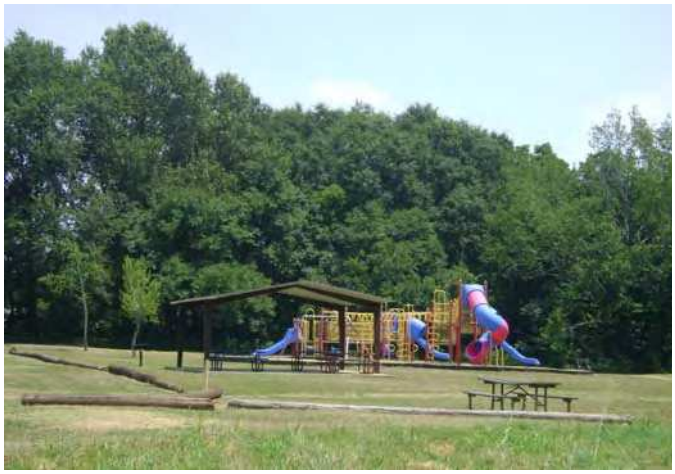
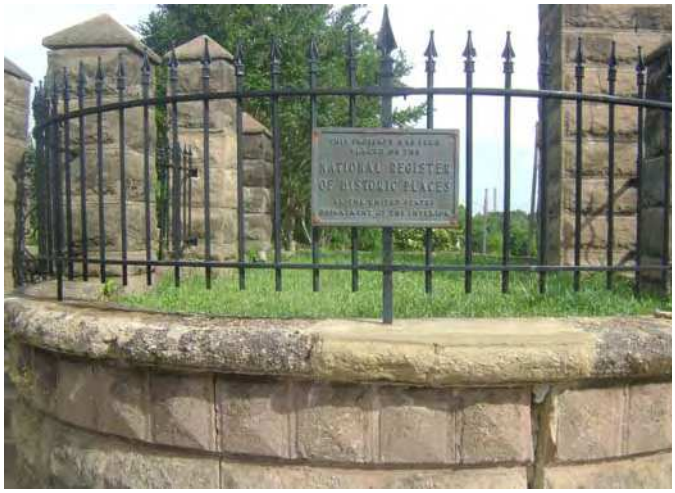
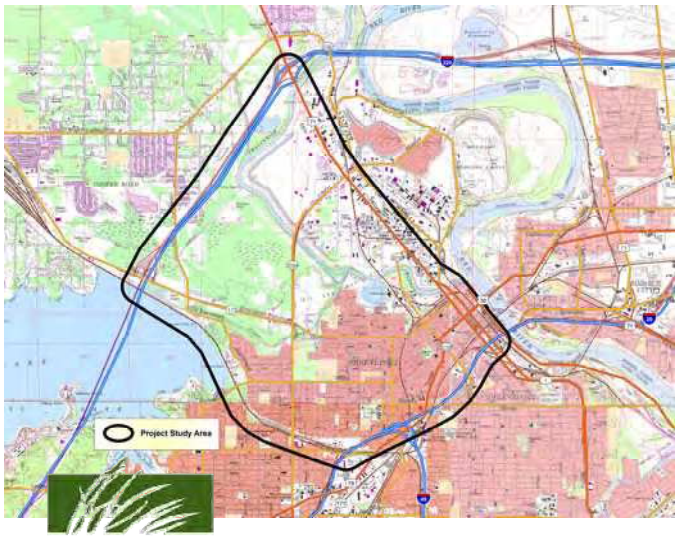
MAY 2010

CADDO PARISH
I-49 INNER CITY CONNECTOR
STATE PROJECT NUMBER 700-09-0171







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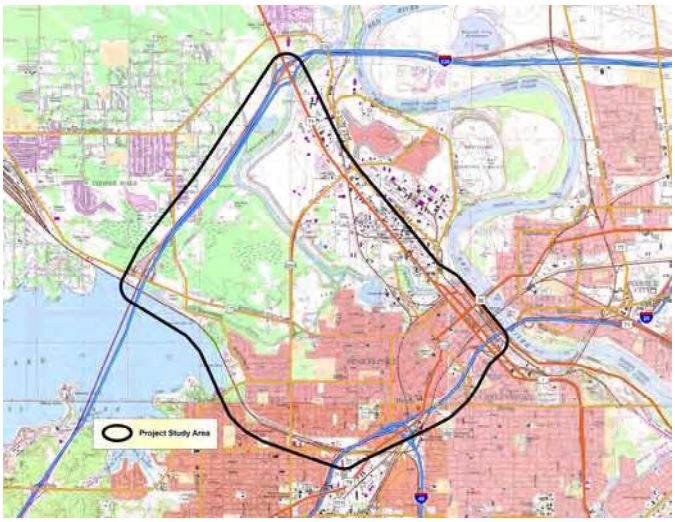
Project Number 489-001

EXECUTIVE SUMMARY

The purpose of this Stage 0 Feasibility Study and Environmental Inventory is to identify reasonable and feasible alternative routes to connect the existing Interstate 49 (I-49)/Interstate 20 (I-20) interchange to the proposed I-49/Interstate-220 (I-220) interchange within the City of Shreveport in Caddo Parish, Louisiana. As part of the I-49 Corridor which runs from Winnipeg, Manitoba, Canada to New Orleans, Louisiana, the 3.8 mile corridor intersects Shreveport, Caddo Parish, Louisiana through the urban area adjacent to the center of downtown.



This section was a portion of the Draft Environmental Impact Statement (DEIS) developed in 1976, but was removed in the Final Environmental Impact Statement (FEIS). This section was "designated a Priority Primary Route, but because of lack of funding it was not developed further."

For this study, three Build Corridors, Build Corridor 1 (Elevated), Build Corridor 2 (At-Grade), Build Corridor 3 (Combination), and the No-Build were analyzed. The three Build Corridors are shown on **Figures 1** and **2**. The No-Build condition provides a baseline for comparing the impacts of the three Build Corridors and is the projected future condition that would exist if the proposed project were not constructed.

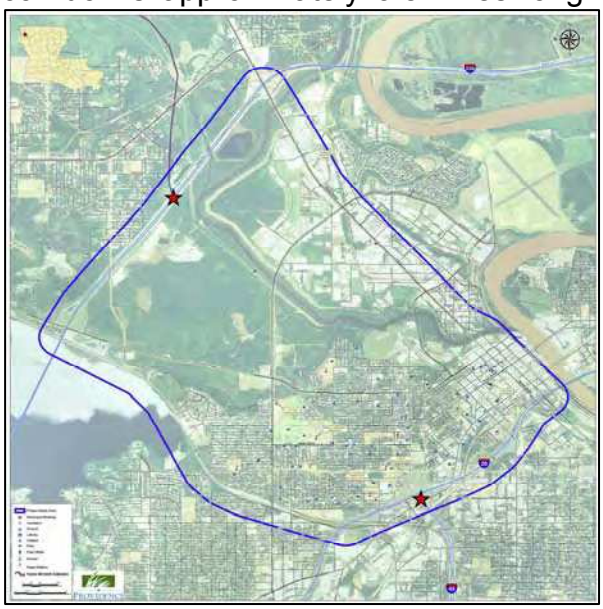
Three Build Corridors were developed with input from the public, local officials, state and federal agencies, and other interested parties. A traffic analysis was conducted in the study area to evaluate existing traffic operations and future traffic projections for all alternatives, and an environmental inventory was prepared to compare how the various alternatives would impact the natural and human environment.

While the community has voiced concerns about community disruption and safety associated with Build Corridor 2, the cheaper cost and comparable footprint continue to make this a feasible alternative. Therefore, all three corridors were determined to be feasible by the North Louisiana Council of Governments (NLCOG) and the Louisiana Department of Transportation and Development (LDOTD). During the next step, a Stage 1 analysis, multiple build alternatives and a no build alternative will be studied within the selected corridors. This document has been designed to be incorporated into the Environmental Assessment (EA) or Environmental Impact Statement (EIS) report to be prepared as the next step (Stage 1) for this proposed project.

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Description of the Proposed Action

The proposed action (referred to as the I-49 Inner City Connector) is to define a corridor within which to locate and ultimately construct a controlled access highway to connect the existing Interstate 49 (I-49)/Interstate 20 (I-20) interchange to the proposed I-49/Interstate-220 (I-220) interchange within the city of Shreveport in Caddo Parish, Louisiana. This corridor is approximately 3.8 miles long and lies within the study area as defined in **Figure 1**. The I-49 Inner City Connector Project is part of the I-49 Corridor which runs from Winnipeg, Manitoba, Canada to New Orleans, Louisiana.



1.2 Project Purpose and Need

The purpose and need of the proposed I-49 Inner City Connector route between the existing I-49/I-20 interchange to the proposed I-49/I-220 interchange are:

1. To provide connectivity between the existing I-49 and the future presently designated I-49 North that is proposed to terminate at I-220 in Shreveport

2. To improve the safety of present routes (I-20 at I-49) and to provide an alternate route for hazardous materials currently being transported across Cross Lake, the designated water supply for the City of Shreveport

3. To provide for economic development by providing improved access to downtown from the west and a continuous I-49 route through Shreveport-Bossier to encourage development throughout Louisiana, Arkansas, and Texas

As a result of its construction, the I-49 Inner City Connector will accommodate future potential development and promote orderly growth.

