

Prepared for the Northwest Alabama Council of Local Governments City of Sheffield City of Tuscumbia





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# Table of Contents

Section I - Executive Summary	1
The Alternatives	
Evaluation Summary	
Next Steps	1
Section II - Study Summary	
Introduction	2
Project Description	
Section III – Existing Conditions	7
Site Conditions and Adjacent Land Use	<del>7</del>
Existing Transportation Facilities	7
Existing Roadway Levels of Service	8
Section IV – Future Year Traffic Analysis Without Project Traffic	<u> </u>
Analysis Methodology	c
Historical Growth Rate	c
Section V – Future Year with Project	13
Analysis Methodology	13
Alternative 1	15
Alternative 1 (Optional Enhanced Typical Section)	19
Alternative 2	21
Alternative 2 (Optional enhanced)	23
Alternative 4	25
Alternative 5	28
Alternative 5A	29
Section VI – Environmental Screening	31
Wetlands	31
FEMA Mapped Streams	32
Threatened and Endangered Species	33
Mammals	33
Fishes	33
Clams	33
Flowering Plants	
Hazardous Materials	
Historic Resources	
Historic Sites	
Cemeteries	

# List of Figures

Figure 1. Site Location and Vicinity Map	5
Figure 2. Inspiration Landing Conception Site Plan	6
Figure 3. 2017 & 2037 Background Estimated Daily Traffic Volumes	10
Figure 4. Access Alternatives Map	
Figure 5. Alternative 1 & 2 Access Map	16
Figure 6. Proposed Typical Section – Alternative 1 – West First St. from Montgomery Ave. to Georgia	
Ave	17
Figure 7. Proposed Typical Section – Alternative 1 – Georgia Ave	17
Figure 8. Alternative 1 – Georgia Ave. in Norfolk Southern ROW	18
Figure 9. Proposed Typical Section – Alternative 1 & 2 – 20 <sup>th</sup> Ave. to Entrance 1 & 2	18
Figure 10. Alternative 1 & 2 – Proposed Shared-Use Path in Undeveloped City ROW	
Figure 11. Recommended Typical Section (Optional Enhanced) – Alternative 1 – Georgia Ave	19
Figure 12. Recommended Typical Section (Optional Enhanced) – Alternative 1 & 2 – 20 <sup>th</sup> Ave. from	
Georgia Ave. to Entrance 1 & 2	20
Figure 13. Realignment of 20 <sup>th</sup> Ave. in Undeveloped City ROW	20
Figure 14. Proposed Typical Section – Alternative 2 – West First St. from Montgomery Ave. to Austin	
Ave	21
Figure 15. Proposed Typical Section – Alternative 2 – West First Street Extension	22
Figure 16. Alternative 2 – West First Street Extension	22
Figure 17. Proposed Typical Section – Alternative 2 – 20 <sup>th</sup> Ave. from West First St. Extension to Georg	
Ave	23
Figure 18. Alternative 4, 5, and 5A Access Map	24
Figure 19. Proposed Typical Section – Alternative 4 & 5– Hook St. from Sixth St. to North Commons	
Street	25
Figure 20. Proposed Typical Section – Alternative 4 – Hook St. from North Commons to Douglas St	26
Figure 21. Alternative 4 – Roundabout Concept at Hook St/Douglas St/West Montgomery Ave	27
Figure 22. Proposed Typical Section – Alternative 4 & 5– Douglas St., Blackwell Rd., Wilson Dam Ave.,	,
and 20 <sup>th</sup> Ave. to Second Entrance	28
Figure 23. Proposed Typical Section – Alternative 5A – North Commons Street Extension	30
Figure 24. Alternative 5A - Map of North Commons Street Extension to Blackwell Road	30
Figure 25. Wetlands in Project Area	32
Figure 26. Hazardous Materials Sites in Project Area	35
Figure 27 Cemeteries within Project Area	37

#### List of Tables

Table 1. Summary of Access Alternatives	2
Table 2. Summary of Alternatives Evaluation	3
Table 3. Inspiration Landing Land-Use Summary	4
Table 4. Existing Roadway Characteristics and Average Daily Traffic (ADT)	7
Table 5. Existing Daily LOS	8
Table 6. ALDOT Historical AADT Volumes and Growth Rate	11
Table 7. Year 2017 & 2037 Background Volumes & LOS	12
Table 8. Year 2017 & Year 2037 With Project Volumes & LOS	14
Table 9. Historic Sites within Project Area	36

# List of Appendices

Appendix A 2017 Existing Traffic and Background Data

Appendix B Trip Generation Study

Appendix C Without Project Level of Service Worksheets
Appendix D With Project Level of Service Worksheets

Appendix E Cost Estimates

Appendix F Georgia Avenue/Norfolk Southern Railroad Correspondence

# Section I - Executive Summary

Inspiration Landing is a proposed mixed-use entertainment, shopping, event and residential development located along the southern banks of the Tennessee River in the western part of the City of Sheffield. Preliminary plans for Inspiration Landing call for up to a 10,000-seat amphitheater, almost 200,000 square feet of retail, conference and event centers, a marina, lodging, approximately 130 single family home sites, and potentially elderly housing or assisted living.

The scale and nature of uses for Inspiration Landing make it a regional destination for a large number of motor vehicle trips during peak periods and special events. In order to access the regional transportation network, including US Highways 72 and 43, trips destined to/from the site could potentially traverse through or adjacent to a number of neighborhoods, industrial uses, a hospital, schools and the traditional downtowns of Sheffield and Tuscumbia.

The Shoals MPO, hosted by the Northwest Alabama Council of Governments (NACOLG), in partnership with the Cities of Sheffield and Tuscumbia, commissioned a study to better understand the transportation impacts of the proposed Inspiration Landing development and to identify and evaluate a set of access routes and associated improvements needed to those routes to handle the additional traffic generated by Inspiration Landing.

#### The Alternatives

The study team developed an initial list of eight route alternatives, which were subsequently refined to five, in consultation with NACOLG, Sheffield and Tuscumbia. For each alternative, necessary improvements are identified to ensure the route can address projected traffic impacts and provide adequate connectivity to the regional transportation network. Note that in many cases, the alternatives are not mutually exclusive. Some routes may complement others. Note: the alternative numbers are the original, preliminary alternative route numbers. Alternatives 1, 2, 4, 5 and 5A are the five alternatives that chosen for detailed study. The "missing" alternatives are the other preliminary routes which were identified that were not carried forward for detailed study. A summary of the five shortlisted route alternatives and the proposed improvements are shown in Table 1.

#### **Evaluation Summary**

The study team evaluated each alternative using a range of criteria, including regional access, route directness, cost, multimodal access, economic, environmental and community impacts, and preliminary estimated cost. The results of the evaluation are summarized in Table 2.

#### **Next Steps**

NACOLG, the Cities of Sheffield and Tuscumbia, and local and state partners will consider the results of the study and ultimately decide on a preferred alternative route or set of alternative routes to implement and improve. NACOLG and local partners will then enter the project development process and identify and pursue funding, which could include a mix of local, state and federal funds, and developer contributions.

# Table 1. Summary of Access Alternatives

Segment	Improvement	1 (Min)	1 (Opt)	2 (Min)	2 (Opt)	4	5	5A
West First Street from Montgomery Avenue to	Reconfigure existing street with 11 foot, eight inch travel lanes in each direction and a center turn lane.	х	х					
Georgia Avenue	Add curb and gutter and sidewalk to south side.	х	Х					
	Add lighting and street trees along right of way.	х	Х					
	As development traffic increases, study and optimize traffic signal timing at Montgomery Avenue at First Street traffic signal.	х	Х					
West First Street from Montgomery Avenue to	Reconfigure existing street with 11 foot, eight inch travel lanes in each direction and a center turn lane.			Х	Х			
Austin Avenue	Add curb and gutter and sidewalk to south side.			Х	Х			
	Add lighting and street trees along right of way.			Х	Х			
	As development traffic increases, study and optimize traffic signal timing at Montgomery Avenue at First Street traffic signal.			Х	Х			
Georgia Avenue from West First Street to 20th	Widen existing pavement to 24 feet (two 12 foot travel lanes in each direction).	х						
Avenue	Widen existing pavement to 36 feet (two 12 foot travel lanes in each direction and center turn lane).		х					1
	Add curb and gutter, sidewalk and shared-use path.	х	х					<u> </u>
	Realign east end of Georgia Avenue to eliminate existing sharp turns.	х	Х					<u> </u>
	Add lighting and street trees along right of way.	x	х					
20th Avenue from Georgia Avenue to Entrance 1	Widen existing pavement to 28 feet (two 12 foot travel lanes and two foot shoulder in each direction).	х		х				
and 2	Widen existing pavement to 40 feet (two 12 foot travel lanes in each direction and center turn lane).		х		Х			
	Add shared-use path in undeveloped City right of way. Add lighting and street trees along right of way.	х	Х	х	Х			
	Realign segment north of Treatment Plant Road to eliminate sharp curves.		Х		Х			
First Street Extension from Austin Avenue to 20th	New road extension with one 12 foot lane in each direction, curb and gutter, sidewalks, lighting and street trees.			х	Х			
Avenue (new road)	Possible mini or compact roundabout at intersection of new First Street Extension with 20th Avenue			х	х			
20th Avenue from First Street Extension to Georgia	Retain existing typical section (13.5 foot travel lane, on-street parking, bicycle lanes and sidewalks in each direction).			х	х			
Avenue	Add street trees along right of way.			х	х			
Hook Street from Sixth Street to North Commons	Retain existing roadway (13 foot travel lanes with curb and gutter on both sides).					Х	х	х
Street	Repair severely cracked and/or rutted pavement. Mill and install new asphalt wearing surface and striping.					Х	х	х
Hook Street from North Commons Street to	Retain existing roadway (11 foot travel lane with curb and gutter on both sides).					Х		
Douglas Street	Repair severely cracked and/or rutted pavement. Mill and install new asphalt wearing surface and striping.					Х		
Intersection of Hook Street, Douglas Street, Shop	Replace six-leg intersection with roundabout.							
Pike and West Montgomery Avenue						Х	Х	
Douglas Street from Hook Street to Blackwell Road	Retain existing roadway (10 to 11 foot lanes, no curb and gutter).					Х		
	Spot pavement repairs. Mill and install new asphalt wearing surface and striping.					Х		
Blackwell Road, Wilson Dam Avenue, and 20th	Retain existing roadway (10 to 11 foot lanes, no curb and gutter).					Х	х	х
Avenue to Entrance 1 and 2.	Spot pavement repairs. Mill and install new asphalt wearing surface and striping.					Х	х	х
20th Avenue at Entrance 1 and 2.	Add center left turn lanes and right turn lanes.					Х	х	х
Blackwell Road between City of Sheffield and Tuscumbia baseball parks	Widen road to 22 feet (11 foot travel lanes in each direction) near curve, add superelevation to curve, add curve warning signs south of ballpark.						х	
·	Add mid-block crossing, replace flashing beacons with pedestrian actuated rectangular rapid flashing beacon (RRFB).						х	
North Commons Street Extension from Hook Street	Twelve foot travel lanes, curb and gutter, sidewalks on both sides.							х
to Blackwell Road (new road)	Remove existing Blackwell Road railroad crossing and cul-de-sac Blackwell Road on both sides of old railroad crossing. Install new							
	active railroad crossing (lights, bells and gates) at new N Commons extension crossing.							х
	Possible roundabout at North Commons Street Extension and Blackwell Road intersection.							х

Table 2. Summary of Alternatives Evaluation

Criteria	1 (Min)	1 (Opt)	2 (Min)	2 (Opt)	4	5	5A		
Route Length (To Entrance 1)	0.93 miles	0.93 miles	1.07 miles	1.07 miles	2.00 miles	1.93 miles	1.90 miles		
Site Access	Entrance 1 and 2	Entrance 1 and 2	Entrance 1 and 2	Entrance 1 and 2	Entrance 1 and 2	Entrance 1 and 2	Entrance 1 and 2		
Regional Access	US 43/72	US 43/72	US 43/72	US 43/72	US 72	US 72	US 72		
Route Directness	Most direct. Very few turn	s to get from US 43 to site.	Slightly less direc	t than Alternate 1	Least direct. Drive	rs must execute at least three t	urns to access site.		
Aesthetics	Rout	e traverses through industrial la	and uses. Tree screening is prop	osed.	Route traverses mostly olde	er residential, commercial and l wooded areas.	ight industrial land uses and		
Economic Impact	Access to route traverses cor	nmercial land uses on SR 184 ar Sheffield's tradit	nd South Montgomery Avenue. ional downtown.	Route begins at south side of	Route passes withi	n five blocks of Tuscumbia's tra	ditional downtown.		
Multimodal Access	Sidewalks or shared-use paths proposed for entire length of route.		Sidewalks or shared-use paths proposed for entire length of route. Bicycle lanes included on 20th Avenue from First Street Extension to Georgia Avenue.		route. Bicycle lanes included on 20th Avenue from First		Existing sidewalk on east side of Hook Street from N Commons St. to Douglas St.	None	Sidewalks proposed on North Commons Street Extension.
Community Impacts	Hwy. and Hatch Blvd Pote	Potential for cut-through traffic on residential streets in Sheffield for vehicles attempting to access US 43/72 via Jackson Hwy. and Hatch Blvd Potential for cut-through traffic on residential and commercial streets in Sheffield for vehicles attempting to access US 43/72 via South Montgomery Avenue and Avalon Avenue.  Development traffic will impact residential properties on Hook South through traffic on residential streets in Tuscumbia for vehicles attempting to access US 43/72 via Sixth Street and Avalon Avenue and US 72 via Sixth Street and Avalon A					cles attempting to access US		
Environmental Impacts			No serious envir	onmental issues or major impac	cts are identified.				
Right of Way Impacts	Georgia Avenue, and 20th Av	Avenue may be in Norfolk	Proposed improvements on West First Street and 20th  Avenue within existing right of way. Proposed		Proposed improvements v	vithin existing right of way.	Most proposed improvements within existing right of way. New right of way needed for N Commons St. Extension.		
Preliminary Estimated Cost	\$3,435,000	\$4,449,000	\$3,230,000	\$4,002,000	\$2,121,000	\$1,772,000	\$3,059,000		

# Section II - Study Summary

#### Introduction

Gresham, Smith and Partners (GS&P), supported by Cambridge Systematics, performed a study to assess the potential traffic impacts related to the proposed Inspiration Landing development in Sheffield, Alabama. Inspiration Landing is proposed to be located along the south side of the Tennessee River west of Sheffield and Tuscumbia. The location and vicinity of Inspiration Landing is shown in Figure 1. The conceptual site plan is included in Figure 2.

The 261-acre mixed-use development is proposed to include lodging, entertainment, recreation, retail and residential uses. Because of the nature of the uses (i.e., type and intensity) and limited existing access to the site, this access study was initiated by the Shoals MPO, hosted by the Northwest Alabama Council of Local Governments (NACOLG), and the Cities of Sheffield and Tuscumbia. The intent of the access study is to identify new or improved routes to enter the site from the east and the south.

#### **Project Description**

The proposed Inspiration Landing Development land use details are presented in Table 3.

Land Use Amount Hotel • 150 rooms • 45,000 Sq. Ft. Conference Center • Two Event Centers (2,400-person capacity) Amphitheater • Up to 10,000 seats Retail/Town Center • 150,000 Sq. Ft. • 200 Seat Wedding Chapel Motorcoach Resort & Campsite • 40 Sites Marina • 321 Wet Slip Boat Dock • 150 Dry Slip Boat Storage • 30,000 Sq. Ft. Shopping • Lodging (14 Rooms) Residential

Table 3. Inspiration Landing Land-Use Summary

The Inspiration Landing Development will have three (3) access points: two (2) along West 20<sup>th</sup> Avenue in Sheffield and one access point to the residential section via Pickwick Street in Tuscumbia. The access locations are shown in the conceptual site plan (Figure 2).

134 Single Family Home SitesElderly Housing or Assisted Living

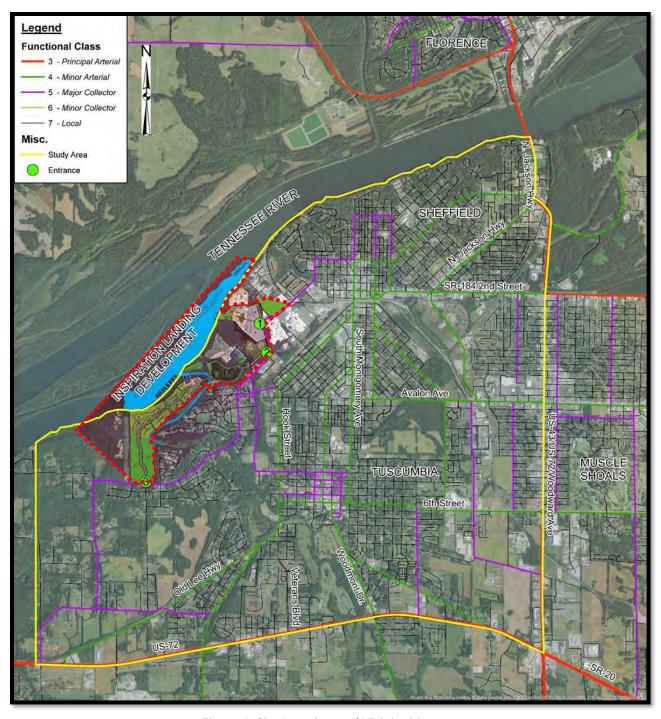


Figure 1. Site Location and Vicinity Map



Figure 2. Inspiration Landing Conception Site Plan

This study has been prepared in accordance with the following standards and includes the following data sources:

- Traffic Access and Impact Studies for Site Development, Institute of Transportation Engineers
- Trip Generation, 9<sup>th</sup> Edition, Institute of Transportation Engineers
- Trip Generation Handbook, 2001 Edition, Institute of Transportation Engineers
- Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, Federal Highway Administration
- Highway Capacity Manual 2010, Transportation Research Board
- A Policy on Geometric Design of Highways and Streets, 2011, American Association of State Highway Transportation Officials (AASHTO)

# Section III – Existing Conditions

### Site Conditions and Adjacent Land Use

Inspiration Landing is proposed to be located along the south side of the Tennessee River, west of Sheffield and Tuscumbia. Currently, the 261-acre parcel proposed for the Inspiration Landing development is largely undeveloped and primarily serves recreational uses. The land uses in the vicinity of the proposed development include a mixture of residential, industrial, commercial, and recreational uses.

### **Existing Transportation Facilities**

The intent of the study is to identify the adequacy of existing transportation facilities to serve the project at buildout without significantly compromising the mobility, convenience and safety of the surrounding community. While there are a number of existing roadways that can provide direct access to the site, a number of these potential corridors may need improvements to function adequately. In most instances, the use of existing facilities will require some infrastructure improvements to address substandard roadway widths (i.e., less than 18 feet of pavement for a two-lane roadway) or lack of multimodal accommodations (i.e., sidewalks and/or bicycle lanes) to provide for both vehicular and multimodal connections from existing places in Sheffield and Tuscumbia as well as visitors originating from outside of the immediate area to Inspiration Landing. Table 2 provides a description of the existing street system near the study area, including functional classifications and other characteristics.

Table 4. Existing Roadway Characteristics and Average Daily Traffic (ADT)

Roadway/ Segment	Functional Classification	No. of Lanes	Speed Limit (mph)	Count Year	Count ADT	On-Street Parking	Sidewalks	Bike Lanes
West 20 <sup>th</sup> Avenue								
West 3 <sup>rd</sup> St to Georgia Ave	Major Collector	2	35	2017*	2,200	Yes	Yes	Yes
Georgia Ave to Cherokee Pike	Major Collector	2	35	2015	2,800	No	No	No
Georgia Avenue								
West 20 <sup>th</sup> Ave to West First St	Local	2	35	2015	2,100	No	No	No
West First Street								
Georgia Ave to Montgomery Ave	Local	2	Not Posted	2017*	2,400	No	Yes	No
Blackwell Road								
Wilson Dam Ave to E Douglas St	Major Collector	2	35	2015	1,700	No	No	No
South of E Douglas St	Major Collector	2	35	2017*	1,100	No	No	No
E Douglas Street								
East of Blackwell Rd	Major Collector	2	Not Posted	2017*	1,500	No	No	No
N Hook Street								
North of Sixth St	Minor Arterial	2	35	2015	4,900	No	Partial	No

<sup>\*2017</sup> counts were obtained by National Data & Surveying Services as part of this project. All remaining counts were obtained from Alabama DOT and/or NACOLG.

### Existing Roadway Levels of Service

Based on the existing number of lanes and the existing average daily traffic (ADT) volumes (without added project traffic) shown in Table 4, the existing daily traffic operations were analyzed on the study roadways using the methodologies outlined in the 2010 Highway Capacity Manual (HCM).

According to the HCM, there are six levels of service (LOS) by which the operational performance of a roadway may be described. These levels of service range between LOS "A" which indicates a relatively free-flowing condition and LOS "F" which indicates operational breakdown. See Table 5 for the Existing Daily Level of Service (LOS) for the roadway network.

Table 5. Existing Daily LOS

Roadway/Segment	2017 ADT	2017 LOS				
West 20 <sup>th</sup> Avenue						
West 3 <sup>rd</sup> St to Georgia Ave	2,200	С				
Georgia Ave to Cherokee Pike	2,800	С				
Georgia Avenue						
West 20 <sup>th</sup> Ave to West First St	2,100	С				
West First Street						
Georgia Ave to Montgomery Ave	2,400	С				
Blackwell Road						
Fontana St to E Douglas St	1,700	С				
South of E Douglas St	1,100	С				
E Douglas Street						
East of Blackwell Rd	1,500	С				
N Hook Street						
North of Sixth St	4,900	С				

# Section IV – Future Year Traffic Analysis Without Project Traffic

### Analysis Methodology

The traffic impacts attributed to the proposed Inspiration Landing development are based on the following assumptions:

- Official dates for construction and phase completion are not available; therefore, the years 2017 and 2037 were chosen as analysis years in this study.
- The year 2017 and 2037 background (without Inspiration Landing) traffic volumes were derived by applying a 0.5 percent annual growth rate to the base year (2015) traffic volumes.

A detailed discussion of the methodology summarized above and the analysis results are contained in the remainder of this section.

#### Historical Growth Rate

The year 2017 and year 2037 background daily traffic volumes were forecasted by growing the 2015 base year daily traffic volumes at an estimated annual growth rate. The annual growth rate was estimated from traffic volume information obtained from the ALDOT's Traffic Data website. Historical average annual daily traffic (AADT) volumes and the corresponding growth rates calculated at 26 traffic count locations in the study area were obtained from the ALDOT's Transportation Planning Bureau website and are provided in Table 6. All 26 locations are not shown in the table, only a sampling of the data is shown.

Based on the growth rates calculated from the ALDOT's traffic data, a growth rate of 0.5 percent was assumed. This is assumed to be a conservative estimate, as a majority of the traffic volume history reflects growth of less than 0.5 percent annually and, in some cases, a decline.

The following formula was used for the traffic projections:

 $F = P (1+i)^n$ 

Where:

**F** = future projected traffic volume, vehicles per hour

**P** = 2015 daily traffic volume, vehicles per hour

i = annual growth rate = 0.5 percent (0.005) for background traffic

n = number of years in projection; 2 years for 2017 and 22 years for 2037

The year 2017 background daily traffic volumes and the year 2037 background daily traffic volumes are shown in Figure 3.

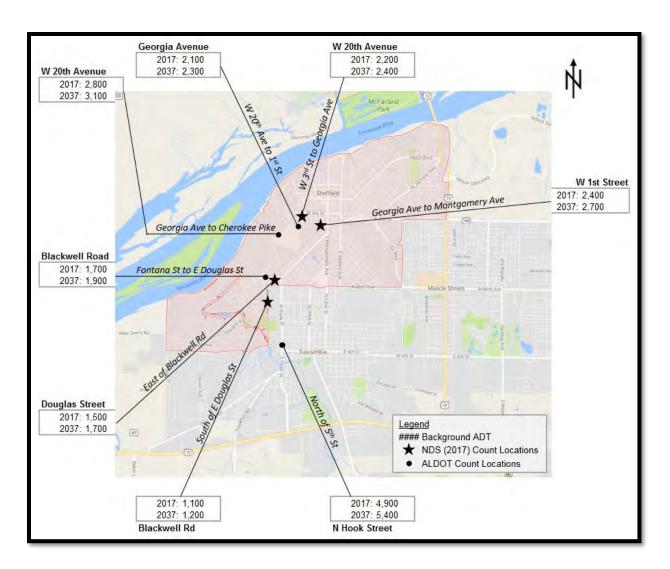


Figure 3. 2017 & 2037 Background Estimated Daily Traffic Volumes

Table 6. ALDOT Historical AADT Volumes and Growth Rate

	T		-
Year	Counter Sta. 635	Counter Sta. 214	Counter Sta. 266
Teal	AL Hwy 184 west of N	S Montgomery Ave	North Jackson Hwy
	Dover Ave	south of McTyre St	south of E 27 <sup>th</sup> St
	200017100	South of Wery to St	30411 01 2 27 30
2009	No Data	No Data	No Data
2010	No Data	No Data	No Data
2011	No Data	9,140	11,500
2012	No Data	9,050	11,390
2013	10,020	9,230	11,620
2014	14,680	9,300	11,710
2015	14,600	11,440	11,640
2016	No Data	No Data	No Data
2017	No Data	No Data	No Data
Historical Growth Rate	-0.27%	0.43%	0.24%
Annual Growth Rate for Study		0.50%	

Table 7. Year 2017 & 2037 Background Volumes & LOS

Roadway/Segment	2017 ADT	2017 LOS	2037 ADT	2037 LOS				
West 20 <sup>th</sup> Avenue								
West 3 <sup>rd</sup> St to Georgia Ave	2,200	С	2,400	С				
Georgia Ave to Cherokee Pike	2,800	С	3,100	С				
Georgia Avenue								
West 20 <sup>th</sup> Ave to West First St	2,100	С	2,300	С				
West First Street								
Georgia Ave to Montgomery Ave	2,400	С	2,700	С				
Blackwell Road								
Fontana St to E Douglas St	1,700	С	1,900	С				
South of E Douglas St	1,100	С	1,200	С				
E Douglas Street								
East of Blackwell Rd	1,500	С	1,700	С				
N Hook Street								
North of 5 <sup>th</sup> St	4,900	С	5,400	С				

# Section V – Future Year with Project

### Analysis Methodology

The traffic impacts related to the proposed Inspiration Landing development were analyzed as follows:

- See discussion in Analysis Methodology for Future Year Traffic Analysis Background for general discussion of analysis methodology.
- Trip distribution of site-generated traffic was developed based on expected users of the development and the logical travel paths to and from major travel corridors in the vicinity of the site. This trip distribution model was generated from the MPO's travel demand model.
- The estimated daily site-generated traffic for the proposed Inspiration Landing development was assigned to the roadway network and added to the Year 2017 and 2037 Background traffic volumes to derive the Year 2017 and 2037 With Project traffic.
- The Year 2017 With Project and Year 2037 With Project traffic volumes were used to determine the traffic impacts related to the proposed Inspiration Landing Development and needed improvements.

A detailed discussion of the methodology summarized above and the analysis results are contained in the remainder of this section. The term "With Project" refers to traffic conditions with the proposed Inspiration Landing development traffic added.

See Appendix D for LOS Figures for all access alternatives.

Table 8. Year 2017 & Year 2037 With Project Volumes & LOS

Roadway/Segment	2017 ADT	2017 LOS	2037 ADT	2037 LOS					
Alternative 1 Access Route: First Street/Georgia Avenue/20 <sup>th</sup> Avenue									
West First Street	T								
Georgia Ave to Montgomery Ave	6,595	С	6,895	D					
Georgia Avenue	T								
West 20 <sup>th</sup> Ave to West First St	6,295	С	6,495	С					
West 20 <sup>th</sup> Avenue									
Georgia Ave to Cherokee Pike	7,852	D	8,152	D					
Alternative 2 Access Route: First Stree	t /First Street Ext	tension (new roa	dway)/20 <sup>th</sup> Avenı	ıe					
West First Street									
Georgia Ave to Montgomery Ave	6,595	С	6,895	D					
West 20 <sup>th</sup> Avenue									
West 3 <sup>rd</sup> St to Georgia Ave	7,252	D	7,452	D					
Georgia Ave to Cherokee Pike	7,852	D	8,152	D					
Alternative 4 Access Route: Hook Stre	et/Douglas Stree	t/Blackwell Road	/20 <sup>th</sup> Avenue						
N Hook Street									
North of 5 <sup>th</sup> St	7,908	D	8,408	D					
E Douglas Street									
East of Blackwell Rd	5,130	С	5,330	С					
Blackwell Road									
Fontana St to E Douglas St	5,411	С	5,611	С					
Alternative 5A Access Route: Hook Str	eet/N Commons	Street Extension	/Blackwell Road/	20 <sup>th</sup> Avenue					
N Hook Street									
North of 5 <sup>th</sup> St	4,900	С	5,400	С					
Blackwell Road									
South of East Douglas St	4,197	С	4,297	С					
Fontana St to E Douglas St	5,411	С	5,611	С					

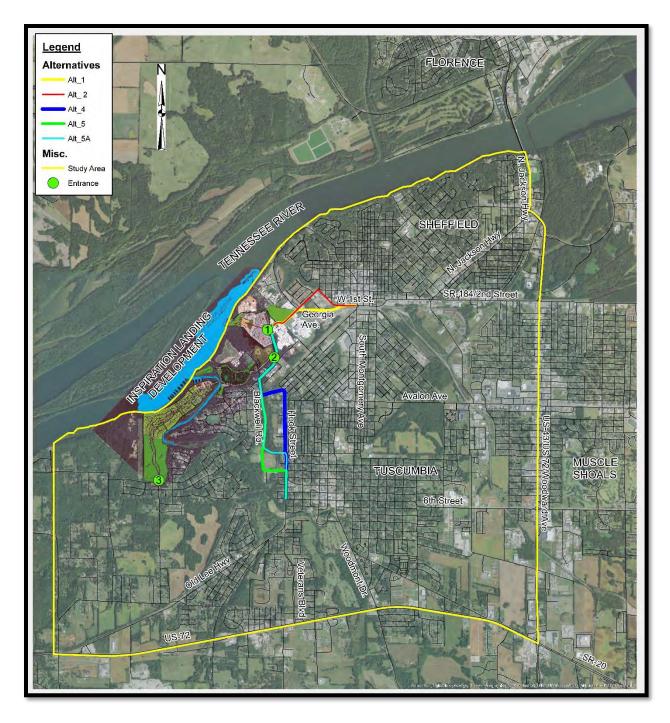


Figure 4. Access Alternatives Map

### Alternative 1

The Alternative 1 access route includes the signalized intersection of First Street and Montgomery Avenue in downtown Sheffield and uses West First Street, Georgia Avenue, and 20<sup>th</sup> Avenue to access Entrance 1 or Entrance 2 to the development. From the First Street and Montgomery Avenue intersection, Woodward Avenue (US-43 and US-72) is easily accessible via Second Street (SR-184), North Jackson Highway, Montgomery Avenue, and Avalon Avenue. The Alternative 1 access route is shown in Figure 5.

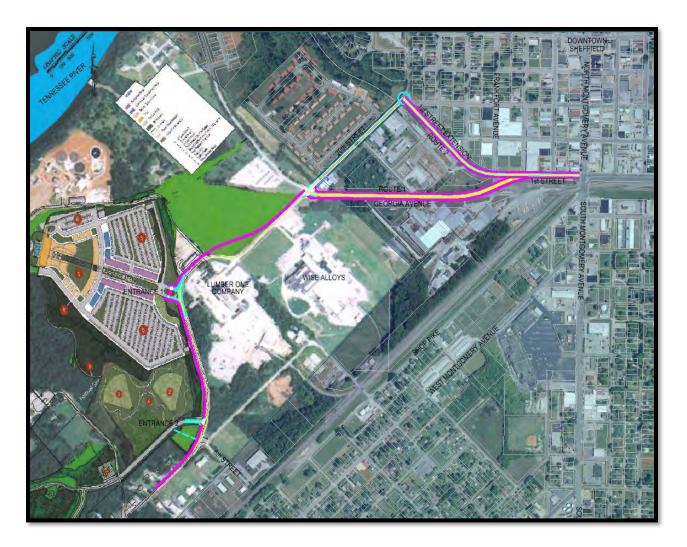


Figure 5. Alternative 1 & 2 Access Map

The proposed minimum roadway typical section of Alternative 1 along West First Street from Montgomery Avenue to Georgia Avenue is shown in Figure 6. The existing 35-foot roadway and the curb and gutter and sidewalks on the north side of West First Street can be retained. New curb and gutter and sidewalks are proposed on the south side of the West First Street. The existing roadway is proposed to be configured with one travel lane in each direction with a center two-way left turn lane, each at a width of 11 feet-8 inches. Street lighting and street trees may also be added for safety and aesthetics. This design can be achieved within the existing right of way (ROW).

