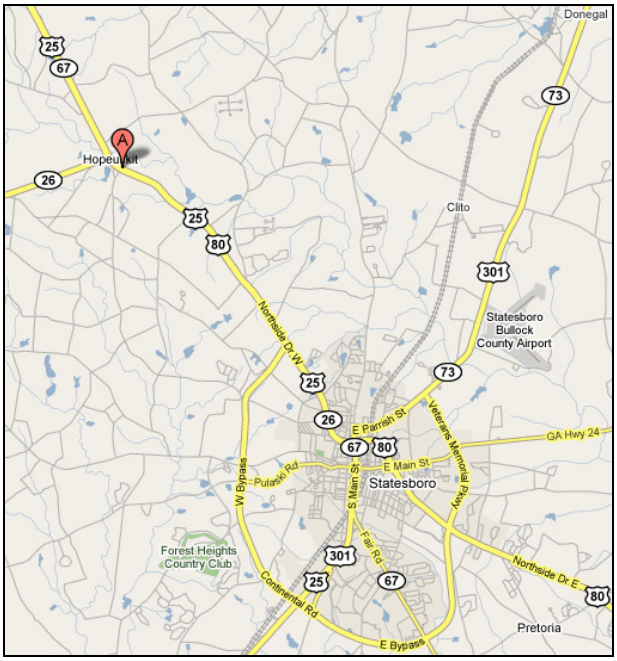



**Scheduled Date & Time: Jan 13, 7:00 – 9:00 AM**
**Actual Date & Time: Jan 13, 7:45 – 9:30 AM**

The survey began at 7:45 am.. The start time was delayed because the variable message sign used to slow traffic was not working so the sheriff decided to wait until he felt it was safe to slow / stop traffic. It was determined by the site crew that this site did not have adequate space for large trucks to safely enter and exit, so the flagman did not pull large trucks over for the survey. There were two surveyors available (in addition to the field supervisor). One of the scheduled surveyors did not return on days following the training. Due to this absence, the field supervisor surveyed when it was safe to do so. At this site, three persons surveyed for the majority of the shift. Informal counts of passing vehicles were done by the HNTB team member present during this survey period. He estimated that three vehicles were surveyed for every 15 vehicles that passed. There were 164 vehicles surveyed.

# Site 3: US 80/25 WB / Outbound, West of Statesboro

**Site 3 Map. US 80/25 East of Hopulikit Ln / Williams Road (Westbound)**

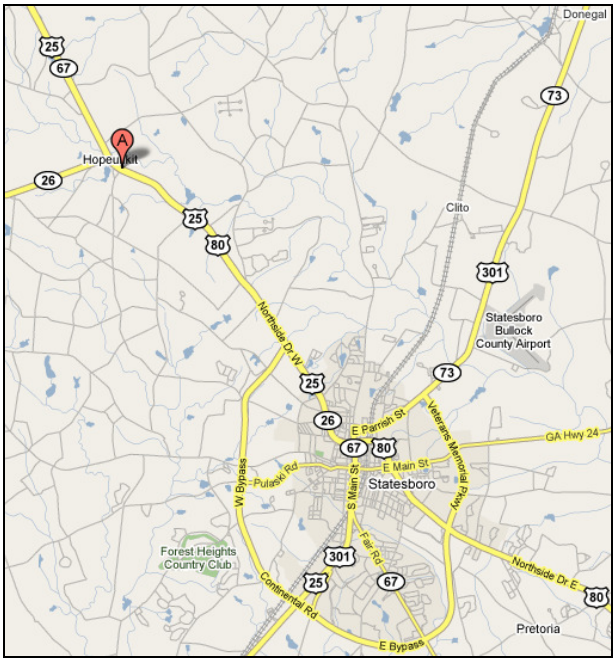



**Scheduled Date & Time: Jan 13, 4:00 PM - 6:00 PM**
**Actual Date & Time: Jan 13, 3:45 PM – 5:45 PM**

The survey began early to avoid surveying at dusk since the survey site was located on a median area between travel lanes. Large trucks could safely enter and exit the site, so they were surveyed. There were two surveyors available (in addition to the field supervisor). Three persons surveyed for the majority of the shift. The setting sun was of particular issue for the drivers surveyed at this location as they were forced to look into the sun while pulling into the survey location. This also presented a potentially unsafe environment for the survey team. Informal counts of passing vehicles were done by the HNTB team member present during this survey period. He estimated that three vehicles were surveyed for every 10-12 vehicles that passed. There were 157 vehicles surveyed.

# Site 4: US 80/25 EB / Inbound, West of Statesboro

**Site 4 Map. US 80/25 at Williams Road Alternate Site (Eastbound)**

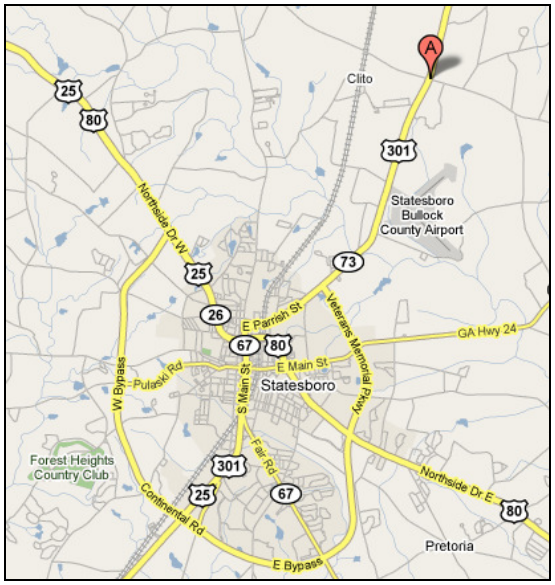



**Scheduled Date & Time: Jan 14, 7:00 AM – 9:00 AM**
**Actual Date & Time: Jan 14, 7:30 AM – 9:30 AM**

It was determined by the site crew that the site location should be moved to the shoulder of the road just southeast of the intersection of US80 with US25 due to the signs and cones available and that the right travel lane would be closed to through traffic at the survey site. This is similar to the site plan at Highway 301 South, with the surveying conducted on the shoulder of the highway. The start time moved until it was light outside. The flagman did not pull large trucks over for the survey due to the lack of space along for trucks to be pulled over safely. There were two surveyors available (in addition to the field supervisor). The field supervisor did not survey so they could ensure the survey site location remained safe for the survey team. There were 106 vehicles surveyed.

