

***I-555 - HWY. 49 (COMMERCE DR.
EXTENSION) (JONESBORO) (S)***

ARDOT Job 100657

Environmental Assessment



I-555 – Hwy. 49 (Commerce Dr. Extension) (Jonesboro) (S)

F.A.P. Number CMAQ-9297(74)

Environmental Assessment

Submitted pursuant to:

*The National Environmental Policy Act (NEPA)
42 U.S.C. §4322(2)(c) and 23 C.F.R. §771*

Submitted by:

FEDERAL HIGHWAY ADMINISTRATION

and

ARKANSAS DEPARTMENT OF TRANSPORTATION

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In compliance with the *National Environmental Policy Act*, this Environmental Assessment (EA) describes the plan to widen and extend Commerce Dr. in the City of Jonesboro. The analysis did not identify any significant adverse environmental impacts and identifies as the Preferred Alternative.

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8/22/2018

Date of Approval



U.S. Department of Transportation
Federal Highway
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Chapter 1 – Purpose and Need

What's in Chapter 1?

Chapter 1 explains the purpose of the project, why improvements to Commerce Drive are needed, and who is leading the project.

1.1 What is the Commerce Drive Extension project?

The Arkansas Department Transportation (ARDOT) is proposing to provide a north-south route connecting Interstate 555 (I-555) and Highway (Hwy. 49) in the City of Jonesboro. The project would include widening of Hwy. 18S, commonly known as Commerce Drive (Dr.), and extending it on a new location route. This project would provide a new connection between I-555 and Hwy. 49 and help alleviate congestion on nearby roadways. The study area is shown in Figure 1.

1.2 What are the existing road conditions?

Regional

I-555, also known as the Joe N. Martin Expressway, is the metropolitan area's primary through route and the only fully controlled access facility. It is a north-south route that begins at I-55 in northern Crittenden County and ends at Hwy. 49 in Jonesboro. I-555 is a four-lane facility with a 65 mile per hour (mph) speed limit serving as the area's primary connection to Missouri and Tennessee. In the immediate study area, there are currently interchanges at Hwy. 18S and Nestle Road (Rd.).

Hwy. 49 is a north-south route on the Arkansas Primary Highway Network (APHN) that begins at Hwy. 62 in Piggott and exits the state at the Mississippi River crossing in Helena-West Helena. Hwy. 18 is a regional east-west route that begins in Jackson County at Hwy. 17 near Newport and ends at Armorel near the Mississippi River. From Newport to Hwy. 49 in Jonesboro, Hwy. 18 is on the APHN; Hwy. 18S is also on the APHN. East of Hwy. 49, Hwy. 18 is on the National Highway System (NHS).

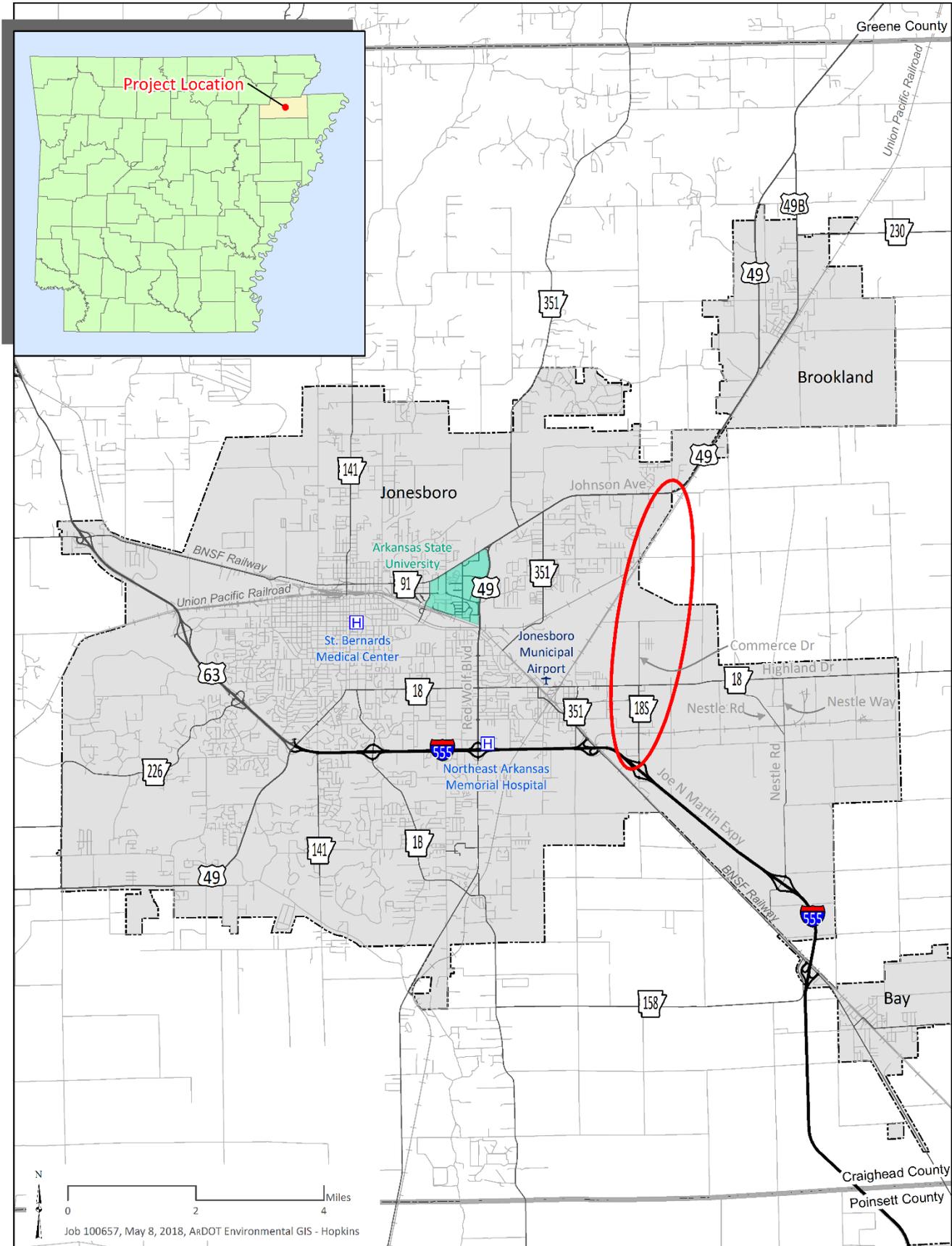
Local

Hwy. 18 (Highland Dr.) consists of four, 11-foot wide travel lanes and has a speed limit of 45 mph in the study area. Residential and industrial developments with associated driveways characterize the land use along this highway in the study area. In Jonesboro, Hwy. 18 is classified as a principle arterial with no control of access.

Arkansas Primary Highway Network (APHN) includes the National Highway System (NHS), other arterials, critical services routes and other high traffic routes.

The National Highway System (NHS) is a network of strategic highways within the United States, including the Interstate Highway System and other roads serving major airports, ports, rail or truck terminals, pipeline terminals and other strategic transport facilities. Altogether, it constitutes the largest highway system in the world.

Figure 1 - Project Study Area



Hwy. 18S (Commerce Dr.) is a north-south highway that extends 1.21 miles and connects I-555 to Hwy. 18. It consists of two, 11-foot wide travel lanes with two 8-foot open shoulders. Commerce Dr. north of Hwy. 18 extends 1.04 miles to Pacific Rd. it consists of two 11-foot wide travel lanes with no shoulders, there is no control of access with a 40 mph speed limit on both sections. The adjacent land use is generally industrial with scattered residences on the north end. Commerce Dr. extends north from the intersection of Hwy. 18 and Hwy. 18S for approximately one mile to Pacific Rd.

Nestle Rd. and Nestle Way are both local north-south routes that connect Hwy. 18 and I-555. They consist of two, 12-foot wide lanes with 4-foot shoulders. The speed limit varies between 35 and 45 mph along the paved routes. A large warehouse distribution facility is located just south of the intersection of Hwy. 18 and Nestle Way.

1.3 Why is the Commerce Dr. Extension project needed?

Background

Jonesboro is located in Craighead County, approximately 133 miles northeast of Little Rock. It is the largest city in Northeast Arkansas and serves as a regional provider of education, medical, and commercial services. It is home to the second largest state-supported institution of higher education in the State (Arkansas State University) as well as two major medical facilities (St. Bernard's Medical Center and Northeast Arkansas Baptist Memorial Hospital). Major employers include medical facilities, educational institutions, social services, manufacturing plants and retail stores.

Land use in Jonesboro is characterized by various densities of residential, commercial, and industrial developments. Commercial activities occur along all major streets in the city, while industrial development is concentrated along Hwy. 18 and Hwy. 18S. The land use in far eastern Jonesboro ranges from moderate and high intensity industrial adjacent to Hwy. 18S (Commerce Dr.) and farmland further to the north.

Connectivity

The current roadway network in Jonesboro does not have a direct route connecting I-555 to Hwy. 49 in eastern Jonesboro, forcing drivers to utilize indirect routes such as Red Wolf Boulevard or Nestle Rd. These circuitous routes result in longer travel times and congestion throughout the city along the corridors. As a result, Red Wolf Boulevard contributes notable delay to many trips throughout northeastern Arkansas.

The lack of north-south connectivity on the eastern side of Jonesboro is a contributing factor to increasing traffic congestion along Hwy. 49. Currently, drivers traveling from I-555 travel up to 8.5 miles to reach the same point on Hwy 49. Along the proposed route, travel to Hwy. 49 from

I-555 drivers would be able to exit I-555 at Hwy. 18S (Commerce Dr.) and drive approximately 4.4 miles directly north, entering onto Hwy. 49 without traveling through more developed sections of the city. At approximately half the length of existing routes, the proposed route would reduce travel time for all vehicles and provided additional emergency access. The proposed project would also reduce the traffic burden on Hwy. 49, offer a more direct route for truck traffic, and improve regional connectivity.

Level of Service

The 2010 Highway Capacity Manual was used to evaluate Level of Service (LOS). LOS is a term used to describe roadway operating conditions from the driver’s perspective. The LOS system assigns quality levels to traffic service based on how well roadway systems perform. LOS ratings range from A (representing free flow conditions) to F (representing a breakdown in traffic flow). For urban roadways, such as the roadways examined in this study, LOS ratings A through D are considered acceptable.

A planning level, peak hour analysis of LOS was completed. The results of this analysis are shown in Tables 1 and 2 and summarized below.

- Hwy. 18S (Commerce Dr.) from the I-555 interchange to Hwy. 18: Traffic is currently operating at LOS C and will continue to operate at LOS C in 2040. Analysis indicates that without changes to the local transportation network, Hwy. 18S (Commerce Dr.) can adequately meet present traffic demands through 2040.
- Hwy. 49: This route is operating at LOS C during the morning peak and LOS D during the afternoon peak. However, traffic is expected to operate at LOS F during both peak periods in 2040, with volumes far exceeding capacity. Hwy. 49 can adequately meet present traffic demands, but would not be able to satisfactorily handle the projected demand in the future. This would result in long delays and inhibit north-south regional travel.

LOS
 The LOS calculator uses road and traffic conditions that affect traffic flow, such as:

- peak-hour traffic volume
- free-flow speed (how quickly free-flowing traffic would travel)
- shoulder and lane width
- percent of the daily traffic that consists of trucks, buses, or recreational vehicles
- passing opportunities
- number of traffic signals
- density of access points (intersections & driveways)
- terrain
- type of highway (commuter & long-distance routes with higher speeds or scenic & recreational routes with slower speeds)

Table 1 - 2017 LOS Summary

	AM				PM			
	NB	v/c	SB	v/c	NB	v/c	SB	v/c
Highway 18S	C	0.51	C	0.68	C	0.63	C	0.42
Highway 49	C	0.52	C	0.90	D	0.97	C	0.64

Note: LOS values based on a planning level assessment

Table 2 - 2040 LOS Summary

	AM				PM			
	NB	v/c	SB	v/c	NB	v/c	SB	v/c
Highway 18S	C	0.71	C	0.94	C	0.87	C	0.58
Highway 49	C	0.80	F	1.37	F	1.48	D	0.96
Note: LOS values based on a planning level assessment								

Safety Analysis

The relative safety of a route can be determined by comparing the crash rate in crashes per million vehicle miles (MVM) traveled to a statewide average for similar routes. Crash data from 2011 - 2015, the five most recent years for which data are available, were analyzed to determine crash rates for Highway 18S (Commerce Dr.). The crash rates for each year for the highway segment was lower than the statewide average rates for similar types of roadways. Therefore, the crash data show that safety does not appear to be a problem in the study area. The results are summarized in Table 3.