The proposed minimum typical section of Alternative 1 along Georgia Avenue is shown in Figure 7. The existing Georgia Avenue pavement width is proposed to be widened to 24 feet (not including curb and gutter) to accommodate a 12-foot travel lane in each direction. Curb and gutter may be added to give the roadway a more urban feel. A five-foot minimum sidewalk and 12-foot minimum shared-use path, that can accommodate bi-directional bicycle and pedestrian traffic is recommended along either side of Georgia Avenue to provide pedestrian and bicycle connectivity to Inspiration Landing. The addition of street trees along the edge of the ROW is recommended to provide screening of the roadway from the adjacent industrial land uses.

There is a generous 200 to 250 feet wide Right-of-Way (ROW) along Georgia Avenue from West 16th Street to 20<sup>th</sup> Avenue. A segment of the Georgia Avenue roadway should be realigned to eliminate the two sharp turns at the intersection with West First Street. This proposed realignment as well as existing Georgia Avenue east of West 16<sup>th</sup> Street lie within ROW owned by Norfolk Southern Railroad according to Colbert County tax maps (Figure 8). In discussions with the railroad, it may be possible to buy the ROW from them for the proposed improvements.

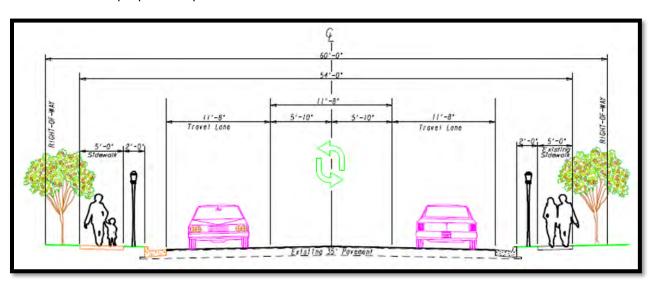


Figure 6. Proposed Typical Section – Alternative 1 – West First St. from Montgomery Ave. to Georgia Ave.

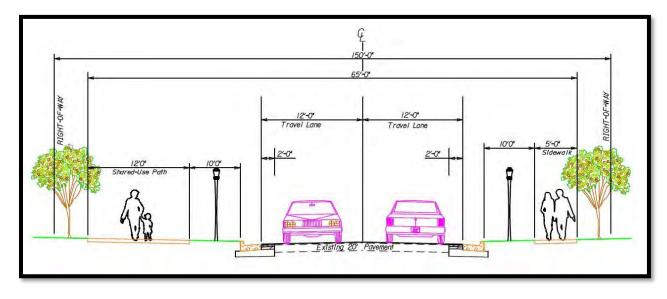


Figure 7. Proposed Typical Section – Alternative 1 – Georgia Ave.



Figure 8. Alternative 1 – Georgia Ave. in Norfolk Southern ROW

The proposed minimum typical section of Alternative 1 along 20<sup>th</sup> Avenue from Georgia Avenue to Entrance 1 & 2 is shown in Figure 9. The existing roadway is approximately 22 feet wide. The proposed typical section includes an additional three feet on each side to include 12 foot lanes with two foot paved shoulders. The proposed typical section also includes a 12-foot shared-use path on the west side and street trees near the ROW line to screen the roadway from the adjacent industrial land uses. The proposed shared-use path could also be constructed in the undeveloped city ROW on the west side of 20<sup>th</sup> Avenue to the northeast of Treatment Plant Road (Figure 10).

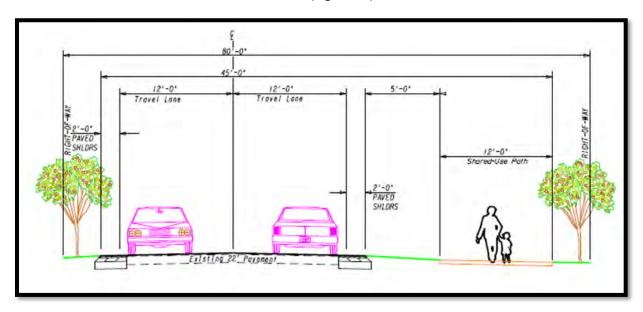


Figure 9. Proposed Typical Section – Alternative 1 & 2 – 20<sup>th</sup> Ave. to Entrance 1 & 2

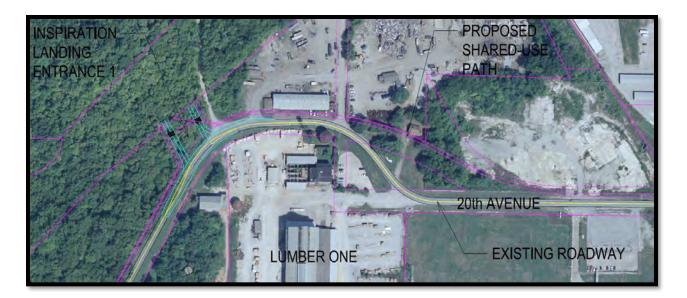


Figure 10. Alternative 1 & 2 - Proposed Shared-Use Path in Undeveloped City ROW

## Alternative 1 (Optional Enhanced Typical Section)

The recommended optional enhanced typical section of Alternative 1 along West First Street from Montgomery Avenue to Georgia Avenue is shown in Figure 6 and is the same as the proposed three-lane typical section (minimum design).

The recommended optional enhanced typical section of Alternative 1 along Georgia Avenue is shown in Figure 11. The existing roadway is proposed to be widened to 36 feet to include one travel lane in each direction and a center two-way left turn lane, each 12 feet wide. The center two-way left turn lane could be used as an additional entry/exit lane for large events at the amphitheater. This recommended typical section also includes a five-foot sidewalk and 12 foot shared-use path along either side, lighting and street trees along the ROW line to screen the roadway from the adjacent industrial land uses. The proposed lighting can be a hybrid roadway and pedestrian lighting design with accommodations for banners for special events or concerts at Inspiration Landing.

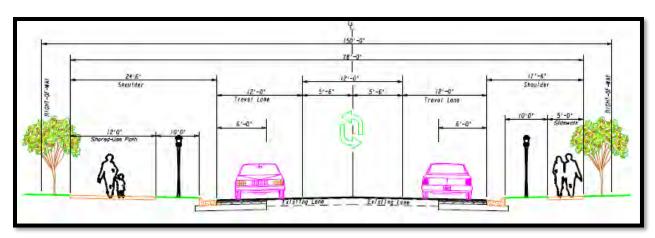


Figure 11. Recommended Typical Section (Optional Enhanced) – Alternative 1 – Georgia Ave.

The recommended optional enhanced typical section of Alternative 1 along 20<sup>th</sup> Avenue from Georgia Avenue to Entrance 2 is shown in Figure 12. Recommendations include widening the existing 22-foot travel way to include one 12-foot travel lane in each direction with a 12-foot center two-way left turn lane for a total of 36 feet. The center two-way left turn lane could be used as an additional exit/entry lane for large events at the Amphitheater. This recommended typical section also includes a 12-foot shared-use path on the west side and adding street trees along the ROW on both sides to screen the road from the adjacent industrial land uses. This ultimate design also proposes to realign 20<sup>th</sup> Avenue into the existing, undeveloped city ROW north of Treatment Plan Road to improve the two existing back-to-back curves (Figure 13).

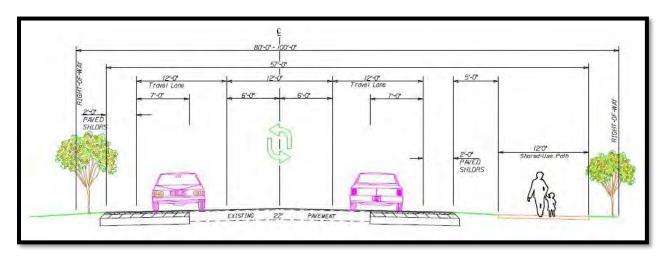


Figure 12. Recommended Typical Section (Optional Enhanced) – Alternative 1 &  $2-20^{th}$  Ave. from Georgia Ave. to Entrance 1 & 2

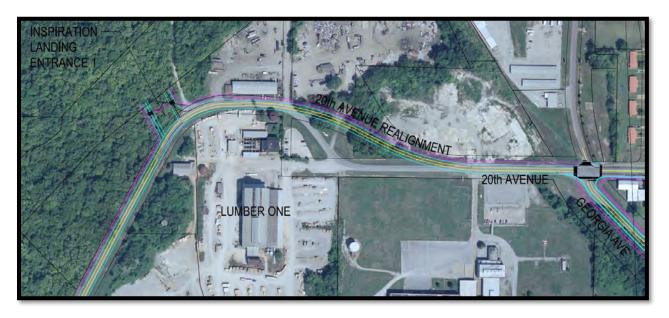


Figure 13. Realignment of 20th Ave. in Undeveloped City ROW

#### Alternative 2

The Alternative 2 access route includes the signalized intersection of First Street and Montgomery Avenue in downtown Sheffield and uses the eastern portion of existing West First Street, a new West First Street Extension (new roadway) and 20<sup>th</sup> Avenue to access Entrances 1 and 2 to the development. From the First Street and Montgomery Avenue intersection, Woodward Avenue (US-43 and US-72) is easily accessible via Second Street (SR-184), North Jackson Highway, Montgomery Avenue, and Avalon Avenue. The Alternative 2 access route is shown in Figure 5.

The proposed minimum typical section of Alternative 2 along West First Street from Montgomery Avenue to Austin Avenue is shown in Figure 14. The existing 35-foot pavement width and the curb and gutter and sidewalk on the north side of the street are proposed to be retained. New curb and gutter and sidewalk is proposed on the south side of West First Street.

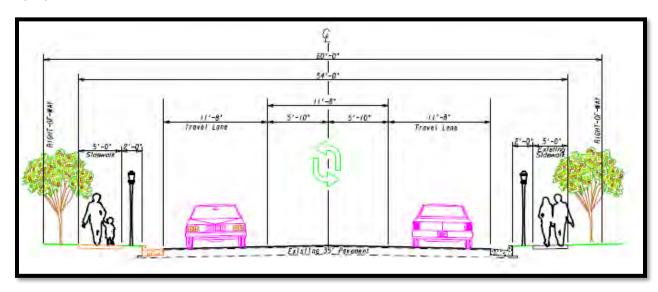


Figure 14. Proposed Typical Section – Alternative 2 – West First St. from Montgomery Ave. to Austin Ave.

Alternative 2 proposes to extend West First Street northwest through an existing city ROW (150 feet wide) to the intersection at 20th Avenue. The proposed minimum typical section of the West First Street Extension is shown in Figure 15. The proposed typical section includes two 12 foot lanes with curb and gutter, sidewalk, street trees and street lighting. Street trees would screen the roadway from adjacent industrial land uses. See Figure 16 for the location and conceptual layout of the West First Street Extension.

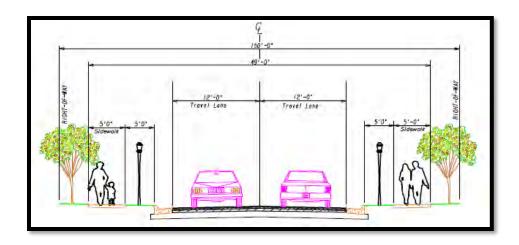


Figure 15. Proposed Typical Section – Alternative 2 – West First Street Extension



Figure 16. Alternative 2 – West First Street Extension

The section of Alternative 2 on 20<sup>th</sup> Avenue from the West First Street Extension to Georgia Avenue will utilize the existing typical section, which includes two 13.5-foot travel lanes with eight foot on-street parallel parking, five-foot bike lanes and five-foot sidewalks on both sides of the road. Street trees could be added along the ROW to screen the roadway from adjacent industrial land uses; however, no major improvements are needed. See Figure 17 for the existing typical section of 20<sup>th</sup> Avenue between the West First Street Extension and Georgia Avenue.

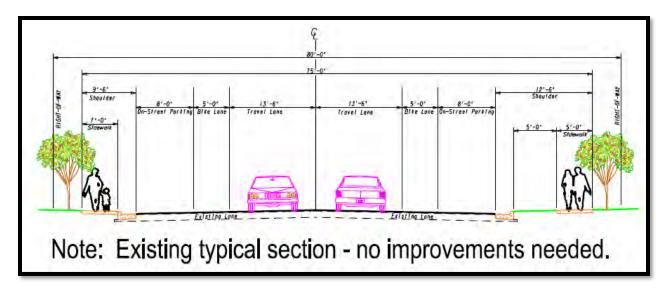


Figure 17. Proposed Typical Section – Alternative 2 – 20<sup>th</sup> Ave. from West First St. Extension to Georgia Ave.

The proposed minimum typical section of Alternative 2 along 20<sup>th</sup> Avenue from Georgia Avenue to Entrance 1 and 2 is shown in Figure 9 above. This is the same proposed typical section as Alternative 1. The existing roadway is approximately 22 feet wide. The proposed typical section includes widening three feet to each side to give this section of 20<sup>th</sup> Avenue a full 24-foot travel way (two 12 foot lanes) with two foot paved shoulders. This proposed typical section also includes a 12-foot shared-use path on the west side and street trees near the existing ROW line to screen the road from adjacent industrial land uses. The proposed shared-use path could be constructed in undeveloped city ROW to the northeast of Treatment Plant Road (Figure 10).

### Alternative 2 (Optional enhanced)

The recommended optional enhanced typical section of Alternative 2 along West First Street from Montgomery Avenue to Austin Avenue, along the proposed West First Street Extension, and along 20<sup>th</sup> Avenue from the West First Street Extension to Georgia Avenue is the same as the proposed minimum typical section for Alternative 2. This is shown in Figure 14, Figure 15, and Figure 17. The recommended optional enhanced typical section of Alternative 2 along 20<sup>th</sup> Avenue from Georgia Avenue to Entrance 1 and 2 is the same as the Alternative 1 recommended optional enhanced typical section (see Figure 12 above). The recommended optional enhanced typical section widens the existing 22-foot travel way to include two 12-foot travel lanes in each direction with two foot paved shoulders and a twelve-foot center two-way left turn lane. The center two-way left turn lane can be used as an additional exit/entry lane for large events at the amphitheater. It is recommended that 20<sup>th</sup> Avenue be realigned through the undeveloped city ROW northeast of Treatment Plant Road to improve the existing sharp back-to-back curves (Figure 13). This recommended typical section also includes constructing a 12-foot shared-use path on the west side and adding street trees near the existing ROW line to screen the road from adjacent industrial land uses.

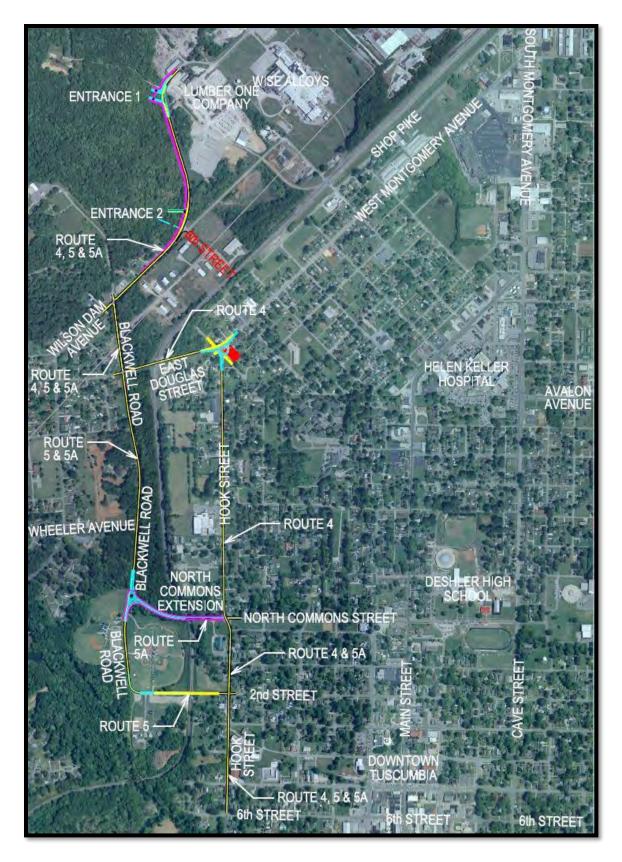


Figure 18. Alternative 4, 5, and 5A Access Map

#### Alternative 4

Alternative 4 provides southern site access from Tuscumbia. The Alternative 4 access route uses Hook Street, Douglas Street, Blackwell Road, Wilson Dam Avenue and 20<sup>th</sup> Avenue to access Entrances 1 and 2 to the development. From the south end of Hook Street in Tuscumbia, Woodward Avenue (US-43/72) is easily accessible via Sixth Street. US-72 is also easily accessible via Veterans Boulevard, Old Lee Highway and Woodmont Drive. The Alternative 4 access route is shown in Figure 18.

The proposed typical section of Alternative 4 along Hook Street from Sixth Street to North Commons Street is shown in Figure 19. The existing 26-foot roadway (one 13-foot travel lane in each direction) and curb and gutter can be retained. The asphalt pavement in this section of Hook Street is deteriorating as evidenced by large areas of block cracking and some rutting. Asphalt patching and leveling are needed. A pavement evaluation should be performed to determine the areas and type of pavement rehabilitation needed. Since Hook Street may become one of the primary routes to and from Inspiration Landing, it is recommended that, after the needed repairs noted above are made, the asphalt pavement be milled and overlaid with a new asphalt wearing surface, approximately one and a half inches thick, and new striping installed.

The proposed minimum typical section of Alternative 4 along Hook Street from North Commons Street to Douglas Street is shown in Figure 20. The existing 22-foot roadway (one 11-foot travel lane in each direction) and the curb and gutter on both sides will be retained. Like the southern section of Hook Street, this portion of Hook Street will also need some spot pavement repair or rehabilitation. It is recommended that the asphalt pavement be milled and overlaid with a new asphalt wearing surface, approximately one and a half inches thick, and new striping installed.

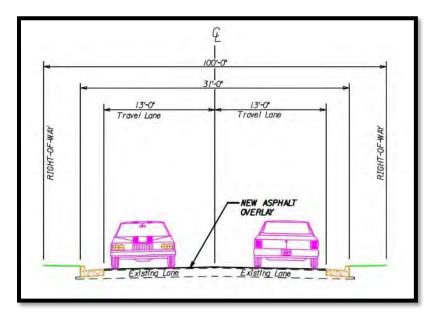


Figure 19. Proposed Typical Section – Alternative 4 & 5– Hook St. from Sixth St. to North Commons Street

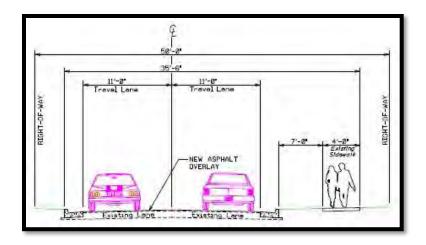


Figure 20. Proposed Typical Section – Alternative 4 – Hook St. from North Commons to Douglas St.

Currently, the intersection of Hook Street, Douglas Street, Shop Pike and West Montgomery Avenue is somewhat confusing. The current intersection has six (6) legs. Intersections with more than four legs are generally considered good candidates for roundabouts. Figure 21 includes a concept sketch to showing how a small roundabout could possibly be configured at this intersection. Shop Pike, the west leg of West Montgomery Avenue and Seventh Street, may not be able to directly access the proposed roundabout. However, with the existing street grid, residents and businesses on these short streets do have easy access to the adjacent streets to access Hook Street and West Montgomery Avenue. A detailed traffic analysis of the proposed roundabout was not performed as part of this study. However, based on the existing and projected volumes of the approach streets and field observations, a single lane roundabout will work at this location.

The proposed typical section for Alternative 4 for Douglas Street, Blackwell Road, Wilson Dam Avenue, and 20<sup>th</sup> Avenue to Entrance 2 is shown in Figure 22. The existing roadways, which range from 20 to 22 feet in width, can be retained and overlaid with a new asphalt wearing surface with some spot repairs (patching and leveling). Left and right turn lanes are recommended on 20<sup>th</sup> Avenue at Entrance 1 and 2 to the development.

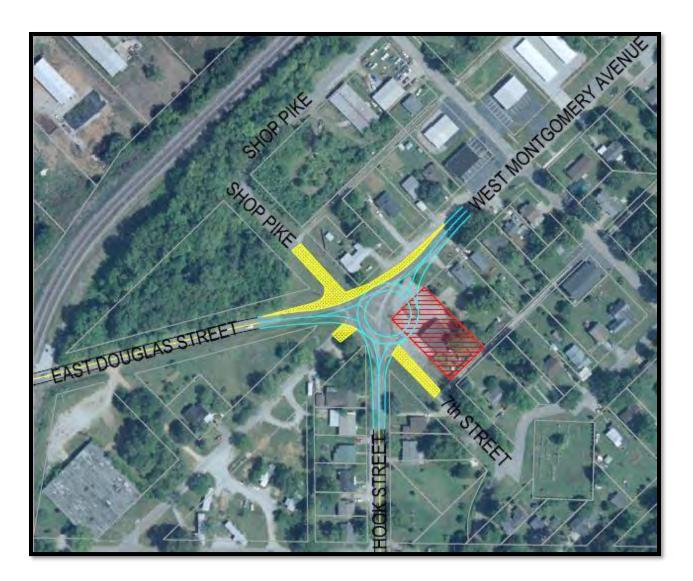


Figure 21. Alternative 4 – Roundabout Concept at Hook St/Douglas St/West Montgomery Ave

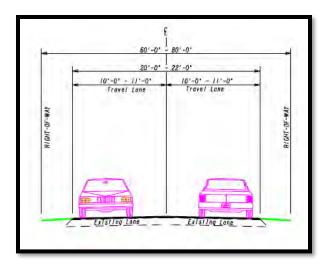


Figure 22. Proposed Typical Section – Alternative 4 & 5– Douglas St., Blackwell Rd., Wilson Dam Ave., and  $20^{th}$  Ave. to Second Entrance

#### Alternative 5

Alternative 5 also provides southern site access from Tuscumbia. The Alternative 5 access route uses Hook Street, Blackwell Road, Wilson Dam Avenue and 20<sup>th</sup> Avenue to access Entrances 1 and 2 to the development. From the south end of Hook Street in Tuscumbia, Woodward Avenue (US-43/72) is easily accessible via Sixth Street. US-72 is also easily accessible via Veterans Boulevard, Old Lee Highway and Woodmont Drive. The Alternative 5 access route is shown in Figure 18.

The proposed typical section of Alternative 5 along Hook Street from Sixth Street to Blackwell Road, shown in Figure 19, is the same as Alternative 4. The existing 26-foot roadway (two 13-foot travel lanes in each direction) and curb and gutter on the both sides can be retained. The asphalt pavement in this section of Hook Street is deteriorating as evidenced by large areas of block cracking and some rutting. Asphalt patching and leveling are needed. A pavement evaluation should be performed to determine the areas and type of pavement repair or rehabilitation needed. Since Hook Street may become one of the primary routes to and from Inspiration Landing, it is recommended that, after the needed repairs noted above are made, the asphalt pavement be milled and overlaid with a new asphalt wearing surface, approximately one and a half inches thick and new striping installed.

The proposed typical section for Alternative 5 for Blackwell Road, Wilson Dam Avenue and 20<sup>th</sup> Avenue is shown in Figure 22. The existing 20- to 22-foot-wide roadways can be retained and overlaid with new asphalt with some spot improvements (patching and leveling). Although major changes are not recommended, aesthetic and multimodal improvements can be made and should be considered as an additional investment.

On Blackwell Road, the road narrows near the sharp curve on the south side of the City of Sheffield's baseball park. It is recommended that the roadway be widened to at least 22 feet (11-foot travel lanes in each direction) and safety improvements be made to this curve such as providing the proper superelevation and adding appropriate curve warning signs. Additionally, there is a mid-block pedestrian crossing between the two ball parks with "pedestrian crossing ahead" warning signs and flashing yellow beacons on either side of the crossing. If the pedestrian crossing volumes are high, the City should

consider removing the (constant) flashing yellow beacons and replacing them with a pedestrian actuated rectangular rapid flashing beacon (RRFB). The RRFB is dark when there is not pedestrian crossing activity. When a pedestrian pushes the button at the crossing, the RRFB will activate and rapidly flash to warn motorists that pedestrians are preparing to cross. After the pedestrians cross, the RRFB deactivates. RRFBs have proven to be an effective tool to reduce vehicle/pedestrian crashes.

As with Alternative 4, a left and right turn lanes are recommended on 20<sup>th</sup> Avenue at Entrances 1 and 2 to the development.

#### Alternative 5A

The Alternative 5A access route is very similar to Alternative 5. From Hook Street, rather than using Blackwell Road between the two baseball parks, this alternative proposes an extension of North Commons Street westward to Blackwell Road north of the baseball parks. From there, the route follows Blackwell Road, Wilson Dam Avenue and 20<sup>th</sup> Avenue to access the Entrance 1 and 2 to the development. The Alternative 5A access route is shown in Figure 18.

The proposed typical section of Alternative 5A along Hook Street from Sixth Street to North Commons Street, shown in Figure 19, is the same as Alternative 4. The existing 26-foot roadway (two 13-foot travel lanes in each direction) and the curb and gutter on the east and west sides can be retained with an asphalt overlay, new striping and pavement repair or rehabilitation in some areas.

The proposed typical section of Alternative 5A for the proposed North Commons Street Extension is shown in Figure 23. The proposed typical section includes a 24-foot roadway (two 12-foot travel lanes in east direction) with proposed curb and gutter and sidewalks on both sides of the roadway. Regarding this typical section, 11 foot lanes can also be considered for this roadway extension. The City of Tuscumbia will need to work with Norfolk Southern Railroad to close the existing railroad crossing at Blackwell Road and to establish a new railroad crossing at the North Commons Road Extension. It is recommended that the new crossing be constructed with lights, bells and gates, which is a safer design than the existing Blackwell Road crossing. A cul-de-sac should be constructed on Blackwell Road on both sides of the closed railroad crossing. See Figure 24 for a map of Alternative 5A at North Commons Street Extension.

The intersection of North Commons Street Extension and Blackwell Road is proposed for a potential roundabout. A concept sketch has been prepared to show how a roundabout could possibly be configured at this intersection. See Figure 24 for the roundabout concept sketch.

The proposed typical section for Alternative 5A for Blackwell Road, Wilson Dam Avenue and 20<sup>th</sup> Avenue to the Development Second Entrance, shown in Figure 22, is the same as Alternatives 4 and 5. The existing 20 to 22-foot-wide roadways can be retained with new asphalt overlay and spot pavement improvements (patching and leveling).

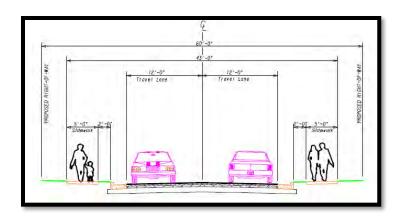


Figure 23. Proposed Typical Section – Alternative 5A – North Commons Street Extension

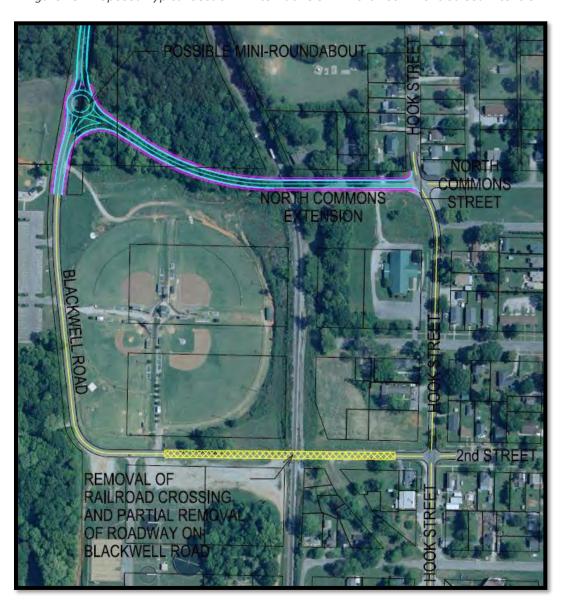


Figure 24. Alternative 5A - Map of North Commons Street Extension to Blackwell Road

# Section VI – Environmental Screening

Each shortlisted alternative is screened against many environmental factors, including wetlands, streams, threatened and endangered species, hazardous materials, historic resources and cemeteries. Ultimately, a formal analysis prescribed by the National Environmental Policy Act (NEPA) will be required for the project to be eligible for federal funding.

#### Wetlands

The Inspiration Landing project site is located along the south banks of the Tennessee River in Sheffield. Spring Creek, a tributary of the Tennessee River, transects the project site. The Tennessee River and Springs Creek are classified as type L1UBHh, indicating that these are permanently flooded bodies of water that have been created or modified by a man-made barrier or dam. To the south of Spring Creek is freshwater forested/shrub wetland of the type PFO1C. This wetland, approximately 55 acres in size in the vicinity of the project site, is dominated by forests, primarily broad-leaved deciduous trees. This area is seasonally flooded, which means that surface water is present for extended periods primarily during the early growing season; after this time, the water table is variable, extending from saturated at the surface to well below the ground surface. The project site also has three wetland areas (including one stream-type feature) of the type PFO1A, which are approximately 19 acres in size combined. These are similar to the PFO1C wetlands, but are temporarily instead of seasonally flooded. Surface water is present for brief periods (from a few days to weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.

For Alternative 2, the proposed mini roundabout at the intersection of the West First Street Extension and 20<sup>th</sup> Avenue, is located in close proximity to one the PFO1A wetland areas. However, the mini roundabout will require very little additional ROW, and, therefore, may not impact this wetland area. This will need to be examined more closely if Alternative 2 and the proposed mini roundabout are advanced. The US Army Corps of Engineers and US Fish and Wildlife Service will need to be consulted and their concurrence with the proposed improvements obtained.

For Alternative 4, Douglas Street is very close to the northern end of the PFO1A wetland (unnamed tributary of Spring Creek). However, since the proposed improvements to Douglas Street are limited to resurfacing of the roadway and shoulder improvements, all within the existing ROW, there should not be any impacts to this linear wetland.

For Alternative 5, Blackwell Road crosses one of the PFO1A wetlands (unnamed tributary of Spring Creek). This wetland/stream runs parallel, approximately 50 feet to the east of Blackwell Road. Since the proposed improvements to Blackwell Road are limited minimal roadway widening, curve safety improvements, shoulder and ditch improvements, these proposed improvements should not impact this linear wetland. The US Army Corps of Engineers and US Fish and Wildlife Services should be consulted and their concurrence with the proposed improvements obtained.

For Alternative 5A, the proposed North Commons Street Extension will cross the PFO1A wetlands (unnamed tributary of Spring Creek). If this alternative is moved forward, the City and/or their design engineer will need to determine the impacts to this linear wetland. Consultation with and concurrence from the US Army Corps of Engineers and US Fish and Wildlife Services will also be required for this stream crossing. A bottomless culvert may be considered for this stream crossing to eliminate or mitigate the impacts to this wetland.

The proposed Entrance 3 to the development is also located in close proximity to one of the PFO1A wetland areas.

Wetlands in the project area are shown in Figure 25.