# Site 5: US 301 NB / Outbound, North of Statesboro

**Site 5 Map. US 301 south of Clito Road Alternate Site (Northbound)**

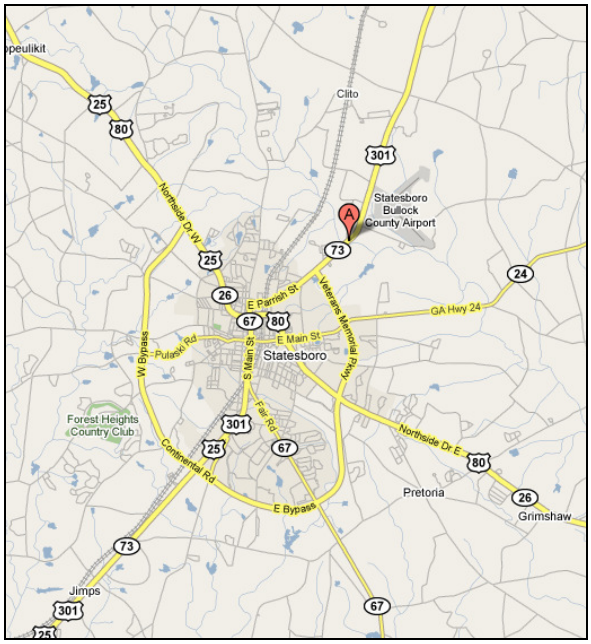



**Scheduled Date & Time: Jan 14, 4:00 PM – 6:00 PM**
**Actual Date & Time: Jan 14, 3:55 PM – 5:45 PM**

The survey began early to avoid surveying at dusk since the survey site was located next to a two-lane highway. Large trucks were not surveyed as there was not enough space to pull a truck and car over simultaneously. There were three surveyors available (in addition to the field supervisor). Three persons surveyed for the majority of the shift. This was a very safe survey site well off of the road. The traffic volume was steady. There were 152 vehicles surveyed.

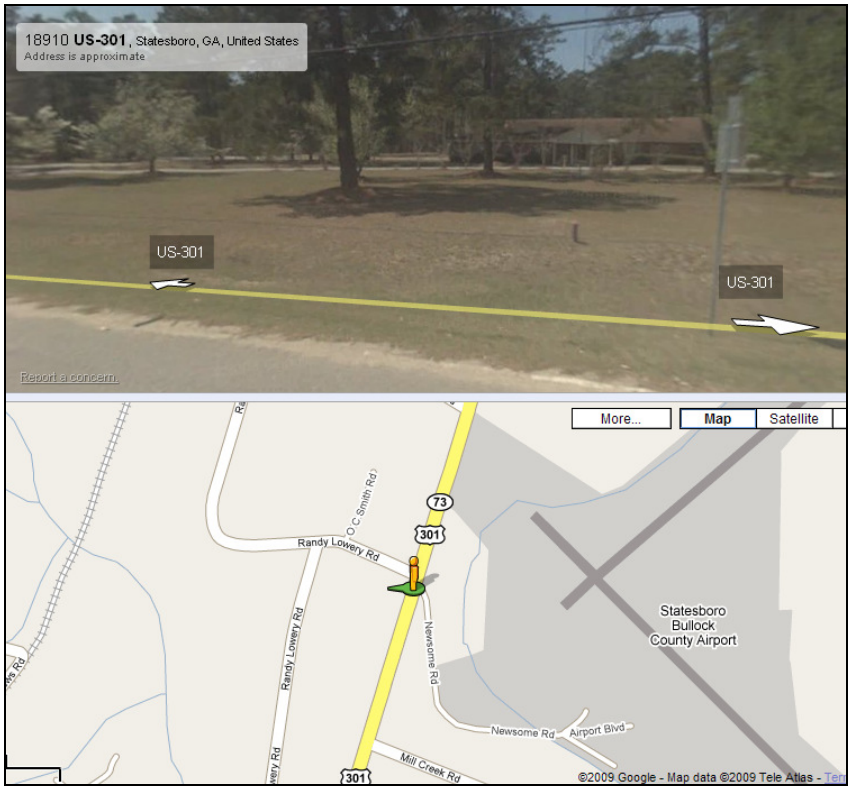
# Site 6: US 301 SB / Inbound, North of Statesboro

**Site 6 Map. US 301 at Randy Lowery Rd / Newsome Road (Southbound)**



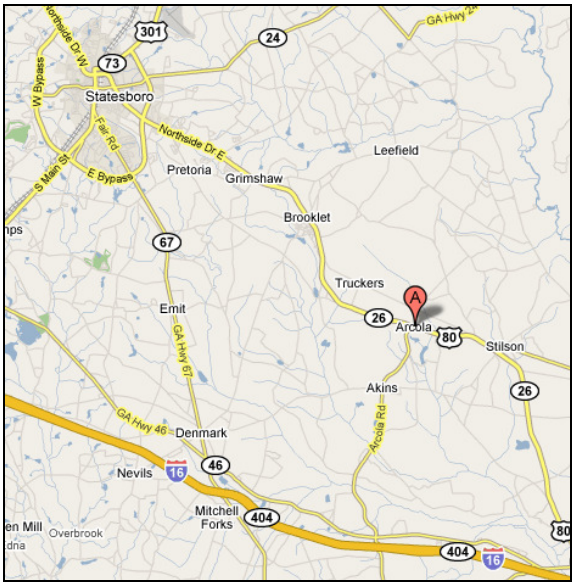

**Scheduled Date & Time: Jan 15, 7:00 AM – 9:00 AM**
**Actual Date & Time: Jan 15, 7:20 AM – 9:20 AM**

It was determined by the site crew that due to the s-shaped entrance and exit to/from this site that large trucks would not be surveyed. There were two surveyors available (in addition to the field supervisor). The traffic volume was light. Three persons surveyed for the majority of the shift. There were 138 vehicles surveyed.