2.0 ALTERNATIVES

In addition to the No-Build, three Build Corridors to connect the existing I-49/I-20 interchange in downtown Shreveport to the proposed I-49/I-220 interchange were developed and evaluated. These Build Corridors are shown on **Figure 2**. All three corridors represent a 1,000-foot wide corridor by approximately 3.8 miles in length, originating at the Pete Harris interchange with I-20 and terminating at I-220. The width of corridor exceeds that which would be necessary for the construction of the highway [new right-of-way (ROW)] in order to obtain the data necessary to move this project into a Stage 1 analysis while providing maximum flexibility in the design of a connecting highway. All the corridors follow the same general alignment, as this alignment was overwhelmingly defined by the public as the only appropriate location within which to develop the I-49 Inner City Connector route.

All three corridors demonstrate two interstate connection interchanges and two additionally proposed interchanges, one at Hearne Avenue and one at Ford Street. It should be noted that an Interchange Justification Study will be required to allow for the development of the new interchanges at I-49 and I-220 as well as the two internal interchanges. Due to the spacing required between interchanges, the proposed interchange at Hearne Avenue was modeled as a half-clover design.

No-Build

No-Build is being considered in this analysis because it provides a baseline condition for comparing the impacts of the Build Corridors. Additionally, the No-Build condition is the projected future situation that would exist if the proposed project were not constructed.

Build Corridor 1 - Elevated

This corridor involves the construction of a completely elevated roadway from its origin at the Pete Harris interchange with I-20 to its terminus at I-220. Consideration of an entirely elevated route was determined essential given the residential and potential wetland nature of the study area. Public support for the elevated option was high. Build Corridor 1 is estimated to be the most expensive of the three build options. **Figures 3, 4,** and **5** demonstrate typical sections for Build Corridor 1. All typical sections were developed using F-2 design standards, which is Freeway Class 2 for urban freeways with a 60 mile per hour design standard.

Build Corridor 2 – At-Grade

Build Corridor 2 represents an entirely at-grade corridor originating at the Pete Harris interchange with I-20 and also terminating at I-220. While not reflected in the corridor width utilized for this study, the at-grade option would result in the greatest amount of community disruption, but would also be the least expensive to build. Safety concerns and community disruption were reasons cited by the public for not supporting this option. **Figures 6** and **7** demonstrate typical sections for Build Corridor 2.

Build Corridor 3 – Combination of Elevated and At-Grade

The public was interested in developing a corridor that incorporated a highway that could be both elevated and at-grade. Therefore, Build Corridor 3 represents an Inner City Connector that is elevated from Pete Harris at I-20 to the general vicinity of Abbie Street. The corridor represents an at-grade road from Abbie Street north, then northwest, until Chester Street at SWEPCO Park on the northern end and Clay Street at Webster Street on the southernmost end, at which time the route becomes elevated once again. The combined elevated at-grade Build Corridor 3 received the most public support. **Figures 3, 4, 5, 6,** and **7** demonstrate typical sections for elevated and at-grade roads; Build Corridor 3 will represent both.

The three Build Corridors were analyzed against the attributes of each corridor, traffic data, and potentially impacted resources. A summary of the traffic analysis is presented below and is fully disclosed in the Traffic Study located in **Appendix A.** Potential costs are presented in this chapter**.** The Environmental Inventory (EI) provides the remaining documentation for the data shown in the Build Corridor comparison matrix (**Table 5** of Chapter 2) and is located in **Appendix B**.

2.1 Traffic Analysis

Methodology

The latest Regional Travel Demand Forecasting Model (TransCAD) from the Northwest Louisiana Council of Governments (NLCOG) was used to develop travel forecasts for the interstate routes within the regional network without the I-49 Inner City Connector and compared to the impact of constructing the I-49 Inner City Connector. A more local investigation of the influence of the I-49 Inner City Connector was also made for the major local roadway network near downtown Shreveport between I-49 and Clyde Fant Parkway. Model runs were completed for the local network for Build and No-Build Alternatives.

Peak hour traffic volumes were determined for the local network using field counts gathered in November 2009 and projected to the Implementation Year 2015 and the Design Year 2035 using information from the regional models. These peak hour volumes were used to analyze operational characteristics of the freeway segments, ramp-freeway merge/diverge areas and interchange ramp terminals. These analyses were completed for the Build Corridor 1 – Elevated. Additionally, a design speed of 60 miles per hour was utilized for the modeling.

Daily Traffic Volumes – Regional Network

Traffic volumes have been obtained from TransCAD models, which were provided by NLCOG for the years 2000 and 2030. The 2030 traffic volumes were then grown to predict the Design Year volumes. **Figures 8** and **9** show average daily traffic (ADT) volumes on major regional routes for the years 2015 and 2035, respectively. These volumes indicate traffic

distribution with the I-49 North extension operational, which is currently under construction, and other projects as listed in **Table 1**. **Figure 10** indicates traffic distribution for the year 2035 after the I-49 Inner City Connector is completed. From a regional perspective, in Year 2035, the I-49 Inner City Connector is projected to attract over 40,000 ADT between I-220 and I-20.

TABLE 1
PROJECTS INCLUDED IN BUILD MODEL ANALYSIS

Name	Route	Limits	Improvements
Inner-Loop Extension	LA 3132	Bert Kouns to Flournoy-Lucas	New 4-lane extension w/interchange
Interstate 49	I-49	@ Southern Loop Rd	New interchange
Airline Drive	LA 3105	I-220 to Brownlee	Widen to 5 lanes
LA 1	LA 1	LA 173 to LA 169	Widen to 4 lanes
West 70th Street	LA 511	Dinkins to Bert Kouns	Widen to 5 lanes
Industrial Drive	LA 782-2	LA 72 to I-20	Widen to 3 lanes
Flournoy-Lucas/Ellerbe	LA 523	Existing 5 lane to LA 1	Widen to 4 lanes
I-49/LA 3132 Interchange	I-49	Inner Loop Expwy Interchange	Widen Northwest ramp onto LA 3132
Colquitt Road	LA 525	Mansfield to Dean Rd	Widen to 4 lanes
Lakeshore Drive		I-220 to Curtis	Widen to 4/5 lanes
Airline Drive	LA 3105	Brownlee to Burt Blvd.1	Widen to 4 lanes
Ellerbe Road	LA 782-2	Flournoy Lucas to Norris Ferry	Widen to 5 lanes

Daily Traffic Volumes – Local Network

Figures 11 through **14** show ADT volumes on major local routes for the year 2035 within the local downtown network. These volumes were taken from the Build models, which include the I-49 North extension and the aforementioned projects. **Figure 11** does not include the I-49 Inner City Connector, but **Figure 12** includes the I-49 Inner City Connector with both interchanges at Hearne and Ford, which would simulate Build Corridor 1. In **Figure 13**, the Hearne interchange was removed from the connector, and in **Figure 14**, both interchanges were removed. The other alternatives were also analyzed for the local network and are shown within the full body of the report in **Appendix A**. As shown in these figures, the I-49 Inner City Connector will draw traffic from I-220 at Louisiana (LA) 173 (Ford Street) and LA 1 (Market Street) for access into downtown Shreveport from the north. Traffic along I-49 northbound or southbound will either exit at Ford Street downtown or continue to I-20 eastbound to Spring Street/Market Street exits. From the south, traffic along Clyde Fant Parkway will substantially decrease along with traffic on Common Street.

Projected Traffic Volumes

Peak hour traffic volumes were determined by counts provided by NTB Associates, Inc. during November 2009 and from information from the TransCAD models. Peak hour volumes were developed for AM (morning) and PM (evening) peaks for both the Implementation Year 2015 and the Design Year 2035. **Figures 15** and **16,** respectively, show the projected AM and PM peak hour volumes used for the year 2035.

Level of Service (LOS) Analysis

Highway Capacity Software (HCS) Version 5.3 was used to analyze the operational characteristics of the basic freeway segments, ramp-freeway merge/diverge areas, and interchange ramp terminals for the years 2015 and 2035. The Levels of Service (LOS) were determined using HCS and are rated from A (free flow of traffic) to F (total breakdown of traffic flow). A summary of the results of these analyses for AM and PM peak hour traffic for the year 2035 can be found in **Figures 17** and **18**, respectively.

2.2 Cost Estimates

Cost estimates are considered in the typical Stage 0 process as they are included in the reasonable and feasible decision. Estimated roadway construction costs based on type of roadway, length, and width are based on typical costs and have been provided in this document as **Tables 2**, **3,** and **4**. The Build Alternatives for I-49 Inner City Connector consist of Build Corridors that are of excessive width, 1000 feet. Since the maximum ROW considered for any of the design options is 300 feet, accurately estimating the cost of business and residential relocations as well as utility relocations is not possible at this stage of study. During the Stage 1 process, design alternatives are studied in detail and would be routed within the alternative corridors to avoid impact to as many structures and resources as possible while keeping within established geometric standards for each roadway option. Therefore, in order to present costs for relocations, we assumed a worst-case scenario estimate for the Build Corridors. The worst case condition assumes a 300-foot ROW over the length of each corridor, affecting 30 percent of the structures present within the corridor and all utilities. Structures present in the corridors include residences (single and multifamily), businesses, churches, parks, wells, and a school. The estimated costs for relocations presented are not reflective of costs that may actually be incurred as a result of relocations; rather, the costs are presented because they are required under the Stage 0 process. The Stage 0 Preliminary Scope and Budget Checklist is provided at the end of this chapter. It should be noted that anticipated mitigation costs presented are the same for all three Build Corridors. This is because the worst case 300-foot impact applies to all three corridors equally.

