



# **FINAL ENVIRONMENTAL ASSESSMENT (EA) with Finding of No Significant Impact (FONSI)**

**Widening of US 84  
from Hwy 772  
to Just East of  
Hair Creek Bridge**

**State Project No. H.000758.2  
Federal Project No. DE-3010 (503)  
LaSalle Parish, Louisiana**

**November 24, 2014**



**LEAD AGENCIES:  
Federal Highway Administration  
Louisiana Department of Transportation  
and Development**

FEDERAL HIGHWAY ADMINISTRATION  
FINDING OF NO SIGNIFICANT IMPACT

FOR

STATE PROJECT NO H.000758

F.A.P NO H000758

WIDENING OF US 84 FROM HWY 772 TO JUST EAST OF HAIR CREEK BRIDGE

ROUTE: US 84

LASALLE PARISH

The FHWA has determined that alternative 4 with modification 4C, stated on page 63 and shown in Appendix A, will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient analysis for determining that an Environmental Impact Statement is not required.

**APPROVED**  
*Carl M. Highsmith*  
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PROJECT DELIVERY TEAM LEADER  
FEDERAL HIGHWAY ADMINISTRATION  
DATE: 11-24-14

**TABLE OF CONTENTS**

List of Acronyms..... v  
 Environmental Determination Checklist.....vii  
 Summary of Permits, Mitigation, and Commitments.....xiii

SECTION	PAGE NO.
1.0 INTRODUCTION .....	1
1.1 Environmental Assessment .....	3
1.2 Where is the Proposed Project in the Development Process? .....	3
2.0 PROJECT PURPOSE AND NEED .....	4
2.1 Why is the Project Needed? .....	4
2.2 What is the Purpose of the Project? .....	4
2.2.1 Mobility and Local Traffic Circulation.....	4
2.2.2 System Linkage .....	5
2.2.3 Social Demands or Economic Development .....	5
3.0 ALTERNATIVES CONSIDERED.....	5
3.1 Which Alternatives Were Initially Considered?.....	6
3.1.1 Alternative Alignments.....	6
3.1.2 Design of Alternatives .....	6
3.1.2.1 Trout Realignment Options.....	8
3.2 Which Preliminary Alternatives Were Eliminated from Further Consideration and Why? ....	11
3.3 Which Build Alternatives are Evaluated in this EA? .....	11
3.4 No Build Alternative .....	12
4.0 ENVIRONMENTAL RESOURCES, IMPACTS, AND MITIGATION .....	14
4.1 Environmental Resources within the Project Corridor and How They Might be Affected .....	14
4.1.1 The Human Environment .....	14
4.1.1.1 Land Use and Community Character.....	14
4.1.1.2 Economic Activities .....	15
4.1.1.3 Demographics and Environmental Justice .....	15
4.1.2 The Built Environment.....	19
4.1.2.1 Relocations of Homes and Businesses .....	20
4.1.2.2 Community Facilities, Services, and Social Resources .....	20
4.1.2.3 Infrastructure .....	22
4.1.2.4 Potential Hazardous Waste Sites .....	22
4.1.3 The Natural Environment .....	23
4.1.3.1 Air Quality.....	23
4.1.3.2 Wild and Scenic Rivers.....	24
4.1.3.3 Wetlands and Other Waters .....	24
4.1.3.4 Surface Water.....	25
4.1.3.5 Subsurface Water .....	25
4.1.3.6 Floodplains .....	27
4.1.3.7 Vegetation .....	30
4.1.3.8 Wildlife and Protected Species .....	31
4.1.3.9 Farmland .....	31
4.1.3.10 Coastal Resources and Essential Fish Habitat .....	32

4.1.4	Cultural Resources.....	32
4.1.5	Noise.....	38
4.1.6	Section 4(f) and Section 6(f) Resources.....	39
4.1.7	Recreational Resources.....	40
4.1.8	Mineral Resources.....	40
4.1.9	Travel Patterns and Accessibility.....	40
4.2	Constructability and Project Implementation.....	42
4.3	Indirect Effects.....	44
4.4	Cumulative Impacts.....	44
4.5	What Can Be Done to Mitigate Adverse Impacts?.....	44
4.5.1	Land Use and Community Character.....	45
4.5.2	Relocations.....	45
4.5.3	Infrastructure.....	45
4.5.4	Potential Waste Sites.....	46
4.5.5	Wetlands and Other Waters.....	46
4.5.6	Floodplains.....	46
4.5.7	Vegetation/Significant Trees.....	46
4.5.8	Cultural Resources.....	46
4.5.9	Traffic Noise Abatement Measures.....	46
4.5.10	Traffic Disruptions.....	47
4.5.11	Safety.....	47
4.5.12	Right-of-Way Acquisition Policy.....	47
4.5.13	Accessibility.....	47
4.5.14	Local Road Closures.....	48
5.0	PUBLIC COMMENTS AND AGENCY COORDINATION.....	48
5.1	Public Involvement Plan.....	48
5.2	Solicitation of Views.....	48
5.3	Public Involvement in the Environmental Process.....	53
5.3.1	July 2012 Public Meeting.....	53
5.3.2	January 2014 Public Outreach – Historic Districts.....	55
5.3.3	March 2014 Public Hearing.....	55
5.3.4	July 2014 Public Meeting – Significant Trees.....	56
5.4	Tribal Coordination.....	56
6.0	COMPARISON AND SELECTION OF ALTERNATIVES.....	56
6.1	What are the Comparative Advantages and Disadvantages of Each Alternative?.....	56
6.1.1	Alternatives 2B and 4.....	58
6.2	Which Alternative is Preferred and What is the Rationale for its Selection?.....	59
6.3	Addendum: Alternatives 4B and 4C.....	59
6.3.1	Development of Additional Alternatives.....	59
6.3.2	Alternatives 4B and 4C.....	61
6.3.3	Additional Impacts and Costs Analysis.....	61
6.3.4	Preferred Alternative.....	63
7.0	LIST OF PREPARERS.....	65
8.0	REFERENCES.....	66

**LIST OF TABLES**

Table 1: Race and Ethnicity by Project Corridor Census Block Groups..... 18  
Table 2: Poverty and Income Data for Census Tracts 9702 and 9703 ..... 19  
Table 3: Summary of Cultural Resources for Each Alternative ..... 33  
Table 4: Noise Abatement Criteria by Activity Category for Noise Receptors..... 38  
Table 5: Solicitation of Views Comments..... 48  
Table 6: Public Comment Summary on Alternatives and Trout Realignment Options ..... 54  
Table 7: Survey Summary on Context Sensitive Design Amenities..... 54  
Table 8: US 84 through Jena Alternatives Screening Details ..... 57  
Table 9: Comparison of Probable Costs by Build Alternative (in \$Million) (2012) ..... 58  
Table 10: Alternatives Screening Details for Alternatives 4, 4B, and 4C ..... 62  
Table 11: Comparison of Probable Costs by Alternatives 4, 4B, and 4C (in \$000s)..... 63

**LIST OF FIGURES**

Figure 1: Project Location ..... 2  
Figure 2: UA-1 Typical Section ..... 7  
Figure 3: UA-1 (Downtown Couplet) Typical Section..... 7  
Figure 4: SA-1 Typical Section ..... 7  
Figure 5: SA-1 (Good Pine Couplet) Typical Section ..... 8  
Figure 6: RA-2 Typical Section..... 8  
Figure 7: Trout Realignment Options..... 10  
Figure 8: Alternatives Overview..... 13  
Figure 9: Project Study Area Existing Land Use/Land Cover Map (2001) ..... 16  
Figure 10: 2010 Census Tract & Block Groups ..... 17  
Figure 11: Community Facilities Map ..... 21  
Figure 12: Water Wells Location Map ..... 26  
Figure 13: FEMA Flood Zones Map ..... 28  
Figure 14: Topography Map..... 29  
Figure 15: Proposed Historic Districts ..... 34  
Figure 16: Proposed Trout Sawmill Historic District ..... 35  
Figure 17: Proposed Good Pine and Tall Timber Sawmill Historic Districts ..... 36  
Figure 18: Proposed Jena Historic District ..... 37  
Figure 19: Oil & Gas Wells Location Map..... 41  
Figure 20: Study Section of Alternative 4 ..... 60  
Figure 21: Alternative 4B with Additional Impacts ..... 64  
Figure 22: Alternative 4C with Additional Impacts ..... 64

**APPENDICES**

Atlas and Plates.....Appendix A  
Agency Coordination and Correspondence.....Appendix B  
July 2012 Public Meeting Summary.....Appendix C  
January 2014 Public Outreach Summary.....Appendix D  
March 2014 Public Hearing Summary.....Appendix E  
July 2014 Public Meeting Summary.....Appendix F  
Conceptual Stage Relocation Plan.....Appendix G  
Phase I Environmental Site Assessment RECs & Field Findings Maps.....Appendix H  
Wetlands Findings Summary and Maps.....Appendix I  
Significant Trees Correspondence.....Appendix J  
Farmland Conversion Rating Form.....Appendix K  
Noise Impact Analysis – Chapter 4: Noise Modeling Results and Impact Analysis.....Appendix L  
Section 4(f) Evaluation.....Appendix M

## LIST OF ACRONYMS

AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
ADT	Average Daily Traffic
APE	Area of Potential Effect
BFE	Base Flood Elevation
BMP	Best Management Practices
CFR	Code of Federal Regulations
CSS	Context Sensitive Solutions
dBA	A-weighted decibels
EA	Environmental Assessment
EDSM	Engineering Directives and Standards Manual
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
HABS	Historic American Buildings Survey
HCR	House Concurrent Resolution
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LDOTD	Louisiana Department of Transportation and Development
LDWF	Louisiana Department of Wildlife and Fisheries
LNHP	LDWF Natural Heritage Program
LOS	Level of Service
LPDES	Louisiana Pollutant Discharge Elimination System
LWCF	Land and Water Conservation Fund
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resource Conservation Service
NRHP	National Register of Historic places
NWI	National Wetland Inventory
REC	Recognized Environmental Conditions
ROW	Right-of-Way
SHPO	State Historic Preservation Office
SONRIS	Strategic Online Natural Resources Information System
SWPPP	Stormwater Pollution Prevention Plan
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation

USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
WQC	Water Quality Certification

**LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT  
ENVIRONMENTAL DETERMINATION CHECKLIST**

**State Project No.:** H.000758.2

**Federal Aid No.:** DE-3010(503)

**Name:** US 84 Widening from Hwy 772 to just East of Hair Creek Bridge

**Route:** US 84

**Parish:** LaSalle

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**1. General Information**

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Status:       Conceptual Layout       Plan-in-Hand  
                  Line and Grade             Preliminary Plans  
                  Survey                             Final Design

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**2. Class of Action**

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Environmental Impact Statement (EIS)  
 Environmental Assessment (EA)  
 Categorical Exclusion (CE)  
 Programmatic CE

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**3. Project Description (use attachment if necessary)**

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The Project consists of the widening of US 84 from Hwy 772 to just east of Hair Creek Bridge in LaSalle Parish, LA. A majority of the widening will occur along the existing centerline of the roadway with additional required right-of-way on both sides. Portions of the roadway will widen asymmetrically to minimize relocations. Residential and commercial relocations will occur. The proposed project comprises the widening of US 84 from two lanes to four lanes; the addition of bicycle lanes, sidewalks and a shared use path; and traffic access management measures. The total length of construction of the proposed project is approximately 5.8 miles. See *Sections 1.0* and *2.0* of the EA.

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**4. Public Involvement**

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Views were solicited on May 24, 2010.  
                 Responses are attached. (See *Appendix B* of the EA)  
 No adverse comments were received.  
 Comments are addressed in attachment.  
 A public hearing (P/H)/Opportunity is not required.  
 An opportunity for requesting a P/H will be afforded upon your concurrence.  
 Opportunity was afforded, with no requests for P/H.  
 A Public Hearing was held on March 26, 2014.  
                 Public Hearing Comment Summary attached. (See *Appendix E* of the EA)  
 A Public Meeting was held on July 12, 2012.  
                 Public Meeting Comment Summary attached. (See *Appendix C* of the EA)

(Additional Outreach was conducted in January 2014 and an additional public meeting was held in July 2014. See *Appendix D* and *F* of the EA for summaries.)

**5. Real Estate (If yes, use attachment)**

- |  | NO  | YES |
|--|-----|-----|
| a. Will additional right-of-way be required?.....                            | ( ) | (X) |
| b. Will relocations be required?.....  | ( ) | (X) |
| Conceptual Stage Relocation Plan Attached. (See <i>Appendix G</i> of the EA) |     |     |
| c. Are construction or drainage servitudes required? .....                   | ( ) | (X) |

**6. Cultural and 106 Impacts (If yes, use attachment)**

- |   | NO  | YES |
|---|-----|-----|
| a. <b>Section 4(f) or 6(f) lands</b>                              |     |     |
| Are any impacted by the project? (If so, list below).....         | (X) | ( ) |
| Are any adjacent to the project? (If so, list below) .....        | ( ) | (X) |
| b. <b>Known Historic sites/structures</b>                         |     |     |
| Are any impacted by the project? (If so, list below).....         | (X) | ( ) |
| Are any adjacent to the project? (If so, list below) .....        | ( ) | (X) |
| c. <b>Known Archaeological sites</b>                              |     |     |
| Are any impacted by the project? (If so, list site # below) ..... | (X) | ( ) |
| Are any adjacent to the project? (If so, list site # below).....  | ( ) | (X) |
| d. <b>Cemeteries</b>  |     |     |
| Are any impacted by the project? (If so, list below).....         | (X) | ( ) |
| Are any adjacent to the project? (If so, list below) .....        | (X) | ( ) |
| e. <b>Historic Bridges</b>  |     |     |
| Are any impacted by the project? (If so, list below).....         | (X) | ( ) |
| Are any adjacent to the project? (If so, list below) .....        | (X) | ( ) |

**7. Wetlands (Attach wetlands finding, if applicable)**

- |   | NO  | YES |
|---|-----|-----|
| a. Are wetlands being affected? .....                         | ( ) | (X) |
| (See <i>Appendix I</i> of the EA)                             |     |     |
| b. Are other waters of the US being affected? .....           | ( ) | (X) |
| Trout Creek, West Prong Creek, Hemphill Creek, and Hair Creek |     |     |
| (See <i>Appendix I</i> of the EA)                             |     |     |
| c. Can C.O.E. Nationwide Permit be used? .....                | (X) | ( ) |

**8. Natural Environment (use attachment if necessary)**

- |  | NO  | YES |
|--|-----|-----|
| a. Endangered/Threatened Species/Habitat .....                       | (X) | ( ) |
| b. Within 100 Year Floodplain? .....                                 | ( ) | (X) |
| Is project a significant encroachment in Floodplain? .....           | (X) | ( ) |
| c. In Coastal Zone Management Area?.....                             | (X) | ( ) |
| Is the project consistent with the Coastal Management Program? ..... | (X) | ( ) |
| d. Coastal Barrier Island (Grand Isle only).....                     | (X) | ( ) |
| e. Farmlands (use form AD 1006 if necessary) .....                   | ( ) | (X) |
| f. Is project on Sole Source Aquifer? .....                          | (X) | ( ) |

- Is coordination with EPA necessary?..... (X) ( )
- g. Natural & Scenic Stream Permit required..... (X) ( )
- h. Is project impacting a waterway? ..... (X) ( )
  - Has navigability determination been made? ..... ( ) (X)
  - Will a US Coast Guard permit or amended permit be required?..... (X) ( )

**9. Physical Impacts (use attachment if necessary)**

- |  | NO  | YES |
|--|-----|-----|
| a. Is a noise analysis warranted (Type I project).....   | ( ) | (X) |
| Are there noise impacts based on violation of the (NAC)?.....  | ( ) | (X) |
| Are there noise impacts based on the 10 dBA increase? .....  | ( ) | (X) |
| Are noise abatement measures reasonable and feasible? .....  | ( ) | (X) |
| b. Is an air quality study warranted? .....  | (X) | ( ) |
| Do project level air quality levels exceed the NAAQS for CO? .....   | (X) | ( ) |
| c. Is project in a non-attainment area for Carbon monoxide (CO), Ozone (O3), Nitrogen dioxide (NO2), or Particulates (PM-10)?.....                   | (X) | ( ) |
| d. Is project in an approved Transportation Plan, Transportation Improvement Program (TIP) and State Transportation Improvement Program (STIP) ..... | ( ) | (X) |
| e. Are construction air, noise, & water impacts major? .....   | (X) | ( ) |
| f. Are there any known waste sites or USTs?.....   | ( ) | (X) |
| Will these sites require further investigation prior to purchase?.....   | ( ) | (X) |

**10. Social Impacts (use attachment if necessary)**

- |  | NO  | YES |
|--|-----|-----|
| a. <b>Land use changes</b> .....   | (X) | ( ) |
| b. <b>Churches and Schools</b>   |     |     |
| Are any impacted by the project? (If so, list below) .....   | ( ) | (X) |
| Are any adjacent to the project? (If so, list below).....  | ( ) | (X) |
| c. <b>Title VI Considerations</b> .....  | (X) | ( ) |
| d. <b>Will any specific groups be adversely affected (i.e., minorities, low-income, elderly, disabled, etc.)?</b> .....          | (X) | ( ) |
| e. <b>Hospitals, medical facilities, fire, police</b>  |     |     |
| Are any impacted by the project? (If so, list below) .....   | (X) | ( ) |
| Are any adjacent to the project? (If so, list below).....  | ( ) | (X) |
| f. <b>Transportation pattern changes</b> .....   | (X) | ( ) |
| g. <b>Community cohesion</b> .....   | (X) | ( ) |
| h. <b>Are short-term social/economic impacts due to construction considered major?</b> .....                                     | (X) | ( ) |
| i. <b>Do conditions warrant special construction times (i.e., school in session, congestion, tourist season, harvest)?</b> ..... | (X) | ( ) |
| j. <b>Were Context Sensitive Solutions considered? (If so explain below)</b> .....   | ( ) | (X) |
| k. <b>Will the roadway/bridge be closed? (If yes, answer questions below)</b> .....  | ( ) | (X) |
| Will a detour bridge be provided? .....  | ( ) | (X) |
| Will a detour route be signed? .....   | ( ) | (X) |

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**11. Other (Use this space to explain or expand answers to questions above.)**


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Item No. 6-a. Section 4(f) and 6(f) Lands – Impacted:

(See *Section 4.1.6* of the EA and *Appendix M*) As a result of the Phase I cultural resources survey and archaeological survey for this project, four historic districts were identified—Trout-Sawmill Historic District, Tall Timber Sawmill Historic District, Good Pine Sawmill Historic District, and Downtown Jena Historic District. Alternative 2B will produce adverse project effects and associated Section 4(f) issues on the Good Pine Sawmill Historic District. The Jena Cultural Center is a listed NHRP site and a contributing element to the Good Pine Sawmill Historic District and would be directly impacted by Alternative 2B. However, Alternative 4 is the preferred alternative and does not impact this site. As a result, there will be no adverse effect to the Good Pine Historic District or the Jena Cultural Center property.

Within the Downtown Jena Historic District, the proposed Alternatives 2B and 4 will have no adverse project effect and no 4(f) issues on the historic district in terms of viewshed, as they are confined to the existing corridor. It is possible that there will be increased ground vibrations due to construction and increased vehicular traffic.

Item No. 6-a. Section 4(f) or 6(f) Lands – Adjacent:

(See *Appendix M*) In addition to the properties identified in *Item No. 6-a. Section 4(f) or 6(f) lands – Impact* above, three historic properties that also contribute to the Downtown Jena Historic District are adjacent to the proposed project corridor—the Bank of Jena located at 3285 North First Street, the Strand Theater at North First Street, and Billy Wood Ford Dealership at 3050 West Oak Street. The proposed highway alternative designs will not be a direct adverse effect on the Bank of Jena or Billy Wood Ford Dealership since the highway will maintain its current footprint. The Strand Theater will not be directly or indirectly impacted by the proposed project. There are no 4(f) issues associated with these three properties if recommendations are followed. A more detailed analysis of potential vibration levels should be conducted prior to construction by a structural engineer and architectural historian. The structure(s) should be monitored for the duration of construction.

Item No. 6-b. Known Historic Sites/Structures – Impacted/Adjacent:

(See *Section 4.1.4* of the EA) Within the APE, there are two NRHP-listed properties—the Jena Cultural Center and the LaSalle Head Start; and one NRHP-nominated property—the Strand Theatre. Based on the current cultural resources survey, two additional properties are considered NRHP eligible—the Bank of Jena and the Billy Wood Ford building. These latter two properties are also considered contributing elements to a proposed Good Pine Sawmill Historic District. Two additional historic districts—Trout Sawmill Historic District and Tall Timber Sawmill District—are proposed based on the current survey.

The construction of Alternative 2B in Good Pine would require the demolition or relocation of the NRHP-listed Jena Cultural Center. Either demolition or relocation would negate the NRHP eligibility of the individual property and would adversely affect the proposed Good Pine Sawmill District. There is no adverse effect on the NRHP-listed LaSalle Head Start.

There is no adverse effect on the NRHP-nominated Strand Theatre because of the distance of the preferred alternative to the building. However, because of the proximity of US 84 to the Bank of Jena and to Billy Wood Ford Dealership, there is the potential from Alternative 2B and 4 for vibrations during construction.

Item No. 6-c. Known Archaeological sites – Adjacent:

The archaeological field investigations resulted in the identification of six new historic sites (16LA74, 16LA75, 16LA87, 16LA94, 16LA95, and 16LA96). In addition, one previously recorded site (16LA72) was revisited. These sites are considered not eligible for nomination to the NRHP and no further investigations are recommended.

Item No. 10-b. Churches and Schools:

(See *Section 4.1.2.2* of the EA) Good Pine Middle School, Jena Elementary School, Sanctuary Full Gospel Church, Nolley Memorial Cemetery, First Baptist Church of Jena, Francis Cemetery, Louisiana Council of Assembly of God, Midway Baptist Church, Good Pine Baptist Church, L&A Chapel, Trout Creek Baptist Church, Eddy Justiss Methodist Church, and two church properties in Trout are adjacent to the project study area.

Item No. 10-e. Hospitals, Medical Facilities, Fire, Police:

(See *Section 4.1.2.2* of the EA) LaSalle General Hospital, nursing home, and outpatient clinics are adjacent to the project study area.

Item No. 10-j. Context Sensitive Solutions:

Throughout the Environmental Assessment and line and grade study, research was performed to understand the future land use planning within the study area. The design process included information received prior to the EA process including the Stage 0 Report and the Town of Jena's comprehensive planning process called Jena's Vision. A public meeting was also held during the EA process to receive feedback on the alternatives as well as feedback on context sensitive solutions.

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Preparer: C.H. Fenstermaker & Associates, LLC  
Title: **Widening of US 84 from Hwy 772 to just East of Hair Creek Bridge, LaSalle Parish, Louisiana**

Date: November 19, 2014

**Attachments**

- (X) S.O.V. and Responses (*Appendix B* of the EA)
- (X) Wetlands Finding (See *Section 4.1.3.3 and Appendix I* of the EA and Supplemental Report)
- (X) Project Description Sheet (See *Sections 1.0 and 2.0* of the EA)
- (X) Conceptual Stage Relocation Plan (See *Sections 4.1.2.1 and Appendix G* of the EA)
- (X) Noise Analysis (See *Section 4.1.5 and Appendix L* of the EA and Supplemental Report)
- (X) Air Analysis (See *Section 4.1.3.1* of the EA and Supplemental Report)
- (X) Exhibits and/or Maps (included in Document)
- (X) 4(f) Evaluation (See *Section 4.1.6 and Appendix M* of the EA)
- (X) Section 106 Documentation (Supplemental Report)
- (X) Other: Public Meeting Summary (*Appendix C*)
- (X) Other: Public Hearing Transcript (*Appendix E*)

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## SUMMARY OF PERMITS, MITIGATION, AND COMMITMENTS

The Louisiana Department of Transportation and Development will implement the following permits, mitigation measures, and commitments to ensure that adverse environmental impacts associated with the project are avoided or minimized to the extent practicable. Please refer to *Section 4.5* of the report for further discussion.

### Permits and Certifications

The following permits and certifications are required for the proposed project:

- A request for Jurisdictional Determination by the US Army Corps of Engineers (USACE) and a Section 404 Permit for temporary and permanent impacts from construction of the proposed project for wetlands and Other Waters of the US determined to be jurisdictional.
- A Water Quality Certification (WQC) under Section 401 of the Clean Water Act will be required for any dredge or fill activities that may occur in Trout Creek, West Prong Creek, Hemphill Creek, and Hair Creek. The WQC will be obtained in conjunction with the USACE Section 404 permit process.
- A Louisiana Pollutant Discharge Elimination System (LPDES) Permit and Storm Water Pollution Prevention Plan will be required. The contractor will be required to implement and maintain best management practices to reduce and/or eliminate any potential impacts to surface water quality in the immediate area due to discharges associated with construction activities.

### Commitments and Mitigation Measures

The following commitments and mitigation measures are required for the proposed project:

- Waterway impacts will be minimized through proper specification and construction techniques, as listed in the Louisiana Standard Specifications for Roads and Bridges, 2006 edition.
- An approved mitigation plan to offset losses of wetland acres.
- Implementation of Best Management Practices during construction to mitigate nonpoint source pollution.
- If archaeological remains are discovered during the process of construction, construction should be stopped and the State Historic Preservation Office will be contacted immediately. Contact Dr. McGimsey, State Archaeologist, (225) 219-4598, [cmcgimsey@crt.la.gov](mailto:cmcgimsey@crt.la.gov).
- All construction equipment, such as pumps, compressors, generators, bulldozers, cranes, trucks, etc., will be properly muffled and all motor panels will be closed to minimize the construction noise impacts to nearby areas.
- Construction sequencing plan to minimize disruption of traffic on US 84. The construction sequencing plan will also address hurricane evacuation route needs during construction phases.
- Acquisition of right-of-way and relocations will be handled in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

- During the preparation of final design plans, field surveying will be performed to identify and verify existing oil, gas, or water wells along the selected alternative.
- The live oak trees located in front of Nolley Memorial United Methodist Church meet the species and size requirements for significant trees according to LDOTD's Significant Tree Policy. LDOTD Design Section will indicate significant trees on the plans and implement a context sensitive design to accommodate these trees where practical. Prior to construction authorization, a professional arborist licensed in the State of Louisiana will be retained by the LDOTD District or the LDOTD contractor to ensure protection of the significant trees.