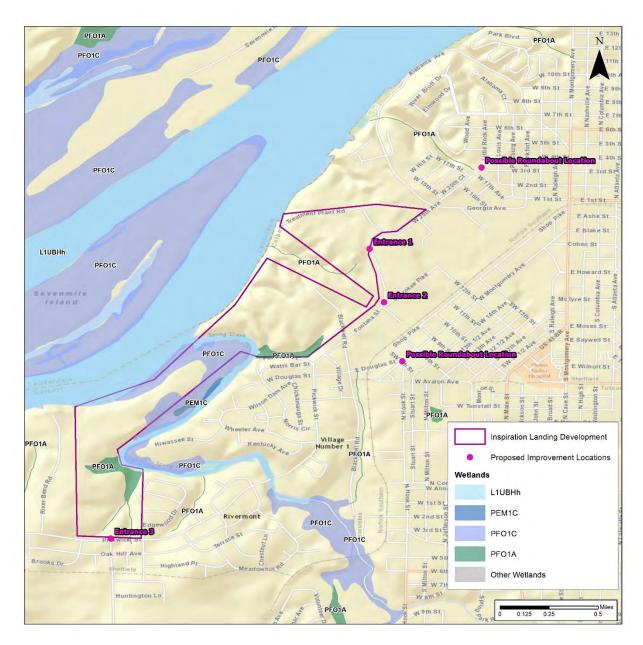


Figure 25. Wetlands in Project Area

### **FEMA Mapped Streams**

According to the National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM) Panel Number 0133C0302D, there is an unnamed tributary of Spring Creek that is classified as a 100-year flood plain with an associated floodway that crosses Blackwell Road near the baseball parks and runs just parallel and to the east of Blackwell Road. From the FIRM map, the 100-year flood plain inundates

Blackwell Road near the two baseball parks and in two or three other spots north of the baseball parks. The flood plain and floodway are immediately adjacent to the east side of Blackwell Road elsewhere.

For Alternatives 5 and 5A, a flood study may be required to confirm that the proposed shoulder improvements will not cause an increase in the 100-year flood elevation. However, the proposed shoulder improvements along Blackwell Road do not add a significant amount of fill in the flood plain. Therefore, it is not anticipated that the proposed shoulder improvements along Blackwell Road would cause any impacts to the flood plain.

For Alternative 5A, the North Commons Street Extension crosses the flood plain discussed above. The drainage structure (pipe or culvert) at this crossing will need to be designed large enough so that it does not create an increase in the 100-year flood elevation upstream of the crossing. This will need to be confirmed with a hydraulic analysis completed to FEMA's requirements.

There are no other flood plains that would affect Alternatives 1, 2 or 4.

#### Threatened and Endangered Species

According to the US Fish and Wildlife Service IPaC (Information for Planning and Consultation), the following threatened and endangered species are potentially affected by activity in the project area. An analysis was done for the project site as well as within a 500-foot buffer around each proposed access routes.

#### Mammals

- Gray bat (Myotis grisescens) endangered
- Indiana Bat (Myotis sodalist) endangered
- Northern Long-eared Bat (Myotis septentrionalis) threatened

#### Fishes

- Alabama Cavefish (Speoplatyrhinus poulsoni) - endangered

#### Clams

- Dromedary Pearlymussel (Dromus dromas) endangered
- Fanshell (Cyprogenia stegaria) endangered
- Orangefoot Pimpleback (pearlymussel) (Plethobasus cooperianus) endangered
- Pink Mucket (pearlymussel) (Lampsilis abrupta) endangered
- Ring Pink (mussel) (Obovaria retusa) endangered
- Rough Pigtoe (Pleurobema plenum) endangered
- Sheepnose Mussel (Plethobasus cyphyus) endangered
- Snuffbox Mussel (Epioblasma triquetra) endangered
- Spectaclecase (mussel) (Cumberlandia monodonta) endangered
- White Wartyback (pearlymussel) (Plethobasus cicatricosus) endangered

#### Flowering Plants

- Lyrate Bladderpod (Lesquerella lyrata) - threatened

No critical habitats for these species have been identified in the project area.

#### Hazardous Materials

There are multiple sites in the project area and within 500 feet of the proposed access routes that potentially store hazardous materials.

The US EPA Envirofacts Database has identified the following facilities that are subject to federal environmental regulations:

- Tuscumbia Landing, located in the northern portion of the project site, is a brownfield site that has previously received grants for cleanup from the US EPA.
- Just north of the project site, at the end of Treatment Plant Road, there is a wastewater treatment plant with facilities that are subject to environmental regulations.
- Near the northern roundabout location, there are two facilities listed on the database:
  - o Lot 6 of the West Haven Urban Renewal Area
  - An old street car barn

The Lot 6 of the West Haven Urban Renewal Area site could impact Alternative 2. However, it appears that this site is located along 20<sup>th</sup> Avenue where no improvements are proposed.

The Wise Alloys Sheffield Ops site near the intersection of Georgia Avenue and 20<sup>th</sup> Avenue could have an impact on the proposed improvements for Alternatives 1 and 2. However, it appears that the proposed improvements in Alternatives 1 and 2 can be constructed within the existing ROW, which should eliminate any impacts to this hazardous materials site.

There are also above-ground storage tanks at the Murphy USA Sheffield Terminal at the end of Blackwell Road on the project site. While not listed in the Envirofacts database, this is a site that should also be taken into consideration for the storage of hazardous materials.

Hazardous materials site in the project area are shown in Figure 26.

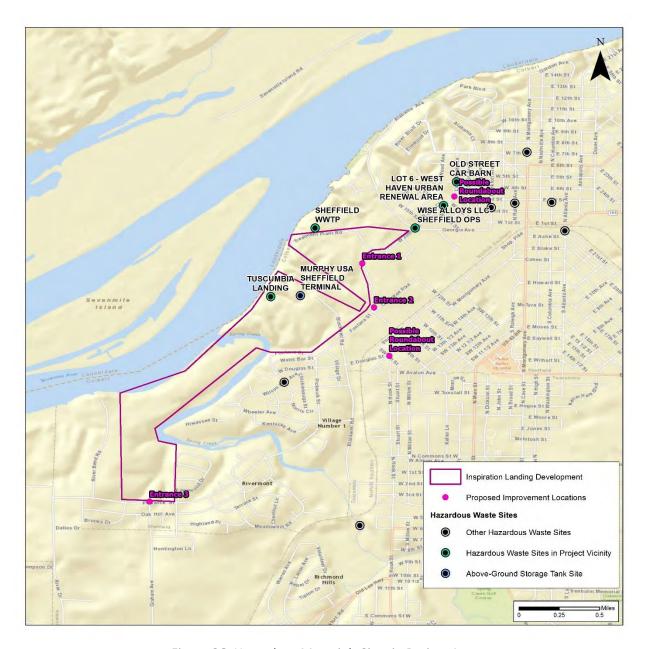


Figure 26. Hazardous Materials Sites in Project Area

#### Historic Resources

#### **Historic Sites**

There are several sites in the project vicinity that are listed on the National Register of Historic Places. Two sites are also listed on the Alabama Register of Landmarks and Heritage. These historic sites are listed in Table 9.

Table 9. Historic Sites within Project Area

Name	Address/Area	Number of Structures	Time Period	National Register of Historic Places	Alabama Register of Landmarks and Heritage
Tuscumbia Landing Site	Spring Creek and Tennessee River	1	1824	X	
Nitrate Village No. 1 Historic District	Sheffield, AL	115	1918-1949	X	
Chamber-Robinson House (also known as Samuel Hooke House)	910 Montgomery Avenue, Sheffield, AL	1	1895	X	X
Sheffield Residential Historic District	Sheffield, AL – Triangular- shaped area of streets bounded by Dover Avenue, 27th Street, and 15th Avenue and several areas featuring curvilinear streets along the river's edge. Also, the area bounded by 10th Street, Montgomery Avenue, Park Boulevard, and the Tennessee River that forms Riverside Park.	802	1886-1952	X	
Sheffield Railroad Depot	Shop Pike, Sheffield, AL	1	1948		X
Ivy Green	300 West North Common, Tuscumbia, AL	3	1821	Х	
William Winston House	North Commons Street, Deshler High School Campus, Tuscumbia	1	1835-1840	Х	
Felix Grundy Norman House	401 N. Main Street, Tuscumbia, AL	1	1851	Х	
Colbert County Courthouse Square Historic District	Indian, South Cave, East Second and Sixth Streets, Tuscumbia, AL	22	1840-1912	X	
Tuscumbia Historic District	Tuscumbia, AL - Roughly bounded by N. & E. Commons, 8th St. and Spring Rd., Hooks, W. 5th & S. Milton including Steel Bridge	640	1820-1970	Х	
John Daniel Rather House	209 South Cave Street, Tuscumbia, AL	1		Х	

#### Cemeteries

There are two cemeteries in the vicinity of the project site. Burton Cemetery is located along Pickwick Street in Sheffield just west of the project site. Winston Cemetery is located along Southwest 14<sup>th</sup> Avenue in Sheffield, within close proximity of the proposed southern roundabout location. However, none of the proposed alternative access routes will impact either of these cemeteries.

The historic resources in the project area are shown in Figure 27.

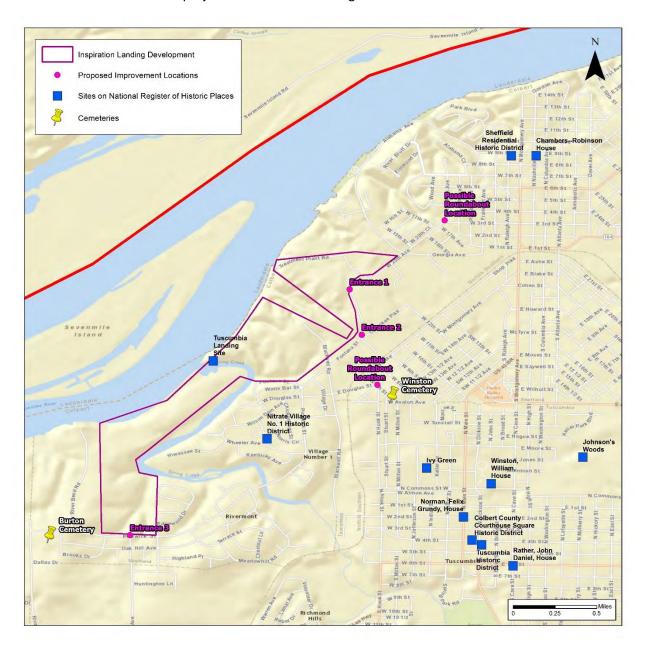
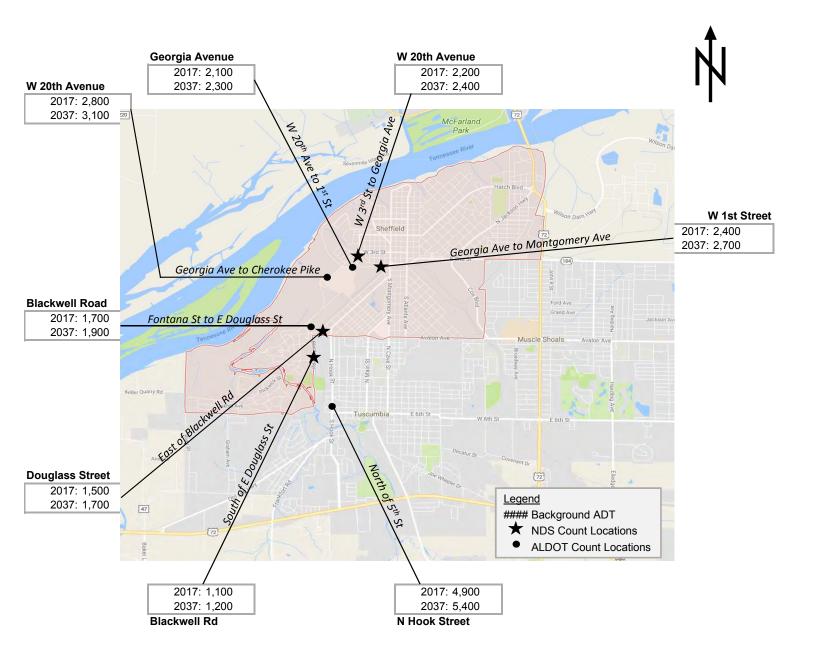
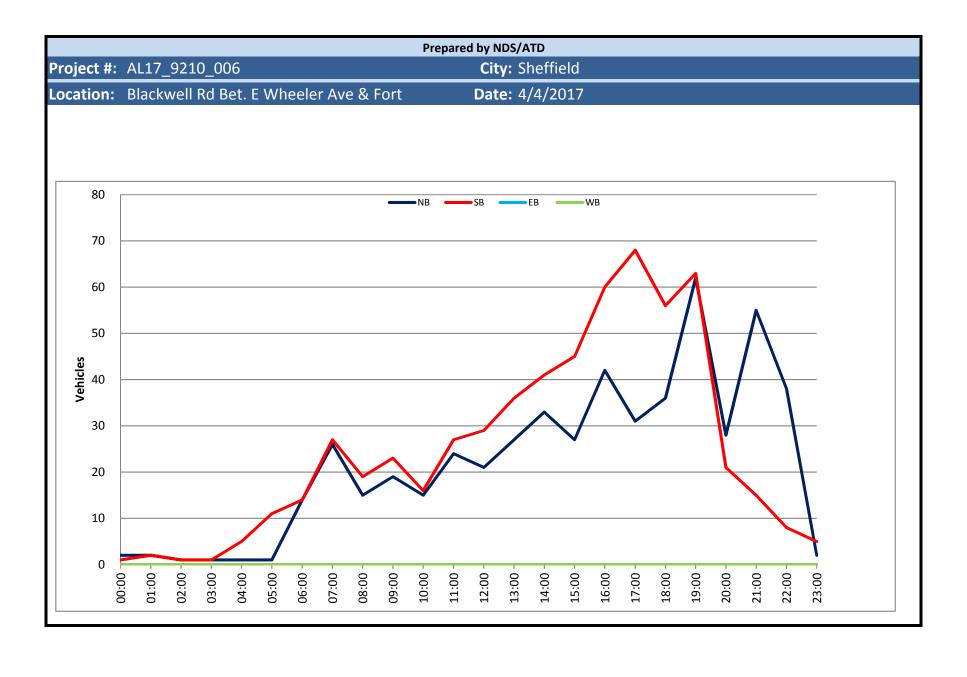


Figure 27. Cemeteries within Project Area

# APPENDIX A Existing and Background Traffic Data



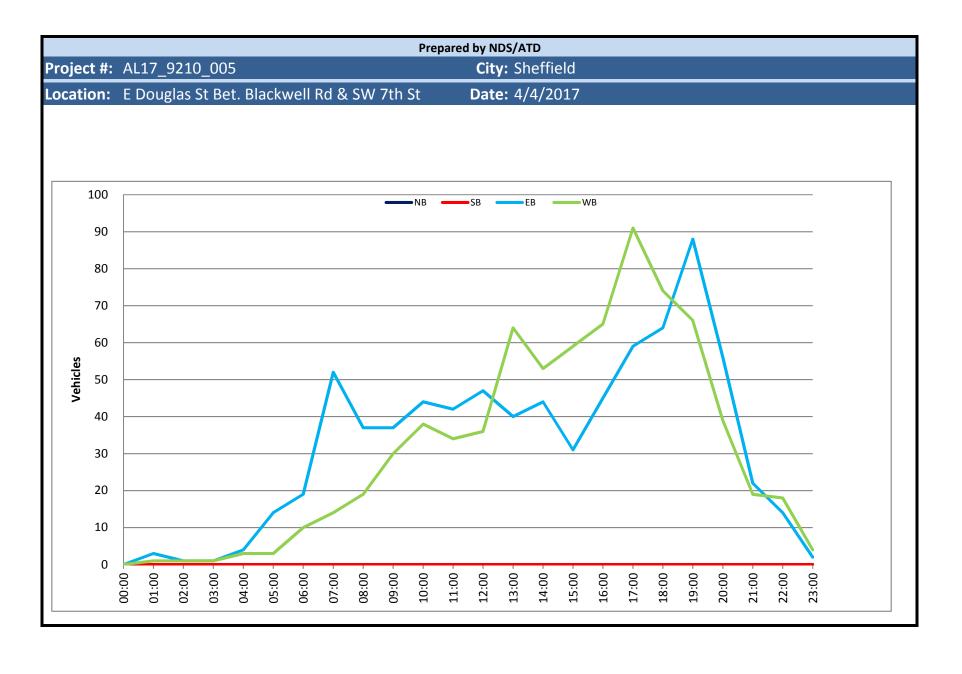


#### Blackwell Rd Bet. E Wheeler Ave & Fort Loudoun St

Day: Tuesday Date: 4/4/2017

City: Sheffield
Project #: AL17\_9210\_006

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02:00	0		0				0	4	14:00	9	21	14	30				23	03
02:15	Ö		0				0		14:15	6		15					21	
02:30	1		0				1		14:30	6		5					11	
02:45	0	1	0	1			0	2	14:45	12	33	7 10	41				19 16	74
03:00 03:15	0		0				0		15:00 15:15	6 9		10					20	
03:30	1		0				1		15:30	6		19					25	
03:45	0	1	1	1			1	2	15:45	6	27	5	45				11	72
04:00	0		0				0		16:00	12		11					23	
04:15 04:30	0		0 2				0 2		16:15 16:30	8 11		13 14					21 25	
04:45	1	1	3	5			4	6	16:45	11	42	22	60				33	102
05:00	1		3				4		17:00	8	72	20	00				28	102
05:15	0		2				2		17:15	7		20					27	
05:30	0		2				2		17:30	6		18					24	
05:45 06:00	0 5	1	3	11			8	12	17:45 18:00	10 7	31	10 14	68				20 21	99
06:00	2		6				8		18:15	7		17					24	
06:30	2		4				6		18:30	13		11					24	
06:45	5	14	1	14			6	28	18:45	9	36	14	56				23	92
07:00	8		5				13		19:00	12		22					34	
07:15 07:30	8		8 8				16 11		19:15 19:30	14 16		14 13					28 29	
07:45	7	26	6	27			13	53	19:45	20	62	14	63				34	125
08:00	5		4				9		20:00	11		9					20	
08:15	1		5				6		20:15	7		7					14	
08:30	1	15	5	10			6	24	20:30	8	20	3	24				11	40
08:45 09:00	8 6	15	<u>5</u>	19			13 11	34	20:45 21:00	<u>2</u>	28		21				7	49
09:15	3		5				8		21:15	4		5					9	
09:30	4		8				12		21:30	14		6					20	
09:45	6	19	5	23			11	42	21:45	31	55	3	15				34	70
10:00	2		4				6		22:00 22:15	17		2					19	
10:15 10:30	5 6		1 6				6 12		22:15	11 7		1 2					12 9	
10:45	2	15	5	16			7	31	22:45	3	38	3	8				6	46
11:00	4		2				6		23:00	1		2					3	
11:15	4		6				10		23:15	0		0					0	
11:30 11:45	9 7	24	12 7	27			21 14	51	23:30 23:45	0 1	2	2 1	5				2	7
TOTALS		121		147			14	268	TOTALS		402		447					849
SPLIT %		45.1%		54.9%				24.0%	SPLIT %		47.3%		52.7%					76.0%
	DΔ	AILY T	ΌΤΔ	ALS.		NB	SB		EB		WB							otal
		WEI I	<b>J</b> 1,			523	594		0		0						1,1	117
AM Peak Hour		11:30		11:30				11:30	PM Peak Hour		21:30		16:45					19:00
AM Pk Volume		28		33				61	PM Pk Volume		73		80					125
Pk Hr Factor		0.778		0.688				0.726	Pk Hr Factor		0.589		0.909					0.919
7 - 9 Volume		41		46	0	0		87	4 - 6 Volume		73		128	C		0		201
7 - 9 Peak Hour		07:00		07:00				07:00	4 - 6 Peak Hour		16:00		16:45					16:30
7 - 9 Pk Volume		26		27				53	4 - 6 Pk Volume		42		80					113
Pk Hr Factor		0.813		0.844	0.000	0.00	U	0.828	Pk Hr Factor		0.875		0.909	0.0	00	0.000		0.856



#### E Douglas St Bet. Blackwell Rd & SW 7th St

EB

SB

NB

52

0.684

23

0.639

**Day:** Tuesday **Date:** 4/4/2017

7 - 9 Pk Volume

Pk Hr Factor

**DAILY TOTALS** 

City: Sheffield
Project #: AL17\_9210\_005

Total

91

0.711

150

0.833

59

0.641

WB

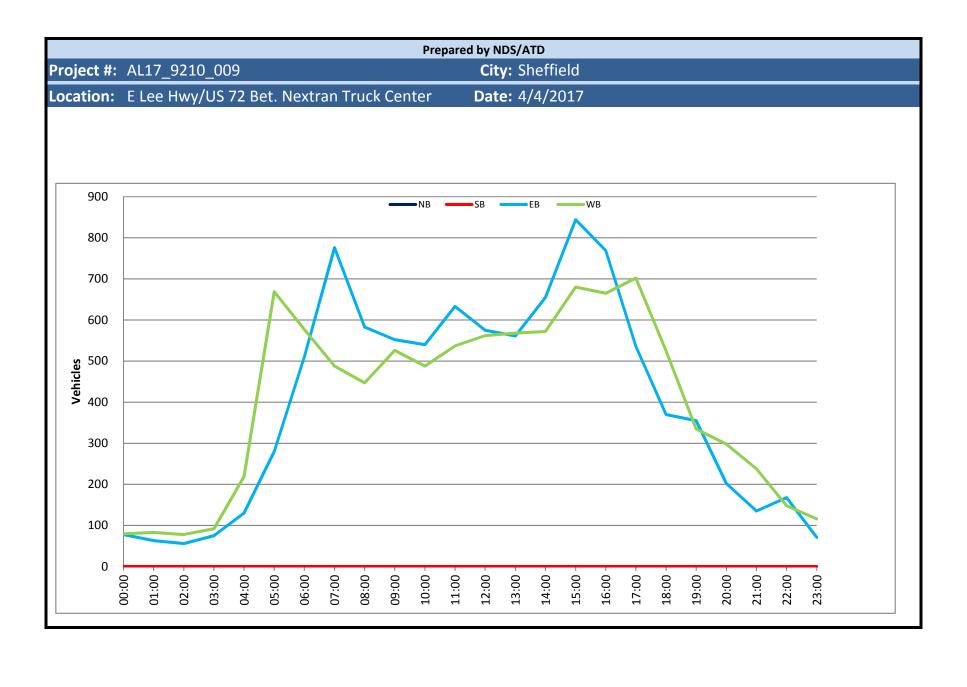
	DAILY TOTALS		-	0		0		766		42							508
				U				700	,	42						1,.	500
<b>AM Period</b>	NB SB	EB		WB		TO	TAL	PM Period	NB	SB		EB		WB		ТО	TAL
00:00		0		0		0		12:00				16		7		23	
00:15		0 0		0		0		12:15 12:30				12 9		10		22	
00:30 00:45		0		0 0		0		12:45				9 10	47	10 9	36	19 19	83
01:00		2		0		2		13:00				8	-1,	11	30	19	- 03
01:15		0		0		0		13:15				8		20		28	
01:30		0		1		1		13:30				15		17		32	
01:45		1	3	0	1	1	4	13:45				9	40	16	64	25	104
02:00		0		0		0		14:00				10		18		28	
02:15 02:30		0 1		0 1		0		14:15 14:30				9 9		14 11		23 20	
02:45		0	1	0	1	0	2	14:45				16	44	10	53	26	97
03:00		0		0		0		15:00				8		14		22	
03:15		0		0		0		15:15				9		10		19	
03:30		1		1		2		15:30				7		22		29	
03:45		0	1	0	1	0	2	15:45				<u>7</u> 9	31	13	59	20	90
04:00 04:15		1 0		1 0		2		16:00 16:15				8		13 15		22 23	
04:30		0		1		1		16:30				17		16		33	
04:45		3	4	1	3	4	7	16:45				11	45	21	65	32	110
05:00		2		0		2		17:00				11		24		35	
05:15		5		0		5		17:15				12		16		28	
05:30		3	4.4	2	2	5	47	17:30				23	<b>5</b> 0	19	04	42	450
05:45 06:00		3	14	2	3	5	17	17:45 18:00				13 24	59	32 15	91	45 39	150
06:00		2		2		5 4		18:15				24 12		20		32	
06:30		8		2		10		18:30				12		22		34	
06:45		6	19	4	10	10	29	18:45				16	64	17	74	33	138
07:00		7		0		7		19:00				37		22		59	
07:15		10		4		14		19:15				24		15		39	
07:30		16	F2	3	1.4	19	cc	19:30 19:45				15	00	17		32	154
07:45 08:00		19 6	52	7	14	26 9	66	20:00				12 12	88	12 9	66	24 21	154
08:15		7		4		11		20:15				19		9		28	
08:30		8		9		17		20:30				14		11		25	
08:45		16	37	3	19	19	56	20:45				11	56	10	39	21	95
09:00		11		2		13		21:00				7		6		13	
09:15		11		8		19		21:15				2		3		5	
09:30 09:45		7 8	37	8 12	30	15 20	67	21:30 21:45				4 9	22	6 4	19	10 13	41
10:00		15	31	9	30	24	- 07	22:00				6		5	13	11	41
10:15		11		7		18		22:15				2		4		6	
10:30		8		14		22		22:30				3		5		8	
10:45		10	44	8	38	18	82	22:45				3	14	4	18	7	32
11:00		8		9		17		23:00				1		1		2	
11:15 11:30		16 10		6 9		22 19		23:15 23:30				0		1 2		1 2	
11:45		8	42	10	34	18	76	23:45				1	2	0	4	1	6
TOTALS			254	10	154	10	408	TOTALS					512	<u> </u>	588		1100
SPLIT %			62.3%		37.7%		27.1%	SPLIT %					46.5%		53.5%		72.9%
				NB		SB		EB		WB						T.	otal
	DAILY TOTALS																
				0		0		766		42						Ι,:	508
AM Peak Hour			07:00		09:45		09:45	PM Peak Hour					18:45		17:00		18:30
AM Pk Volume			52		42		84	PM Pk Volume					92		91		165
Pk Hr Factor			0.684		0.750		0.875	Pk Hr Factor					0.622		0.711		0.699
7 - 9 Volume	0 0		89		33		122	4 - 6 Volume		0	0		104		156		260
7 - 9 Peak Hour			07:00		07:45		07:15	4 - 6 Peak Hour					17:00		17:00		17:00

4 - 6 Pk Volume

Pk Hr Factor

68

0.654

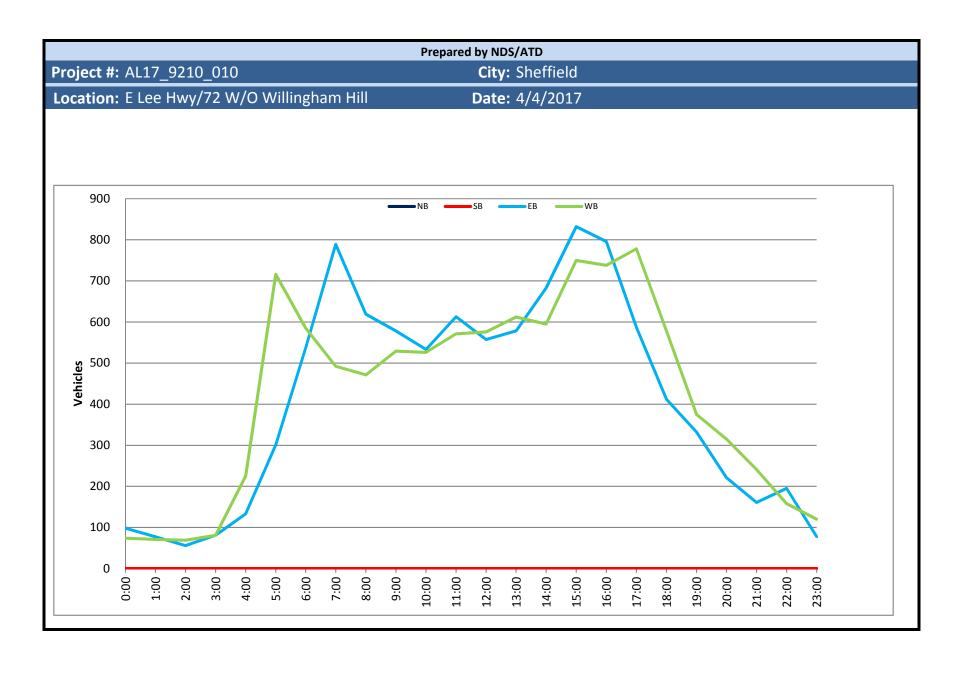


#### E Lee Hwy/US 72 Bet. Nextran Truck Center Dwy & Hollywood Ave

 Day: Tuesday
 City: Sheffield

 Date: 4/4/2017
 Project #: AL17\_9210\_009

	DAILY TOTALS			NB 0		SB 0		EB 9,517	WI 9,69							otal ,210
AM Period	NB SB	EB					TAL	PM Period		SB	EB		WB			
00:00	NB SB	20		WB 22		42	IAL	12:00	NB	28	147		154		301	TAL
00:00		14		21		35		12:15			154		133		287	
00:30		19		14		33		12:30			128		146		274	
00:45		25	78	23	80	48	158	12:45			146	575	129	562	275	1137
01:00		12		20		32		13:00			117		118		235	
01:15		20		23		43		13:15			146		157		303	
01:30 01:45		19 12	63	16 24	83	35 36	146	13:30 13:45			162 136	561	156 137	568	318 273	1129
02:00		11	03	21	03	32	140	14:00			158	301	147	300	305	1123
02:15		13		23		36		14:15			168		144		312	
02:30		18		21		39		14:30			148		146		294	
02:45		14	56	13	78	27	134	14:45			181	655	135	572	316	1227
03:00 03:15		13 27		13 20		26 47		15:00 15:15			177 227		144 174		321 401	
03:30		20		34		54		15:30			201		193		394	
03:45		15	75	25	92	40	167	15:45			239	844	169	680	408	1524
04:00		24		41		65		16:00			202		162		364	
04:15		30		58		88		16:15			194		173		367	
04:30 04:45		30 46	130	59 61	219	89 107	349	16:30 16:45			191 182	769	164 166	665	355 348	1434
05:00		48	130	121	219	164	349	17:00			176	769	193	605	369	1434
05:15		54		179		233		17:15			128		193		321	
05:30		94		240		334		17:30			125		161		286	
05:45		89	280	129	669	218	949	17:45			107	536	155	702	262	1238
06:00		92		143		235		18:00			91		147		238	
06:15 06:30		144 131		157 153		301 284		18:15 18:30			105 83		148 122		253 205	
06:45		143	510	124	577	267	1087	18:45			91	370	108	525	199	895
07:00		162	310	133	3,,,	295	1007	19:00			82	370	104	323	186	033
07:15		208		107		315		19:15			107		83		190	
07:30		223		133		356		19:30			90		82		172	
07:45 08:00		183 132	776	115 104	488	298 236	1264	19:45 20:00			76 59	355	66 77	335	142 136	690
08:00		160		104		265		20:00			59 50		80		130	
08:30		146		115		261		20:30			56		63		119	
08:45		145	583	123	447	268	1030	20:45			37	202	78	298	115	500
09:00		152		113		265		21:00			36		83		119	
09:15		117		113		230		21:15			42		61		103	
09:30 09:45		136 147	552	129 171	526	265 318	1078	21:30 21:45			25 32	135	42 52	238	67 84	373
10:00		125	332	116	320	241	1076	22:00			31	133	51	230	82	3/3
10:15		146		115		261		22:15			60		29		89	
10:30		132		134		266		22:30			55		22		77	
10:45		137	540	123	488	260	1028	22:45			22	168	46	148	68	316
11:00 11:15		168 137		112 139		280 276		23:00 23:15			22 21		30 30		52 51	
11:15		157		166		324		23:30			13		35		48	
11:45		170	633	120	537	290	1170	23:45			15	71	21	116	36	187
TOTALS			4276		4284		8560	TOTALS				5241		5409		10650
SPLIT %			50.0%		50.0%		44.6%	SPLIT %				49.2%		50.8%		55.4%
	<b>DAILY TOTALS</b>			NB		SB		EB	W							otal
				0		0		9,517	9,69	95					19,	,210
AM Peak Hour			07:00		05:15		07:00	PM Peak Hour				15:15		16:30		15:15
AM Pk Volume			776		691		1264	PM Pk Volume				869		716		1567
Pk Hr Factor			0.870		0.720		0.888	Pk Hr Factor				0.909		0.927		0.960
7 - 9 Volume			1359		935		2294	4 - 6 Volume				1305		1367		2672
7 - 9 Peak Hour			07:00		07:00		07:00	4 - 6 Peak Hour				16:00		16:30		16:15
7 - 9 Pk Volume			776		488		1264	4 - 6 Pk Volume				769		716		1439
Pk Hr Factor	0.000 0.0	JUU	0.870		0.917		0.888	Pk Hr Factor	0.00	0.1	JUU	0.952		0.927		0.975