TABLE 2
OPINION OF COST FOR BUILD CORRIDOR 1

ITEM	QUANTITY	UNITS	UNIT PRICE	TOTAL COST
CLEARING AND GRUBBING	1	LS	2,101,576.23	2,101,576.23
REMOVAL OF STRUCTURES & OBSTRUCTIONS	1	LS	$851,640.00	$851,640.00
REMOVAL OF SURFACING AND STABILIZED BASE	57,243	SY	$6.00	$343,460.00
GENERAL EXCAVATION	53,657	CY	$5.50	$295,115.74
EMBANKMENT	21,527	CY	$8.00	$172,219.26
GEOTEXTILE FABRIC	19,100	SY	$2.00	$38,200.00
BRIDGE	22,226	LF	$8,500.00	$188,921,000.00
ACCESS ROADS	13,210	LF	$250.00	$3,302,500.00
RAMPS	4,400		LF $250.00	$1,100,000.00
CONCRETE WALK (4” thick)	17,613	SY	$60.00	$1,056,800.00
DRAINAGE STRUCTURES	1	LS	$366,000.00	$366,000.00
BARRIER RAIL	88,904	LF	$60.00	$5,334,240.00
TEMPORARY SIGNS AND BARRICADES	1	LS	$2,026,595.97	$2,026,595.97
MOBILIZATION	1	LS	$2,026,595.97	$2,026,595.97
PLASTIC PAVEMENT STRIPING (solid line, 4” width)	16.84	MILE	$2,525.00	$42,515.64
PLASTIC PAVEMENT STRIPING (broken line, 4” width)	8.42	MILE	$905.00	$7,619.14
SEEDING AND FERTILIZER	102.00	ACRE	$1,000.00	$102,000.92
CONSTRUCTION LAYOUT	1	LS	$2,026,595.97	$2,107523.47
UTILITY RELOCATION				
AEP SWEPCO Distribution	1	LS	$1,350,000.00	$1,350,000.00
AEP SWEPCO Transmission (5 Lines)	1	LS	$6,000,000.00	$6,000,000.00
AEP F-625 Pipeline	1,450	LF	$200.00	$290,000.00
OTHER UTITILITIES (AT&T, Comcast, Reliant)	1	LS	$650,000.00	$650,000.00
RIGHT-OF-WAY	106	ACRE	$5,000.00	$529,036.73
MITIGATION (based on 3:1)	130	ACRE	$15,000	$5,850,000.00
SUBTOTAL				**$225,142,402**
Contingency (25%)				**$56,285,600**
Estimated Probable Construction Cost				**$281,428,002**

LS – Lump Sum
CY – Cubic Yard
SY –Square Yard
LF – Linear Feet

TABLE 3
OPINION OF COST FOR BUILD CORRIDOR 2

ITEM	QUANTITY	UNITS	UNIT PRICE	TOTAL COST
CLEARING & GRUBBING	1	LS	$2,712,439.60	$2,712,439.60
REMOVAL OF STRUCTURES & OBSTRUCTIONS	1	LS	$846,360.00	$846,360.00
REMOVAL OF SURFACING AND STABILIZED BASE	90,340	SY	$6.00	$542,040.00
GENERAL EXCAVATION	127,942	CY	$5.50	$703,681.71
EMBANKMENT	197,778	CY	$8.00	$1,582,222.37
GEOTEXTILE FABRIC	227,704	SY	$2.00	$455,408.00
TEMPORARY SILT FENCE	43,144	LF	$2.00	$86,288.00
CLASS II BASE COURSE (10” thick)	63,255	CY	$22.00	$1,391,610.00
LIME	3,228	TON	$73.50	$237,258.00
LIME TREATMENT (TYPE D) (12” thick)	227,704	SY	$1.00	$227,704.00
PORTLAND CEMENT CONCRETE PAVEMENT (11” thick)	227,704	SY	$70.00	$15,939,280.00
ELEVATED SECTIONS - BRIDGE	1,800	LF	$8,500.00	$15,300,000.00
ACCESS ROADS	13,080	LF	$250.00	$3,270,000.00
RAMPS	4,400	LF	$250.00	$1,100,000.00
CONCRETE WALK (4” thick)	17440	SY	$60.00	$1,046,400.00
DRAINAGE STRUCTURES	1	LS	$366,000.00	$366,000.00
BARRIER RAIL	50,344	LF	$60.00	$3,020,640.00
TEMPORARY SIGNS AND BARRICADES	1	LS	$1,084,975.84	$1,084,975.84
MOBILIZATION	1	LS	$1,084,975.84	$1,084,975.84
PLASTIC PAVEMENT STRIPING (solid line-4” thick)	17.25	MILE	$2,525.00	$43,560.08
PLASTIC PAVEMENT STRIPING (broken line-4” thick)	8.63	MILE	$905.00	$7,806.31
SEEDING AND FERTILIZER	99.00	ACRE	$1,000.00	$98,999.54
CONSTRUCTION LAYOUT	1	LS	$1,084,975.84	$1,084,975.84
UTILITY RELOCATION				
AEP SWEPCO Distribution	1	LS	$1,350,000.00	$1,350,000.00
AEP SWEPCO Transmission (5 Lines)	1	LS	$6,000,000.00	$6,000,000.00
AEP F-625 Pipeline	1,450	LF	$200.00	$290,000.00
OTHER UTITILITIES (AT&T, Comcast, Reliant)	1	LS	$650,000.00	$650,000.00
RIGHT-OF-WAY	108	ACRE	5,000.00	$539,893.94
MITIGATION (based on 3:1)	130	ACRE	$15,000	$5,850,000.00
SUBTOTAL				**$66,912,519**
CONTINGENCY (25%)				**$16,728,130**
ESTIMATED PROBABLE CONSTRUCTION COST				**$83,640,649**

TABLE 4
OPINION OF COST FOR BUILD CORRIDOR 3

ITEM	QUANTITY	UNITS	UNIT PRICE	TOTAL COST
CLEARING & GRUBBING	1	LS	$1,871,252.36	$1,871,252.36
REMOVAL OF STRUCTURES & OBSTRUCTIONS	1	LS	$846,360.00	$846,360.00
REMOVAL OF SURFACING AND STABILIZED BASE	57,243	SY	$6.00	$343,460.00
GENERAL EXCAVATION	107,315	CY	$5.50	$590,231.48
EMBANKMENT	51392	CY	$8.00	$411,136.00
GEOTEXTILE FABRIC	18895	SY	$2.00	$37,790.00
TEMPORARY SILT FENCE	7944	LF	$2.00	$15,888.00
CLASS II BASE COURSE (10” thick)	12,137	CY	$22.00	$267,014.00
LIME	600	TON	$73.50	$44,100.00
LIME TREATMENT (TYPE D) (12” thick)	41,927	SY	$1.00	$41,927.00
PORTLAND CEMENT CONCRETE PAVEMENT (11” thick)	41,927	SY	$70.00	$2,934,890.00
ELEVATED SECTIONS - BRIDGE	18,800	LF	$8,500.00	$159,800,000.00
ACCESS ROADS	13,080	LF	$250.00	$3,270,000.00
RAMPS	4,400	LF	$250.00	$1,100,000.00
CONCRETE WALK (4” thick)	17440	SY	$60.00	$1,046,400.00
DRAINAGE STRUCTURES	1	LS	$366,000.00	$366,000.00
BRIDGE AT ALLEN	600	LF	$8,500.00	$5,100,000.00
BRIDGE AT PATZMAN	600	LF	$8,500.00	$5,100,000.00
BARRIER RAIL	85,544	LF	$60.00	$5,132,640.00
TEMPORARY SIGNS AND BARRICADES	1	LS	$1,871,252.36	$1,871,252.36
MOBILIZATION	1	LS	$1,871,252.36	$1,871,252.36
PLASTIC PAVEMENT STRIPING (solid line-4” thick)	17.25	MILE	$2,525.00	$43,560.08
PLASTIC PAVEMENT STRIPING (broken line-4” thick)	8.63	MILE	$905.00	$7,806.31
SEEDING AND FERTILIZER	13.64	ACRE	$1,000.00	$13,639.28
CONSTRUCTION LAYOUT	1	LS	$1,871,252.36	$1,871,252.36
UTILITY RELOCATION				
AEP SWEPCO Distribution	1	LS	$1,350,000.00	$1,350,000.00
AEP SWEPCO Transmission (5 Lines)	1	LS	$6,000,000.00	$6,000,000.00
AEP F-625 Pipeline	1,450	LF	$200.00	$290,000.00
OTHER UTITILITIES (AT&T, Comcast, Reliant)	1	LS	$650,000.00	$650,000.00
RIGHT-OF-WAY	108	ACRE	5,000.00	$539,893.94
MITIGATION (based on 3:1)	130	ACRE	$15,000	$5,850,000.00
SUBTOTAL				**$209,006,446**
CONTINGENCY (25%)				**$52,251,612**
ESTIMATED PROBABLE CONSTRUCTION COST				**$261,258,058**

2.3 Build Corridor Comparison Matrix

Table 5 represents the Build Corridor comparison matrix developed for this project.