*Based on public concern regarding the live oak trees (see Section 5.3.4 and Appendices F and J) two additional alternatives were created after the Public Hearing held on March 26, 2014, to mitigate impacts to the trees. LDOTD will continue to work with the community of Jena through the Construction phase of the project to minimize impacts.*

- Any further investigation of the potentially hazardous sites identified in Section 4.1.2.4 will be handled in accordance with LDOTD Secretary's Policy and Memorandum No. 48: Underground Storage Tank (UST) and Contaminated Site Policy. Investigation will occur during Pre-Design, Design, Acquisition, and Construction phases of activity. During the Pre-Design phase, "Immediately upon beginning the development of a project, representatives of the respective Design Section(s), Materials and Testing Section, Environmental Section, and Real Estate Directorate will be advised."
- LDOTD's Complete Streets Policy is proposed to be implemented through the construction of bicycle lanes, sidewalks, and shared-use bicycle/pedestrian paths. Maintenance and liability for sidewalks and bicycle paths outside the limits of the curb or shoulder would be the responsibility of the local jurisdiction. An agreement between LDOTD, LaSalle Parish, and the Town of Jena will be required for the construction and maintenance of the sidewalks and the shared-use bicycle/pedestrian paths.
- Prior to construction, the Jena Band of Choctaw Indian Tribe will be notified of the construction schedule to allow for collection of significant plants to the Tribe prior to clearing and grubbing activities. Contact Dana Masters, Jena Band of Choctaw Indians, Tribal Council Member, THPO/Cultural Director, (318) 992-1205, danamasters@aol.com.
- A more detailed analysis of potential construction-related vibration levels near the Bank of Jena at 3285 North First Street will be conducted by a structural engineer and architectural historian prior to construction. The construction contract is required to include vibration-related specifications for construction near the Bank of Jena at 3285 North First Street and include monitoring vibration levels during construction. The construction contract should limit the types of equipment permitted and the allowable levels of vibration.

## **1.0 INTRODUCTION**

US Highway 84 (US 84) passes through the communities of Trout, Good Pine, Midway, and Jena, Louisiana. US 84 is part of the El Camino corridor, a historic route across the southern United States from the US border with Mexico near El Paso, Texas, to the US Atlantic coast near Brunswick, Georgia, that was used as a major route by Spanish settlers. The five state El Camino East-West Corridor Commission has been formed to promote economic development along the route by upgrading the entire corridor through expansion of the existing highway to a four lane facility. The Louisiana Department of Transportation and Development (LDOTD) is directing the study and development of the El Camino corridor through Louisiana.

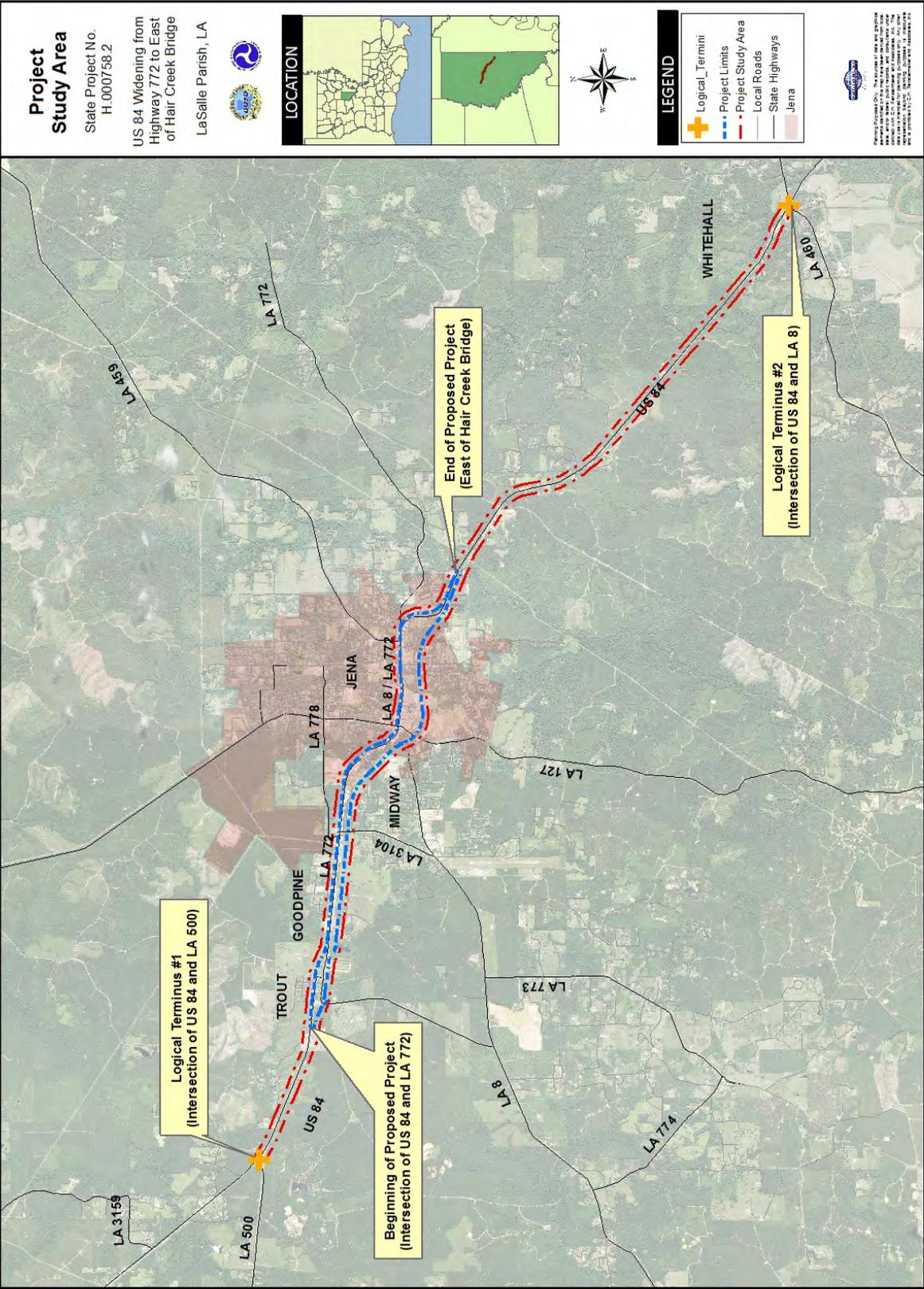
LDOTD and Town of Jena are proposing to widen and improve US 84 from LA Highway 772 (Hwy 772) to just east of Hair Creek Bridge in LaSalle Parish. A majority of the widening will occur along the existing centerline of the roadway with additional required right-of-way on both sides. Portions of the roadway will widen asymmetrically to minimize relocations. Residential and commercial relocations will occur. The widening of US 84 from two lanes to four lanes; the addition of bicycle lanes, sidewalks, and a shared-use path; and traffic access management measures comprise the proposed project. The total length of construction of the proposed project is approximately 5.8 miles. *Figure 1* shows the Project Location.

LDOTD adopted a Complete Streets Policy in 2010 requiring new proposed projects to consider all users in each stage of the project. For this project, LDOTD's Complete Streets Policy is proposed to be implemented through the construction of bicycle lanes, sidewalks, and shared-use bicycle/pedestrian paths. Maintenance and liability for sidewalks and bicycle paths outside the limits of the curb or shoulder would be the responsibility of the local jurisdiction. An agreement between LDOTD, LaSalle Parish, and the Town of Jena will be required for the construction and maintenance of the sidewalks and the shared-use bicycle/pedestrian paths.

LDOTD has adopted an Access Management Policy for the construction of new roadways and reconstruction of existing roadways. Access Management is the control of access connections on a roadway to mitigate impacts to safety performance. Access connections can include driveways, streets, and other means of connecting to a roadway. The policy would be implemented through the use of raised medians; right-in/right-out only (i.e. no left-in or left-out turns) from residential and business driveways as well as adjacent roadways; and median openings allowing U-turns and left-in turns.

This document is an Environmental Assessment (EA) prepared to evaluate the effects that the proposed project would have on the natural and human environment.

Figure 1: Project Location



## **1.1 Environmental Assessment**

The National Environmental Policy Act (NEPA) directs federal agencies to conduct environmental reviews to consider potential impacts from proposed federal undertakings. The NEPA process requires coordination with local, state, and federal agencies through planning and project development decision-making.

The Federal Highway Administration (FHWA) and LDOTD are committed to the examination and minimization of potential impacts to the social and natural environment when considering approval of proposed transportation projects. NEPA project development considers a range of alternatives that would serve the purpose of the project while balancing the potential impacts on the human and natural environment with the public's need for safe and efficient transportation.

The NEPA process must be clearly documented to ensure transparency. Potentially affected communities and stakeholders are offered the opportunity to ask questions and provide comments about proposals, alternatives, and environmental impacts. Public input is formalized in the document as are the responses to public concerns and the choices made about the project.

When the significance of impacts from a proposed transportation project is uncertain, an EA is prepared. Unlike an Environmental Impact Statement (EIS) that is prepared when significant impacts are known, an EA is a concise document that presents sufficient evidence and analysis for determining whether the impacts from the proposed action warrant further analysis in an EIS, or whether a finding of no significant impact (FONSI) is appropriate.

This document records the environmental assessment process undertaken for the widening of US 84 from Highway 772 to just east of Hair Creek Bridge.

## **1.2 Where is the Proposed Project in the Development Process?**

The El Camino East/West Corridor Master Plan Study (LDOTD 2001) established the conceptual design and studied the feasibility for the Louisiana segment of the five-state route, which follows both US 84 and LA 6. Federal demonstration funds provided through legislation were obtained by LDOTD and are being utilized for the environmental process. This funding allowed FHWA and LDOTD to proceed with the environmental process.

The original concepts for this project were developed in a 2009 LDOTD feasibility study (Shaw Environmental & Infrastructure, Inc. 2009). The feasibility study phase is referred to as "Stage 0" of the seven stages in the LDOTD project delivery process. The Stage 0 study for this project documented the purpose and need for this project; developed reasonable and feasible engineering concepts to address the need; and identified potential environmental, cultural, and socioeconomic resources that might affect the feasibility of Build Alternatives. In the spring of 2010, LDOTD and FHWA initiated Stage 1 for this project. Stage 1 is the environmental clearance phase of LDOTD's project delivery process that refines the Stage 0 concepts and evaluates the effects of alternatives to the environment. The Stage 1 phase is followed by Stage 2 (Funding), Stage 3 (Final Design), Stage 4 (Letting), Stage 5 (Construction), and Stage 6 (Operations and Maintenance).

Upon commencement of Stage 1, FHWA approved the logical termini, i.e., the end points of the project study area, as LA 500 to the west and LA 8 to the east for a total of 12.2 miles. The limits of construction, i.e., the segment of roadway where the widening is proposed, extends from approximately 1,700 feet west of West Street to approximately 2,000 feet east of Hair Creek Bridge for a construction

length of approximately 5.8 miles. *Figure 1* depicts both the logical termini and the limits of construction. On May 24, 2010, notifications were sent to federal, state, and local agencies and officials along with potential stakeholders requesting their views regarding the project. The Solicitations of Views correspondence, distribution list, and responses are provided in *Appendix B*. A Scoping Meeting was held with local officials and stakeholders to provide information and answer questions. An open house public meeting was held in July 2012 to provide information to the public and answer questions. Comments received during this meeting are provided in *Appendix C*. Alternative design refinements were made in the summer of 2012. Alternatives and impact analyses were then completed and documented in this EA. The EA was distributed to agencies and local officials in February 2014. Copies were made available to the public in local libraries, the local LDOTD District office, Town of Jena, and online. An open house public hearing was held in March 2014. Comments received at the Public Hearing are provided in *Appendix E*.

Following the environmental process, the project will proceed when funding becomes available.

## **2.0 PROJECT PURPOSE AND NEED**

The focus of this EA is the portion of US 84 located in central LaSalle Parish, along the communities of Trout, Midway, Good Pine, and the Town of Jena. This roadway is an important transportation link in the El Camino corridor. The El Camino corridor is a historic route across the southern United States from the US border with Mexico near El Paso, Texas, to the US Atlantic coast near Brunswick, Georgia, that was used as a major route by Spanish settlers. In 1992, the El Camino Commission, a five state effort involving Texas, Louisiana, Mississippi, Alabama, and Georgia was formed to recognize the history of Spanish migration from the Atlantic coast to the present US/Mexico border. Each state has designated the roadways that comprise the route as the El Camino East/West Corridor to promote tourism and historic preservation, as well as economic development and transportation enhancement. To achieve these objectives, the five states have installed signage and have undertaken transportation projects to effect four-lane improvements along its component highways.

### **2.1 Why is the Project Needed?**

In Louisiana, the legislature passed House Concurrent Resolution (HCR) No. 8 during the 2007 Legislative Session recognizing that improvements to the corridor would yield benefits for the parishes of Catahoula, Concordia, LaSalle, Natchitoches, Sabine, and Winn, as well as the many communities along the corridor by addressing: enhanced economic development; improved access for tourists to the many historic sites through this part of the state; an east-west route in addition to I-10 and I-20; improved safety; and facilitation of intrastate and interstate trucking.

### **2.2 What is the Purpose of the Project?**

The purpose of the project is to improve mobility throughout the corridor to increase roadway capacity, promote local traffic circulation, and improve the quality of life of the community. To accomplish these purposes, the project proposes to widen the roadway and upgrade the facility in accordance with current design criteria.

#### **2.2.1 Mobility and Local Traffic Circulation**

The proposed improvements will improve access at certain locations along the project corridor and provide opportunities for non-motorized transportation:

- *Improve Access Management.* There are two abnormal crash locations along the project corridor. Two areas along the US 84 project corridor, east and west of downtown Jena, have a high rate of rear end crashes possibly due to several access points along the roadway and vehicles making left turns onto side streets. The proposed improvements will minimize these access points by employing access management principles along the corridor.
- *Enhance non-motorized transportation.* There are several churches, schools, and community land uses where non-motorized transportation may be utilized. The proposed improvements would accommodate all users by providing non-motorized transportation opportunities.

### **2.2.2 System Linkage**

The proposed project is located along the El Camino Corridor. The El Camino Corridor has been identified by the five-state El Camino East-West Corridor Commission for upgrade to a four lane facility. A study prepared in June 2002 by LDOTD addressed the importance of the corridor and promoted the upgrading of the route to present design standards to meet growth demands, improve safety, and encourage economic development in communities along the corridor. This portion of US 84 is a vital link in the corridor.

### **2.2.3 Social Demands or Economic Development**

The proposed improvements will benefit the four communities located along the project corridor: Trout, Good Pine, Midway, and the Town of Jena. The project area is 28.0 percent minority and 24.0 percent low income according to the Environmental Protection Agency (EPA) Environmental Justice toolkit. Investment along this corridor would improve the quality of life in this distressed area.

*Town of Jena Comprehensive Master Plan, "Jena's Vision"* – The Town of Jena adopted a Comprehensive Master Plan for the Town of Jena and surrounding communities in January 2011. The community prioritized expanding US 84 in a context sensitive manner and expressed a need for expanding transportation choices.

*Accommodate Population Growth and Changing Land Use* – According to comments received from the Kisatchie-Delta Regional Planning & Development District, Inc., "the proposed project is compatible with local needs and benefits regional use; the proposed project is located in a distressed area and investment by the funding agency is appropriate and necessary to assist the quality of life and community and economic development; the proposed project is congruent with the Comprehensive Economic Development Strategy and considerate of both environmental and socioeconomic needs, and this project would substantially benefit the region by improving access to a Scenic Byway traversing the region." (*Heather Smoak Urena, Executive Director, July 8, 2010*)

## **3.0 ALTERNATIVES CONSIDERED**

NEPA requires that all reasonable alternatives which could address the identified needs and purposes be considered including a No Build Alternative. A range of alternatives were identified and examined against the established need for the project. Some alternatives were eliminated because they did not meet the established objectives. Those that were determined to meet the project need and purpose were carried forward for further study.

### 3.1 Which Alternatives Were Initially Considered?

#### 3.1.1 Alternative Alignments

A range of alternative alignments was considered in the development of this project as described in the “Widen US 84 from Highway 772 to Hair Creek Bridge Stage 0 Feasibility Study” (Shaw Environmental & Infrastructure, Inc. June 2009). Numerous configurations were evaluated including upgrading existing US 84, providing two lanes in each direction, creating four lanes with a continuous center median, or a bypass to avoid impacting downtown Jena. The considered alternatives have the same beginning and end point.

Because the purpose of the project is to improve mobility, increase capacity, and improve local circulation, the alternatives that were determined to be reasonable included versions of the four-lane, divided or raised median roadway. Within that concept, four alternative alignments were originally considered:

- Alternate 1 – Widen along existing alignment through downtown Jena – determined to be not feasible due to the displacement of businesses along the corridor, and eliminated for purposes of this study;
- Alternate 1A – Widen along existing alignment with a minor bypass to the south in downtown Jena – designated **Alternative 1** for purposes of this study;
- Alternate 2 – Construct a couplet with the existing alignment and a new alignment to the south of the existing alignment – designated **Alternative 2A** for purposes of this study; and
- Alternate 3 – Construct a larger bypass to the south of the existing alignment – designated **Alternative 3** for this study.

A new alternative alignment was introduced in this study after the Stage 0 Feasibility was completed to address the public input received during the development of the Town of Jena’s Comprehensive Plan, “Jena’s Vision,” adopted January 2010:

- **Alternative 4** – Widen along existing alignment with a couplet in downtown Jena. Trout Realignment Options A, B, and C were developed during the scoping process to analyze the impacts of the realignment of US 84 through the community of Trout.

Another new alternative alignment was introduced after the Agency Scoping Meeting on March 28, 2012 to provide an additional alternative that addressed the community’s vision for a downtown couplet and reduces impacts to homes and businesses along US 84 in Good Pine. **Alternative 2B** is a hybrid of **Alternative 2A** and **Alternative 4**:

- **Alternative 2B** – Construct a couplet in Trout with the existing US 84 alignment and Highway 772 – a couplet in Good Pine, and a couplet in downtown Jena.

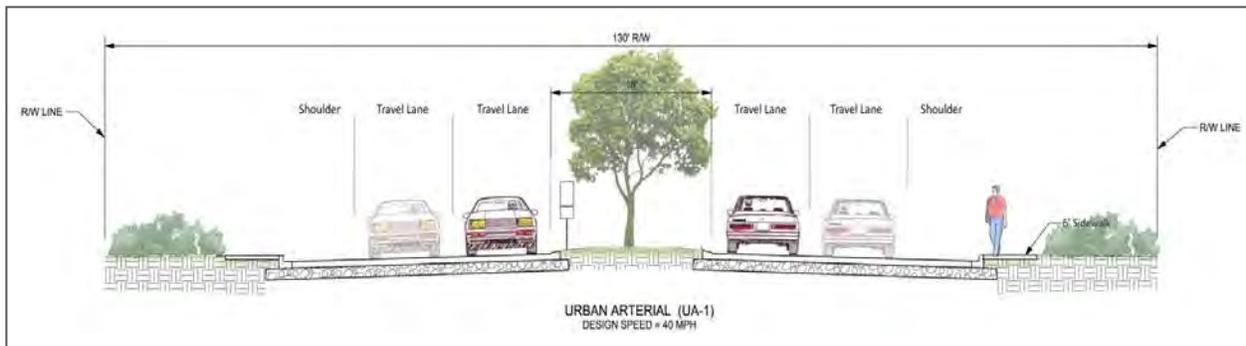
#### 3.1.2 Design of Alternatives

In addition to these alternative alignments, a number of design elements were considered. The existing US 84 roadway between Highway 772 and Hair Creek Bridge is currently classified as a principal arterial in the LDOTD functional system of roadways. Therefore, the design options include Urban Arterial (UA), Suburban Arterial (SA), or Rural Arterial (RA) classifications. These designs are known as “typical sections” and are graphically represented as the view across the full width of the roadway including

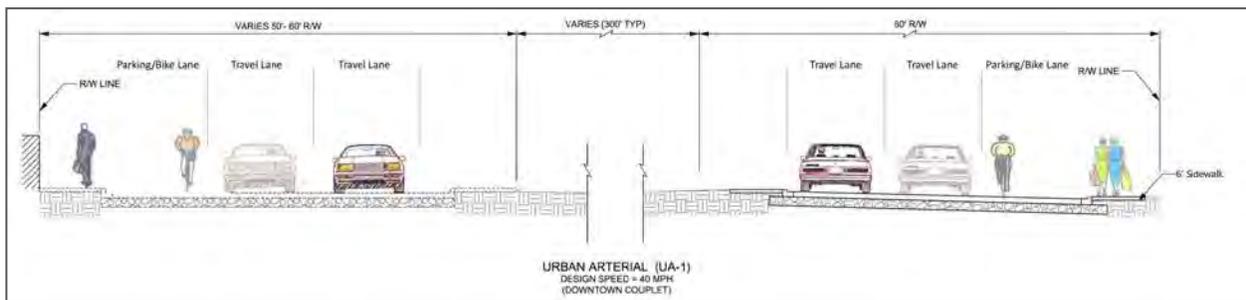
outside shoulders and drainage systems. Variations within the design classifications were considered that include cross-section features as discussed below. *Figures 2 through 6* show the typical sections.

- **UA-1** – A four-lane roadway with a raised median width of 18 feet, curb and gutter, and a 6-foot sidewalk on each side of the roadway.
- **UA-1 Downtown Couplet** – A two-lane one-way roadway with curb and gutter and a 6-foot sidewalk on both sides of the roadway.
- **SA-1** – A four-lane roadway with a raised median width of 30 feet, paved 8-foot shoulder, curb and gutter, and a 10-foot multi-use path on one side of the roadway.
- **SA-1 Suburban Couplet** – A two-lane one-way roadway with an 8-foot paved shoulder, curb and gutter, and a 10-foot multi-use path on one side of the roadway.
- **RA-2** – A four-lane roadway with a 42-foot-wide depressed median, and 10-foot paved shoulders.

**Figure 2: UA-1 Typical Section**



**Figure 3: UA-1 (Downtown Couplet) Typical Section**



**Figure 4: SA-1 Typical Section**

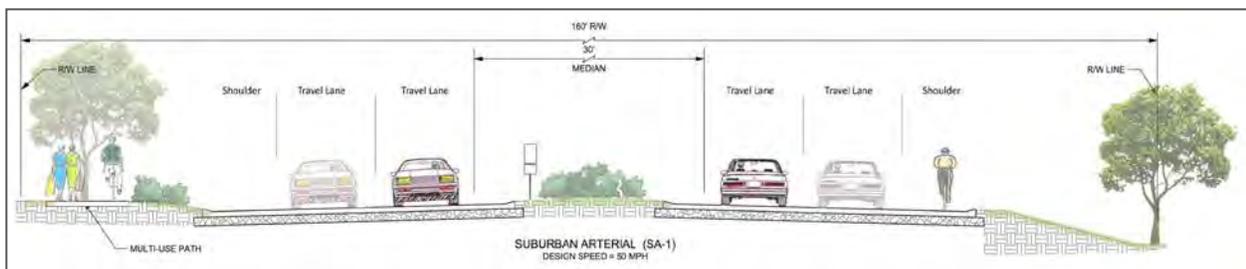


Figure 5: SA-1 (Good Pine Couplet) Typical Section

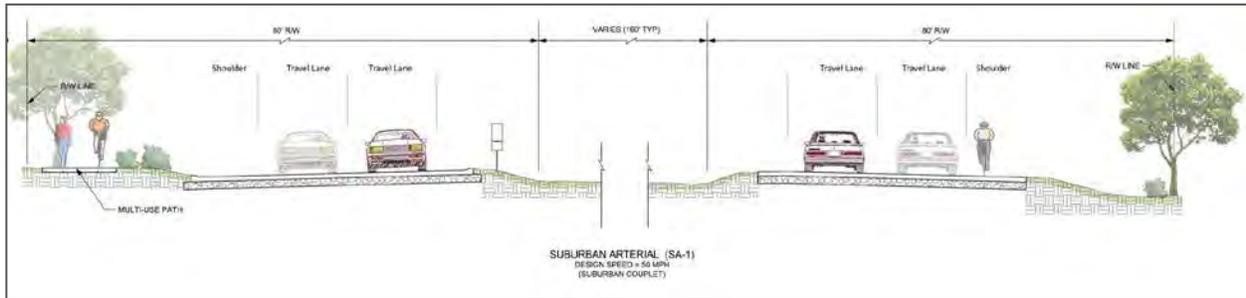
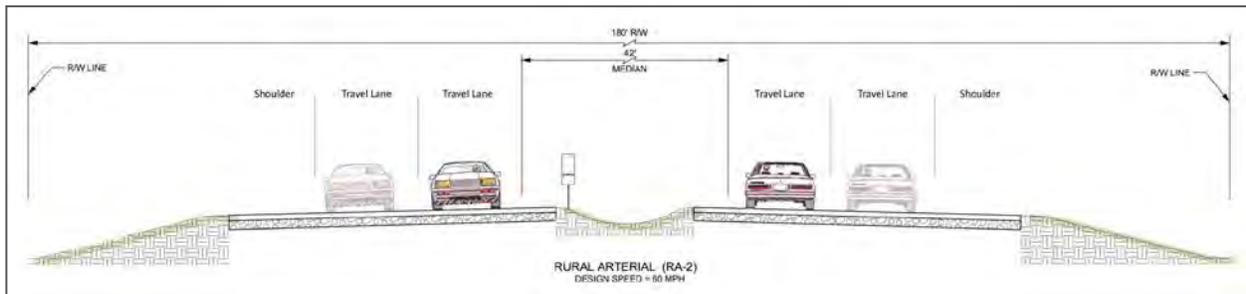


Figure 6: RA-2 Typical Section



For **Alternatives 1, 2A, 2B, and 4**, there are three distinct sections of the corridor within the limits of construction that were considered separately with regard to the appropriate design criteria. The western portion of Highway 772 to near downtown Jena is a SA-1 design classification. Through downtown Jena, each alternative uses a UA-1 design classification. The design classification east of downtown Jena is a SA-1 until Baker Street, where the design changes to a RA-2 classification. **Alternative 1** uses a combination of these design classifications. A majority of newly constructed eastbound **Alternative 2a** is new alignment and uses a RA-2 classification. For **Alternative 2B** and **Alternative 4**, there are three options [described below] that were considered for the realignment of US 84 within the community of Trout.