Table 3 - Crash Rates

Segment	Length (mi)	Year	Weighted ADT	Crashes	Crash Rate	Statewide Avg. Crash Rate	KA Crashes	KA Crash Rate	Statewide Avg. KA Crash Rate
Hwy. 18S (LM 0.0-1.21)	1.21	2011	6878	2	0.00	2.81	0	0.00	9.94
		2012	7678	4	1.18	2.78	0	0.00	11.43
		2013	7370	4	1.23	2.34	0	0.00	12.47
		2014	6985	6	1.94	2.37	0	0.00	11.53
		2015	7824	3	0.87	2.75	0	0.00	11.49
		Avg.	7347	3.80	2.61	2.61	0.00	0.00	11.37
Note: KA crash rates are crashes per hundred MVM Crash rates are crashes per MVM									

Economic Considerations

An economic analysis was conducted for Craighead County and the Jonesboro area, the fastest growing region in the state. The population of Craighead County increased from 82,148 to 96,443 (17.4%) between 2000 and 2010. The City of Jonesboro also saw a sizeable increase in population, jumping from 55,515 to 67,263 (21.2%) during the same time period. The U.S. Census Bureau estimates the population of Craighead County and Jonesboro to be 105,835 and 74,889 respectively in 2016. Population growth in this region is supported by a strong mix of professional growth and economic development. Jonesboro's diverse mix of industry, hospitals, national retail chains, and academia allows the city to serve as an economic center for the region. See Table 4 for demographic data.

Table 4 - Demographic Data

Attribute	Jonesboro	Craighead County	State of Arkansas
Population 2010	67,263	96,443	2,915,918
Population 2000	55,515	82,148	2,673,400
Population 1990	47,008	68,956	2,357,000
Percent Change 1990/2000	18.1%	19.1%	13.4%
Percent Change 2000/2010	21.2%	17.4%	9.1%
Median Resident Age	32	34	37.4
Median Household Income	\$41,688	\$42,475	\$41,371
Median Household Value	\$129,700	\$141,400	\$111,400
White-Non Hispanic	74.7%	81.2%	77.0%
Black	18.4%	13.1%	15.4%
Other Races	6.9%	5.7%	7.6%
Education Attained by Age 25+			
High School Graduates	89.1%	87.5%	84.8%
Bachelor's Degree or Higher	29.8%	25.4%	21.1%
Employment by Industry Type			
Education, Health Care & Social Services	29%	28%	15%
Manufacturing	13%	13%	13%
Retail, Food Services & Accommodations	24%	8%	10%
Other	4%	5%	2%
Unemployment Rate	3%	3%	4%

1.4 How is the project related to other transportation plans and goals?

The Jonesboro Metropolitan Planning Organization (MPO) is responsible for regional transportation planning. The Commerce Dr. Extension project is one of several projects included in the Jonesboro MPO's Transportation Improvement Plan. Other projects include:

- A major interchange improvement is proposed along Hwy. 49 at the I-555 interchange before 2020.
- Improvements along Hwy. 18 at the South Caraway Rd. and Main Street intersections.
- A grade separation improvement at East Nettleton Avenue.

1.5 What is the purpose of this project?

Given the transportation needs, goals, and objectives described above, the purpose of this project is to provide a more efficient connection between I-555 and Hwy. 49 in eastern Jonesboro that will have the following additional benefits:

- Improve traffic flow and reduce traffic and traffic related congestion caused by large trucks traveling along Hwy. 18 through more developed sections of the city.
- Improve traffic safety and provide a better level of service to those motorists traveling both on the new route and on other routes in the project area.

1.6 Who is leading the proposed project?

The Federal Highway Administration (FHWA) is the federal lead agency and the ARDOT is the state lead agency for the proposed project. The FHWA is involved because it would fund a portion of this project. The project would also require state funds allocated to ARDOT. The ARDOT will own and maintain the new facility after construction.

1.7 What is the purpose of this Environmental Assessment?

This Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act of 1969 (NEPA). The EA serves to:

- Explain the purpose and need for the proposed project.
- Describe the alternatives considered.
- Evaluate the social, economic, and environmental effects of the alternatives.
- Inform the public and decision makers about potential impacts of the proposed project.
- Provide sufficient evidence and analysis to determine whether to prepare a more detailed Environmental Impact Statement or a Finding of No Significant Impact (FONSI).

NEPA

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the potential environmental consequences of their actions, document the analysis, and provide a public involvement process prior to project implementation. Federal agencies are subject to NEPA as part of their decision making process as part of their own projects, by providing funding to other organizations or agencies, through regulatory or permitting processes, or through the involvement of their resources or property.

Significant Impacts

NEPA regulations do not provide specific thresholds to determine if project impacts are considered significant, but they do discuss the process that should be used to evaluate impacts. Consideration is given both to context, where the significance of impacts varies with the setting of the proposed action, and intensity, the severity of the impacts.

Chapter 2 – Alternative Development

What's in Chapter 2?

Chapter 2 identifies the project limits and briefly describes how the alternatives were developed.

2.1 What are the project limits?

The proposed project begins at I-555 in southeastern Jonesboro and extends north to Hwy. 49 in northeastern Jonesboro.

2.2 How has the public been involved?

A public involvement meeting was held on July 11, 2017, at the Nettleton High School located within the project area. The meeting was attended by 98 people, with 39 comment forms received. A majority (24) of the commenters indicated that they believed that Hwy. 18S (Commerce Dr.) needed to be widened and extended. The public involvement meeting synopsis can be found in Appendix A.

2.3 How have tribal governments been involved?

Section 106 of the *National Historic Preservation Act* requires federal agencies to consult with tribes where projects could affect tribal areas with historical or cultural significance. The FHWA initiated coordination with The Osage Nation, United Keetoowah Band of Cherokee, and the Quapaw Tribe since these tribes have an active cultural interest in the area. The Tribal Historic Preservation Officer for each tribe was given the opportunity to comment on the proposed project. The Osage Tribe determined a “No Adverse Effect” for the proposed project. To date, the Quapaw Tribe and the United Keetoowah Band of Cherokee have not responded.

2.4 What alternatives were evaluated for this project?

Two alternatives were considered for this project: the No Action Alternative and one build alternative, Alternative 1.

No Action Alternative

The No Action Alternative would not provide changes to the existing roadway network, but routine and preventative maintenance treatments would still be performed as needed. Although there are no direct construction costs with this alternative, indirect costs would include maintenance costs and additional vehicle operating costs due to indirection and delays. The No Action Alternative does not meet the project's purpose and need of improving current and forecasted traffic flow, safety, traffic congestion, or provide connectivity. The No Action Alternative will be

No Action Alternative

The National Environmental Policy Act (NEPA) requires decision makers to consider a “no action” alternative in all NEPA studies. This alternative usually does not meet the project's purpose and need, but is used to compare the beneficial and adverse impacts of “action” alternatives and determine their significance.

considered in this Environmental Assessment as a baseline comparison of impacts against Alternative 1.

Alternative 1

Alternative 1 would include widening of Hwy. 18S (Commerce Dr.) from I-555 north for 1.25 miles to Hwy. 18 and would be curb and gutter providing four 11-foot travel lanes, a 12-foot center turn lane, and 5-foot sidewalks. Commerce Dr. from Hwy. 18 to Pacific Dr. (1.0 mile) would be widened and would be curb and gutter providing four 12-foot travel lanes, a 16-foot raised median, and 5-foot sidewalks. This same cross section would continue north on new location for 2.4 miles from Pacific Dr. to Hwy. 49. A grade separation of the Union Pacific Railroad (UPRR) main line would also be constructed. A curbed cross section is consistent with Jonesboro's Master Street Plan and a design speed of 45 mph in a urban/suburban area. The alignment for Alternative 1 is shown in Figure 2 and the typical cross sections of the proposed improvements are shown in Figures 3 and 4.

Figure 2 - Alternative 1 Alignment



Figure 3 - Typical Cross Section: Four Lanes with Center Turn Lane

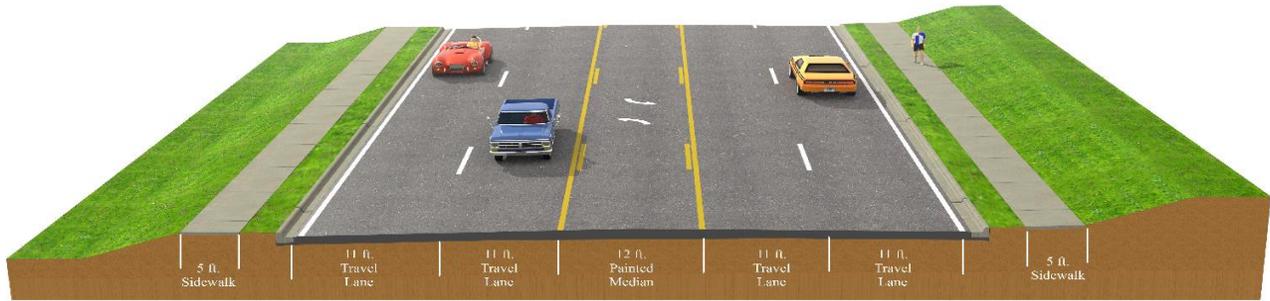
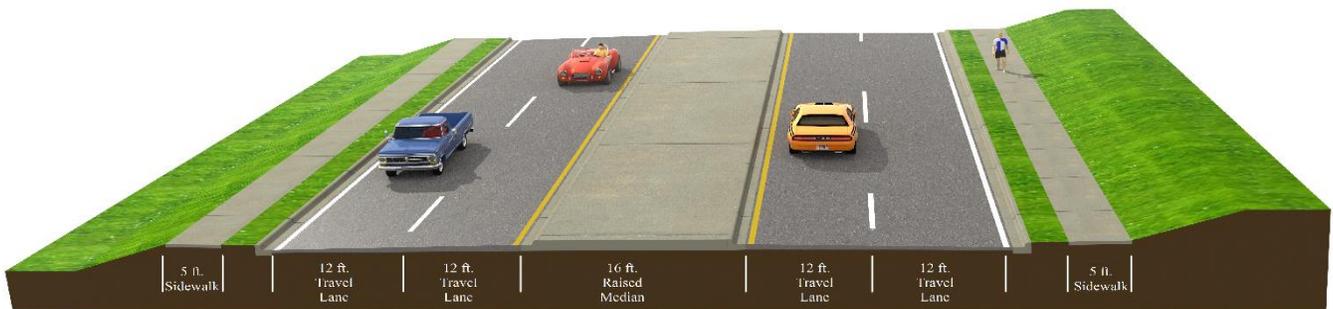


Figure 4 - Typical Cross Section: Four Lanes with Raised Median



Chapter 3 – Project Impacts

What's in Chapter 3?

Chapter 3 identifies impacts that are expected as a result of the proposed project. Only elements that would be affected by the project are discussed. The impact areas discussed in Chapter 3 are summarized in Table 7 at the end of Chapter 4.

3.1. How would the project affect traffic?

The Arkansas Statewide Travel Demand Model was used to estimate how a new north-south arterial connector would affect the traffic patterns on Hwy. 18S (Commerce Dr.) and other routes in the vicinity. After opening this arterial connector to traffic, estimated traffic volumes between I-555 and Hwy. 18 would be 15,000 vehicles per day (vpd) currently and 26,000 vpd in 2040. The traffic volume on the proposed arterial connector between Hwys. 18 and 49 would be 8,500 vpd currently and 21,000 vpd in 2040. See Figure 5 for estimated and projected traffic volumes. Traffic operating conditions are outlined below and summarized in Tables 5 and 6.

- The newly constructed portion of Commerce Drive would operate LOS C in both 2017 and 2040.
- Upon completion of this project, Commerce Dr. will operate acceptably. The planning level methodology indicated that volumes may slightly exceed capacity in 2040. This potential problem can be alleviated through careful intersection design, particularly at the Hwy. 18 intersection.

If the new facility was currently in place, it would divert around 5,000 vpd from Hwy. 49 (Red Wolf Boulevard) in 2017. While this will not completely alleviate congestion, volume-to-capacity (v/c) ratios will be closer to one, and motorists utilizing Commerce Dr. will be provided an option to avoid congestion.

