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Iowa 2 Bridge Replacement

Over the Des Moines River
In Farmington, Van Buren County, Iowa

Project Number
BRF-2-9(17)- -38-89

ENVIRONMENTAL ASSESSMENT

U.S. Department of Transportation
Federal Highway Administration
and
Iowa Department of Transportation
Office of Location and Environment

Environmental Assessment and Approvals
Submitted Pursuant to 42 USC 4332(2)(c)

The signatures are considered acceptance of the general project location and concepts described in the environmental document unless otherwise specified by the approving officials. However, such approval does not commit to approve any future grant request to fund the preferred alternative.



For the Division Administrator
Federal Highway Administration



Office of Location and Environment
Iowa Department of Transportation

May 23, 2005

Date of Approval
For Public Availability

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INTRODUCTION: STREAMLINING EFFORTS

A streamlining process was used to focus on issues that apply to the Iowa Highway 2 Bridge Replacement Environmental Assessment (EA). This process allowed study and discussion of resources present in the study area, rather than expending effort on resources that were either not present or not impacted. The streamlining process consisted of three parts: the Project Classification Concurrence Worksheet, the Document Managers EA Worksheet and the EA Worksheet. After completion of the Project Classification Concurrence Worksheet and the Document Managers EA Worksheet, the EA Worksheet provides evidence that resources that are either not present or not impacted, although not discussed in the EA, were considered appropriately during the planning process.

ENVIRONMENTAL CONSEQUENCES AND MITIGATION

The first column with an "x" means the resource is in the project area. The second column with an "x" means the impact to the resource warrants more discussion in this document. Resources without an "x" in the first and/or second column have been reviewed and are included in the summary (see Appendix B).

SOCIOECONOMIC			NATURAL ENVIRONMENT		
x	x	Land Use	x	x	Wetlands
<input type="checkbox"/>	<input type="checkbox"/>	Community Cohesion	x	x	Surface Waters
x	x	Relocation Potential	x	x	Water Quality
<input type="checkbox"/>	<input type="checkbox"/>	Churches and Schools	<input type="checkbox"/>	<input type="checkbox"/>	Wild and Scenic Rivers
x	<input type="checkbox"/>	Utilities	x	x	Flood Plain
<input type="checkbox"/>	<input type="checkbox"/>	Energy	x	x	Wildlife and Habitat
x	<input type="checkbox"/>	Emergency Routes	<input type="checkbox"/>	<input type="checkbox"/>	Farmlands
<input type="checkbox"/>	<input type="checkbox"/>	Environmental Justice	x	x	Threatened and Endangered
<input type="checkbox"/>	<input type="checkbox"/>	Transportation	x	<input type="checkbox"/>	Vegetation
x	x	Right of Way	x	<input type="checkbox"/>	Ecosystem
x	x	Construction	<input type="checkbox"/>	<input type="checkbox"/>	
x	x	Pedestrian and Bicycle			
<input type="checkbox"/>	<input type="checkbox"/>				
CULTURAL			PHYSICAL		
x	<input type="checkbox"/>	Historical Sites or Districts	x	<input type="checkbox"/>	Noise
x	x	Archaeological Sites	x	<input type="checkbox"/>	Air Quality
x	<input type="checkbox"/>	Recreational	x	<input type="checkbox"/>	Temporary Impacts
<input type="checkbox"/>	<input type="checkbox"/>		x	<input type="checkbox"/>	Contamination
			x	x	Regulated Materials Sites
			<input type="checkbox"/>	<input type="checkbox"/>	Visual
			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	CONTROVERSY POTENTIAL		None.		
<input type="checkbox"/>	SECTION 4(F)		The project would not use Section 4(f)-protected property.		

1.0 DESCRIPTION OF PROPOSED ACTION

The Iowa Department of Transportation (DOT) is proposing to provide an improved Iowa Highway 2 (IA 2) crossing over the Des Moines River in Farmington, Iowa. The existing bridge is over 50 years old and does not meet current design standards. The existing bridge also does not provide breakdown lanes or pedestrian access in accordance with the Americans with Disabilities Act (ADA) sidewalk design standards.

The current bridge was constructed in 1948. It is 781 feet long, 26 feet high, and spans the banks of the Des Moines River in a northeast/southwest orientation. The current bridge has a federal sufficiency rating of 20-poor (see Section 3.2 for details).

1.1 Project Location

The City of Farmington is located in the southeast corner of Iowa in Van Buren County. The city is located less than two miles north of the Missouri border and approximately 30 miles west of the Mississippi River. Iowa 2 crosses the Des Moines River on the western edge of Farmington as shown in Figure 1. A larger aerial image of the Farmington bridge is shown in Figure 2.