### 3.1.2.1 Trout Realignment Options

Three realignment options were studied in the early stages of the EA study to look at potential impacts for realigning US 84 within the Trout Community. The three options are described below and can be seen in *Figure 7*.

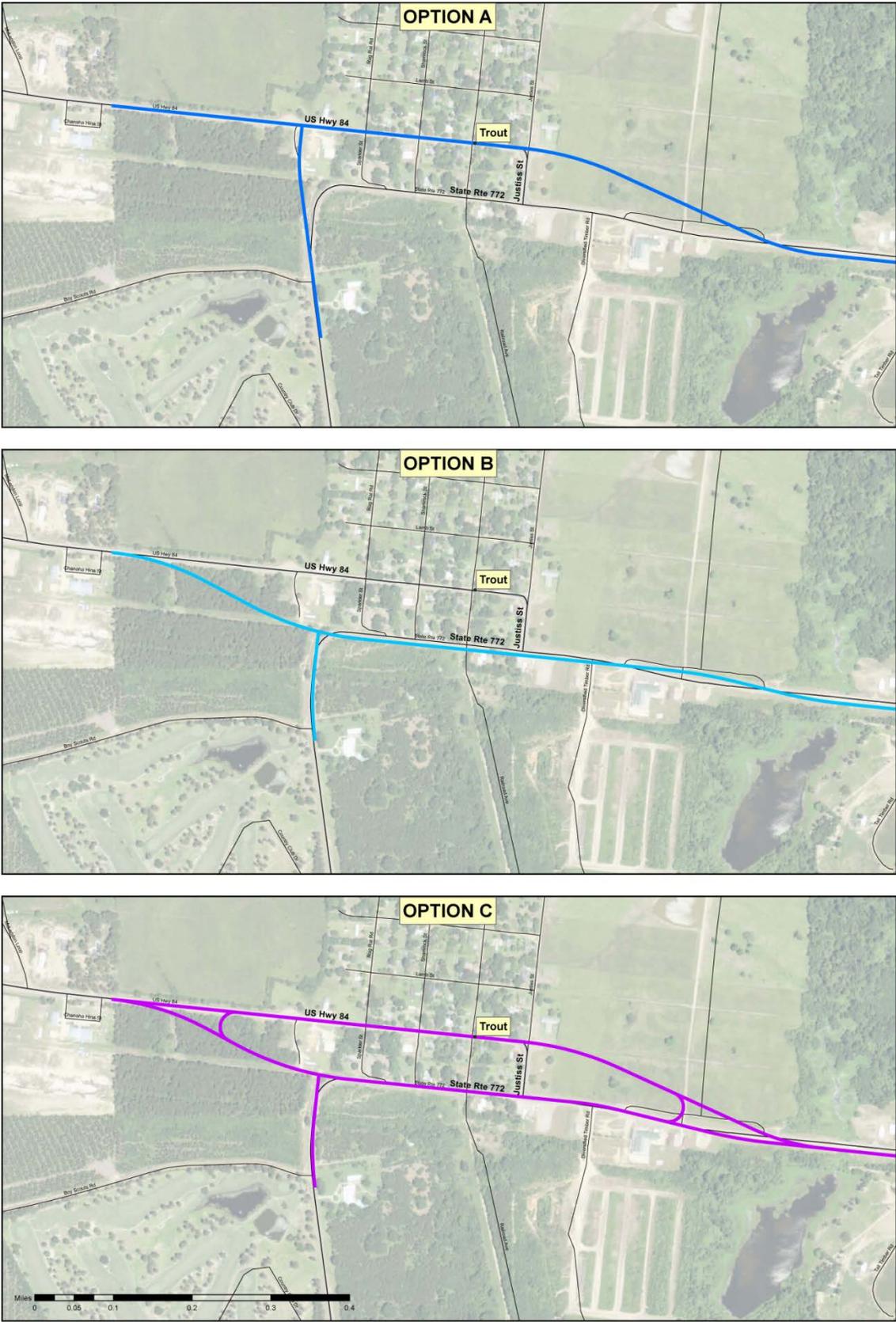
**Option A** – Widen US 84 to four lanes along existing US 84 through Trout and remove the dog-leg at the intersection with Highway 772.

**Option B** – Widen Highway 772 to four lanes to become the new US 84 and remove the dog-leg at the intersection of US 84 and Highway 772.

**Option C** – Two-lane, one-way couplet using US 84 for westbound travel and Highway 772 for eastbound travel.

**Alternatives 1, 2A, 2B, 4**, and the three Trout Options were presented to the public at the open house public meeting in July 2012. Attendees were given the opportunity to identify their preference of the alternatives and the three Trout Options. After reviewing the preference survey results and consulting with LDOTD and FHWA, **Trout Option B** was chosen to be applied to both **Alternative 2B** and **Alternative 4**.

Figure 7: Trout Realignment Options



### **3.2 Which Preliminary Alternatives Were Eliminated from Further Consideration and Why?**

Alternative 3 was eliminated for further consideration because it is not in line with the community's vision outlined in Jena's Vision Comprehensive Plan, nor does it fulfill the project's purpose and need. Alternative 3 would completely bypass downtown Jena and US 84, having the potential to negatively impact investment in downtown Jena and businesses along US 84, which would decrease the quality of life of the people in the community.

After the Public Meeting on July 12, 2012, the Trout Realignment Options A and C were eliminated because of the documented preferences by a majority of the respondents. Both Option A and Option C would continue to push truck traffic through the community of Trout and limit the development opportunity to enhance the residential community. Option B is in line with Jena's Vision Comprehensive Plan.

### **3.3 Which Build Alternatives are Evaluated in this EA?**

Four alternative alignments and a combination of designs were evaluated in this EA. Four typical sections are incorporated into each of the alternatives. These alternative alignments, described below, are illustrated in *Figure 8* and detailed on the plates in *Appendix A*.

**Alternative 1** – This proposed alternative will be approximately 5.86 miles and will widen existing US 84 to a four-lane roadway divided by a median using UA-1 design criteria with a 18-foot median between 1,700 feet west of West Street to Church Road; SA-1 design criteria with a 30-foot raised median between Church Road and Garan Street; UA-1 design criteria with a 18-foot raised median between Garan Street and Baker Road; and RA-2 design criteria with a 42-foot depressed median between Baker Road and 2,000 feet east of Hair Creek Bridge.

**Alternative 2A** – This proposed alternative will be approximately 5.66 miles and will widen existing US 84 to a four-lane roadway divided by a median using UA-1 design criteria with a 18-foot raised median between 1,700 feet west of West Street to Church Road; SA-1 Suburban Couplet design criteria would add two new eastbound lanes to the south of the existing roadway and the existing roadway would become the new westbound roadway between Church Road and Baker Road; and RA-2 design criteria with a 42-foot depressed median between Baker Road and 2,000 feet east of Hair Creek Bridge.

**Alternative 2B** – This proposed alternative will be approximately 5.86 miles and will widen existing Highway 772 to a four-lane roadway divided by a median using UA-1 design criteria with a 18-foot raised median between 1,700 feet west of West Street and 400 feet east of Trout Creek Bridge; SA-1 Suburban Couplet design criteria would add two new eastbound lanes to the south of the existing roadway and the existing roadway would become the new westbound roadway between 400 feet east of Trout Creek Bridge and 300 feet west of Garan Street; UA-1 design criteria with a 18-foot raised median between 300 feet west of Garan Street and 100 feet east of Elm Street; UA-1 Downtown Couplet design criteria with two lanes westbound along Oak Street and two lanes eastbound on Pine Street between 100 feet east of Elm Street and 400 feet west of Carpenter Road; UA-1 design criteria with a 18-foot raised median between 400 feet west of Carpenter Road and 700 feet west of Baker Road; and RA-2 design criteria with a 42-foot depressed median between 800 feet west of Baker Road and 2,000 feet east of Hair Creek Bridge.

**Alternative 4** – This proposed alternative will be approximately 5.85 miles and will widen existing Highway 772 to a four-lane roadway divided by a median using UA-1 design criteria with a 18-foot raised median between 1,700 feet west of West Street and Church Road; SA-1 design criteria with a 30-foot raised median between Church Road and 300 feet west of Garan Street; UA-1 design criteria with a 18-foot raised median between 300 feet west of Garan Street and 100 feet east of Elm Street; UA-1 Downtown Couplet design criteria with two lanes westbound along Oak Street and two lanes eastbound on Pine Street between 100 feet east of Elm Street and 400 feet west of Carpenter Road; UA-1 design criteria with a 18-foot raised median between 400 feet west of Carpenter Road and 700 feet west of Baker Road; and RA-2 design criteria with a 42-foot depressed median between 800 feet west of Baker Road and 2,000 feet east of Hair Creek Bridge.

See *Appendix B* of the Line and Grade Report and *Section 6.3* of the EA for information regarding Alternatives 4B and 4C. These alternatives were developed after additional comments were received following the Public Hearing.

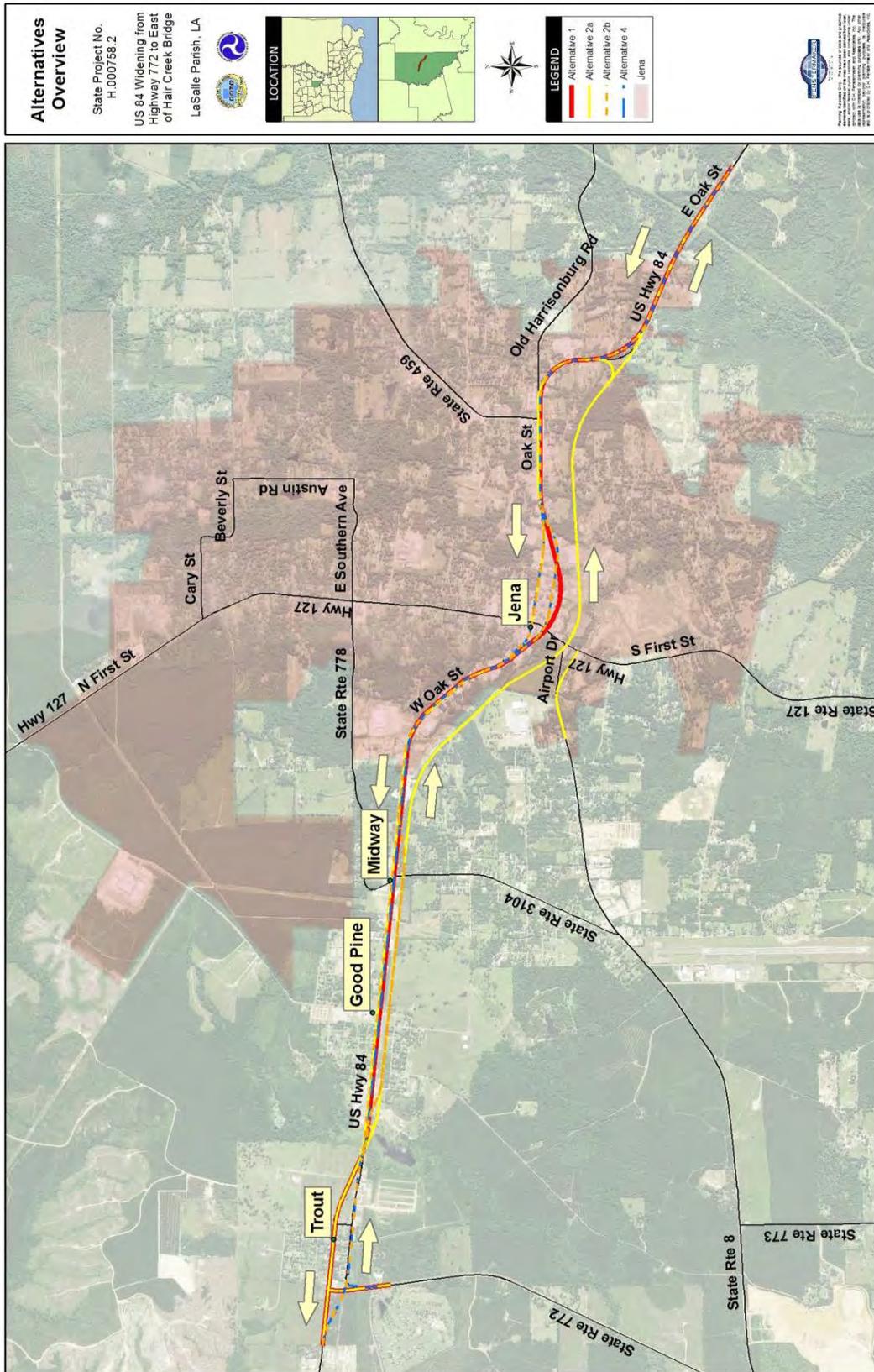
For all alternatives, the amount of required right-of-way varies throughout the project due to differences in limits of construction, amount of grading, varied design elements along the alternative alignments, and other similar factors. For all alternatives, additional right-of-way would need to be acquired, and utilities would need to be relocated. All of the alternatives would have an impact on side streets, and temporary drives would need to be installed.

### **3.4 No Build Alternative**

In addition to Build Alternatives, the alternative of taking no action is also evaluated in detail. A No build Alternative is required by NEPA to be studied for purposes of comparison and for consideration in cases where adverse impacts to the environment might outweigh the benefits derived from addressing the purpose and need. The resulting environmental effects from taking no action will be compared with the effects of permitting the proposed action. Where a choice of “no action” by the agency would result in predictable actions by others, these actions are considered to be consequences of the No Build Alternative and are included in the analysis. Other planned and programmed activities, such as road and right-of-way maintenance and other regional improvements, would be performed as scheduled under the No Build Alternative.

**Figure 8: Alternatives Overview**

\*Note: Full size plate available in Line & Grade Study document under separate cover



## 4.0 ENVIRONMENTAL RESOURCES, IMPACTS, AND MITIGATION

### 4.1 Environmental Resources within the Project Corridor and How They Might Be Affected

#### 4.1.1 The Human Environment

The people who live, work, and travel through the US 84 corridor are significant to how the decisions about this project have been made. Besides direct impacts to the population from potential relocation of their homes or businesses, the project has the potential to affect land use and community character, travel patterns, lifestyles, community cohesion, and economic activities, which are also considered to be relevant human resources.

##### 4.1.1.1 Land Use and Community Character

The study area is located entirely within LaSalle Parish and passes through the communities of Trout, Midway, Good Pine, and the jurisdictional limits of the Town of Jena. The Town of Jena is a community of approximately 3,000 citizens located one hour northeast of the City of Alexandria and one hour south of the City of Monroe. Jena was founded in the 1800s as an agrarian community harvesting timber, and shifted to oil and gas production in the 1920s. The Band of Jena Choctaw Indians settled in the area in the 1830s following the Trail of Tears, a policy forcefully removing the Choctaw and other Native American Indian Tribes from the Southeast and placing them in Oklahoma. The Band of Jena Choctaw Indians' tribal lands are located along US 84 just west of the western terminus of the proposed construction and within the study area.

Land use in the study area is light industrial, commercial, retail, suburban residential, and civic-related (See *Figure 9*). The eastern terminus of the study area is located at the intersection of US 84 and Hwy 8. From this intersection to the eastern construction limits near Hair Creek Bridge, the corridor is characterized as undeveloped forested and agricultural land with a few commercial properties and residences. From Hair Creek Bridge to Downtown Jena, the corridor is predominantly commercial and single family residential uses and characterized as rural. Through the downtown, land uses are commercial including restaurants, retail shops, businesses, and civic including Jena's Town Hall, Jena Police Department, and LaSalle Parish Assessor's Office. The corridor then moves through the communities of Good Pine and Midway where churches, homes and businesses are located along the roadway. Several buildings are vacant along US 84 in this area; however, the LaSalle General Hospital has a large complex within the Midway community including medical related buildings and assisted living facilities. The western terminus of the proposed construction limits lies just west of Trout which is dominated by small lot size single family residential homes. The Jena Band of Choctaw Indians Tribal Headquarters is located along the roadway just past the community of Trout but outside the proposed construction limits. From there until the western terminus of the study area at LA 500, the corridor is characterized as rural undeveloped, agricultural, and forested land.

There are no land development regulations in the incorporated Town of Jena or in LaSalle Parish; however, the Town of Jena and LaSalle Parish require building permits for any development.

Currently there are limited pedestrian facilities within the project corridor and no bicycle facilities. The proposed project would accommodate pedestrians and bicyclists by providing a paved shoulder for bicyclists along a majority of the corridor and either a sidewalk or a shared-use path for pedestrians. The proposed bicycle and pedestrian facilities would be contained within the proposed right-of-way and are preliminary, conceptual, and may be subject to change during the design phase of the project.

Expansion of the two-lane roadway could potentially change the rural character of the corridor by introducing a raised median and pedestrian and bicycle facilities, thereby creating a more suburban/urban look and feel. The new roadway aesthetics are anticipated to induce development, which could increase population and housing densities along the roadway. Commercial development would be expected to expand along the corridor at a slow pace, and a number of properties could lose a portion of their existing setback from the road.

#### **4.1.1.2 Economic Activities**

Education, oil and gas industry, correctional, and healthcare are the largest employment industry sectors in LaSalle Parish. Jena is the parish seat and houses the LaSalle Parish School Board and LaSalle General Hospital. Both employers are listed as two of the major employers in LaSalle Parish. Other major employers are Justiss/Clecco Oil Company and the GEO Group.

Currently, there are six oil and gas fields in LaSalle Parish. The oil industry has been a significant part of the area's economy. The Olla Oil Field was established in 1938 and has steadily expanded since that time. Many local residents are employed as drillers, roughnecks, pushers, roustabouts, and pumpers. There are also many small businesses in the area associated with the forest and timber industry. Pine and hardwood saw logs are the leading forest product in the parish. Pine pulpwood, hardwood pulpwood, and firewood are also produced in Jena. Several businesses located along US 84 and within the Town of Jena provide goods and services for the residents including gas stations, grocery stores, hardware stores, a florist, a liquor store, banks, restaurants, and clothing/gift stores.

The proposed project would enhance economic activities in the study area by improving traffic operations and providing a higher capacity roadway making the area more attractive for retail and light commercial development. The proposed project would also affect access patterns by limiting left turns to approximately every 0.5 miles where turn lanes cross the median and in the areas that have a one-way couplet. This could change the way businesses and residential properties are accessed. Although this change could initially affect patronage, the addition of two lanes would improve traffic flow and would be expected to offset any impacts from the left turn limitations.

#### **4.1.1.3 Demographics and Environmental Justice**

##### Demographics

LaSalle Parish has been growing moderately for the last ten years. From 2000 to 2010, the population of LaSalle Parish grew at rate of 4.2 percent compared to 1.4 percent for Louisiana. Census Tract 9702 which encompasses a majority of the project corridor grew at a rate of 2.5 percent compared to 14.3 percent for the Town of Jena. Although data specific to the project corridor are limited, the data indicate that growth along US 84 is slow and population is sparse except for a moderate increase in population for the Town of Jena from 2000 to 2010.

According to the US Census Bureau, in 2010 there were 8,168 persons living within the block groups of Census Tracts 9701, 9702, and 9703 that contain the limits of construction of the project identified on *Figure 10*. However, as shown on *Figure 10*, these block group geographies are large and bounded by more than one roadway, therefore, it can be deduced that not all of the individuals counted in the block groups in 2010 lived along the project corridor between the limits of construction.

Figure 9: Project Study Area Existing Land Use/Land Cover Map (2001)

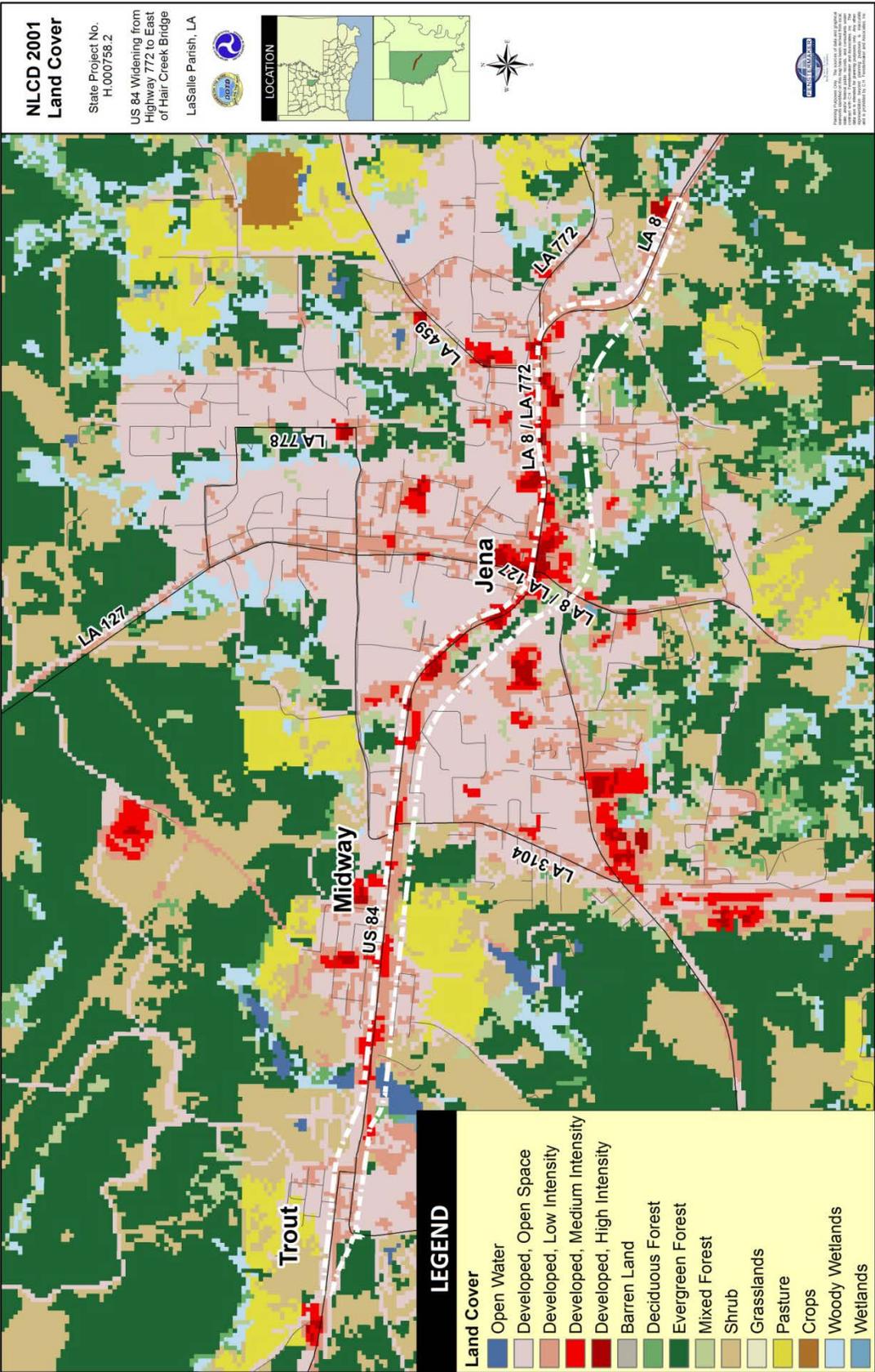
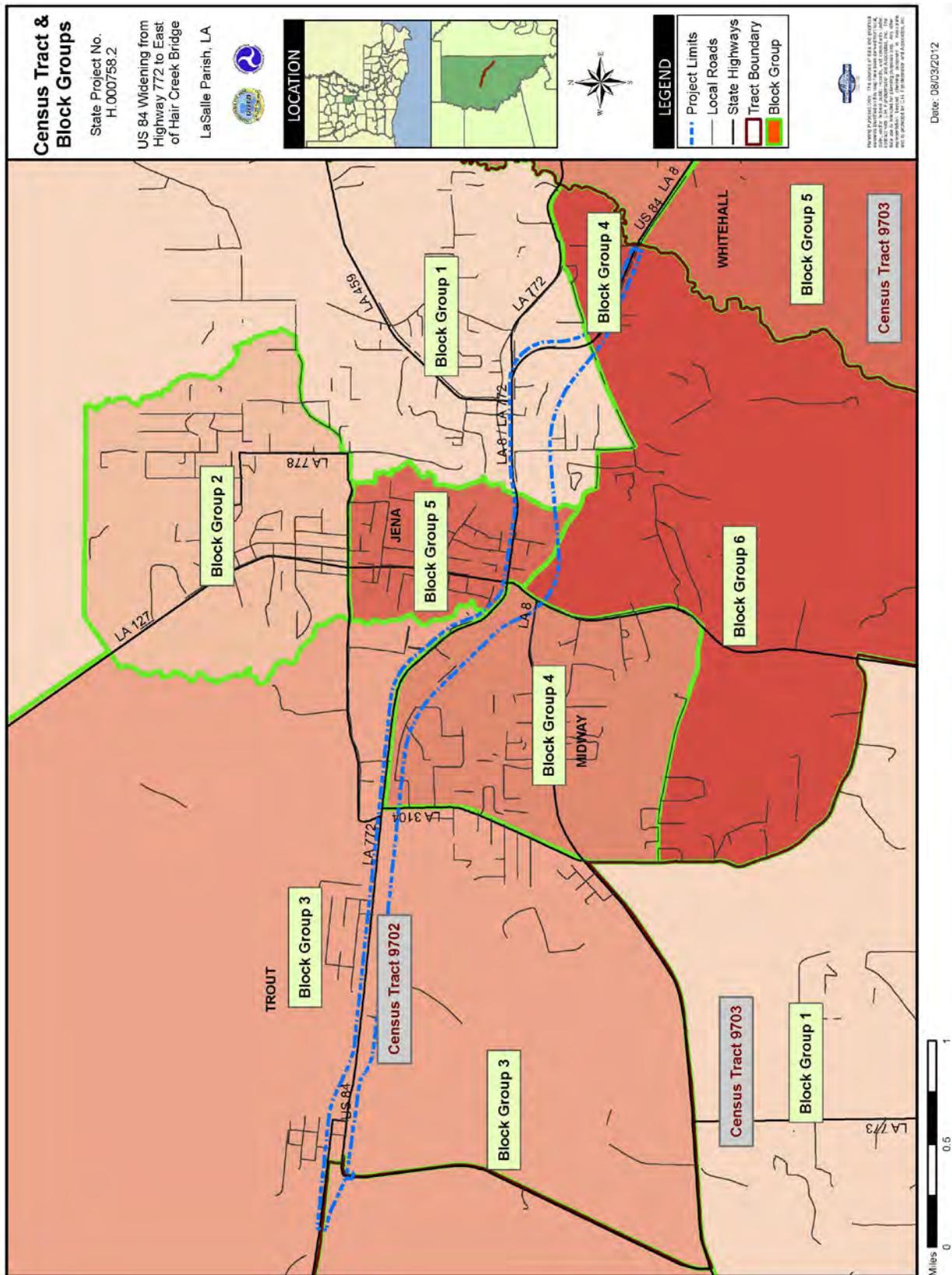


Figure 10: 2010 Census Tract & Block Groups



### Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, educational level, or income with respect to the development, implementation, and enforcement of environmental laws. Environmental justice seeks to ensure that minority and low-income communities have access to public information for human health, environmental planning, regulations, and enforcement. Environmental justice ensures that no population, especially the elderly and children, are forced to shoulder a disproportionate burden of the negative human health and environmental impacts of pollution or other environmental hazard.

