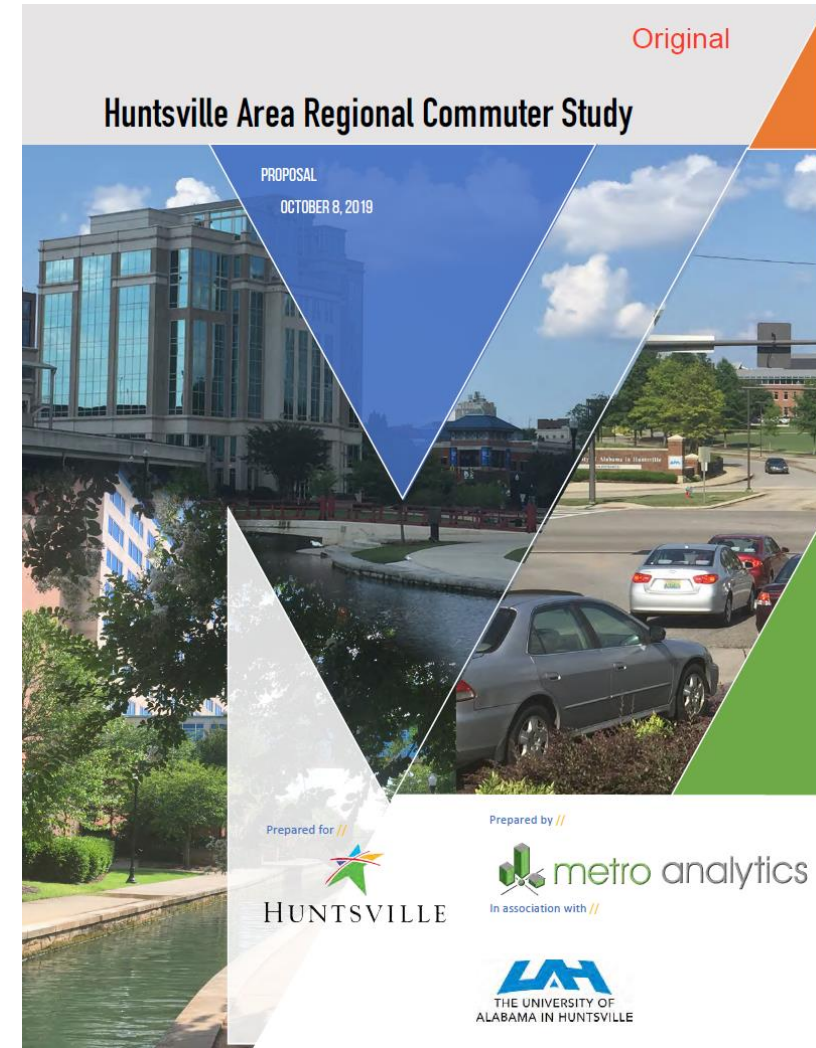


Huntsville Area Regional Commuter Study

1/30/2020 Meeting:
Project Overview & Initial Data Findings

Presented to:
Redstone Arsenal

Presented by:
Robert G. Schiffer, AICP
*National Practice Leader in
Travel Demand Forecasting
at Metro Analytics*



Presentation Overview

- Project purpose
- Project tasks
- Status update on obtaining data
- Initial data findings
- Arsenal coordination
- Project schedule
- Questions & comments



Huntsville Area Regional Commuter Study



Project Purpose

- Conduct a Regional Commuter Study to better understand worker travel patterns throughout Madison County, Alabama and adjoining counties
- Use findings as input to MPO's Congestion Management Plan and regional travel demand model



Huntsville Area Regional Commuter Study



Project Tasks

- Task 1: Data Collection
- Task 2: Data Presentation
- Task 3: Data Analysis and Presentation of Conclusions