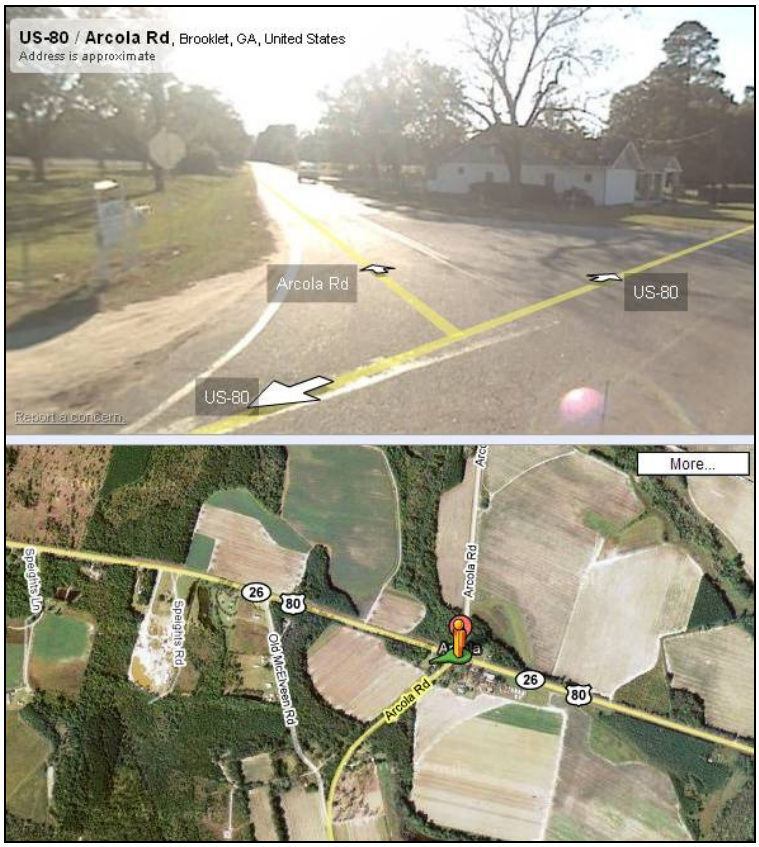
# Site 7: US 80 EB / Outbound, East of Statesboro

**Site 7 Map. US 80 at Arcola Rd (Eastbound)**



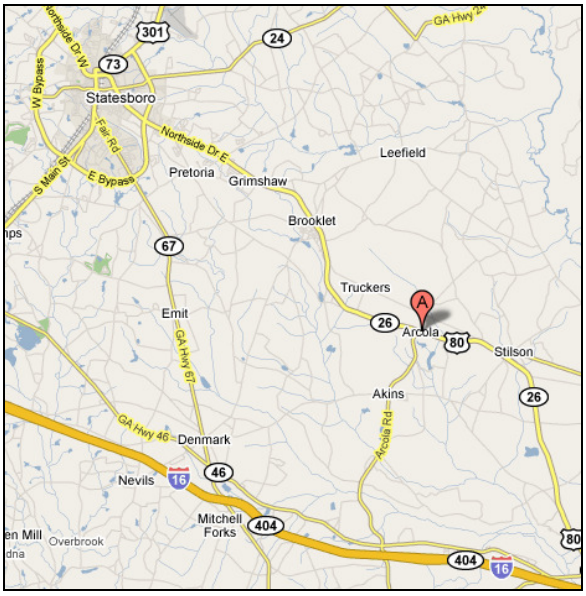

**Scheduled Date & Time: Jan 15, 4:00 PM – 6:00 PM**
**Actual Date & Time: Jan 15, 3:55 PM – 5:30 PM**

The survey location was set-up at an intersection which made traffic control challenging for the sheriff's department. There was only enough room to safely pull over two vehicles at a time. Large trucks were not surveyed due to the small size of the site. There were two surveyors available (in addition to the field supervisor). Two persons surveyed for the majority of the shift, with the field supervisor acting as an extra set of eyes to make sure the survey team remained safe. It was determined while surveying at this site that the inbound site (surveyed on Friday morning) would be moved to the opposite corner of the intersection from the proposed location. The survey was ended early due to dusk along a two-lane highway at an intersection. Ninety vehicles were surveyed at this location.



# Site 8: US 80 WB / Inbound, East of Statesboro

**Site 8 Map. US 80 at Arcola Rd(Westbound)**




**Scheduled Date & Time: Jan 16, 7:00 AM–9:00 AM**
**Actual Date & Time: Jan 16, 8:00 AM – 9:20 AM**

survey start time was postponed to 8:00 am due to a National Weather Service Wind Chill Advisory in effect for Bulloch County until 9am. The temperature during the survey time was less than 25 degrees. It was determined by the site crew that due to the entrance and exit to/from this site that large trucks would not be surveyed. There were two surveyors available (in addition to the field supervisor). The traffic volume was extremely light. Many of the people surveyed at this location had already been surveyed the previous day headed eastbound. There were also an unusually high percentage of persons traveling to a teacher's workshop in Brooklet who stated this was the first time having ever traveled this route. Three persons surveyed during this shift (two at a time) alternating frequently due to the cold / wind. It is estimated that 1 in 2 cars were surveyed. There were 72 vehicles surveyed.