Title VI of the Civil Rights Act (42 United States Code [USC] 2000) and Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994), requires an environmental justice review, which entails a thorough evaluation of project effects to persons belonging to the low-income populations and the following minority groups at a minimum:

- Black;
- Asian;
- American Indian and Alaskan Native;
- Native Hawaiian or Other Pacific Islander (added by the Office of Management and Budget in its Bulletin No. 00-02, “Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement,” issued March 9, 2000); and
- Hispanic (of any race).

A review of the race and ethnicity data for the census block groups identified in *Figure 10* was undertaken to ascertain whether any minority groups would be disproportionately affected by adverse impacts from the proposed project. Results of the review are provided in *Table 1*.

**Table 1: Race and Ethnicity by Project Corridor Census Block Group**

Census Geography	Number of Persons	Black	American Indian and Alaskan Native	Asian	Native Hawaiian or Other Pacific Islander	Hispanic
Census Tract 9702* (2006-2010)						
Block Group 1	1303	6.6%	0.9%	0.2%	0%	1.07%
Block Group 2	821	3.4	0.9	0.2	0	0.7
Block Group 3	1583	22.7	1.4	0.5	0.1	12.3
Block Group 4	937	56.7	0.9	0	0	0.2
Block Group 5	584	4.6	1.7	0.7	0	2.9
Block Group 6	637	34.7	0.9	0.2	0	0.8
Census Tract 9703* (2006-2010)						
Block Group 3	910	0.7	3.3	0.3	0	0.9
Block Group 4	714	0.8	1.0	0	0	0
Block Group 5	679	0.7	0.7	0	0	1.2
<b>ALL Blocks</b>	<b>8,168</b>	<b>16.0%</b>	<b>1.3%</b>	<b>0.3%</b>	<b>0.0%</b>	<b>3.1%</b>
Town of Jena (2010)	3,398	11.3%	0.8%	0.4%	0.0%	6.7%
LaSalle Parish (2010)	14,890	11.9%	1.0%	0.2%	0.0%	2.2%
Louisiana (2010)	4,533,372	32.0%	0.7%	1.5%	0.0%	4.2%

Source: US Census Bureau, 2010 Summary File 1 (SF 10 100-Percent Data and 2006-2010 American Community Survey (ACS).

\*Census Tracts 9702 and 9703 Block Groups that contain the limits of Construction (2006-2010).

According to the 2010 Census, most residents within the census tract block groups where the limits of construction of the corridor occur were not members of any minority. African Americans represented 16.0 percent of the block groups' population and American Indians and native Alaskans represented 1.3 percent of the population. Asians represented 0.3 percent and there were no native Hawaiians or other Pacific islanders in the block groups. Hispanics were identified as 3.1 percent of the resident population.

An environmental justice review is also required for persons of low income. American Community Survey (ACS) 2006-2010 income data are not available for census block geographies, but are available for census tracts. Census Tracts 9702 and 9703 cover the limits of construction of the project corridor. The poverty and income data from the US Census Bureau for these tracts are provided in *Table 2*.

**Table 2: Poverty and Income Data for Census Tracts 9702 and 9703**

Census Geography	Median Household Income	Persons with Income Below the Poverty Level	Households with Income below \$10,000
Census Tract 9702 (2006-2010)	\$34,619	16.2%	9.2%
Census Tract 9703 (2006-2010)	\$46,429	10.2%	8.6%
LaSalle Parish (2006-2010)	\$37,572	13.0%	8.0%
Louisiana (2006-2010)	43,445	18.1%	10.1%

Source: US Census Bureau, 2006-2010 American Community Survey.

The small percentage of minorities and low-income persons within the census tracts along the project corridor reduces the possibility that the proposed project would cause adverse impacts to a disproportionate number of individuals in these groups. Generalized adverse impacts such as noise and loss of rural character would be shared equally among all residents. However, displacements from the home structure, business, or community facility removal could directly affect one particular group more than another.

Estimated displacements were studied in detail and data about the estimated income and minority status of the individuals who would be relocated were reviewed to determine if any minority or low-income groups would be disproportionately affected. Based on visual observation, it was estimated that minority groups may represent approximately five, nine, nine, and eight percent of the total relocations for **Alternative 1**, **Alternative 2A**, **Alternative 2B** and **Alternative 4**, respectively. As demonstrated by these numbers, none of the alternatives are expected to cause any minority or low-income group to be disproportionately affected by adverse impacts from the proposed project.

#### **4.1.2 The Built Environment**

The homes and businesses along the corridor are important physical resources that make up the built environment. A summary of relocations by alternative is provided in *Appendix G*. Other resources within the built environment are community facilities and services, other social resources, and public or semi-public infrastructure. Infrastructure includes transportation facilities, pipelines, and utilities. These resources were also considered to be relevant to the project.

Another consideration related to the built environment and relevant to the project is the presence of potentially hazardous waste sites that may be disturbed by construction of the project. This waste may be found in Underground Storage Tanks (USTs) or within industrial facilities or commercial sites. Regulations for currently operating facilities generally prescribe measures to prevent contamination to the built and natural environment from any waste generated. The potential presence of unconfirmed

waste sources such as those generated prior to the establishment of regulations or produced without authorizations should also be considered.

#### 4.1.2.1 Relocations of Homes and Businesses

The right-of-way (ROW) required for the proposed project would impact between 173 and 246 properties by taking a portion of the frontage for the new travel lanes and “clear zone,” which is an unobstructed area beyond the edge of the roadway that allows a driver to stop safely or regain control of a vehicle that leaves the roadway. The acquisition of ROW does not necessarily constitute a relocation impact.

While most structures are set back from the roadway by a sufficient distance to put them outside the limits of the ROW required for the proposed project, there are a number of homes and businesses that are within the proposed ROW and would have to be relocated. **Alternative 1** would require ROW along both sides of the existing roadway and some structures on both sides to be relocated. **Alternative 2A** would require ROW on both sides of the existing roadway in some areas and would require new ROW to the south of US 84 within the communities of Good Pine and Midway and some structures on both sides to be relocated. **Alternative 2B** would require ROW on both sides of the existing roadway in some areas and would require new ROW to the south of US 84 within Good Pine and Midway and some structures on both sides to be relocated. **Alternative 4** would require ROW on both sides of the existing roadway and some structures on both sides to be relocated. A detailed quantification and comparison of ROW acquisition impacts and relocations for each alternative is provided in *Appendix G*.

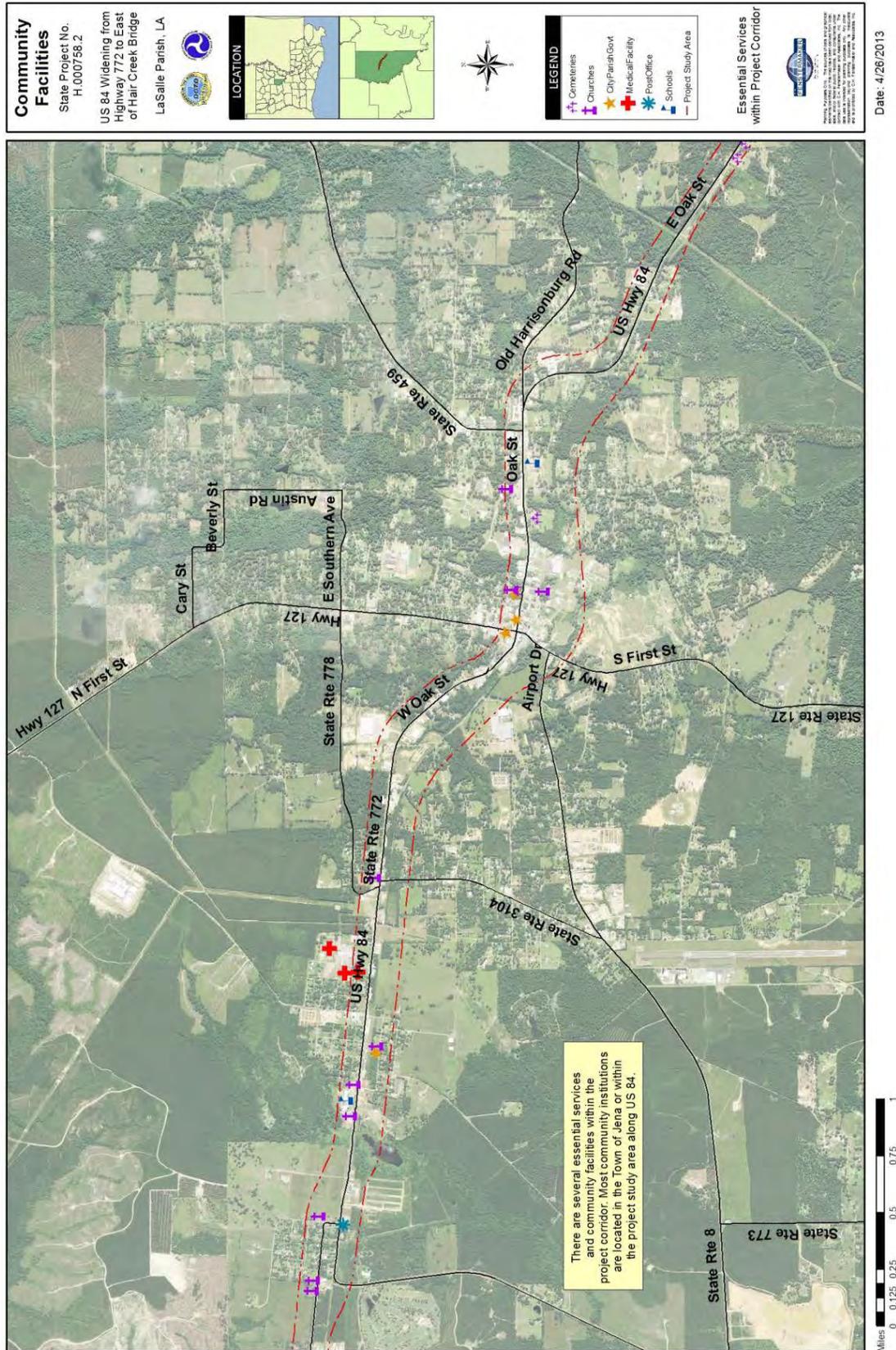
See *Appendix G* and *Section 6.3* of the EA for information regarding right-of-way impacts for Alternatives 4B and 4C. These alternatives were developed after additional comments were received following the Public Hearing.

#### 4.1.2.2 Community Facilities, Services, and Social Resources

There are several essential services and community facilities within the project corridor (*Figure 11*). Most community institutions are located in the Town of Jena or within the project study area along US 84. The LaSalle General Hospital, nursing home, and outpatient clinics are located in Good Pine along US 84 and most schools are located in Jena or along US 84. There are two public schools adjacent to the project: Good Pine Middle School and Jena Elementary School. Good Pine Middle serves third through fifth grades and Jena Elementary serves grades Pre-K through second grade. A new Jena Elementary School building is being constructed south of the project study area and the existing building will be closed. The old building will still be owned by LaSalle Parish School Board but there are currently no plans for the building to serve as a school in the future. There is also a Jena Junior High School serving sixth through eighth grades and Jena High School serving ninth through twelfth grades. Temple Baptist Academy is the only church-affiliated school located in the Town of Jena serving grades Pre-K to eighth grade. Vocational education is available at Louisiana Technical College, Rod Brady Branch, located in Jena. Higher education is available within 60 miles of the project study area at Louisiana College, Louisiana State University – Alexandria, and the University of Louisiana at Monroe.

There are nine churches located within the project study area. Nolley Memorial Cemetery is located adjacent to the project on US 84. Jena Cemetery and Woodland memorial Park are both located along US 84 within the study area but are outside the proposed construction limits. Additional community facilities that serve the community but are located outside the project study area include LaSalle Parish Library – Jena Branch, an Amphitheater, and Senior Citizen Center.

Figure 11: Community Facilities Map



There are two US Post offices, Jena Town Hall, LaSalle Parish Tax Assessor, and the Jena Cultural Center (currently listed on the National Register of Historic Places) located adjacent to the project corridor. There are a few bars, restaurants, and a motel located within the project study area. The Jena Airport is a general aviation airport for private planes located outside the project study area.

A number of community facilities and services are located within the project corridor or require access from the project corridor by the residents. An improvement to the corridor would enhance community access and utilization of these resources.

#### **4.1.2.3 Infrastructure**

The Town of Jena provides water, sanitary sewer, and waste collection inside the city limits, with gas services extending past the city limits. Areas outside of Jena are serviced by smaller water systems including Belah Water System, East Jena Water System, LaSalle Water Works, Little Creek Water System, Nebo Water Works, Searcy Water System, Summerville-Rosefield Water, Whitehall Water System, and Manifest-Rhinehart Water System. Sanitary sewer for areas outside of Jena is serviced by septic tanks or small package treatment plants. Natural gas outside of Jena is provided by American Natural Resources. There is a natural gas pipeline that is adjacent to US 84 along a portion of the project corridor. LaSalle Parish provides waste collection outside of Jena. Stormwater management in the project corridor consists of subsurface drainage for the downtown area and ditches and culverts for the areas outside of downtown.

Electrical service for the Town of Jena is provided by Entergy, while Concordia Electric Cooperative serves the area outside of Jena. Telephone and fiber optic communications are provided by CenturyTel. Media 3 is the local cable provider for the Town of Jena. Dish Network and DirecTV are also available for the area. Some of the utility lines would be affected during construction and may need to be relocated. Some would require permanent relocation after the proposed project is complete.

Lifestyles of the corridor residents are automobile-dependent, and there are no alternative transportation facilities along the corridor. Besides the two-lane state highways, there are a few parish roads and a number of local roads. There are no sidewalks or bicycle lanes along the roadways except for some parts of downtown Jena.

#### **4.1.2.4 Potential Hazardous Waste Sites**

The Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulate hazardous materials and waste sites. Hazardous waste is generally defined as any material that has, or when combined with other materials, will have a deleterious effect on humans or the natural environment. Hazardous wastes are characterized as reactive, toxic, infectious, flammable, explosive, corrosive, or radioactive. Hazardous wastes may occur as solids, sludges, liquids, or gases.

Potential hazardous waste sites include landfills, dumps, pits, lagoons, salvage yards, and industrial sites, as well as above and below ground storage tanks. Service stations are one of the most common generators of potential hazardous material sites because older underground storage tanks may deteriorate and contaminate surrounding soil and groundwater with gasoline.

### **Phase I Environmental Site Assessment**

A Phase I Environmental Site Assessment (ESA) was conducted for the proposed project ROW for all four Build Alternatives. Regulatory database information, historic topographic maps, and historic aerial

photographs were obtained from GeoSearch, Inc. In addition, a Site Reconnaissance was conducted by the study team along the project corridor. Selected business owners were interviewed in association with sites identified in the regulatory database report. More than 70 industrial, commercial, unconfirmed, or unauthorized potential hazardous waste sites were investigated in the corridor. Thirty-three sites were identified in the regulatory database search and an additional 40 sites were identified during the Site Reconnaissance. The assessment of these sites revealed evidence of 40 Recognized Environmental Conditions (RECs) in connection with the project corridor.<sup>1</sup> Detailed information on the RECs can be found in the *US 84 through Jena Phase I Environmental Site Assessment* under separate cover. Maps showing the approximate locations of the RECs are included in *Appendix H*.

Of the 40 RECs, 25 are active or historical automotive related businesses including repair and machine shops, service and filling stations, and automotive sales shops. Associated RECs include underground storage tanks (USTs), in-ground hydraulic lifts, in-ground concrete sumps, drums and cans stored outside, and wash racks. There are five historical dry cleaning facilities within the project corridor and two historical photo shops. The historical L&A Rail Road freight depot was located near the intersection of First Street and Oak Street in Jena dating back to 1919, and railroad tracks have adjoined or dissected the project corridor since at least 1919. The Pan American Oil Company and Standard Oil were both historically located near the project corridor.

The International Paper site located near the project corridor is listed as a confirmed contamination site in the Louisiana Confirmed and Potential Sites Inventory. According to the Louisiana Department of Environmental Quality (LDEQ) Electronic Document Management System (EDMS) database, soil remediation activities have been completed at this site; however there is continued monitoring of the groundwater attenuation at this site.

#### **4.1.3 The Natural Environment**

Within the natural environment, there are a number of relevant resources such as wetlands and other surface waters, which are protected by Section 404 of the Clean Water Act. Subsurface waters used for drinking, irrigation, and industry are another water resource that were considered in the project decision-making process. Floodplains or land areas adjacent to surface waters that are subject to recurring inundation were also analyzed for this EA.

Vegetation and wildlife are also relevant resources that were identified and considered. Additional consideration was given to species of flora and fauna identified as protected or endangered. These species may be listed for protection by the state or may be classified as threatened or endangered in accordance with the Endangered Species Act (ESA).

##### **4.1.3.1 Air Quality**

The US Environmental Protection Agency (USEPA) established criteria for evaluating air quality in accordance with the 1990 Clean Air Act Amendments. Airsheds (geographical areas that share an air supply) that do not meet these standards are known as non-attainment areas and require special

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<sup>1</sup> As defined in ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process Designation E 1527-05, RECs means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. A material threat is a physically observable or obvious threat which is reasonably likely to lead to a release that in the opinion of the environmental professional is threatening and might result in impact to public health or the environment. Obvious threats are those which are plain or evident; a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the property.

consideration. The project corridor is located within an airshed that meets air quality standards established by USEPA; however, the NEPA process requires an evaluation of air quality impacts from the proposed project. Past carbon monoxide (CO) analyses as part of a historical database may be used in lieu of modeling to determine possible impacts to air quality. The comparative study, provided in the *US 84 through Jena Noise and Air Quality Assessment Report* under separate cover, did not indicate that a project like the one proposed for US 84 through Jena would violate air standards and it demonstrated that there would be no variation in the effects among the proposed alternatives. Therefore, no further consideration of this resource was required.

#### **4.1.3.2 Wild and Scenic Rivers**

The Louisiana Natural and Scenic Rivers System established in 1970 is administered by the Louisiana Department of Wildlife and Fisheries (LDWF). Its purpose is to preserve, develop, reclaim, and enhance the wilderness quality, scenic beauty, and ecological regimen of designated free-flowing water bodies. Trout Creek is listed as a Louisiana Natural and Scenic River under the Scenic Rivers Act, "From its origin near Hwy. 8 to its entrance into Little River."

According to the Scenic Rivers Coordinator at the LDWF, Trout Creek is located approximately 1.5 miles south of the project study area. There are no other designated Scenic Streams in the vicinity of the Project Study Area; therefore, the Build Alternatives will have no adverse direct impacts on Trout Creek or other Scenic Rivers.

#### **4.1.3.3 Wetlands and Other Waters**

Section 404 of the Clean Water Act requires that anyone interested in depositing dredged or fill material into waters of the US, including wetlands, must receive authorization for such activities. The US Army Corps of Engineers (USACE) has been assigned responsibility for administering the Section 404 permitting process and makes the determination of whether or not wetlands fall under their jurisdiction.

An assessment of jurisdictional waters of the US that occur within the project corridor was performed by the study team for all four Build Alternatives using US Geological Survey (USGS) topographic maps, National Wetland Inventory (NWI) maps, and parish soil survey maps, and then refined during the field visit. Field investigation was conducted for **Alternatives 2B** and **4**. A summary of the wetland delineation report is located in *Appendix I*.

All wetlands located during the field visit were delineated using the three parameters (dominant vegetation, soil characteristics, and hydrology) and methods described within the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region* (November 2010) and the *Corps of Engineers Wetland Delineation Manual* (USACE 1987).

A total of nine jurisdictional wetlands, 20 jurisdictional waters, one potentially isolated wetland, two potential isolated waters, and two potentially isolated small ponds were identified within the project corridor and were surveyed within the proposed ROW. Four of the 20 jurisdictional waters are riparian waterways and the remaining jurisdictional waters and wetlands have direct or indirect connectivity to these waterways. The Build Alternatives cross Trout Creek, West Prong Creek, Hemphill Creek, and Hair Creek which are considered to be "waters of the US" or "other waters" as defined under Section 404 of the Clean Water Act. Potential jurisdictional wetlands were found to be associated with these riparian waterways. The USACE will make the final determination as to whether these areas will be considered jurisdictional wetlands. Figures in *Appendix I* illustrate the extent of wetlands and other waters

delineated within the project corridor. Each wetland, other water, and stream identified on the figures is detailed in the *US 84 through Jena Wetland Delineation Report* under separate cover.

Impacts to these resources were calculated using geographic information system (GIS) technology to view the footprint of the Build Alternatives being considered and to compare the potential impacts. The potential impacts to waterways from the proposed project are minor. The potential direct impacts to the jurisdictional riparian waterways from the Build Alternatives range between 0.51 and 1.06 acres. Potential impacts to wetlands and other waters would also be minor (*see Appendix I*). The potential direct impacts to wetlands are between 0.89 and 0.88 acres while potential direct impacts to other waters are between 0.43 and 0.10 acres.

Mitigation requirements for wetland loss may require creation of acreage off site, in an approved wetland mitigation area. The final mitigation acreage requirements will be determined based upon the functions and values of the impacted wetlands, as well as the characteristics of any mitigation banks or projects available at the time of permitting.

#### **4.1.3.4 Surface Water**

Soil erosion is generally the most critical water quality impact resulting from construction activities. The degree of erosion is dependent on factors such as the amount of vegetation and soil removal, slope of the exposed area, and the effectiveness of erosion-control measures. Erosion can lead to deposition of sediment in waterways causing a reduction of the natural flow of the waterway and degradation of water quality.

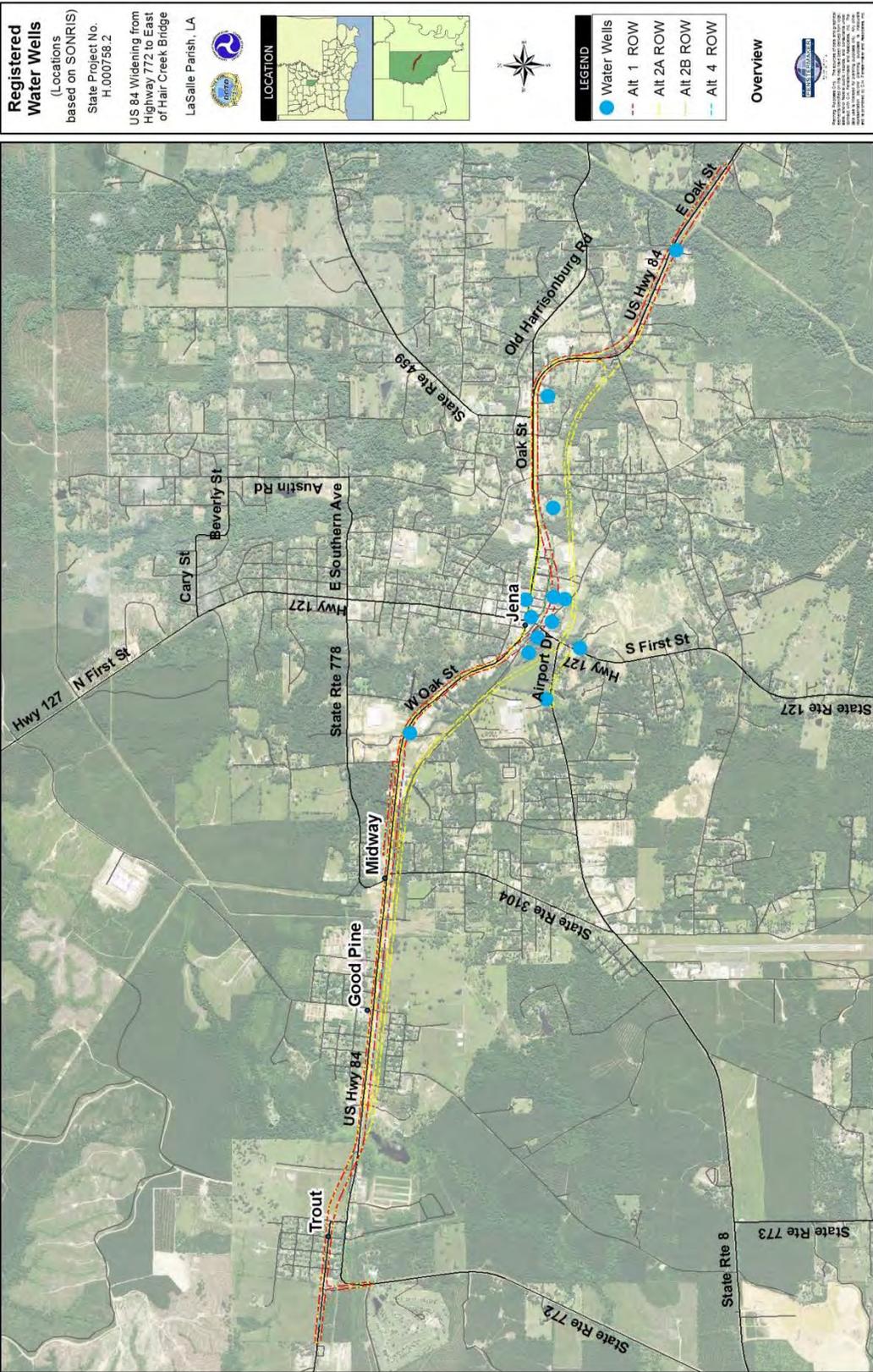
All of the Build Alternatives will result in impacts to the soils outside of the existing roadway pavement of US 84 during construction. Adverse impacts to water quality will be reduced by application of Best Management Practices (BMPs) and adhering to an erosion and sedimentation control plan. Appropriate measures, such as provisions for proper disposal and storage of materials and wastes, will also be taken to avoid accidental spillage of fuels or other chemicals and to control runoff into public drainage systems. National Pollutant Discharge Elimination System (NPDES) guidelines for Phase II construction activities will be followed during construction, and a site specific Storm Water Pollution Prevention Plan (SWPPP) will be developed for the project. Any water quality degradation that may occur during construction activities will be localized and short term.