<p>Volume-to-Capacity Ratio Simply the volume divided by the capacity. If $v/c < 1.00$, the roadway volume is below its capacity.</p>
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Figure 5 - 2017/2040 ADT: No Action Alternative and Alternative 1

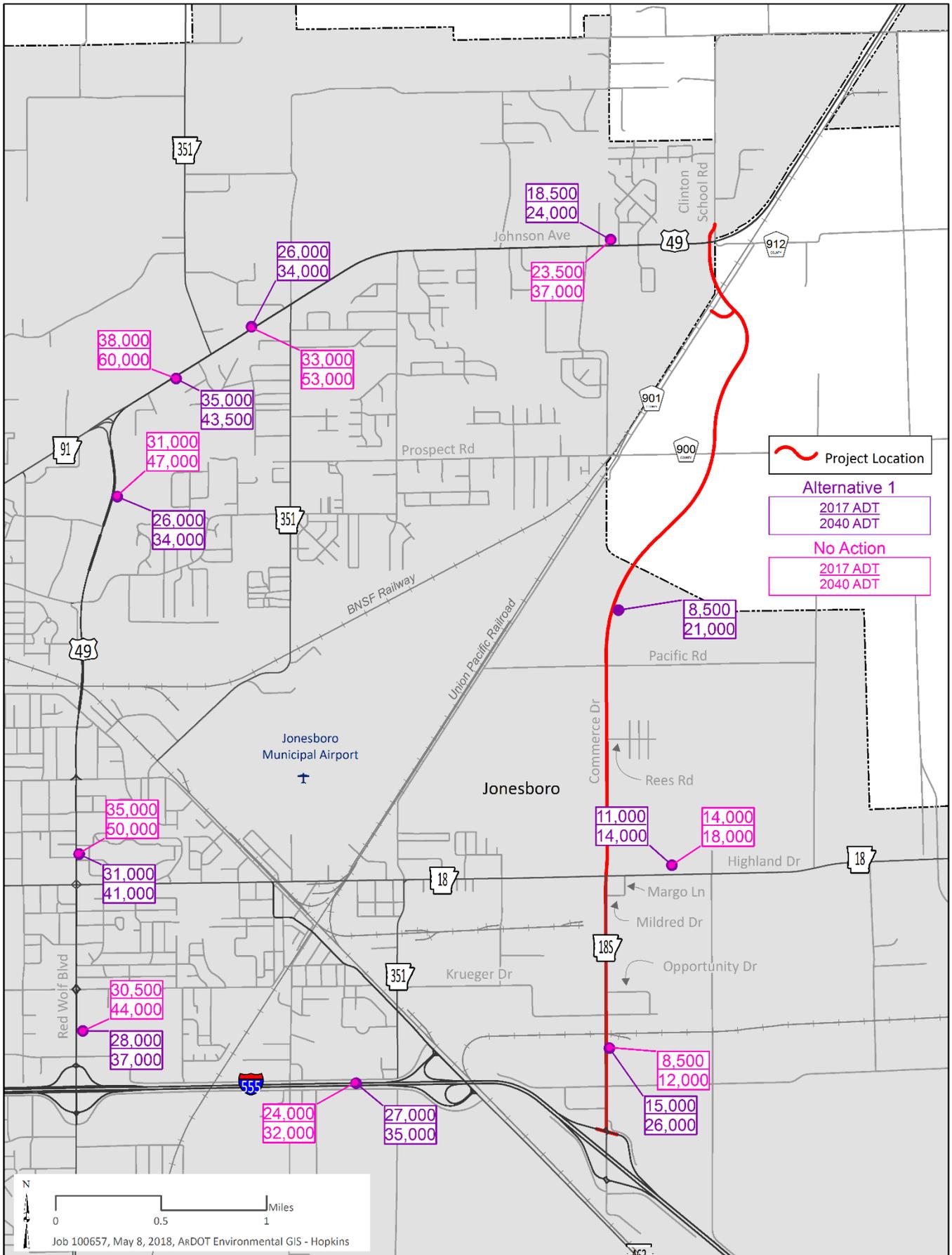


Table 5 - 2017 LOS Summary: Alternative 1

	AM				PM			
	NB	v/c	SB	v/c	NB	v/c	SB	v/c
Highway 18S	C	0.44	C	0.59	C	0.54	C	0.36
New Commerce Drive	B	0.14	C	0.26	C	0.27	B	0.15
Highway 49	C	0.44	C	0.76	C	0.82	C	0.48
Note: LOS values based on a planning level assessment								

Table 6 - 2040 LOS Summary: Alternative 1

	AM				PM			
	NB	v/c	SB	v/c	NB	v/c	SB	v/c
Highway 18S	C	0.78	F	1.04	C	0.96	C	0.64
New Commerce Drive	C	0.35	C	0.64	C	0.57	C	0.37
Highway 49	C	0.58	F	1.06	C	0.94	C	0.63
Note: LOS values based on a planning level assessment								

3.2 How much would the proposed project cost?

In 2018 dollars, total project cost for Alternative 1 is estimated at \$41.0 million: construction cost = \$31.6 million; acquisition and relocation costs = \$5.8 million; utility relocation costs = \$3.6 million. The No Action Alternative would not result in any construction and would only involve routine maintenance.

3.3 How would the economic and social conditions in the surrounding areas be affected?

Relocations

Relocations occur when residential, business, or non-profit properties fall within the established right of way limits for a proposed project. Until the final design has been established, relocation quantities are estimates.

Estimated right of way widths were used in determining potential structures to be relocated. A Conceptual Stage Relocation Analysis and a Conceptual Stage Inventory Record were completed in April 2018. They describe the existing residential and commercial locations in the project study area and evaluate potential relocation impacts within the proposed project. The studies are provided in Appendix B. Results of the Conceptual Stage Relocation Analysis are provided in Table 7.

Relocations

Relocations occur when a residence, business, or non-profit is impacted severely enough by a proposed project that they cannot continue to live or do business at their current location. This is usually due to the proposed right of way limits requiring acquisition of a structure (house or business), taking most of a business's parking, or severing access to the property.

Alternative 1

Alternative 1 would impact between 1 to 12 employees and relocate 3 residential owners, 5 residential tenants, 1 business, and 2 landlord businesses. There are approximately 1 to 2 low-income households and 2 to 3 elderly households that would be relocated as a result of this project. There are no minority families that would be relocated as a result of this project.

Alternative 1 will not sever any subdivisions or urban neighborhoods, however upgrading the existing highway will cause multiple impacts on residential and commercial properties. Alternative 1 would create benefits for the community by enhancing circulation and accessibility for local citizens and travelers alike.

All relocation activities would be governed by the *Federal Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970*, which ensures that decent, safe and sanitary housing is available and offered to displaced residents prior to the initiation of construction.

No Action Alternative

Because new right of way would not be acquired, the No Action Alternative would not require residential or business relocations.

Environmental Justice Impacts and Title VI Compliance

This proposed project is in compliance with Title VI and Executive Order 12898. The ARDOT public involvement process did not exclude any individuals due to income, race, color, religion, national origin, sex, age, or disability. By using the 2012-2016 U.S. Census Data, the Health and Human Services Poverty Guidelines, (Federal Register, February 2018), making field observations, and conducting a public involvement meeting, the determination was made that the proposed project will not have any disproportionate or adverse impacts on minorities, low-income, elderly, or disabled populations.

Social Environment

The geographic area considered for analysis of existing social conditions and impacts consists of Craighead County and the City of Jonesboro. The study area encompasses agricultural, residential, commercial and industrial areas. Jonesboro is largest city Northeastern Arkansas and home to Arkansas State University. This city offers many opportunities for degree seeking individuals, as well as, advanced healthcare for families in Jonesboro and the surrounding areas.

Alternative 1

Alternative 1 initially follows along the existing route, passing through areas that are primarily business, industrial, and residential properties. A

Table 7 - Relocations

Property Type	Number of Relocations
Residential Owners	3
Residential Tenants	5
Businesses	1
Landlord Businesses	2
Total	11

Environmental Justice
 Environmental Justice at the FHWA means identifying and addressing disproportionately high and adverse effects of the agency’s programs, policies, and activities on minority populations and low-income populations to achieve an equitable distribution of benefits and burdens.

Title VI
 Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, sex, national origin, religion, or disability under any program or activity receiving federal financial assistance.

new location route will be constructed between Pacific Rd. and Hwy. 49. This alternative will not sever any subdivisions or urban neighborhoods nor will it disrupt community services and facilities. However, upgrading the existing highway will cause the potential relocation of some businesses, homes and alter public transportation routes.

The project will ease the traffic flow and improved safety for motorists. Recreational users and emergency service providers would also benefit from the enhanced circulation and accessibility throughout the project area. Construction delays, dust, noise, and exhaust fumes from equipment would temporarily affect residences and businesses as a result of Alternative 1.

No Action Alternative

The No Action Alternative consists of no improvements being made to the existing highway and no construction of the Commerce Dr. extension. Without the widening of Commerce Dr., traffic related congestion would continue to deteriorate and only routine maintenance would be provided. Without the construction of the Commerce Dr. extension, truck traffic would continue to cause congestion along Hwy. 18.

3.4. How would the project affect land uses in the project area?

The proposed project was developed in coordination with the Jonesboro MPO and City of Jonesboro Engineering and Zoning & Planning departments. The project’s compatibility with existing and intended land uses was therefore considered during the planning and design process.

As shown on Figure 6, the project corridor would pass through the following land use zoning categories: Agricultural; Commercial; Industrial; and Residential (Single- and Multi-Family). In addition to traditional zones, Jonesboro has proposed growth sector categories to evaluate how areas can meet the intensity of land use impacts.

Alternative 1

The acreage of each zone that would be converted to transportation use are provided in Table 8 and discussed below.

Most of the land use changes in the project area would be associated with the new location segment. Approximately 63 percent of the new location acreage is zoned for agriculture. The remaining land is zoned for residential use, with the exception of a small amount for industrial use. Most of the new location segment is located in the Moderate Intensity and Rural growth sectors, with a small portion just south of Hwy. 49 designated as High Intensity.

The project would be compatible with the intended Commercial and Industrial zone uses. The mobility of goods and services would be

Table 8 - Land Use

Land use Type	Acres
Commercial	2.6
Agriculture	36.3
Industrial	2.9
Residential	15.6
Total	57.3

improved by providing a direct north-south connector and an overpass in this area.

The project would not be compatible with existing residential uses in areas where residences would be either displaced or brought into closer proximity to the roadway. However, the project would include a median, sidewalks, and grassy berms. These features meet Jonesboro's goal of promoting a more pedestrian-friendly community and are visually enhancing. Land use effects are therefore likely to range from adverse to beneficial in this zone.

No Action Alternative

Because new right of way would not be acquired, the No Action Alternative would not directly impact current or future land uses.

3.5 How would vegetation be affected by the project?

Potential natural vegetation in the area is southern floodplain forest. In bottomland hardwood forests, native vegetation includes overcup oak (*Quercus lyrata*), Nuttall oak (*Quercus texana*), willow oak (*Quercus phellos*), water hickory (*Carya aquatica*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*) and sweetgum (*Liquidambar styraciflua*). Native vegetation in the wettest areas; e.g., depressions and in relict channels, include bald cypress (*Taxodium distichum*), water tupelo (*Nyssa aquatica*) and overcup oak (*Quercus lyrata*). Native vegetation along ridges include Nuttall oak (*Quercus texana*), willow oak (*Quercus phellos*), water hickory (*Carya aquatica*), elms (*Ulmus spp.*), green ash (*Fraxinus pennsylvanica*) and sweetgum (*Liquidambar styraciflua*).

Land cover impacts were calculated. Appendix C provides additional information regarding potential vegetation impacts.

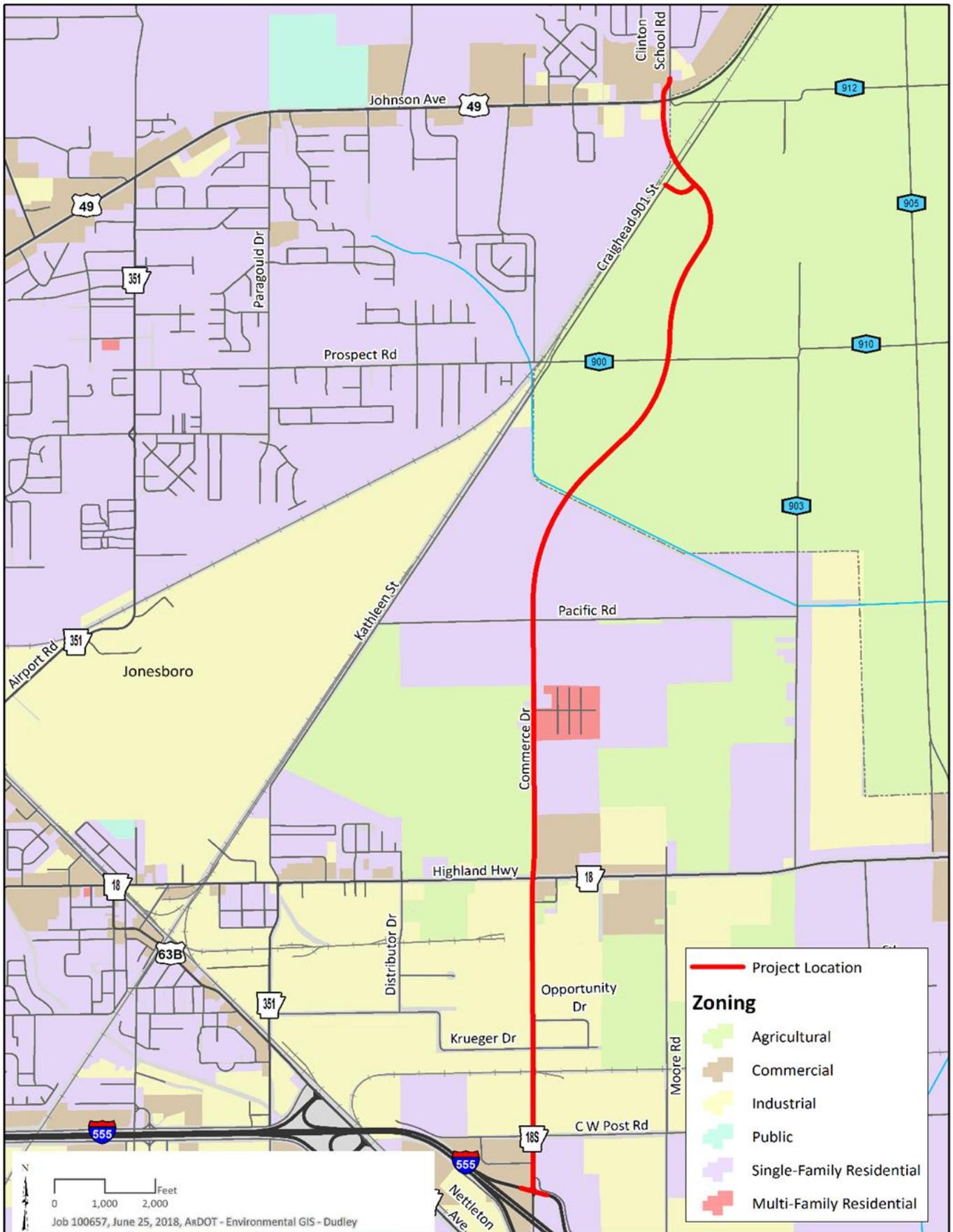
Alternative 1

Alternative 1 would convert approximately 11.7 acres of bottomland hardwood forest, 40.7 acres of cropland, 4.1 acres of residential property and 10.2 acres of business property to highway right-of-way.