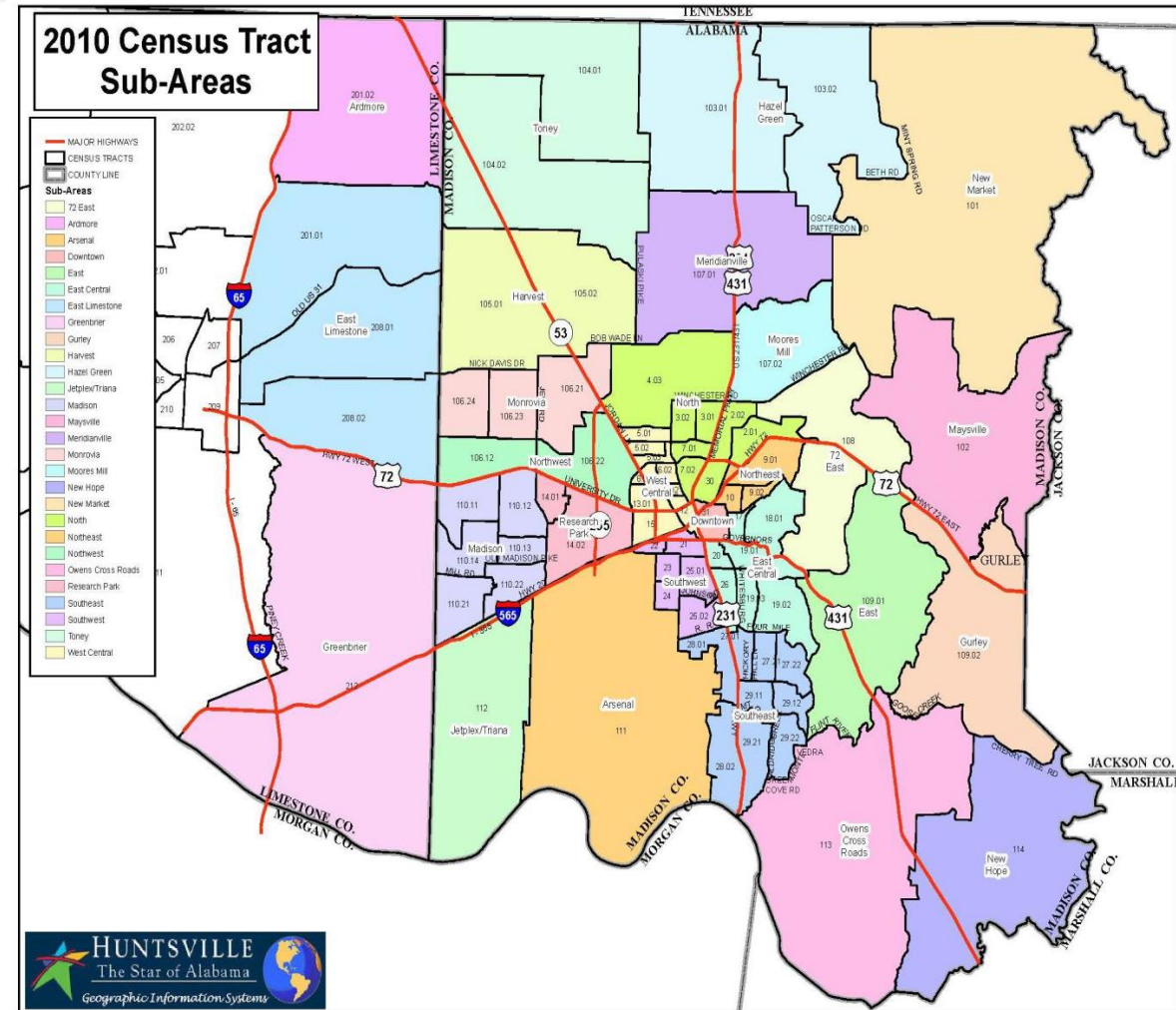


Huntsville Area Regional Commuter Study



Task 1: Data Collection

- Fill gaps in existing data sets on:
 - Commuting flows
 - Times leaving home
 - Travel patterns & routes
 - Focus on federal workers