# Data Collection Results

There were 1073 surveys conducted during the survey week. The breakdown of surveys conducted by location appears in Table 1.

**TABLE 1 - SUMMARY OF SURVEY RESULTS BY SITE AND DIRECTION**

| Location Name | Direction of Travel | Number of Surveys Collected | Survey Day And Date |
|---|---|---|---|
| US 301 SB - South of Statesboro | Outbound | 194 | MON PM - 1/12/09 |
| US 301 NB - South of Statesboro | Inbound | 164 | TUES AM - 1/13/09 |
| US 80 / US 25 NB Northwest of Statesboro | Outbound | 157 | TUES PM - 1/13/09 |
| US 80 / US 25 SB Northwest of Statesboro | Inbound | 106 | WED AM - 1/14/09 |
| US 301 NB - Northeast of Statesboro | Outbound | 152 | WED PM - 1/14/09 |
| US 301 SB - Northeast of Statesboro | Inbound | 138 | THU AM - 1/15/09 |
| US 80 SB - SE of Statesboro | Outbound | 90 | THU PM - 1/15/09 |
| US 80 NB - SE of Statesboro | Inbound | 72 | FRI AM - 1/16/09 |
| **Total** | | **1073** | |

There were a total of 2146 origins and destinations collected within the 1073 surveys. The data files were downloaded from the PDA's used for data collection into a Microsoft Access database. The audio files collected during the surveys were matched to the corresponding data records. GeoStats analysts listened to the audio files while reviewing the data files, adding and editing the data as necessary. A unique ID number, LOCID, was added to the file for each origin and destination reported. The quality-checked origin and destination data were then run through a geocoding engine. The geocoding engine returned multiple matches for locations when the data available was not sufficient to match to a single location. This most often occurred when a street name was provided with no street number and/or prefix direction AND only a city and/or state name was provided. The geocoding results were examined and the code "NotGC" was added to the precision field for data returned when it was determined that the input address was not geocodable to the ZIP level or higher. In these cases, one record in the database was kept and the remaining duplicate records were removed. This was done to preserve at least one LOCID for each input address.

Coordinates returned that were insufficient for geocoding were removed from the database. Reasons a record may be insufficient include data quality (i.e., only the state or county can be matched to a location). Duplicate records created when the street name and city were returned but for which the lack of a street number or street direction resulted in duplicate matches were maintained in the database. Consequently, there are multiple locations for some trip ends and users of the data should take caution before selecting a coordinate. The cleaned geocoding results database contains 2382 records, which includes 236 records in which one or more potential locations were identified.

The Traffic Analysis Zone (TAZ) ID was assigned for all records geocoded to the address level in Bulloch County. The assignment was done in ArcCatalog using the cleaned geocoded locations and the TAZ shapefile provided by HNTB. A spatial join was done using the "within" option so in cases where a geocoded point intersected multiple TAZs, the majority TAZ found was assigned. Of the 1073 surveys, 996 had complete information to determine location for both an origin and destination (82 locations were not geocodable due to not enough information being supplied by the respondent). As mentioned above, the level of positional accuracy varied based on the level of detail provided by the respondent. Internal (inside Bulloch County) trip ends in a "complete" survey have address-level, street-level, or ZIP-level geocoding. External (outside Bulloch County) trip ends have city-level or better geocoding. Table 2 shows the number of completes by external trip type. Given that most of the survey sites were located

well within the county (near the City of Statesboro), there were a significant number of internal to internal trips recorded. Internal trips are those in which both the origin and the destination locations fell within Bulloch County.

**TABLE 2 – NUMBER OF COMPLETES BY EXTERNAL TRIP TYPE**

| External Trip Type | Completes |
|---|---|
| External-External | 61 |
| External-Internal | 289 |
| Internal-External | 336 |
| Internal-Internal | 310 |
| **Total Completes** | **996** |

The geocoding results are shown in Table 3. A little over 50% of the locations were geocoded to a street or address level inside Bulloch County, the vast majority of the remaining were matched to the ZIP code. Outside of Bulloch County, over 90% of the records were matched to a ZIP code or better. Figure 1 shows a regional perspective map of the recorded trip ends, Figure 2 shows the trip ends for Bulloch County.

**TABLE 3 - GEOCODING RESULTS**

| GeoCoding Level | All Records | All Percent | Bulloch County | Bulloch Percent | Other Counties | Other Percent | Unknown |
|---|---|---|---|---|---|---|---|
| Address | 406 | 18.9% | 366 | 28.2% | 40 | 5.2% | 0 |
| Street | 395 | 18.4% | 327 | 25.2% | 68 | 8.9% | 0 |
| City | 116 | 5.4% | 40 | 3.1% | 76 | 9.9% | 0 |
| ZipCode | 1149 | 53.5% | 567 | 43.6% | 582 | 76.0% | 0 |
| Not Geocodable | 82 | 3.8% | 0 | 0.0% | 0 | 0.0% | 82 |
| **TOTAL** | **2148** | **100.0%** | **1300** | **100.0%** | **766** | **100.0%** | **82** |