No Action

The No Action Alternative would not convert any land cover to a transportation use.

Figure 6 - Land Use



3.6 How would the project affect cultural resources?

Alternative 1

A preliminary cultural resources review of Alternative 1 has been conducted. It consisted of a review of site, structure, and property records on file at the Arkansas Historic Preservation Program (AHPP) and the Arkansas Archeological Survey (AAS), FHWA initiation of Native American consultation, a comparison of early maps showing historic settlement in the area, a standing structures survey, and a field visit to all public access points along the alternative. It was conducted in order to identify any obvious potentially historic properties that might be affected by the proposed alternative.

According to the Arkansas Archeological Survey’s AMASDA database no archeological sites are recorded on or near the project limits. The AHPP data set has no structures on record for the project area. The 1849 GLO showed no cultural development. The 1936 road map shows historic development along the route.

Once a Preferred Alternative has been identified, an intensive cultural resources survey will be conducted by ARDOT staff archeologists to determine if unknown archeological sites or features are present. If sites, historic properties, or routes will be affected, a full report documenting the results of the survey and stating the ARDOT’S recommendations will be prepared and submitted to the State Historic Preservation Officer (SHPO) for review. If potentially significant prehistoric sites are identified, further consultation will be carried out with the appropriate Native American Tribe(s) to determine if and what type of additional work should be carried out. Should any sites or properties within the project area be determined eligible or potentially eligible for nomination to the National Register of Historic Places and avoidance is not possible, then resource specific treatment plans will be prepared, approved and carried out at the earliest practicable time.

No Action Alternative

Because new right of way would not be acquired, the No Action Alternative would not directly impact cultural resources.

3.7 How would the proposed project increase noise for surrounding properties?

Alternative 1

FHWA’s Transportation Noise Model (TNM 2.5) indicates that an increase in noise levels will occur along the existing route from the predicted traffic volume increase during the next 20 years. Thirty-five receptors would be impacted by noise from the project due to the increase in traffic volumes and the design for the proposed project bringing the highway closer to some receptors. Eight sensitive receptors are located along Hwy. 18S

<p>Historic Property Cultural resources include elements of the built environment (buildings, structures, or objects) or evidence of past human activity (archeological sites). Those that are listed on or eligible for inclusion in the National Register of Historic Places (NRHP) are defined as historic properties.</p>
--

<p>Noise Sound is anything we hear, while noise is unwanted or undesirable sound. Traffic noise is a combination of the noises produced by vehicle engines, exhaust, and tires.</p>
--

<p>Sensitive Noise Receptors Residences are considered sensitive noise receptors along with businesses that have a special sensitivity to noise, such as schools, churches, libraries, and parks.</p>
--

(Commerce Dr.) south of Hwy. 18, and 27 sensitive receptors are located along Commerce Dr. north of Hwy. 18, including the new location section. A noise barrier would be ineffective due to the gaps needed along the route for driveways and streets.

Construction noise from the project would be temporary and relatively minor. A noise analysis detailing the methods used for the noise study and the results can be found in Appendix D.

No Action Alternative

The No Action Alternative would not directly impact noise sensitive receptors.

3.8 How would the project area's visual quality be affected?

Alternative 1

Increased roadway widths would alter the appearance of the existing roadway for travelers along the road and for residents and businesses (referred to as project "neighbors"). The removal of an existing business, some residences, and several acres of trees and other vegetation would alter visual resources along the project corridor. Existing residences and commercial buildings would be in closer proximity to the roadway.

The UPRR overpass would be approximately 25 feet in elevation at the uppermost portion and include fencing over the railroad track. For this reason, constructing an overpass would introduce a structure considerably higher than others in the area. Its height would increase neighbors' views of the overpass. Likewise, it would expand travelers' views of the surrounding area.

Project visual resources would not detract from the area's overall existing visual character. Local planning and development guidelines would be taken into consideration to ensure compatibility. For these reasons, overall visual quality impacts are likely to be beneficial, particularly for travelers. Impacts may also be beneficial for business neighbors, which may benefit from increased visibility to travelers. Impacts may be adverse for residential neighbors for whom views of the roadway would become more prominent.

Project construction would result in vegetation clearing and the short-term presence of construction vehicles and equipment, temporarily altering the area's visual character. Impacts in roadside cleared areas would be minor and short-term until new vegetation becomes established.

Adverse impacts to overall visual quality are not expected as a result of the project. A visual impact assessment technical memorandum (including a scoping questionnaire and visual impact definitions) are provided in Appendix E.

Visual Quality

Visual quality impacts are determined by predicting viewer responses to changes in the project area's visual resources.

Visual Resources

Visual resources include features such as roadway elements like cross sections and construction materials; buildings and other manmade structures; and vegetation.

Project Viewer

Project viewers are travelers (drivers, bicyclists, and pedestrians) with views *from* the road and residential and businesses with views *to* the road.

No Action Alternative

The No Action Alternative would not directly impact the visual quality of the area.

3.9 Would any hazardous materials be created or affected?

Alternative 1

A visual assessment and database search determined if any hazardous materials were located in the project area. The database search revealed one leaking underground storage tank (LUST) location. The LUST site is at an Exxon Station, formerly known as the Snappy Mart #18, at the corner of Hwy. 18S (Commerce Dr.) and Commerce Square. Design plans indicate that the building, canopy, and the existing tanks will not be impacted under Alternative 1. Because the station is an existing LUST site and is within 200 feet of the centerline of the project area, the site has a high probability of contamination being discovered. The existing tanks and the LUST site are recorded in the Arkansas Department of Environmental Quality (ADEQ) records as AFIN Number 16-00841.

If hazardous materials are identified, observed or accidentally uncovered by any ARDOT personnel, contracting company(s), or state regulating agency, it would be the ARDOT's responsibility to determine the type, size and extent of contamination. The ARDOT would identify the type of contaminant, develop a remediation plan, and coordinate disposal methods to be employed for the particular type of contamination. All remediation work would be conducted in conformance with the ADEQ, Environmental Protection Agency (EPA), and Occupational Safety and Health Administration (OSHA) regulations.

An asbestos survey by a certified asbestos inspector will be conducted on each building identified for demolition. If the survey detects the presence of any asbestos-containing materials, plans will be developed for the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in accordance with ADEQ, EPA, and OSHA asbestos abatement regulations.

No Action Alternative

The No Action Alternative would not directly impact hazardous materials sites.

3.10 Would any prime farmland be impacted by the project?

The study area is located in the Mississippi River Alluvial Plain in an area that is favorable to intense agricultural activity because of the level land and fertile soil. Craighead County is generally rural in nature and agriculture is a major land use and source of employment. Agricultural activities consist of row cropping for crops like soybeans, corn, and rice.

Hazardous Materials

A hazardous material is any item or chemical that can cause harm to people, plants, or animals when released into the environment.

Prime Farmland

Prime Farmland is defined by the US Department of Agriculture as land that has the best combination of physical and chemical characteristics for the production of crops. Impacts to Prime Farmland occur when it is converted to highway right of way.

Alternative 1

Alternative 1 would acquire approximately 26 acres of Prime Farmland. The NRCS-CPA-106 Form is located in Appendix F.

No Action Alternative

Because new right of way would not be acquired, the No Action Alternative would not directly impact any prime farmland.

3.11 How would water resources, wetlands, and protected species be affected by the project?

Figure 7 shows the water resources and wetland locations in the project study area.

The proposed project area contains four unnamed intermittent streams (designated as Stream A, B, C, and D). The streams are headwater tributaries in the Little Bay Ditches Headwaters watershed.

Wetlands A and B are depressional forested areas located interspersed between row crops. Wetland C is an herbaceous, scrub/shrub area south of Prospect Rd. consisting of early successional growth. Wetland D is a depressional forested area with the southern portion cleared and maintained as residential lawn. Wetland E is depressional wetland that is transected by the railroad. All wetlands are adjacent to the headwater tributaries.

The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation website lists Indiana bat (*Myotis sodalis*), Fat Pocketbook (*Potamilus capax*), Rabbitsfoot (*Theiladerma cylindrica*), Scaleshell (*Leptodea leptodon*), and pondberry (*Lindera melissifolia*) as threatened and endangered species potentially occurring at or near the project location.

Indiana bats are known to utilize trees for roosts during the summer and caves during the winter. The project lies on the edge of the known Indiana bat range and suitable summer habitat has been identified within the project area. Fat Pocketbook, Rabbitsfoot, and Scaleshell are freshwater mussels (i.e. clams) that inhabit medium to large rivers and streams. All the streams identified are too small for suitable habitat for any of the threatened and endangered mussel species. Pondberry is small deciduous shrub endemic to the southeastern United States. It grows in low, wet woods. Some of the wetlands identified with the project vicinity are wooded, however, suitable habitat for pondberry is not present. The closest known record for pondberry is from St. Francis Sunk Lands Wildlife Management Area approximately 15 miles to the southeast.

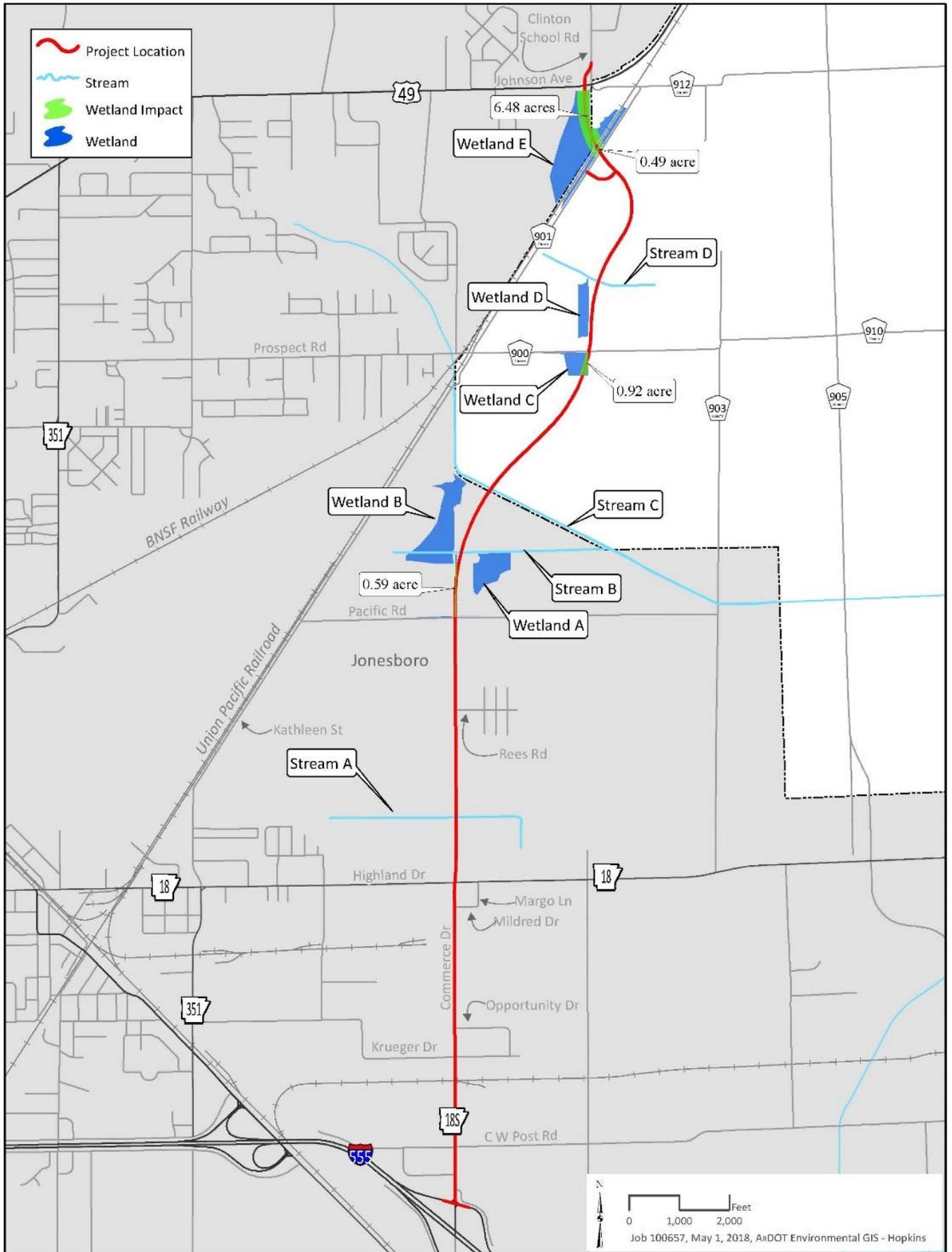
Threatened and Endangered Species

An endangered species is one that is in danger of extinction throughout all or a significant portion of its range. endangered species receive the highest level of protection. A threatened species is one that is likely to become endangered in the near future. threatened species.