Huntsville Area Regional Commuter Study



Task 1: Data Collection (cont'd)

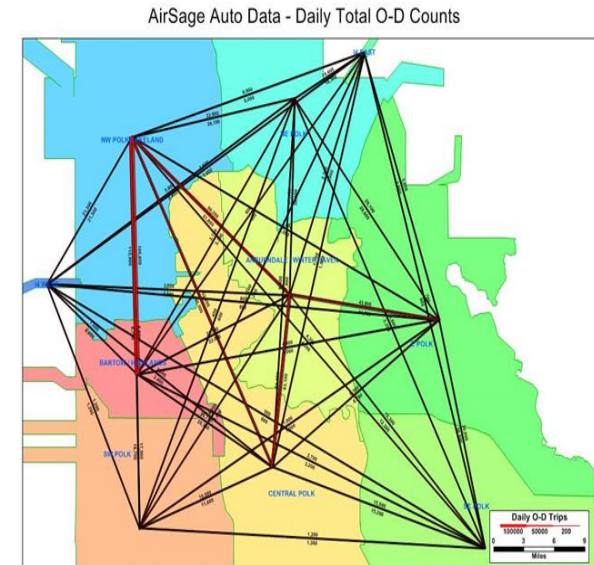
- Data sources for potential use:
 - Big data on origin/destinations
 - Proprietary employment data
 - Contact/surveys of employees at Redstone Arsenal

	ALTERNATIVE ORIGIN-DESTINATION (O/D) DATA SOURCES					
	PASSIVE TRAVEL SURVEY DATA COLLECTION					
Unique Characteristics of Methodology	High speed videotaping of license plates	Positioning of Bluetooth readers to match devices	Tracking of anonymous cellular data	Truck GPS tracking	Aerial tracking of vehicles	Tracking of multiple GPS device types
Vendor/Product Names (where applicable)	n/a	TrafficCast BlueToad	AirSage	ATRI	SkyComp	StreetLight Insight
General Description of Survey Approach	Tracking of vehicles by plate using videotaping	Tracking of vehicles using Bluetooth readers	Tracking of anonymous mobile devices	Tracking movement of trucks via GPS	Tracking vehicles using aerial photography	Tracking vehicles using GPS navigation data
Survey Sampling Unit	Vehicles	Bluetooth Device	Cellular Devices	Truck with GPS	Vehicles	Vehicles with GPS
Survey Period Typically Covered	Single trip (poss. followup survey)	Single trip (poss. tracking of day)	Single trip (poss. tracking of day)	Series of linked truck trips	Single trip within limited study area	Single trip (poss. tracking of day)
Relative Vintage of Approach	Well Established	Relatively Recent	Relatively Recent	Relatively Recent	Relatively Recent	Relatively Recent
Pros/Benefits to Approach	Can be first step in detailed survey	Flexibility to move or station readers	Very inexpensive; easy to self price	Inexpensive and flexible pricing	Creates permanent record	Piggybacked onto INRIX GPS data
Cons/Disadvantages of Approach	The most costly passive option	Requires equip. purchase or lease	Limited to two cellular carriers	Only a sample; mode limited	Potentially costly; small study area	Some issues with precision



Task 2: Data Presentation

- Data visualization
 - Aggregated TAZ to TAZ origin-destination matrix (intra-MPO)
 - 12 Surrounding Counties to aggregated TAZ origin-destination matrix
 - Time Leaving Home tables by aggregated origin TAZ, 12 surrounding counties
 - Graphic representation of % workers from outside MPO area
 - Commuter routes to subareas and 7 Arsenal gates