#### Prepared by NDS/ATD

#### Prepared by National Data & Surveying Services

#### **VOLUME**

#### E Lee Hwy/72 W/O Willingham Hill Rd/Baker Ln

**Day:** Tuesday **Date:** 4/4/2017

AM Peak Hour

AM Pk Volume

Pk Hr Factor

7 - 9 Volume

7 - 9 Peak Hour

7 - 9 Pk Volume

Pk Hr Factor

7:00

789

0.865

1408

7:00

789

0.865

5:15

734

0.685

963

7:00

492

0.946

7:00

1281

0.902

2371

1281

0.902

PM Peak Hour

PM Pk Volume

Pk Hr Factor

4 - 6 Volume

4 - 6 Peak Hour

4 - 6 Pk Volume

Pk Hr Factor

City: Sheffield
Project #: AL17\_9210\_010

15:15

850

0.900

1383

16:00

796

0.980

16:30

796

0.930

1516

16:30

796

0.930

15:15

1614

0.928

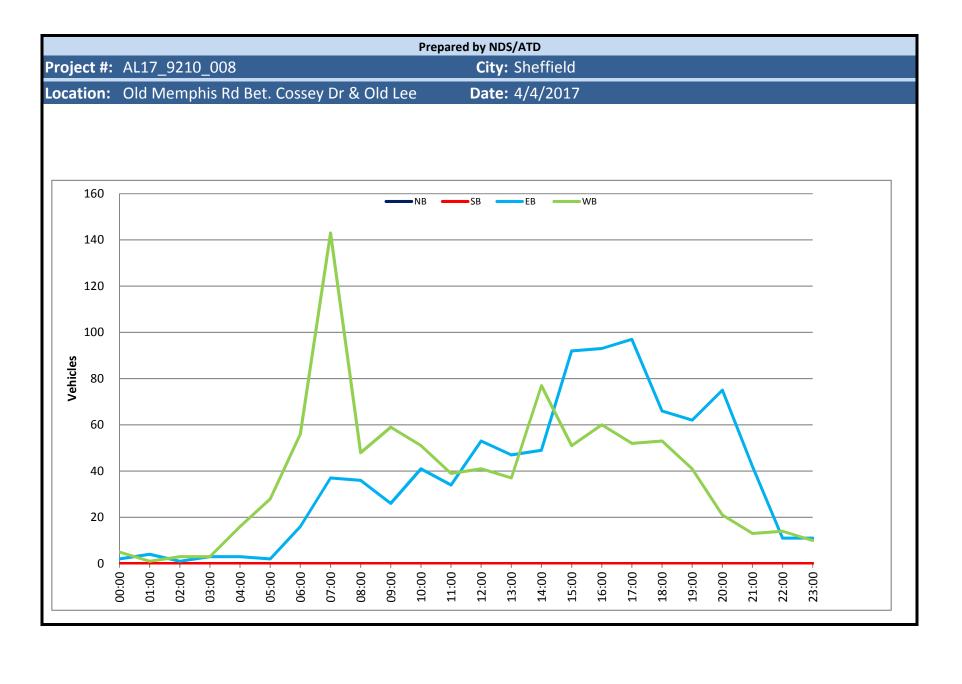
2899

16:15

1562

0.969

	DAII	LY TOTALS			NB		SB		EB		WB					To	otal
	DAII	ET TOTALS			0		0		9,847		10,246					20	,093
<b>AM Period</b>	NB	SB	ЕВ		WB		TO	TAL	PM Period	NB	SB	ЕВ		WB		TO	TAL
0:00	0	0	27		17		44		12:00	0	0	142		155		297	
0:15	0	0	22		25		47		12:15	0	0	144		141		285	
0:30	0	0	21		13		34		12:30	0	0	125		144		269	
0:45	0	0	28	98	19	74	47	172	12:45	0	0	146	557	136	576	282	1133
1:00	0	0	15		18		33		13:00	0	0	124		131		255	
1:15	0	0	24		20		44		13:15	0	0	152		163		315	
1:30 1:45	0 0	0 0	23 15	77	13	71	36 35	1.40	13:30 13:45	0	0 0	157 145	F70	148 170	C12	305	1190
2:00	0	0	10	77	20 18	71	28	148	14:00	0	0	156	578	143	612	315 299	1190
2:15	0	0	15		22		37		14:15	0	0	167		146		313	
2:30	0	0	16		16		32		14:30	0	0	149		164		313	
2:45	0	0	15	56	13	69	28	125	14:45	0	0	211	683	142	595	353	1278
3:00	0	0	13	- 50	14	- 05	27	125	15:00	0	0	185	000	158	555	343	1270
3:15	0	0	30		15		45		15:15	0	0	236		185		421	
3:30	0	0	24		32		56		15:30	0	0	179		204		383	
3:45	0	0	14	81	20	81	34	162	15:45	0	0	232	832	203	750	435	1582
4:00	0	0	26		42		68		16:00	0	0	203		172		375	
4:15	0	0	31		61		92		16:15	0	0	191		192		383	
4:30	0	0	31		60		91		16:30	0	0	200		183		383	
4:45	0	0	45	133	62	225	107	358	16:45	0	0	202	796	191	738	393	1534
5:00	0	0	45		121		166		17:00	0	0	189		214		403	
5:15	0	0	57		188		245		17:15	0	0	145		208		353	
5:30	0	0	100		268	=46	368	404-	17:30	0	0	138		180		318	400=
5:45	0	0	99	301	139	716	238	1017	17:45	0	0	115	587	176	778	291	1365
6:00	0	0	101		139		240		18:00 18:15	0	0	91		166		257	
6:15 6:30	0 0	0 0	145 141		148 172		293 313		18:30	0	0 0	118 95		159 139		277 234	
6:45	0	0	150	537	126	585	276	1122	18:45	0	0	108	412	114	578	222	990
7:00	0	0	167	337	120	363	287	1122	19:00	0	0	74	412	122	376	196	330
7:15	0	0	205		115		320		19:15	0	0	114		91		205	
7:30	0	0	228		127		355		19:30	0	0	68		93		161	
7:45	0	0	189	789	130	492	319	1281	19:45	0	0	76	332	69	375	145	707
8:00	0	0	142		116		258		20:00	0	0	67		77		144	
8:15	0	0	160		108		268		20:15	0	0	53		90		143	
8:30	0	0	155		122		277		20:30	0	0	56		74		130	
8:45	0	0	162	619	125	471	287	1090	20:45	0	0	45	221	74	315	119	536
9:00	0	0	156		119		275		21:00	0	0	44		85		129	
9:15	0	0	128		122		250		21:15	0	0	48		59		107	
9:30	0	0	141		122		263		21:30	0	0	30		43		73	
9:45	0	0	153	578	166	529	319	1107	21:45	0	0	39	161	54	241	93	402
10:00	0	0	117		134		251		22:00	0	0	36		55		91	
10:15	0	0	143		122		265		22:15	0	0	70		35		105	
10:30	0 0	0 0	137	E22	147	E26	284	1050	22:30	0	0 0	61 28	105	25 42	150	86 71	25.2
10:45 11:00	0	0	136 156	533	123 131	526	259 287	1059	22:45 23:00	0	0	28 27	195	43 33	158	71 60	353
11:00	0	0	142		143		285		23:15	0	0	27		33 31		55	
11:30	0	0	154		170		324		23:30	0	0	13		36		49	
11:45	0	0		613		571		1184	23:45	0	0	14	78	20	120	34	198
TOTALS	J	, i		4415		4410	200	8825	TOTALS	J			5432		5836	<u> </u>	11268
SPLIT %				50.0%		50.0%		43.9%	SPLIT %				48.2%		51.8%		56.1%
					NB		SB		ЕВ		WB					T.	otal
	DAI	LY TOTALS															
					0		0		9,847		10,246					20,	,093

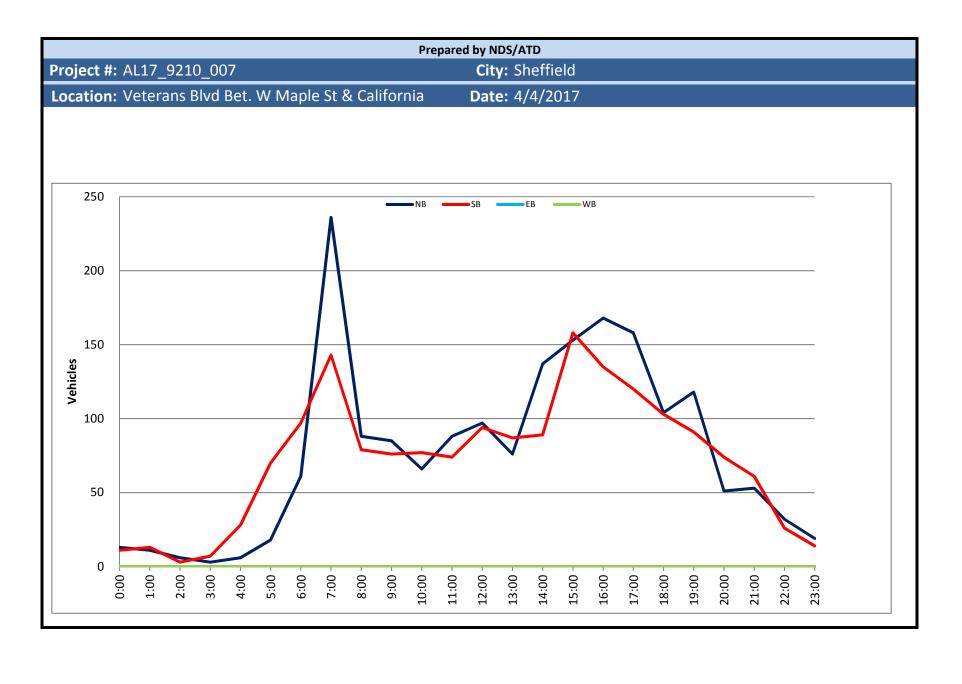


#### Old Memphis Rd Bet. Cossey Dr & Old Lee Hwy

**Day:** Tuesday **Date:** 4/4/2017

City: Sheffield Project #: AL17\_9210\_008

	DAILY TOTALS			NB		SB		EB		WB						To	tal
	DAILT TOTALS			0		0		903		922						1,8	325
<b>AM Period</b>	NB SB	EB		WB		TC	TAL	PM Period	NB		SB	EB		WB		TO	TAL
00:00		1		1		2		12:00				15		7		22	
00:15		1		1		2		12:15				10		9		19	
00:30		0	2	1	-	1	_	12:30				13	F2	16	44	29	0.4
00:45 01:00		2	2	0	5	2	7	12:45 13:00				15 13	53	9 10	41	24	94
01:00		1		0		1		13:15				8		6		14	
01:30		1		0		1		13:30				17		11		28	
01:45		0	4	1	1	1	5	13:45				9	47	10	37	19	84
02:00		0		0		0		14:00				14		19		33	
02:15		0		2		2		14:15 14:30				14		13 22		27	
02:30 02:45		1	1	0 1	3	1 1	4	14:30 14:45				14 7	49	23	77	36 30	126
03:00		1		0	3	1	-	15:00				29	43	13	,,	42	120
03:15		1		0		1		15:15				24		13		37	
03:30		0		2		2		15:30				17		11		28	
03:45		1	3	1	3	2	6	15:45				22	92	14	51	36	143
04:00		1		2		3		16:00				26		18		44	
04:15 04:30		1		4 6		5 6		16:15 16:30				15 21		13 17		28 38	
04:45		1	3	4	16	5	19	16:45				31	93	12	60	36 43	153
05:00		1		4	10	5	13	17:00				21	33	14	00	35	133
05:15		0		7		7		17:15				32		12		44	
05:30		1		6		7		17:30				28		16		44	
05:45		0	2	11	28	11	30	17:45				16	97	10	52	26	149
06:00		1		7		8		18:00				17		11		28	
06:15 06:30		7 5		13 18		20 23		18:15 18:30				23 14		16 13		39 27	
06:45		3	16	18	56	21	72	18:45				12	66	13	53	25	119
07:00		9	10	32	30	41	,_	19:00				13	- 00	10	33	23	113
07:15		2		46		48		19:15				15		9		24	
07:30		8		45		53		19:30				17		12		29	
07:45		18	37	20	143	38	180	19:45				17	62	10	41	27	103
08:00		12		10		22		20:00 20:15				21		7		28	
08:15 08:30		7 6		10 14		17 20		20:15				17 20		6 5		23 25	
08:45		11	36	14	48	25	84	20:45				17	75	3	21	20	96
09:00		3		12		15		21:00				15		4		19	
09:15		6		17		23		21:15				10		5		15	
09:30		9		14		23		21:30				10		1		11	
09:45		8	26	16	59	24	85	21:45				7	42	3	13	10	55
10:00 10:15		8 11		12 17		20 28		22:00 22:15				4 2		2 3		6 5	
10:30		16		12		28		22:30				4		3		7	
10:45		6	41	10	51	16	92	22:45				1	11	6	14	7	25
11:00		12		8		20		23:00				4		3		7	
11:15		7		13		20		23:15				5		1		6	
11:30		7	24	8	20	15	72	23:30				2	11	5	10	7	24
11:45		8	34	10	39	18	73	23:45				0	11	1	10	1	21
TOTALS			205		452		657	TOTALS					698		470		1168
SPLIT %			31.2%		68.8%		36.0%	SPLIT %					59.8%		40.2%		64.0%
				NP		SB		ЕВ		WB						Te	tal
	DAILY TOTALS			NB													otal
				0		0		903		922						1,8	325
AM Peak Hour			11:45		07:00		07:00	PM Peak Hour					16:45		14:00		16:45
AM Pk Volume			46		143		180	PM Pk Volume					112		77		166
Pk Hr Factor			0.767		0.777		0.849	Pk Hr Factor					0.875		0.837		0.943
7 - 9 Volume	0 0		73		191		264	4 - 6 Volume		0	(	)	190		112		302
7 - 9 Peak Hour			07:30		07:00		07:00	4 - 6 Peak Hour					16:45		16:00		16:45
7 - 9 Pk Volume			45		143		180	4 - 6 Pk Volume					112		60		166
Pk Hr Factor	0.000 0.000		0.625		0.777		0.849	Pk Hr Factor		0.000	0.0	000	0.875		0.833		0.943



#### Prepared by NDS/ATD

#### Prepared by National Data & Surveying Services

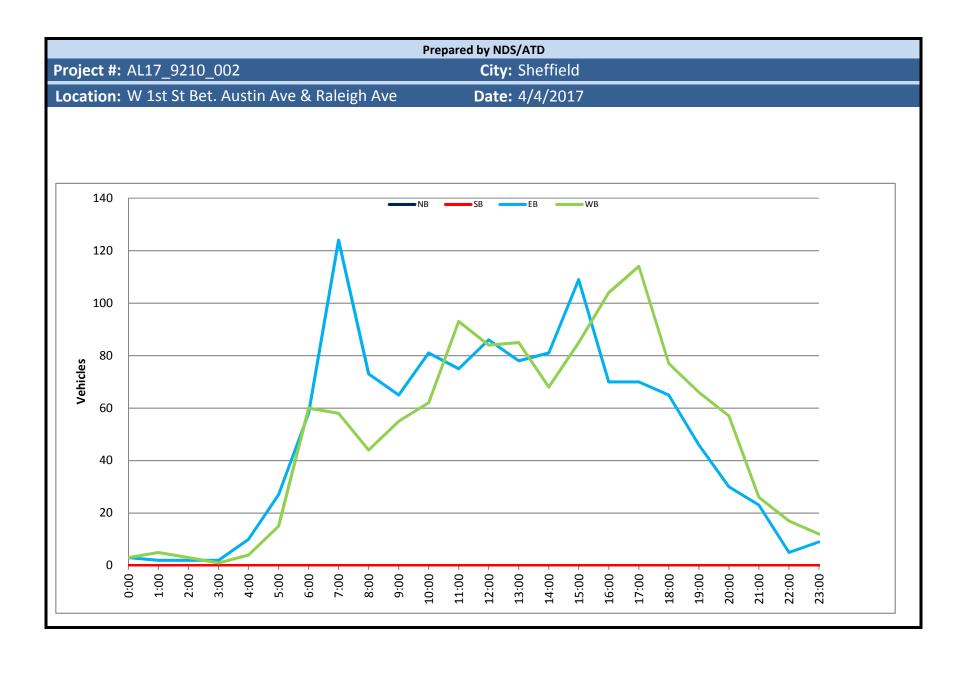
#### **VOLUME**

#### Veterans Blvd Bet. W Maple St & California Dr

Day: Tuesday Date: 4/4/2017

City: Sheffield
Project #: AL17\_9210\_007

	D.	AILY 1	ΓΩΤ/	AI S		NB		SB		EB		WB							То	tal
		AILI	1017	123		1,847		1,730		0		0							3,5	577
AM Period	NB		SB		EB	WB		TO	ΓAL	PM Period	NB		SB		ЕВ		WB		TO	TAL
0:00	2		6		0	0		8		12:00	26		26		0		0		52	
0:15	5		2		0	0		7		12:15	27		18		0		0		45	
0:30	3		2		0	0		5		12:30	21		24		0		0		45	
0:45	3	13	1	11	0	0		4	24	12:45	23	97	26	94	0		0		49	191
1:00	2		7		0	0		9		13:00	13		16		0		0		29	
1:15	3		3		0	0 0		6 3		13:15 13:30	23 13		23		0 0		0		46 37	
1:30 1:45	3	11	0 3	13	0 0	0		6	24	13:45	27	76	24 24	87	0		0		51	163
2:00	3		1	13	0	0		4	2-7	14:00	22	,,	16	07	0		0		38	103
2:15	1		0		0	0		1		14:15	31		23		0		0		54	
2:30	0		0		0	0				14:30	22		30		0		0		52	
2:45	2	6	2	3	0	0		4	9	14:45	62	137	20	89	0		0		82	226
3:00	0		1		0	0		1		15:00	43		44		0		0		87	
3:15	2		1		0	0		3		15:15	33		44		0		0		77	
3:30 3:45	1	2	2 3	7	0 0	0 0		3	10	15:30 15:45	27 50	153	33 37	158	0 0		0		60 87	311
4:00	1	3	4		0	0		5	10	16:00	37	133	25	130	0		0		62	311
4:15	1		7		0	0		8		16:15	48		38		0		0		86	
4:30	1		6		Ö	0		7		16:30	38		33		0		0		71	
4:45	3	6	11	28	0	0		14	34	16:45	45	168	39	135	0		0		84	303
5:00	1		17		0	0		18		17:00	49		32		0		0		81	
5:15	1		12		0	0		13		17:15	32		29		0		0		61	
5:30 5:45	6 10	10	23	70	0 0	0 0		29 28	88	17:30	40	158	30	120	0 0		0		70 66	278
6:00	9	18	18 20	70	0	0		29	88	17:45 18:00	37 29	158	29 32	120	0		0		61	2/8
6:15	14		17		0	0		31		18:15	25		25		0		0		50	
6:30	19		30		0	0		49		18:30	25		27		0		0		52	
6:45	19	61	30	97	0	0		49	158	18:45	25	104	19	103	0		0		44	207
7:00	22		35		0	0		57		19:00	31		31		0		0		62	
7:15	61		35		0	0		96		19:15	33		25		0		0		58	
7:30	86	226	37	142	0	0		123	270	19:30 19:45	25	110	16	01	0		0		41	200
7:45 8:00	67 25	236	36 24	143	0	0		103 49	379	20:00	29 17	118	19 28	91	0		0	-	48 45	209
8:15	25		18		0	0		43		20:15	9		14		0		0		23	
8:30	13		19		0	0		32		20:30	14		20		0		0		34	
8:45	25	88	18	79	0	0		43	167	20:45	11	51	12	74	0		0		23	125
9:00	22		19		0	0		41		21:00	11		29		0		0		40	
9:15	27		23		0	0		50		21:15	18		10		0		0		28	
9:30	13	or.	12	7.0	0	0 0		25	161	21:30	12	F2	9	C1	0 0		0		21	114
9:45 10:00	23 18	85	22 13	76	0	0		45 31	161	21:45 22:00	12 11	53	13 3	61	0		0		25 14	114
10:15	12		17		0	0		29		22:15	7		7		0		0		14	
10:30	19		25		0	0		44		22:30	11		10		Ö		0		21	
10:45	17	66	22	77	0	0		39	143	22:45	3	32	6	26	0		0		9	58
11:00	16		23		0	0		39		23:00	5		4		0		0		9	
11:15	12		11		0	0		23		23:15	8		2		0		0		10	
11:30	26	00	23	74	0	0		49 51	162	23:30 23:45	3 3	10	4	1.4	0		0		7 7	22
11:45	34	88 691	17	74 679	0	0		51	162		3	1166	4	1052	0		0		,	33
TOTALS		681		678					1359	TOTALS		1166		1052						2218
SPLIT %		50.1%		49.9%					38.0%	SPLIT %		52.6%		47.4%						62.0%
		A 11.24.5	rot4	VIC -		NB		SB		EB		WB							To	tal
	D	AILY 1	TO I A	ALS		1,847		1,730		0		0								577
414 D- 1 11		7.15		7.00					7.00	DM Degletter		16.15		45.00						
AM Peak Hour		7:15		7:00					7:00	PM Peak Hour		16:15		15:00						16:15
AM Pk Volume		239		143					379	PM Pk Volume		180		158						322
Pk Hr Factor		0.695		0.966		0	0		0.770	Pk Hr Factor 4 - 6 Volume		0.918		0.898		0		0		0.936
7 - 9 Volume 7 - 9 Peak Hour		324 7:15		222 7:00					546 7:00	4 - 6 Volume 4 - 6 Peak Hour		326 16:15		255 16:15						581 16:15
7 - 9 Peak Hour 7 - 9 Pk Volume										4 - 6 Peak Hour 4 - 6 Pk Volume										322
		239		143						Pk Hr Factor		180		142						
Pk Hr Factor		0.695		0.966		0.000	0.000		0.770	FRIII FACTOR		0.918		0.910		0.000	(	7.000		0.936



#### Prepared by NDS/ATD

#### Prepared by National Data & Surveying Services

#### **VOLUME**

#### W 1st St Bet. Austin Ave & Raleigh Ave

EB

1,194

WB

1,198

Total

2,392

 Day: Tuesday
 City: Sheffield

 Date: 4/4/2017
 Project #: AL17\_9210\_002

SB

0

NB

0

7:00

124

0.795

7:00

58

0.806

7:00

182

0.858

4 - 6 Peak Hour

4 - 6 Pk Volume

Pk Hr Factor

16:45

83

0.798

16:45

121

0.890

16:45

204

0.850

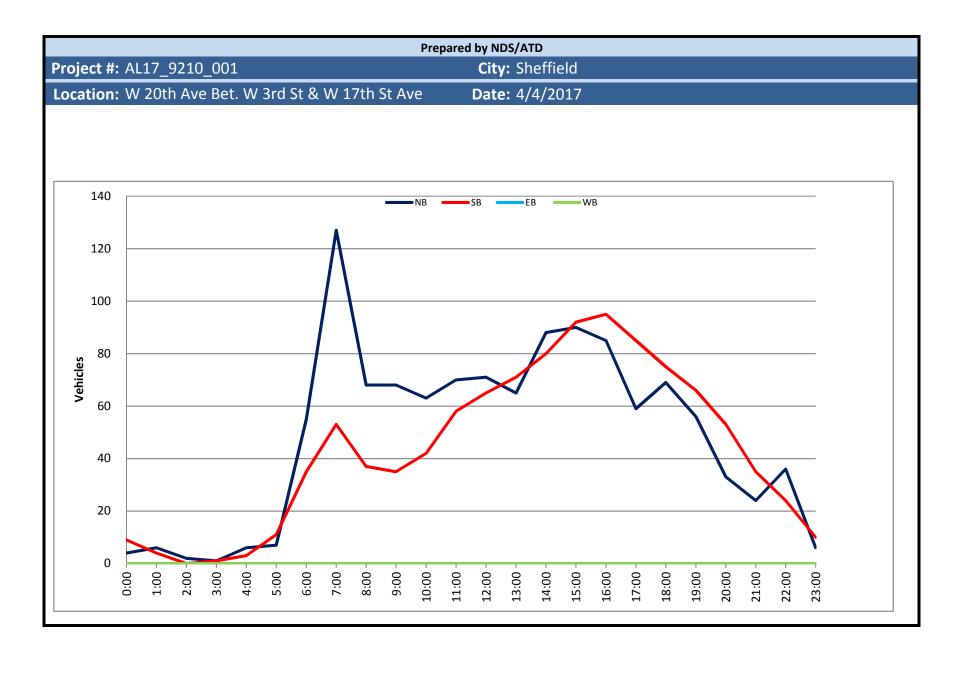
**DAILY TOTALS** 

7 - 9 Peak Hour

7 - 9 Pk Volume

Pk Hr Factor

<b>AM Period</b>	NB	SB	EB		WB		TO	TAL	PM Period	NB	SB	EB		WB		TO	TAL
0:00	0	0	1		0		1		12:00	0	0	23		25		48	
0:15	0	0	0		1		1		12:15	0	0	16		18		34	
0:30	0	0	2		2		4		12:30	0	0	27		21		48	
0:45	0	0	0	3	0	3		6	12:45	0	0	20	86	20	84	40	170
1:00	0	0	0		0				13:00	0	0	18		24		42	
1:15	0	0	0		3		3		13:15	0	0	17		13		30	
1:30	0	0	1		1		2		13:30	0	0	19		24		43	
1:45	0	0	1	2	1	5	2	7	13:45	0	0	24	78	24	85	48	163
2:00	0	0	1		1		2		14:00	0	0	13		20		33	
2:15	0	0	0		1		1		14:15	0	0	22		18		40	
2:30	0	0	1	•	0	2	1	_	14:30	0	0	19	04	13	60	32	4.40
2:45	0	0	0	2	1	3	1	5	14:45	0	0	27	81	17	68	44	149
3:00	0	0	0		0		1		15:00 15:15	0		29		17		46	
3:15 3:30	0	0 0	1 1		0 1		1 2		15:30	0 0	0 0	20 38		23 25		43 63	
3:45	0	0	0	2	0	1	2	3	15:45	0	0	22	109	20	85	42	194
4:00	0	0	0		0			J	16:00	0	0	14	103	26	65	40	134
4:15	0	0	4		1		5		16:15	0	0	15		25		40	
4:30	0	Ö	3		2		5		16:30	0	0	15		19		34	
4:45	0	0	3	10	1	4	4	14	16:45	0	0	26	70	34	104	60	174
5:00	0	0	4		1	·	5		17:00	0	0	18		24		42	
5:15	0	0	6		1		7		17:15	0	0	19		32		51	
5:30	0	0	9		5		14		17:30	0	0	20		31		51	
5:45	0	0	8	27	8	15	16	42	17:45	0	0	13	70	27	114	40	184
6:00	0	0	7		11		18		18:00	0	0	14		12		26	
6:15	0	0	8		10		18		18:15	0	0	21		23		44	
6:30	0	0	17		13		30		18:30	0	0	14		21		35	
6:45	0	0	26	58	26	60	52	118	18:45	0	0	16	65	21	77	37	142
7:00	0	0	24		12		36		19:00	0	0	15		20		35	
7:15	0	0	27		14		41		19:15	0	0	13		22		35	
7:30	0	0	39	124	14	F0	53	102	19:30	0	0	10	4.0	10		20	112
7:45 8:00	0	0	34 17	124	18 11	58	52 28	182	19:45 20:00	0	0	<u>8</u> 9	46	14 14	66	22	112
8:15	0	0	19		15		34		20:15	0	0	8		23		31	
8:30	0	0	12		10		22		20:30	0	0	4		11		15	
8:45	0	0	25	73	8	44	33	117	20:45	0	0	9	30	9	57	18	87
9:00	0	0	19	-,5	11		30	11/	21:00	0	0	6	30	6	3,	12	- 07
9:15	0	0	11		13		24		21:15	0	0	6		7		13	
9:30	0	0	19		15		34		21:30	0	0	2		7		9	
9:45	0	0	16	65	16	55	32	120	21:45	0	0	9	23	6	26	15	49
10:00	0	0	14		13		27		22:00	0	0	1		5		6	
10:15	0	0	21		15		36		22:15	0	0	1		3		4	
10:30	0	0	19		20		39		22:30	0	0	2		6		8	
10:45	0	0	27	81	14	62	41	143	22:45	0	0	1	5	3	17	4	22
11:00	0	0	18		21		39		23:00	0	0	3		4		7	
11:15	0	0	20		17		37		23:15	0	0	1		2		3	
11:30	0	0	14	7-	24		38	160	23:30	0	0	1	•	3	4.2	4	24
11:45	0	0	23	75	31	93	54	168	23:45	0	0	4	9	3	12	7	21
TOTALS				522		403		925	TOTALS				672		795		1467
SPLIT %				56.4%		43.6%		38.7%	SPLIT %				45.8%		54.2%		61.3%
					NB		SB		EB		VB					.To	tal
	DA	ILY TOTALS			0		0		1,194		198						392
					-0				1,134		130					۷,۰	J.E.
AM Peak Hour				7:00		11:30		11:45	PM Peak Hour				14:45		16:45		16:45
AM Pk Volume				124		98		184	PM Pk Volume				114		121		204
Pk Hr Factor				0.795		0.790		0.852	Pk Hr Factor				0.750		0.890		0.850
7 - 9 Volume		0 0		197		102		299	4 - 6 Volume		0	0	140		218		358



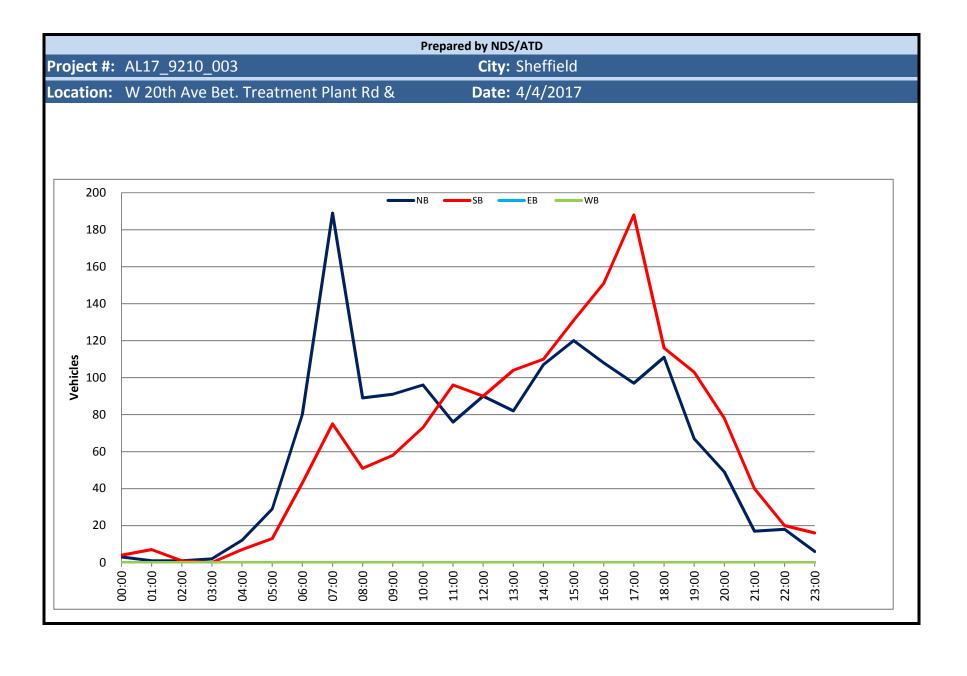
#### Prepared by National Data & Surveying Services