TABLE 5
BUILD CORRIDOR COMPARISON MATRIX

EVALUATION CRITERIA	BUILD CORRIDOR SCENARIOS [A]		
	Corridor 1	Corridor 2	Corridor 3
Purpose and Need			
Meets Purpose and Need	Yes	Yes	Yes
Engineering			
Length (in miles)	3.75	3.80	3.80
2030 Average Daily Traffic for Connector (ADT)	62,000	62,000	62,000
Anticipated Level of Service (LOS) for the Alternatives [B]	C/D	C/D	C/D
Anticipated LOS with Interchange at Ford	C/D	C/D	C/D
Anticipated LOS with Two Interchanges	C/D	C/D	C/D
New At-Grade Railroad Crossing Location	0	0	0
New Navigable Water Crossings	1	1	1
Constructability			
Construction Complexity [C]	Medium	Medium	Medium
Estimated Roadway Construction Costs (in millions) [D]	$281	$84	$261
Community Disruption/Impacts During Construction	Low	High	Medium
Potential Construction Impacts to Utilities	Medium	High	Medium
Cultural Resources			
Potential to Impact Cultural Resources	None	None	None
Potential Wetlands [E]			
Potential Wetlands (acres in the corridor)	241.1	243.7	243.4
Open Water (acres in the corridor)	5.3	3.7	3.7
Other Natural Resources			
Plant Communities	Low	Low	Low
Terrestrial/Aquatic Wildlife	Low	Low	Low
Water Quality	Low	Low	Low
State Scenic Streams	None	None	None
Threatened/Endangered/Protected Species			
Potential Impact to Threatened and Endangered Species	None	None	None
Community Impacts			
Residential Structures in the Corridor	257 [F]	254 [G]	254 [G]
Commercial Structures in the Corridor (includes one hotel)	10	10	10
Abanonded Structures in the Corridor	19	20	20
Potential to Adversely Impact Existing Industries	No	No	No
Community Cohesion Impact	Low	High	Medium
Potential to Impact Transit Routes	Low	High	Medium
Potential Environmental Justice Concerns	Low	Low	Low
Potential Public Facility Access Impacts	Low	Low	Low
Churches in the Corridor	10	8	8
Parks in the Corridor	2	2	2
Other Community Facilities in the Corridor	1	1	1
Potential Impacts to Public Supply or Domestic Water Wells	0	0	0
Potential Impacts to Industrial or Agricultural Water Wells	0	0	0
Visual Quality			
Potential Visual Quality Impacts	Medium	High	Medium
Air Quality and Noise Impacts			
Potential Air Quality Impacts	No Data	No Data	No Data
Potential Noise Impacts	No Data	No Data	No Data
Land Use			
Prime Farmland (acres in the corridor)	0.0	0.0	0.0
100-yr Floodplain (acres in the corridor)	193.4	192.1	192.1
Environmental Liability Concerns			
Potential Impacts to Hazardous Sites [H]	0	0	0
Active Oil and Gas Well Locations	1	0	0

Notes
[A] Analysis of the Build Corridor Scenarios is based upon the construction of at least one interchange; without an interchange, no corridor will meet the Purpose and Need.
[B] LOS presented is for the Build Corridors.
[C] Construction complexity estimates the general difficulty of construction based on grade adjustments, the number of railroad crossings, the number of navigable water crossings, utility relocations, and ROW.
[D] Construction cost for this estimate include the labor and materials for comparison purposes only.
[E] Potential wetlands were defined using National Wetlands Inventory data and minimal field verification.
[F] Total number includes one townhouse complex with four units.
[G] Total number includes one townhouse complex with four units and two apartment buildings, unknown number of residences.
[H] Included in this category are USTs, LUST, small quantity generators, aboveground storage tanks, landfills, etc. as identified by an EDR database search and field observations.

STAGE 0
Preliminary Scope and Budget Checklist

District ***4*** Parish ***Caddo*** Route ***I-49 Inner City Connector***

Control Section ***NA-New Route*** Total Project Length (miles) ***3.8***

Begin Project (CS Log Mile) ***NA*** End Project (CS Log Mile) ***NA***

Project Category (Safety, Capacity, etc.) ***Transportation Linkage*** Date Prepared: ***11/18/09***

A. Purpose and need for the project: ***To provide connectivity between existing I-49 and designed I-49 North, improve safety, and economic development***

B. Project Concept

- Description of existing facility (functional class, ADT, number of lanes, etc): ***The facility does not exist***
- Major Design Features/Criteria of the proposed facility (attach aerial photo w/concept if applicable): ***See Figures 3 through 7***
- Design Exceptions: ***Fully at-grade facility is not currently supported by public***
- Technical Analyses (traffic analysis, safety analysis, etc): ***See Chapter 2 and Appendix A***
- Alternatives to Project Concept: ***Corridors are for an elevated Inner City Connector, an at-grade facility, and a combined elevated/at-grade connector, a final concept/design option is anticipated under Stage 1***
- Future ITS / Traffic Considerations: ***Not Anticipated***
- Construction Traffic Management/Property Access Considerations: ***Traffic management during construction will likely involve temporary detours, regardless of which build concept would be selected in Stage 1 - Property access will be maintained***

C. Potential environmental impacts (Complete the Stage 0 Environmental Checklist on pages 4-10 to 4-13): ***See Stage 0 Environmental Checklist – Chapter 3***

D. Cost Estimate

Build Corridor 1

- Engineering Design: ***$13,698,903***
- Environmental (document, mitigation, etc.): ***$5,850,000 (mitigation)*, $985,000 (EA)**
- R/W Acquisition: (C of A if applicable) ***$529,037***
- Utility Relocations: ***$8,290,000***
- Construction (including const. traffic management): ***$266,758,965***

TOTAL PROJECT COST FOR BUILD CORRIDOR 1 ***$296,111,905***

D. Cost Estimate

Build Corridor 2

- Engineering Design: ***$3,448,038***
- Environmental (document, mitigation, etc.): ***$5,850,000 (mitigation)*, $985,000 (EA)**
- R/W Acquisition: (C of A if applicable) ***$539,894***
- Utility Relocations: ***$8,290,000***
- Construction (including const. traffic management): ***$68,960,755***

TOTAL PROJECT COST FOR BUILD CORRIDOR 2 ***$88,073,687***

D. Cost Estimate

Build Corridor 3

- Engineering Design: ***$12,709,465***
- Environmental (document, mitigation, etc.): ***$5,850,000 (mitigation)*, $985,000 (EA)**
- R/W Acquisition: (C of A if applicable) ***$539,894***
- Utility Relocations: ***$8,290,000***
- Construction (including const. traffic management): ***$246,578,164***

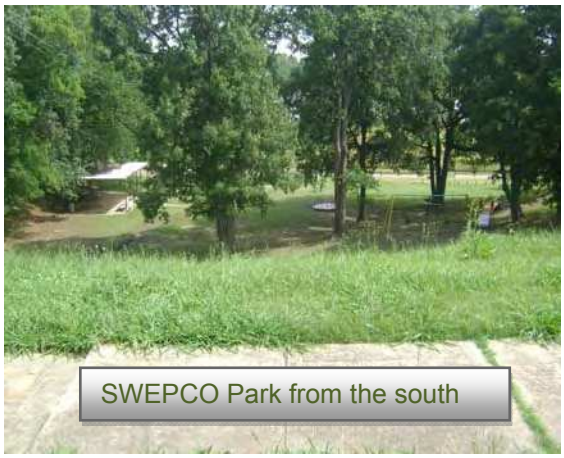
TOTAL PROJECT COST FOR BUILD CORRIDOR 3 ***$274,952,523***

E. Expected Funding Source(s) (Highway Priority Program, CMAQ, Urban Systems, Fed/State earmarks, etc.)

ATTACH ANY ADDITIONAL DOCUMENTATION Prepared By: Kerry Oriol
Disposition (circle one): (1) Advance to Stage 1 (2) Hold for Reconsideration (3) Shelve

3.0 STAGE 0 ENVIRONMENTAL SUMMARY AND CHECKLIST

An EI was completed for this Stage 0 Feasibility Study and Environmental Inventory and is located in **Appendix B**. The EI provides the basis for the comparison matrix (**Table 5**, presented in Chapter 2) and defines the physical, natural, and social environment of the project area. Multiple figures are included in the EI that demonstrate the extent and nature of the resources that comprise these environments. The EI also details environmental liability concerns associated with hazardous and solid waste facilities. Due to the excessive widths of the corridors, no one Build Corridor demonstrates an excessively higher potential to impact wetlands, floodplains, or other natural resources or sites representing potential environmental liability concerns. There are two active wells in the project area that are close to or within one of the corridors. There are many structures, mostly residential, some churches, and some commercial structures in all the corridors. SWEPCO Park and Allendale Park are located within the bounds of the corridors. A more accurate measure of potential impacts to these resources would be determined during the Stage 1 process, when the 100 to 300 foot ROW necessary for the connector would be determined and alignments considered. At the Stage 0 stage and with 1000 feet of corridor, the Build Corridor that presents the greatest number of challenges is Build Corridor 2, an all at-grade connector. While not clearly demonstrated by the comparison matrix, an all at-grade controlled access interstate through this urban area would result in excessive disruption of community cohesion and community services as well as greater impacts to utilities, floodplains, and possibly wetlands. However, as Build Corridor 2 is estimated to cost less than half of the other Build Corridors to construct, it remains feasible.