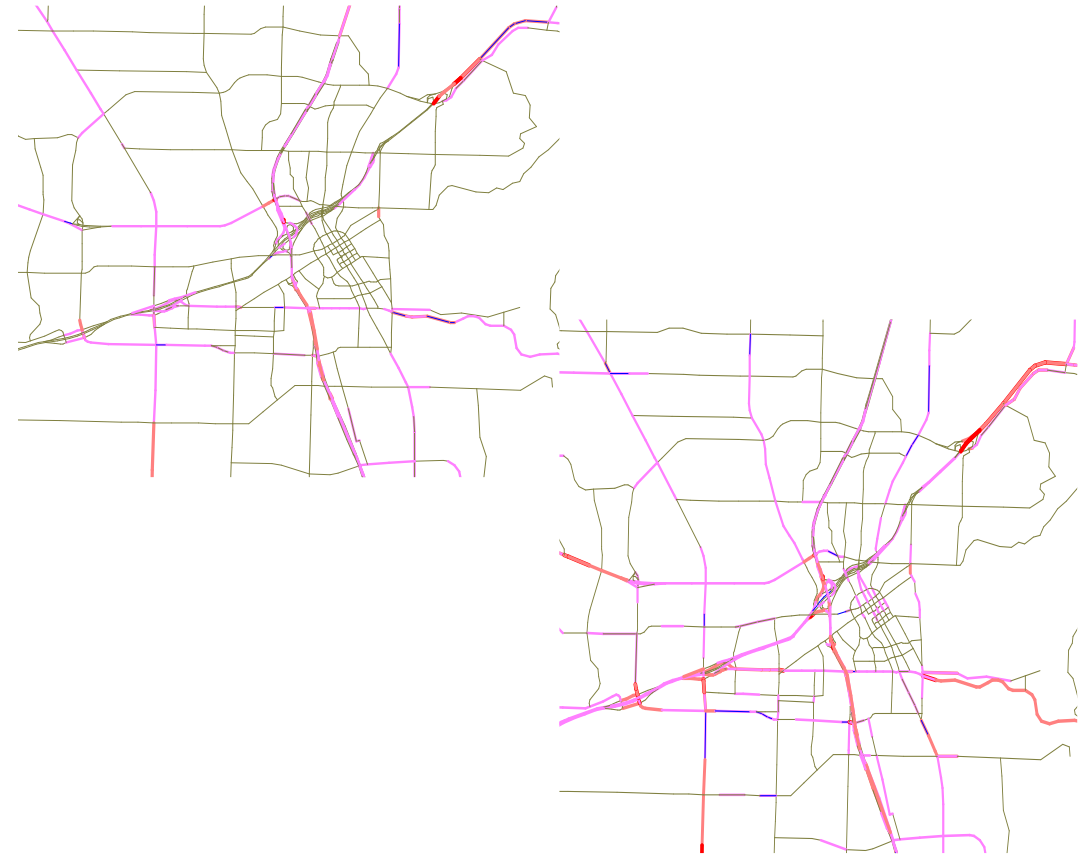


AirSage Auto Data – Daily Total O-D Counts



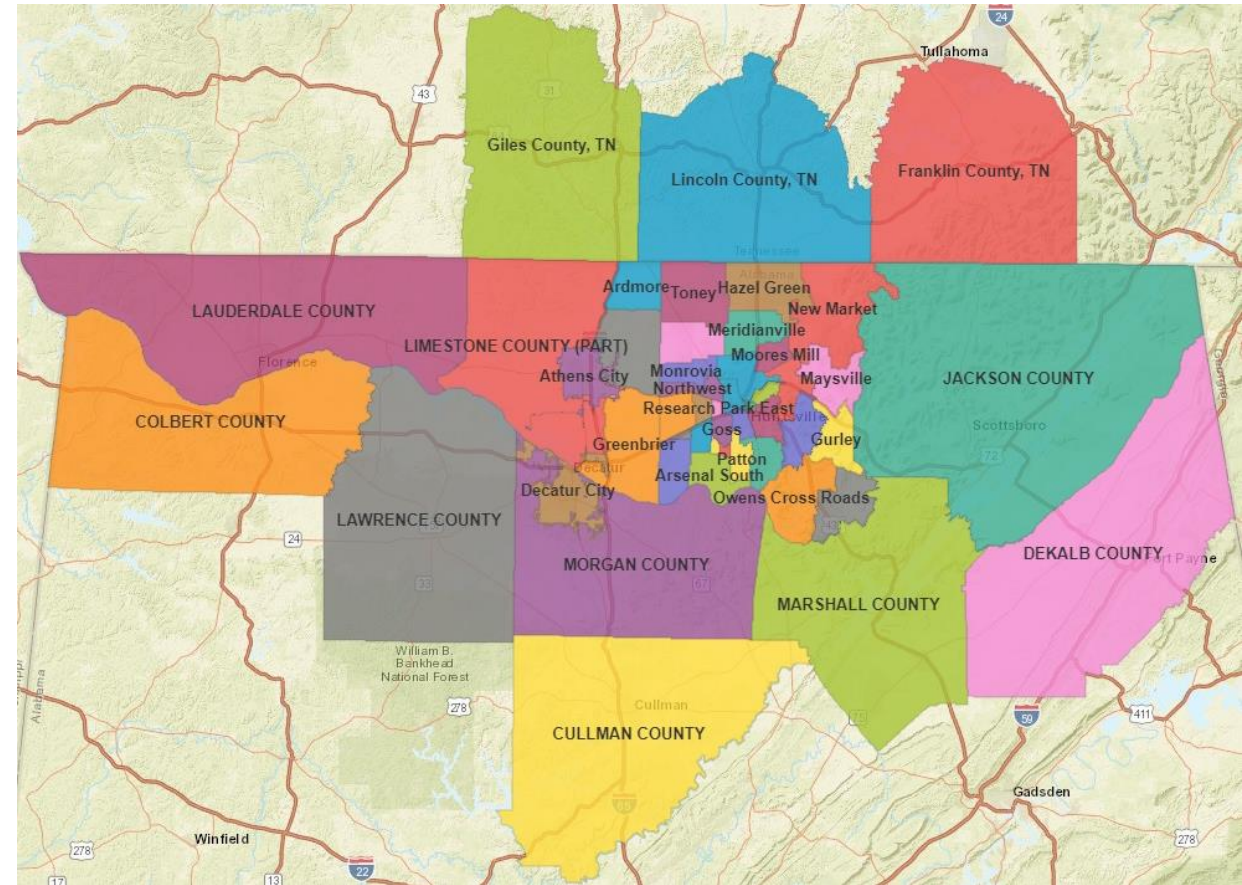
Task 3: Data Analysis and Presentation of Conclusions

- Presentation of findings to include:
 - Aggregate TAZ OD matrices into Journey to Work subareas
 - Time Leaving Home tables by subarea, 12 surrounding counties
 - List of opportunities for additional studies and improvements along congested routes
 - Recommendations for alternative commuter routes
 - Suggested park & ride transit locations



Status Update on Obtaining Data

- Data sources under consideration:
 - Big data on origin/destinations – *purchased StreetLight Insight and finalized map of 50 analysis districts*
 - Proprietary employment data – *common data already in use at MPO and other regional partners*
 - Contact/surveys of employees at Redstone Arsenal – *focus of today's presentation with Arsenal staff*