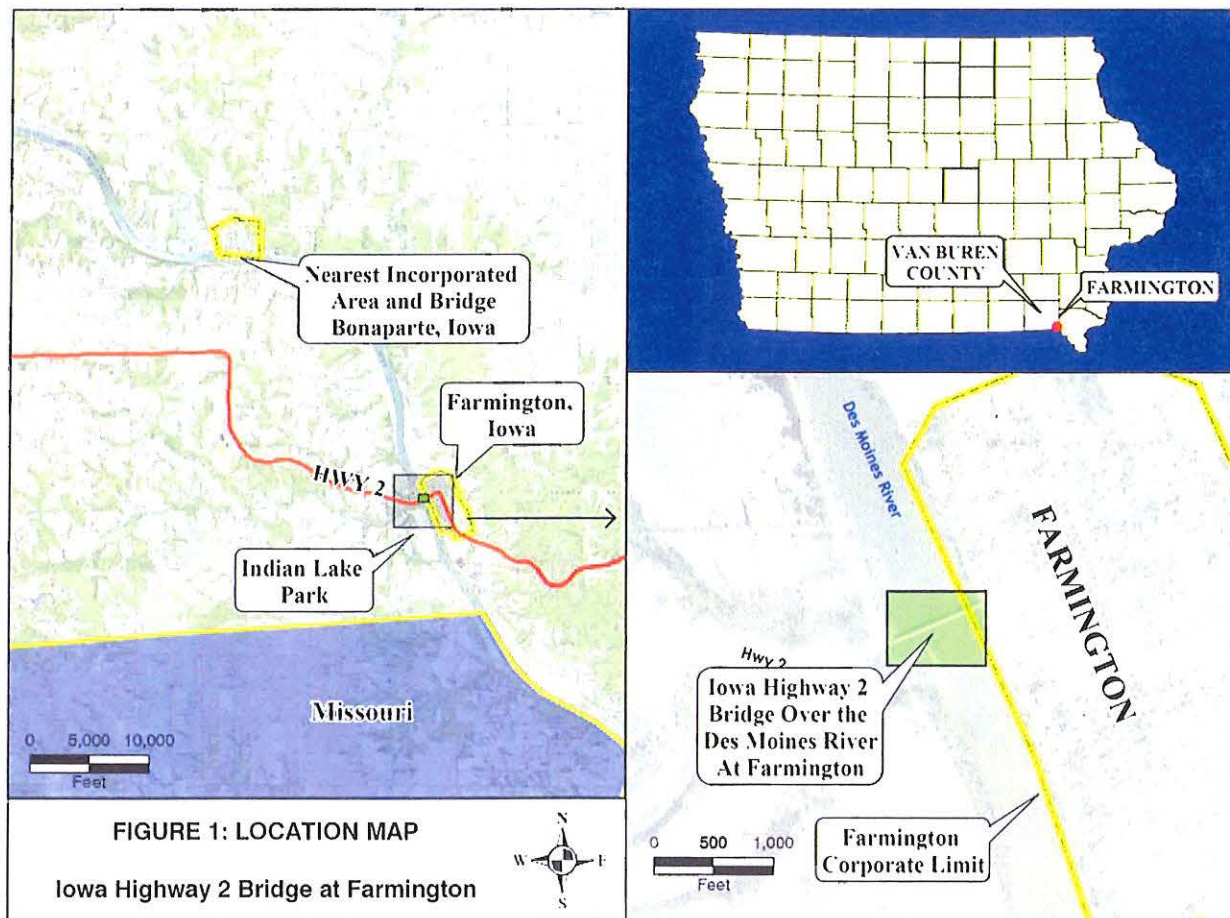


Figure 1. Location Map

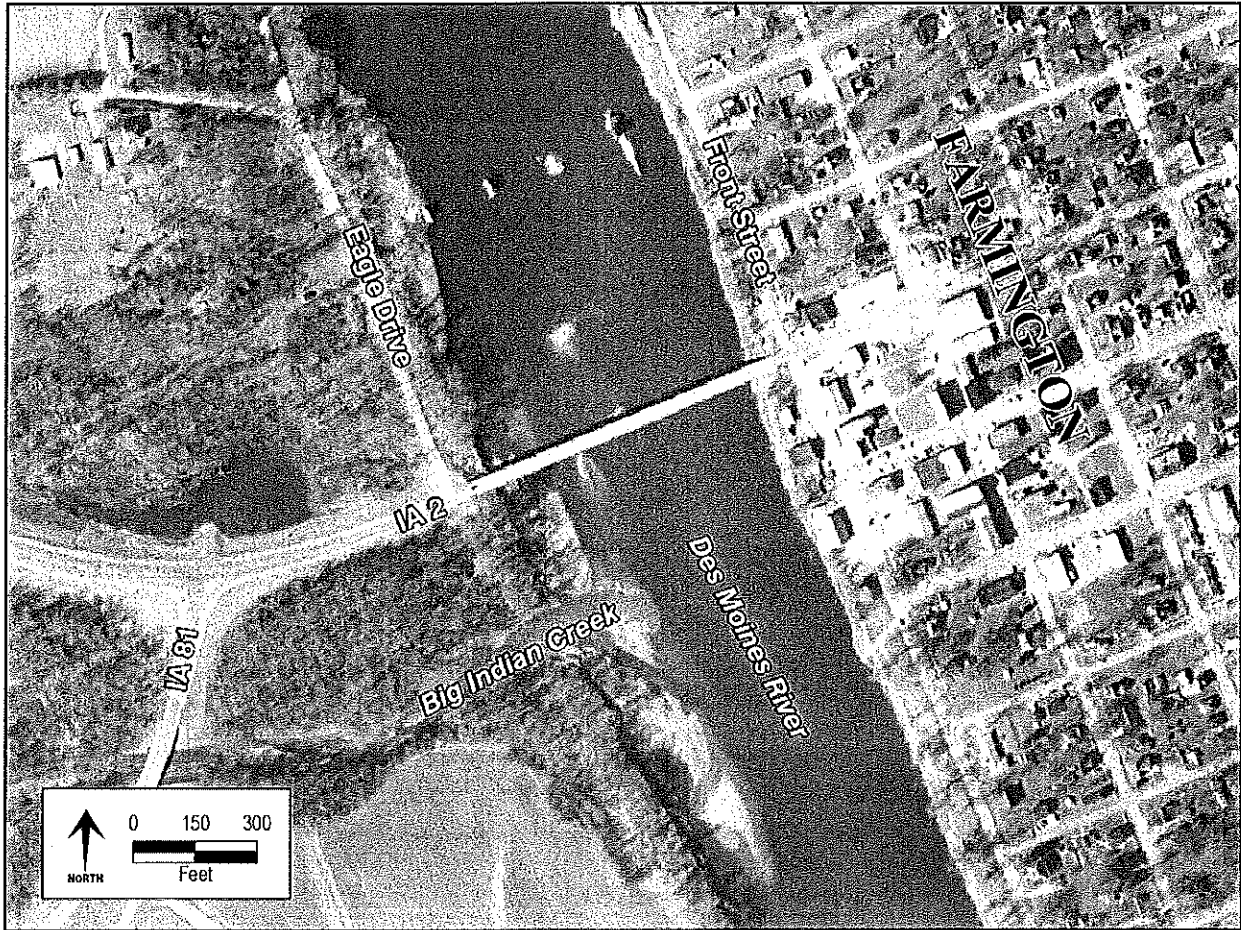


Figure 2. Annotated Aerial Image of the Project Vicinity (2002)

3.0 PURPOSE AND NEED FOR ACTION

3.1 Purpose of the Proposed Action

The purpose of the project is to provide an improved Iowa 2 river crossing over the Des Moines River at Farmington in order to maintain travel patterns. This would be accomplished by providing a bridge that meets current design standards, maintains route continuity and travel reliability, and maintains safety.

3.2 Need for the Proposed Action

The proposed action needs to accomplish the following:

- Ensure existing route continuity
- Maintain existing travel reliability
- Correct existing bridge condition and design standard issues
- Ensure continued safety of the Iowa 2 river crossing at Farmington.

Route Continuity:

Iowa 2 is the southernmost east/west corridor across the State of Iowa. Iowa 2 provides a connection for southeastern Iowa to move goods and services to other parts of the state and to Missouri and Illinois as shown in Figure 3. The route continuity of Iowa 2 needs to be maintained during the replacement of the existing bridge. The junction of IA 81 and IA 2 is located approximately 500 feet west of the bridge. Iowa 81 becomes Missouri 81 approximately two miles south of the IA 2 junction. The nearest all-weather roadway crossings of the Missouri border are approximately 22 miles west of Farmington on County Road V56 near Milton, Iowa and approximately 16 miles southeast of Farmington on Iowa 27 at St. Francisville. Farmington is 26 miles west of the Mississippi River at Fort Madison, Iowa. Iowa 2 connects with US 218 at Donnellson and US 61 west of Fort Madison; approximately 10 and 20 miles respectively, east of Farmington.

The Farmington bridge provides a crossing of the Des Moines River for residents, tourists and commerce. The nearest crossing upstream is approximately six miles northwest in Bonaparte, Iowa. The nearest crossing downstream is a bridge approximately 20 miles southeast in St. Francisville, Missouri.

Indian Lake Park is located approximately one mile southwest of the bridge. This park contains a four-mile trail that is used for cycling, hiking, jogging, snowmobiling, and cross-country skiing. The bridge provides connectivity for citizens to access this recreational facility.

Travel Reliability:

The bridge provides essential services to the Farmington community. It provides the quickest route to the nearest hospital, which is 18 miles northwest of Farmington in Keosauqua, Iowa. Emergency response vehicles, such as ambulances, fire trucks, and police cruisers, from Farmington use the bridge to access the hospital and citizens on the west side of the Des Moines River. In addition, busses from the Harmony Community School District utilize the bridge during the school year to transport students.