SWEPCO Park from the south

STAGE O ENVIRONMENTAL CHECKLIST

C.S. *NA-new route* **Parish** *Caddo Parish*
Route *I-49 Inner City Connector* **Begin Log mile** *NA* **End Log mile** *NA*

ADJACENT LAND USE: *Residential, undeveloped, oil and gas field*

Any property owned by a Native American Tribe?
(Y or **N** or Unknown) If so, which Tribe? _____

Any property enrolled into the Wetland Reserve Program?
(Y or **N** or Unknown) If so, give the location _____

Community Elements: Is the project impacting or adjacent to any:
(Y or **N)** Cemeteries _____
(Y or N) Churches *Possibly, there are churches in the corridors; it is anticipated that they can be avoided during the Stage 1 process.*
(Y or N) Schools *Build Corridor 1 borders and possibly intersects the eastern bounds of the property of George P. Hendrix Elementary School and Build Corridors 2 and 3 are adjacent to Ingersoll Elementary.*
(Y or **N**) Public Facilities (i.e., fire station, library, etc.)_____
(Y or **N**) Community water well/supply _____

Section 4(f) issue: Is the project impacting or adjacent to any:
(Y or **N)** Public recreation areas _____
(Y or N) Public parks *SWEPCO Park and Allendale Park are within the corridors; it is anticipated that Allendale Park can be avoided during the Stage 1 process.*
(Y or **N**) Wildlife Refuges _____
(Y or **N)** Historic Sites_____

Is the project impacting, or adjacent to, a property listed on the National Register of Historic Places? (Y or **N**) **Is the project within a historic district or a national landmark district?** (Y or **N**) If the answer is yes to either question, list names and locations below:

_____

Do you know of any threatened or endangered species in the area? (Y or **N**)
If so, which species? _____

Does the project impact a stream protected by the Louisiana Scenic Rivers Act? (Y or **N**)
If yes, name the stream. _____

Are there any Significant Trees as defined by EDSM I.1.1.21 within proposed ROW?(Y or N) If so, where? *Possibly, the alternatives are 1000 foot wide corridors that pass through a wooded area that has not been visually surveyed. There may also be live oaks of significance in the neighborhood area that could be affected by a route within a corridor.*

What year was the existing bridge built? NA_____

Are any waterways impacted by the project considered navigable? (Y or N) If unknown, state so, list the waterways: *Cross Bayou*

Hazardous Material: Have you checked the following DEQ and EPA databases for potential problems?

(**Y** or N) Leaking Underground Storage Tanks _____
(**Y** or N) CERCLIS_____
(**Y** or N) ERNS_____
(**Y** or N) Enforcement and Compliance History_____
If found site, give the name and location: *No sites were located in the corridors*

Underground Storage Tanks (UST): Are there any Gasoline Stations or other facilities that may have UST on or adjacent to the project? (**Y** or N) *Most all of the sites that we located have removed their USTs per the database search.*
If so, give the name and location: *One facility, cited in the database as T and T Automotive and located at 530 Pete Harris, is listed as having four active USTs. This site was observed as operating.*

Any chemical plants, refineries or landfills adjacent to the project? (Y or **N)** **Any large manufacturing facilities adjacent to the project?** (**Y** or N) **Dry Cleaners?** (Y or **N**) If yes to any, give names and locations: *The AEP Arsenal Hill Power Plant is located to the north of the corridors and is listed as a conditionally exempt small quantity generator and holds LPDES (Louisiana Pollutant Discharge Elimination System) permits.*

Oil/Gas wells: Have you checked DNR database for registered oil and gas wells? (**Y** or N) List the type and location of wells being impacted by the project. *One active oil well is located in Build Corridor 1 and one (also oil) is located close to the proposed interchange area at Ford/Caddo Street. As there is no defined roadway, it is anticipated that these wells can be avoided*.

Are there any possible residential or commercial relocations/displacements? (**Y** or N)
How many? *All the Build Corridors originate in a neighborhood. Given the expansive width of the corridors, it is not possible to speculate the entire number of relocations that may be expected.*

Do you know of any sensitive community issues related to the project? (**Y** or N)
If so, explain *The community is concerned about disruption of community cohesion. There are a significant number of adjudicated properties in the corridors; the community is concerned about further degradation of the community and the stifling of revitalization of the community.*

Is the project area population minority or low income? (**Y** or N) _____.

What type of detour/closures could be used on the job? *This Stage 0 process has identified Build Corridors of expansive width within which to design a roadway. Based on recommended corridors, the roadway could be elevated, at-grade or both elevated and at-grade. The types of detours/closures that would be employed would be dependent on what type of roadway design is determined the least damaging during the Stage 1 process.*

Did you notice anything of concern during your site/windshield survey of the area? If so, explain below. *We took note of the high number of churches in the project area assuming that some would be within the corridors. A second windshield survey was completed the week of September 8, 2009, to confirm structures in the previously defined 400-foot corridors. The corridor widths were recommended to be expanded to 1000 feet by the LDOTD during an update meeting held on September 17, 2009.*

Kerry Oriol
Point of Contact

225.766.7400
Phone Number

May 12, 2010
Date

Threatened & Endangered Species Information
http://www.wlf.louisiana.gov/experience/threatened/speciesfactsheets/
http://www.wlf.louisiana.gov/experience/threatened/threatenedandendangeredtable/
http://www.wlf.louisiana.gov/experience/threatened/

LA Wildlife Refuge Information
http://www.wlf.louisiana.gov/experience/wmas/refuges/

Louisiana Scenic Rivers Act (R.S. 56:1840-1856)
Louisiana Natural and Scenic Rivers (R.S. 56:1847)
http://www.legis.state.la.us/lss/lss.asp?doc=104995
Louisiana Historic and Scenic Rivers (R.S. 56:1856)
http://www.legis.state.la.us/lss/lss.asp?doc=105004
http://www.wlf.louisiana.gov/experience/scenicrivers/

Significant Tree Policy (EDSM I.1.1.21)
EDSMs can be found on DOTD's intranet site: http://ladotnet/
(Live Oak, Red Oak, White Oak, Magnolia or Cypress, aesthetically important, 18" or greater in diameter at breast height and has form that separates it from surrounding or that which may be considered historic.)

LA Historic Sites and Districts
http://www.crt.state.la.us/hp/nhl/default.htm

Hazardous Waste Site Information
http://www.deq.louisiana.gov/portal/tabid/71/Default.aspx
http://www.epa.gov/superfund/sites/cursites/index.htm
http://www.epa.gov/superfund/sites/npl/la.htm
http://www.deq.louisiana.gov/portal/Portals/0/permits/ust_facility_owner.pdf
http://www.deq.louisiana.gov/portal/Portals/0/remediation/form_5222_r01.xls
http://www.nrc.uscg.mil/wdbcgi/wdbcgi.exe/WWWUSER/WEBDB.foia_query.show_parms
http://www.epa.gov/echo/

DNR Oil & Gas Well Information
http://sonris-www.dnr.state.la.us/www_root/sonris_portal_1.htm

Environmental Justice (minority & low income)
http://www.fhwa.dot.gov/environment/ej2000.htm

Demographics
http://www.louisiana.gov/wps/wcm/connect/Louisiana.gov/About+Louisiana/Demographics%3A+Census+Info/Census+2000+Information/
http://www.census.gov/

Water Wells
http://www.dotd.state.la.us/intermodal/wells/home.asp

FHWA's Environmental Website (Just a good reference for understanding NEPA)
http://www.fhwa.dot.gov/environment/index.htm

Additional Databases Checked
See Appendices of the Environmental Inventory (Appendix C) for the EDR Report (Appendix C of the EI)

Other Comments:
_____
_____
_____

General Explanation:

To adequately consider projects in Stage 0, some consideration must be given to the human and natural environment which will be impacted by the project. The Environmental Checklist was designed knowing that some environmental issues may surface later in the process. This checklist was designed to obtain basic information, which is readily accessible by reviewing public databases and by visiting the site. It is recognized that some information may be more accessible than other information. Some items on the checklist may be more important than others depending on the type of project. It is recommended that the individual completing the checklist do their best to answer the questions accurately. Feel free to comment or write any explanatory comments at the end of the checklist.

The Databases:

To assist in gathering public information, the previous sheet includes web addresses for some of the databases that need to be consulted to complete the checklist. As of October 2006, these addresses were accurate.

Note that you will not have access to the location of any threatened or endangered (T&E) species. The web address list only the threatened or endangered species in Louisiana. It will generally describe their habitat and other information. If you know of any species in the project area, please state so, but you will not be able to confirm it yourself. If you feel this may be an issue, please contact the Environmental Section. We have biologist on staff who can confirm the presence of a species.

Why is this information important?

Land Use? Indicator of biological issues such as T&E species or wetlands.

Ownership? Tells us whether coordination with tribal nations will be required.

WRP properties? Farmland that is converted back into wetlands. The Federal government has a permanent easement which cannot be expropriated by the State. Program is operated through the Natural Resources Conservation Service (formerly the Soil Conservation Service).

Community Elements? DOTD would like to limit adverse impacts to communities. Also, public facilities may be costly to relocate.

Section 4(f) issues? USDOT agencies are required by law to avoid certain properties, unless a prudent or feasible alternative is not available.

Historic Properties? Tells us if we have a Section 106 issue on the project. (Section 106 of the National Historic Preservation Act) See http://www.achp.gov/work106.html for more details.

Scenic Streams? Scenic streams require a permit and may require restricted construction activities.

Significant Trees? Need coordination and can be important to community.