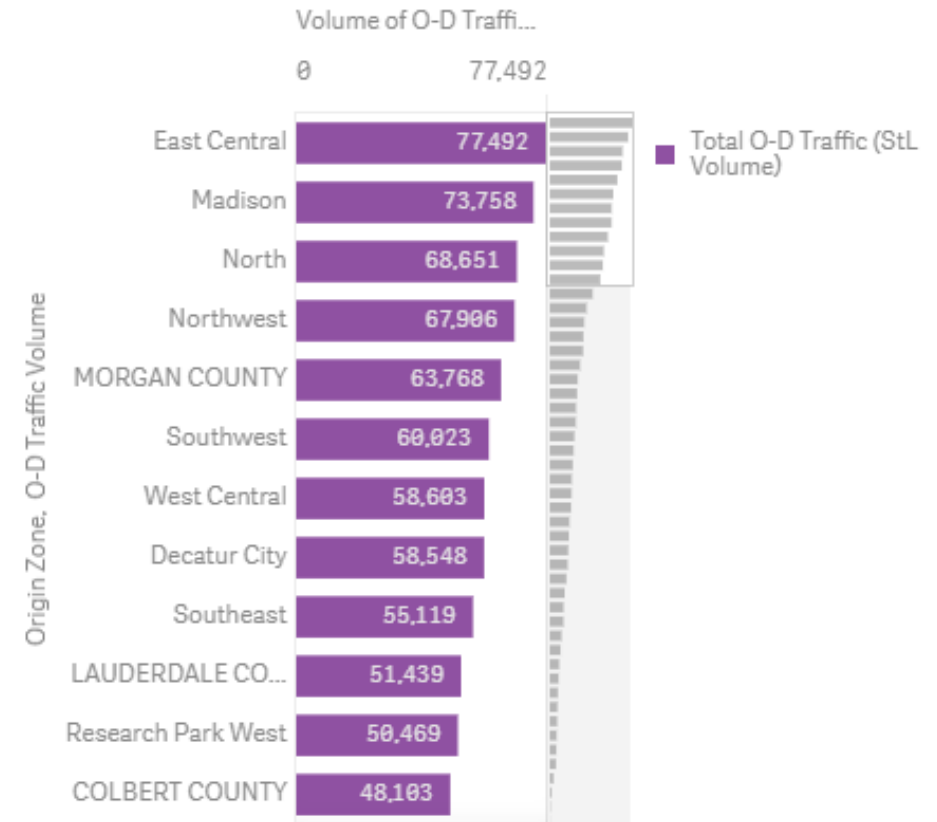


Initial Data Findings

- Rank Order of Weekday Trip Origins by Districts within MPO Area (*StreetLight Insight*)

1. East Central
2. City of Madison
3. North Huntsville
4. NW Madison County
5. Southwest of Downtown
6. West Central Huntsville
7. Southeast Huntsville
8. Research Park West

O-D Traffic Volume



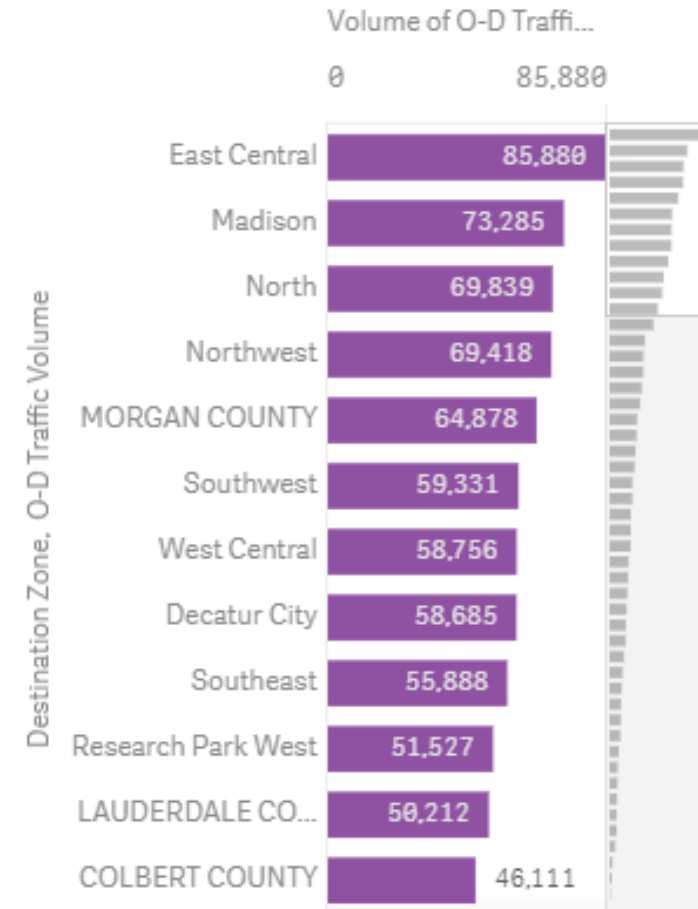
Initial Data Findings

- *Same Rank Order of Districts within MPO Area by Trip Destination (StreetLight Insight)*