#### **VOLUME**

W 20th Ave Bet. W 3rd St & W 17th St Ave

Day: Tuesday Date: 4/4/2017 City: Sheffield
Project #: AL17\_9210\_001

	D	AILY 1	ГОТА	\LS		NB	SB		EB		WB							otal
			<b></b>	0		1,159	1,039	9	0		0						2,	198
AM Period	NB		SB		EB	WB		TAL	PM Period	NB		SB		ЕВ	'	ΝB		TAL
0:00 0:15	0 1		1 3		0	0 0	1 4		12:00 12:15	18 14		16 11		0 0		0	34 25	
0:30	2		0		0	0	2		12:30	17		23		0		0	40	
0:45 1:00	4	4	5 1	9	0	0	6 5	13	12:45 13:00	22 19	71	15 17	65	0		0	37 36	136
1:15	1		0		0	0	1		13:15	15		16		0		0	31	
1:30	0		1	_	0	0	1		13:30	11		17		0		0	28	
1:45 2:00	1	6	0	4	0	0	3	10	13:45 14:00	20	65	21	71	0		0	41	136
2:15	1		0		0	0	1		14:15	24		14		0		0	38	
2:30 2:45	0	2	0		0 0	0 0		2	14:30 14:45	18 25	88	23 23	80	0		0	41 48	168
3:00	1		0		0	0	1		15:00	23	00	26	80	0		0	49	100
3:15	0		0		0	0			15:15	26		33		0		0	59	
3:30 3:45	0	1	0 1	1	0	0 0	1	2	15:30 15:45	29 12	90	16 17	92	0 0		0	45 29	182
4:00	1		2		0	0	3		16:00	18		26		0		0	44	
4:15 4:30	1 2		0 0		0	0 0	1 2		16:15 16:30	16 19		20 26		0		0	36 45	
4:45	2	6	1	3	0	0	3	9	16:45	32	85	23	95	0		0	55	180
5:00	1		3		0	0	4		17:00	13		26		0		0	39	
5:15 5:30	3 1		1 3		0 0	0 0	4		17:15 17:30	17 17		22 20		0		0	39 37	
5:45	2	7	4	11	0	0	6	18	17:45	12	59	17	85	0		0	29	144
6:00 6:15	5 8		2 10		0	0 0	7 18		18:00 18:15	11 16		23 17		0 0		0	34 33	
6:30	16		7		0	0	23		18:30	22		21		0		0	43	
6:45	26	55	16	35	0	0	42	90	18:45	20	69	14	75	0		0	34	144
7:00 7:15	24 40		8 8		0	0 0	32 48		19:00 19:15	19 13		24 17		0 0		0	43 30	
7:30	38		18		0	0	56		19:30	12		12		0		0	24	
7:45 8:00	25 16	127	19 8	53	0	0	44 24	180	19:45 20:00	12 11	56	13 13	66	0		0	25 24	122
8:15	12		11		0	0	23		20:15	4		14		0		0	18	
8:30	21	60	9	27	0	0	30	405	20:30	7	22	11		0		0	18	0.0
8:45 9:00	19 16	68	9 7	37	0	0	28	105	20:45 21:00	11 5	33	15 11	53	0		0	26 16	86
9:15	18		9		0	0	27		21:15	2		8		0		0	10	
9:30 9:45	12 22	68	7 12	35	0 0	0 0	19 34	103	21:30 21:45	5 12	24	8 8	35	0 0		0	13 20	59
10:00	13	00	10	33	0	0	23	103	22:00	13	24	8	33	0		0	21	39
10:15	15		9		0	0	24		22:15	9		4		0		0	13	
10:30 10:45	18 17	63	11 12	42	0 0	0 0	29 29	105	22:30 22:45	10 4	36	5 7	24	0		0	15 11	60
11:00	14		10		0	0	24		23:00	2		5		0		0	7	
11:15 11:30	13 21		21 10		0 0	0 0	34 31		23:15 23:30	1 1		3 1		0		0	4 2	
11:45	22	70	17	58	0	0	39	128	23:45	2	6	1	10	0		0	3	16
TOTALS		477		288				765	TOTALS		682		751					1433
SPLIT %		62.4%		37.6%				34.8%	SPLIT %		47.6%		52.4%					65.2%
	D	AILY 1	ГОТА	\LS		NB	SB		EB		WB							otal
						1,159	1,039	)	0		0						2,	198
AM Peak Hour		6:45		11:45				7:00	PM Peak Hour		14:45		14:30					14:45
AM Pk Volume Pk Hr Factor		128 0.800		67 0.728				180 0.804	PM Pk Volume Pk Hr Factor		103 0.888		105 0.795					201 0.852
7 - 9 Volume		195		90		0 0		285	4 - 6 Volume		144		180		0	0		324
7 - 9 Peak Hour		7:00		7:30				7:00	4 - 6 Peak Hour		16:00		16:30					16:00
7 - 9 Pk Volume		127		56				180	4 - b PK Volume		85		97					180
Pk Hr Factor		0.794		0.737		0.000 0.000		0.804	Pk Hr Factor		0.664		0.933		0.000	0.00	0	0.818



#### W 20th Ave Bet. Treatment Plant Rd & Georgia Ave

ЕВ

SB

NB

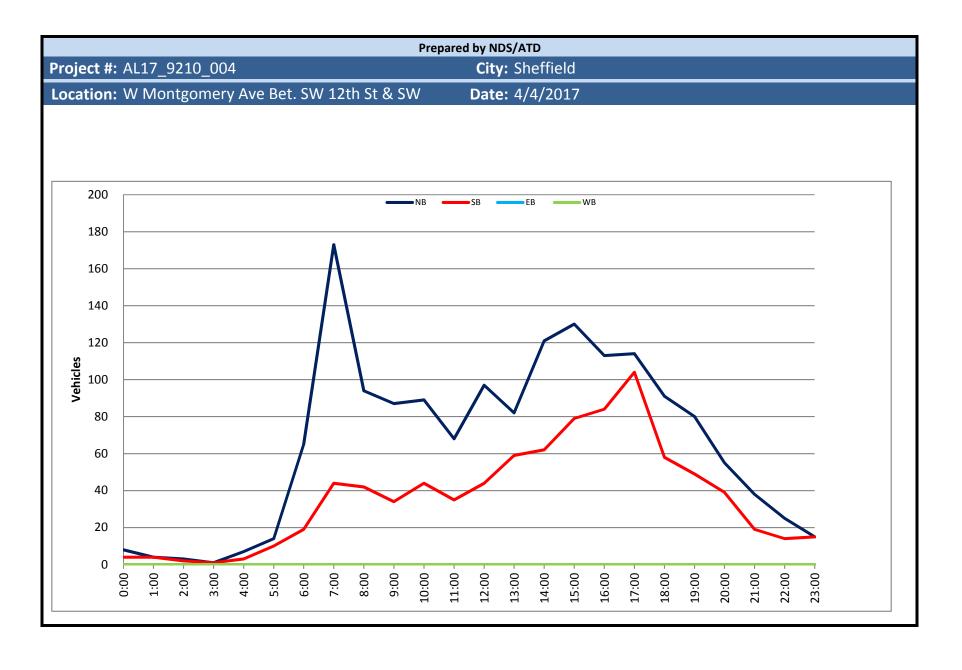
**Day:** Tuesday **Date:** 4/4/2017

City: Sheffield
Project #: AL17\_9210\_003

Total

WB

AM Period NB SB EB WB TOTAL PM Period NB SB EB WB TOTAL 0.00.00 0 0 0 0 0 1 1 1 1 2.20 1 2 32 32 54 54 50.00 1 1 1 1 2.20 1 1 1 2.20 1 1 1 1 2.20 1 1 1 1 2.20 1 1 1 1 1 2.20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		D	AILY T	OTA	LS		1,541	36 1,57!	5	О ЕВ		О							116
0000	AM Doried	NID		CD		ED					NID		CD		ED	VA/D			
Dot						ED	VVD		JIAL						ED	WD			IAL
00.05																			
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01:15 0 1 1 1 13:15 18 24 42 01:45 0 1 3 7 3 8 13:40 72 23 40 01:45 0 1 3 7 3 8 13:40 72 23 50 02:20 1 1 1 2 14:40 27 32 50 02:21 0 0 0 0 0 14:15 25 30 55 02:23 0 0 0 0 0 0 14:15 25 30 60 02:20 0 1 0 1 0 1 0 1 0 2 14:45 25 27 30 55 08:30 1 1 0 1 1 0 1 1 0 2 14:45 30 107 25 110 55 217 08:30 1 1 0 0 1 1 1 15:30 37 26 30 33 37 37 30 08:30 1 1 0 0 1 1 1 15:30 37 27 38 37 37 39 31 37 39 31 37 39 31 37 39 31 37 39 31			3		4				7			90		90					180
01:30 0 2 2 2 2 13:30 17 23 40 66 186 02:00 1 3 7 3 8 13:45 30 82 31 104 66 186 02:00 1 1 1 1 2 14:00 27 32 2 5 5 5 02:30 0 0 0 0 0 14:15 25 30 0 25 5 10:23 0 0 0 0 14:45 25 30 12:30 10 0 1 1 0 1 0 2 14:45 30 17 25 110 55 217 03:30 1 0 0 1 14:30 25 23 12:30 10 1 0 0 1 15:00 43 3 10:30 1 0 0 1 1 1 15:00 43 3 1 0 0 1 1 1 15:00 43 3 1 0 0 1 1 1 1 15:00 43 3 1 0 0 1 1 0 1 1 1 15:00 43 3 1 0 0 1 1 0 1 1 1 1 15:00 43 3 1 0 0 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1																			
D2-20																			
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02:30																			
02.45																			
03:00		_	1		1				2			107		110					217
03:30	03:00	0		0				0		15:00	27								
03:45																			
04:00			2						2			120		121					251
Od-15								_				120		131					231
October   Octo																			
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DS:15   S			12		7				19			108		151					259
05:30																			
05:45																			
06:15		7	29		13			11	42	17:45	24	97		188				68	285
06:30   22   12   34   60   123   18:45   30   111   25   116   55   227																			
06-045   39   80   21   43   43   50   123   18-45   30   111   25   116   55   227																			
07:00   37			80		43				123			111		116					227
07:30			- 00		-13			_	123					110					
O7:45   33   189   20   75   53   264   19:45   8   67   22   103   30   170																			
08:00         23         14         37         20:00         16         22         38         40           08:15         18         19         37         20:15         12         28         40           08:30         18         8         26         20:30         4         15         19           08:45         30         89         10         51         40         140         20:45         17         49         13         78         30         127           09:00         26         17         43         21:00         5         10         15         15         15         19         11         18         15         10         15         15         10         15         15         10         15         15         10         15         10         15         10         15         10         15         10         15         10         15         15         10         15         10         12         20         11         18         11         16         20         11         11         16         20         12         12         12         13         12         12         12 <t< td=""><th></th><td></td><td>400</td><td></td><td>75</td><td></td><td></td><td></td><td>264</td><td></td><td></td><td>67</td><td></td><td>400</td><td></td><td></td><td></td><td></td><td>470</td></t<>			400		75				264			67		400					470
08:15         18         19         37         20:15         12         28         40           08:30         18         8         26         20:30         4         15         19           08:45         30         89         10         51         40         140         20:45         17         49         13         78         30         127           09:00         26         17         43         21:05         5         10         15           09:15         19         11         30         21:15         7         11         18           09:45         25         91         13         58         38         149         21:45         0         17         8         40         8         57           10:00         19         20         39         22:00         7         6         13         10:15         18         15         33         22:15         5         5         10         10:10:10         19         20         39         22:30         7         6         13         11:10:10         10:30         23:16         39         22:30         2         2         4         4			189		/5				264			6/		103					170
08:30         18         8         26         20:30         4         15         19           08:45         30         89         10         51         40         140         20:45         17         49         13         78         30         127           09:00         26         17         43         21:00         5         10         15           09:15         19         11         30         21:15         7         11         18           09:30         21         17         38         21:30         5         11         16           09:45         25         91         13         58         38         149         21:45         0         17         8         40         8         57           10:00         19         20         39         22:00         7         6         13         13           10:15         18         15         33         22:15         5         5         10           10:30         23         16         39         22:30         2         2         4           10:45         36         96         22         73         58																			
09:00   26   17   13   15   10   15   15   10   15   10   15   10   15   10   15   10   17   13   18   16   10   17   18   10   17   19   20   10:15   15   15   10   10:15   18   15   10:30   23   16   16   16   16   16   10:45   36   96   22   73   73   73   11:15   16   25   25   21   23:15   1   3   23:15   1   3   23:15   1   3   3   23:15   1   3   3   23:15   1   3   3   23:15   1   3   3   3   3   3   3   3   3   3																		19	
09:15			89		51				140			49		78					127
09:30																			
09:45   25   91   13   58   38   149   21:45   0   17   8   40   8   57																			
10:15			91		58				149			17		40					57
10:30																			
10:45																			
11:00			96		73				169			18		20					38
11:15       16       25       21       41       23:15       1       3       4       4       5       11:30       25       21       46       23:30       2       3       5       5       5       12       23:45       2       6       3       16       5       22         TOTALS       669       428       1097       TOTALS       872       1147       2019         SPLIT %       61.0%       39.0%       35.2%       SPLIT %       43.2%       56.8%       64.8%         DAILY TOTALS       NB       SB       EB       WB       WB       Total         1,541       1,541       1,575       0       0       0       3,116         AM Peak Hour       06:45       11:15       06:45       PM Peak Hour       14:45       17:00       16:45         AM Pk Volume       195       115       PM Pk Volume       130       188       300         Pk Hr Factor       0.728       0.777       0.797       0.797       0.756       0.870       0.904			50		, ,				103			10					-		30
11:45         18         76         37         96         55         172         23:45         2         6         3         16         5         22           TOTALS         669         428         1097         TOTALS         872         1147         2019           SPLIT %         61.0%         39.0%         35.2%         SPLIT %         43.2%         56.8%         64.8%           DAILY TOTALS         NB         SB         EB         WB         WB         Total         3,116           AM Peak Hour         06:45         11:15         06:45         PM Peak Hour         14:45         17:00         16:45           AM Pk Volume         195         115         271         PM Pk Volume         130         188         300           Pk Hr Factor         0.728         0.777         0.797         0.797         0.756         0.870         0.904	11:15	16		25				41		23:15	1		3					4	
TOTALS         669         428         1097         TOTALS         872         1147         2019           SPLIT %         61.0%         39.0%         35.2%         SPLIT %         43.2%         56.8%         64.8%           DAILY TOTALS         NB         SB         EB         WB         WB         Total         3,116           AM Peak Hour AM Peak Hour Pk Volume Pk Hr Factor         195         11:15         06:45         PM Peak Hour PM Pk Volume Pk Hr Factor         130         188         300           Pk Hr Factor         0.728         0.777         0.797         Pk Hr Factor         0.756         0.870         0.904					0							_							
SPLIT %         61.0%         39.0%         35.2%         SPLIT %         43.2%         56.8%         64.8%           DAILY TOTALS         NB         SB         EB         WB         WB         Total           1,541         1,575         0         0         0         3,116           AM Peak Hour         06:45         11:15         06:45         PM Peak Hour         14:45         17:00         16:45           AM Pk Volume         195         115         271         PM Pk Volume         130         188         300           Pk Hr Factor         0.728         0.777         0.797         Pk Hr Factor         0.756         0.870         0.994		18		37				55			2		3					5	
DAILY TOTALS         NB         SB         EB         WB         Total           1,541         1,575         0         0         3,116           AM Peak Hour Pk Volume Pk Hr Factor         195         115         271         PM Peak Hour Pk Volume Pk Hr Factor         130         188         300           Pk Hr Factor         0.728         0.777         0.797         Pk Hr Factor         0.756         0.870         0.904	IOTALS		669		428				1097	TOTALS		8/2		114/					2019
DAILY TOTALS         1,541         1,575         0         0         3,116           AM Peak Hour 06:45 AM Pk Volume 195 115 Pk Hr Factor 0.728 0.777         11:15 O6:45 PM Peak Hour 14:45 17:00 16:45 PM Pk Volume 130 188 300 Pk Hr Factor 0.756 0.870 0.904         16:45 PM Pk Volume 130 188 300 Pk Hr Factor 0.756 0.870 0.904	SPLIT %		61.0%		39.0%				35.2%	SPLIT %		43.2%		56.8%					64.8%
AM Peak Hour 06:45 11:15 06:45 PM Peak Hour 14:45 17:00 16:45 AM Pk Volume 195 115 271 Pk Hr Factor 0.728 0.777 0.797 Pk Hr Factor 0.756 0.870 0.904		_	A 11 3/ 3	OTA	\1C		NB_	SB		EB		WB						To	tal
AM Pk Volume         195         115         271         PM Pk Volume         130         188         300           Pk Hr Factor         0.728         0.777         0.797         Pk Hr Factor         0.756         0.870         0.904		ע	AILY I	UIA	1L5		1,541	1,57	5	0		0						3,1	116
AM Pk Volume         195         115         271         PM Pk Volume         130         188         300           Pk Hr Factor         0.728         0.777         0.797         Pk Hr Factor         0.756         0.870         0.904	AM Peak Hour		06:45		11.15				06:45	PM Peak Hour		14.45		17:00					16.45
Pk Hr Factor         0.728         0.777         0.797         Pk Hr Factor         0.756         0.870         0.904																			
						0	0								0		0		
<b>7 - 9 Peak Hour</b> 07:00 07:00 <b>07:00 4 - 6 Peak Hour</b> 16:45 17:00 <b>16:45</b>	7 - 9 Peak Hour				07:00				07:00	4 - 6 Peak Hour		16:45		17:00					16:45
<b>7 - 9 Pk Volume</b> 189 75 0 0 <b>264 4 - 6 Pk Volume</b> 114 188 0 0 <b>300</b>	7 - 9 Pk Volume		189		75				264	4 - 6 Pk Volume		114		188					300
Pk Hr Factor         0.705         0.815         0.000         0.000         0.776         Pk Hr Factor         0.695         0.870         0.000         0.000         0.904	Pk Hr Factor		0.705		0.815	0.000	0.0	00	0.776	Pk Hr Factor		0.695		0.870	0.000	)	0.000		0.904



#### Prepared by NDS/ATD Prepared by National Data & Surveying Services

#### **VOLUME**

W Montgomery Ave Bet. SW 12th St & SW 13th St

EB

WB

Total

**Day:** Tuesday **Date:** 4/4/2017 City: Sheffield Project #: AL17\_9210\_004

SB

NB

**DAILY TOTALS** 

	D	AILY T	OTA	ALS		1,574		868 36		0		0 0								142
AM Period	NB		SB		EB	WB		TO1	ΓΔΙ	PM Period	NB		SB		EB		WB			TAL
0:00	1		0		0	0		1	AL	12:00	26		11		0		0		37	IAL
0:15	6		0		0	0		6		12:15	17		12		0		0		29	
0:30	1		2		0	0		3	12	12:30	24	07	11		0		0		35	4.44
0:45 1:00	0	8	<u>2</u>	4	0	0		2	12	12:45 13:00	30 20	97	10 11	44	0		0		40 31	141
1:15	1		0		0	0		1		13:15	14		15		0		0		29	
1:30	2		0		0	0		2		13:30	22		13		0		0		35	
1:45	0	4	3	4	0	0		3	8	13:45	26	82	20	59	0		0		46	141
2:00 2:15	2 0		0 1		0 0	0 0		2 1		14:00 14:15	27 32		18 11		0		0 0		45 43	
2:30	1		1		0	0		2		14:15	32 29		16		0		0		45 45	
2:45	0	3	0	2	0	0			5	14:45	33	121	17	62	0		0		50	183
3:00	0		0		0	0				15:00	34		22		0		0		56	
3:15 3:30	0 1		0 0		0 0	0 0		1		15:15 15:30	40 31		20 20		0 0		0 0		60 51	
3:45	0	1	1	1	0	0		1 1	2	15:45	25	130	20 17	79	0		0		42	209
4:00	0		0		0	0			_	16:00	33	100	22		0		0		55	
4:15	1		1		0	0		2		16:15	26		11		0		0		37	
4:30	3	-	1	2	0	0		4	10	16:30	23	112	31	0.4	0		0		54	107
4:45 5:00	3	7	1 1	3	0	0		2	10	16:45 17:00	31 31	113	20 30	84	0		0		51 61	197
5:15	3		3		0	0		6		17:15	25		19		0		0		44	
5:30	2		3		0	0		5		17:30	36		28		0		0		64	
5:45	8	14	3	10	0	0		11	24	17:45	22	114	27	104	0		0		49	218
6:00	12 10		3		0 0	0 0		15 11		18:00 18:15	24 29		16		0		0		40	
6:15 6:30	21		1 7		0	0		28		18:30	29 16		18 13		0 0		0		47 29	
6:45	22	65	8	19	0	0		30	84	18:45	22	91	11	58	0		0		33	149
7:00	23		6		0	0		29		19:00	39		18		0		0		57	
7:15	47		9		0	0		56		19:15	14		8		0		0		22	
7:30 7:45	51 52	173	16 13	44	0 0	0 0		67 65	217	19:30 19:45	15 12	80	10 13	49	0 0		0 0		25 25	129
8:00	23	1/3	9	77	0	0		32	217	20:00	11	00	13	73	0		0		24	123
8:15	21		5		0	0		26		20:15	22		6		0		0		28	
8:30	25		15		0	0		40	400	20:30	11		13		0		0		24	
8:45 9:00	25 18	94	13 10	42	0	0		38 28	136	20:45 21:00	11 8	55	7	39	0		0		18 10	94
9:15	20		6		0	0		26		21:15	12		8		0		0		20	
9:30	24		10		0	0		34		21:30	7		5		0		0		12	
9:45	25	87	8	34	0	0		33	121	21:45	11	38	4	19	0		0		15	57
10:00 10:15	22		9 12		0 0	0 0		31 33		22:00 22:15	5 8		1 4		0		0 0		6 12	
10:30	21 27		11		0	0		38		22:30	5		4		0		0		9	
10:45	19	89	12	44	0	0		31	133	22:45	7	25	5	14	0		0		12	39
11:00	15		11	· · · · · ·	0	0		26		23:00	4		9		0		0		13	
11:15	26 16		7 10		0 0	0 0		33 26		23:15 23:30	7 3		4 1		0		0 0		11 4	
11:30 11:45	11	68	7	35	0	0		26 18	103	23:30 23:45	3 1	15	1	15	0		0		2	30
TOTALS		613	<u>,                                     </u>	242		- U		10	855	TOTALS		961		626			<u> </u>			1587
SPLIT %		71.7%		28.3%					35.0%	SPLIT %		60.6%		39.4%						65.0%
						NB		SB		ЕВ		WB							To	tal
	D	AILY T	OT/	ALS		1,574		868		0		0								142
AM Peak Hour		7:00		7:15					7:15	PM Peak Hour		14:45		17:00						16:45
AM Pk Volume		7:00 173		7:15 47					7:15	PM Pk Volume		138		104						220
Pk Hr Factor		0.832		0.734					0.821	Pk Hr Factor		0.863		0.867						0.859
7 - 9 Volume		267		86		0	0		353	4 - 6 Volume		227		188		0		0		415
7 - 9 Peak Hour		7:00		7:15					7:15	4 - 6 Peak Hour		16:45		17:00						16:45
7 - 9 Pk Volume		173		47					220	4 - 6 Pk Volume		123		104						220
Pk Hr Factor		0.832		0.734	(	0.000	0.000		0.821	Pk Hr Factor		0.854		0.867		0.000	0	.000		0.859

#### NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain

Coastal Base Flood Elevations shown on this map apply only landward of 0.0" NAVD 88. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this

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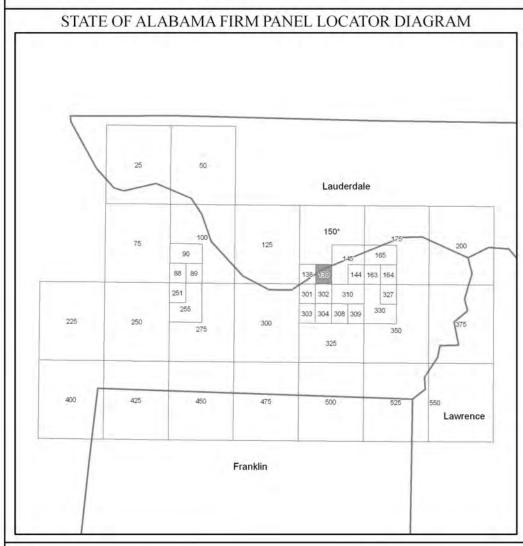
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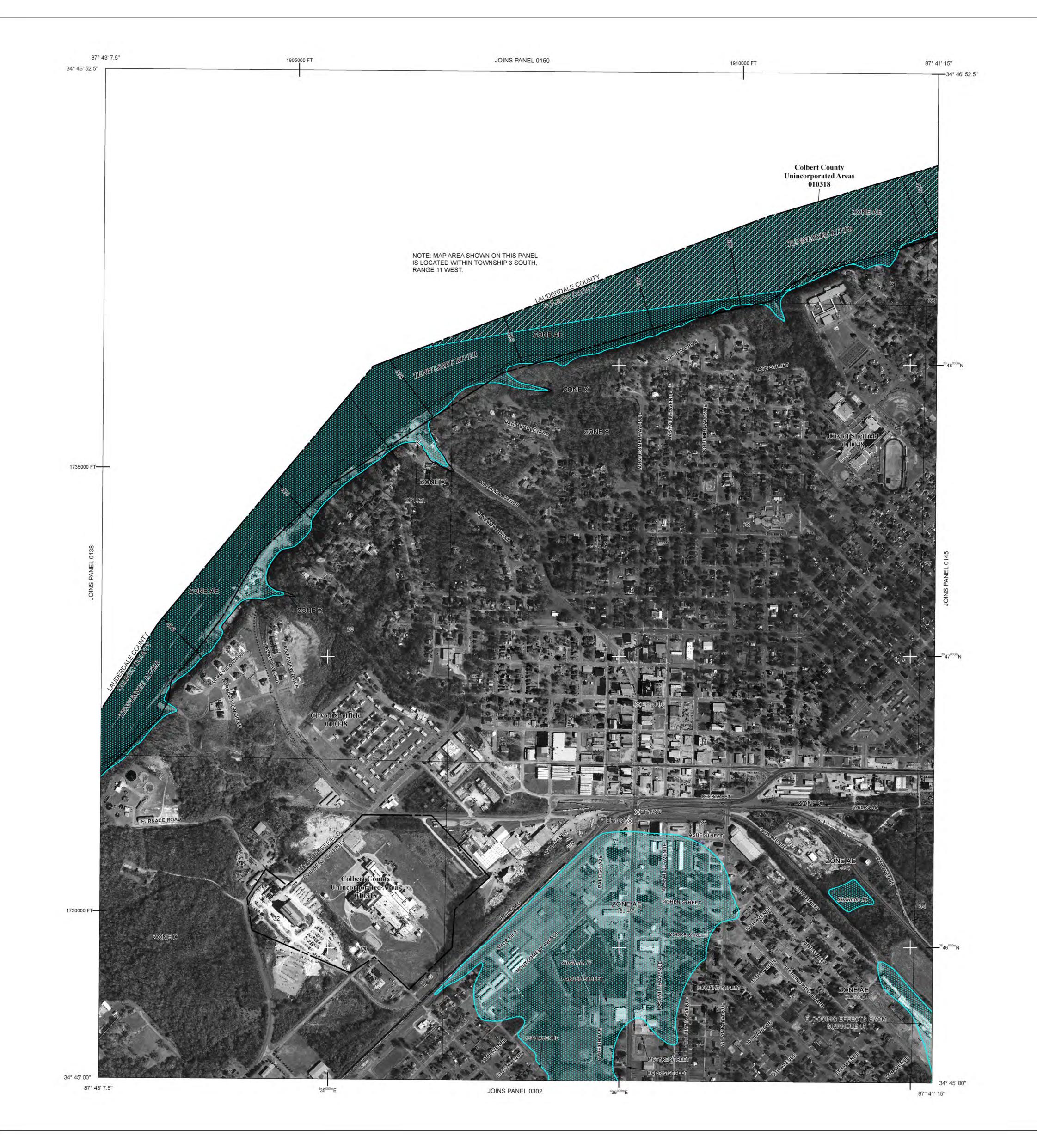
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#### LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE AE Base Flood Elevations determined. ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also Special Flood Hazard Area formerly protected from the 1% annual chance ZONE AR flood by a flood control system that was subsequently decertified. Zone AR

No Base Flood Elevations determined.

Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood

protection from the 1% annual chance or greater flood

indicates that the former flood control system is being restored to provide

Coastal flood zone with velocity hazard (wave action); Base Flood ZONE VE

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain. ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS OTHERWISE PROTECTED AREAS (OPAS)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. 1% annual chance floodplain boundary

0.2% annual chance floodplain boundary Floodway boundary Zone D boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

..... 513 mmm Base Flood Elevation line and value; elevation in feet\* Base Flood Elevation value where uniform within zone; elevation (EL 987)

\* Referenced to the North American Vertical Datum of 1988 Cross section line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) 87°07'45", 32°22'30" 1000-meter Universal Transverse Mercator grid values, zone 16 5000-foot grid ticks: Alabama State Plane coordinate

600000 FT system, west zone (FIPSZONE 0102), Lambert Conformal Conic Bench mark (see explanation in Notes to Users section of this DX5510 x

• M1.5 River Mile

> MAP REPOSITORY Refer to listing of Map Repositories on Map Index EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP FEBRUARY 17, 2010

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

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To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



FIRM FLOOD INSURANCE RATE MAP COLBERT COUNTY, **ALABAMA** 

AND INCORPORATED AREAS PANEL 139 OF 550 (SEE LOCATOR DIAGRAM OR MAP INDEX FOR

FIRM PANEL LAYOUT)

Sheffield, CITY OF 010048 0139

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

PANEL 0139D

EFFECTIVE DATE MAP NUMBER FEBRUARY 17, 2010 01033C0139D





#### NOTES TO USERS

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Coastal Base Flood Elevations shown on this map apply only landward of 0.0" NAVD 88. Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

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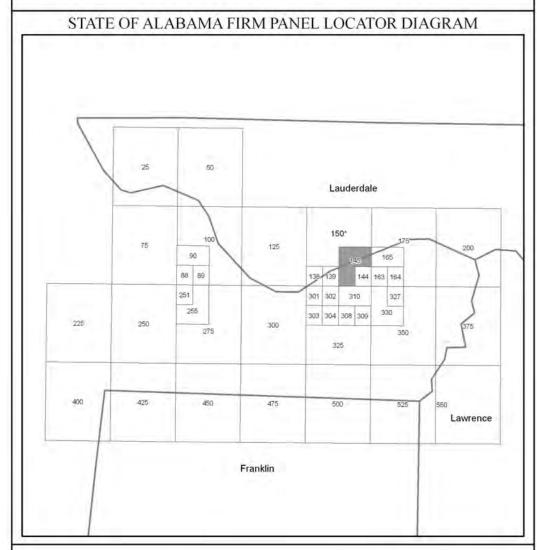
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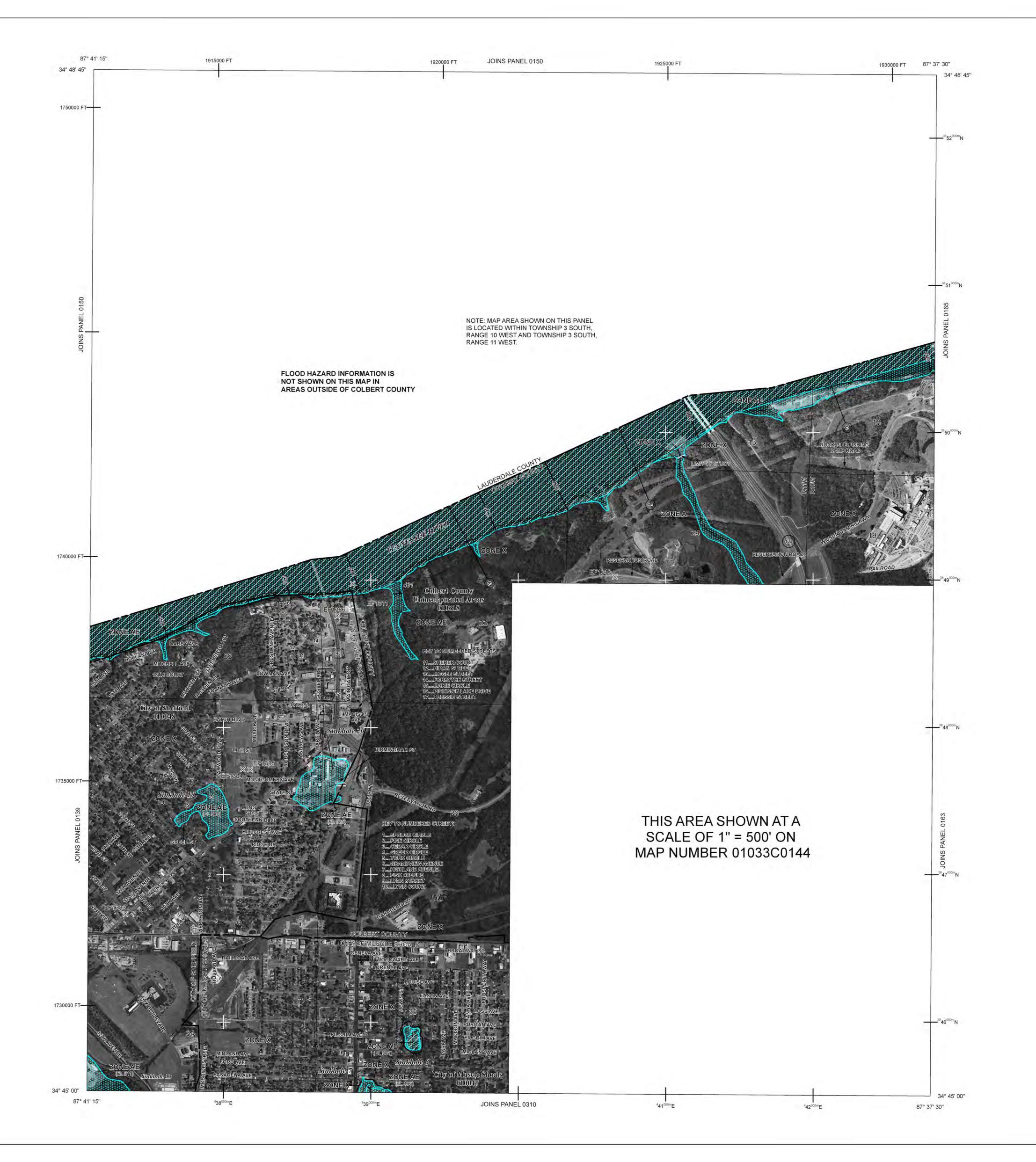
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#### LEGEND

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No Base Flood Elevations determined. ZONE AE Base Flood Elevations determined. ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined

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Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood

protection from the 1% annual chance or greater flood

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS ZONE X

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible. ZONE D

OTHERWISE PROTECTED AREAS (OPAS)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas. 1% annual chance floodplain boundary 0.2% annual chance floodplain boundary

Floodway boundary Zone D boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities. ..... 513 mmm Base Flood Elevation line and value; elevation in feet\* Base Flood Elevation value where uniform within zone; elevation

(EL 987) \* Referenced to the North American Vertical Datum of 1988 Cross section line

Transect line Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) 87°07'45", 32°22'30"

1000-meter Universal Transverse Mercator grid values, zone 16 5000-foot grid ticks: Alabama State Plane coordinate 600000 FT system, west zone (FIPSZONE 0102), Lambert Conformal Conic

Bench mark (see explanation in Notes to Users section of this DX5510 x • M1.5 River Mile

> MAP REPOSITORY Refer to listing of Map Repositories on Map Index EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

FEBRUARY 17, 2010

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## **FIRM** FLOOD INSURANCE RATE MAP COLBERT COUNTY, **ALABAMA** AND INCORPORATED AREAS

PANEL 145 OF 550 (SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

Muscle Shoals, CITY OF 010047 Sheffield, CITY OF 010048

Notice to User: The Map Number shown below should be

0145

PANEL 0145D

EFFECTIVE DATE MAP NUMBER FEBRUARY 17, 2010 01033C0145D

used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



State of Alabama Federal Emergency Management Agency

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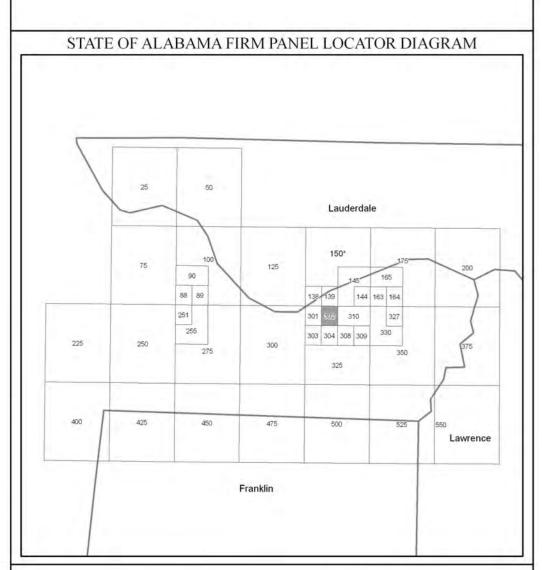
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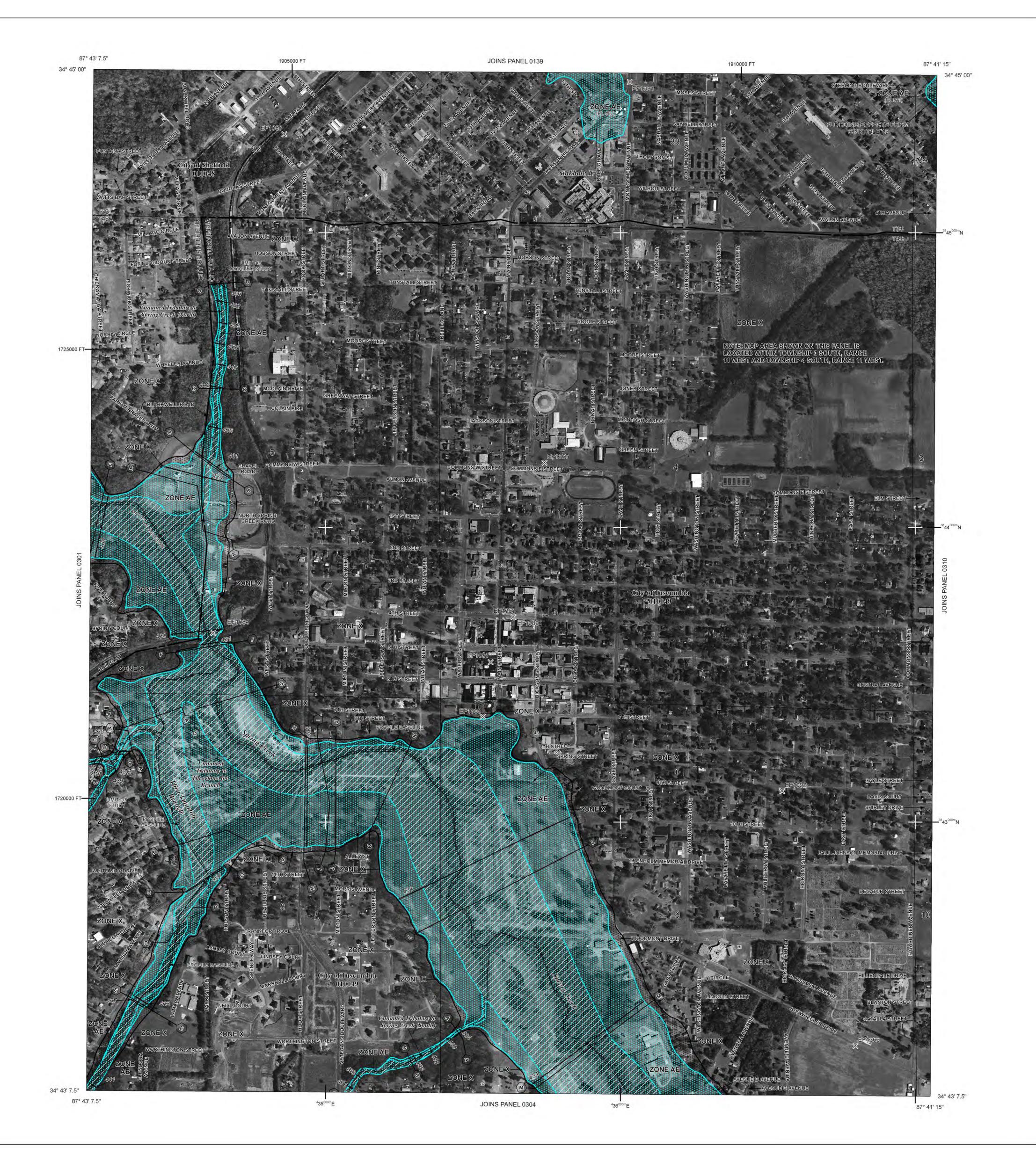
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ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Coastal flood zone with velocity hazard (wave action); Base Flood ZONE VE

of encroachment so that the 1% annual chance flood can be carried without substantial increases

FLOODWAY AREAS IN ZONE AE The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free

OTHER FLOOD AREAS

water-surface elevation of the 1% annual chance flood.

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

protection system under construction; no Base Flood Elevations

OTHER AREAS

in flood heights.

ZONE X Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible. ZONE D

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

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> 1% annual chance floodplain boundary 0.2% annual chance floodplain boundary Floodway boundary Zone D boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities. Base Flood Elevation line and value; elevation in feet\*

..... 513 mmm Base Flood Elevation value where uniform within zone; elevation

\* Referenced to the North American Vertical Datum of 1988 Cross section line

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Bench mark (see explanation in Notes to Users section of this DX5510 x • M1.5 River Mile

> MAP REPOSITORY Refer to listing of Map Repositories on Map Index EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

FEBRUARY 17, 2010

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FIRM FLOOD INSURANCE RATE MAP COLBERT COUNTY,

ALABAMA AND INCORPORATED AREAS PANEL 302 OF 550 (SEE LOCATOR DIAGRAM OR MAP INDEX FOR

FIRM PANEL LAYOUT)

Tuscumbia, CITY OF 010049 0302

PANEL 0302D

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for

EFFECTIVE DATE MAP NUMBER FEBRUARY 17, 2010 01033C0302D





# APPENDIX B Trip Generation Study

**Total Trip Generation Conceptual Development** 

Land-use	Size	Daily Trip Rate	Daily Dis	tribution	Dai	ily Total Tr	ips
		, ,	In	Out	In	Out	Total
Hotel (310)	130 RMS	8.17	50%	50%	531	531	1062
Conference Center			Accessory	Use to Hote			
Event Facility			Accessory	Use to Hote			
Arena (460)	15 ACR	33.3	50%	50%	250	250	500
Open Air Arena/Lawn			Accessory l	Jse to Arena	9		
Shopping Center (820)	150 KSF	58.93	50%	50%	4420	4420	8840
Wedding Chapel		Acce	ssory Use to	Shopping (	Center		
Movie Theater with Matinee (444)	6 SCR	101 <sup>1</sup>	50%	50%	303	303	606
Brewery: Drinking Place (925)	5 KSF	57.0 <sup>1</sup>	50%	50%	142	142	284
Brewery: General Light Industrial (110)	15 KSF	6.97	50%	50%	52	52	104
Marina (420)	321 BRTH	2.96	50%	50%	475	475	950
Guest Rooms			Accessory U	lse to Marin	a		
Marina: Specialty Retail (826)	30 KSF	44.32	50%	50%	665	665	1330
Single-Family Detached Housing (210) <sup>2</sup>	150 DU	10.17	50%	50%	763	763	1526
Assisted Living (254)	100 BEDS	2.66	50%	50%	133	133	266
Campground/Recreational Vehicle Park (416)	40 OCS	2.70 <sup>3</sup>	50%	50%	54	54	108
Clubhouse		Accessory Use to	o Campgrou	nd/Recreati	onal Vehicle	e Park	
		Tota	l "Raw Trip (	Generation	7,788	7,788	15,576
			Internal Trip	Reduction	(-2,345)	(-2,345)	(-4,690)
	259	% Shopping Center L	Diverted Trip	Reduction	(-858)	(-858)	(-1,716)
^	let "New" Trip	os Created by Develo	opment (Ret	ail + Hotel)	4,044	4,044	8,087
Net '	'New" Trips Cı	reated by Developm	ent (Other R	Residential)	541	541	1,083
		Net "New" Trips Cr	eated by De	velopment	4,585	4,585	9,170

RMS = Rooms

ACR = Acres

KSF = 1,000 square feet

SCR = Screens

BRTH = Berths

DU = Dwelling Units

OCS = Occupied Camp Sites

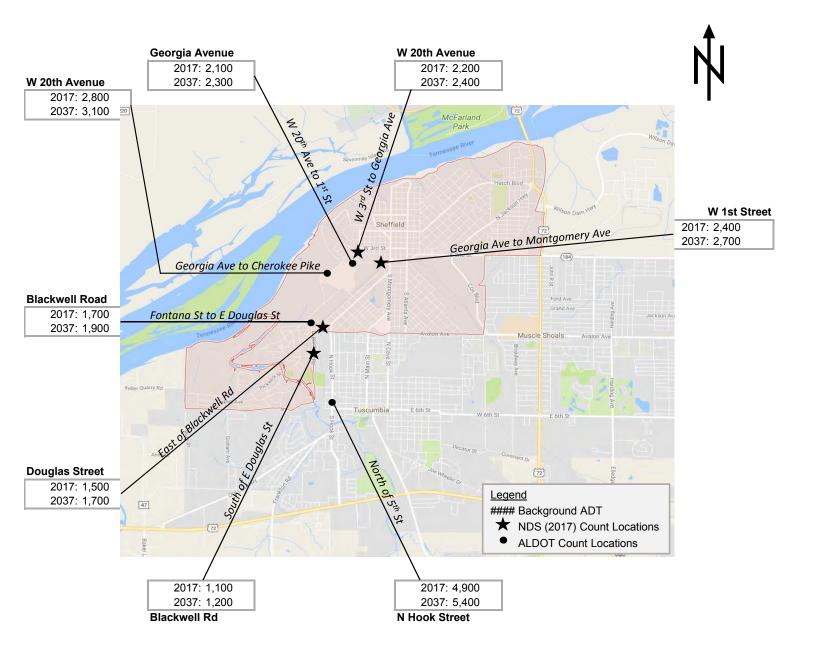
<sup>&</sup>lt;sup>1</sup> Daily trip rate is approximated as 5 times the PM peak trip rate (assuming the PM peak rate is 20% of the daily rate)

<sup>&</sup>lt;sup>2</sup> The single-family detached housing land-use was inclusive of rental cottages

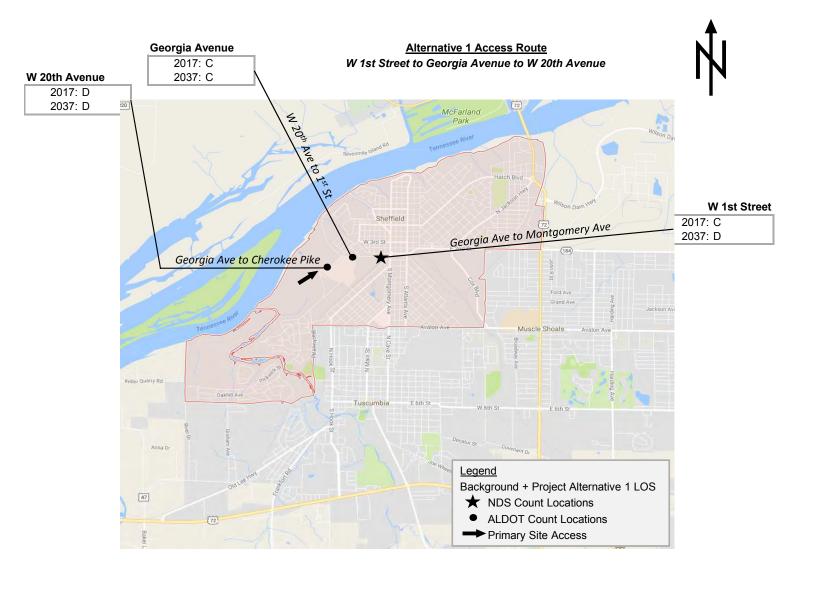
<sup>&</sup>lt;sup>3</sup> Daily trip rate is approximated as 10 times the PM peak trip rate (assuming the PM peak rate is 10% of the daily rate)

## **APPENDIX C**

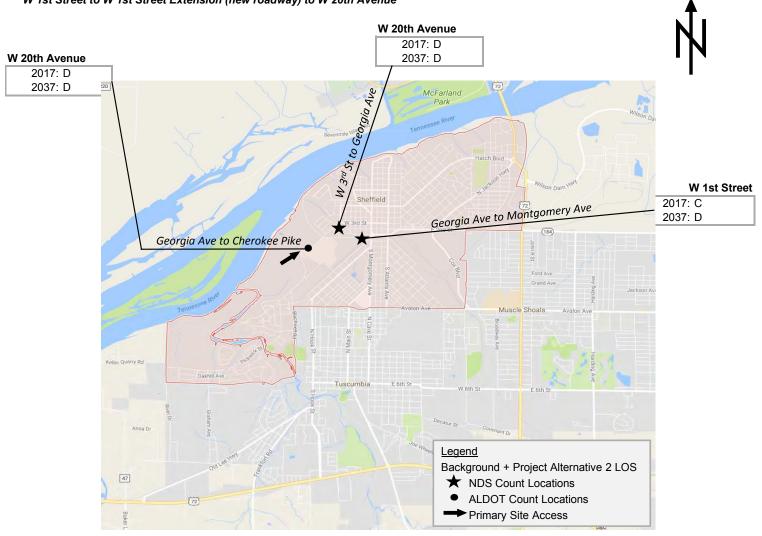
### Without Project Level of Service Worksheets



# APPENDIX D With Project Level of Service Worksheets

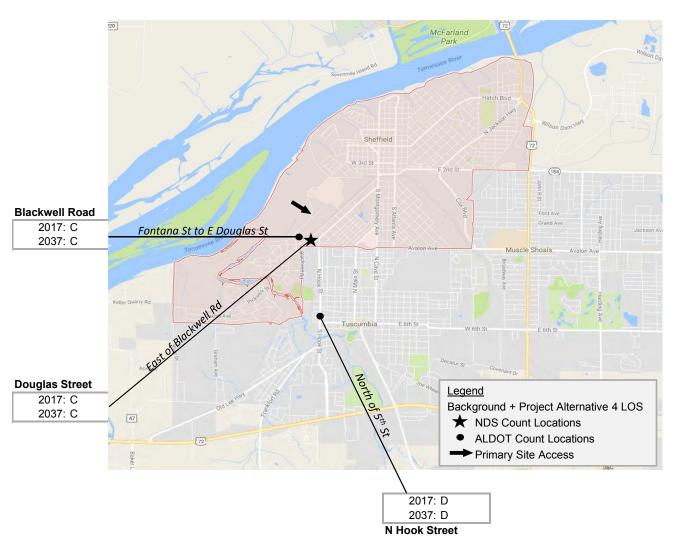


# Alternative 2 Access Route W 1st Street to W 1st Street Extension (new roadway) to W 20th Avenue



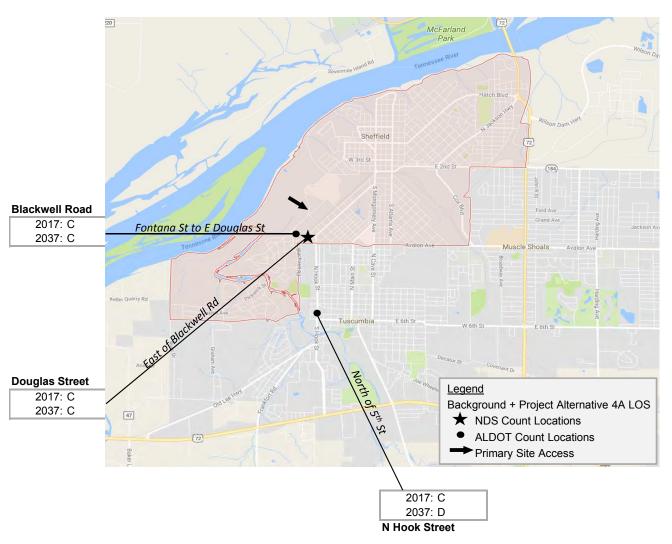
## Alternative 4 Access Route Hook Street to Douglas Street to Blackwell Road to W 20th Avenue





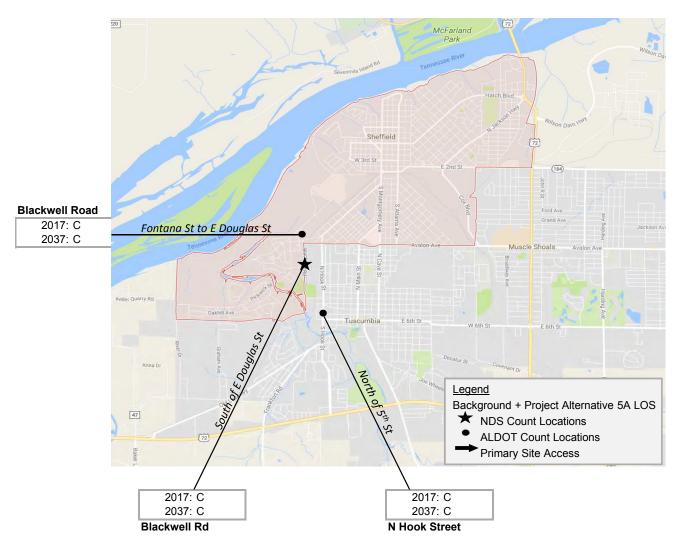
# Alternative 4A Access Route Hook Street to N Stewart Street (one-way pair) to Douglas Street to Blackwell Road to W 20th Avenue





### Alternative 5A Access Route Hook Street to N Commons Street (extension over railroad) to Blackwell Road to W 20th Avenue





# APPENDIX E Cost Estimates

**Sheffield Inspiration Landing Access Study** 

Sheffield, AL

ALTERNATE 1 (Minimum) - 1st Street, Georgia Avenue, and 20th Avenue to access the 1st or 2nd Entrance: Mill and Pave nt of Georgia Aven

Item Description	Unit		Unit Cost	Quantity		Cost
Removal of Existing Pavement/Sidewalk	CU YD	\$	15.00	0	\$	-
Grading <sup>1</sup>	SQ YD	\$	25.00	15020	\$	375,500.00
Base & Pave (New Pavement/Full Buildup Area) <sup>2</sup>	SQ YD	\$	50.00	5610	\$	280,500.00
1" Plane Existing Pavement (to be retained) <sup>1</sup>	SQ YD	\$	3.00	11000	\$	33,000.00
1" Leveling & Overlay of Existing Pavement (to be retained)		$\top$			$\Box$	
1	SQ YD	\$	7.50	11000	\$	82,500.00
Gravel Shoulders	SQ YD	\$	7.50	0		·
Inlets/Drainage Structures	EACH	\$	3,000.00	15	\$	45,000.00
Junction Box	EACH	\$	3,000.00	3	\$	9,000.00
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$	65.00	3360	\$	218,400.00
Concrete Sidewalk, 4"	SQ YD	\$	45.00	1770	\$	79,650.00
Asphalt Trail, 12' Wide	SQ YD	\$	17.00	7650	\$	130,050.00
Concrete Driveway, 6" Thick	SQ YD	\$	45.00	0	\$	-
Curb & Gutter <sup>1</sup>	LIN FT	\$	20.00	6260	\$	125,200.00
Concrete Curb	LIN FT	\$	16.00	0	\$	
Signal Modifications	Lump Sum	\$	80,000.00	0	\$	
Solid Sodding <sup>1</sup>	SQ YD	\$	4.50	4240	\$	19,080.00
Seeding	ACRE	\$	1,000.00	3.00	\$	3,000.00
Mulching	ACRE	\$	800.00	0.00		-
Topsoil	CU YD	\$	25.00	1710	\$	42,750.00
Striping	MILE	\$	3,000.00	6.31	\$	18,930.00
Markings and Legends	SQ FT	\$	5.00	2040	\$	10,200.00
Signing (includes post) <sup>1</sup>	SQ FT	\$	29.00	65	\$	1,885.00
Traffic Handling	Lump Sum	\$	22,200.00	1	\$	22,200.00
Erosion & Sediment Control	Lump Sum	\$	47,200.00	1	\$	47,200.00
SUBTOTAL					\$	1,544,045.0
Incidentals/Contingency (20%)		$\perp$			\$	308,809.0
CONSTRUCTION COST					\$	1,852,900.00
+ Engineering Controls		I	2.00%		\$	37,100.0
+ Mobilization			5.00%		\$	92,700.0
+ Construction Engineering & Inspection (CE&I)			15.00%		\$	297,500.00
CONSTRUCTION SUBTOTAL					\$	2,280,200.00
+ Preliminary Engineering		7		[	Ī	
(Environmental Study, Survey, Geotechnical, Design, ROW			!			
Acquisition Docs)		$\perp$	15.00%		\$	342,030.0
+ Utility Relocation Cost <sup>3</sup>	Lump Sum	$\perp$		1	\$	
+ ROW Cost	Acre		2.67	\$ 150,000.00	\$	400,430.3
SUBTOTAL					\$	3,022,660.3
+ ALDOT Indirect Cost			13.63%		\$	412,000.0
TOTAL ESTIMATED PROJECT COST (2017)				<u> </u>	\$	3,434,700.0

80.00%

20.00%

\$ 2,747,760.00

\$686,940.00

20% Local Funding Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.

Note: Incidental & Contingency cost includes miscellaneous/unknown items not quantified at this time.

80% Federal Funding

<sup>&</sup>lt;sup>1</sup> Based on ALDOT Items Bid History

<sup>&</sup>lt;sup>2</sup> Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

**Sheffield Inspiration Landing Access Study** 

Sheffield, AL

ALTERNATE 1 (Optimum) - 1st Street, Georgia Avenue, and 20th Avenue to access the 1st or 2nd Entrance: Mill and Pave with New Curb & Gutter and Sidewalk/Trail (realignment of Georgia Avenue - 3 Lane Section), Widen and add 2' Paved Shoulder on 20th Street (3 Lane Section)

Item Description	Unit	Unit Cost Quantity			Cost
Removal of Existing Pavement/Sidewalk	CU YD	\$ 15.00		0	\$ -
Grading <sup>1</sup>	SQ YD	\$ 25.00		24030	\$ 600,750.00
Base & Pave (New Pavement/Full Buildup Area) 2	SQ YD	\$ 50.00		11400	\$ 570,000.00
1" Plane Existing Pavement (to be retained) 1	SQ YD	\$ 3.00		11000	\$ 33,000.00
1" Leveling & Overlay of Existing Pavement (to be retained)					
1	SQ YD	\$ 7.50		11000	\$ 82,500.00
Gravel Shoulders	SQ YD	\$ 7.50		0	,
Inlets/Drainage Structures	EACH	\$ 3,000.00		15	\$ 45,000.00
Junction Box	EACH	\$ 3,000.00		3	\$ 9,000.00
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$ 65.00		3540	\$ 230,100.00
Concrete Sidewalk, 4"	SQ YD	\$ 45.00		1730	\$ 77,850.00
Asphalt Trail, 12' Wide	SQ YD	\$ 17.00		7670	\$ 130,390.00
Concrete Driveway, 6" Thick	SQ YD	\$ 45.00		0	\$ -
Curb & Gutter 1	LIN FT	\$ 20.00		6260	\$ 125,200.00
Concrete Curb	LIN FT	\$ 16.00		0	\$ -
Signal Modifications	Lump Sum	\$ 80,000.00		0	\$ -
Solid Sodding <sup>1</sup>	SQ YD	\$ 4.50		4240	\$ 19,080.00
Seeding	ACRE	\$ 1,000.00		1.00	\$ 1,000.00
Mulching	ACRE	\$ 800.00		0.00	\$ -
Topsoil	CU YD	\$ 25.00	25.00 86		\$ 21,500.00
Striping	MILE	\$ 3,000.00		6.31	\$ 18,930.00
Markings and Legends	SQ FT	\$ 5.00		2040	\$ 10,200.00
Signing (includes post) <sup>1</sup>	SQ FT	\$ 29.00		65	\$ 1,885.00
Traffic Handling	Lump Sum	\$ 29,700.00		1	\$ 29,700.00
Erosion & Sediment Control	Lump Sum	\$ 63,300.00		1	\$ 63,300.00
SUBTOTAL					\$ 2,069,385.00
Incidentals/Contingency (20%)					\$ 413,877.00
CONSTRUCTION COST					\$ 2,483,300.00
+ Engineering Controls		2.00%			\$ 49,700.00
+ Mobilization		5.00%			\$ 124,200.00
+ Construction Engineering & Inspection (CE&I)		15.00%			\$ 398,600.00
CONSTRUCTION SUBTOTAL					\$ 3,055,800.00
+ Preliminary Engineering					
(Environmental Study, Survey, Geotechnical, Design, ROW					
Acquisition Docs)		15.00%			\$ 458,370.00
+ Utility Relocation Cost <sup>3</sup>	Lump Sum			1	\$ -
+ ROW Cost	Acre	2.67	\$ 1	50,000.00	\$ 400,430.38
SUBTOTAL					\$ 3,914,600.38
+ ALDOT Indirect Cost		13.63%		_	\$ 533,600.00
TOTAL ESTIMATED PROJECT COST (2017)					\$ 4,448,300.00
80% Federal Funding		80.00%			\$ 3,558,640.00
20% Local Funding		20.00%			\$889,660.00

Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.

<sup>&</sup>lt;sup>1</sup> Based on ALDOT Items Bid History

 $<sup>^{2}</sup>$  Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

**Sheffield Inspiration Landing Access Study** 

Sheffield, AL

ALTERNATE 2 (Minimum) - 1st Street Extension and 20th Avenue to access the 1st or 2nd Entrance: Mill and Pave and Construct 1st Street Extension with Curb & Gutter and Sidewalk, Roundabout at 20th & 1st Avenue Extension, Widen and add 2' Paved Shoulder on 20th Street south of Georgia Avenue

Item Description	Unit		Unit Cost Quantity			Cost
Removal of Existing Pavement/Sidewalk	CU YD	\$	15.00	0	\$	_
Grading <sup>1</sup>	SQ YD	\$	25.00	13650		341,250.00
Base & Pave (New Pavement/Full Buildup Area) <sup>2</sup>	SQ YD	\$	50.00	6630	Ś	331,500.00
1" Plane Existing Pavement (to be retained) 1	SQ YD	\$	3.00	11510	Ś	34,530.00
1" Leveling & Overlay of Existing Pavement (to be retained)		T				5 1,000100
1	SQ YD	\$	7.50	11510	\$	86,325.00
Gravel Shoulders	SQ YD	\$	7.50	0	Ų	80,323.00
Inlets/Drainage Structures	EACH	\$	3,000.00	12	\$	36,000.00
Junction Box	EACH	\$	3,000.00	3	\$	9,000.00
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$	65.00	2530	\$	164,450.00
Concrete Sidewalk, 4"	SQ YD	\$	45.00	2470	\$	111,150.00
Asphalt Trail, 12' Wide	SQ YD	\$	17.00	4560	\$	77,520.00
Concrete Driveway, 6" Thick	SQ YD	\$	45.00	0	\$	
Curb & Gutter <sup>1</sup>	LIN FT	\$	20.00	4510	\$	90,200.00
Concrete Curb	LIN FT	\$	16.00	0	\$	-
Signal Modifications	Lump Sum	\$	80,000.00	0	\$	
Roundabout	Lump Sum	\$	250,000.00	1	\$	250,000.00
Solid Sodding <sup>1</sup>	SQ YD	\$	4.50	1870	\$	8,415.00
Seeding	ACRE	\$	1,000.00	3.00	\$	3,000.00
Mulching	ACRE	\$	800.00	0.00	\$	-
Topsoil	CU YD	\$	25.00	1450	\$	36,250.00
Striping	MILE	\$	3,000.00	5.39	\$	16,170.00
Markings and Legends	SQ FT	\$	5.00	200	\$	1,000.00
Signing (includes post) <sup>1</sup>	SQ FT	\$	29.00	50	\$	1,450.00
Traffic Handling	Lump Sum	\$	24,000.00	1	\$	24,000.00
Erosion & Sediment Control	Lump Sum	\$	51,200.00	1	\$	51,200.00
SUBTOTAL	•	Ť	,		\$	1,673,410.00
Incidentals/Contingency (20%)					\$	334,682.00
CONSTRUCTION COST					\$	2,008,100.00
+ Engineering Controls			2.00%		\$	40,200.00
+ Mobilization			5.00%		\$	100,500.00
+ Construction Engineering & Inspection (CE&I)			15.00%		\$	322,400.00
CONSTRUCTION SUBTOTAL					\$	2,471,200.00
+ Preliminary Engineering						
(Environmental Study, Survey, Geotechnical, Design, ROW						
Acquisition Docs)			15.00%		\$	370,680.00
+ Utility Relocation Cost <sup>3</sup>	Lump Sum			1	\$	-
+ ROW Cost	Acre		0.00	\$ 150,000.00	\$	_
SUBTOTAL		-		,	\$	2,841,880.00
+ ALDOT Indirect Cost					\$	387,400.00
TOTAL ESTIMATED PROJECT COST (2017)						3,229,300.00
80% Federal Funding			90 00º/		\$	
80% Federal Funding 20% Local Funding			80.00% 20.00%		Þ	2,583,440.00 \$645,860.00
Note: All Costs are from the ALDOT Preliminary Cost Estimate Form	/Undeted Ostali 3	042) -		l		\$045,86U.UU

Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.