Suitable Bat Roost Trees

Larger than three inches in diameter and have shaggy bark (such as shag bark hickory) or have cracks and crevasses that form during storm damage or old age.

Figure 7 - Streams and Wetlands



Alternative 1

Alternative 1 would impact 8.48 acres from Wetland B, C, and E as well as 330 linear feet from Streams A, B, C, and D. Stream impacts should be minimal with stream B, C, and D crossed perpendicular to the alignment.

Water quality impacts could occur due to soil disturbance from land clearing, culvert construction/extension, and operating construction equipment and vehicles. Stormwater runoff during the construction phase of the proposed project would also temporarily impact water quality; however, impacts will be minimized with the incorporation of sediment and erosion control best management practices.

Tree clearing for the new alignment could reduce suitable habitat for the Indiana bat. The scope of the project is outside of the Programmatic Biological Opinion (BO) for Transportation Projects; however, informal technical assistance from the USFWS recommended the use of mitigation ratio from the BO to calculate the mitigation needed. A total of 5.1 acres of trees suitable for Indiana bat habitat will be cleared. The ARDOT proposes the use of 8.9 acre credits as compensatory mitigation for the 5.1 acres of suitable Indiana bat habitat being cleared. Consultation with the USFWS will follow the identification of a Selected Alternative. Suitable habitat for pondberry is not located within the project vicinity. No impacts to any mussel species are anticipated during the construction of this project.

No Action Alternative

No water quality or protected species will be impacted.

3.12 How would floodplains be affected?

Alternative 1

Craighead County participates in the National Flood Insurance Program. The southern portion of the project lies within the Zone AE, Special Flood Hazard Area. A section of the project adjacent to Stream A is within the regulatory floodway and 100-year floodplain. Flood Insurance Rate Maps issued by the Federal Emergency Management Agency were reviewed to identify any regulatory floodways and 100-year floodplains within the project area. Any project in a floodway must be reviewed to determine if the project will increase flood heights.

Floodplain Impacts under Alternative 1

All of the floodplain encroachments within this roadway construction project will be designed to comply with the county's local flood damage prevention ordinance. The final project design will be reviewed to confirm that the design is adequate and that the potential risk to life and property are minimized. Adjacent properties should not be impacted nor have a greater flood risk than existed before construction of the project. No adverse impacts to the floodplain that would increase the frequency or severity of flooding are expected to occur as a result of Alternative 1.

Floodplains

Floodplains are land areas that become covered by water in a flood event. 100-year floodplains are areas that would be covered by a flood event that has a 1% chance of occurring (or being exceeded) each year, also known as a 100-year flood. This is the floodplain commonly used for insurance and regulatory purposes.

No Action Alternative

No floodplains would be impacted by the No Action Alternative.

3.13 Will public/private wellheads be impacted?**Alternative 1**

Arkansas Department of Health (ADH) regulations require public well supply owners to effectively control a restricted buffer zone of at least 100 feet around the wellhead to prevent contamination. The project area is within four drinking water wellhead protection areas, however the 100 feet buffer zones will be maintained for the Jonesboro Water System. Commerce Dr. Well #1 is approximately 375 feet east of the Alternative 1, Commerce Dr. Well #2 is located approximately 90 feet west of the Alternative 1, Commerce Dr. Well #3 is approximately 1,366 feet west of Alternative 1 and Well #4 is approximately 150 feet west of the Alternative 1. Coordination efforts with the (ADH) will include selecting appropriate protective measures within the wellhead protection areas, such as conveying stormwater away from the buffer zone.

No Action Alternative

No impacts to public/private wells will occur with the No Action Alternative

Chapter 4 – Recommendations

What's in Chapter 4?

Chapter 4 contains the results and conclusions of this Environmental Assessment.

4.1 What are the results of this EA?

The environmental analysis of the proposed project did not identify any significant impacts to the natural and social environment as a result of the No Action Alternative or Alternative 1. A summary of the impacts of these alternatives can be found in Table 9. Alternative 1 has been identified as the Preferred Alternative, because it meets the project's purpose and need and minimizes impacts.

The ARDOT's standard commitments associated with relocation procedures, hazardous waste abatement, cultural resources discovery, and control of water quality impacts have been made in association with this project. They are as follows:

- See Relocation procedures located in Appendix B.
- If hazardous materials, unknown illegal dumps, or underground storage tanks are identified or accidentally uncovered by ARDOT personnel or its contractors, the ARDOT will determine the type, size, and extent of the contamination according to the ARDOT's response protocol. The ARDOT in cooperation with the ADEQ will determine the remediation and disposal methods suited for that particular type of contamination. The proposed project will comply with local, state, and federal laws and regulations.
- An asbestos survey will be conducted by a certified asbestos inspector on each building slated for acquisition and demolition. If the survey detects the presence of any asbestos-containing materials, plans will be developed to accomplish the safe removal of these materials prior to demolition. All asbestos abatement work will be conducted in conformance with ADEQ, EPA, and OSHA asbestos abatement regulations.
- An intensive cultural resources survey will be conducted for the Preferred Alternative. If sites are affected, a full report documenting the results of the survey and stating the ARDOT's recommendations will be prepared and submitted to the SHPO for review. If prehistoric sites are impacted, consultation led by FHWA with the appropriate Native American Tribe will be conducted and the site(s) evaluated to determine if Phase II testing is necessary. Should any of the sites be found to be eligible or potentially eligible

for nomination to the NHRP, and avoidance is not possible, then site-specific treatment plans will be prepared, and data recovery conducted at the earliest practicable time. All borrow pits, waste areas, and work roads will be surveyed for cultural resources when locations become available.

- The Federally designated endangered Indiana bat (*Myotis sodalis*) has the potential to occur within the project area. When not in hibernation, Indiana bats utilize hardwood forests for foraging, roosting and maternal activities. In an effort to avoid potential impacts to endangered species, the clearing of trees is prohibited from March 15 through November 14. However, grubbing activities will be allowed during the entire calendar year.
- Stream and wetland mitigation will be offered at an USACE approved mitigation bank site at a ratio approved by the USACE during the Section 404 permitting process.
- A Restraining Condition and an Archeological Monitoring Special Provision are required by the AHPP; therefore, an ARDOT's staff archeologist must be present during any ground disturbing activity within the existing roadside park.
- The ARDOT will comply with all requirements of the *Clean Water Act*, as amended, for the construction of this project. This includes Section 401-Water Quality Certification, Section 402-NPDES, and Section 404-Permit for Dredged or Fill Material.
- A Water Pollution Control Special Provision will be incorporated into the contract to minimize potential water quality impacts.
- If any permanent impacts to public drinking water sources occur due to this project, the ARDOT will take appropriate action to mitigate these impacts.

4.2 Is the NEPA process finished?

After this EA is signed by the FHWA and approved for public dissemination, a Location and Design Public Hearing will be held.

After a review of comments received from citizens, public officials, and public agencies, a FONSI document may be prepared by the ARDOT and submitted to the FHWA. If approved by FHWA, the FONSI will identify the Selected Alternative and the project may proceed to final design.

Table 9 - Alternative Impact Comparison

Alternative	Total project Cost (2018 million dollars)	Construction Cost (2018 million dollars)	Other Cost (2018 million dollars)	Prime Farmland Impacts (acres)	Relocations	Noise Receptors Impacted	Wetland Impacts (acres)	Stream Impacts (linear feet)
No Action	0	0	0	0	0	0	0	0
1	41	31.6	9.4	26	11	35	8.48	330

Other cost includes preliminary engineering, right of way acquisition costs, business, non-profit, landlord relocation costs, and utility relocation costs

Appendix A

Public Involvement Meeting Synopsis

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PUBLIC INVOLVEMENT SYNOPSIS

Job Number 100657
I-555 – Hwy. 49 (Commerce Dr. Extension) (Jonesboro)
Craighead County
Thursday, July 11, 2017

An open forum Public Involvement meeting for the proposed project was held at the Nettleton High School (Presentation Room) from 4:00 – 7:00 p.m. on Thursday, July, 11 2017. Special efforts to involve minorities and the public in the meetings included the following:

- Display advertisement placed in the *Jonesboro Sun* on Sunday, July 9, 2017 and Sunday, July 16, 2017.
- Outreach letters mailed to Public Officials.
- Distribution of flyers in the project area.

The following information was available for inspection and comment:

- Displays including an aerial photograph at a scale of 1-inch equals 650feet.
- A large display of an aerial photograph at a scale of 1-inch equals 100 feet.

Handouts for the public included a comment sheet and a small-scale map illustrating the project location, which was identical to the aerial photograph display. Copies of the handouts are attached.

Table 1 describes the results of the public participation at the meeting.

TABLE 1	
Public Participation	Totals
Attendance at meeting (including ArDOT staff)	98
Letters Received	1
Comments forms received	39

ArDOT staff reviewed all comments received and evaluated their contents. The summary of comments listed below reflects the personal perception or opinion of the person or organization making the statement. The sequencing of the comments is random and is not intended to reflect importance or numerical values. Some of the comments were combined and/or paraphrased to simplify the synopsis process.

An analysis of the responses received as a result of the public survey is shown in Table 2.

Job Number 100657 Public Involvement Synopsis

July 11, 2017

Page 2 of 2

TABLE 2	
Survey Results	Totals
Supports the extension and widening of Commerce Drive	24
Does not support the extension and widening of Commerce Drive	11
No response to support/does not support	4
Knowledge of historical, archeological or cemetery sites	1
Knowledge of area environmental constraints	1
Home or property offers limitations to the project	3
Suggestions to better serve the needs of the community	10
Beneficial impacts due to the proposed project	10
Adverse impacts due to the proposed project	13
No response to beneficial/adverse impacts	6

The following is a listing of comments concerning issues associated with this project:

- Two individuals indicated it would increase traffic on Commerce Drive.
- Seven individuals said it would alleviate congestion.
- Five individuals were concerned about the elderly living along the road.
- Eight individuals commented it would affect their property and its value.
- One individual did not want State funds used.
- Seven individuals wanted another route considered using Roger Chapel Road or Nestle Road.
- Two individuals wanted a bike and pedestrian lane considered.
- Three individuals were concerned about flooding and wanted Moore Ditch widened.
- One individual wanted an interchange with merge lanes at Highway 49.
- Two individuals commented there was a memorial site at the end of Commerce Drive.
- Two individuals were concerned about their septic system.

Attachments:

Public handouts, including blank comment form

Small-scale display copy

RJ *RJ*

DN *DN*

JB:cb

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT (AHTD)

CITIZEN COMMENT FORM

**AHTD JOB NUMBER 100657
I-555 – HWY. 49 (COMMERCE DR. EXTENSION) (JONESBORO)
CRAIGHEAD COUNTY**

**LOCATION:
NETTLETON HIGH SCHOOL (PRESENTATION ROOM)
4201 CHIEFTAN LANE
JONESBORO, AR
4:00 – 7:00 P.M.
TUESDAY, JULY 11, 2017**

Make your comments on this form and leave it with AHTD personnel at the meeting or mail it by 4:30 p.m. on **Wednesday, July 26, 2017** to: Arkansas State Highway and Transportation Department, Environmental Division, Post Office Box 2261, Little Rock, Arkansas 72203-2261. Email: environmentalpi meetings@ahtd.ar.gov

Yes No
 Do you feel there is a need for the proposed widening of Commerce Drive from I-555 extending north on new location to Hwy. 49? Comment (optional) _____

 Do you know of any historical sites, family cemeteries, or archaeological sites in the project area? Please note and discuss with staff. _____

 Do you know of any environmental constraints, such as endangered species, hazardous waste sites, existing or former landfills, or parks and public lands in the vicinity of the project? Please note and discuss with AHTD staff. _____

 Does your home or property offer any limitations to the project, such as septic systems, that the Department needs to consider in its design? _____

(Continued on back)

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Do you have a suggestion that would make this proposed project better serve the needs of the community? _____

<input type="checkbox"/>	<input type="checkbox"/>	Do you feel that the proposed improvements project will have any impacts (<input type="checkbox"/> Beneficial or <input type="checkbox"/> Adverse) on your property and/or community (economic, environmental, social, etc.)? Please explain.