1. East Central
2. City of Madison
3. North Huntsville
4. NW Madison County
5. Southwest of Downtown
6. West Central Huntsville
7. Southeast Huntsville
8. Research Park West

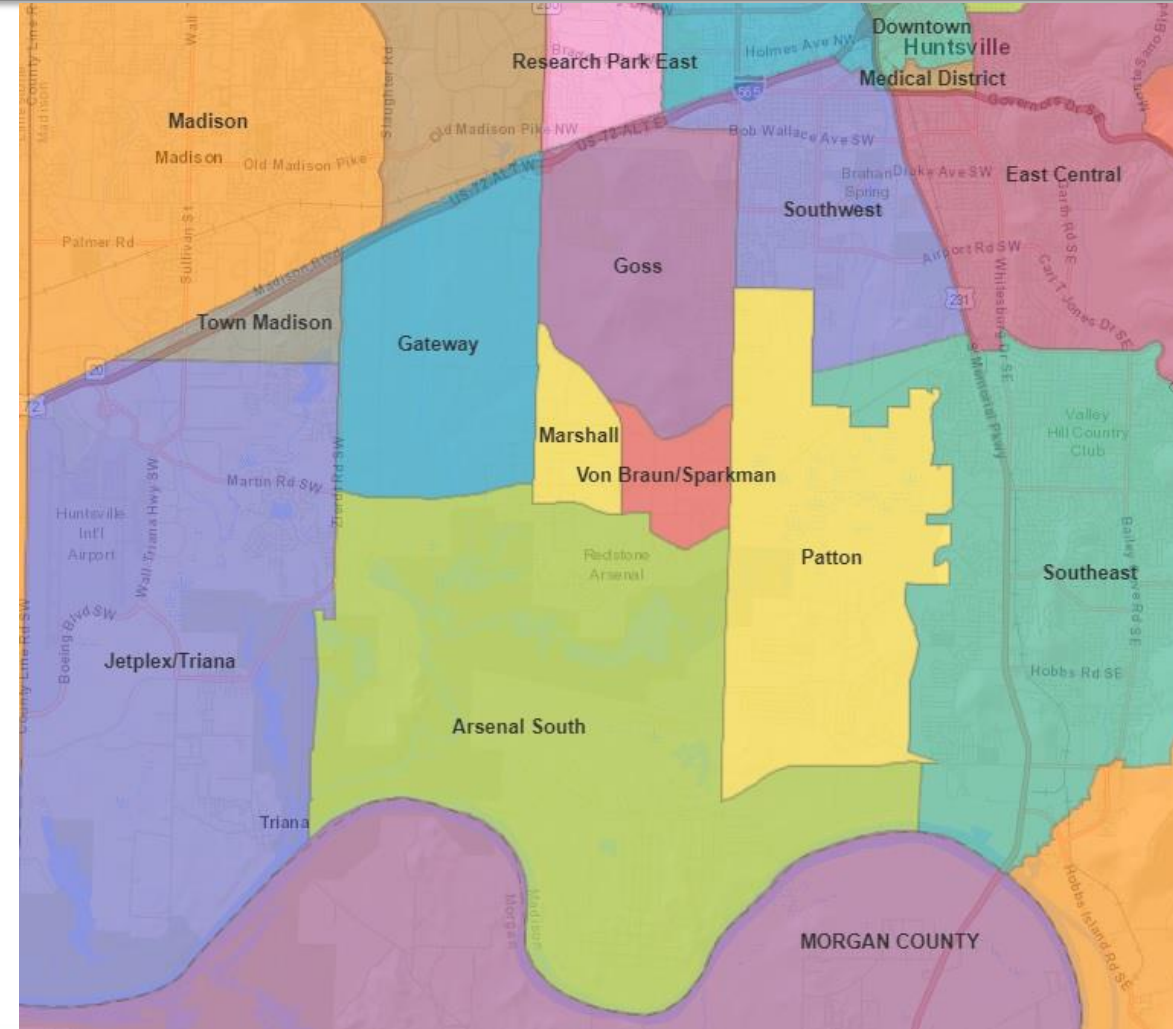
All 6 Arsenal Districts Combined = 57,200 Daily Weekday Trip Destinations