#### **4.1.3.5 Subsurface Water**

The USEPA defines a sole source aquifer as an underground water source that supplies at least 50.0 percent of the drinking water consumed in the area overlying the aquifer. These areas have no alternative drinking water source(s) that could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. There is no sole source aquifer underlying the project corridor.

A review of the Louisiana Department of Natural Resources (LDNR) Strategic Online Natural Resources Information System (SONRIS) showed that there are registered water wells adjacent to the project site. *Figure 12* shows the locations of registered wells. There may be unregistered water wells in the vicinity of the project.

Figure 12: Water Wells Location Map



There is little potential for adverse effects to the subsurface waters from the proposed project. A stormwater discharge permit will be required by LDEQ for the project and best management practices will be implemented to manage runoff and prevent pollution.

#### **4.1.3.6 Floodplains**

Floodplains are areas flooded during storm events. The 100-year floodplain is defined as the area that would be inundated by a precipitation event that has a 1-in-100 chance of occurring every year. Floodplains are protected by Executive Order 11988, Floodplain Management; 23 Code of Federal Regulations (CFR) Part 650, *Location and Hydraulic Design of Encroachments on Floodplains*; and the US Department of Transportation 5650.2, Floodplain Management and Protection. These regulations require that encroachments within the 100-year floodplain are minimized and that land development inconsistent with floodplain values is avoided.

Flood zones within the project study area are identified on *Figure 13* and the topography of the study area is shown in *Figure 14*. Flood zones are geographic areas that the Federal Emergency Management Agency (FEMA) has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area. According to FEMA, Flood Zone A depicts areas with a 1.0 percent annual chance of flooding and a 26.0 percent chance of flooding over the life of a 30-year mortgage. Zone A corresponds to the 100-year floodplains that are determined in the Flood Insurance Study (FIS) by approximate methods. Because detailed analyses are not performed for such areas, no depths or base flood elevations (BFE) are shown within these zones. Flood Zone C depicts areas of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.

The project corridor crosses the 100-year floodplain in a few locations at waterways including Trout Creek, Hemps Creek – East and West Prong, and Hair Creek.

Encroachments upon the floodplains are not expected to violate applicable floodplain regulations by adversely impacting the BFE. The proposed project incorporates appropriately designed drainage structures. LaSalle Parish and the Town of Jena participate in the National Flood Insurance Program that regulates development within the floodplain.

Figure 13: FEMA Flood Zones Map

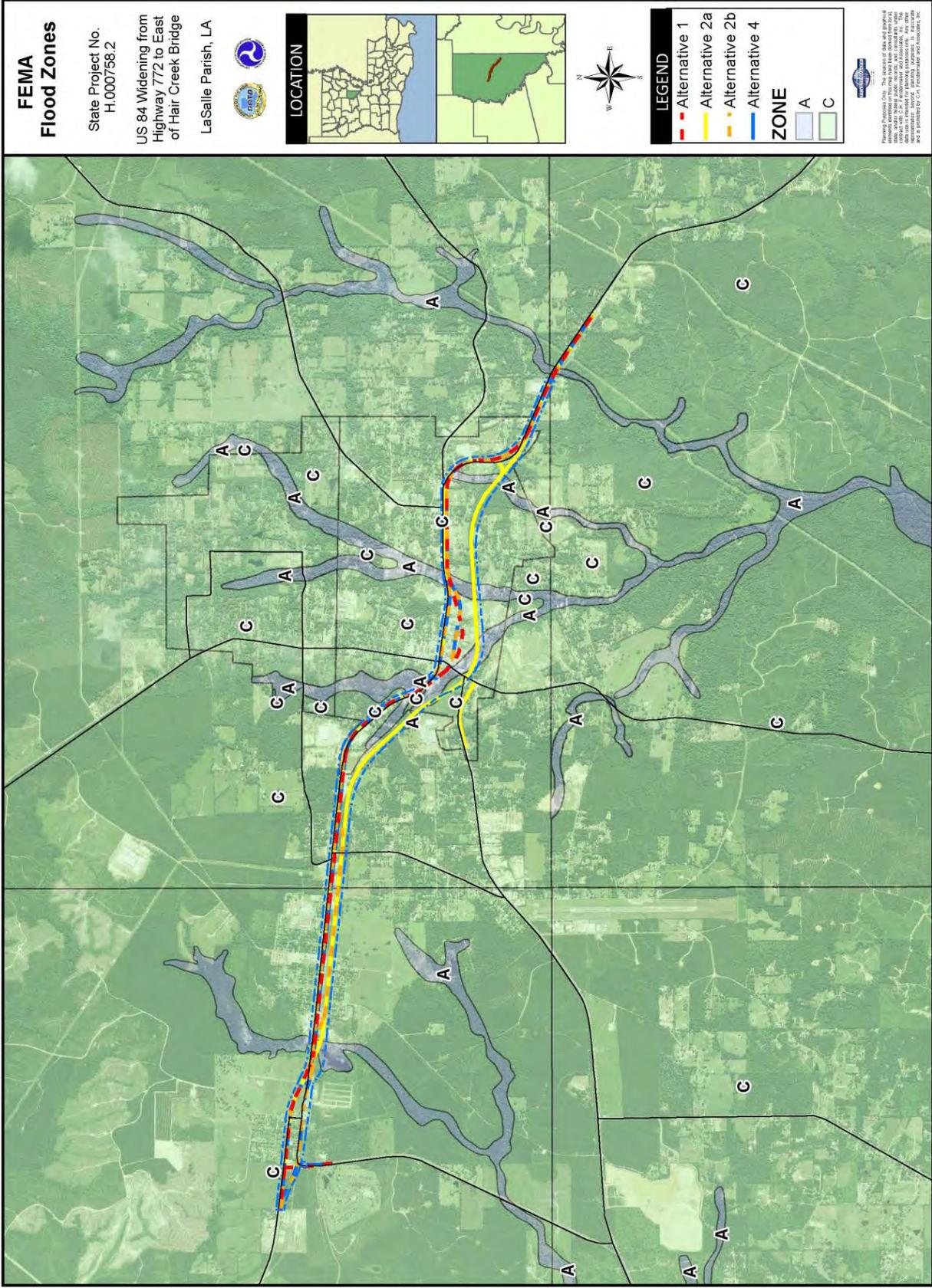
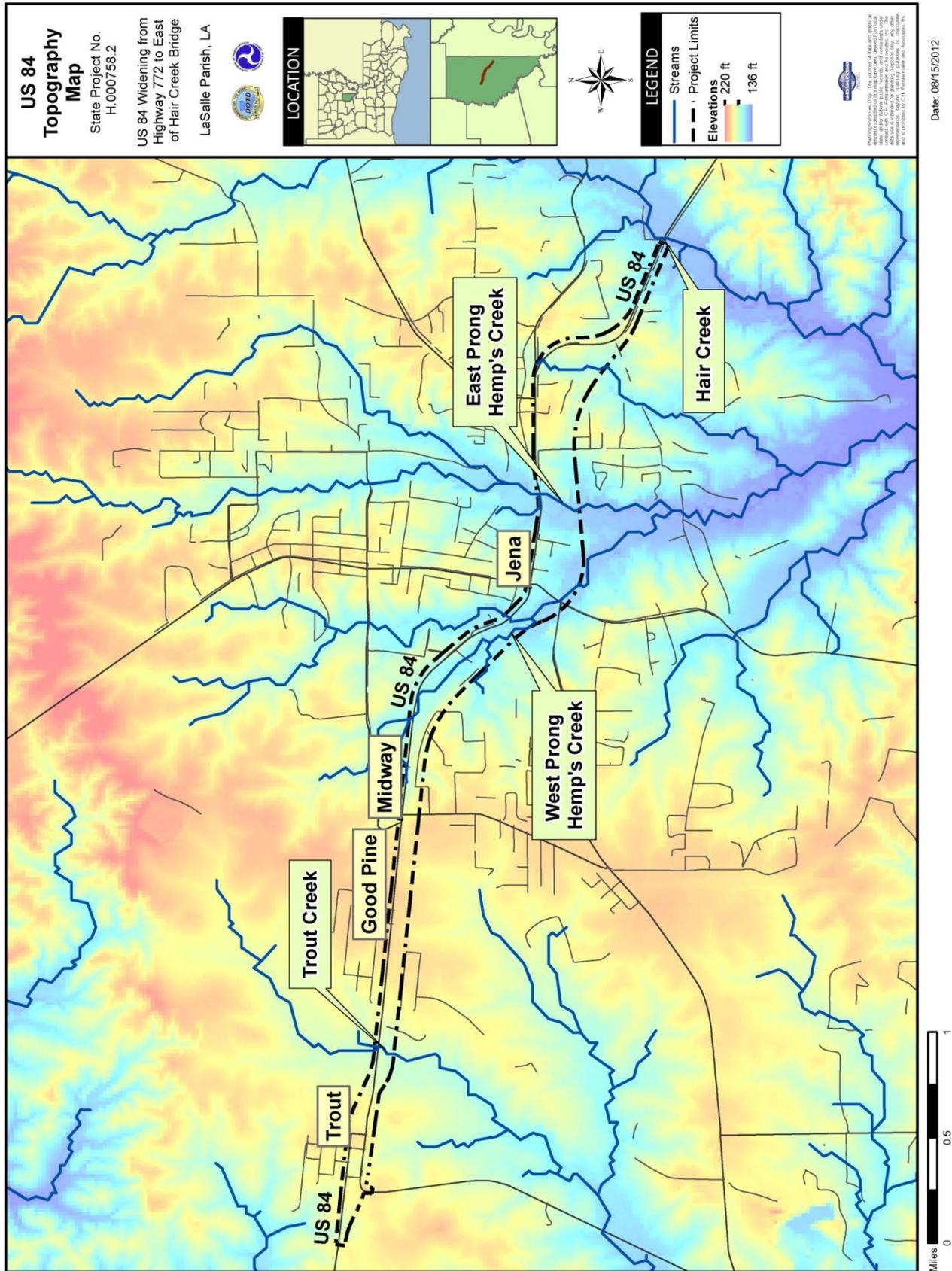


Figure 14: Topography Map



#### 4.1.3.7 Vegetation

The vegetation within the project corridor is predominantly herbaceous with some forested areas. The herbaceous communities can be characterized as maintained grassy areas, pasture for grazing cattle, and areas with dense shrubs. The forested communities can be characterized as pine/hardwood areas.

Herbaceous species such as Bermuda grass, Johnson grass, carpet grass, blackberry, and poison ivy grow along the creeks and streams and in vegetated swales and roadside drainage features. Forested areas contain trees such as Loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), live oak (*Quercus virginiana*), white oak (*Quercus alba*), water oak (*Quercus nigra*), American elm (*Ulmus americana*), sycamore (*Platanus occidentalis*), and sweet gum (*Liquidambar styraciflua*). Understory shrubs and scrub species include Chinese privet (*Ligustrum sinense*), Persian silk tree (*Albizia julibrissin*), buttonbush (*Cephalanthus occidentalis*), and black willow (*Salix nigra*).

The primary impact on the vegetation communities from the proposed project would be the direct loss of vegetation due to clearing and grubbing operations within the proposed right-of-way. During construction, fugitive dust may accumulate on adjacent vegetation, causing a temporary reduction in photosynthesis and transpiration rates. Soil erosion may result in sedimentation of downstream plant communities and off-site pollution may occur as runoff carries oil and grease from heavy equipment to adjacent plant communities. These potential impacts would be minimized, however, by implementing proper runoff and erosion control measures, dust suppression and control, and removal of accidental spills of fuel or waste oil during construction. As soon as possible after construction is complete, exposed soils should be stabilized by re-vegetation.

#### Significant Trees

According to LDOTD's Engineering Directives and Standards Manual Directive (EDSM) regarding treatment of significant trees, "...a significant tree is a live oak, red oak, white oak, magnolia or cypress that is considered aesthetically important, 18 inches or greater in diameter at breast height (4-foot-6-inches above the ground), and having a form that separates it from the surrounding vegetation or is considered historic. A historic tree is a tree that stands at a place where an event of historic significance occurred that had local, regional, or national importance. A tree may also be considered historic if it has taken on a legendary stature to the community; mentioned in literature or documents of historic value; considered unusual due to size, age; or has landmark status. Significant trees must be in good health and not in a declining condition."

Coordination with area Forestry and Wildlife Agent for the LSU Agricultural Center and the LDOTD's Environmental Section identified one location along the project corridor with potential significant trees at Nolley Memorial United Methodist Church (UMC). The four live oaks meet the species and size requirements and are considered significant to the community members of Jena and church goers of Nolley UMC.

Further investigation by a certified arborist should be considered to determine the health and integrity of these trees and a plan should be prepared to protect them during roadway construction. Significant trees correspondence, maps, and additional outreach regarding the trees are included in *Appendix J*.

*Based on public concern regarding the live oak trees (see Section 5.3.4 and Appendices F and J), two additional alternatives were created after the Public Hearing held on March 26, 2014, to mitigate impacts to the trees. LDOTD will continue to work with the community of Jena through the Construction phase of the project.*

#### 4.1.3.8 Wildlife and Protected Species

Section 7 of the Endangered Species Act of 1973 requires federal agency actions (e.g., project approvals, funding, other actions) to be implemented so that species listed as protected are not jeopardized in terms of their existence or habitat. The US Fish and Wildlife Service (USFWS) is charged with implementing this law and maintaining a list of protected plants and animals and their protection status. The Louisiana Natural Heritage Program (LNHP) maintains sighting records of federally protected species and species of state concern.

According to the USFWS, LaSalle Parish provides habitat for endangered and threatened species. The endangered species known to exist in LaSalle Parish is the red-cockaded woodpecker (*Picoides borealis*). The Sprague's Pipit (*Anthus spragueii*) is known to be a candidate species. According to the USFWS, there are no known threatened or endangered species located within the project area. During the wetland field survey, the presence of threatened or endangered species or their habitat was not detected within the project corridor.

According to the LNHP, LaSalle Parish contains several "Natural Communities" including cypress swamp, hardwood slope forest, scrub/shrub swamp, and small stream forest. A database review indicated no impacts to rare, threatened, or endangered species or critical habitats are anticipated within the areas of the project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified project site.

Animals that occupy the right-of-way will be temporarily displaced during construction; however, sufficient habitat exists adjacent to the right-of-way to absorb any displaced wildlife. No unique habitat will be impacted by this action.

#### 4.1.3.9 Farmland

The Farmland Protection Policy Act of 1981 (FPPA) requires federal agencies to minimize adverse effects of federal actions related to irreversible conversion of farmland to nonagricultural uses. Farmlands of concern include prime farmland, unique farmland, and *land of statewide or local importance*. Prime farmland is one of several types of important farmland defined by the US Department of Agriculture (USDA). Prime farmland soils, as defined by the USDA, are soils that are best suited to producing food, feed, forage, fiber, and oilseed crops. Such soils have properties that are favorable for the economic production of sustained yields of crops. Prime farmland soils produce the highest yields with minimal inputs of energy and other economic resources. For these reasons, Prime Farmland soils are of major importance in meeting the nation's short-term and long-term food and fiber needs.

Approximately 80.0 percent of the soils in the Project Area are rated as prime farmland soils. Four types of prime farmland soils were identified within the project corridor: Ruston fine sandy loam 1.0 to 3.0 percent slopes; Ruston fine sandy loam 3.0 to 8.0 percent slopes; Savannah fine sandy loam 1.0 to 5.0 percent slopes; and Pheba loam. A Farmland Conversion Impact Rating Form for Corridor Type Projects (Form NRCS-CPA-106) was submitted to the National Resource Conservation Service (NRCS) for comparison of impacts to farmlands for each of the Build Alternatives. Copies of the completed forms and correspondence are provided in *Appendix K*.

A majority of the project corridor is considered urban and is exempt from the rules and regulations of FPPA including the sections that pass through Trout, Midway, and the incorporated limits of the Town of Jena. The portion of the corridor that lies between the communities of Trout and Midway was assessed by the NRCS. This portion of the corridor lies predominantly along the watershed of Trout Creek.

**Alternatives 1 and 4** are located on existing US 84 in this section and would have minimal impacts to Prime Farmland. Both **Alternatives 2A and 2B** will require new alignments for the east bound lanes and will therefore impact a portion of Prime Farmland in this section of the corridor. A low conversion impact rating of 56 out of 260 was assessed by the NRCS for this portion of the proposed project. This rating indicates that the proposed project will not cause unacceptable impacts to farmland.

#### **Farm Bill Program**

The Farmland Protection Program is a voluntary program that helps farmers and ranchers keep their land in agriculture. The program provides matching funds to State, Tribal, or local governments and non-governmental organizations with existing farmland protection programs to purchase conservation easements or other interests in land.

Conservation programs under the 2008 Farm Bill are: Agricultural Management Assistance Program (AMA), Chesapeake Bay Watershed Initiative (CBWI), Cooperative Conservation Partnership Initiative (CCPI), Conservation of Private Grazing Land Program, Conservation Reserve Program (Farm Service Agency), Conservation Stewardship Program (CSP), Environmental Quality Incentives Program (EQIP), Agricultural Water Enhancement Program (AWEP), Conservation Innovation Grants (CIG), Farm and Ranch Lands Protection Program (FRPP), Grassland Reserve Program (GRP), Healthy Forest Reserve Program (HFRP), Small Watershed Rehabilitation Program, Wetlands Reserve Program (WRP), Wildlife Habitat Incentive Program (WHIP).

According to USDA NRCS District Conservationist, there are no conservation easements located in the project study area; therefore, the Build Alternatives will have no adverse effects to Farm Bill Program lands.

#### **4.1.3.10 Coastal Resources and Essential Fish Habitat**

The project corridor is outside the coastal zone and does not contain any marine or estuarine habitats.

#### **4.1.4 Cultural Resources**

Historical properties and archaeological sites are physical resources that also represent cultural values and human history. Special consideration must be given to the effects of the proposed project upon any district, site, building, structure, or object that is included or eligible for inclusion in the National Register of Historic Places (NRHP) as required by Section 106 of Public Law 89-665; 80 Stat. 915; 16 USC 470 as amended, also known as the National Historic Preservation Act. These properties are also afforded protection under Section 4(f) of the USDOT Act of 1966. A Phase I Cultural Resources Survey for the proposed project corridor was conducted in August 2012 and September 2012 to meet the requirements of these acts. The investigation was performed in accordance with guidelines provided by the Louisiana Division of Archaeology and the Louisiana Office of Historic Preservation within an Area of Potential Effect (APE), which coincides with the project corridor.

Prior to commencement of field work, a comprehensive literature search and records review regarding the project area was performed. Background research included examination of records on file at the Divisions of Archaeology and Historic Preservation with the Louisiana Department of Culture, Recreation and Tourism. Cultural resource reports, site files, and National Register of Historic Places were reviewed and geomorphological data, maps, and aerial images were examined. Based on the research, areas of high and low probabilities for encountering archaeological remains were identified.

A review of the previous archaeological surveys revealed one previously recorded site, the Louisiana and Arkansas Railroad Site (16LA72), is located within the project area. This site is not considered eligible for nomination to the NRHP. Architectural background research determined that two NRHP properties, the Good Pine Lumber Company Building (currently the Jena Cultural Center) and the Trout-Good Pine School (currently the LaSalle Head Start School), are located in the west end of the one-eighth mile buffer surrounding the project corridor. Also, more than 200 structures greater than 50 years of age have been previously recorded in the project area. Many of these are industrial housing constructed for sawmill workers. These were reassessed during the field investigation.

The archaeological field investigations resulted in the identification of six new historic sites. In addition, one previously recorded site (16LA72) was revisited. These sites are considered not eligible for nomination to the NRHP and no further investigations are recommended.

The architectural field investigations identified cultural resources within the APE for the projected corridor of US 84 and assessed the impact of **Alternatives 2B** and **4** on these cultural resources. Within the APE, two NRHP-listed properties (the Jena Cultural Center and the LaSalle Head Start) and one NRHP-nominated property (the Strand Theatre) were identified. Based on the current cultural resources survey, two additional properties are considered NRHP eligible: the Bank of Jena and the Billy Wood Ford building. Also, the current survey proposes there are four NRHP eligible historic districts, a Downtown Jena Historic District, a Trout Sawmill Historic District, a Good Pine Sawmill Historic District, and a Tall Timber Sawmill Historic District (*Figures 15-18*). It is recommended that Alternative 2B has no adverse effect on the NRHP-nominated Strand Theatre because of the distance of the alternative to the building. However, because of the proximity of US 84 to the Bank of Jena and Billy Wood Ford Dealership, there is the potential for vibrations during construction from **Alternative 2B**. **Alternative 2B** will have adverse effects on the Jena Cultural Center and the proposed Good Pine Sawmill Historic District. The construction of **Alternative 2B** in Good Pine would require the demolition or relocation of the NRHP-listed Jena Cultural Center. Either demolition or relocation would negate the NRHP eligibility of the individual property and would adversely affect the proposed Good Pine Sawmill District.

**Alternative 4** has been evaluated as having no adverse effect on the NRHP nominated Strand Theatre, or the proposed NRHP eligible Bank of Jena, or the proposed NRHP eligible Billy Wood Ford Dealership. **Alternative 4** has no negative impact on the proposed Trout Sawmill Historic District, the Tall Timber Sawmill Historic District, the Good Pine Sawmill Historic District, the Jena Cultural Center, or the LaSalle Parish Head Start if the existing vegetative screen is either left in place or replaced with in-kind vegetation after highway construction. *Table 3* shows a summary of the cultural resources identified. The full *Cultural Resources Survey* supplemental report is available under separate cover.