Figure 1. Map of Geocoded Locations in Southeast Georgia

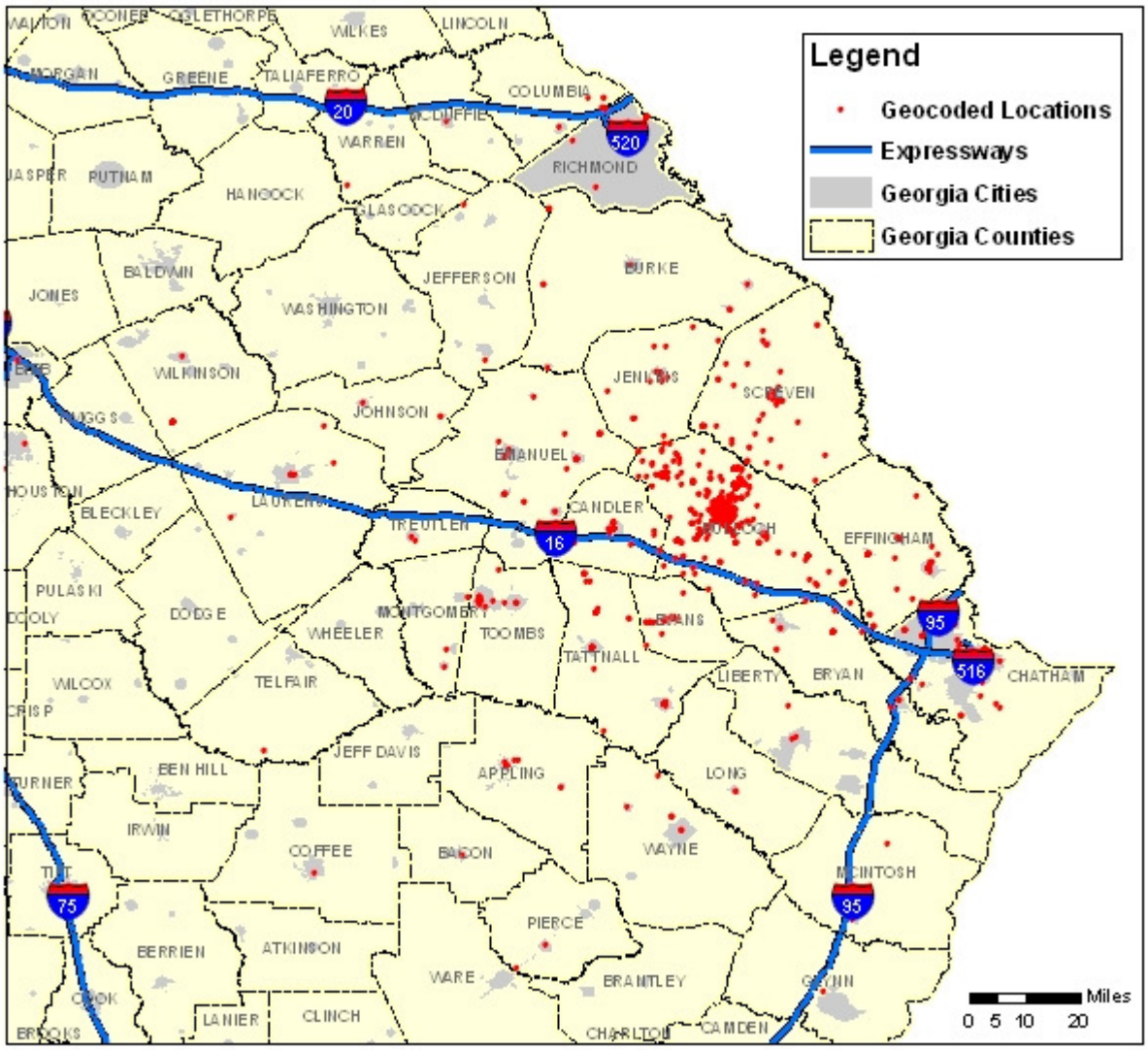
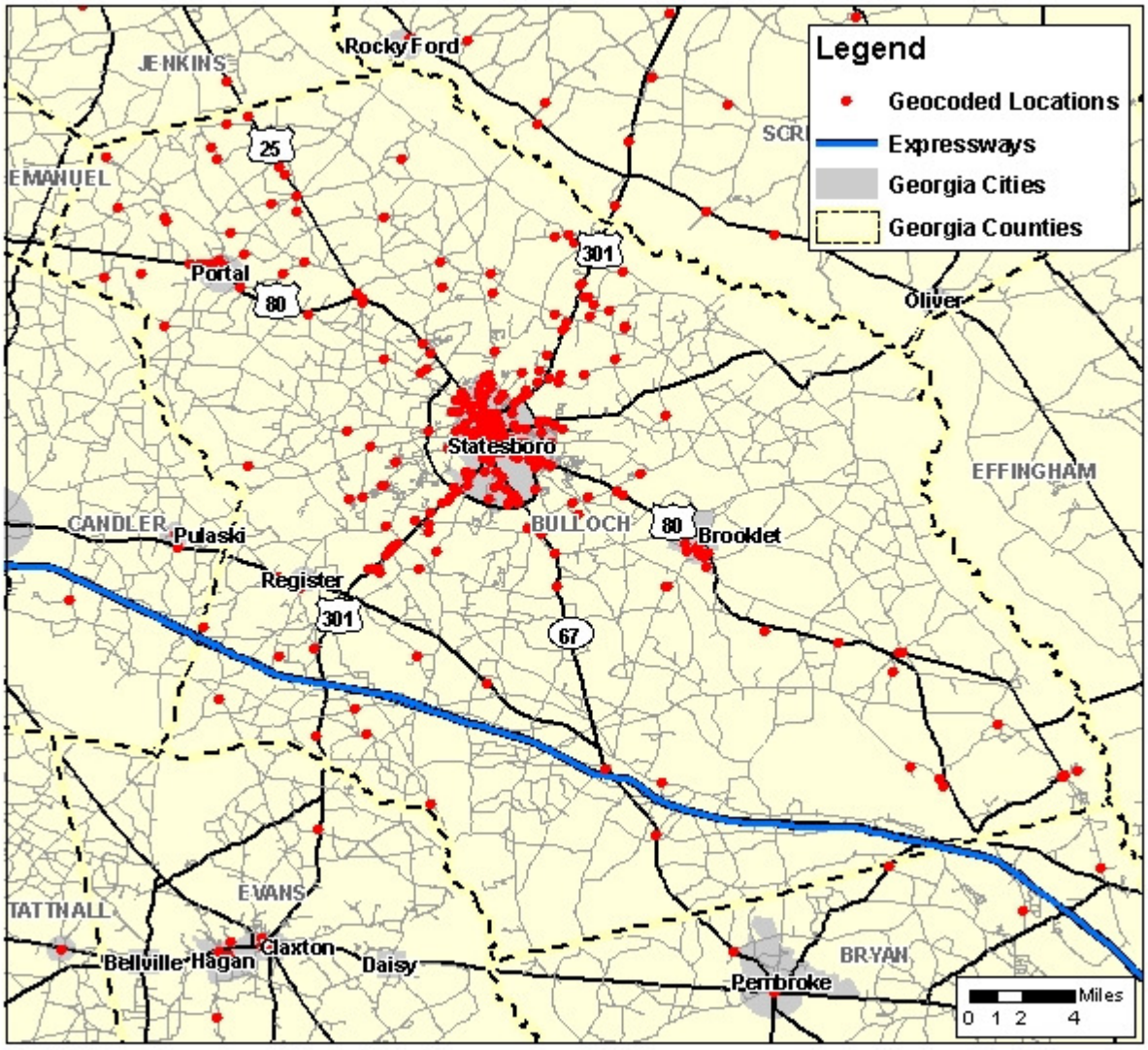