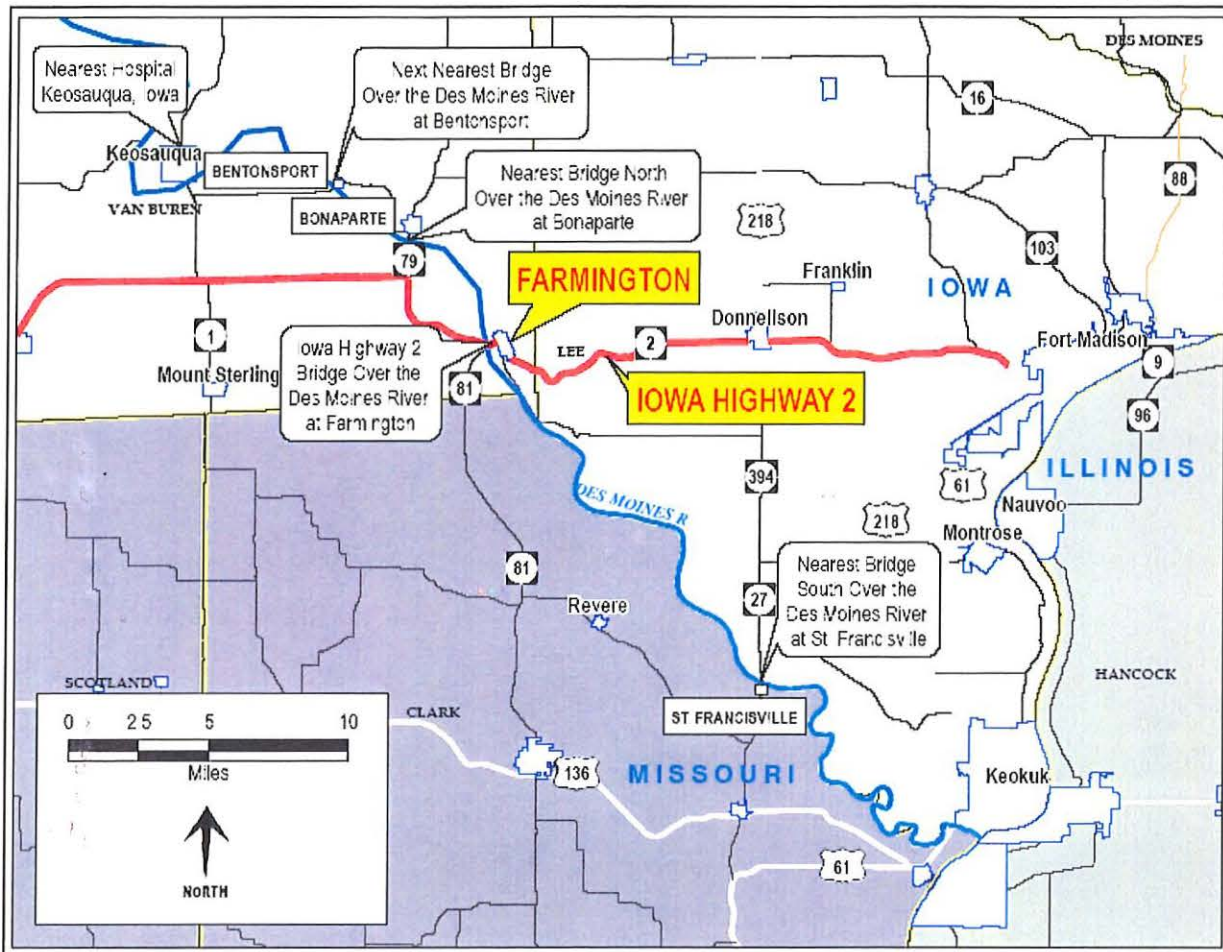


Figure 3. Route Continuity Map

Without the Farmington bridge, emergency vehicles would need to cross the Des Moines River in Bonaparte, Iowa to respond to an accident on the west side of the Des Moines River (see Figures 1 and 3). For example, consider what could occur if an accident were to take place at the intersection of Iowa 2 and Iowa 81, which is on the west side of the Des Moines River. If emergency responders were able to travel across the existing bridge from downtown Farmington, then they would have to travel approximately ½ of a mile to be at the scene of the accident. However, if the emergency responders were forced to cross the Des Moines River via the bridge in Bonaparte, then they would have to travel a total of approximately 18 miles to be at this same accident location. This increase in travel distance would negatively impact medical, fire, and police response time.

Bridge Condition and Design Standards:

The existing bridge was built in 1948. The structural integrity of the existing bridge is a concern. Pieces of concrete from the bridge deck and piers are missing. Pieces of concrete from the undercarriage of the bridge deck and piers are missing and rebar is exposed. The exposed rebar, steel girders, and other parts of the bridge are rusting. Due to its two-girder design, the bridge could be taken out of service if one or both of its supporting girders were damaged in an accident or by a natural disaster.

The Federal Highway Administration (FHWA) assigned a Federal Sufficiency Rating¹ of 20-Poor to the Farmington bridge in April 2004 due to structural integrity issues. The rating of 20 means that the replacement of this bridge is eligible for Federal funds because the bridge is not appropriate for current and anticipated service needs. Deterioration of the bridge is visually evident. In addition, the bridge does not meet the current design standards of the Iowa DOT or American Association of State Highway and Transportation Officials (AASHTO). The current bridge is 26 feet wide, with two 12-foot-wide travel lanes and two one-foot-wide curbs. This bridge accommodates two-way traffic but does not provide additional width for emergencies due to swerving or stalling. The curbs do not meet the sidewalk requirements of the Americans with Disabilities Act (ADA), which require a minimum walkway width of three feet.

Current Iowa DOT standards suggest that the width of the bridge should be determined by the width of the roadway including the shoulders. The width of IA 2 immediately west of the Farmington bridge is 40 feet wide, including two 8-foot-wide shoulders. To meet the Iowa DOT design standard, the bridge should be at least 40 feet wide (two 12-foot-wide travel lanes and two 8-foot-wide shoulders).

The estimated number of vehicles using the bridge in 2004 is 2,400 vehicles per day (vpd) with 12% of these vehicles being trucks (290 trucks per day). The estimated number of vehicles using the bridge in the design year of 2024 is 3,300 vpd with 13% being trucks (430 trucks per day). This is a 37.5% increase in utilization of the bridge over the next twenty years. Iowa 2 is expected to be able to accommodate the projected volume of traffic in 2024.

Safety:

The IA 2 bridge has not experienced a substantial number of crashes. During a five-year study from January 1, 1994 through December 31, 1998, only one crash occurred involving the bridge. Property damage amounted to under \$5,000 and there were no injuries. One of the project goals is to ensure the continued safe crossing of Iowa 2 over the Des Moines River at Farmington.

3.3 Summary

The replacement of the Farmington bridge would maintain existing route continuity, enhance travel reliability along IA 2, and ensure the safety of an important surface transportation corridor in southeastern Iowa. Replacement would also correct the structural and functional design deficiencies identified on the existing bridge. Therefore, for the above mentioned reasons, the Iowa Department of Transportation and the Federal Highway Administration propose that the existing Farmington bridge be replaced.

¹ Four separate factors including safety, functionality, public use, and special reductions are evaluated to obtain a numeric value that indicates the bridge's sufficiency to remain in service. A rating of 90-100 is excellent, 80-89 is good, 65-79 is fair, 50-64 is tolerable, and 0-49 is poor.

4.0 ALTERNATIVES

4.1 Range of Alternatives Considered

A total of six build alternatives and the no build alternative were initially considered. All six build alternatives proposed the replacement of the existing Iowa 2 bridge at Farmington. Four build alternatives and the no build alternative were carried forward for evaluation in this EA. Two build alternatives were eliminated from further consideration because they did not meet the purpose and need of the proposed project. All six build alternatives are described in subsection 4.1.1. The no build alternative was used as a basis for comparison with the build alternatives and is discussed in section 4.2.

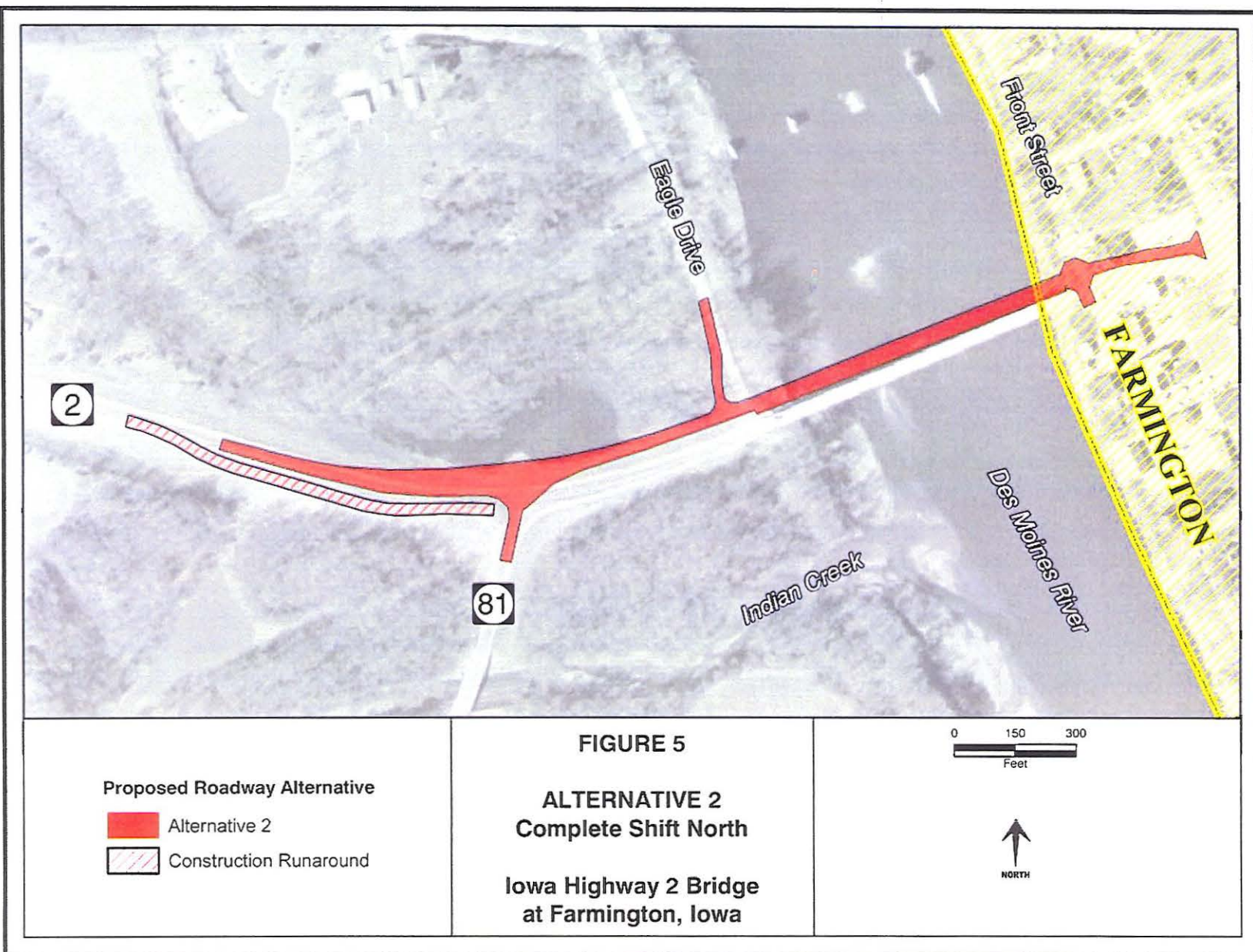
4.1.1 Range of Alternatives Carried Forward