**Table 3: Summary of Cultural Resources for Each Alternative**

Cultural Resources	No-Build	Alt. 1	Alt. 2A	Alt. 2B	Alt. 4
Historic Property recommended as eligible for NR Historic District	0	9	12	2	0
Historic Property recommended as NOT eligible NR Historic District	0	26	21	15	12
Historic Property recommended as eligible or listed on NR as individual	0	0	1	1	0
Archaeological Sites Eligible for or Listed on NRHP	0	0	0	0	0
Archaeological Sites Not Eligible for NRHP	0	3	5	3	6

Figure 15: Proposed Historic Districts Overview

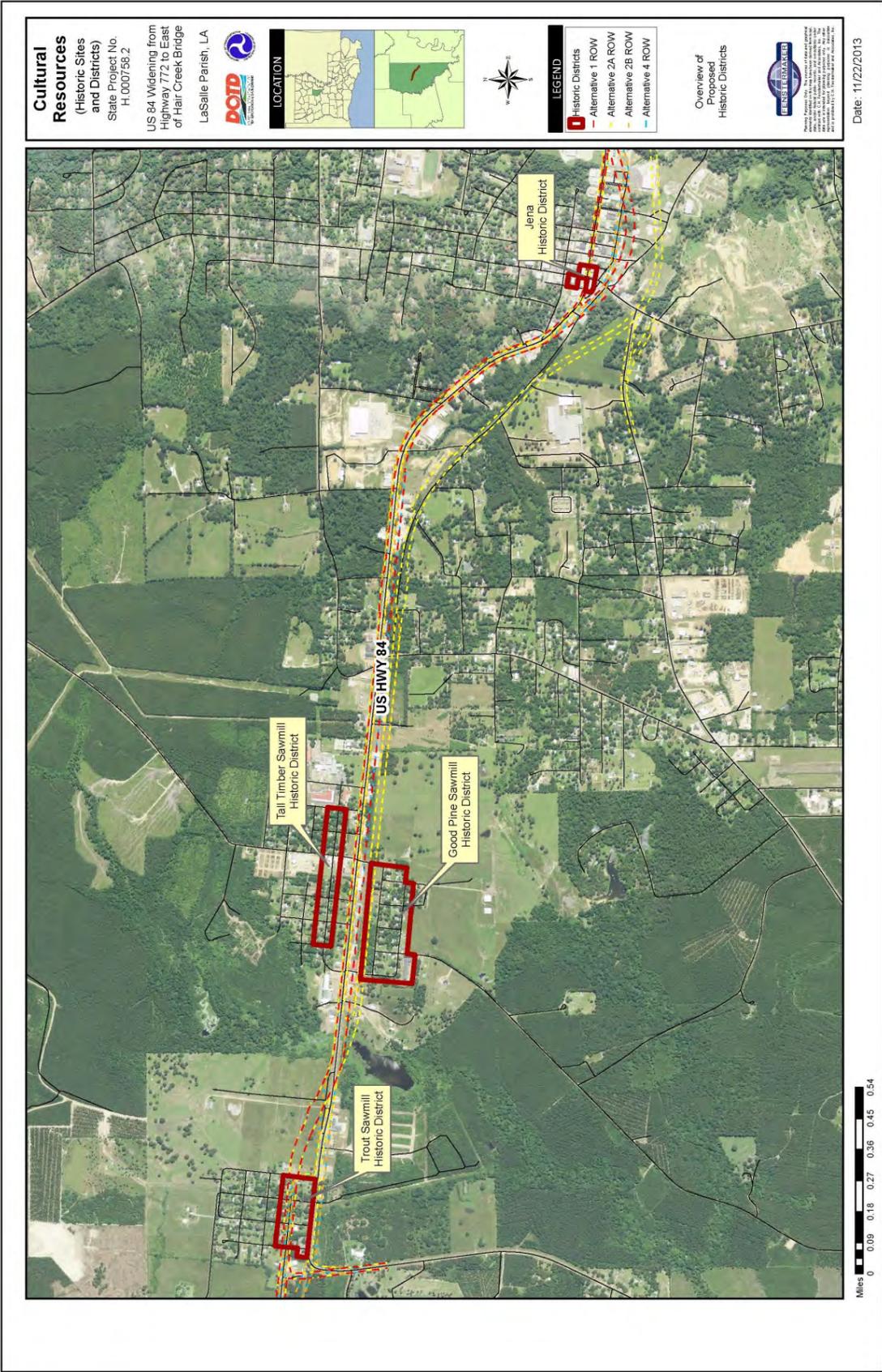


Figure 16: Proposed Trout Sawmill Historic District

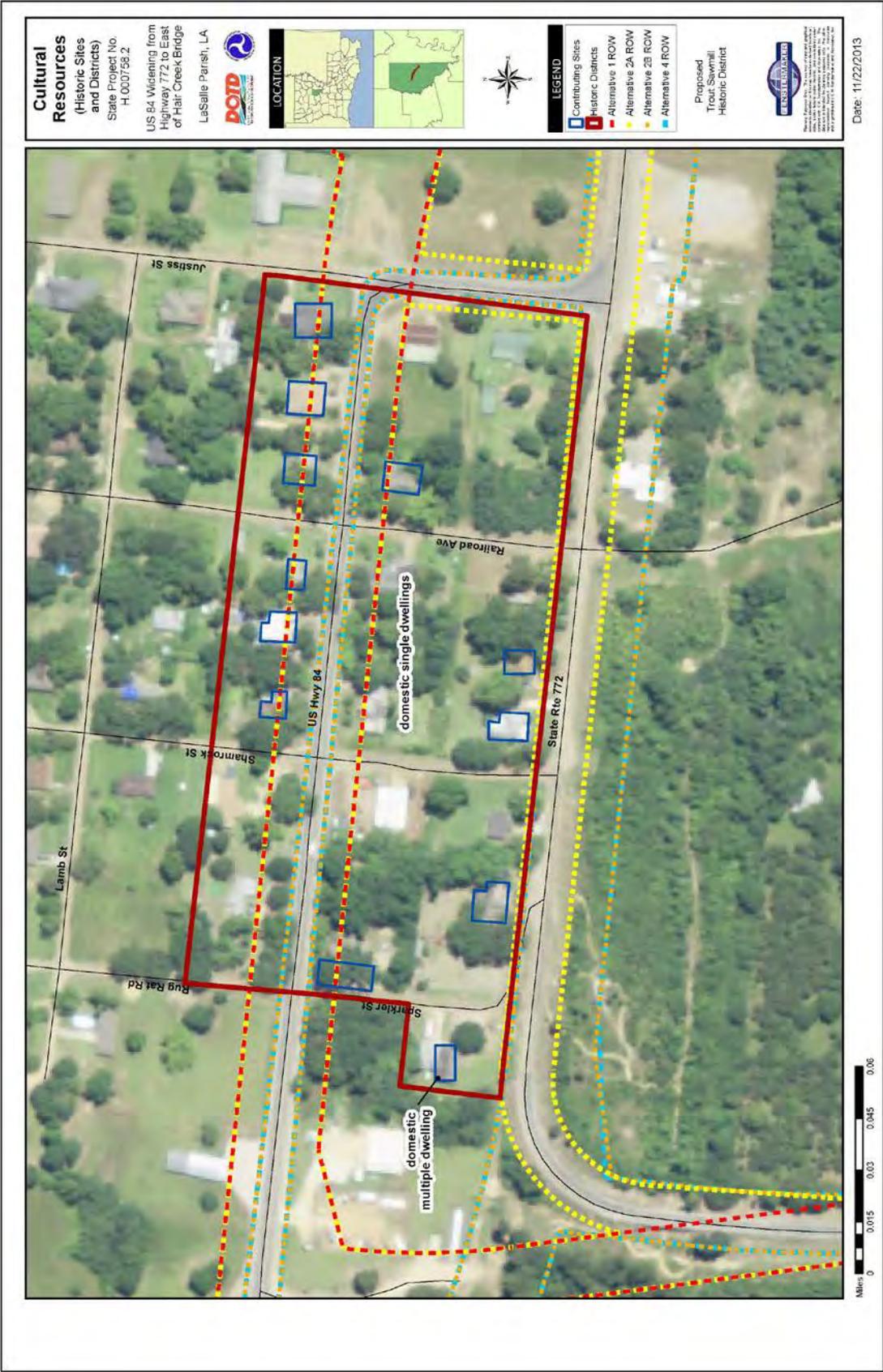
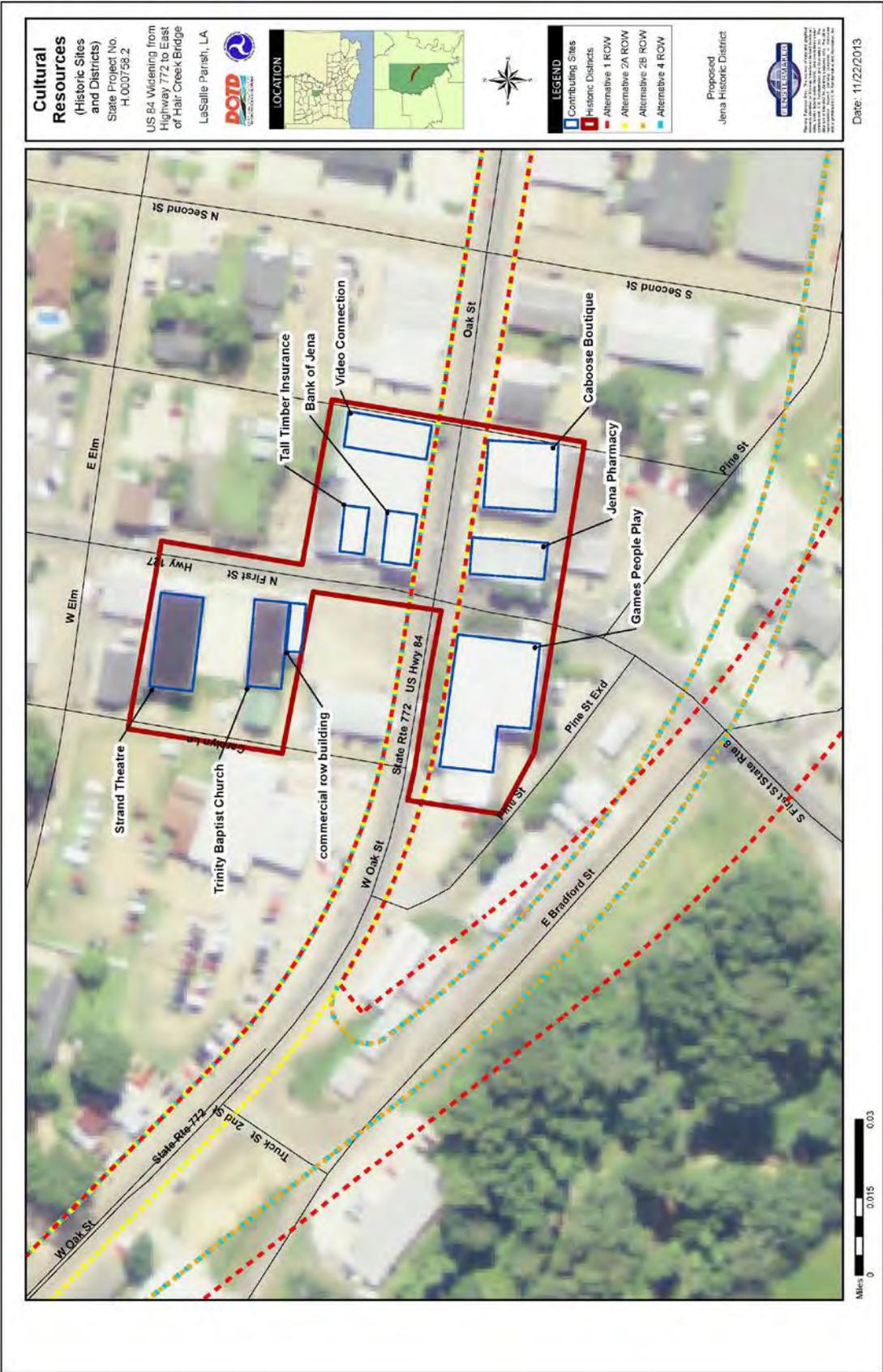




Figure 18: Proposed Jena Historic District



#### 4.1.5 Noise

Noise is not considered a resource, but noise produces a condition that potentially affects both human and natural environments. It is emitted from many sources including airplanes, factories, railroads, power generating plants, and highway vehicles. The dominant noise source in the project corridor is existing traffic, which is usually a composite of noises from engine exhausts, drive trains, and tire-roadway interaction. Noise increases as the source moves closer to the receiver; therefore the widening of US 84 could affect those areas that would be closer to the new travel lanes. A noise study was performed to establish the magnitude of the potential impact on the ambient levels from existing and future noise for all four Build Alternatives.

The specific location of an outdoor area where frequent human activity occurs that might be impacted by highway noise is known as a sensitive receiver, or receptor. Both the Build Alternatives and the No Build Alternative will have some impacts on receptors.

In accordance with LDOTD criteria, traffic noise impacts occur when the predicted traffic noise levels equal or exceed the LDOTD Noise Abatement Criteria (see *Table 4*), or when the predicted traffic noise levels exceed the existing noise levels by 10 decibels (dBA). The Noise Abatement Criteria (NAC) is measured in hourly A-weighted decibels (dBA). The most recent version of the Traffic Noise Model (2.5) was used to model current and future noise impacts.

**Table 4: Noise Abatement Criteria by Activity Category for Noise Receptors**

Activity Category	Hourly A-Weighted Decibels*	Description of Activity Category
A	56 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	66 (exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries and hospitals.
C	71 (exterior)	Developed lands, properties, or activities not included in categories A or B above.
D	--	Undeveloped lands.
E	51 (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

NA – not applicable to the noise study for this project.

\*A-weighted decibel (dBA) is the traditional measurement unit for environmental noise or unwanted sound that reflects what the typical human ear can hear.

The noise study identified five modeled receivers which have predicted noise levels for 2039 (Design Year) for all four Build Alternatives that exceed the Louisiana NAC of 66 dBA. Additionally, there are ten modeled receivers that have the predicted noise levels for 2039 (Design Year) that are 10 dBA or higher than the existing noise levels for all four Build Alternatives. Each receiver represents one dwelling unit in the model and there is one receiver that experiences both types of noise impacts (i.e., absolute sound level over 66 dBA and increase over 10 dBA). Therefore, based on the Louisiana Highway Traffic Noise Policy, it can be concluded that the proposed project potentially causes traffic noise impacts for 14 noise sensitive receivers in the study area. There were no noise impacts to sensitive receivers in the No Build Alternative. Detailed information on the noise study results are in the *US84 through Jena Noise and Air Quality Assessment Report* under separate cover. The results of the noise analysis are included in *Appendix L*.

#### 4.1.6 Section 4(f) and Section 6(f) Resources

Section 4(f) of the Department of Transportation (DOT) Act of 1966 stipulates that FHWA cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites, unless there is no feasible and prudent avoidance alternative following all possible planning to minimize harm to the property; or if the use of the land would have only a *de minimis* impact, or no adverse effect, to key features of the property.

Architectural survey was conducted during August and September 2012 and encompassed **Alternatives 2B** and **4** (Direct APE) as well as a 200 m (656.2-foot) radius buffer (Indirect APE) surrounding the proposed project area. Seven vehicular bridges were documented during survey. All of the bridges are vehicular slab span bridges constructed of concrete. With the exception of the Hemps Creek Bridge and the railroad overpass on LA 772, the bridges have no obvious alterations. The Hemps Creek Bridge on US 84 has a pedestrian walkway that is separated from traffic by a newer metal guardrail. The railroad overpass on LA 772 has both wood and concrete construction; the newer concrete piers were installed beside the wooden piers for additional support. The railroad beneath LA 772 is no longer used and the tracks have been removed. These seven bridges have been recommended to be not eligible for the NRHP. None of the bridges have local significance. Following the Section 4(f) Evaluation Diagram, there are no 4(f) issues to resolve concerning the bridges.

Both highway **Alternatives 2B** and **4** maintain the existing corridor of US 84 for eastbound traffic and the lanes for westbound traffic will veer south along West Bradford and Pine streets. The eastbound traffic lanes will have no adverse project effect and no 4(f) issues on the potential historic district in terms of viewshed, as they are confined to the existing corridor. It is possible that there will be increased ground vibrations due to construction and increased vehicular traffic.

**Alternative 2B** will produce adverse project effects and associated Section 4(f) issues on the proposed Good Pine Sawmill Historic District in the Good Pine area. **Alternative 2B** divides into two lanes at Good Pine. The eastbound lane of traffic would require construction south of the existing corridor and would necessitate the demolition or removal of the NRHP-listed Jena Cultural Center. The First Baptist Church of Good Pine, adjacent to the Jena Cultural Center, would also have to be removed or demolished if **Alternative 2B** is implemented. The church is a contributing element to the proposed historic district. Since the integrity of these buildings relies on their location and connection to surrounding properties, moving them would not be advisable as it would result in loss of integrity and NRHP eligibility. Additionally, the Jena Cultural Center is built around a large vault that would impede relocation and potentially cause damage to the historic materials. To avoid adverse effects on the NRHP properties/district necessitating a full Section 4(f) evaluation, it is recommended that a feasible and prudent avoidance alternative be considered.

**Alternative 4** closely follows the boundaries of the existing highway. Since the existing highway was in place during the historic period, **Alternative 4** has no adverse project effects, physical takings, or constructive use of the NRHP properties/Trout Sawmill Historic District, Tall Timber Sawmill Historic District or Good Pine Sawmill Historic District. Following the Section 4(f) Evaluation Diagram, there are no 4(f) issues to resolve concerning these districts. The Section 4(f) Evaluation is included in *Appendix M*.

Section 6(f) of the Land and Water Conservation Act (LWCA) requires that unavoidable conversion of lands or facilities acquired or developed with Land and Water Conservation Act funds be replaced in kind or coordinated with the Department of Interior. Jena Town Park is a Land and Water Conservation

Fund (LWCF) assisted facility but is located outside the project corridor and will not be impacted by any of the alternatives.

#### **4.1.7 Recreational Resources**

There are a few recreational resources that serve the project corridor. The Jena Town Park is a Land and Water Conservation Funds assisted facility but is located outside the project corridor. Also within Jena but outside the project study area are the LaSalle Country Club and a Senior Citizen Center. The Catahoula National Wildlife Refuge is located 12 miles east of Jena. While there are recreational facilities in the Town of Jena, adverse effects are not anticipated with either the Build or No Build Alternatives. None of these recreational resources would be impacted by the alternatives.

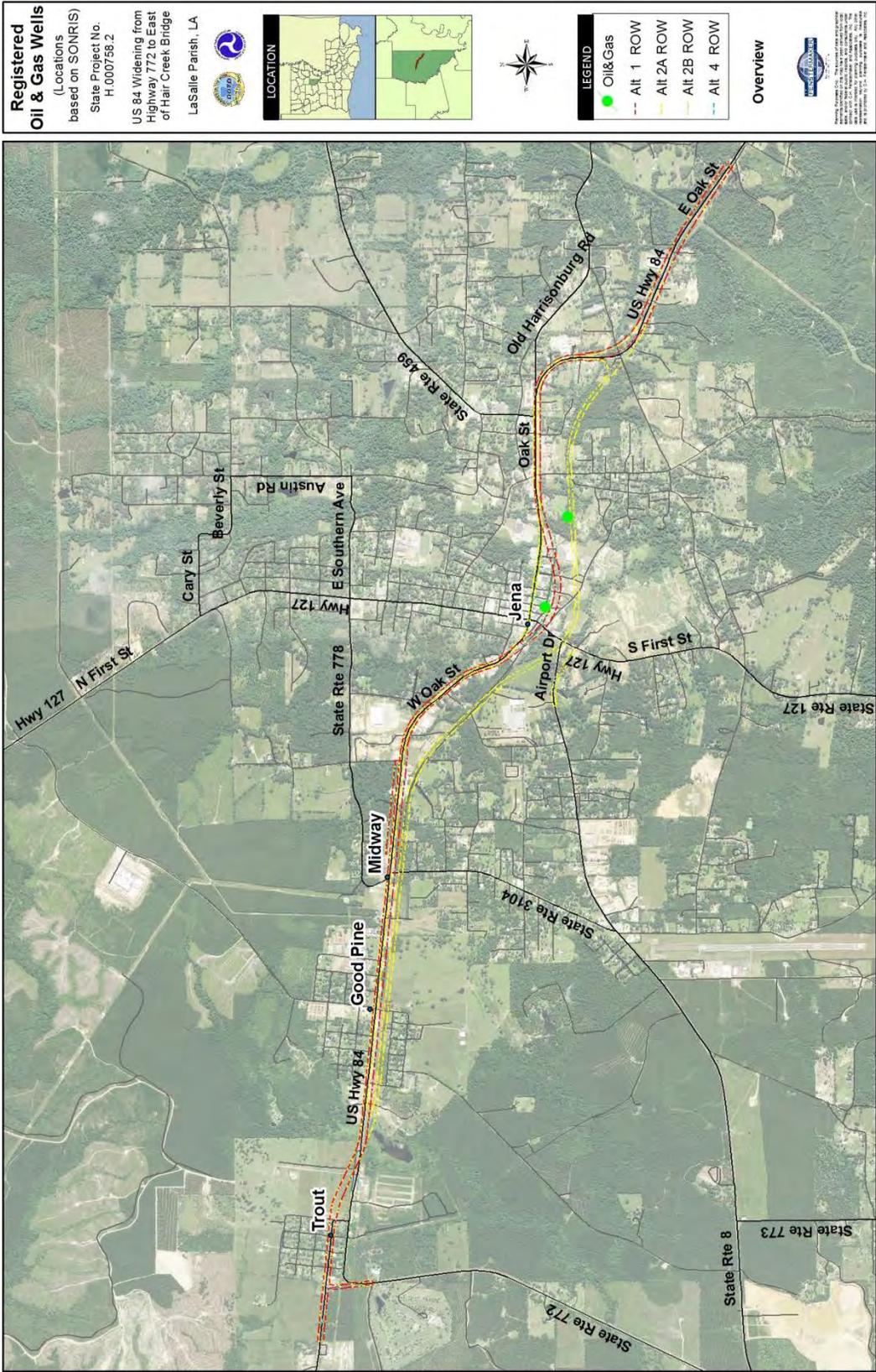
#### **4.1.8 Mineral Resources**

A review of the Department of Natural Resources (DNR) Strategic Online Natural Resources Information System (SONRIS) showed that there are no active leases in the project area; however there are plugged and abandoned wells drilled in search of hydrocarbons in the area. There are no anticipated mineral resource concerns with either the Build or No Build Alternatives. *Figure 19* shows the oil and gas wells locations in the project study area.

#### **4.1.9 Travel Patterns and Accessibility**

Travel patterns along US 84 would not be expected to change for through traffic such as heavy trucks for industrial and agricultural use. Travel patterns for residents, customers, and employees destined for homes and businesses on the proposed project corridor would be affected by the restriction on left-turns imposed by the median and the one-way couplet sections of the corridor. Travelers would be allowed to make left-turns only at median openings that shall be spaced at least .50 mile (2,640 feet).

Figure 19: Oil & Gas Wells Location Map



## 4.2 Constructability and Project Implementation

Four alternatives were analyzed to determine the most appropriate sequencing of construction to minimize impacts to local traffic on US 84.

The typical section for the proposed roadway is a divided highway with a median that ranges from 18 to 42 feet in width. For various segments of **Alternatives 2A, 2B, and 4**, a couplet section is also proposed that divides the eastbound and westbound directions by up to 1,000 feet. The sequential construction of the separated roadways would allow existing traffic to be maintained on US 84, while the new roadway is constructed. After the completion of one direction of the new roadway, traffic could be shifted to the newly constructed roadway and the proposed improvements to US 84 would be reconstructed. Constructing the new southern roadway section while maintaining existing traffic, and then shifting the traffic lanes during construction, would minimize impacts to houses and businesses along the corridor and allow for traffic to continue flowing during the entire course of construction.

In general, the existing US 84 roadway is proposed to be the future US 84 westbound direction of travel. There is one segment west of downtown Jena where the alignment is shifted to minimize impacts, and existing US 84 will be the future eastbound direction of travel. It is anticipated that the existing US 84 can be resurfaced to provide the structural pavement section required for the project. Therefore, the impacts to businesses and residents along US 84 will be minimal and access can be maintained throughout construction of the roadway resurfacing.

There are four major bridge crossings within the project corridor and two existing railroad bridges that will be removed. Beginning at the west end of the project, the following bridges and construction impacts are listed below:

1. *LA 772 Railroad Overpass* – The LA 772 Railroad Overpass was originally owned by Louisiana Midland Railway and was purchased by Illinois Central in 1967. The railroad was auctioned off in 1986 and is no longer in service. As part of the proposed project, this railroad bridge overpass will be removed and LA 772 will be reconstructed at grade and no railroad crossing will be built at grade. It is anticipated that LA 772 will be closed while this portion of the project is under construction. Major through traffic would be detoured along LA 3104 and LA 8 during construction. A detour road could be constructed around the construction zone to allow local traffic and access to the golf course.
2. *Mill Pond Creek* – The existing bridge at Mill Pond Creek was constructed in 1993 and is in good condition. Traffic will be maintained on the existing bridge, while a parallel bridge is constructed to the south for each of the alternatives. Construction impacts at this location will be minimal for each alternative.
3. *Hemps Creek West Prong* – The existing bridge at Hemps Creek West Prong just west of downtown Jena was constructed in 1955 and is recommended to be replaced for each of the alternatives. For **Alternatives 1, 2B, and 4** the impacts will be minor as the new bridge is in approximately the same location. The new bridge can be constructed and traffic can be shifted to it, prior to removing the existing bridge. For **Alternative 2A**, the eastbound alignment bypasses the downtown area so there is not a parallel bridge in this area. US 84 at the existing bridge location will be closed during construction. There are parallel bridges on Bradford Street and West Elm Street that can serve as detour roads during construction.
4. *Hemps Creek East Prong* – The existing bridge at the Hemps Creek East Prong was constructed in 1953 and is recommended for replacement for each of the alternatives. This bridge is located just east of downtown Jena, and similar to the Hemps Creek West Prong, has minor impacts to

**Alternatives 1, 2B, and 4**, but will require detours during construction for **Alternative 2A**, because the eastbound alignment is approximately 1,000 feet south of the existing crossing. Traffic would be required to detour along Carpenter road or Sycamore Street.

5. *Jena Railroad Overpass* – This railroad bridge overpass located east of Downtown Jena will be removed for each of the alternatives and US 84 will be reconstructed at grade. The proposed roadway alignment in this area is shifted north of the existing US 84 alignment to increase the curve radius at W. Baker Rd. The new westbound roadway can be constructed and traffic shifted to the new alignment prior to removal of the overpass, minimizing traffic impacts in the area.
6. *Hair Creek* – The existing bridge at Hair Creek was constructed in 1957 and is recommended for replacement in each alternative. For each alternative, the new eastbound bridge can be constructed south of the existing bridge and traffic shifted to the new bridge while the existing bridge is removed and reconstructed in the same location. Traffic impacts in the area should be minor for all four alternatives.
7. *Unnamed Creek* – **Alternative 2A** proposes a divided highway for a majority of the project extents. Based on the hydraulic analysis, a bridge was required at an unnamed creek crossing at approximately station 2695+00. Construction impacts at this location would be minimal as the area is currently undeveloped.

If the Project is fully funded, it is estimated that the construction duration would be approximately three years. However, funding limitations may require the project to be segmented into three construction projects, which could extend the construction of the project to a ten-year period. If the project cannot be fully funded at the time of construction, construction phasing would be an option to spread the funding over a longer period of time. The sequential phasing could be broken up into the following logical segments:

1. West of Downtown – From the beginning of the project to Wal-Mart.
2. Downtown Jena – From Wal-Mart to east of Hemps Creek East Prong bridge.
3. East of Downtown – From east of Hemps Creek East Prong bridge to east of Hair Creek bridge.

Constructing the roadway in segments would reduce the initial cost to begin construction of the project, but would most likely increase the overall cost of the project for the course of the project life.

The classification of impacts to traffic during roadway construction can vary from high to low. High impacts to traffic during construction would include road closures with rerouting of traffic and detours along major roadways. Medium impacts to traffic during construction would include temporary closures, for example, the reconstruction of a bridge which would require the rerouting of existing traffic. Low impacts to traffic during construction would require the use of temporary roadways and providing temporary driveway access.

Based on the constructability of each of the four Build Alternatives, **Alternative 2B** would have a low impact to local businesses and residents. **Alternative 4** and **Alternative 1** would also have low impacts to local businesses and local through traffic, but would create greater temporary impacts in the Midway and Good Pine areas as a result of widening existing US 84 to four lanes through those areas. **Alternative 2A** would have medium traffic impacts to local businesses and residents along US 84 because the eastbound alignment would be utilized as a bypass alignment during construction. For **Alternative 2A**, both the Hemps Creek East and West Prong bridges would also require temporary closing of US 84 and detouring traffic to remove and replace the existing bridges.

### 4.3 Indirect Effects

The purpose of the project is to improve mobility throughout the corridor to increase the capacity of the roadway, promote local traffic circulation, and improve the quality of life of the people in the community. As an indirect benefit, it is also expected to enhance economic development and improve access for local citizens and tourists. The inclusion of sidewalks and bicycle lanes in the design will also provide an indirect benefit of increased health, cleaner environment, economic impact, and quality of life. Meeting the project purpose would also encourage the conversion of agricultural and sparsely developed land to more intense uses. Additional indirect effects may include population growth and related changes in the pattern of land use, population density or growth rate and related effects on air and water and other natural systems. Offsetting these adverse indirect effects are economic benefits derived from new development and increased land values.