Age of Bridge? Section 106 may apply. Bridges over 50 years old are evaluated to determine if they are eligible for the National Register of Historic Places.

Navigability? If navigable, will require an assessment of present and future navigation needs and US Coast Guard permit.

Hazardous Material? Don't want to purchase property if contaminated. Also, a safety issue for construction workers if right-of-way is contaminated.

Oil and Gas Wells? Expensive if project hits a well.

Relocations? Important to community. Real Estate costs can be substantial depending on location of project. Can result in organized opposition to a project.

Sensitive Issues? Identification of sensitive issues early greatly assists project team in designing public involvement plan.

Minority/Low Income Populations? Executive Order requires Federal Agencies to identify and address disproportionately high and adverse human health and environmental effects on minority or low income populations. (often referred to as Environmental Justice)

Detours? The detour route may have as many or more impacts. Should be looked at with project. May be unacceptable to the public.

4.0 COMMENTS AND COORDINATION

Public outreach and coordination with elected officials, state and federal resource agencies, local government, and local area businesses was conducted as part of the I-49 Inner City Connector project. Residents of Caddo Parish and the communities of Allendale and Ledbetter Heights were consulted throughout the process. This section presents a discussion of these activities and the outcome prior to the publication of the Stage 0 Feasibility Study and Environmental Inventory.

4.1 Coordination Letters

A Solicitation of Views letter was mailed to elected officials, state and federal resources agencies, local government, and other interested parties in June 2009. The letter provided a brief overview of the project and requested input from the various entities. A copy of this letter and all responses received is located in the appendices of **Appendix B**. In addition to these letters, comments from local law enforcement were solicited relative to public safety concerns associated with the corridors once they were developed. From January 2010 until May 2010, multiple attempts to obtain comments from local law enforcement officials resulted in no comments received.

4.2 Public Involvement

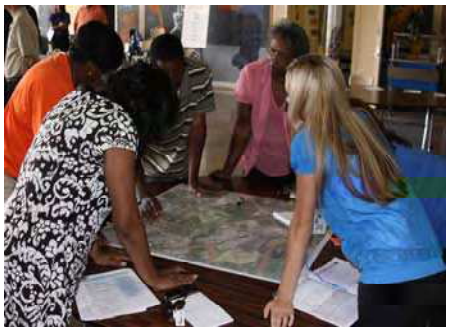
Participation from the public in both inside of the designated project study area and outside of the project study area was fostered through multiple means of outreach, public meetings, and survey tools. Stakeholder interviews, public input surveys, and community meetings all were utilized to include the public in the process of determining the feasibility of constructing the I-49 Inner City Connector. A scoping meeting was held on March 5, 2009, to initiate the environmental process for the I-49 Inner City Connector. The dates of other meetings are presented below.

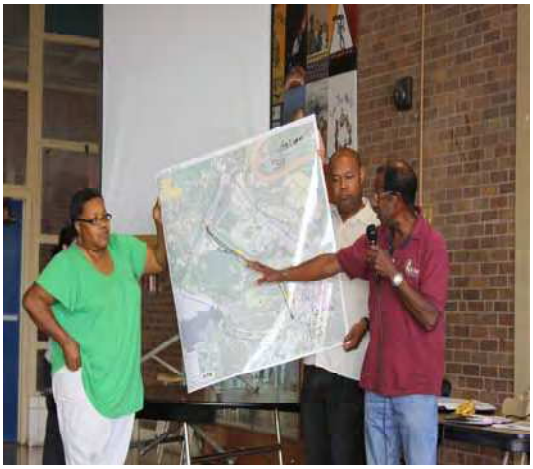
Public Outreach Events for the I-49 Inner City Connector

Event	Date
Community Stakeholder Interviews	May 18 – 21 & June 11, 2009
Public Input Surveys	June 20 – July 31, 2009
Community Input Meetings Round I	June 20 – 25, 2009
Community Input Meetings Round II	September 24 – 26, 2009
Public Meeting	March 25, 2010

The May 2009 stakeholder meetings were held to brief community leaders on the Stage 0 Feasibility Study and Environmental Inventory for the I-49

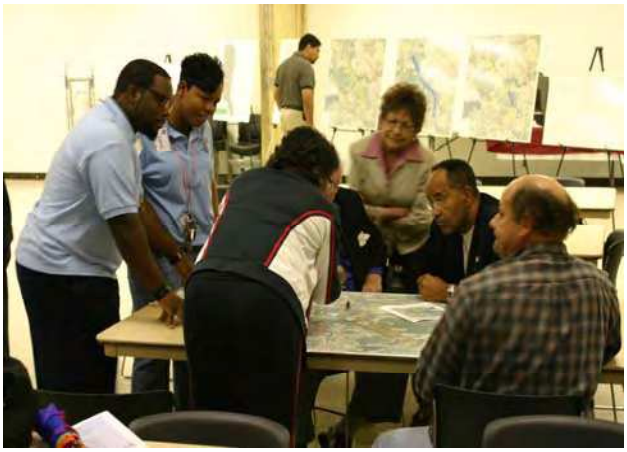
Inner City Connector and to solicit these leaders' involvement in the public participation process. Community Input Meetings were conducted shortly thereafter to involve the public as early in the process as possible. The



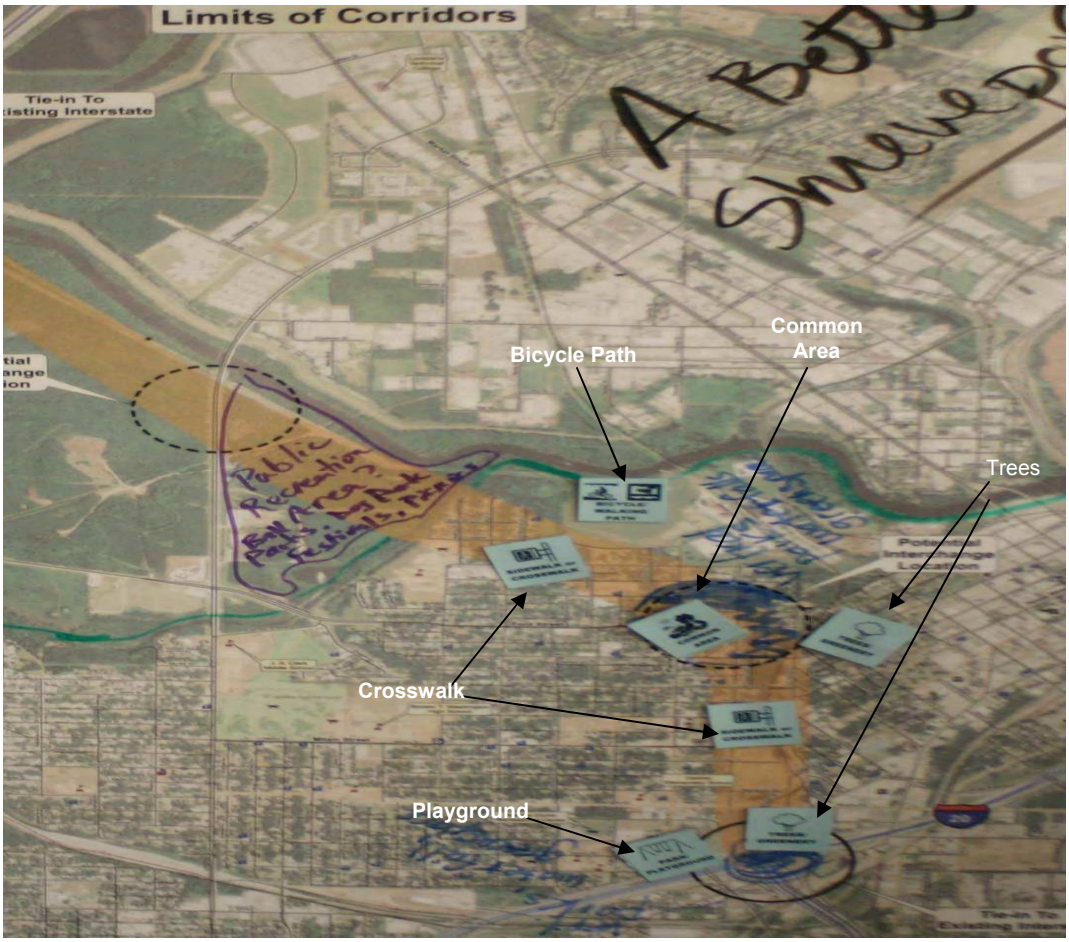


first round of meetings (six in total) was conducted in a town hall format at various locations in and in near proximity to the study area in June 2009. Attendees were asked to participate in an exercise whereby they sat in groups and developed and drew a corridor concept on maps that the group could support. Attendees were asked if the corridor concepts would support elevated, at-grade, or depressed roadways and to select locations for an interchange or two, if interchanges were to be included.

The corridor developed by the public during the June 2009 meetings was presented during the second round of Community Input Meetings (three in total) held from September 24, 2009, through September 26, 2009. Attendees were given color handouts of the corridors with interchanges and a feedback form. The feedback form was to be used to record data on their (attendee) preferred corridor and potential design considerations.