O-D Traffic Volume



Initial Data Findings (Cont'd)

- Rank Order of Weekday Trips to *Arsenal Districts (StreetLight Insight)*
 1. Southwest of Downtown to *Goss*
 2. City of Madison to *Gateway*
 3. Southeast Huntsville to *Von Braun*
 4. City of Madison to *Von Braun*
 5. Southeast Huntsville to *Marshall*
 6. East Central to *Von Braun*
 7. City of Madison to *Marshall*
 8. City of Madison to *Goss*



Arsenal Coordination

- While *StreetLight Insight* provides origin-destination patterns, data are implied on trip purposes; missing vehicle occupancy rates; and focused on intermediate stop locations
- Options for more anonymous data extraction:
 - Employment at Arsenal buildings and sites
 - Number of employees by home zip code
 - Postcard handout surveys at Arsenal Gates
 - Online survey of Arsenal employees

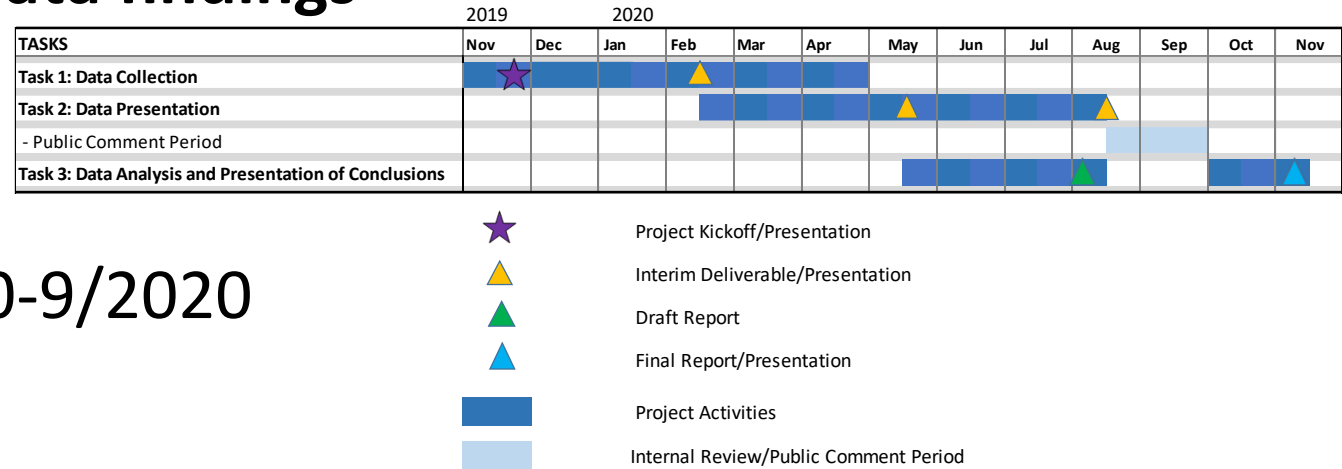


Huntsville Area Regional Commuter Study



Project Schedule

- *November 2019: Project initiation*
- ~~February~~ **January 2020: Initial data findings**
- May 2020: Data presentation
- August 2020: Draft report
- 45-day comment period: 8/2020-9/2020
- November 2020: Final report



Questions & Discussion



Huntsville Area Regional Commuter Study