A total of four build alternatives were carried forward for evaluation in this EA. They are:

- Alternative 1 – Partial Shift North
- Alternative 2 – Complete Shift North
- Alternative 3 – Complete Shift South
- Alternative 4 – Partial Shift South

Alternative 1 – Partial Shift North, proposes the construction of a new bridge that would shift the west end of the bridge to the north. This alternative is shown in Figure 4. Approximately 1,850 feet of existing IA 2 would be realigned to accommodate the shifted orientation of the new bridge. Approximately 1,350 feet of this realignment would occur on the west side of the bridge and 500 feet would occur on the east side of the bridge. Iowa 81 and Eagle Drive would be realigned to accommodate the realignment of IA 2. Temporary pavement, called a runaround, would be constructed south of existing IA 2 to accommodate traffic during the realignment of IA 2, IA 81, and Eagle Drive. Staged construction of the new bridge and staged demolition of the existing bridge would allow at least one lane of traffic to remain open over the Des Moines River. Traffic would be controlled by automatic traffic signals during the project to provide alternating one-way traffic across the river. This alternative would impact approximately 1.7 acres of emergent and forested wetlands, much of which is located on state-owned land. This alternative could require the acquisition of up to 0.49 acre of right-of-way, including a restaurant located at the northeast corner of IA 2 and Front Street.

Alternative 2 – Complete Shift North, proposes the construction of a new bridge to the north of the existing bridge. This alternative is shown in Figure 5. Approximately 1,850 feet of existing IA 2 would be realigned to accommodate the new bridge. Approximately 1,350 feet of this realignment would occur on the west side of the bridge and 500 feet would occur on the east side of the bridge. Iowa 81 and Eagle Drive would be realigned to accommodate the realignment of IA 2 and the new bridge north of the existing bridge. The existing bridge would be demolished once the new bridge is complete. A runaround would be constructed south of existing IA 2 to accommodate traffic during the realignment of IA 2, IA 81, and Eagle Drive. Construction of this alternative would occur north of the existing bridge, which would allow the existing bridge to remain open during construction. This alternative would impact approximately 1.7 acres of emergent and forested wetlands, much of which is located on state-owned land. This alternative could require the acquisition of up to 0.49 acre of right-of-way, including a restaurant located at the northeast corner of IA 2 and Front Street.



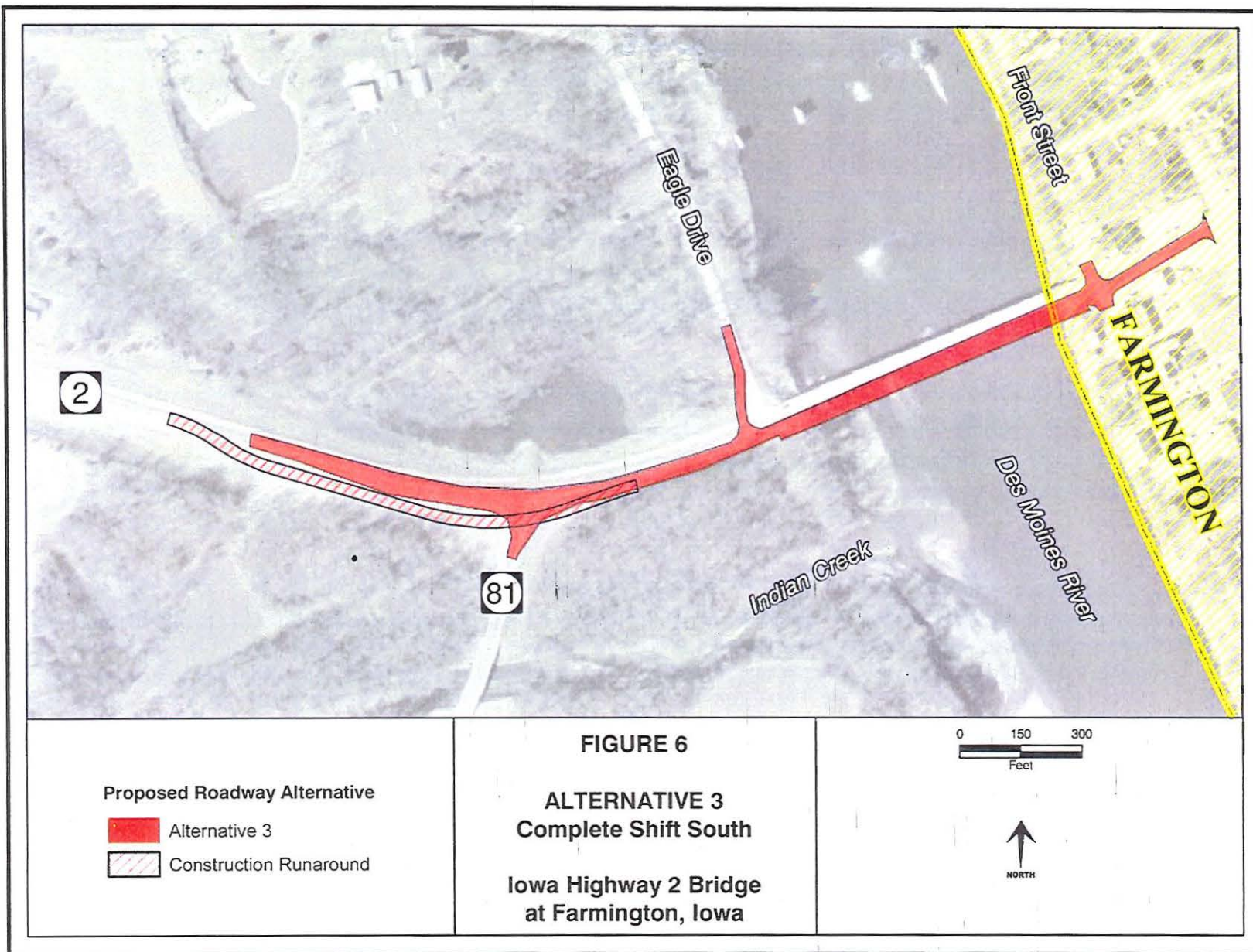
Alternative 3 – Complete Shift South, proposes the construction of a new bridge to the south of the existing bridge. This alternative is shown in Figure 6. Approximately 1,850 feet of existing IA 2 would be realigned to accommodate the new bridge. Approximately 1,350 feet of this realignment would occur on the west side of the bridge and 500 feet would occur on the east side of the bridge. Iowa 81 and Eagle Drive would be realigned to accommodate the realignment of IA 2 and the new bridge south of the existing bridge. A runaround would be constructed south of existing IA 2 to accommodate traffic during the realignment of IA 2, IA 81, and Eagle Drive. Construction of this alternative would occur south of the existing bridge, which would allow the existing bridge to remain open during construction. This alternative would impact approximately 0.5 acre of forested wetlands, much of which is located on state-owned land. This alternative could require the acquisition of up to 0.46 acre of right of way and may displace a commercial property at the southeast corner of IA 2 and Front Street.