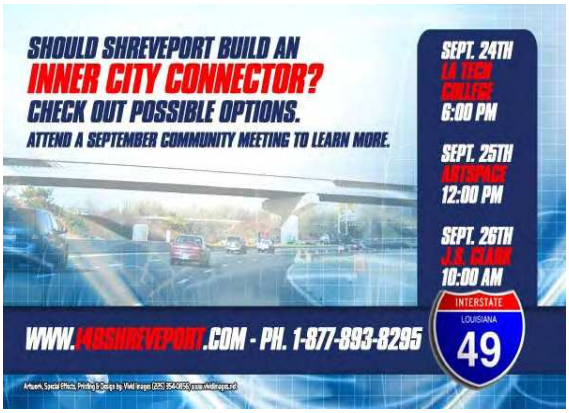


Participants worked in groups with table maps to discuss and present ideas for context sensitive solutions such as bike trails, parks, and playgrounds with the caveat that design considerations are dependent on funding and city or parish maintenance. An example of a context sensitive solutions map developed by participants during the meeting is presented below. The corridor concepts provided by the public during these meetings were converted into the three alternative Build Corridors presented in this report.



In addition to the meetings, a Public Input Survey was conducted and was made available at the first round of Community Input Meetings, as well as online at http://www.i49shreveport.com. The deadline for the survey was July 31, 2009. There were a total of 217 respondents to the survey by the deadline, with two late submissions. Therefore the results presented in **Appendix C** and posted to the project website were produced based on the surveys submitted by July 31,2009. Survey results indicated that most respondents were in favor of the project.

In order to ensure the greatest level of public involvement, a multi-faceted outreach strategy was launched throughout the Allendale, Ledbetter Heights, Lakeside, and downtown Shreveport areas, encompassing fliers, handouts, yard signs, and road-side 3 x 5 foot banners detailing community meeting dates. Meeting dates were posted at http://www.i49shreveport.com, and a toll-free number was provided that orated meeting dates and locations for residents who may not have access to a computer. Media outreach including press releases and public service announcements were included in this outreach effort. Details on the locations in which I-49 Community Input Meeting materials were distributed are provided below.

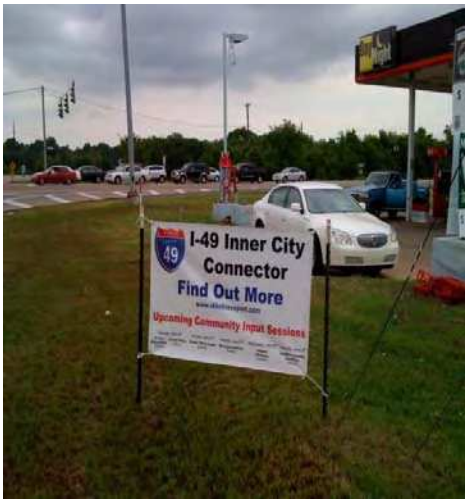


Fliers

- Canaan Village Tower, Dale Street
- Dale Street Grocery, Dale Street
- Chase Bank Building
- Regions Bank Building
- Government Plaza
- David Raines Public Library
- C&C Café, Milam Street
- W.K. Community Health & Education Ce
- City Hall Annex
- Artspace
- Robinson Center
- Shreveport Public Library

Pushcards (4x6)

- Galilee Baptist Church
- Mount Canaan Baptist Church
- Evergreen Baptist Church
- Greenwood Acres Baptist Church



Banners (3x5)

- Ford Street & Hearne Street
- N. Market Street & Hearne Street
- Murphy Street & Pierre Avenue

Yard Signs

- Ford and Ernest T Miller, near J.S. Clark
- N. Market in front of Podnuh's BBQ
- Martin Luther King Drive & David Raines Road
- Ford Street & Pierre Avenue
- Milam Street & Sycamore Street, across from C&C cafe

E-promotion

- E-blasts were sent from info@i49shreveport.com to community stakeholders one week preceding the meetings, one day before the first meeting, and during the meetings

Partnerships

- Don Shea, DDA – forwarded e-blast to DDA distribution list
- Lee Jeter, Fuller Housing Center – 200 handouts and 4 yard signs disbursed throughout Allendale for Round I/ 50 pushcards for Round II

Press releases and public service announcements (PSAs) were sent to the following stations and networks for both rounds of Community Input Meetings:

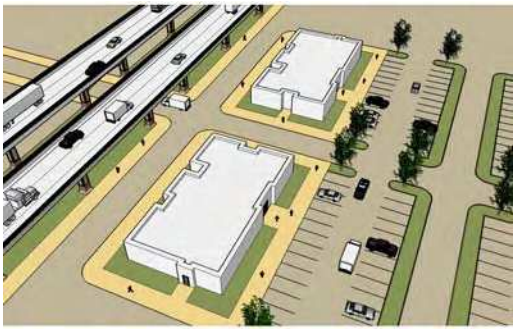
Television/ Radio/Newspaper

KMSS – Newsroom
KSLA – Newsroom, The Hometown Show
KTAL – Newsroom, Millicent Maiden Show
KTBS – Newsroom, Morning Show
BPCC
KOKA KBTT
KDKS KLKL
KTAL KEEL
KWKH KXKS
KVKL KRUF
KTUX KRMD
KDAQ KLSA
KBA KLDN
KMJJ KVMA
Super Talk 1340
GAP Broadcasting
The Shreveport Times
The Sun Weekly
The Forum News

One final meeting to solicit input on the draft Stage 0 study was conducted on March 25, 2010. Comments received during this meeting and during the 30-day comment period following the meeting are addressed at the end of this chapter. A summary document detailing the extensive public outreach effort conducted under this Stage 0 study for the I-49 Inner City Connector is provided as **Appendix C**.

4.3 Community Development

The public outreach process was also used to obtain input on how the I-49 Inner City Connector would factor into community development. One of the project's stated purposes is to promote economic development in the Allendale/Ledbetter Heights area. The Millennium Studios development was scheduled to break ground in December 2009. This commercial project is a positive move towards revitalizing the urban Allendale/Ledbetter Heights area. The I-49 Inner City Connector will bring more people through this area on the way into downtown Shreveport. There is a strongly held belief that the observation of the revitalization by the commuters will foster continued positive change in the community.



The graphic to the left conceptually depicts potential commercial development adjacent to an elevated interstate between the interstate and frontage road. The design and layout of the interstate and frontage roads (if included) along with land use coordination will be required prior to finalization of any future development plans.

4.4 Responses to Comments

Five comments were received between March and April 24, 2010. The comments and responses are summarized below. Hard copies of the actual comments are located in **Appendix C**.

Comments 1 and 5

Both of these comments were received through the project website and requested information on how to provide construction-related services to the project.

Response
These comments received individual email responses with the following text: "Presently, this project is in what is called the Stage 0 phase of the Project Delivery Process prescribed by the Louisiana Department of Transportation and Development (DOTD). Stage 0 is a pre-construction, pre-design phase where the project is determined to be feasible for construction and therefore should move forward into Stage 1. During Stage 1, the project would be further defined down to an alignment that is preferred and the project would go through the federal environmental clearance process. Only after receiving federal environmental clearance, can a project be moved forward into Stage 3, where funding is secured, then the project is closer to final design and right-of-way acquisition, then construction. This process takes several years. The best thing for you to do at this time is to continue to follow the project, provide your comments and support, as you have done, and wait for the next phases to be completed. When the construction of the new highway is put out for bid, you should submit to the DOTD at that time to provide your services."

Comment 2

This comment was provided during the public meeting on March 25, 2010, and suggests that we use Build Corridor 3 because an elevated highway over wetlands would have fewer impacts and the at-grade portion would provide community exposure.

Response
We appreciate your comment and Build Corridor 3 has been recommended to move forward into a Stage 0 Study.

Comment 3

This comment was provided during the public meeting on March 25, 2010. The comment is made that the project must be built to provide a route for hazardous materials that does not cross Cross Lake and it should have all four interchanges.

Response
We appreciate your comment and it has been noted.

Comment 4

This comment letter was received in the mail during the comment period. The writer states that he fully supports the project for five reasons, three of which expand on the project's stated purpose and need. A fourth reason for supporting the project is that the new highway would improve traffic flow and he suggests six lanes with at least one exit in the Allendale area to access downtown. He also states that the new highway would provide a direct route for traffic into downtown, improving access to the Hilton Convention Center, the Strand, casinos, and restaurants.

Response
We appreciate your comment and it has been noted.

5.0 CONCLUSIONS

Based on the studies undertaken, data derived, and public input, all three of the Build Corridors were determined to be reasonable and feasible and are proposed to move forward into the Stage 1 process.

Build Corridor 1-Elevated
Build Corridor 1 was selected for further study for the following reasons:

- An elevated highway should require the least amount of additional ROW
- An elevated highway would result in lower impacts to wetlands than an at-grade highway
- Less disruption to community cohesion than an at-grade highway
- Utilization as an I-49 Inner City Connector route

Build Corridor 2 – At-Grade
Build Corridor 2 was selected for further study for the following reasons:

- Lowest anticipated construction cost
- Ability to fund community impact mitigation and remain less than half the cost of the other Build Corridors
- ROW not significantly higher than the other two Build Corridors

Build Corridor 3 – Combination of Elevated and At Grade
Build Corridor 3 was selected for further study for the following reasons:

- Should require less additional ROW than Build Corridor 2
- The elevated design through potential wetlands would result in lower impacts than an at-grade highway
- Less disruption to community cohesion than an entirely at-grade highway

5.1 Funding Options

The Highway Revenue Act of 1956 created the Highway Trust Fund (HTF) primarily to ensure a dependable source of financing for the National System of Interstate and Defense Highways. The Highway Revenue Act provided that revenues from certain highway-user taxes would be credited to the HTF to finance the interstate system and the remainder of the federal-aid highway program. A summary of funding options including both traditional programs and innovative financing tools to be considered for the construction of the I-49 Inner City Connector is provided in **Table 6** at the end of this chapter.