It is often necessary for the AHTD to contact property owners along potential routes. If you are a property owner along or adjacent to the route under consideration, please provide information below. Thank you.

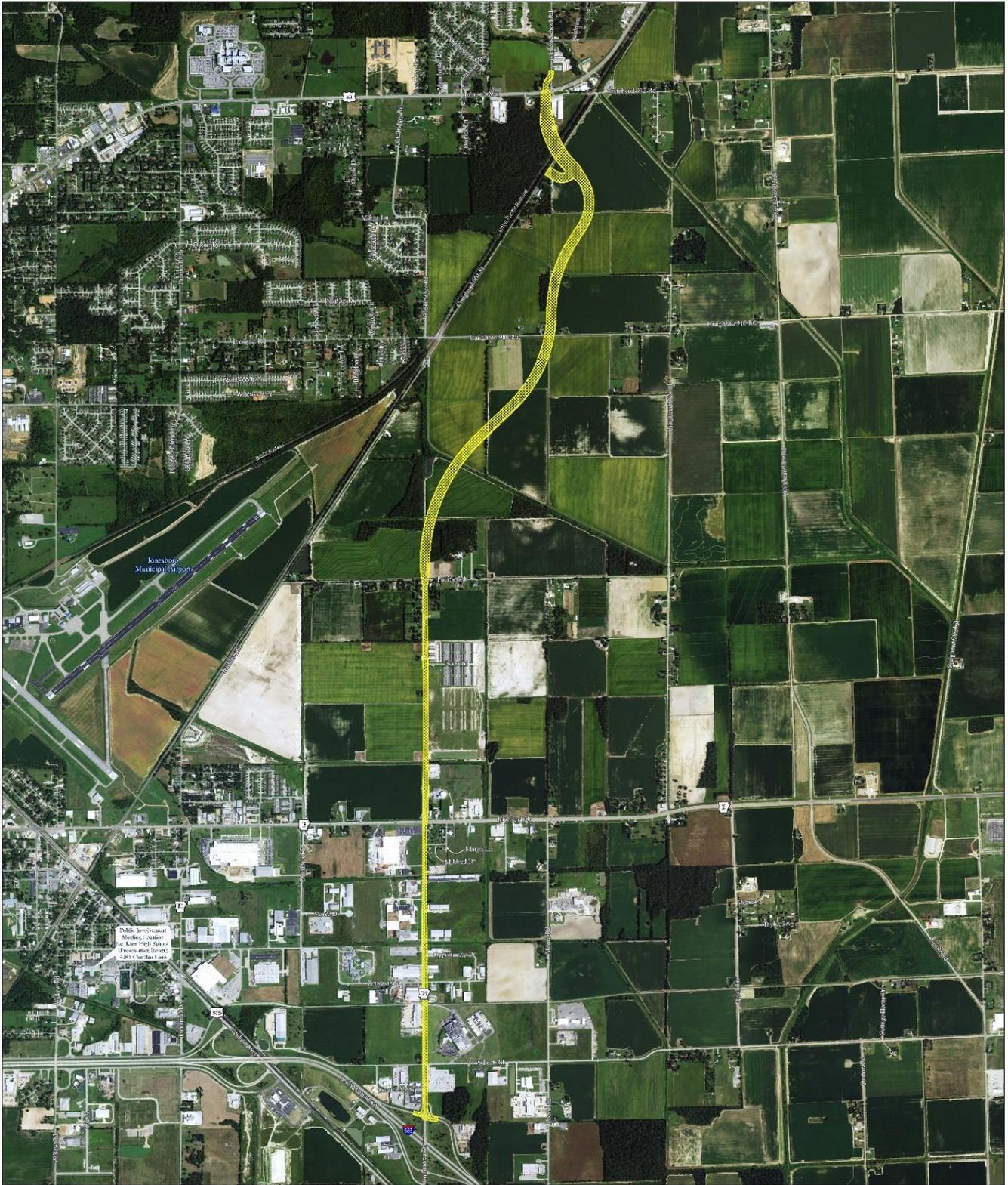
Name : _____ (Please Print)

Address: _____ Phone: (____) _____ -- _____

E-mail: _____

Please make additional comments here. _____

For more information, please visit our website at www.arkansashighways.com



0 650 1,300
Feet

AUTD - Environmental GIS-4 Synopsis
Map Date - July 2, 2017
Maping Date - July 11, 2012
Public Information Meeting Display



Job 100657
I-555 - Hwy. 49
(Commerce Dr. Extension) (Jonesboro)
Craighead County

Preliminary
Subject to Revision

Project Corridor

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Appendix B

Conceptual Stage Relocation Study

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ARKANSAS DEPARTMENT OF TRANSPORTATION
AR DOT.gov | I Drive Arkansas.com | Scott E. Bennett, P.E., Director
10324 Interstate 30 | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2000

INTEROFFICE MEMORANDUM

TO: John Fleming, Environmental Division Head
FROM: Perry M. Johnston, Right of Way Division Head 
DATE: April 19, 2018
SUBJECT: Job 100657
I-555 – Hwy. 40
(Commerce Dr. Extension) (Jonesboro)
Craighead County
CONCEPTUAL STAGE RELOCATION STATEMENT

GENERAL STATEMENT OF RELOCATION PROCEDURE

Persons displaced as a direct result of acquisition for the proposed project will be eligible for relocation assistance in accordance with Public Law 91-646, Uniform Relocation Assistance Act of 1970. The Relocation Program provides advisory assistance and payments to minimize the adverse impact and hardship of displacement upon such persons. No lawful occupant shall be required to move without receiving a minimum of 90 days advance written notice. All displaced persons; residential, business, farm, nonprofit organization, and personal property relocates are eligible for reimbursement for actual reasonable moving costs.

Construction of the project will not begin until decent, safe and sanitary replacement housing is in place and offered to all affected persons. It is the Department's Policy that adequate replacement housing will be made available, built if necessary, before any person is required to move from their dwelling. All replacement housing must be fair housing and offered to all affected persons regardless of race, color, religion, sex or national origin.

There are two basic types of residential relocation payments: (1) Replacement Housing payments and (2) Moving Expense payments. Replacement Housing payments are made to qualified owners and tenants. An owner may receive a payment of up to \$31,000.00 for the increased cost of a comparable replacement dwelling. The amount of this payment is determined by a study of the housing market. Owners may also be eligible for payments to compensate them for the increased interest cost for a new mortgage and the incidental expenses incurred in connection with the purchase of a replacement dwelling. A tenant may receive a rental subsidy payment of up to \$7,200.00. Tenants may elect to receive a down payment rather than a rental subsidy to enable them to purchase a replacement dwelling. Replacement housing payments are made in addition to moving expense payments.

Businesses, farms and nonprofit organizations are eligible for reestablishment payments, not to exceed \$25,000.00. Reestablishment expense payments are made in addition to moving expense payments. A business, farm or nonprofit organization may be eligible for a fixed payment in lieu of the moving costs and reestablishment costs if relocation cannot be accomplished without a substantial loss of existing patronage. The fixed payment will be computed in accordance with the Code of Federal Regulations and cannot exceed \$40,000.00.

If the displacee is not satisfied with the amounts offered as relocation payments, they will be provided a form to assist in filing a formal appeal. A hearing will be arranged at a time and place convenient for the displacee, and the facts of the case will be promptly and carefully reviewed.

Relocation services will be provided until all persons are relocated or their relocation eligibility expires. The Relocation Office will have listings of available replacement housing and commercial properties. Information is also maintained concerning other Federal and State Programs offering assistance to displaced persons.

=====
 Based on preliminary right of way plans, aerial photographs, and an on-site project review, it is estimated that the subject project could cause the following displacements and costs:

3	Residential Owners	\$ 105,000.00
5	Residential Tenants	\$ 62,500.00
1	Businesses	\$ 40,000.00
2	Landlord Businesses	\$ 50,000.00
6	Personal Properties	\$ 15,000.00
	Services	\$ 50,000.00
	Total	\$ 322,500.00

The general characteristics of the displacees to be relocated are listed on the Conceptual Stage Inventory Record forms in the back of this report. The general characteristics have been determined by a visual inspection of the potential displacement locations by Relocation Coordinators. The Relocation Coordinators utilize area demographic data, visual inspections, experience and knowledge in making this determination.

An available housing inventory has been compiled and it indicates there are at least one hundred forty-three comparable replacement dwellings available for sale and twenty-seven comparable replacement dwellings available for rent within five miles of the project. At least ninety-six commercial properties are currently for sale, and forty-one for lease in the project area. A breakdown of the available properties is as follows:

Residential (For Sale)	<u>Number Of Units</u>
\$ 50,000 - 75,000	25
75,001 - 100,000	22
100,001 - 125,000	21
125,001 - 150,000	42
150,001 - 175,000	33
Total	143
Residential (Monthly Rent)	
\$ 0 - 500.00	3
501.00 - 600.00	1
601.00 - 700.00	4
701.00 - 800.00	7
801.00 - 900.00	2
901.00 and up	10
Total	27
Commercial Properties (For Sale)	
\$ 0 - 250,000	17
250,001 - 500,000	24
500,001 - 750,000	19
750,001 - 1,000,000	10
1,000,001 - and up	28
Total	98
Commercial Properties (Monthly Rent)	
\$ 500 - 1,000	1
1,001 - 2,000	5
2,001 - 3,000	4
3,001 - 4,000	5
4,001 and up	26
Total	41

This is a city street extension project that includes widening and new location. The units contained in the housing inventory are in the Jonesboro area. The dwellings and number of dwellings are comparable and adequate to provide replacement housing for the families displaced on the subject project. The housing market should not be detrimentally affected and there should be no problems with insufficient housing at this time. In the event housing cannot be found or can be found but not within the displacees' economic means at the time of displacement, Section 206 of Public Law 91-646 (Housing of Last Resort) will be utilized to its fullest and practical extent.

The housing inventory was compiled from data obtained from real estate companies, web sites, and local newspapers for the subject area. The dwellings contained in the inventory have been determined to be comparable and decent, safe and sanitary. The locations of the comparable dwellings are not less desirable in regard to public utilities and public and commercial facilities, reasonably accessible to the displacees' places of employment, adequate to accommodate the displacees, and in a neighborhood which is not subject to unreasonable adverse environmental factors. It has also been determined that the available housing is within the financial means of the displacees and is fair housing open to all persons regardless of race, color, sex, religion or national origin consistent with the requirements of 49 CFR, Subpart A, Section 24.2 and Title VIII of the Civil Rights Act of 1968.

The businesses displaced on the subject project may not be able to relocate in the immediate area of their displacement. However, in order to assist the displaced business in relocating, the State will explore all possible sources of funding or other resources that may be available to businesses. Sources that will be considered include: State and Local entities, the Department of Housing and Urban Development, the Economic Development Administration, the Small Business Administration and other Federal Agencies. Emphasis will be given in providing relocation advisory services to the businesses. Appropriate measures will be taken to ensure that each entity displaced is fully aware of their benefits, entitlements, courses of action that are open to it, and any special provisions designed to encourage businesses and nonprofit organizations to relocate within the same community.

At the time of displacement another inventory of available housing in the subject area will be obtained and an analysis of the market made to ensure that there are dwellings adequate to meet the needs of all displacees. Also, special relocation advisory services and assistance will be administered commensurate with displacees' needs, when necessary. Examples of these include, but are not limited to, Housing of Last Resort as previously mentioned and consultation with local officials, social and federal agencies and community groups.

There are no other identified unusual conditions involved with this project.

ARKANSAS DEPARTMENT OF TRANSPORTATION
 CONCEPTUAL STAGE RELOCATION INVENTORY

Job No.: 100657 Job Name: I-555 - Hwy. 49 (Commerce Dr. Extension) (Jonesboro) Date of Inventory: April 19, 2018

Type Relocation	Number	Residential Property Values or Rental Rates	Number in Household (Range)	Employees Affected (Range)	Length of Occupancy (Range)	Minority Households	Elderly Individuals	Low Income Households
Residential Owners	3	\$80,000 to \$150,000	1 to 4	0	0	0	0	0
Residential Tenants	5	\$600 to \$1,200 per Month	1 to 6	N/A	1 to 5 years	0	2	1 to 2
Businesses	1	N/A	N/A	1 to 12	1 to 8 years			
Land Lord Businesses	2	N/A	N/A	N/A				
Nonprofit Organizations	0	N/A	N/A	N/A				
Personal Properties	6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Totals	17	N/A	1 to 10	1 to 12	N/A	0	2 to 3	1 to 2

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Appendix C

Geological Resources, Soils, and Vegetation

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GEOLOGICAL RESOURCES, SOILS, AND VEGETATION

Natural Environment

The project is located in the St. Francis Lowlands (EPA 73c Level IV) Ecoregion in the Mississippi Alluvial Plain (EPA 74 Level III) Ecoregion (Woods et al. 2004). The St. Francis Lowlands is characterized by wide and flat alluvial plains and terraces with undulating sand sheets, sand dunes and depressional sand blow-outs, sunken lands, relict channels and drained wetlands. Streams are extensively channelized, and an extensive network of drainage ditches are present (Woods et al. 2004). Elevations range from 190 to 275 feet (Woods et al. 2004).