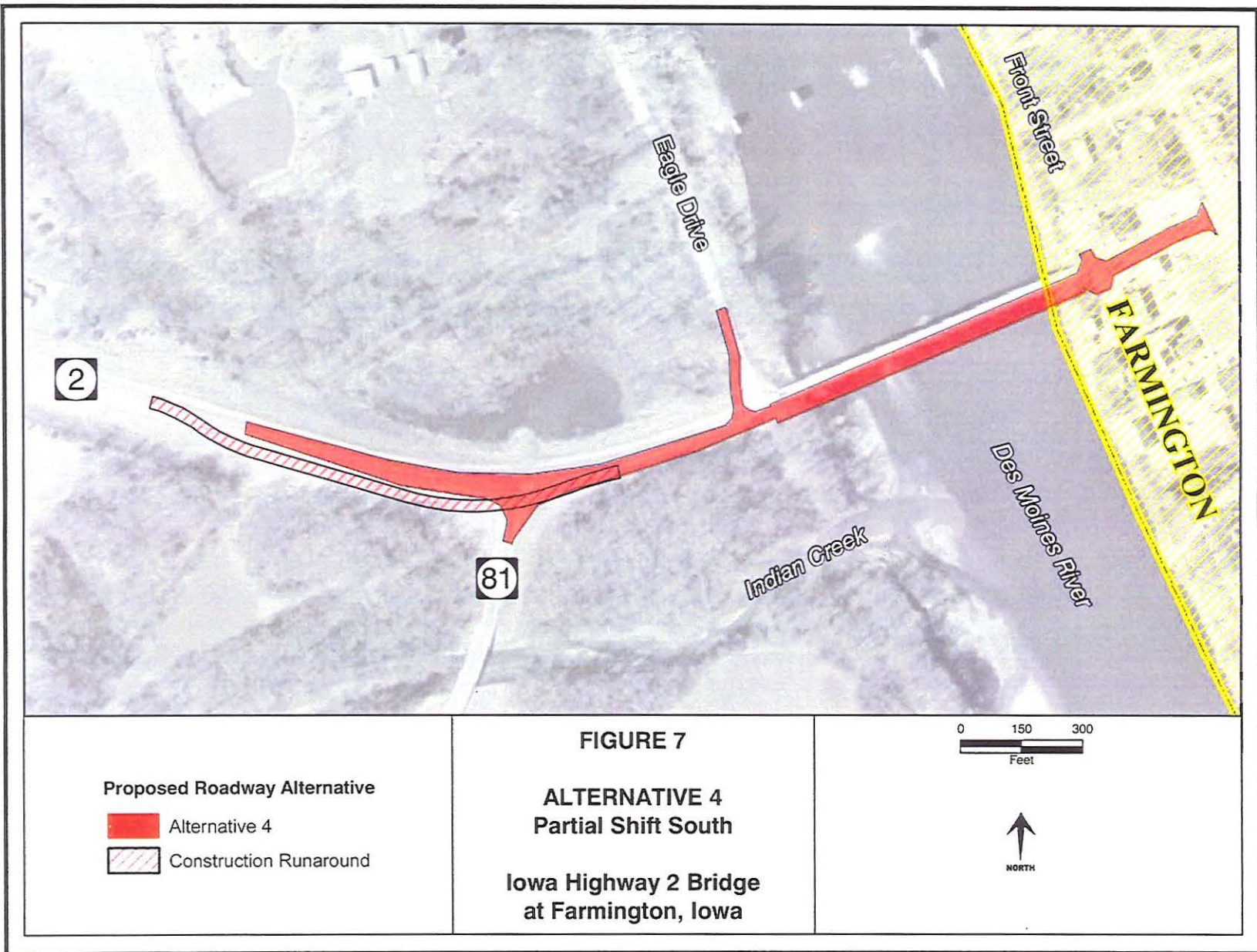
Alternative 4 – Partial Shift South, proposes the construction of a new bridge that would shift the west end of the bridge to the south. This alternative is shown in Figure 7. Approximately 1,850 feet of existing IA 2 would be realigned to accommodate the shifted orientation of the new bridge. Approximately 1,350 feet of this realignment would occur on the west side of the bridge and 500 feet would occur on the east side of the bridge. Iowa 81 and Eagle Drive would be realigned to accommodate the realignment of IA 2. A runaround would be constructed south of existing IA 2 to accommodate traffic during the realignment of IA 2, IA 81, and Eagle Drive. Staged construction of the new bridge and staged demolition of the existing bridge would allow at least one lane of traffic to remain open over the Des Moines River. Traffic would be controlled by automatic traffic signals during the project to provide alternating one-way traffic across the river. This alternative would impact approximately 0.5 acre of forested wetlands, much of which is located on state-owned land. This alternative could require the acquisition of up to 0.47 acre of right of way and may displace a commercial property at the southeast corner of IA 2 and Front Street.

4.1.2 Alternatives Eliminated from Further Consideration

- Alternative 5 – Replace Existing Deck
- Alternative 6 – Replace Entire Bridge

Alternative 5 – Replace Existing Deck, proposed the construction of a new bridge on the same alignment as the existing bridge and proposed the reuse of the existing bridge piers and abutments. This alternative proposed the removal of the existing bridge deck, widening of the existing bridge piers and abutments to meet current design standards, and then constructing a new deck upon the widened piers and abutments. This alternative was eliminated because it would have required the closure of Iowa 2 over the Des Moines River for the duration of the project, which could be a minimum of 18 months. A detour would have been required to reroute traffic to the nearest bridge crossing in Bonaparte, Iowa (see Figures 1 and 3). During bridge closure, vehicles would have been required to travel a total of 18 miles to go from Farmington to the west side of the Des Moines River. This alternative did not meet the purpose and need of this project as stated in Sections 3.1 and 3.2 because travel patterns, route continuity, and travel reliability would not be maintained during construction. Therefore, this alternative was not carried forward for further evaluation.





Alternative 6 – Replace Entire Bridge, proposed the construction of a new bridge on the same alignment as the existing bridge. This alternative proposed the demolition of the existing bridge and the construction of new piers, abutments, and bridge deck. This alternative was eliminated because it would have required the closure of Iowa 2 over the Des Moines River for the duration of the project, which could be a minimum of 18 months. A detour would have been required to reroute traffic to the nearest bridge crossing in Bonaparte, Iowa (see Figures 1 and 3). During bridge closure, vehicles would have been required to travel a total of 18 miles to go from Farmington to the west side of the Des Moines River. This alternative did not meet the purpose and need of this project as stated in Sections 3.1 and 3.2 because travel patterns, route continuity, and travel reliability would not be maintained during construction. Therefore, this alternative was not carried forward for further evaluation.

4.2 No Build Alternative

The No Build alternative includes no action being taken to replace or improve the Iowa 2 Farmington bridge. This alternative is not selectable because it does not meet the purpose and need established in Section 3.0 of this EA. However, it is discussed in subsequent sections in order to establish a basis of comparison for the build alternatives.

4.3 Preferred Alternative

Alternative 3 – Complete Shift South, is the preferred alternative. This is because it minimizes impacts to wetlands while maximizing travel reliability during construction.

4.4 Comparison of Alternatives

A comparison of Alternatives 1 through 4 is shown in Table 1.