 $Note: \ Incidental \ \& \ Contingency \ cost \ includes \ miscellaneous/unknown \ items \ not \ quantified \ at \ this \ time.$ 

<sup>&</sup>lt;sup>1</sup> Based on ALDOT Items Bid History

<sup>&</sup>lt;sup>2</sup> Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

**Sheffield Inspiration Landing Access Study** 

Sheffield, AL

ALTERNATE 2 (Optimum) - 1st Street Extension and 20th Avenue to access the 1st or 2nd Entrance: Mill and Pave and Construct 1st Street Extension with Curb & Gutter and Sidewalk (3 Lane Section), Roundabout at 20th & 1st Avenue Extension, Widen and add 2' Paved Shoulder on 20th Street south of Georgia Avenue (3 Lane Section)

Item Description	Unit	Unit Cost Quantity				Cost		
Removal of Existing Pavement/Sidewalk	CU YD	\$	15.00	0	\$	-		
Grading <sup>1</sup>	SQ YD	\$	25.00	21460	\$	536,500.00		
Base & Pave (New Pavement/Full Buildup Area) <sup>2</sup>	SQ YD	\$	50.00	11400	\$	570,000.00		
1" Plane Existing Pavement (to be retained) <sup>1</sup>	SQ YD	\$	3.00	8240	\$	24,720.00		
1" Leveling & Overlay of Existing Pavement (to be retained)								
1	SQ YD	\$	7.50	8240	\$	61,800.00		
Gravel Shoulders	SQ YD	\$	7.50	0				
Inlets/Drainage Structures	EACH	\$	3,000.00	12	\$	36,000.00		
Junction Box	EACH	\$	3,000.00	3	\$	9,000.00		
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$	65.00	2677	\$	174,005.00		
Concrete Sidewalk, 4"	SQ YD	\$	45.00	2470	\$	111,150.00		
Asphalt Trail, 12' Wide	SQ YD	\$	17.00	4560	\$	77,520.00		
Concrete Driveway, 6" Thick	SQ YD	\$	45.00	0	\$	-		
Curb & Gutter <sup>1</sup>	LIN FT	\$	20.00	4490	\$	89,800.00		
Concrete Curb	LIN FT	\$	16.00	0	\$	-		
Signal Modifications	Lump Sum	\$	80,000.00	0	\$	-		
Roundabout	Lump Sum	\$	250,000.00	1	\$	250,000.00		
Solid Sodding <sup>1</sup>	SQ YD	\$	4.50	1870	\$	8,415.00		
Seeding	ACRE	\$	1,000.00	1.00	\$	1,000.00		
Mulching	ACRE	\$	800.00	0.00	\$	-		
Topsoil	CU YD	\$	25.00	480	\$	12,000.00		
Striping	MILE	\$	3,000.00	5.39	\$	16,170.00		
Markings and Legends	SQ FT	\$	5.00	200	\$	1,000.00		
Signing (includes post) <sup>1</sup>	SQ FT	\$	29.00	50	\$	1,450.00		
Traffic Handling	Lump Sum	\$	29,800.00	1	\$	29,800.00		
Erosion & Sediment Control	Lump Sum	\$	63,400.00	1	\$	63,400.00		
SUBTOTAL					\$	2,073,730.00		
Incidentals/Contingency (20%)					\$	414,746.00		
CONSTRUCTION COST					\$	2,488,500.00		
+ Engineering Controls			2.00%		\$	49,800.00		
+ Mobilization			5.00%		\$	124,500.00		
+ Construction Engineering & Inspection (CE&I)			15.00%		\$	399,500.00		
CONSTRUCTION SUBTOTAL					\$	3,062,300.00		
+ Preliminary Engineering								
(Environmental Study, Survey, Geotechnical, Design, ROW								
Acquisition Docs)			15.00%		\$	459,345.00		
+ Utility Relocation Cost <sup>3</sup>	Lump Sum			1	\$	-		
+ ROW Cost	Acre		0.00	\$ 150,000.00	\$	-		
SUBTOTAL					\$	3,521,645.00		
+ ALDOT Indirect Cost	st 13.63%					480,100.00		
TOTAL ESTIMATED PROJECT COST (2017)	(1)					4,001,800.00		
80% Federal Funding			80.00%		\$	3,201,440.00		
20% Local Funding			20.00%		7	\$800,360.00		
20% Local Funding 20.00% \$								

Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.

 $Note: \ Incidental \ \& \ Contingency \ cost \ includes \ miscellaneous/unknown \ items \ not \ quantified \ at \ this \ time.$ 

<sup>&</sup>lt;sup>1</sup> Based on ALDOT Items Bid History

<sup>&</sup>lt;sup>2</sup> Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

**Sheffield Inspiration Landing Access Study** 

Tuscumbia & Sheffield, AL (Colbert County)

ALTERNATE 4 (PROPOSED) - Hook St (From 6th Street to W Montgomery Ave)/E Douglas St/Blackwell Rd (From E Douglas St to Wilson Dam Ave)/Wilson Dam Ave (From Blackwell Rd to Entrance #2): Mill and Pave (with Deep Patching on 1/3 of Hook Street), Roundabout at E Douglas/W Montgomery/Hook St Intersection

Item Description	Unit		Unit Cost	Quantity		Cost
Removal of Existing Pavement/Sidewalk	CU YD	\$	15.00	0	\$	-
Grading <sup>1</sup>	SQ YD	\$	25.00	0	\$	-
Base & Pave (New Pavement/Full Buildup Area) <sup>2</sup>	SQ YD	\$	50.00	0	\$	-
Deep Patching (2.5" thick) (33% of Hook Street)	SQ YD	\$	12.50	4740	\$	59,250.00
1.5" Plane Existing Pavement (to be retained) 1	SQ YD	\$	3.00	23010	\$	69,030.00
1.5" Leveling & Overlay of Existing Pavement (to be						
retained) <sup>1</sup>	SQ YD	\$	7.50	23010	\$	172,575.00
Slope Paving (for Paved Ditches)	CU YD	\$	450.00	852	\$	383,400.00
Gravel Shoulders	SQ YD	\$	7.50	0		•
Inlets/Drainage Structures	EACH	\$	3,000.00	0	\$	-
Junction Box	EACH	\$	3,000.00	0	\$	-
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$	65.00	0	\$	-
Concrete Sidewalk, 4"	SQ YD	\$	45.00	0	\$	-
Asphalt Trail, 12' Wide	SQ YD	\$	17.00	0	\$	-
Concrete Driveway, 6" Thick	SQ YD	\$	45.00	0	\$	-
Curb & Gutter <sup>1</sup>	LIN FT	\$	20.00	0	\$	-
Concrete Curb	LIN FT	\$	16.00	0	\$	-
Signal Modifications	Lump Sum	\$	80,000.00	0	\$	-
Roundabout	Lump Sum	\$	400,000.00	1	\$	400,000.00
Solid Sodding <sup>1</sup>	SQ YD	\$	4.50	0	\$	-
Seeding	ACRE	\$	1,000.00	0.00	\$	-
Mulching	ACRE	\$	800.00	0.00	\$	-
Topsoil	CU YD	\$	25.00	0	\$	-
Striping	MILE	\$	3,000.00	6	\$	18,000.00
Markings and Legends	SQ FT	\$	5.00	0	\$	-
Signing (includes post) <sup>1</sup>	SQ FT	\$	29.00	0	\$	-
Traffic Handling	Lump Sum	\$	16,600.00	1	\$	16,600.00
Erosion & Sediment Control	Lump Sum	\$	3,000.00	1	\$	3,000.00
SUBTOTAL					\$	1,121,855.00
Incidentals/Contingency (15%)					\$	168,278.25
CONSTRUCTION COST				1	\$	1,290,200.00
+ Engineering Controls			2.00%		\$	25,900.00
+ Mobilization			5.00%		\$	64,600.00
+ Construction Engineering & Inspection (CE&I)			15.00%		\$	207,200.00
CONSTRUCTION SUBTOTAL		_		,	\$	1,587,900.00
+ Preliminary Engineering						
(Environmental Study, Survey, Geotechnical, Design, ROW						
Acquisition Docs)			15.00%		\$	238,185.00
+ Utility Relocation Cost <sup>3</sup>		1	\$	-		
+ ROW Cost	Acre		0.27	\$ 150,000.00	\$ \$	40,318.67
SUBTOTAL						1,866,403.67
+ ALDOT Indirect Cost	13.63%				\$	254,400.00
TOTAL ESTIMATED PROJECT COST (2017)					\$	2,120,900.00
80% Federal Funding			80.00%		\$	1,696,720.00
20% Local Funding			20.00%			\$424,180.00

 $Note: \ All \ Costs \ are \ from \ the \ ALDOT \ Preliminary \ Cost \ Estimate \ Form \ (Updated \ October \ 2012) \ except \ where \ noted.$ 

<sup>&</sup>lt;sup>1</sup> Based on ALDOT Items Bid History

 $<sup>^{2}</sup>$  Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

**Sheffield Inspiration Landing Access Study** 

Tuscumbia & Sheffield, AL (Colbert County)

ALTERNATE 5 (PROPOSED) - Hook St (From 6th St to Blackwell Rd)/Blackwell Rd (From Hook St to Wilson Dam Ave)/Wilson Dam Ave (From Blackwell Rd to Entrance #2) Mill and Pave (with Deep Patching on 1/2 of Hook Street), Add 2' Stone Shoulders along Blackwell, superelevation & curve improvement on Blackwell, Reconstruct ditches along Blackwell Rd

Item Description	Unit	Unit Cost Quantity				Cost		
Removal of Existing Pavement/Sidewalk	CU YD	\$	15.00		\$	-		
Grading <sup>1</sup>	CU YD	\$	25.00	3750	\$	93,750.00		
Base & Pave (New Pavement/Full Buildup Area) <sup>2</sup>	SQ YD	\$	50.00	1120	\$	56,000.00		
Deep Patching (2.5") (50% of Hook Street)	SQ YD	\$	12.50	1940	\$	24,250.00		
1.5" Plane Existing Pavement (to be retained) 1	SQ YD	\$	3.00	23460	\$	70,380.00		
1.5" Leveling & Overlay of Existing Pavement (to be								
retained) 1	SQ YD	\$	7.50	23460	\$	175,950.00		
Slope Paving (for Paved Ditches)	CU YD	\$	450.00	852	\$	383,400.00		
Gravel Shoulders	SQ YD	\$	7.50	2670	\$	20,025.00		
Inlets/Drainage Structures	EACH	\$	3,000.00	0	\$	-		
Junction Box	EACH	\$	3,000.00	0	\$	-		
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$	65.00	100	\$	6,500.00		
Pipe End Treatment	EACH	\$	1,200.00	24	\$	28,800.00		
Concrete Sidewalk, 4"	SQ YD	\$	45.00	0	\$	-		
Asphalt Trail, 12' Wide	SQ YD	\$	17.00	0	\$	-		
Concrete Driveway, 6" Thick	SQ YD	\$	45.00	0	\$	-		
Curb & Gutter <sup>1</sup>	LIN FT	\$	20.00	0	\$	-		
Concrete Curb	LIN FT	\$	16.00	0	\$	-		
Signal Modifications	Lump Sum	\$	80,000.00	0	\$	-		
Solid Sodding <sup>1</sup>	SQ YD	\$	4.50	0	\$	-		
Seeding	ACRE	\$	1,000.00	3.00	\$	3,000.00		
Mulching	ACRE	\$	800.00	0.00	\$	-		
Topsoil	CU YD	\$	25.00	1240	\$	31,000.00		
Striping	MILE	\$	3,000.00	7.3	\$	21,900.00		
Markings and Legends	SQ FT	\$	5.00	310	\$	1,550.00		
Signing (includes post) 1	SQ FT	\$	29.00	0	\$	-		
Traffic Handling	Lump Sum	\$	13,800.00	1	\$	13,800.00		
Erosion & Sediment Control	Lump Sum	\$	29,400.00	1	\$	29,400.00		
SUBTOTAL Incidentals/Contingency (20%)					\$	959,705.00 191,941.00		
CONSTRUCTION COST					\$	1,151,700.00		
+ Engineering Controls			2.00%		\$	23,100.00		
+ Mobilization			5.00%		\$	57,600.00		
+ Construction Engineering & Inspection (CE&I)			15.00%		\$	184,900.00		
CONSTRUCTION SUBTOTAL					\$	1,417,300.00		
+ Preliminary Engineering								
(Environmental Study, Survey, Geotechnical, Design, ROW								
Acquisition Docs)			10.00%		\$	141,730.00		
+ Utility Relocation Cost <sup>3</sup>	Lump Sum	\$	-	1	\$	-		
+ ROW Cost	Acre 0.00 \$ 150,000.00 \$					-		
SUBTOTAL	Ş					1,559,030.00		
+ ALDOT Indirect Cost	13.63% \$					212,500.00		
TOTAL ESTIMATED PROJECT COST (2017)		\$	1,771,600.00					
80% Federal Funding		\$	1,417,280.00					
20% Local Funding			80.00% 20.00%		•	\$354,320.00		
Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.								

Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.

<sup>&</sup>lt;sup>1</sup>Based on ALDOT Items Bid History

<sup>&</sup>lt;sup>2</sup> Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

**Sheffield Inspiration Landing Access Study** 

Tuscumbia & Sheffield, AL (Colbert County)

ALTERNATE 5A (PROPOSED) - Hook St (From 6th St to N Commons St)/North Commons Extension to Blackwell Rd/Blackwell Rd (From N Commons St Extension to Wilson Dam Ave)/Wilson Dam Ave (From Blackwell Rd to Entrance 2): Mill and Pave (with Deep Patching on 1/2 of Hook Street), Add 2' Stone Shoulders along Blackwell Rd, Reconstruct ditches along Blackwell Rd, Remove existing RR X-ing on Blackwell Rd and Construct New RR X-ing across N Commons Extension

Item Description	Unit		Unit Cost	Quantity		Cost		
Removal of Existing Pavement/Sidewalk	CU YD	\$	20.00	350	\$	7,000.00		
Grading <sup>1</sup>	CU YD	\$	25.00	3750	_	93,750.00		
Base & Pave (New Pavement/Full Buildup Area) <sup>2</sup>	SQ YD	\$	50.00	4420	·	221,000.00		
Deep Patching (2.5") (50% of Hook Street)	SQ YD	\$	12.50	3360	_	42,000.00		
1.5" Plane Existing Pavement (to be retained) <sup>1</sup>	SQ YD	\$	3.00	24040	\$	72,120.00		
1.5" Leveling & Overlay of Existing Pavement (to be retained)	54.5	· ·	3.00	2.0.0	~	72,120.00		
1	SQ YD	\$	7.50	24040	\$	180,300.00		
Slope Paving (for Paved Ditches)	CU YD	\$	450.00	852	\$	383,400.00		
Gravel Shoulders	SQ YD	\$	7.50	2670	\$	20,025.00		
Inlets/Drainage Structures	EACH	\$	3,000.00	8	\$	24,000.00		
Junction Box	EACH	\$	3,000.00	2	\$	6,000.00		
Storm Drain Pipe (includes Str. Exc. & Found. Backfill)	LIN FT	\$	·	1392	\$	90,480.00		
Concrete Sidewalk, 4"		\$	65.00	1392	\$	· · · · · · · · · · · · · · · · · · ·		
Asphalt Trail, 12' Wide	SQ YD	\$	45.00		\$	59,400.00		
	SQ YD		17.00	0	\$	-		
Concrete Driveway, 6" Thick	SQ YD	\$	45.00	0	·			
Curb & Gutter 1	LIN FT	\$	25.00	2350	\$	58,750.00		
Concrete Curb	LIN FT	\$	16.00	0	\$			
Signal Modifications	Lump Sum	\$	80,000.00	0	\$	-		
Solid Sodding <sup>1</sup>	SQ YD	\$	4.50	530	\$	2,385.00		
Seeding	ACRE	\$	1,000.00	3.00	\$	3,000.00		
Mulching	ACRE	\$	800.00	0.00	\$	-		
Topsoil	CU YD	\$	25.00	1300	\$	32,500.00		
Striping	MILE	\$	3,000.00	6.4	\$	19,200.00		
Markings and Legends	SQ FT	\$	5.00	450	\$	2,250.00		
Signing (includes post) <sup>1</sup>	SQ FT	\$	29.00	15	\$	435.00		
New RR Crossing with Bells, Lights, and Gates	Lump Sum	\$	250,000.00	1	\$	250,000.00		
Removal of Exisiting RR Crossing	Lump Sum	\$	5,000.00	1	\$	5,000.00		
Traffic Handling	Lump Sum	\$	23,600.00	1	\$	23,600.00		
Erosion & Sediment Control	Lump Sum	\$	50,400.00	1	\$	50,400.00		
SUBTOTAL					\$	1,646,995.00		
Incidentals/Contingency (20%)					\$	329,399.00		
CONSTRUCTION COST					\$	1,976,400.00		
+ Engineering Controls			2.00%		\$	39,600.00		
+ Mobilization			5.00%		\$	98,900.00		
+ Construction Engineering & Inspection (CE&I)			15.00%		\$	317,300.00		
CONSTRUCTION SUBTOTAL					\$	2,432,200.00		
+ Preliminary Engineering								
(Environmental Study, Survey, Geotechnical, Design, ROW								
Acquisition Docs)			10.00%		\$	243,220.00		
+ Utility Relocation Cost <sup>3</sup>	Lump Sum			1	\$	-		
+ ROW Cost	Acre		0.11	\$ 150,000.00	\$	16,418.08		
SUBTOTAL					\$	2,691,838.08		
+ ALDOT Indirect Cost					\$	366,900.00		
TOTAL ESTIMATED PROJECT COST (2017)		-1			\$	3,058,800.00		
80% Federal Funding			80.00%		\$	2,447,040.00		
20% Local Funding			20.00%		7	\$611,760.00		
Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Undated October 2012) except where noted								

Note: All Costs are from the ALDOT Preliminary Cost Estimate Form (Updated October 2012) except where noted.

<sup>&</sup>lt;sup>1</sup> Based on ALDOT Items Bid History

 $<sup>^{2}</sup>$  Cost based on pavement designs from similar ALDOT projects and unit costs in ALDOT Items Bid History

<sup>&</sup>lt;sup>3</sup> Cost provided by Helena Utility Department Engineer (Garver). Cost is for estimated minimum utility relocation required.

# **APPENDIX F**

# Georgia Avenue/Norfolk Southern Railroad Correspondence

#### **Corlett, Leslie**

From: Corlett, Leslie

Sent: Thursday, August 31, 2017 9:39 AM

To: 'stevenrstanley@gmail.com'
Cc: Perry, Blair; 'Jesse Turner'

**Subject:** Sheffield Inspiration Landing Project - 1st Avenue/Georgia Avenue ROW/Norfolk

Southern Railroad

**Attachments:** 42518\_NSR.pdf

Mr. Stanley,

Blair Perry asked me to make a detail for you which shows that Norfolk Southern Railroad (NSR) Right-of-Way (ROW) that encompasses Georgia Avenue/1<sup>st</sup> Avenue. The detail is attached. Please let me know if you have any questions.

In July, I spoke with Warren Walls of NSR. He said that NSR might be interested in selling some of the property to the City, but it would be up to an appraisal, higher-ups, whether the property is being used, etc. His information is below.

#### Warren Walls

Sr. Property Agent Norfolk Southern – Real Estate 1200 Peachtree Street NE- 12th Floor Atlanta, GA 30309 (404)962-5650 Office (678)512-5099 Fax

#### Thanks,

#### Leslie B. Corlett, P.E.

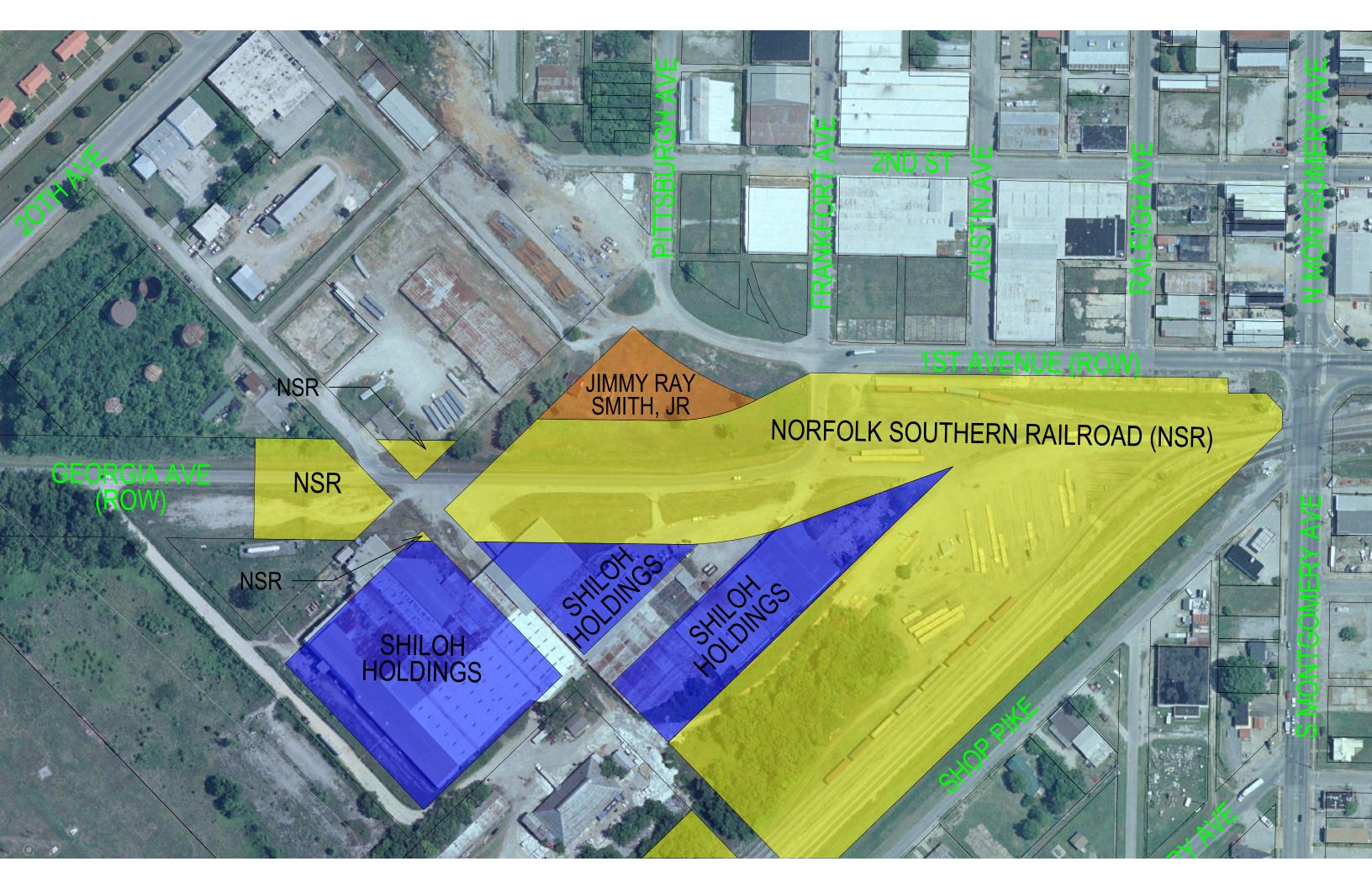
Transportation Engineer

#### **GRESHAM, SMITH AND PARTNERS**

Architecture, Engineering, Interiors, Planning

3595 Grandview Parkway, Suite 300 Birmingham, AL 35243 [P] 205.298.9264

www.greshamsmith.com <u>Dialogue</u> & <u>Showcase</u> Facebook, Twitter, <u>LinkedIn</u>



#### **Corlett, Leslie**

From: Steve Stanley <stevenrstanley@gmail.com>
Sent: Friday, September 01, 2017 4:23 PM

To: Corlett, Leslie

**Cc:** Perry, Blair; Jesse Turner; Julie Woodward; Keith Worsham

**Subject:** Re: Sheffield Inspiration Landing Project - 1st Avenue/Georgia Avenue ROW/Norfolk

Southern Railroad

Attachments: Deed to Georgia Avenue ROW.pdf; Map of W. 20th Avvenue.pdf

**Categories:** GS&P, Filed by Newforma

Leslie,

Julie Woodward at North Alabama Abstract gave me the attached deed and maps of Georgia Avenue. The deed conveys a 100' ROW for Georgia Avenue from Southern Railway to the City of Sheffield. I think this should resolve the concern about using Georgia Avenue as a corridor to Inspiration Landing.

The other attachment is a map of W. 20th Avenue showing the original right of way and a section of constructed road that bisects the XMPT 43 parcel. The ROW north of XMPT 43 was not used but is shown on tax maps. Julie and Marcel confirmed that the city of Sheffield can use the ROW to improve W. 20th Avenue. The deeds for the adjacent parcels only extend to the borders of the ROW and state that excluded property remains for the use of the city. This will allow the elimination of the curve where the road diverged from the ROW when it was built.

Julie, correct me if I've explained this incorrectly.

Steve 256-627-5089

On Thu, Aug 31, 2017 at 9:42 AM, Corlett, Leslie < leslie corlett@gspnet.com> wrote:

Mr. Stanley,

Blair Perry asked me to make a detail for you which shows that Norfolk Southern Railroad (NSR) Right-of-Way (ROW) that encompasses Georgia Avenue/1<sup>st</sup> Avenue. The detail is attached. Please let me know if you have any questions.

In July, I spoke with Warren Walls of NSR. He said that NSR might be interested in selling some of the property to the City, but it would be up to an appraisal, higher-ups, whether the property is being used, etc. His information is below.

#### **Warren Walls**

Sr. Property Agent

Norfolk Southern - Real Estate

1200 Peachtree Street NE- 12th Floor

Atlanta, GA 30309

(404)962-5650 Office

(678)512-5099 Fax

Thanks,

#### Leslie B. Corlett, P.E.

Transportation Engineer

#### **GRESHAM, SMITH AND PARTNERS**

Architecture, Engineering, Interiors, Planning

3595 Grandview Parkway, Suite 300 Birmingham, AL 35243 [P] 205.298.9264

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2036

TATE OF ALABAMA

COUNTY OF COLBERT

88030062

(NOW ALL MEN BY THESE PRESENT:

Grantee hereinafter remise for government hereby release, of SHEFFIELD, an instrumentality of corporation, all ţ or to it in hand paid by the Grantee, sum of ONE AND NO/100 DOLLARS Railway Company in does acknowledged, assigns, ര and SOUTHERN RAILWAY COMPANY, Southern receipt whereof is hereby successor consideration, CITY OF of consideration of the its claim the of Alabama, and quitclaim unto described premises and valuable interest State named, ij title, poob the and

or Sheffield, Colbert County, Alabama follows: described as particularly e strips or the City of those 'n All the being being

Lne Twentieth Avenue Bridge, as nterline of said track, said point r less, northwesterly of the now! the northwest southwestwardly ne POINT OF ENDING vidth of 100 feet, t following described along ester.,
Avenue, Der.
and being Being a strip of land of uniform width of 100 is, 50 feet on either side of the following de original centerline of Grantor's Track Number beginning at a point 858 feet, more or less, s of the centerline of the Twentieth Avenue Brid northweses track curving sou northwestwardly BEGINNING; thence, northwestwar centerline of said track curvir oad Valuation Station 58+70 and of the Twentieth centerline of sa measured along the centerlinbeing 20 feet, more or less, right of way boundary of Eig Valuation Station 14+00 on s POINT OF BEGINNING; thence, original cen to Railroad Being a

along the POINT e original
7, said
Railroad
rack 1-15 being the width at Track thence, comestion 11+5-, the to to Railroad Valuation Station 12+61

Track 1-17; thence northeastwardly alroad Valuation Station 9+81 and the at at which point t northeastwardly n aforesaid Track 1-1 at being Station 0+00 of T iINNING, at which point at which point along Track Also, a strip of land of varying widths centerline of Grantor's Track 1—15 and Track 1—15 springing from aforesaid Track Valuation Station 55+41, being Station Cand the TRUE POINT OF BEGINNING, at which way is 100 feet wide; thence, north lroad Valuation Station 4+50, at whireases to 34 feet in width; thence, theastwardly to Railroad Valuation increases to width northeastwardly t Station 0+00 of T Track 1-17 to Rai the northeastwardly. point decreases ENDING of way is Railroad which

1-14; 1 5+48 15 feet I Track F Track 1. Station 1-14, said Tr at Railroad of 0+00 of width being Station 0+00 of o Railroad Valuation Also, all that strip of land of uniform along the original centerline of Track ll-14 springing from aforesaid Track l-1 Valuation Station 52+44, being Station Cthence, northeastwardly to Railroad Valuand the POINT OF ENDING. of land containing 14.25 acres stantially as shown on Drawing 19.25 1986. Last revised April t revised hereof. or parcels of land containing being substantially as shown dated March 25, 1986, last rev last made and attached or less, and t TC-86-0020, da 1986, hereto strips ss, and Said

SEE OFFICE NOTES ATTACKED

8. C.

appear of as may the premises SUBJECT, however, to such easements and restrictions from an examination of as may be apparent or record

successor its SHEFFIELD, PF CITY said the unto TO HAVE AND TO HOLD assigns, forever. and

and affixed Southern Railway Company has caused these day to be hereunto 174 this authorized, presents to be executed, and its corporate seal thereunto duly IN WITNESS WHEREOF, officers 1988. attested, by its tebruan

S. ATTEST:

Soulliem.

SOUTHERN RAILWAY COMPANY

W 24 President Vice

This instrument prepared by:

Jerry L. Causey Attorney at Law Norfolk Southern Corporation 185 Spring Street, S.W. Atlanta, Georgia 30303

JLC:map 1/27/88 24840 0137B

STATE OF Virginian CITY/COUNTY OF North

80030064

and for a Notary Public

the above State and City/<del>County,</del> hereby certify that

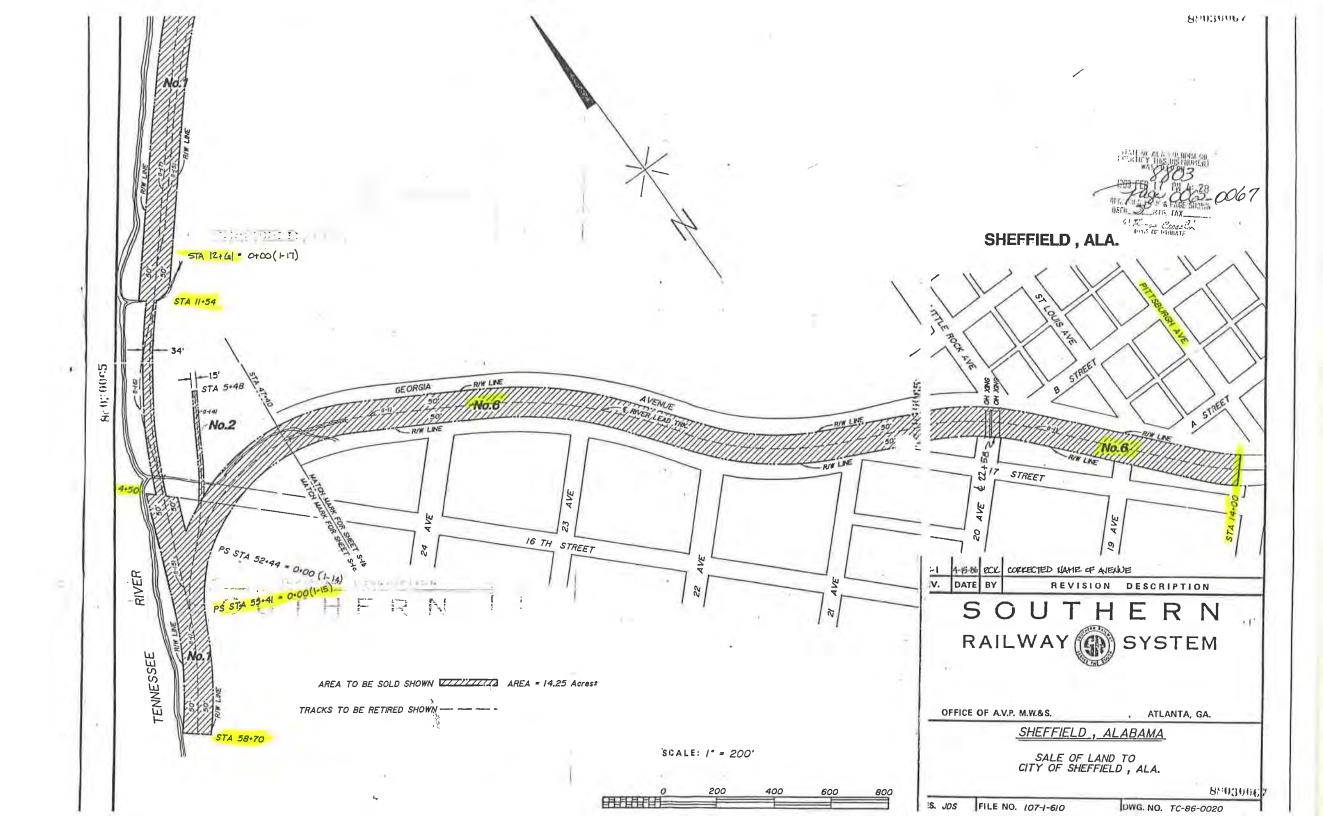
before me on this day that, being informed of the contents of the conveyance, and with full authority, executed the same voluntarily whose name as Vice President of Southern Railway Company, a corporation, signed to the foregoing conveyance, and who is known to me, acknowledged for and as the act of said corporation. as such officer, he,

GIVEN under my hand and official seal this IM day of F 1988.