### 4.4 Cumulative Impacts

If the proposed project is built in any of its alternative forms, it may improve the declining trend of development along the corridor. It may improve regional connectivity as one of the missing components of the El Camino East/West Corridor. It may also provide development potential within downtown Jena by improving traffic patterns and providing a more walkable environment.

Cumulative impacts may be most pronounced on agricultural farmlands and natural habitat because these resources may be converted for commercial or residential development. All of these factors may increase the impact on the rural character of the project corridor over time.

### 4.5 What Can Be Done to Mitigate Adverse Impacts?

Context Sensitive Solutions (CSS) is an approach toward planning and development of road projects that has evolved from the early NEPA practices of FHWA and state transportation agencies. CSS is a philosophy that grew out of the realization that no transportation facility can be efficiently developed without considerations of site-specific issues. It responds to concerns over community values as well as social, economic, and environmental constraints through a creative and sensitive application of design criteria guidelines and standards.

US 84 asserts a physical presence as it traverses communities including the Town of Jena, and the proposed project must be aware of its context. From the outset, FHWA and LDOTD have approached the proposed project with CSS in mind. Although many CSS design features more appropriately come into play during the final design process, there are a number of elements that have been incorporated into the highway improvements planning documented by this EA. These factors include the previously discussed functional classification, design speed, and typical cross sections.

The objective of the development of the Build Alternatives is to minimize impacts to existing structures by reducing the amount of ROW while still providing elements of context sensitive design for the community. Elements of design to address the community's vision for the future road improvements include a multi-use path, bicycle lanes, sidewalks, divided median, and providing landscape buffering within the ROW. The CSS approach recognizes that the benefits of a contextual solution sometimes outweigh cost considerations, and it is a proactive way to avoid adverse impacts that would otherwise have to be mitigated. For those impacts that cannot be avoided, mitigation measures as described below would be implemented.

#### **4.5.1 Land Use and Community Character**

Improved roads may attract both traffic and businesses that could convert the rural uses of the corridor to more intense uses such as suburban-residential and commercial. However, land use planning with building codes, design guidelines, and height, setback, and landscaping requirements could be adopted by LaSalle Parish and the Town of Jena to maintain and improve the character of the corridor and limit potential negative effects from changes in land use.

#### **4.5.2 Relocations**

The number of impacts from relocations can be mitigated by reducing the amount of required ROW and aligning the roadway to avoid as many structures as possible. From the outset, LDOTD and FHWA understood the need to minimize the ROW requirements by considering its design elements. By reducing the proposed median width from 30 feet to 18 feet in some sections of the alignment and adjusting the widening to either the north or south of the existing roadway, the number of affected structures was reduced.

Acquisition of ROW and relocation activities are governed by the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Relocation Act). Relocation programs available through LDOTD to displaced residents can include relocation assistance, moving payments, and replacement housing payments, as well as rent supplements. Acquisition of ROW and relocations will be handled in accordance with LDOTD's Acquisition of Right-of-Way and Relocation Assistance Program.

During ROW acquisition, each property with a taken structure will be assigned a relocation officer from LDOTD. The relocation officer will be the point of contact for the residents and businesses during transition from existing to new properties. No person or family will be displaced until comparable replacement housing has been offered or provided to the displaced resident within a reasonable time prior to displacement.

In some instances, only a portion of the commercial or residential property will be taken and it may be possible for the business or residential structure to be relocated to the remaining property, or "remainder." This option is particularly attainable in rural or semi-rural areas, where properties are larger. The number of available properties in rural areas also provides a greater opportunity for relocation in the general area of the displacement.

It is anticipated that sufficient replacement home lots and housing units are available in the region to accommodate the potential residential relocation. If comparable replacement housing is not available at the time of negotiations, or if the displaced resident cannot afford it, LDOTD may use the Last Resort Housing program, which provides flexibility in the relocation program to ensure all displaced residents are provided decent, safe, and sanitary housing.

#### **4.5.3 Infrastructure**

During construction, utility lines carrying gas, water, electricity, and telecommunications would have to be protected. Some lines would be permanently relocated. Construction and relocation would be programmed to limit disruption of service. Individual wells that would be impacted by the proposed project would be identified to determine if the impacts would qualify the owner for relocation assistance under the Relocation Act.

#### 4.5.4 Potential Waste Sites

Further investigation of sites identified in the Phase I ESA may be required prior to the Design phase. Mitigation of adverse effects from these sites will be handled in accordance with the Secretary's Policy and Procedure Memorandum No. 48: Underground Storage Tank (UST) and Contaminated Site Policy (1995) on a case-by-case basis.

#### 4.5.5 Wetlands and Other Waters

To comply with the federal policy of ensuring that there is no net loss of wetland acres, unavoidable wetlands impacts along the corridor would be compensated according to an approved mitigation plan that will be coordinated during the permit process.

#### 4.5.6 Floodplains

Drainage structures included in the design for the proposed project would mitigate any impacts to the floodplain.

#### 4.5.7 Vegetation/Significant Trees

The LDOTD EDSM regarding treatment of significant trees recommends investigation of potential significant trees by a certified arborist during the design phase. The LDOTD Design Section shall indicate significant trees on the plans and implement a context sensitive design (i.e. preservation, specified limited impact, or special treatment) to accommodate these trees where practical.

*See Section 5.3.4 and Appendices F and J regarding two additional alternatives to mitigate impacts to the Nolley Memorial United Methodist Church live oak trees. LDOTD will continue to work with the community of Jena through the Construction phase of the project.*

#### 4.5.8 Cultural Resources

Suggested mitigation of any impacted historic properties is to avoid the property by altering the alignment or moving the structure. If highway construction requires demolition of historic structures, mitigation in the form of Historic American Buildings Survey (HABS) documentation should be conducted in consultation with the SHPO.

#### 4.5.9 Traffic Noise Abatement Measures

The LDOTD Highway Traffic Noise Policy (2011) requires that if a noise impact is identified, abatement measures must be considered and evaluated for all impacted receivers identified in the noise impact analysis. Noise abatement should be considered primarily to exterior areas where frequent human use occurs. In determining and abating traffic noise impacts, two tests must be met to justify noise abatement measures: feasibility and reasonableness. Based on the current LDOTD Highway Traffic Noise Policy, noise abatement measures include:

1. Construction of noise barriers (landscaping is not a viable noise barrier) including acquisition of property rights, either within or outside the highway ROW;
2. Traffic management measures (e.g., traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits and exclusive lane designations);
3. Alteration of horizontal and vertical alignments;
4. Acquisition of property rights (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise; and
5. Noise insulation of Activity Category D land use facilities.

For a noise barrier to be considered acoustically feasible, 75.0 percent of the first row of impacted receptors adjacent to the barrier must achieve at least a 5 dBA reduction in highway traffic noise. Other feasibility factors that are considered are safety, barrier height, topography, drainage, utilities, maintenance of the abatement measure, and access to adjacent properties.

The impacted receivers have individual driveways connecting them to the highway. To maintain access, the noise barrier would have to incorporate openings, which would prevent it from achieving a 5 dBA reduction in noise. Therefore, it was determined that noise barriers would not be feasible for any receptors within the project corridor.

Non-barrier measures such as traffic management and acquisition of property rights may be feasible for abatement of noise impacts for the proposed project. Major alterations of horizontal and/or vertical alignments are not feasible for this project, however minor alterations of horizontal alignments may be feasible.

#### **4.5.10 Traffic Disruptions**

A construction sequencing plan will be developed and followed to minimize traffic disruptions during construction. Congestion would be expected to increase temporarily during this period, but the plan will ensure that traffic continues to flow.

In terms of roadway construction, impacts to the traffic are not anticipated to be high. High impacts to traffic during would include road closures with rerouting of traffic and detours along major roadways. Medium impacts to traffic during construction would include temporary closures due to the construction of bridges or structures. Low impacts to traffic during construction would include temporary roadways and temporary driveway access. For the proposed alternatives, low impacts to traffic were anticipated with the only requirement of temporary driveway access and no rerouting or detouring of traffic.

#### **4.5.11 Safety**

While safety has not been identified as part of the purpose and need for the project, all elements of the proposed project would adhere to current design guidelines and would be expected to improve safety within the corridor for drivers, bicyclists and pedestrians. The removal of the dog-leg from Highway 772 to US 84 and the railroad overpass on Highway 772 were proposed to enhance both safety and traffic operations.

#### **4.5.12 Right-of-Way Acquisition Policy**

It is LDOTD policy to pay just compensation for all property required for the project. Owners of required properties may be contacted by an appraiser or appraisers, who will provide owners an opportunity to point out areas of importance during the evaluation of the property. After the evaluations have been reviewed and approved, a real estate agent will contact each property owner. A letter will be sent setting forth a cash offer for the purchase of the property or property rights. The agent will also explain the property value and discuss possible option for relocation of fences, parking, canopies, and other appurtenances.

#### **4.5.13 Accessibility**

In general, acquiring the rights of access to a property does not require mitigation as long as reasonable access remains after the acquisition.

#### 4.5.14 Local Road Closures

Dead end locations were proposed along the alignments to manage access from side streets and reduce impacts to existing businesses. **Alternative 1** and **2A** proposed dead end locations were near the LA 772 realignment and near the downtown area. **Alternative 2B** and **4** proposed dead end locations were near the downtown area. Exact locations of the proposed local road closures can be found in the line and grade report.

## 5.0 PUBLIC COMMENTS AND AGENCY COORDINATION

### 5.1 Public Involvement Plan

A Public Involvement Plan (PIP) was prepared for the US 84 through Jena EA to ensure that every reasonable opportunity was available to interested citizens, civic groups, public officials, and state and federal resource agencies to participate in the planning process. The PIP included a variety of methods for providing project feedback and obtaining information on the project.

Information about the public involvement process is provided in this section up to the date of the publication of the Draft EA. Upon approval by FHWA, the Draft EA will be circulated to local, state, and regional clearinghouses and the public will be notified through appropriate channels of the Draft EA's availability. There will be a 45-day comment period following the Notice of Availability. During that time, a Public Hearing will be held in Jena, Louisiana. Comments from the public received during the comment period will be considered.

### 5.2 Solicitation of Views

Information on the proposed project was sent to federal, state, and local agencies in the form of a Solicitation of Views request on May 24, 2010, and in a Scoping Meeting invitation on March 28, 2012. A brief summary of the comments received are including in *Table 5* and the full comments are included in *Appendix B*. These comments are included here for the record and were taken into account during the Alternatives Screening process.

**Table 5: Solicitation of Views Comments**

Respondent	Date Received	View/Comment	Response
LA Dept. of Culture, Recreation & Tourism, Office of State Parks	June 1, 2010	"Jena Town Park located north of US 84 near Sycamore Street is a Land and Water Conservation Fund project site. As such, this site has protection under Section 6(f). Until additional information is forthcoming, it is impossible to provide complete feedback in relation to recreation with this proposal. Our office would be interested in development of the Environmental Assessment as the project is more defined."	Jena Town Park is located outside the project corridor and will not be impacted by any of the alternatives.
US Environmental Protection Agency, Sole Source Aquifer Program	June 1, 2010	"Based on the information provided, we have concluded that the project does not lie within the boundaries of a designated sole source aquifer and is thus not eligible for review under the SSA program; however we would like to review the Environmental Assessment Report, when available."	Comment noted.

Respondent	Date Received	View/Comment	Response
Dept. of Wildlife and Fisheries, Natural Heritage Program	June 4, 2010	"After careful review of our database, no impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. No state or federal parks, wildlife refuges, scenic streams, or wildlife management areas are known at the specified site within Louisiana's boundaries."	Comment noted.
Dept. of Health and Hospitals	June 9, 2010	"Based upon the information received from the applicant we have no objection to the referenced project(s) at this time."	Comment noted.
Dept. of Social Services	June 15, 2010	"We have determined that the project will not adversely impact the operations of our agencies or their delivery of services to our customers who reside in the affected area. We offer no objection to this undertaking and look forward to its successful completion."	Comment noted.
Dept. of the Army, Environment Division Branch, Vicksburg Planning Branch	June 2, 2010	"The US Army Corps of Engineers, Vicksburg District, has no ongoing or proposed activities in the project area. If your proposed work involves the discharge of dredged or fill material into wetlands or any other waters of the United States, you may need a Department of the Army permit prior to construction."	Comment noted.
US Dept. of Homeland Security, US Coast Guard	June 16, 2010	"[We have] ...determined that this project is not a project over which the Coast Guard exercises jurisdiction for bridge administration purposes. A Coast Guard permit is not required."	Comment noted.
FEMA Natural Hazards Program	June 14, 2010	"Part of this project will be located in a Special Flood Hazard Area... As the communities of LaSalle Parish and the Town of Jena are participating in the National Flood Insurance Program (NFIP), these projects must be reviewed by the appropriate Floodplain Administrator in each community to ensure compliance with their Flood Damage Prevention Ordinance. " [see letter for details]	LaSalle Parish and Town of Jena Floodplain Managers were consulted and the proposed project will not violate applicable floodplain regulations.
LA Dept. of Environmental Quality	June 21, 2010	"There were no objections based on the information in the document submitted to us." [see letter for details regarding recommended permits]	Comment noted.
LA Dept. of Culture, Recreation & Tourism	June 29, 2010	"We are unable to complete the Section 106 review at this time due to the submittal of insufficient documentation." [see letter for details regarding required information to complete review]	The completed document was submitted for review.
LA Dept. of Natural Resources, Office of Conservation	June 28, 2010	"A review of our computer records for the referenced project area indicates no active oil, gas or injection wells located within or adjacent to the project area. However, there are plugged and abandoned wells drilled in search of hydrocarbons in the area. Additionally, LDOTD database indicates that there are registered water wells in the vicinity of the project area. Please note that unregistered water wells may also be located	Comment noted.

Respondent	Date Received	View/Comment	Response
		in the area.”	
Kisatchie-Delta Regional Planning & Development District, Inc.	July 8, 2010	“We have no objection to the proposed project; We have no objection and support the proposed use of proceeds to conduct project; There is no known flood hazard impact related to the proposed project; The proposed project is compatible with local needs and benefits regional use; The proposed project would not detract from employment and income opportunities of area; The project is located in a distressed area and investment by the funding agency...is appropriate and necessary to assist the quality of life and community and economic development; The proposed project is congruent with the Comprehensive Economic Development Strategy and considerate of both environmental and socioeconomic needs; This project would substantially benefit the region by improving access to a Scenic Byway traversing the region.”	Comment noted.
USDA Natural Resources Conservation Service	June 8, 2010	“If federal funds are involved, a determination of the “prime” farm land conversion impact, if any, will have to be made in accordance with the provisions of the Farmland Protection Policy Act of 1981” [see letter for soil details]	A Farmland Conversion Impact Rating Form for Corridor Type Projects was submitted to and assessed by the NRCS.
LA Office of State Parks	March 15, 2012	“Jena Town Park, with boundaries of Austin Road, Edwards Drive and Terral Street, is a Land and Water Conservation Fund (LCWF) assisted facility. As such, the boundaries of this facility are encumbered with Section 6(f)(c)(3) protection. It does not appear your project will infringe upon the boundaries of this location, but I seek to raise awareness that any such infringement will require a conversion process as detailed in the LWCF Manual...”	Jena Town Park is located outside the project corridor and will not be impacted by any of the alternatives.
US Environmental Protection Agency	March 21, 2012	“In accordance with the National Environmental Policy Act, and under Section 309 of the Clean Air Act, our agency has identified areas of concern that should be addressed in your environmental assessment: project area is within 1000 meters of a hospital; project area is within 100 meters of EPA regulated facilities; project area is within 1000 meters of a school; project crosses many waters of the U.S...; rare and/or sensitive habitats/vegetation within 100 meters of project area; project area within 100 meters of places on the National Register of Historic Places; project is within the tribal	Areas of concern were analyzed and addressed in the EA. The project alternatives were designed to minimize impacts to areas of concern as much as possible. The Purpose and Need has been

Respondent	Date Received	View/Comment	Response
		<p>boundaries of the Jena Band of Choctaw Reservation; project area is 28% minority... and 24% low-income... EPA's suggested Purpose and Need language: The purpose of the proposed project is to improve mobility throughout the corridor to relieve existing traffic congestion and promote local traffic circulation. The project is needed because of current and projected population growth, changing land use, and current and projected traffic volumes. All project "needs" should be fully supported."</p>	<p>revised to incorporate suggestion language.</p>
<p>LA Dept. of Environmental Quality, Business &amp; Community Outreach Division</p>	<p>March 22, 2012</p>	<p>"After reviewing your request, the Department has no objections based on the information provided in your submittal." [see letter for general comments]</p>	<p>Comment noted.</p>
<p>US Environmental Protection Agency, Wetlands Section</p>	<p>March 26, 2012</p>	<p>"Our preliminary review revealed that there may be jurisdictional waters of the US, including wetlands, along the proposed site. The EPA recommends that the applicant contact the US Army Corps of Engineers to verify if any jurisdictional waters will be affected by the project, and to begin the process of applying for any necessary permits. The EPA concurs with the use of an existing alignment for the construction of an upgraded highway, and also agrees with the extent of the project study area."</p>	<p>A wetland delineation was conducted and results are documented in Section 4.1.3.3. The USACE will make the final determination of as to whether areas identified in the delineation are jurisdictional wetlands.</p>
<p>Jena Band of Choctaw Indians</p>	<p>April 20, 2012</p>	<p>"Choctaw people have lived along and around the Trout Creek and Catahoula Lake area since before the 1790's. You can also include all of the other rivers located along Hwy. 84's current route to also be of concern to us. As you may or may not know, there is actually quite a few mound sites along Old River, Little River, as well as Sacred Places in the area of concern to the Jena Band and possibly other tribes such as the Tunica-Biloxi, and Caddo as well. There are numerous ceremonial landscapes throughout this area... We are in no way in opposition to the widening/four lane project for Hwy. 84. We are in complete agreement it is and has been a necessary improvement for the growth of the Town of Jena physically and economically. The goal is to complete a well needed project, at the lowest cost necessary, both monetarily and culturally, and to maintain a great working relationship between the LDOTD and the JBCI."</p>	<p>Comment noted.</p>

Respondent	Date Received	View/Comment	Response
LSU AgCenter Rapides Extension Office	June 26, 2012	"...trees on which you may want to do some further investigation... [are] located at Justiss Memorial Methodist Church, Nolley Memorial Methodist Church, and Jena Church of Christ. These trees meet all of the species and diameter requirements associated with being significant trees."	Further coordination with the LDOTD Environmental Section identified one location for significant trees. Further investigation by a certified arborist is required prior to construction and is documented in the Summary of Mitigation and Environmental Commitments.
State Historic Preservation Office (SHPO)	December 2, 2013	"In reference to the four project alternatives, we concur [with] the report's finding that Alternative 4 would avoid Adverse Effect on any historic property. As such, we recommend that Alternative 4 be adopted for the project route."	Comment noted for the project record.
US Environmental Protection Agency	April 14, 2014	"Section 5.0: Complete section 106 consultation with the Louisiana SHPO and provide all SHPO correspondence in a dedicated section of the Final EA."	Section 106 Consultation was completed and SHPO correspondence is included in Appendix B.
US Environmental Protection Agency	April 14, 2014	"Tribal Consultation: Continue to consult the JBCI on all aspects of the DEA in accordance with government-to-government consultation requirements set forth in Executive Order (EO) 13175. Include the consultation correspondence in a dedicated section of the Final EA."	All outreach efforts with the JBCI are summarized in Section 5.4 and copies of correspondence included in Appendix B.
US Environmental Protection Agency	April 14, 2014	"Section 4.2: Describe how the potential partial funding scenario will affect noise levels in the project area. Of particular importance would be any changes in duration, frequency, or magnitude of noise levels on sensitive receptors.  Appendix L: Discuss the level of noise reduction the abatement measures are expected to reduce noise on sensitive receptors and discuss the measures that will be implemented if noise abatement measures are not successful in reducing traffic noise below significance thresholds."	1. The receivers with modeled exceedances of 66 dbA were only slightly over 66 dbA and 10 dbA thresholds: a. Between 66.1 and 67.9 dbA versus the 66 dbA absolute noise threshold and b. Between 10.5 and 13.8 dbA versus the 10 dbA noise increase threshold.

Respondent	Date Received	View/Comment	Response
			<p>2. The mitigation measures suggested are commonly able to reduce minor exceedances below the applicable noise thresholds.</p> <p>3. Given the small magnitude of the exceedances, the need for additional abatement measures is unlikely.</p> <p>The Appendix was updated to the final version.</p>

### 5.3 Public Involvement in the Environmental Process

#### 5.3.1 July 2012 Public Meeting

One public meeting was held on July 12, 2012, at Jena Town Hall for the US 84 widening project as part of the EA process. The meeting was held as an informal open house with a station format including a short presentation on the project exhibits for each proposed alternative and typical sections.

The public meeting was advertised in several ways. Property owners along the project corridor were mailed a postcard on June 27, 2012. A display advertisement was advertised in the Jena Times on July 3 and July 11, 2012, and in the Alexandria Town Talk on July 8, 2012. A press release was emailed to stakeholders and media on July 3 and July 9, 2012. Meeting fliers were also emailed with the Press Release and posted at Jena Town Hall and local businesses.



The public meeting provided an opportunity to view the proposed alternatives, ask questions of the project team, and provide written and verbal comments for consideration. Comment forms were handed out to each attendee when signing in. During the open house, attendees were able to turn in a completed written form. Attendees were also able to turn in comment forms via email or mail. Comments were received through July 23, 2012. The exhibits, materials, and handouts presented at the Public Meeting were also made available on the Town of Jena website. The public meeting summary is included in *Appendix C*.

In addition to the Public Meeting, there was an opportunity for the local Tribes and the local elected officials to meet with the Team separately, prior to the public presentation. This gave the local leaders an opportunity to review the materials, discuss issues, and provide comments to the Team. A total of 39 comment forms were received regarding the US 84 project



during the public comment period. At the open house, 27 written comment forms were turned in. There were three emails and nine written comment forms mailed within the comment period. A summary of the comments received are included in *Appendix C*.

In addition to comments on the Purpose and Need and Alternatives, the participants were asked to comment on Environmental/Socioeconomic Issues, Trout Realignment Options, and asked to rank importance of Context Sensitive Design (CSD) amenities from 1 to 5 (1 being “Not Important” and 5 being “Very Important”). The preferences for Alternatives and Trout Realignment Options are detailed in *Table 6*. The preferences for ranking of importance for CSD amenities are detailed in *Table 7*.

**Table 6: Public Comment Summary on Alternatives and Trout Realignment Options**

Alternative 1	Alternative 2a	Alternative 2b	Alternative 4	Trout Option A	Trout Option B	Trout Option C
0	6 – 8*	9 – 11*	17	5	18	10

\*2 commenters chose 2 alternatives options

Six people responded that they have **No Opinion** on Trout Options.  
 Five people responded that they have **No Opinion** on Alternatives Options.

Of the 39 respondents, approximately 28.0 percent preferred **Alternative 2B** and 44.0 percent preferred **Alternative 4**. For the Trout Realignment Options, 46 percent preferred Option B. Option A was preferred by 13.0 percent of the respondents, Option C was preferred by 26.0 percent of the respondents, and 15.0 percent had no opinion.

**Table 7: Survey Summary on Context Sensitive Design Amenities**

Amenity	1	2	3	4	5	No Opinion
	“Not important”			“Very important”		
<b>Bike Lanes</b>	6	4	10	4	12	3
<b>Sidewalks</b>	4	2	4	8	16	5
<b>Landscaping</b>	0	3	7	7	18	4
<b>Lighting</b>	0	1	5	2	26	5
<b>Other</b>					4*	

\*One commenter suggested shoulders as a very important CSD amenity; another suggested protecting residential neighborhoods; and another specified an east bound turn lane for commenter’s place of business.

Of the 39 respondents, a majority identified each amenity as “Very Important”. Approximately 41.0 percent identified *Bike Lanes* as “Very Important/Important” by ranking “4” or “5,” while 26.0 percent ranked *Bike Lanes* a “3.” About 62.0 percent identified *Sidewalks* as “Very Important/Important” and *Landscaping* was identified as “Very Important/Important” by 64.0 percent of the respondents. *Lighting* was identified as the most important CSD amenity by 72.0 percent of the respondents.

A brief summary of the overall comments received include the following:

- Most respondents agree that the project serves a purpose and is needed, especially an improvement in traffic and safety conditions.
- Many preferred **Alternative 4**, explaining that this alternative is “best for business in Jena” and will not bypass downtown.
- A majority preferred Trout Realignment Option B, one person cited traffic improvements for residents, but many did not specify why this was their preference.
- A few voiced concern for impacts to businesses and residential properties in Trout.

The comments received during the public comment period were considered during the subsequent development and refinement of alternatives which were evaluated in this EA. The entire comment summary is included in *Appendix C*. Agency comments to the Draft EA are provided in *Table 8* and at the end of this report.

### 5.3.2 January 2014 Public Outreach – Historic Districts

During the public comment period for the July 12, 2012, public meeting, the State Historic Preservation Office (SHPO) responded with recommendations to include additional potential historic districts along the project corridor. After LADOTD’s consultants conducted additional field work and research, the recommendations were incorporated into the Draft EA. Outreach was conducted in January 2014 to inform the public of the changes. The public outreach materials are included in *Appendix D*.

### 5.3.3 March 2014 Public Hearing

A public hearing was held on March 26, 2014, for the US 84 widening project as part of the Environmental Assessment process. The hearing was held as an informal open house with a station format including a short presentation on the project and project exhibits for proposed alternatives and typical sections.

The objective of the public hearing was to seek input from individuals and community organizations on issues and concerns related to the potential impacts associated with the proposed widening of US 84 from Hwy 772 to just east of Hair Creek Bridge in LaSalle Parish, LA, and to receive comments on the preferred alternative, **Alternative 4**.

A total of 53 public comments were received regarding the US 84 project during the 40-day comment period. At the open house, seven written comment forms were turned in and three comments taken by the court reporter. There were 29 emails and 14 written comment received by US mail. A summary of the comments and responses is included in *Appendix E*.

In addition to comments on the preferred alternative, the majority of comments received – 40 comments – were regarding impacts to oak trees in front of Nolley United Methodist Church. These comments and the Team’s responses are included in the Comment Table in the Appendix.