Table 1. Comparison of Alternatives

Impact Category	Alternative 1 Partial Shift North	Alternative 2 Complete Shift North	Alternative 3 Complete Shift South	Alternative 4 Partial Shift South	No Build Alternative
Additional Right of Way and Displacements	Up to 0.49 acre 1 building displaced	Up to 0.49 acre 1 building displaced	Up to 0.46 acre 2 buildings displaced	Up to 0.47 acre 2 buildings displaced	No Impact
Land Use	No Impact	No Impact	No Impact	No Impact	No Impact
Emergency Routes	No Impact	No Impact	No Impact	No Impact	Adverse Impact
Pedestrian and Bicycle	No Impact	No Impact	No Impact	No Impact	Adverse Impact
Wetlands	Approximately 1.7 acres of emergent and forested wetland (includes state owned land)	Approximately 1.7 acres of emergent and forested wetland (includes state owned land)	Approximately 0.5 acre of forested wetland (includes state owned land)	Approximately 0.5 acre of forested wetland (includes state owned land)	No Impact
Surface Waters	Minor Impact	Minor Impact	Minor Impact	Minor Impact	No Impact
Water Quality	Minor Impact	Minor Impact	Minor Impact	Minor Impact	No Impact

5.0 IMPACTS

5.1 Land Use

In general, the past land use of the City of Farmington and its surrounding area was dominated by agricultural, residential, commercial, and manufacturing land uses. In the late 1800s, there was a great deal of land used for commercial and manufacturing purposes, such as blacksmiths, grocery stores, cigar manufacturers, grist mills, and saw mills. In the 1930s, the State of Iowa began to acquire forestland and abandoned farmland east of Farmington. This land was converted to forest, which later became Shimek State Forest. At the time, acres of hardwood and softwood stands were planted to determine what trees were best suited to Iowa's climate. The Chicago, Burlington & Quincy (CB&Q) Railroad crossed the Des Moines River north of the project corridor from approximately 1875 to 1968. The railroad bridge was removed and the rail corridor has been abandoned for approximately 25 years.

The present land use of the City of Farmington and its surrounding area can be classified into the following land use categories: residential, commercial, institutional (churches, schools, city hall), industrial, open space, park, and agricultural (Figure 8). The City of Farmington and the Township of Farmington have adopted no formal zoning regulations. Within the city limits, most of the land use is either commercial or residential. The 9,000-acre Shimek State Forest, located east of Farmington, is used for timber production, wildlife management, and recreation. Indian Lake Park, located on the west side of the Des Moines River and Farmington, is used for recreation. The majority of the land outside the city limits of Farmington is used for agricultural purposes.

There is no development plan in place for the City of Farmington. There is a plan of action set up by the Villages of Van Buren, Inc., which was set up with the assistance of the Institute for Decision Making located at the University of Northern Iowa. The focus of this plan is to increase tourism, commercial, and economic development. With this plan, it is likely that the future land use of the City of Farmington and its surrounding area will continue to be dominated by agricultural, residential, commercial, and recreational land use. The amount of commercial and industrial land use could increase if the wood industry in Iowa expands through the marketing of softwood products from Shimek State Forest. If the countywide bike trail system and the Des Moines River Trail are developed, there could be an increase in tourism throughout the Farmington area.

There are fourteen known cemeteries in the Farmington Township. None of the cemeteries would be affected by the proposed project.

Build Alternatives Impacts: Land use would not be adversely impacted by the implementation of Alternatives 1 through 4. Implementing Alternatives 1 through 4 could have a positive impact on the tourism within Farmington and the Villages of Van Buren, Inc. The wider bridge would provide a safer crossing for bicyclists, pedestrians, and vehicles, which could increase the tourism in and around Farmington.

Build Alternatives Mitigation: There is no mitigation required for land use impacts under Alternatives 1 through 4.

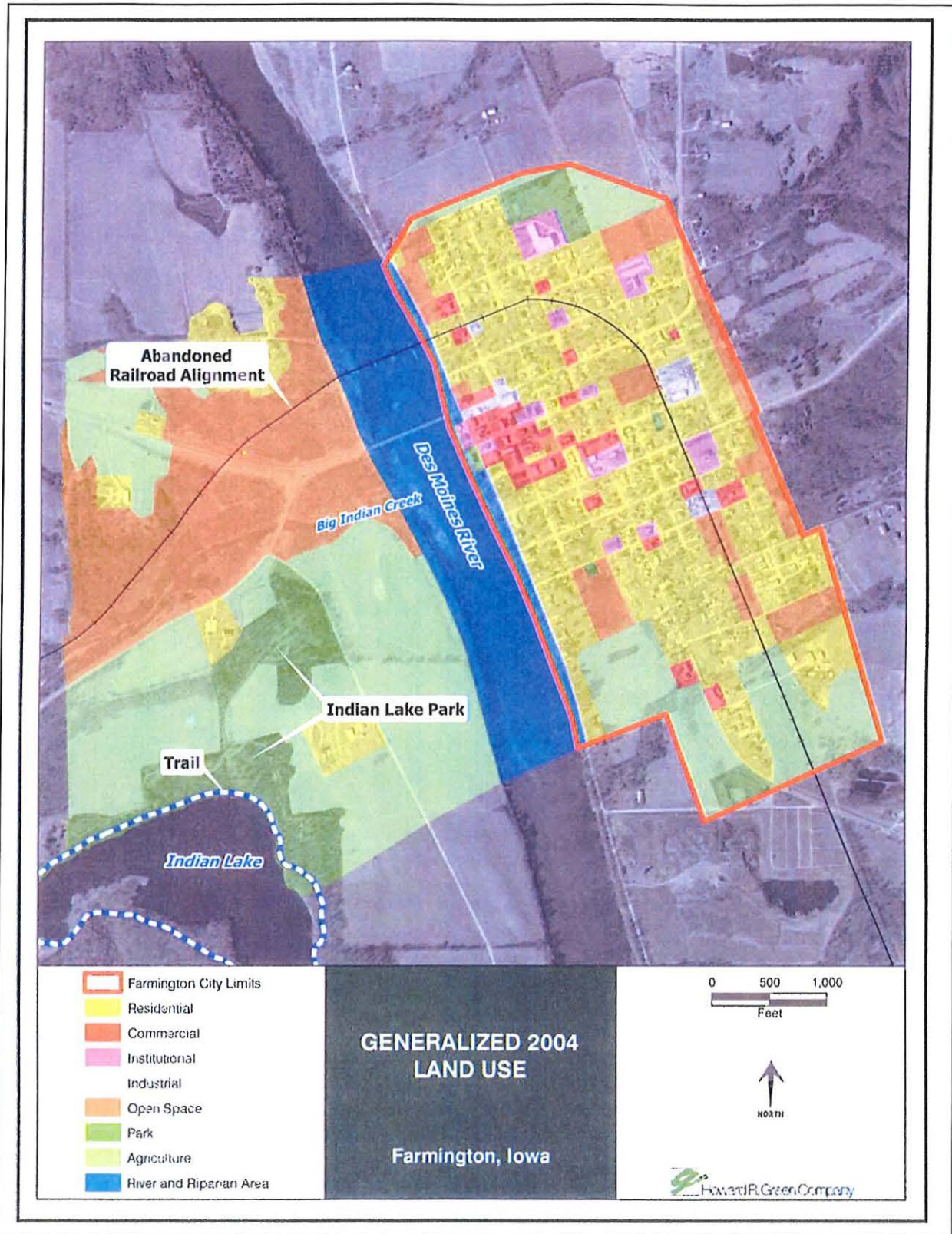


Figure 8. Generalized 2004 Land Use

No Build Alternative Impacts: This alternative would not adversely impact the land use of the project area. However, the No Build Alternative could adversely impact the plans of The Villages of Van Buren, Inc. to increase tourism. If the existing bridge were closed, the loss of this bicycle, pedestrian, and vehicle crossing would likely reduce traffic flow and tourism to Farmington.

No Build Alternative Mitigation: There is no mitigation required for land use impacts under the No Build Alternative.

5.2 Right of Way and Displacements

The majority of the proposed project would be constructed on State of Iowa owned land and within the existing roadway right of way. Some additional right of way would need to be acquired for all four of the proposed alternatives. Each of the proposed alternatives has slightly different right-of-way requirements. Table 2 describes the approximate anticipated additional right of way impacts for each of the four alternatives.

Table 2. Anticipated Right of Way Impacts

Anticipated Impacts	Alternative 1	Alternative 2	Alternative 3 (Preferred)	Alternative 4
Potential Additional Right of Way Requirement	0.49 acre	0.49 acre	0.46 acre	0.47 acre
Number of potentially affected parcels not owned by State of Iowa	5	5	5	5
Number of potentially affected commercial buildings or structures	1	1	2	2

Build Alternatives Impacts: No residential properties would be impacted by the implementation of Alternatives 1 through 4. One commercial building on the east side of the Des Moines River on the north side of IA 2 would be impacted by Alternatives 1 and 2. Two commercial buildings or structures on the east side of the Des Moines River on the south side of IA 2 would be impacted by Alternatives 3 and 4. Right of way would need to be acquired for the implementation of Alternatives 1-4 near Eagle Drive and for the east bridge approach.