Figure 2. Map of Geocoded Locations in Bulloch County



# Miscellaneous Field Notes

**Safety Considerations for Future Studies**

1. The survey times should be fully scheduled within daylight hours.
2. The location of the sun relative to the drivers' viewing angle should be considered when selecting sites. A couple of the sites were located at a position where the drivers were directly facing the rising or setting sun when pulling up to be surveyed.
3. Survey locations should be set well away from intersections, especially those intersections with a historically high frequency of accidents.
4. Survey locations should be set well off the roadway on two-lane roads.
5. The flag person should be located close to the survey team so that vehicles passing near the survey area are still travelling at a slow rate of speed.

**Survey Instrument Observations – Question Clarification**

1. Is this place your home or work? It may be helpful to add 'school' to this list as there were many students surveyed going to Georgia Southern, the nearby Ogeechee Technical College and the local high school.
2. How often did you make this trip? There was no option between one-two times per month and Don't Know / Refused, so if the driver answered "This is my first time" or "a couple of times a year" the surveyor coded the answer as Don't Know / Refused. An additional category may be helpful in future surveys.
3. What is the vehicle type? This was an issue when the vehicle (passenger car / truck /van) was not obviously commercial, but may have been company owned. It may be helpful to ask this question in a different manner, such as, "Is this vehicle your personal vehicle or company owned?

**Unsolicited Suggestions from the Field**

1. Multiple sheriff team members asked why GA 67 was not chosen for this survey, their observation is that 67 is the most congested of all major roads in Bulloch County.
2. Many persons that were interviewed on U.S. 301 north of town suggested that the road be widened and that the potholes be fixed.
3. A couple of persons surveyed on U.S. 80 west of town that they were happy with the reflectors that had been added along the centerline of the road the week of the survey.

# Appendix A: O-D Questionnaire

### Survey Questions

| Question ID | Question Text |
|---|---|
| 1 | Where did you start this one-way trip? |
| 2 | Is this place your home or work? |
| 3 | What is your final destination in this one-way trip? |
| 4 | Is this place your home or work? |
| 5 | Frequency: how often do you make this trip? |
| 6 | What is the vehicle occupancy? |
| 7 | What is the vehicle type? |

### Survey Responses

| Question ID | Option ID | Option Text |
|---|---|---|
| 1 | 1 | Text Entry (Place, Address, ZIP) |
| 2 | 1 | Home |
| 2 | 2 | Work |
| 2 | 3 | Other |
| 2 | 4 | Don't Know / Refused |
| 3 | 1 | Text Entry (Place, Address, ZIP) |
| 4 | 1 | Home |
| 4 | 2 | Work |
| 4 | 3 | Other |
| 4 | 4 | Don't Know / Refused |
| 5 | 1 | Three or more times per week (Daily) |
| 5 | 2 | One or two times per week (Weekly) |
| 5 | 3 | One or two times per month (Monthly) |
| 5 | 4 | Don't Know / Refused |
| 6 | 1 | One |
| 6 | 2 | Two |
| 6 | 3 | Three or More |
| 7 | 1 | Personal |
| 7 | 2 | Commercial Vehicle |
| 7 | 3 | Large Truck |
| 7 | 4 | Container Truck |