A brief summary of the overall comments received include the following:

- Most respondents agree that **Alternative 4** should be the preferred alternative.
- A majority voiced concern for impacts toward four oak trees in front of the Nolley Memorial United Methodist Church and gravesite of the church founder, Reverend Richmond Nolley.

LDOTD and FHWA felt that the number of comments received regarding the live oak trees in front of Nolley UMC justified further investigation into alternative alignments for that section of **Alternative 4**.

#### 5.3.4 July 2014 Public Meeting – Significant Trees

A public meeting was held on July 29, 2014, at Nolley Memorial UMC to present alternative alignments for the proposed widening in front of the church, approximately 400 feet west of Carpenter Road toward the downtown couplet. The meeting was held as an informal open house with a station format including exhibits for proposed revisions to **Alternative 4**.

The objective of the public meeting was to seek input from individuals and community organizations on issues and concerns related to the potential impacts associated with the proposed widening of US 84 adjacent to the Nolley UMC property, particularly the four live oaks on the church property, and to receive comments on the proposed revisions to **Alternative 4**.

A total of 17 public comments were received during the two week comment period. At the open house, 10 written comment forms were turned in. There were four emails and three written comments received by US mail.

- Of the two Alternatives presented, commenters preferred **Alternative 4B**.
- Some proposed that a third alternative should be presented that curves northward to avoid the trees altogether, displaces the scrap metal business across the street from the church, and then curves southward to avoid the new gas station.

Alternative 4B	Alternative 4C	Other
6	2	9

The public comments received during the public comment period were considered during the subsequent development and refinement of alternatives which were evaluated in this EA. The entire comment summary is included in *Appendix F*. A full description of **Alternatives 4B** and **4C** and the development process is provided in *Section 6.3*.

#### 5.4 Tribal Coordination

Letters to regional Tribes were mailed at the start of the project on March 14, 2012, opening Federal to Federal communication between the Tribes and FHWA. The Jena Band of Choctaw Indians (JBCI) responded on April 23, 2012, with their views on the project (see *Table 5*). DOTD and FHWA continued coordination with JBCI throughout the project. A meeting was held with FHWA and JBCI on July 12, 2012, prior to the public meeting. A copy of the Draft EA and Public Hearing announcements were sent to JBCI as well as letters and emails regarding meetings. Correspondence is included in *Appendix B*.

## 6.0 COMPARISON AND SELECTION OF ALTERNATIVES

### 6.1 What are the Comparative Advantages and Disadvantages of Each Alternative?

A comparison of quantifiable project impacts is provided in *Table 9*, offering a basis for discussion and selection of a preferred alternative. The screening criteria identified in *Table 9* represent both human and natural environmental impacts as well as engineering impacts on four identified proposed

alternatives and the No Build Alternative. These criteria were selected to represent transportation efficiency, safety, community issues, land acquisition, and costs that are addressed in this study.

**Table 8: US 84 through Jena Alternatives Screening Details**

Evaluation Measure	Units	No Build	1	2A	2B	4
<b>Potential Relocation Impacts</b>						
Residential Relocations	Each	0	34	25	24	24
Business Relocations	Each	0	63	18	43	57
Community Relocations	Each	0	0	1 <sup>a</sup>	1 <sup>a</sup>	0
Other Relocations	Each	0	1 <sup>b,c</sup>	1 <sup>c</sup>	1 <sup>c</sup>	1 <sup>c</sup>
<b>Potential Traffic Impacts During Construction</b>		NA	Low	Low	Med	Low
<b>Potential Frontage Impacts</b>						
Residential Properties	Each	0	7	9	4	4
Business Properties	Each	0	27	107	52	24
Community Properties	Each	0	4	1	2	1
Vacant/Unused Structures	Each	0	70	68	78	67
<b>Potential Underground Risk Sites</b>						
Recognized Environmental Concerns (RECs)	Each	0	39	39	40	40
Oil and Gas Wells	Each	0	0	0	0	0
<b>Natural Environment</b>						
Wetlands Filled	Acres	0	0.61 <sup>d</sup>	1.02 <sup>d</sup>	0.891 <sup>e</sup>	0.882 <sup>e</sup>
Scenic Streams	Each	0	0	0	0	0
Stream Crossings	Each	0	4	4	4	4
Other Waters Filled (RPW)	Acres	0	--	--	0.511 <sup>e</sup>	0.562 <sup>e</sup>
Other Waters Filled (Non-RPW)	Acres	0	--	--	0.427 <sup>e</sup>	0.598 <sup>e</sup>
Ponds Filled	Each	0	0	0	0	0
Sole Source Aquifer Impacts	Acres	0	0	0	0	0
Floodplain Encroachment	Acres	0	8.4	9.3	7.4	7.6
Protected Species	Each	0	0	0	0	0
Prime and Unique Farmland	Acres	0				
Coastal Res./Essential Fish Habitat	Each	NA	NA	NA	NA	NA
<b>Utilities</b>						
LDOTD-listed Water Wells	Each	0	9 <sup>f</sup>	12 <sup>f</sup>	8 <sup>f</sup>	8 <sup>f</sup>
<b>Cultural Resources</b>						
Hist Prop recommended as eligible for NR Historic District	Each	0	9	12	2	0
Hist Prop recommended as NOT eligible NR Historic District	Each	0	26	21	15	12
Hist Prop recommended as eligible or listed on NR as individual	Each	0	0	1	1	0
Archaeological Sites Eligible for or Listed on NRHP	Each	0	0	0	0	0
Archaeological Sites Not Eligible for NRHP	Each	0	3	5	3	6
<b>Noise</b>						
Residential Receivers Design Year Noise Level > 66 dBA	Each	0	3	2	3	4

Evaluation Measure	Units	No Build	1	2A	2B	4
Residential Receivers Design Year Increase > 10 dBA	Each	0	2	6	6	0
Total # Impacted Receivers	Each	0	4 <sup>f</sup>	8	9	4
<b>ROW Acquisition</b>	Acres	N/A	63	67	47	55
<b>ROW Costs<sup>h</sup></b>	\$Million	N/A	\$9.489	\$5.125	\$6.598	\$8.995

<sup>a</sup> Church, <sup>b</sup> Cell Tower, <sup>c</sup> 74 mini-warehouses, <sup>d</sup> Desktop Delineation, <sup>e</sup> Field Delineation,

<sup>f</sup> Water well locations from SONRIS are approximate and may be located anywhere on the parcel they are attributed to. The locations identified are either within the proposed ROW or on the property adjacent to the proposed ROW.

<sup>g</sup> There is one receiver (E030) that experiences both types of noise impacts (i.e., absolute sound level over 66 dBA and increase over 10 dBA).

<sup>h</sup> The estimated ROW costs include costs for land acquisition, improvements and damages only.

**Table 9: Comparison of Probable Costs by Build Alternative (\$Million) (2012)**

	Alternative 1 (5.86 Miles)	Alternative 2A (5.66 Miles)	Alternative 2B (5.86 Miles)	Alternative 4 (5.85 Miles)
Construction <sup>a</sup>	\$53.157	\$51.004	\$50.051	\$54.728
Engineering (10%)	\$5.316	\$5.100	\$5.005	\$5.473
Right of Way and Relocation Costs <sup>b</sup>	\$17.139	\$11.121	\$12.368	\$15.556
<b>Project Totals</b>	<b>\$75.611</b>	<b>\$67.225</b>	<b>\$67.424</b>	<b>\$75.757</b>

<sup>a</sup> Construction costs include 25% contingency.

<sup>b</sup> Includes ROW costs from *Table 9*, relocation costs, and soft costs.

While the EA analyzes each Build Alternative and the No Build alternative, this section focuses on the comparative advantages and disadvantages on **Alternatives 2B and 4**. Following the Public Meeting on July 12, 2012, **Alternatives 2B and 4** were identified as the preferred alternatives on which to conduct detailed field analyses. This was based on the impact data obtained during desktop evaluations for each alternative coupled with feedback received during the Public Meeting on alternative preferences. The meeting summary is included in *Appendix C*. A discussion of the comparative advantages and disadvantages of **Alternatives 2B and 4** follows.

#### 6.1.1 Alternatives 2B and 4

**Alternatives 2B and 4** are identical from the Town of Jena (approximately near Wal-Mart) to the eastern end of the project. The difference between the two alternatives is the two-way couplet in **Alternative 2B** through the Good Pine/Midway area.

- In **Alternative 2B**, the two-way couplet design for the Good Pine/Midway portion of the project corridor may impact emergency access to the LaSalle General Hospital. The properties located between the two-way couplet may be impacted by limited development potential. The average width of these properties between the two-way couplet is 170 feet. While the two-way couplet may provide less temporary construction impacts and fewer impacts to businesses fronting US 84, it may impede local circulation for residents and will change access to businesses, homes, and community services. **Alternative 2B** limits frontage impacts to residential and business properties.

- During the Phase I Cultural Resources field investigation, architectural historians identified four structures that can be grouped into four National Register of Historic Places (NRHP) historic districts within the project corridor: a Downtown Jena Historic District, a Trout Sawmill Historic District, a Tall Timber Sawmill Historic District, and a Good Pine Sawmill Historic District. There is one NRHP-listed property located within the proposed Good Pine Sawmill Historic District that was the former Good Pine Lumber Company Building, now the Jena Cultural Center. This property will be impacted by **Alternative 2B** and would need to be either relocated or demolished. Because this property is inherently important to the designation of the historic district, relocating this structure would not be feasible. Additionally, the building is built around a large vault that would impede relocation and potentially cause damage to the historic materials.
- Both **Alternatives 2B** and **4** would require a large amount of business and residential relocations and frontage impacts. **Alternative 2B** would require the relocation of one church.
- **Alternative 4** was initially developed during the Town of Jena’s Comprehensive Plan process in 2010 and was identified by the community as its preference for the proposed widening of US 84.
- **Alternative 4** impacts the least amount of property frontage.
- Both **Alternatives 2B** and **4** would impact a similar amount of wetlands and other waters.
- **Alternative 4** has the least amount of impacted noise receptors.

## 6.2 Which Alternative is Preferred and What is the Rationale for its Selection?

A majority of the impacts between **Alternatives 2B** and **4** are similar. The most defining difference is the potential impacts of **Alternative 2B** to the proposed sawmill historic district, namely the listed NRHP property and two eligible historic properties. Both alternatives meet the desired community request of keeping US 84 through downtown Jena. Both alternatives have relocation and frontage impacts; however, **Alternative 4** has more business relocations and **Alternative 2B** has more business frontage impacts. Both alternatives could improve the streetscape and development opportunity, but the Good Pine couplet in **Alternative 2B** could limit development of the properties within the couplet and impact the local circulation for area residents.

**Alternative 4** meets the established purpose and need of the project and addresses the concerns identified by the public; therefore, **Alternative 4** is recommended as the preferred alternative.

## 6.3 Addendum: Alternatives 4B and 4C

### 6.3.1 Development of Additional Alternatives

The Draft Environmental Assessment (EA) was prepared and distributed in advance of the Public Hearing held on March 26, 2014. The US 84 EA and technical reports provide evidence and analysis for determining the need for an Environmental Impact Statement (EIS) or Finding of No Significant Impact (FONSI) as well as documentation of agency coordination and public outreach performed over a two-year period (See *Section 5.0*).

**Alternative 4** was presented as the preferred alternative at the Public Hearing (see *Section 6.2*), but 40 public comments were received regarding potential impacts of the alternative to four live oak trees on the property of Nolley Memorial United Methodist Church (UMC). LDOTD and FHWA responded to these concerns by revising the section of roadway adjacent to Nolley Memorial UMC to reduce impacts to the oak trees. These revisions were presented as **Alternative 4B** and **Alternative 4C** at an open house format public meeting summarized in *Section 5.3.4* and documented in *Appendix F*.

The revised section of **Alternative 4** includes a portion of the Downtown Couplet from about South 4<sup>th</sup> Street to Carpenter Street (*Figure 20*). Like **Alternative 4**, **Alternatives 4B** and **4C** utilize UA1 design criteria through this section with two lanes westbound along Oak Street (US 84) and two lanes eastbound on Pine Street, rejoining US 84 approximately 400 feet west of Carpenter Street as four lanes divided with a median. The median was decreased from 18 feet to six feet to accommodate right-of-way for the oak trees and businesses.

For all alternatives, the amount of required right-of-way varies throughout the project due to differences in limits of construction, amount of grading, varied design elements along the alternative alignments, and other similar factors. For all alternatives, additional right-of-way would need to be acquired, and utilities would need to be relocated. All of the alternatives would have an impact on side streets, and temporary drives would need to be installed.

**Figure 20: Study Section of Alternative 4**



### 6.3.2 Alternatives 4B and 4C

**Alternatives 4B** and **4C** were prepared in response to public input after the Public Hearing held on March 26, 2014. **Alternatives 4B** and **4C** follow the same alignment as **Alternative 4** until a 2,000-foot section from about South 4<sup>th</sup> Street to just west of Carpenter Street. These changes are reflected on Alternative 4B: Plate 5 and Alternative 4C: Plate 5 at the end of *Appendix A* of the EA and in the Line and Grade Report.

- **Alternative 4B** shifts northward into the Jena Metals properties on the north side of US 84 and the downtown couplet begins further west to avoid impacts to the oak trees at Nolley Memorial UMC. As the alternative splits into the couplet, the westbound lane begins to curve southwardly through the frontage of Mac's supermarket [and Speedy Mac's gas station] to meet up again with US 84. The eastbound lane has a tighter curve than in **Alternative 4** due to the shifting northward and westward of the couplet beginning point, before meeting up with Pine Street. (See *Figure 21*.)
- **Alternative 4C** was created in response to a new gas station [Speedy Mac's] that was built after the Public Hearing, of which the study team was unaware during the design of **4B**. This alternative shifts slightly less northward, still reducing impacts to the oak trees in front of Nolley UMC while avoiding impacts to the newly built gas station. (See *Figure 22*.)

### 6.3.3 Additional Impacts and Costs Analysis

**Alternative 4** was previously recommended as the preferred alternative because it met the established purpose and need of the project and addressed the concerns identified by the public. *Tables 10* and *11* provide comparisons between **Alternative 4**, **Alternative 4B** and **Alternative 4C**. *Figures 21* and *22* provide a comparison of ROW impacts between **Alternative 4** and **Alternatives 4B** and **4C**. (See also *Appendix G*.)

The curvature and speed of roadways must follow LDOTD Design guidelines to maintain safe vehicular travel through this section while mitigating potential impacts to social, economic, and environmental impacts. NEPA guidelines and FHWA policy state the alternatives and decisions must "be made in the best overall public interest based upon a balanced consideration of the need for safe and efficient transportation; of the social, economic, and environmental impacts of the proposed transportation improvement; and of national, state, and local environmental protection goals." [FHWA Policy 23 CFR § 771.105]

**Table 10: Alternatives Screening Details for Alternatives 4, 4B, and 4C**

<b>Evaluation Measure</b>	<b>Units</b>	<b>4</b>	<b>4B</b>	<b>4C</b>
<b>Potential Relocation Impacts</b>				
Residential Relocations	Each	24	24	24
Business Relocations	Each	57	60	59
Community Relocations	Each	0	0	0
Other Relocations	Each	1 <sup>c</sup>	1 <sup>c</sup>	1 <sup>c</sup>
<b>Potential Traffic Impacts During Construction</b>		Low	Low	Low
<b>Potential Frontage Impacts</b>				
Residential Properties	Each	4	4	4
Business Properties	Each	24	26	25
Community Properties	Each	1	1	1
Vacant/Unused Structures	Each	67	67	67
<b>Potential Underground Risk Sites</b>				
Recognized Environmental Concerns (RECs)	Each	40	*	*
Oil and Gas Wells	Each	0	*	*
<b>Natural Environment</b>				
Wetlands Filled	Acres	0.882 <sup>e</sup>	*	*
Scenic Streams	Each	0	*	*
Stream Crossings	Each	4	*	*
Other Waters Filled (RPW)	Acres	0.562 <sup>e</sup>	*	*
Other Waters Filled (Non-RPW)	Acres	0.598 <sup>e</sup>	*	*
Ponds Filled	Each	0	*	*
Sole Source Aquifer Impacts	Acres	0	*	*
Floodplain Encroachment	Acres	7.6	*	*
Protected Species	Each	0	*	*
Prime and Unique Farmland	Acres		*	*
Coastal Res./Essential Fish Habitat	Each	NA	*	*
<b>Utilities</b>				
LDOTD-listed Water Wells	Each	8 <sup>f</sup>	*	*
<b>Cultural Resources</b>				
Hist Prop recommended as eligible for NR Historic District	Each	0	*	*
Hist Prop recommended as NOT eligible NR Historic District	Each	12	*	*
Hist Prop recommended as eligible or listed on NR as individual	Each	0	*	*
Archaeological Sites Eligible for or Listed on NRHP	Each	0	*	*
Archaeological Sites Not Eligible for NRHP	Each	6	*	*
<b>Noise</b>				
Residential Receivers Design Year Noise Level > 66 dBA	Each	4	*	*
Residential Receivers Design Year Increase > 10 dBA	Each	0	*	*
Total # Impacted Receivers	Each	4	*	*

Evaluation Measure	Units	4	4B	4C
ROW Acquisition	Acres	55	57	56
ROW Costs <sup>h</sup>	\$Million	\$8.995	\$10.401	\$9.364

<sup>a</sup>Church, <sup>b</sup>Cell Tower, <sup>c</sup>74 mini-warehouses, <sup>d</sup>Desktop Delineation, <sup>e</sup>Field Delineation, <sup>f</sup>Water well locations from SONRIS are approximate and may be located anywhere on the parcel they are attributed to. The locations identified are either within the proposed ROW or on the property adjacent to the proposed ROW. <sup>g</sup>There is one receiver (E030) that experiences both types of noise impacts (i.e., absolute sound level over 66 dBA and increase over 10 dBA). <sup>h</sup>The estimated ROW costs include costs for land acquisition, improvements and damages only.  
 \*See Alternative 4

**Table 11: Comparison of Probable Costs by Alternatives 4, 4B, and 4C (in \$000s)**

	Alternative 4 (5.85 Miles)	Alternative 4B	Alternative 4C
Construction <sup>a</sup>	\$54.728	\$55.168	\$54.925
Engineering (10%)	\$5.473	\$5.517	\$5.493
Right of Way and Relocation Costs <sup>b</sup>	\$15.556	\$17.406	\$16.130
<b>Project Totals</b>	<b>\$75.757</b>	<b>\$78.091</b>	<b>\$76.548</b>

<sup>a</sup>Construction costs include 25% contingency. <sup>b</sup>Includes ROW costs from *Table 11*, relocation costs, and soft costs.

#### 6.3.4 Preferred Alternative

**Alternative 4** was previously recommended as the preferred alternative (*Section 6.2*), because it meets the purpose and need of the project; however, **Alternative 4** would impact all of the live oak trees as well as parking at Nolley Memorial UMC. Additionally, the right-of-way would come very close to the grave of the founder, Reverend Richmond Nolley (*Appendix E – Comment Response Table*).

- **Alternative 4B** would greatly reduce impacts to the live oak trees, but would impact more businesses than **Alternatives 4** and **4C** (see *Table 11* and *Figure 21*).
- **Alternative 4C** would reduce impacts to the live oak trees. It would impact more businesses than **Alternative 4**, but would impact fewer businesses than **Alternative 4B** (see *Table 11* and *Figure 22*).
- **Alternative 4B** will add an additional \$2.3 million in construction and ROW/relocation costs, while **Alternative 4C** will add an additional \$791,000 (see *Table 12*).

LDOTD worked closely with the study team to analyze potential impacts of **Alternatives 4, 4B, and 4C** while addressing public concerns and staying within required NEPA, FHWA, LDOTD, and AASHTO guidelines. **Alternative 4C** meets the established purpose and need of the project and addresses the concerns identified by the public; therefore, **Alternative 4C** is the preferred alternative.

Figure 21: Alternative 4B with Additional Impacts

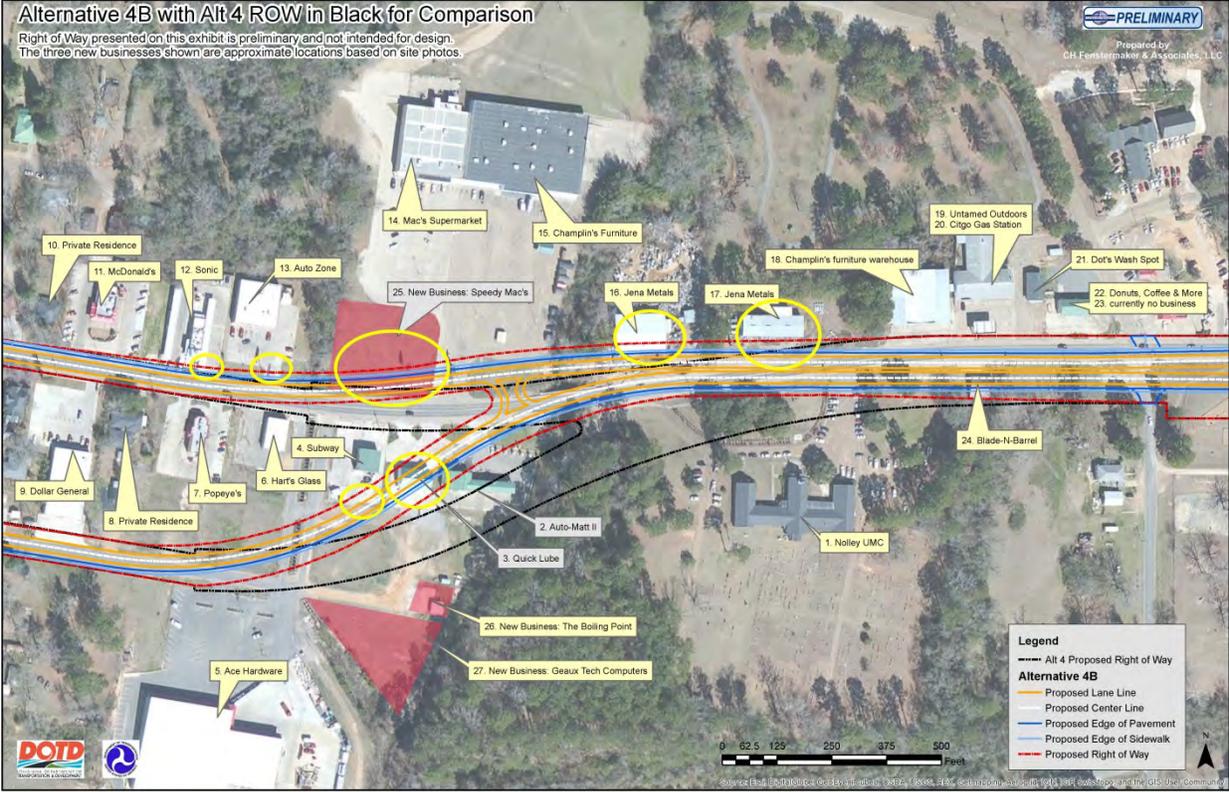
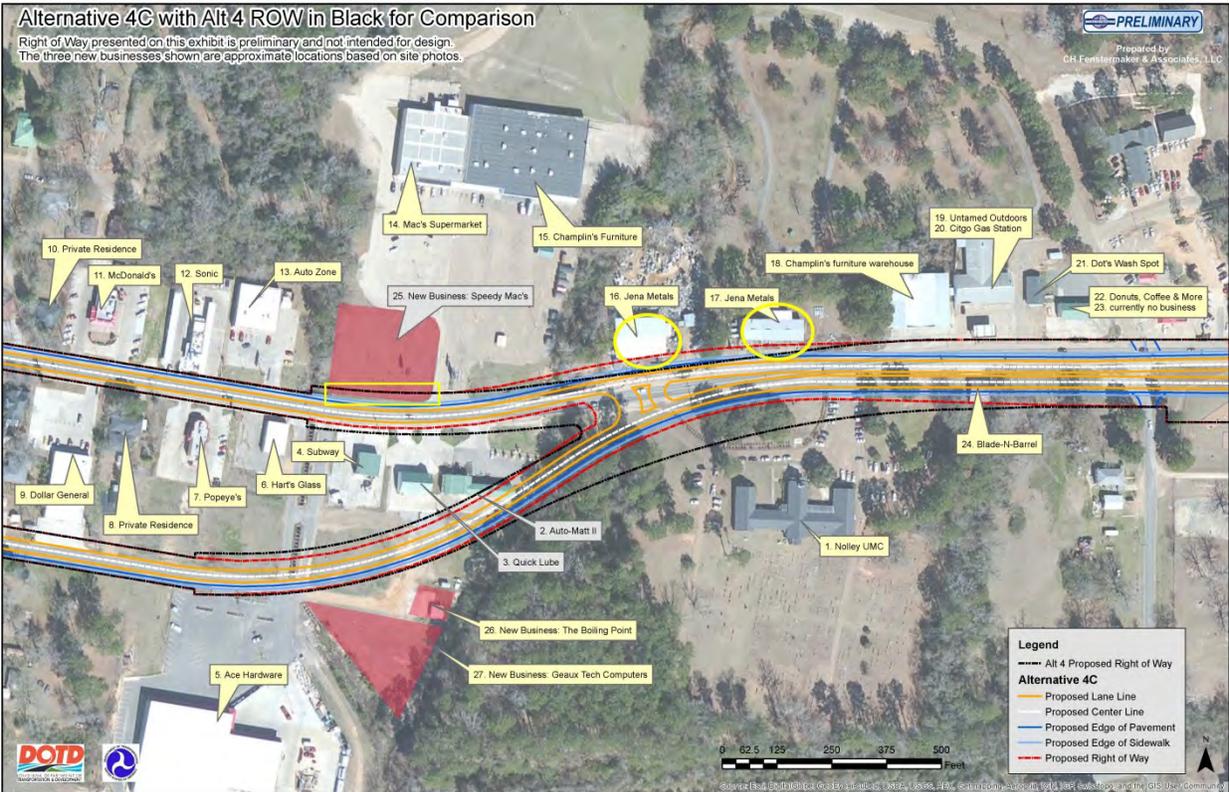


Figure 22: Alternative 4C with Additional Impacts



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