Surface geology in the project area is largely mapped as unconsolidated clay, sand and gravel. Surface geology is described as Quaternary sand sheets and Pleistocene terrace deposits. A complex sequence of unconsolidated gravel, sand, silt and clay deposits occur in at least three recognized terrace levels, where the lowest terrace is the youngest. Water resources include Bridger Creek and several other unnamed tributaries to a large canal ditch located just east of the proposed project.

Soils are mapped largely as Falaya silt loam, Loring silt loam, Fountain silt loam, Lafe silt loam, Calhoun silt loam, Foley silt loam, Calloway silt loam, Collins silt loam and Henry silt loam. Falaya silt loam is a very deep, somewhat poorly drained, moderately permeable soil that formed in silty alluvium from loess; this soil is frequently found on 0-1 percent slopes on level to nearly level floodplains. The Loring soil series consists of moderately well-drained soils with a fragipan. These soils formed in loess on level to strongly sloped uplands and stream terraces on slopes ranging from 0 to 20 percent. The Fountain series consists of poorly drained, moderately permeable soils that formed in silty deposits of the late Pleistocene age; these soils are on stream terraces with slopes ranging from 0 to 1 percent. Lafe silt loam consists of very deep, somewhat poorly drained, very slowly permeable soils that formed in silty sediments. The soils are typical on Pleistocene terraces on slopes from 0 to 5 percent. Calhoun silt loam consists of level, 0-1 percent slopes, poorly drained, slowly permeable soils formed from loess and have low sand content. These soils are typical at low elevations on Pleistocene-aged terraces and not common on floodplains. The Foley series consists of very deep, poorly drained and very slowly permeable soils that formed in silty material; these soils are found on level to nearly level terraces on slopes ranging from 0 to 3 percent. Calloway silt loam is a very deep, somewhat poorly drained soil that formed in thick loess of water reworked loess deposits on level to gently sloping uplands and stream terraces, ranging in slopes from 0 percent to 5 percent. Calloway silt loam soils have a seasonally high water table perched over a thick fragipan. Collins silt loam consists of very deep, moderately well-drained and moderately permeable soils that formed in silty alluvium on floodplains of streams; slopes range from 0-2 percent. Henry silt loam is consists of very deep, poorly drained soils that have a slowly permeable fragipan in the subsoil. These soils formed in loess more than 4-feet thick in depressions and nearly level areas on uplands and terraces; slopes are typically less than 1 percent.

Potential natural vegetation in the area is southern floodplain forest. In bottomland hardwood forests, native vegetation includes overcup oak (*Quercus lyrata*), Nuttall oak (*Quercus texana*),

willow oak (*Quercus phellos*), water hickory (*Carya aquatica*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*) and sweetgum (*Liquidambar styraciflua*). Native vegetation in the wettest areas; e.g., depressions and in relict channels, include bald cypress (*Taxodium distichum*), water tupelo (*Nyssa aquatica*) and overcup oak (*Quercus lyrata*). Native vegetation along ridges include Nuttall oak (*Quercus texana*), willow oak (*Quercus phellos*), water hickory (*Carya aquatica*), elms (*Ulmus spp.*), green ash (*Fraxinus pennsylvanica*) and sweetgum (*Liquidambar styraciflua*).

The No Action Alternative would not affect the existing vegetation within the project area. Alternative 1 proposes to widen the existing two lanes of Highway 18, from Highway 63 to Highland Drive, and Commerce Drive, from Highland Drive to Pacific Road, to five lanes for approximately 2.2 miles. In addition, Alternative 1 proposes to construct four lanes with a raised median on new location from Pacific Road to Highway 49 for approximately 2.3 miles. Alternative 1 would convert approximately 11.7 acres of bottomland hardwood forest, 40.7 acres of cropland, 4.1 acres of residential property, and 10.2 acres of business property to highway right-of-way.

The primary land cover in the immediate project area is cropland with some patches of bottomland hardwood forest. Current land use is largely crops, residential homes, businesses and pastureland. Direct impacts to land use/land cover includes the conversion of property to transportation rights-of-way. Land use/land cover categories were discerned through field work and digitized as features by aerial imagery interpretation using Google Earth Pro. Estimated land use/land cover impacts were calculated based on right-of-way plans.

The No Action Alternative would convert 0 acres of bottomland hardwood forest, residential and business properties and cropland to a transportation use, while Alternative 1 would convert approximately 11.7 acres of bottomland hardwood forest, 40.7 acres of cropland, 4.1 acres of residential property and 10.2 acres of business property to a transportation use.

Appendix D

Noise Analysis

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Fundamentals of Sound and Noise

“Noise” is defined as an unwanted sound. Sounds are described as noise if they interfere with an activity or disturb the person hearing them. Sound is measured in a logarithmic unit called a decibel (dB). The human ear is more sensitive to middle and high frequency sounds than it is to low frequency sounds, so sound levels are weighted to more closely reflect human perceptions. These “A-weighted” sounds are measured using the decibel unit dB(A). Because the dB(A) is based on a logarithmic scale, a 10 dB(A) increase in sound level is generally perceived as twice as loud while a 3 dB(A) increase is just barely perceptible to the human ear.

Sound levels fluctuate with time depending on the sources of the sound audible at a specific location. In addition, the degree of annoyance associated with certain sounds varies by time of day, depending on other ambient sounds affecting the listener and the activities of the listener. The time-varying fluctuations in sound levels at a fixed location can be quite complex, so they are typically reported using statistical or mathematical descriptors that are a function of sound intensity and time. A commonly used descriptor of the equivalent sound level is Leq , which represents the equivalent of a steady, unvarying level over a defined period of time containing the same level of sound energy as the time varying noise environment. $Leq(h)$ is a sound level averaged over one hour. For highway projects, the $Leq(h)$ is commonly used to describe traffic-generated sound levels at locations of outdoor human use and activity (such as residences).

Noise Impact Criteria

Traffic noise impacts take place when the predicted traffic noise levels approach or exceed the noise abatement standard, or when the predicted traffic noise levels exceed the existing noise level by ten dB(A) (decibels on the A-scale). The noise abatement standard of 67 dB(A) is used for sensitive noise receptors such as residences, schools, churches, and parks. The term “approach” is considered to be one dB(A) less than the noise abatement standard.

The number of noise receptors was estimated for this project utilizing the Federal Highway Administration’s Traffic Noise Model 2.5, existing and proposed roadway information, existing traffic information, and projected traffic levels for 2039.

Traffic noise analyses

Traffic noise analyses were performed for the project utilizing a roadway cross-section for Commerce Drive south of Highway 18 consisting of four 11-foot paved travel lanes, a 12-foot wide paved turn lane and curb and gutter. A roadway cross-section for Commerce Drive north of Highway 18 consisted of four 12-foot wide paved travel lanes and curb and gutter. A roadway cross-section of two 11-foot wide paved travel lanes with 4-foot wide paved shoulders was used to assess current and future impacts of the existing roadway.

Effects of Project

The traffic noise estimates for the project resulted in a noise abatement distance of 100 feet from the centerline of Commerce Street south of Highway 18 and a noise abatement distance of 130 feet from the centerline of Commerce Street north of Highway 18. No sensitive receptors are or will be impacted by the existing cross-section of two 11-foot wide paved travel lanes at a noise abatement distance of 60 feet. Approximately 35 sensitive receptors are predicted to experience noise impacts resulting from noise levels that approach or exceed 67 dB(A) during the design year. The majority of the impacted receptors are located along Commerce Street north of Highway 18.

Traffic Noise Abatement

Since noise impacts are predicted within 500 feet of the proposed project, the feasibility and reasonableness of potential noise abatement measures must be evaluated. Based upon ARDOT's "Policy on Highway Traffic Noise Abatement", any noise abatement effort using barrier walls or berms is not warranted for this project. In order to provide direct access to the highway from adjacent properties, breaks in the barrier walls or berms would be required. These necessary breaks for highway access would render any noise barrier ineffective.

To avoid noise levels in excess of design levels, any future receptors should be located a minimum of 10 feet beyond the distance that the noise abatement standard is projected to occur. This distance should be used as a general guide and not a specific rule since the noise will vary depending upon the roadway grades and other noise contributions.

Any excessive project noise, due to construction operations, should be of short duration and have a minimum adverse effect on land uses or activities associated with this project area.

In compliance with federal guidelines, a copy of this analysis will be transmitted to the East Arkansas Planning and Development District for possible use in present and future land and use planning.

Appendix E

Visual Impact Assessment

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ARKANSAS DEPARTMENT OF TRANSPORTATION
ArDOT.gov | IDriveArkansas.com | Scott E. Bennett, P.E., Director
10324 Interstate 30 | P.O. Box 2261 | Little Rock, AR 72203-2261 | Phone: 501.569.2000

INTEROFFICE MEMORANDUM

April 24, 2018

TO: Project File

FROM: Mary Pearson, Environmental Impact Analyst, Environmental Division

SUBJECT: Job Number 100657
FAP Number CMAQ-9227(74)
I-555 – Hwy. 49 (Commerce Dr. Extension) (Jonesboro)
Craighead County
Visual Impact Assessment Technical Memorandum

Purpose of this Memorandum

The purpose of this Visual Impact Assessment (VIA) Memorandum (memo) is to evaluate potential visual impacts associated with the Commerce Drive (Dr.) Extension project. The VIA was prepared using guidance outlined in the *Guidelines for the Visual Impact Assessment of Highway Projects* published by the Federal Highway Administration (FHWA) in January 2015.

Visual Impact Assessment

The VIA Scoping Questionnaire was completed. As shown in Attachment 1, the response to each question has a corresponding value of either 1 or 2, resulting in an overall score of 14. Consistent with FHWA guidelines, a score of 10 to 14 recommends the preparation of a brief visual impact assessment in memo format. This memo documents the recommended level of assessment.

Visual resource and VIA definitions for the concepts and terms used in the remainder of this memo are provided in Attachment 2. The visual impacts described are associated with Alternative 1; no impacts are anticipated under the No Action Alternative.

Job Number 100657
Visual Impact Assessment
Page 2 of 4

Proposed project viewers are categorized as either neighbors or travelers. Neighbors include residents and business occupants. Travelers include users of the project corridor and adjacent roadways.

Existing Visual Character

Alternative 1's project corridor extends approximately 4.3 miles from Interstate 555 (I-555) north to Highway (Hwy.) 49. It would involve widening existing Hwy. 18S/Commerce Dr. from two to five lanes between I-55 to Pacific Road (Rd.). Hwy. 18/Highland Dr. intersects this corridor segment at its midpoint. North of Pacific Rd., the route would be on new location and run east of and roughly parallel to existing Kathleen Street (St.)/Craighead St. The new location segment would be comprised of four lanes and a raised median. An overpass would be constructed to cross Craighead St. and the Union Pacific Railroad (UPRR) railroad track approximately 0.1 mile south of Hwy. 49.

The following summarizes the corridor segments and their estimated widths:

- I-555 to Hwy. 18/Highland Dr. (100-foot width) – Industrial area lacking an architecturally uniform appearance and with minimal landscaping.
- Hwy. 18/Highland Rd. to Pacific Rd. (110-foot width) – Mix of commercial structures, agricultural land, and residences; includes single-family homes and a large apartment complex.
- Pacific Rd. to Kathleen St./Craighead St. (110- to 300-foot width) – Primarily agricultural, this area includes small residential clusters and the UPRR railroad track.
- Kathleen St./Craighead St. to Hwy. 49 (300-foot width) – Primarily agricultural with a small residential cluster and industrial area; includes the UPRR railroad track.

The project study area is relatively flat. Elevations range from approximately 190 to 275 feet above mean sea level. Long distance views are uncommon due to a combination of elevation uniformity and the screening effect of wooded areas. These wooded areas consist primarily of bottomland hardwood forest and are dense at some locations.

The existing segments of the corridor lack medians, curbs and gutters, and sidewalks. Throughout the corridor, many of the residences feature trees, grassy lawns, and other landscaping elements. Additionally, several neighboring structures afford partial or complete views of the roadway and are in turn visible to travelers.

Job Number 100657
Visual Impact Assessment
Page 3 of 4

Permanent Impacts

The construction of the overpass would introduce a structure that is higher than the surrounding area. The upper portion of the overpass would likely be at least 25 feet in elevation and include fencing over the railroad track. This would represent a moderate change from the project area's existing visual character. The increase in roadway width and profile would modify the appearance of the existing roadway. Removing existing structures and clearing trees and vegetation would alter the project corridor's current appearance. Several residences and businesses along the existing segments of the route would be in closer proximity to the roadway. Residences between Pacific Rd. and Hwy. 49 would be newly introduced to roadway proximity. However, the proximities of residential and commercial structures would not exceed zoning codes. Depending on viewer exposure and sensitivity, these changes could be experienced as either beneficial, neutral, or adverse.