Driveways and access to the commercial businesses on the east side of the Des Moines River would be impacted with the implementation of any of the four alternatives. These impacts would be temporary and would occur during construction only.

Build Alternatives Mitigation: Property owners would be compensated for right of way acquisitions through the implementation of standard operating procedures for the Iowa DOT for property acquisition.

No Build Alternative Impacts: This alternative would not require acquisition of right of way.

No Build Alternative Mitigation: There is no mitigation required for right of way impacts under this alternative.

5.3 Utilities

Utilities lines are located near and on the bridge. Two conduits attached to the underside of the bridge carries utilities over the Des Moines River. One of the conduits belongs to Starwest Cable Company and the other belongs to Iowa Telecom.

The City of Farmington receives its potable water supply from the Rathbun Regional Water Association from Fort Madison, Iowa. The water is treated in Fort Madison and is piped to Farmington. The imported water utilizes the existing Farmington water distribution system. A water main pipe is located on the north side of IA 2 beginning at 2nd Street and joins into the water main pipe located on the west side of 2nd Street. No water main pipe is located between 2nd Street and the Des Moines River. No water main pipe is located on the west side of the Des Moines River.

Municipal wastewater is treated at the City of Farmington Sewage Treatment Plant located on the south side of the community. The water is treated in three large lagoons and is discharged into the Des Moines River downstream of the Farmington bridge. A sanitary sewer force main is located on the west side of Front Street and would not be impacted by the proposed bridge replacement project.

Storm water is collected by inlets and storm sewers. Storm water flows westerly towards the Des Moines River on both sides of IA 2 to approximately mid-block between 2nd and Front Street, where all storm water runs on the north side of IA 2. The storm water is discharged into the Des Moines River and would be maintained during construction. No storm sewer is located on the west side of Des Moines River.

Build Alternatives Impacts: Construction of Alternatives 1 through 4 would impact private and public utilities in Farmington. Farmington's storm sewer and sanitary sewer force main would be impacted by the construction of any of the build alternatives. The private utilities near and on the bridge would also be impacted by the construction of any of the build alternatives. Relocation of these utilities would need to occur if Alternatives 1 through 4 were constructed. Coordination with the public and private utility companies would need to be conducted to ensure that utility service is not disturbed during construction.

Build Alternatives Mitigation: No mitigation is necessary for Alternatives 1 through 4 as long as utility service is maintained.

No Build Alternative Impacts: This alternative would not impact the utilities in the project area.

No Build Alternative Mitigation: No mitigation is necessary for the No Build Alternative.

5.4 Emergency Routes

The bridge provides essential services to the Farmington community. It provides the quickest route to the nearest hospital, which is in Keosauqua, Iowa, and to the west side of the Des Moines River. If an emergency response vehicle needed to transport a patient from Farmington to the hospital in Keosauqua, it would need to travel a distance of approximately 17 miles via the Farmington bridge, approximately 22 miles via the Bentonsport bridge, and approximately 26 miles via the Bonaparte bridge. If emergency response vehicles needed to travel from downtown Farmington to the intersection of Iowa 2 and Iowa 81, which is on the west side of the

Des Moines River, they would only need to travel approximately ½ of a mile if they were able to use the existing bridge in Farmington. However, if they were forced to cross the Des Moines River via the next nearest bridge, in Bonaparte, then they would have to travel a total of approximately 18 miles to be at the same accident location.

In addition, busses from the Harmony Community School District (which includes Farmington) utilize the bridge during the school year to transport students.

Build Alternatives Impacts: Implementing any of the Alternatives 1 through 4 would allow the existing bridge to remain open to traffic. Emergency services would be able to function normally without disruption caused by a detour.

Build Alternatives Mitigation: No mitigation is required for emergency routes for Alternatives 1 through 4.

No Build Alternative Impacts: The selection of this alternative could substantially adversely impact emergency routes in the future. The condition of the bridge would continue to deteriorate until the bridge would no longer be safe to cross. Without the existing bridge, emergency vehicles would need to travel a substantially increased distance to provide emergency services on the west side of the Des Moines River. Emergency vehicles would also need to travel an increased distance in order to transport a patient from Farmington to the nearest hospital, which is located in Keosauqua.

No Build Alternative Mitigation: If this alternative were selected, then it is likely that the Farmington bridge may be closed to traffic at some point in time. In the event that this crossing of the Des Moines River is no longer available, there may be a requirement to provide some sort of emergency service route that crosses the Des Moines River at or near Farmington.

5.5 Pedestrian and Bicycle

Currently, there are no sidewalks on the Farmington bridge. Pedestrians can use the two one-foot-wide curbs that exist inside the guard rails on either side of the bridge as a means to cross the Des Moines River. The current bridge does not provide a pedestrian-friendly way to cross the river. The current bridge does not provide an Americans with Disabilities Act (ADA)-compatible pedestrian crossing.

Some of the pedestrians crossing the bridge are doing so to access a four-mile multipurpose trail located southwest of the bridge in Indian Lake Park (Figure 8). Indian Lake Park is located approximately one mile southwest of IA 2 and is open year round. In addition to other amenities, the multiuse trail accommodates hiking, jogging, snowmobiling, and cross country skiing.

Bicycles crossing the Des Moines River currently use the vehicle lanes of IA 2. The existing bridge does not have shoulders or bike lanes. Vehicles in the same lane of travel as cyclists are forced either to follow the cyclist along the distance of the bridge or risk passing cyclists in a no passing zone. The Farmington bridge is a part of the Bike Van Buren route. Bike Van Buren is an annual 110-mile, two-day summer event, where hundreds of bike riders travel through the Villages of Van Buren County.

Build Alternatives Impacts: Alternatives 1 through 4 include a ten-foot wide sidewalk on the bridge in addition to the vehicle lanes. Implementing any of the four build alternatives would improve pedestrian access and provide an ADA-compliant pedestrian crossing of the river.

Pedestrians would be able to cross the bridge without having to use the vehicle lanes. Bicyclists would be able to use the sidewalk.

Build Alternatives Mitigation: No mitigation would be necessary for Alternatives 1 through 4.

No Build Alternative Impacts: This alternative would continue to provide the existing bicycle and pedestrian crossing of the Des Moines River. Deteriorating bridge conditions could result in the closure of the existing bridge. This closure would eliminate the only bicycle and pedestrian crossing of the Des Moines River at this location.

No Build Alternative Mitigation: Impacts of this alternative could be mitigated by providing some form of crossing to maintain pedestrian and bicycle access across the Des Moines River.

5.6 Wetlands

Wetlands are present within the project area, as shown on Figure 9. An investigation was performed by Iowa DOT personnel on June 30, 2004 and September 23, 2004 to identify those waters of the U.S., including wetlands, that may be impacted by the proposed project. All potential wetland and stream areas within the proposed project corridor, as well as those wetlands shown on National Wetland Inventory (NWI) maps and those streams and/or drainages shown as blue lines on USGS Quadrangle maps, were investigated.

Wetland delineations were conducted using methods outlined in the *1987 Corps of Engineers Manual for Wetland Delineation*. Wetland boundaries were identified in the field and mapped using a Global Positioning System (GPS) receiver and available topographic survey information. Stream determinations were made based upon guidance received from the Rock Island District of the U.S. Army Corps of Engineers (Corps).

Field investigations revealed that this project will result in the unavoidable discharge of fill material into the Des Moines River and wetland areas, depending upon the alternative selected. These impacts are considered to be unavoidable. No feasible and prudent alternatives exist to avoid impacts to wetlands in the project area. Design constraints in placement of the highway, along with other environmental and cultural constraints, do not allow these wetlands and/or streams to be avoided. A detailed description of waters of the U.S. and wetlands within the project corridor is included below:

Wetland 1. Wetland 1 is a palustrine forested wetland located along the south side of existing IA 2 and west of IA 81. This wetland is part of the floodplain of Indian Creek, which is located just to the south. Dominant vegetation within the portion of Wetland 1 adjacent to IA 2 and IA 81 includes Virginia wild rye (*Elymus virginicus*), cottonwood (*Populus deltoides*), and silver maple (*Acer saccharinum*). NWI maps indicate this area as being a temporarily flooded, palustrine forested wetland.