# Appendix B: Data Dictionary

### Deliverable Surveys

| Field Name | Data Type | Description |
|---|---|---|
| deviceid | Text | Handheld PDA ID |
| instrumentid | Number | Survey instrument - Always '1' as only one instrument was used |
| surveyid | Number | Cummulative number by device id |
| starttime | Date/Time | Survey start time |
| endtime | Date/Time | Survey end time |
| completioncode | Number | 3' for complete surveys |
| surveyor | Text | Surveyor ID Number |
| site | Text | Site ID number |
| origName | Text | Place name for origin location reported by survey participant |
| origAddress | Text | Origin addess reported by survey participant |
| origCity | Text | Origin city reported by survey participant |
| origState | Text | Origin state reported by survey participantt |
| origZip | Number | Origin ZIP reported by survey participant |
| origLocID | Number | Origin location ID - Used to join to geocode table |
| origPrecision | Text | Geocode percision for origin |
| origType | Text | Origin Type: 1 = home, 2 = work, 3 = other |
| destName | Text | Place name for Destination location reported by survey participant |
| destAddress | Text | Destination addess reported by survey participant |
| destCity | Text | Destination city reported by survey participant |
| destState | Text | Destination state reported by survey participant |
| destZip | Number | Destination ZIP eported by survey participant |
| destLocID | Number | Destination location ID - Used to join to geocode table |
| destPrecision | Text | Geocode percision for Destination |
| destType | Text | Destination Type: 1 = home, 2 = work, 3 = other |
| frequency | Text | Trip Frequency: 1 = 3+/week, 2 = 1 or 2x/week, 3 = 1 or 2x/month, 4 = Don't Know / Refused |
| occupancy | Text | Vehicle Occupancy: 1 = one person, 2 = two persons, 3 = three or more persons |
| vehicleType | Text | Vehicle Type: 1 = Personal, 2 = Commercial, 3 = Large Truck, 4 = Container Truck. |

## Site ID and Name

| Site | Location Name | Travel Direction | Survey Day |
|---|---|---|---|
| Site 1 | US 301 SB - South of Statesboro | Outbound | MON PM - 1/12/09 |
| Site 2 | US 301 NB - South of Statesboro | Inbound | TUES AM - 1/13/09 |
| Site 3 | US 80 / US 25 NB Northwest of Statesboro | Outbound | TUES PM - 1/13/09 |
| Site 4 | US 80 / US 25 SB Northwest of Statesboro | Inbound | WED AM - 1/14/09 |
| Site 5 | US 301 NB - Northeast of Statesboro | Outbound | WED PM - 1/14/09 |
| Site 6 | US 301 SB - Northeast of Statesboro | Inbound | THU AM - 1/15/09 |
| Site 7 | US 80 SB - SE of Statesboro | Outbound | THU PM - 1/15/09 |
| Site 8 | US 80 NB - SE of Statesboro | Inbound | FRI AM - 1/16/09 |

## Geocodes and TAZ Attribution

| Field Name | Data Type | Field Type |
|---|---|---|
| locid | Number | Location ID - Join field to surveys |
| address | Text | Geocoded Address - Address Returned by Geocoder |
| state | Text | Geocoded State - Address Returned by Geocoder |
| city | Text | Geocoded City - Address Returned by Geocoder |
| zip | Number | Geocoded ZIP - Address Returned by Geocoder |
| precisionf | Text | Geocoded Precision Returned by Geocoder |
| latitude | Number | Latitude for location |
| longitude | Number | Longitude for location |
| warning | Text | Geocoder warning string |
| gc_level | Text | Precision based on combination of precision reported and warning |
| county | Text | Bulloch, Other or Unknown |
| taz | Number | TAZ ID from input TAZ shapefile |
| id | Number | ID from input TAZ shapefile |
| resultid | Number | Number of records returned for each locid |