5.2 Corridor Preservation

As result of the developed nature of half the project area and the remaining area supporting oil and gas development, corridor preservation is of importance to the NLCOG. Corridor preservation occurs when a variety of measures are employed to minimize development within the ROW of a planned transportation facility or planned transportation

improvement within a defined corridor. The implementation of corridor preservation should ensure that an efficient and effective transportation system exists for current and future users. Reasons for implementing corridor preservation include:

- To provide for orderly, predictable development (inclusion in a comprehensive plan)
- To reduce conflict in ROW acquisition
- To reduce overall social, economic, and environmental impact
- To reduce ROW costs

Presently, Louisiana does not have a system, formal or informal, addressing how to design and implement corridor preservation. Multiple states have official legislated systems in place; others have informal processes. The following measures are among those utilized by other states and could be considered by the NLCOG for corridor preservation for the I-49 Inner City Connector:

- Advanced corridor approval/official map development
- Protective purchasing
- Land acquisition
- Local government actions

Advanced Corridor Approval/Official Map Development

Advanced corridor approval occurs after the completion of the environmental process and before final design. The approved corridor for the project is depicted on an official map, typically in a comprehensive plan such as the local transportation improvement plan (TIP) or the State TIP. The primary benefit of this action is that future land use planning and actions can be conducted in concert with the corridor. A downside to this process is the potential for increased costs to be incurred by the local government dedicating resources earlier in order to track and respond to development pressures in the corridor.

Protective Purchasing

Protective purchasing involves buying property within the corridor prior to completion and approval of the environmental document or final design. If an alignment has been selected and a public hearing held adequately notifying the public of the intent to develop a transportation facility, then purchasing of property that lies in the path of the project that may be under development pressure is considered "protective purchasing." The purpose of protective purchasing is to prevent the impending development of land in the presumed ROW, theoretically reducing the cost of ROW acquisition. There are two primary potential negatives: (1) alignments may change between the public hearing and final environmental document, and (2) landowners may view the attempt to purchase at this stage as a taking.

Land Acquisition

Land acquisition, like corridor approval, takes place after the completion and acceptance of the environmental document and in some cases, prior to final design. Land acquisition involves the full title purchase, establishment of easements, and/or the use of eminent domain to acquire property within the ROW of a planned transportation facility. The benefits of advanced or accelerated land acquisition center around reducing the overall cost of ROW acquisition by obtaining large tracts of land, key properties, or properties that may be in the path of an incompatible development early in the process. Conversely, sufficient funds must be available at this stage of the process to acquire such properties and as such, the burden of purchase may fall to the local government.

Local Government Actions

In the absence of a state approved plan for corridor preservation, local governments can implement strategies to preserve land within a defined approved transportation corridor. Actions that can be taken by the local government include advanced ROW acquisition (as defined above), approving land and/or development agreements, implementing access management measures, and zoning changes. Land and/or development agreements may involve allowing for subdivision reservation, providing for specific types of development, or holding development permits (for a specified time-frame) within the corridor. Access management measures include limiting the number of curb cuts for new roads. Zoning changes could include reserving a strip along the corridor and maintaining only low density developments within the corridor.

TABLE 6
I-49 INNER CITY CONNECTOR PROJECT FINANCING OPTIONS

Traditional Federal-Aid Highway Programs for Financing	**Description**	**Pro**	**Con**
Surface Transportation Program (STP)	Flexible funding that may be used by States and localities for projects on any federal-aid highway.	Matching Shares for Interstate Projects: Federal - 90% State - 10% Matching shares for most projects: Federal - 80% State - 20%	1. A state is repaid for the federal share only after they have spent the money 2. Need 10% of project cost 3. Competition for funds
Innovative Management of Federal Funds	**Description**	**Pro**	**Con**
Advanced Construction (AC)	AC allows states to begin projects with their own funds and later convert these projects to federal assistance. States can "convert" advance-constructed projects to federal-aid at any time sufficient federal-aid funds and obligation authority are available.	AC can help facilitate construction of large projects, while maintaining obligation authority for smaller projects.	A state must identify and receive federal approval to advance construct any project that it intends later to convert to federal aid. The project must be included on the State TIP and must meet the tests of financial constraint.
Partial Conversion of Advance Construction (PCAC)	PCAC allows states to begin projects with their own funds and later convert these projects to federal assistance. States can convert, obligate, and receive re-imbursement for a portion of the federal share of project costs, removing the need to wait until the full amount of obligation authority is available. PCAC is used in conjunction with GARVEE bonds (described below) when federal funds are obligated for debt service payments over a period of time.	PCAC eliminates a major single year "draw down" of federal funds, and obligation of funds for the entire federal share of a project, thereby making federal-aid funds available to support a greater number of projects.	A state must identify and receive federal approval to advance construct any project that it intends later to convert to federal aid. The project must be included on the State TIP, and must meet the tests of financial constraint.
Flexible Match	Flexible match allows a wide variety of public and private contributions to be counted toward the non-federal match of federal-aid projects. States may seek program-wide approval for STP projects. The matching requirement would then apply to the program instead of individual projects.	Flexible match provisions increase a state's ability to fund its transportation programs by: accelerating certain projects that receive donated resources, allowing states to reallocate funds, and promoting public-private partnerships by providing incentives to seek private donations.	The eligibility determination considers the combination of the source of the contribution (private, local, state, or federal) and the nature of the contribution (cash, materials, land, services, or buildings and equipment). Any federal-aid project for which a non-federal match is required may employ some form of flexible match with FHWA (Federal Highway Administration) approval

TABLE 6
I-49 INNER CITY CONNECTOR PROJECT FINANCING OPTIONS

Innovative Management of Federal Funds	Description	Pro	Con
Tapered Match	Tapered match enables the project sponsor to vary the non-federal share of a federal-aid project during development and construction so long as the total federal contribution does not exceed the federal-aid limit. The non-federal matching ratio is imposed on projects rather than individual payments.	Use when the project sponsor of a federal-aid project lacks sufficient funds to match federal grants at the start of the project, but expects to accumulate the match in time for project completion, a project sponsor needs to overcome a near-term gap in state matching funds, or to advance a project before fully securing capital market financing.	FHWA limits the use of tapered match to situations that result in expediting project completion, reducing project costs, or leveraging additional non-federal funds.
Toll Credits	States may apply toll revenues used for capital expenditures as a credit toward the non-federal share of certain transportation projects. By using toll credits to substitute for the required non-federal share on a federal-aid project, federal funding can effectively be increased to 100%.	Toll credits provide states with more flexibility in financing projects. Federal-aid projects can be advanced when matching funds are not available and project administration may be simplified when a single funding source is used.	To use this tool, the state must certify that its toll facilities are properly maintained and must pass an annual maintenance of effort test to earn credits.
Debt Financing	**Description**	**Pro**	**Con**
Grant Anticipation Revenue Vehicle (GARVEE) Bonds	Permits states to pay debt service and other bond-related expenses with future federal-aid highway apportionments.	Bond related costs that are eligible: interest payments and retirement of principal, and any other costs incidental to the sale of an eligible bond issue.	Not guaranteed, issuers should seek the expert advice of bond counsel regarding the tax status of such debt instruments.
Municipal Bonds	Municipal bonds are interest-bearing obligations issued by state or local government to finance public facilities' capital or operating costs.	The bond issuance yields an immediate influx of cash in the form of bond proceeds.	Bond financing imposes interest and other debt related costs.
Section 129 Loans	Section 129 loans allow states to use regular federal-aid highway funds to fund loans to projects with dedicated revenue streams.	States benefit because every loaned dollar is repaid and recycled into further investment in the transportation system.	Only those costs incurred after the date FHWA authorizes the loan may be funded by the loan.
State Infrastructure Banks (SIBs)	SIBs can offer loans and credit enhancement to both public and private transportation project sponsors. Banks can also be capitalized with state funds.	Can use to finance all or part of project.	The amount of assistance that can be provided depends on the size of the state's SIB.

TABLE 6
I-49 INNER CITY CONNECTOR PROJECT FINANCING OPTIONS

Credit Assistance	Description	Pro	Con
Transportation Infrastructure Finance and Innovation Act (TIFIA)	Allows U.S. DOT (Department of Transportation) to provide direct credit assistance to sponsors of major transportation projects.	Three types of assistance: 1. Secured loans 2. Loan guarantees 3. Lines of credit	The total amount of credit cannot exceed 33% of eligible project costs.
Tolling	**Description**	**Pro**	**Con**
Tolling Federal Aid Highways	All types of toll facilities used to increase interstate funding.	Can be used in addition to federal funds on some projects.	Toll funding for initial construction is not allowed on the interstate system without a tolling agreement.
Interstate Reconstruction and Rehabilitation Pilot Program	Allows up to three existing interstate facilities (highway, bridge, or tunnel) to be tolled to fund needed reconstruction or rehabilitation on interstate highway corridors.	Allows for funding of projects that could not otherwise be adequately maintained or functionally improved without the collection of tolls.	For reconstruction or rehabilitation only. Each of the three facilities must be in a different state. There is no special funding authorized for this program.

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