Notary Public

My Commission expires:

My Commission Expires December 22, 1991



MAPS S-16 & S-1c ALABAMA COUNTY, VALUATION SECTION INA , N PARCELS INVOLVED No.s COLBERT

29008088

00+P1 AT2 SYSTEM DESCRIPTION PITTSEURGH AVE With the Parish CORRECTED MAME OF AVENUE 3VA 61 REVISION SHEFFIELD, ALA RAILWAY STREET 4-15-86 BCL DATE BY AVE & 22+58 Z OH XING TTLE ROCK AVE 50

SALE OF LAND TO CITY OF SHEFFIELD, ALA.

ATLANTA,

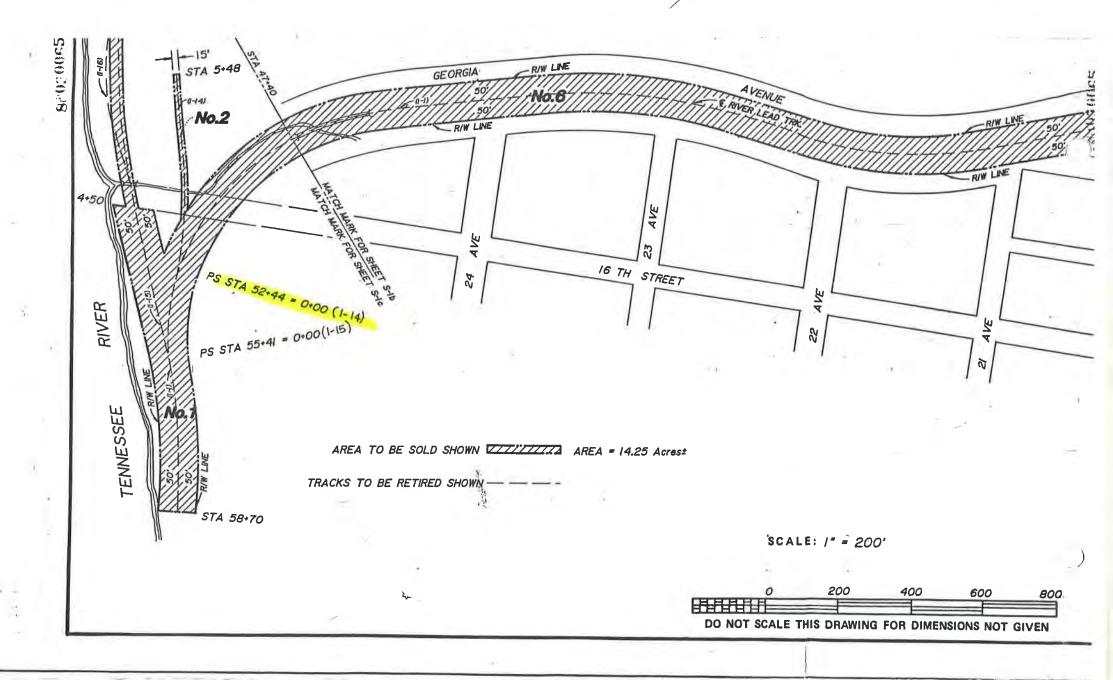
OFFICE OF A.V.P. M.W.&S.

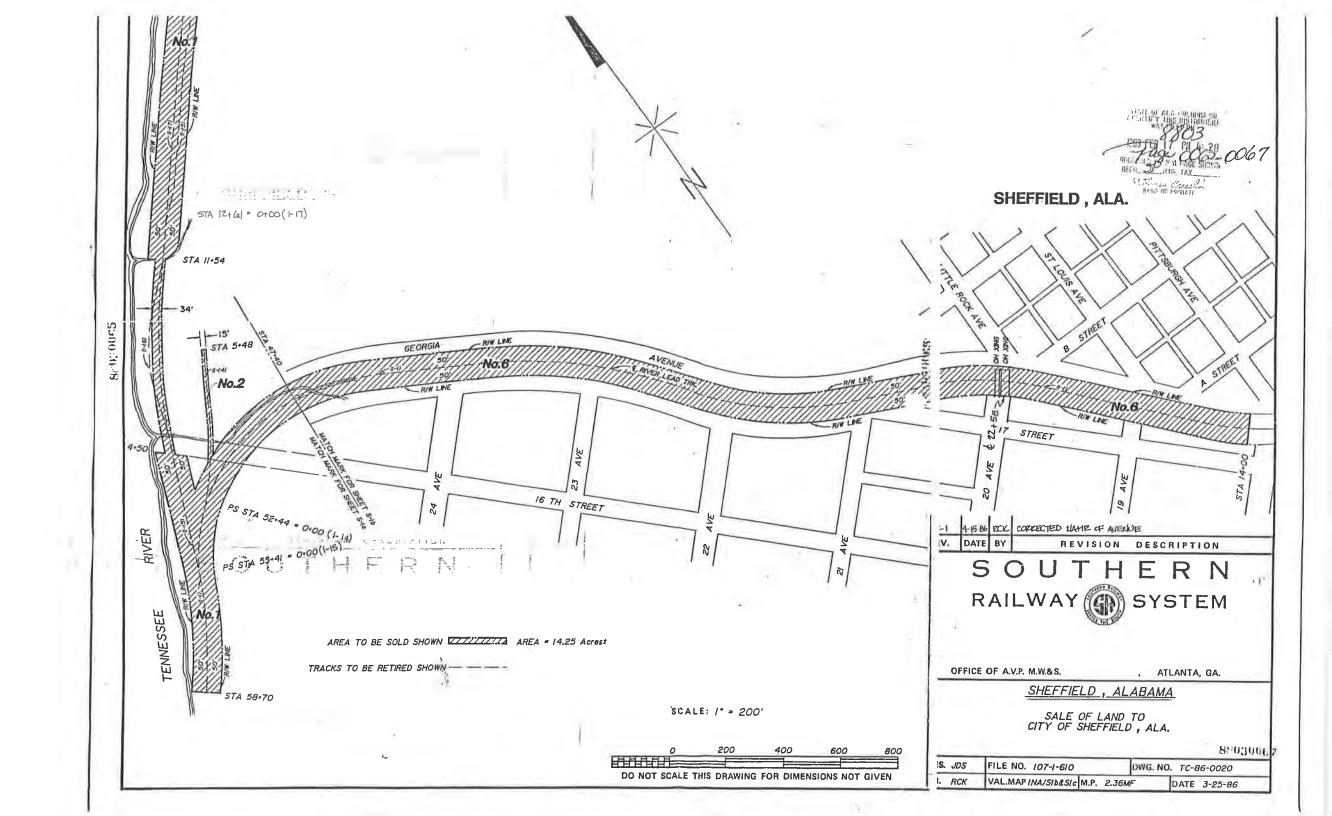
SHEFFIELD, ALABAMA

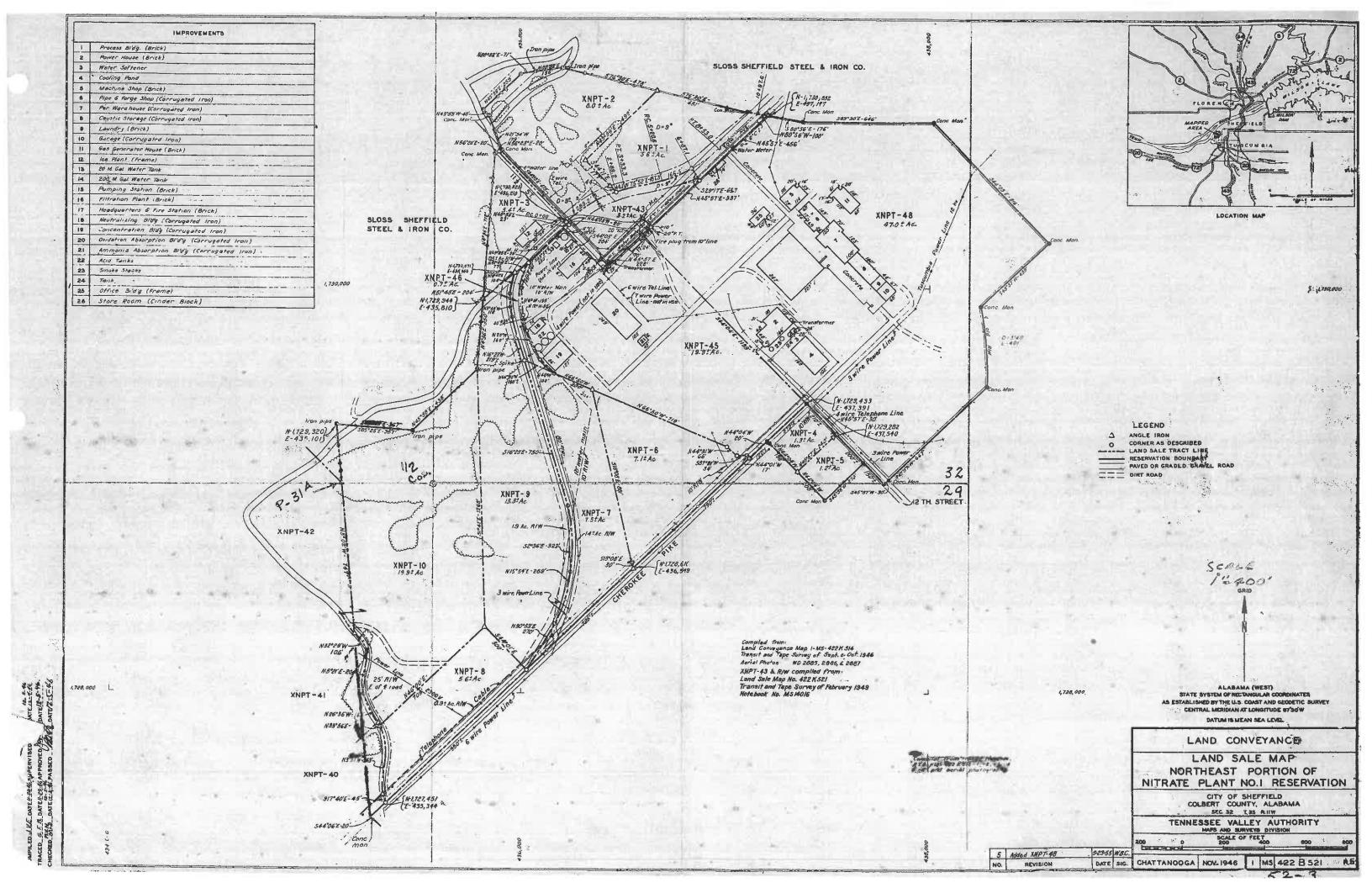
8903006

DATE 3-25-86 DWG. NO. FC-86-0020 VAL.MAP INA/SIBESIC M.P. 2.36MF FILE NO. 107-1-610 is. Jos









#### **Corlett, Leslie**

From: Steve Stanley <stevenrstanley@gmail.com>
Sent: Wednesday, October 11, 2017 3:14 PM

To: Corlett, Leslie
Cc: Steve Baccus

**Subject:** Survey of Shiloh Holdings Property Along Georgia Avenue

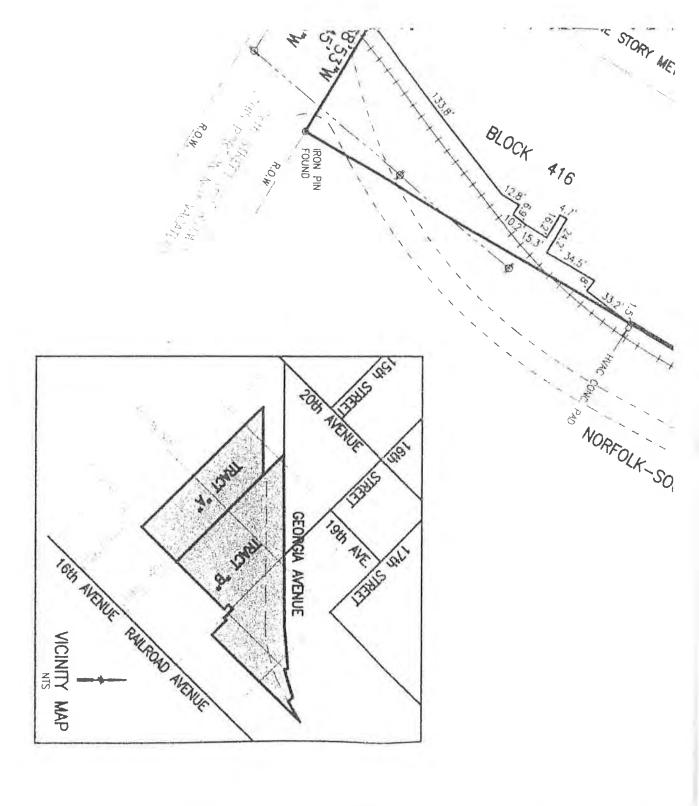
**Attachments:** Shiloh Holdings Survey.pdf

**Categories:** GS&P, Filed by Newforma

#### Leslie,

I don't know if you are finished with the Inspiration Landing Corridor Study or not but the attached file is a survey of the Shiloh Holdings property along Georgia Avenue that disputes at least part of the Colbert Revenue Commissioner's tax map of the area. Also, Steve Baccus, an attorney representing the city, indicates that the deeds originally transferring property in Sheffield to the railroad have reversionary clauses that transfer ownership back to the city if the railroad discontinues use. Mr. Baccus is investigating past actions that resulted in the railroad transferring land where Sheffield's Industrial Park is currently located due to their discontinuance of use of the land for their shops. I hope this will remove any impediments to using Georgia Avenue as the primary corridor to access Inspiration Landing from the east.

Steve 256-627-5089



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SOURCE OF INFORMATION:
LAWYERS TITLE INSURANCE CORPORATION COMMITMENT FOR TITLE
INSURANCE NO. 01-0379 (DATED JANUARY 31, 2001 @ 8:00 A.M.)

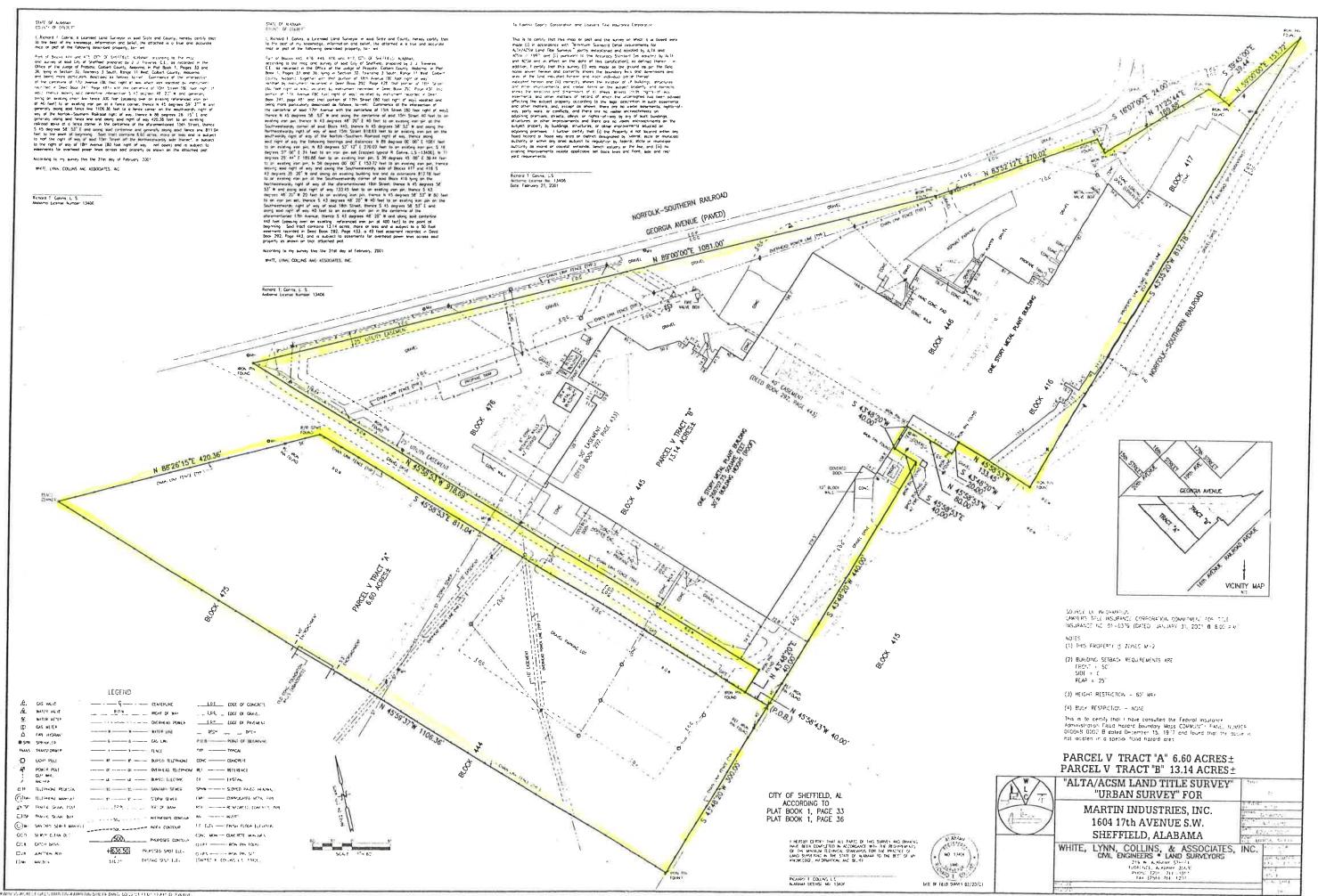
NOTES:

- (1) THIS PROPERTY IS ZONED M-2.
- (2) BUILDING SETBACK REQUIREMENTS ARE FRONT = 50'
  SIDE = 0
  REAR = 25'
- (3) HEIGHT RESTRICTION 60' MAX.
- (4) BULK RESTRICTION NONE

This is to certify that I have consulted the Federal Insurance Administration Flood Hazard Boundary Maps COMMUNITY PANEL NUMBER 010048 0002 B dated December 15, 1977 and found that the above is not located in a special flood hazard area.

# PARCEL V TRACT "A" 6.60 ACRES± PARCEL V TRACT "B" 13.14 ACRES±

			1				一人。配	*\ *\	
REVIOED	WHITE, LYNN, COLLINS, & ASSOCIATES, CML ENGINEERS * LAND SURVEYORS  219 W. ALABAMA STREET FLORENCE, ALABAMA 35630 PHONE (256) 766-1051 FAX (256) 766-1201	STITE TELEVISION STATES	CHEFFINI D AT ARAMA	1604 17th AVENUE S.W.	MADITA TIADOSTOTES, TIAC.	MADTINI INIDITETE INIC	"URBAN SURVEY" FOR	"ALTA/ACSM LAND TITLE SURVEY"	FARCEL V IKACI B 13.14 ACKEST
OF TO	PLOT VIEW:  JOB NUMBER:  13907-01-01  SCALE:  1"= 60'  TOTAL SHEETS	FLE: MARTIN-SHEFF	DATE: 02/21/2001	BY: R.COLLINS	DRAWN D.SWANN	BY: R.ISBELL	OF	SHEET	



STATE OF ALABAMA COUNTY OF COLBERT

I, Richard T. Collins, a Licensed Land Surveyor in said State and County, hereby certify that to the best of my knowledge, information and belief, the attached is a true and accurate map or plat of the following described property, to— wit:

Part of Blocks 445, 476, 446, 416 and 417, CITY OF SHEFFIELD, ALABAMA, according to the map and survey of said City of Sheffield, prepared by J. J. Treveres, C.E., as recorded in the Office of the Judge of Probate, Colbert County, Alabama, in Plat Book 1, Pages 33 and 36, lying in Section 32, Township 3 South, Range 11 West, Colbert County, Alabama, together with that portion of 18th Avenue (80 foot right of way) vacated by instrument recorded in Deed Book 292, Page 428, that portion of 16th Street (60 foot right of way) vacated by instrument recorded in Deed Book 292, Page 436, that portion of 17th Avenue (80 foot right of way) vacated by instrument recorded in Deed Book 241, page 481 and that portion of 17th Street (60 foot right of way) vacated and being more particularly described as follows, to-wit: Commence at the intersection of the centerline of said 17th Avenue with the centerline of 15th Street (80 foot right of way); thence N 45 degrees 58' 53" W and along the centerline of said 15th Street 40 feet to an existing iron pin; thence N 43 degrees 48 20 E 40 feet to an existing iron pin at the Southwestwordly corner of said Block 445; thence N 45 degrees 58' 53" W and along the Northeastwardly right of way of said 15th Street 918.69 feet to an existing iron pin on the southwardly right of way of the Norfolk-Southern Railroad right of way; thence along soid right of way the following bearings and distances: N 89 degrees 00' 00" E 1081 feet to an existing iron pin; N 83 degrees 52' 12" E 270.02 feet to an existing iron pin; S 16 degrees 07' 00" E 24 feet to an iron pin set (capped typical R. Collins, L.S.-13406); N 71 degrees 25' 44" E 189.88 feet to an existing iron pin; \$ 39 degrees 45' 00" E 39.44 feet to an existing iron pin: N 59 degrees 00' 00" E 153.72 feet to an existing iron pin; thence leaving said right of way and along the Southwestwardly side of Blocks 417 and 416 S 43 degrees 35 20" W and along an existing building line and its extensions 812.78 feet to an existing iron pin at the Southwestwardly corner of said Block 416 lying on the Northeastwardly right of way of the aforementioned 16th Street: thence N 45 degrees 58' 53" W and along said right of way 133.45 feet to an existing iron pin; thence S 43 degrees 48' 20" W 20 feet to an existing iron pin; thence N 45 degrees 58' 53" W 80 feet to an iron pin set; thence S 43 degrees 48' 20" W 40 feet to an existing iron pin on the Southwestwardly right of way of said 16th Street; thence S 45 degrees 58' 53" E and along said right of way 40 feet to an existing iron pin in the centerline of the aforementioned 17th Avenue; thence S 43 degrees 48' 20" W and along said centerline 440 feet (passing over an existing referenced iron pin at 400 feet) to the point of beginning. Said tract contains 13.14 acres, more or less and is subject to a 50 foot easement recorded in Deed Book 292, Page 433, a 40 foot easement recorded in Deed Book 292, Page 443, and is subject to easements for overhead power lines across said property as shown on that attached plat.

GRAVEL

According to my survey this the 21st day of February, 2001.

WHITE, LYNN, COLLINS AND ASSOCIATES, INC.

Alabama License Number 13406

Richard T. Collins, L. S.

To Foothill Capital Corporation and Lawyers Title Insurance Corporation:

Richard T. Collins, L.S.

Alabama License No. 13406

This is to certify that this map or plat and the survey on which it is based were made (i) in accordance with "Minimum Standard Detail requirements for ALTA/ACSM Land Title Surveys," jointly established and adopted by ALTA and ACSM in 1997; and (ii) pursuant to the Accuracy Standard (as adopted by ALTA and ACSM and in effect on the date of this certification), as defined therein. In addition, I certify that this survey (i) was made on the ground as per the field notes shown hereon and correctly shows the boundary lines and dimensions and area of the land indicated hereon and each individual parcel thereof indicated hereon and (ii) correctly shows the location of all buildings, structures and other improvements, and visible items on the subject property, and correctly shows the locations and dimensions of all alleys, streets, roads, rights-of-way, easements, and other matters of record of which the undersigned has been advised affecting the subject property according to the legal description in such easements and other matters; and, except as shown, there are no visible easements, rights-ofway, party walls, or conflicts, and there are no visible encroachments on adjoining premises, streets, alleys, or rights-of-way by any of such buildings. structures, or other improvements and there are no visible encroachments on the subject property by buildings, structures, or other improvements situated on adjoining premises. I further certify that (i) the Property is not located within any flood hazard or flood way area or district designated by federal, state or municipal authority or within any area subject to regulation by federal, state or municipal authority as inland or coastal wetlands, beach estuary or the like, and (iii) no existing Improvements violate applicable set back lines and front, side and rear vard requirements.

Date: February 21, 2001 NORFOLK-SOUTHERN RAILROAD GEORGIA AVENUE (PAVED) OVERHEAD POWER LINE (TYP.) N 89.00,00 E 1081.00 GRAVEL GRAVEL CONC CHAIN LINK FENCE (TYP.) FIRE VALVE BOX FO.G. GRAVEL (DEED BOOK EASEMENT 292, PAGE 4.

STATE OF ALABAMA
COUNTY OF COLBERT

I, Richard T. Collins, a Licensed Land Surveyor in said State and County, hereby certify that to the best of my knowledge, information and belief, the attached is a true and accurate map or plat of the following described property, to— wit:

Part of Blocks 444 and 475, CITY OF SHEFFIELD, ALABAMA, according to the map and survey of said City of Sheffield prepared by J. J. Treveres, C.E., as recorded in the Office of the Judge of Probate, Colbert County, Alabama, in Plat Book 1, Pages 33 and 36, lying in Section 32, Township 3 South, Range 11 West, Colbert County, Alabama, and being more particularly described as follows, to-wit: Commence at the intersection of the centerline of 17th Avenue (80 foot right of way which was vacated by instrument recorded in Deed Book 241, Page 481) with the centerline of 15th Street (80 foot right of way); thence leaving said centerline intersection S 43 degrees 48' 20" W and generally along an existing chain link fence 300 feet (passing over an existing referenced iron pin at 40 feet) to an existing iron pin at a fence corner; thence N 45 degrees 59' 37" W and generally along said fence line 1106.36 feet to a fence corner on the southwardly right of way of the Norfolk-Southern Railroad right of way: thence N 88 degrees 26' 15" E and generally along said fence line and along said right of way 420.36 feet to an existing railroad spike at a fence corner in the centerline of the aforementioned 15th Street; thence S 45 degrees 58' 53" E and along said centerline and generally along said fence line 811.04 feet to the point of beginning. Said tract contains 6.60 acres, more or less and is subject to half the right of way of said 15th Street off the Northeastwardly side thereof, is subject to the right of way of 18th Avenue (80 foot right of way not open) and is subject to easements for overhead power lines across said property as shown on the attached plat.

According to my survey this the 21st day of February, 2001.

WHITE, LYNN, COLLINS AND ASSOCIATES, INC.

Richard T. Collins, L. S. Alabama License Number 13406 STATE OF ALABAMA
COUNTY OF COLBERT

I, Richard T. Collins, a Licensed Land Surveyor in said State and County, hereby certify that to the best of my knowledge, information and belief, the attached is a true and accurate map or plat of the following described property, to— wit:

Part of Blocks 445, 476, 446, 416 and 417, CITY OF SHEFFIELD, ALABAMA, according to the map and survey of said City of Sheffield, prepared by J. J. Treveres, C.E., as recorded in the Office of the Judge of Probate, Colbert County, Alabama, in Plat Book 1, Pages 33 and 36, lying in Section 32, Township 3 South, Range 11 West, Colbert County, Alabama, together with that portion of 18th Avenue (80 foot right of way) vocated by instrument recorded in Deed Book 292, Page 428, that portion of 16th Street (60 foot right of way) vacated by instrument recorded in Deed Book 292, Page 436, that portion of 17th Avenue (80 foot right of way) vacated by instrument recorded in Deed Book 241, page 481 and that portion of 17th Street (60 foot right of way) vacated and being more particularly described as follows, to-wit: Commence at the intersection of the centerline of said 17th Avenue with the centerline of 15th Street (80 foot right of way); thence N 45 degrees 58' 53" W and along the centerline of said 15th Street 40 feet to an existing iron pin; thence N 43 degrees 48' 20" E 40 feet to an existing iron pin at the Southwestwardly corner of said Block 445; thence N 45 degrees 58' 53" W and along the Northeastwardly right of way of said 15th Street 918.69 feet to an existing iron pin on the southwardly right of way of the Norfolk-Southern Railroad right of way; thence along said right of way the following bearings and distances: N 89 degrees 00' 00" E 1081 feet to an existing iron pin; N 83 degrees 52' 12" E 270.02 feet to an existing iron pin; S 16 degrees 07' 00" E 24 feet to an iron pin set (capped typical R. Collins, LS.-13406); N 71 degrees 25' 44" E 189.88 feet to an existing iron pin; S 39 degrees 45' 00" E 39.44 feet to an existing iron pin; N 59 degrees 00' 00" E 153.72 feet to an existing iron pin; thence leaving said right of way and along the Southwestwardly side of Blacks 417 and 416 S 43 degrees 35' 20" W and along an existing building line and its extensions 812.78 feet to an existing iron pin at the Southwestwardly corner of said Block 416 lying on the Northeastwardly right of way of the aforementioned 16th Street; thence N 45 degrees 58' 53" W and along said right of way 133.45 feet to an existing iron pin; thence S 43 degrees 48' 20" W 20 feet to an existing iron pin; thence N 45 degrees 58' 53" W 80 feet to an iron pin set; thence S 43 degrees 48' 20" W 40 feet to an existing iron pin on the Southwestwardly right of way of said 16th Street; thence S 45 degrees 58' 53" E and along said right of way 40 feet to an existing iron pin in the centerline of the aforementioned 17th Avenue; thence S 43 degrees 48' 20" W and along said centerline 440 feet (passing over an existing referenced iron pin at 400 feet) to the point of beginning. Said tract contains 13.14 acres, more or less and is subject to a 50 foot easement recorded in Deed Book 292, Page 433, a 40 foot easement recorded in Deed Book 292, Page 443, and is subject to easements for overhead power lines across said property as shown on that attached plat.

According to my survey this the 21st day of February, 2001.

WHITE, LYNN, COLLINS AND ASSOCIATES, INC.

This is to certify that this map or pl made (i) in accordance with "Minimur ALTA/ACSM Land Title Surveys," jointly ACSM in 1997; and (ii) pursuant to I and ACSM and in effect on the date addition, I certify that this survey (i) notes shown hereon and correctly shi area of the land indicated hereon an indicated hereon and (ii) correctly sh and other improvements, and visible

To Foothill Capital Corporation and Lc

and other improvements, and visible shows the locations and dimensions a casements, and other matters of recaffecting the subject property according and other matters; and, except as slway, party walls, or conflicts, and the adjoining premises, streets, alleys, or structures, or other improvements an subject property by buildings, structure adjoining premises. I further certify flood hazard or flood way area or diguthority or within any area subject

authority as inland or coastal wetland

existing Improvements violate applicat

Richard T. Collins, L.S. Alabama License No. 13406 Date: February 21, 2001

yard requirements.