# Appendix B

## Bulloch County 24-Hour Classification Traffic Counts at O&D Sites

| Time | US301 / SR73 North of Jimps Rd | | | | | | | US80 / US25 East of Williams Rd | | | | | | | US301 / SR73 North of Mill Creek Rd | | | | | | | US80 / SR26 West of Arcola Rd | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Northbound | | | Southbound | | | NB/SB Total | Eastbound | | | Westbound | | | EB/WB Total | Northbound | | | Southbound | | | NB/SB Total | Eastbound | | | Westbound | | | EB/WB Total |
| | Cars | Trucks | Total | Cars | Trucks | Total | | Cars | Trucks | Total | Cars | Trucks | Total | | Cars | Trucks | Total | Cars | Trucks | Total | | Cars | Trucks | Total | Cars | Trucks | Total | |
| 12:00 AM | 74 | 10 | 84 | 31 | 8 | 39 | 123 | 18 | 3 | 21 | 27 | 3 | 30 | 51 | 49 | 5 | 54 | 9 | 3 | 12 | 66 | 9 | 2 | 11 | 14 | 1 | 15 | 26 |
| 01:00 AM | 22 | 6 | 28 | 21 | 7 | 28 | 56 | 12 | 5 | 17 | 10 | 3 | 13 | 30 | 20 | 6 | 26 | 12 | 1 | 13 | 39 | 4 | 1 | 5 | 6 | 0 | 6 | 11 |
| 2:00 AM | 32 | 7 | 39 | 32 | 10 | 42 | 81 | 10 | 6 | 16 | 11 | 0 | 11 | 27 | 14 | 4 | 18 | 4 | 0 | 4 | 22 | 6 | 6 | 12 | 5 | 2 | 7 | 19 |
| 3:00 AM | 18 | 15 | 33 | 19 | 10 | 29 | 62 | 16 | 7 | 23 | 10 | 7 | 17 | 40 | 14 | 5 | 19 | 7 | 2 | 9 | 28 | 9 | 5 | 14 | 7 | 1 | 8 | 22 |
| 4:00 AM | 31 | 25 | 56 | 54 | 21 | 75 | 131 | 43 | 9 | 52 | 25 | 16 | 41 | 93 | 16 | 12 | 28 | 31 | 7 | 38 | 66 | 33 | 5 | 38 | 11 | 5 | 16 | 54 |
| 5:00 AM | 59 | 61 | 120 | 164 | 47 | 211 | 331 | 111 | 14 | 125 | 30 | 22 | 52 | 177 | 62 | 11 | 73 | 95 | 12 | 107 | 180 | 95 | 18 | 113 | 21 | 7 | 28 | 141 |
| 6:00 AM | 262 | 69 | 331 | 337 | 68 | 405 | 736 | 244 | 47 | 291 | 111 | 18 | 129 | 420 | 104 | 31 | 135 | 154 | 31 | 185 | 320 | 152 | 39 | 191 | 63 | 12 | 75 | 266 |
| 7:00 AM | 471 | 99 | 570 | 361 | 92 | 453 | 1,023 | 445 | 57 | 502 | 226 | 51 | 277 | 779 | 203 | 38 | 241 | 339 | 47 | 386 | 627 | 187 | 41 | 228 | 243 | 41 | 284 | 512 |
| 8:00 AM | 509 | 103 | 612 | 249 | 73 | 322 | 934 | 357 | 60 | 417 | 175 | 49 | 224 | 641 | 185 | 36 | 221 | 314 | 53 | 367 | 588 | 124 | 38 | 162 | 169 | 33 | 202 | 364 |
| 9:00 AM | 377 | 93 | 470 | 225 | 88 | 313 | 783 | 251 | 48 | 299 | 162 | 45 | 207 | 506 | 147 | 35 | 182 | 228 | 40 | 268 | 450 | 113 | 35 | 148 | 117 | 35 | 152 | 300 |
| 10:00 AM | 351 | 87 | 438 | 283 | 81 | 364 | 802 | 225 | 40 | 265 | 162 | 50 | 212 | 477 | 188 | 39 | 227 | 238 | 40 | 278 | 505 | 97 | 21 | 118 | 125 | 21 | 146 | 264 |
| 11:00 AM | 359 | 90 | 449 | 304 | 83 | 387 | 836 | 218 | 43 | 261 | 183 | 41 | 224 | 485 | 222 | 33 | 255 | 222 | 57 | 279 | 534 | 104 | 34 | 138 | 117 | 40 | 157 | 295 |
| 12:00 PM | 344 | 93 | 437 | 373 | 104 | 477 | 914 | 191 | 38 | 229 | 211 | 53 | 264 | 493 | 272 | 34 | 306 | 223 | 51 | 274 | 580 | 153 | 36 | 189 | 100 | 26 | 126 | 315 |
| 1:00 PM | 334 | 103 | 437 | 371 | 105 | 476 | 913 | 231 | 51 | 282 | 219 | 40 | 259 | 541 | 236 | 50 | 286 | 244 | 55 | 299 | 585 | 142 | 41 | 183 | 111 | 41 | 152 | 335 |
| 2:00 PM | 339 | 106 | 445 | 441 | 97 | 538 | 983 | 221 | 48 | 269 | 268 | 42 | 310 | 579 | 243 | 44 | 287 | 219 | 37 | 256 | 543 | 150 | 30 | 180 | 143 | 36 | 179 | 359 |
| 3:00 PM | 442 | 96 | 538 | 507 | 109 | 616 | 1,154 | 263 | 47 | 310 | 296 | 50 | 346 | 656 | 279 | 48 | 327 | 284 | 72 | 356 | 683 | 179 | 44 | 223 | 159 | 44 | 203 | 426 |
| 4:00 PM | 498 | 101 | 599 | 457 | 112 | 569 | 1,168 | 254 | 43 | 297 | 360 | 42 | 402 | 699 | 308 | 46 | 354 | 337 | 71 | 408 | 762 | 175 | 19 | 194 | 232 | 32 | 264 | 458 |
| 5:00 PM | 450 | 75 | 525 | 542 | 93 | 635 | 1,160 | 214 | 40 | 254 | 475 | 45 | 520 | 774 | 450 | 40 | 490 | 236 | 46 | 282 | 772 | 200 | 19 | 219 | 213 | 42 | 255 | 474 |
| 6:00 PM | 337 | 58 | 395 | 376 | 71 | 447 | 842 | 169 | 32 | 201 | 285 | 31 | 316 | 517 | 299 | 25 | 324 | 173 | 33 | 206 | 530 | 144 | 19 | 163 | 153 | 25 | 178 | 341 |
| 7:00 PM | 205 | 28 | 233 | 240 | 25 | 265 | 498 | 125 | 18 | 143 | 191 | 27 | 218 | 361 | 195 | 23 | 218 | 96 | 14 | 110 | 328 | 101 | 7 | 108 | 73 | 9 | 82 | 190 |
| 8:00 PM | 140 | 37 | 177 | 206 | 30 | 236 | 413 | 88 | 10 | 98 | 125 | 16 | 141 | 239 | 146 | 13 | 159 | 92 | 15 | 107 | 266 | 74 | 6 | 80 | 42 | 8 | 50 | 130 |
| 9:00 PM | 102 | 29 | 131 | 174 | 33 | 207 | 338 | 102 | 14 | 116 | 119 | 22 | 141 | 257 | 90 | 7 | 97 | 52 | 5 | 57 | 154 | 32 | 4 | 36 | 37 | 3 | 40 | 76 |
| 10:00 PM | 97 | 28 | 125 | 145 | 22 | 167 | 292 | 48 | 10 | 58 | 51 | 7 | 58 | 116 | 58 | 3 | 61 | 64 | 4 | 68 | 129 | 29 | 2 | 31 | 27 | 4 | 31 | 62 |
| 11:00 PM | 90 | 11 | 101 | 49 | 9 | 58 | 159 | 27 | 5 | 32 | 62 | 6 | 68 | 100 | 56 | 2 | 58 | 30 | 5 | 35 | 93 | 13 | 0 | 13 | 12 | 1 | 13 | 26 |
| **TOTAL** | **5,943** | **1,430** | **7,373** | **5,961** | **1,398** | **7,359** | 14,732 | **3,883** | **695** | **4,578** | **3,794** | **686** | **4,480** | 9,058 | **3,856** | **590** | **4,446** | **3,703** | **701** | **4,404** | 8,850 | **2,325** | **472** | **2,797** | **2,200** | **469** | **2,669** | 5,466 |