The proposed roadway cross section and materials are typical of transportation improvements in the Jonesboro area. Visual resources uncommon in the area would not be introduced, and landforms would not be noticeably altered. Local planning and development guidelines would be taken into consideration during final design to ensure visual compatibility of the proposed project. In addition to improving safety, raised medians are noted for improving streetscape appearances. In addition to meeting the city's goal of promoting a more pedestrian-friendly community, the proposed sidewalks and grassy bermed areas would also enhance the corridor's appearance. Based on the factors described above, the visual resources of these facilities are predicted to be beneficial to the existing overall visual character of the corridor. Overall visual quality is therefore predicted to be enhanced for the majority of business neighbors and for travelers.

Based on predicted viewer exposure and sensitivity, permanent adverse impacts would be minor and localized for residents for whom exposure will increase. These residents are concentrated primarily southeast of the Hwy. 18S/Commerce Dr. and Hwy. 18/Highland Dr. intersection and on Kathleen St./Craighead St. near the proposed overpass.

Temporary Impacts

Project construction would result in the short-term presence of construction vehicles and equipment, grading and excavation, and vegetation clearing throughout the project area. The areas where construction and grading would remove existing natural vegetation would be viewable by travelers and site-specific neighbors. Grading and excavation activities and the presence of

Job Number 100657
Visual Impact Assessment
Page 4 of 4

construction vehicles and equipment would result in a temporary change in the visual character of the project corridor. These activities would be short-term. Impacts in roadside cleared areas would be short/medium-term until new vegetation becomes established. These temporary visual impacts would be minor and not expected to result in an adverse response by typical viewers.

Avoidance, Minimization and/or Mitigation Measures

The *Jonesboro Land Use Plan* details the project area's development regulations to foster appropriate design and land uses. The proposed project's visual resources (e.g, cross sections and construction materials) would complement the visual character desired by the community as expressed in Jonesboro's development regulations. Impacts to existing vegetation within the project area would be minimized through revegetation efforts as part of the process to ensure that biological resources are not adversely affected.

Attachments

1. VIA Scoping Questionnaire
2. VIA Definitions

Attachment 1.

Visual Impact Assessment Scoping Questionnaire

Project Name: I-555 - Hwy. 49 (Commerce Dr. Extension) (Jonesboro) (S)

Location: Jonesboro, Craighead County

Special Conditions/Notes:

Conducted By: M. Pearson

Environmental Compatibility

1. *Will the project result in a noticeable change in the physical characteristics of the existing environment? (Consider all project components and construction impacts - both permanent and temporary, including landform changes, structures, noise barriers, vegetation removal, railing, signage, and contractor activities.)*

- High level of permanent change (3)
 Moderate level of permanent change (2)
 Low level of permanent or temporary change (1)
 No Noticeable Change (0)

2. *Will the project complement or contrast with the visual character desired by the community? (Evaluate the scale and extent of the project features compared to the surrounding scale of the community. Is the project likely to give an urban appearance to an existing rural or suburban community? Do you anticipate that the change will be viewed by the public as positive or negative? Research planning documents, or talk with local planners and community representatives to understand the type of visual environment local residents envision for their community.)*

- Low Compatibility (3)
 Moderate Compatibility (2)
 High compatibility (1)

3. *What level of local concern is there for the types of project features (e.g., bridge structures, large excavations, sound barriers, or median planting removal) and construction impacts that are proposed? (Certain project improvements can be of special interest to local citizens, causing a heightened level of public concern, and requiring a more focused visual analysis.)*

- High concern (3)
 Moderate concern (2)
 Low concern (1)
 Negligible Project Features (0)

Attachment 1.

4. *Is it anticipated that to mitigate visual impacts, it may be necessary to develop extensive or novel mitigation strategies to avoid, minimize, or compensate for adverse impacts or will using conventional mitigation strategies, such as landscape or architectural treatment adequately mitigate adverse visual impacts?*

- Extensive Non-Conventional Mitigation Likely (3) Some non-conventional Mitigation Likely (2)
 Only Conventional Mitigation Likely (1) No Mitigation Likely (0)

5. Will this project, when seen collectively with other projects, result in an aggregate adverse change (cumulative impacts) in overall visual quality or character? (Identify any projects [both state and local] in the area that have been constructed in recent years and those currently planned for future construction. The window of time and the extent of area applicable to possible cumulative impacts should be based on a reasonable anticipation of the viewing public's perception.)

- Cumulative Impacts likely: 0-5 years (3) Cumulative Impacts likely: 6-10 years (2)
 Cumulative Impacts unlikely (1)

Viewer Sensitivity

1. *What is the potential that the project proposal may be controversial within the community, or opposed by any organized group? (This can be researched initially by talking with the state DOT and local agency management and staff familiar with the affected community's sentiments as evidenced by past projects and/or current information.)*

- High Potential (3) Moderate Potential (2)
 Low Potential (1) No Potential (0)

2. *How sensitive are potential viewer-groups likely to be regarding visible changes proposed by the project? (Consider among other factors the number of viewers within the group, probable viewer expectations, activities, viewing duration, and orientation. The expected viewer sensitivity level may be scoped by applying professional judgment, and by soliciting information from other DOT staff, local agencies and community representatives familiar with the affected community's sentiments and demonstrated concerns.)*

- High Sensitivity (3) Moderate Sensitivity (2)
 Low Sensitivity (1)

Attachment 1.

3. *To what degree does the project's aesthetic approach appear to be consistent with applicable laws, ordinances, regulations, policies or standards?*

- Low Compatibility (3) Moderate Compatibility (2)
 High compatibility (1)

4. *Are permits going to be required by outside regulatory agencies (i.e., Federal, State, or local)?*
 (Permit requirements can have an unintended consequence on the visual environment. Anticipated permits, as well as specific permit requirements - which are defined by the permitter, may be determined by talking with the project environmental planner and project engineer. Note: coordinate with the state DOT representative responsible for obtaining the permit prior to communicating directly with any permitting agency. Permits that may benefit from additional analysis include permits that may result in visible built features, such as infiltration basins or devices under a storm water permit or a retaining wall for wetland avoidance or permits for work in sensitive areas such as coastal development permits or on Federal lands, such as impacts to Wild and Scenic Rivers.)

- Yes (3) Maybe (2)
 No (1)

5. *Will the project sponsor or public benefit from a more detailed visual analysis in order to help reach consensus on a course of action to address potential visual impacts? (Consider the proposed project features, possible visual impacts, and probable mitigation recommendations.)*

- Yes (3) Maybe (2)
 No (1)

Total Project Score: 14

Attachment 1.

Determining the Level of Visual Impact Assessment

Total the scores of the answers to all ten questions on the Visual Impact Assessment Scoping Questionnaire. Use the total score from the questionnaire as an indicator of the appropriate level of VIA to perform for the project. Confirm that the level suggested by the checklist is consistent with the project teams' professional judgments. If there remains doubt about whether a VIA needs to be completed, it may be prudent to conduct an Abbreviated VIA. If there remains doubt about the level of the VIA, begin with the simpler VIA process. If visual impacts emerge as a more substantial concern than anticipated, the level of VIA documentation can always be increased.

The level of the VIA can initially be based on the following ranges of total scores:

Score 25-30

An *Expanded VIA* is probably necessary. It is recommended that it should be preceded by a formal visual scoping study prior to beginning the VIA to alert the project team to potential highly adverse impacts and to develop new project alternatives to avoid those impacts. These technical studies will likely receive state-wide, even national, public review. Extensive use of visual simulations and a comprehensive public involvement program would be typical.

Score 20-24

A *Standard VIA* is recommended. This technical study will likely receive extensive local, perhaps state-wide, public review. It would typically include several visual simulations. It would also include a thorough examination of public planning and policy documents supplemented with a direct public engagement processes to determine visual preferences.

Score 15-19

An *Abbreviated VIA* would briefly describe project features, impacts and mitigation requirements. Visual simulations would be optional. An Abbreviated VIA would receive little direct public interest beyond a summary of its findings in the project's environmental documents. Visual preferences would be based on observation and review of planning and policy documents by local jurisdictions.

Score 10-14

A *VIA Memorandum* addressing minor visual issues that indicates the nature of the limited impacts and any necessary mitigation strategies that should be implemented would likely be sufficient along with an explanation of why no formal analysis is required.

Score 6-9

No noticeable physical changes to the environment are proposed and no further analysis is required. Print out a copy of this completed questionnaire for your project file to document that there is no effect. A *VIA Memorandum* may be used to document that there is no effect and to explain the approach used for the determination.

Visual Impact Assessment Definitions

The FHWA guidelines recognize three types of visual resources:

- **Natural visual resources** include landforms and land cover such as trees, vegetation, and water.
- **Cultural visual resources** include manmade elements such as roadways, embankments, bridges, and buildings
- **Project visual resources** include the existing highway's geometrics, structures, and fixtures and those that will be placed in the environment as part of the proposed project.

The overall composition of visual resources helps determine the **visual character** of a scene or landscape. For highway project assessment purposes, visual resources and character are considered from two perspectives:

1. The view of the project to the surrounding community (neighbors).
2. The view from the project to motorists (travelers).

Neighbors who can see a highway project and travelers who use it are defined as **viewers**.

Visual resource changes are assessed by considering the compatibility and/or contrast of the proposed projects with the visual character of existing environments. Viewer responses to these changes are predicted by considering both exposure and sensitivity.

Viewer exposure considers the physical limits of the views and the number and type of viewers. **Viewer sensitivity** considers the expectations of viewers based on existing environments and the extent to which various visual resources may be important to them.

The predicted viewer response to changes in the existing landscape are used to determine **visual quality** impacts. Potential impacts may be identified as neutral, adverse, or beneficial and described in the following terms:

- Extent – Are the effects site-specific, local, or even regional?
- Duration – Are the effects temporary or permanent, or short-term or long-term?
- Scale – Are the effects negligible, minor, moderate, or major?

Potential impact durations are defined below.

- Short-term – during construction.
- Short/medium-term – 1 to 5 years while new vegetation becomes established after construction.
- Medium/long-term – 5 to 15 years after construction when new vegetation would be effective mitigation.
- Long-term – Over 15 years.

Potential impact scales are defined below.

Negligible: Changes would be non-detectable or, if detected, effects would be slight and local. Impacts would not require mitigation.

Minor: Changes would be noticeable, although the changes would be small and localized. Conventional mitigation measures may be necessary to reduce potential effects.

Moderate: Changes would be noticeable and have localized and potentially regional scale impacts; historical conditions would be altered. Conventional mitigation measures may be necessary to reduce potential effects.

Major: Changes would be noticeable and would have substantial consequences on a local and/or regional level. Mitigation measures to offset the effects would be required to reduce impacts, although long-term changes to the resource would be possible.

Appendix F

NRCS-CPA-106 Form

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U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106
(Rev. 1-91)

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency) Job 100657		3. Date of Land Evaluation Request	6/19/18	4. Sheet 1 of
1. Name of Project I-555 - Hwy. 49 (Commerce Dr. Extension) (Jonesboro)		5. Federal Agency Involved FHWA		
2. Type of Project Hwy. Widening and Extension		6. County and State Craighead AR.		
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).		YES	NO	4. Acres Irrigated Average Farm Size
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction		7. Amount of Farmland As Defined in FPPA	
	Acres:	%	Acres:	%
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System		10. Date Land Evaluation Returned by NRCS	

PART III (To be completed by Federal Agency)	Alternative Corridor For Segment			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor				

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	26			
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

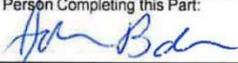
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)

PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))	Maximum Points			
1. Area in Nonurban Use	15	15		
2. Perimeter in Nonurban Use	10	10		
3. Percent Of Corridor Being Farmed	20	20		
4. Protection Provided By State And Local Government	20	0		
5. Size of Present Farm Unit Compared To Average	10	0		
6. Creation Of Nonfarmable Farmland	25	0		
7. Availability Of Farm Support Services	5	5		
8. On-Farm Investments	20	0		
9. Effects Of Conversion On Farm Support Services	25	0		
10. Compatibility With Existing Agricultural Use	10	0		
TOTAL CORRIDOR ASSESSMENT POINTS	160	50		

PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)	100	100		
Total Corridor Assessment (From Part VI above or a local site assessment)	160	50		
TOTAL POINTS (Total of above 2 lines)	260	150		

1. Corridor Selected: New Location Adjacent to existing	2. Total Acres of Farmlands to be Converted by Project: 26 acres of Prime Farmland	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>
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5. Reason For Selection:

Signature of Person Completing this Part:  DATE 7/6/18

NOTE: Complete a form for each segment with more than one Alternate Corridor