Wetland 2. Wetland 2 is a palustrine forested wetland located along the south side of existing IA 2, and east of IA 81. This wetland is part of the floodplain of Indian Creek, which is located just to the south. Dominant vegetation within Wetland 2 adjacent to IA 2 and IA 81 includes Virginia wild rye, Canada clearweed (*Pilea pumila*), pale touch-me-not (*Impatiens pallida*), wood nettle (*Laportea canadensis*), cottonwood, and silver maple. NWI maps indicate this area as being a temporarily flooded, palustrine forested wetland.

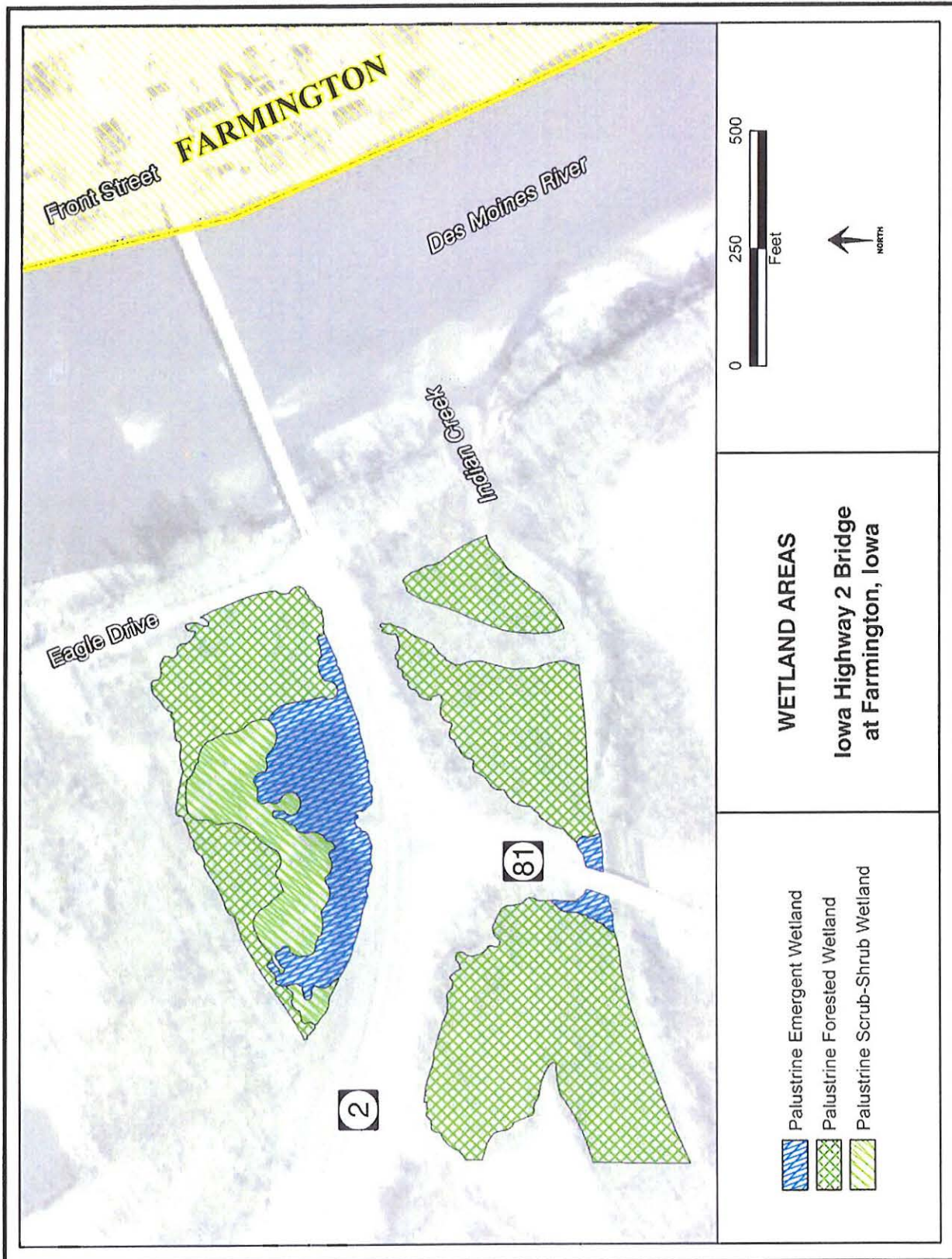


Figure 9. Wetland Areas in the Project Area

Wetland 3. Wetland 3 is a palustrine emergent wetland located along the north side of existing IA 2. This wetland is part of a larger emergent, scrub-shrub, and forested wetland complex that occupies a triangular-shaped, low-lying area bordered to the south by IA 2, to the north by an embankment of an abandoned railroad (see Figure 8), and to the east by Eagle Drive. The emergent portion of this wetland appears to have been previously excavated, most likely to obtain borrow material for earlier construction on IA 2. Dominant vegetation within the portion of Wetland 3 adjacent to IA 2 includes water smartweed (*Polygonum amphibium*), swamp dock (*Rumex verticillatus*), bristly smartweed (*Polygonum setaceum*), and reed canary grass (*Phalaris arundinacea*). NWI maps indicate this area as being a seasonally flooded, palustrine emergent wetland and semi-permanently flooded palustrine scrub-shrub wetland.

Wetland 4. Wetland 4 is a palustrine forested wetland located north of existing IA 2, just to the west of Eagle Drive. This wetland is part of a larger emergent, scrub-shrub, and forested wetland complex that occupies a triangular-shaped, low-lying area bordered to the south by IA 2, to the north by an the embankment of an abandoned railroad, and to the east by Eagle Drive. Wetland 4 consists of a low area in the vicinity of a shallow drainage that connects the wetlands 3 and 4 complex with the Des Moines River via a culvert under Eagle Drive. Dominant vegetation within the portion of Wetland 4 adjacent to IA 2 and Eagle Drive includes Virginia wild rye, Canada clearweed, and silver maple. NWI maps do not indicate this area as being wetland.

Des Moines River. The Des Moines River is considered to be a navigable river at the proposed project location, and therefore, is regulated by Section 10 of the Rivers and Harbors Act of 1899. The Des Moines River meets jurisdictional criteria in that it appears on the Farmington, Iowa, United States Geological Survey Quadrangle map as a perennial stream, it has a defined bed and bank and an ordinary high water mark, and it actively sorts sediment. NWI maps indicate the river as being a permanently flooded, upper perennial riverine system, with an unconsolidated bottom.

Build Alternatives Impacts: For the four action alternatives, wetlands and other waters of the U.S. filled by this project, a Department of the Army Section 404 Permit would be required from the Corps prior to construction, in compliance with the Clean Water Act. Compensatory wetland mitigation would be performed (at a minimum ratio of 1.5:1) to replace those wetlands impacted by construction.

Implementation of any of the four action alternatives would result in impacts to the Des Moines River from the construction of five bridge piers within the river channel. Impacts to the river would occur in a construction zone extending across the river and approximately 150 linear feet upstream and downstream.

Build Alternatives Mitigation: The Iowa DOT has coordinated with the appropriate federal and state agencies on the appropriate mitigation for the potential impacts to wetlands and waters of the United States (see Section 6.2). It is anticipated that the impacts to wetlands associated with the replacement of the Farmington bridge and the realignment of Iowa 2 would be mitigated at a 1.5 to 1 ratio through the establishment of a mitigation area east of Fairfield, Iowa, along Crow Creek. The final details of the mitigation plan would be completed and submitted to the Corps and the Iowa DNR as part of the completed 404 permit application.

No Build Alternative Impacts: No impacts to wetlands would occur as part of this alternative.

No Build Alternative Mitigation: No mitigation would be required for the No Build Alternative.

5.7 Surface Waters

There are three major bodies of water near the project area. They are the Des Moines River, Big Indian Creek, and Indian Lake (Figures 2 and 8). The Des Moines River is approximately 600 feet wide and runs northwest to southeast on the west side of Farmington. The river is used for recreation and is a source for additional water for extinguishing fires. Big Indian Creek flows east and empties into the Des Moines River approximately 300 feet south on the bridge on the west bank of the River. Indian Lake is a 44-acre, recreational lake located in Indian Lake Park.

Storm water runoff is collected in streams and creeks that flow into the Des Moines River.

During construction, standard erosion control measures should be followed. A National Pollutant Discharge Elimination System (NPDES) permit number 2 would need to be obtained from the Iowa DNR. The pollution prevention plan associated with this permit would outline measures to control erosion and sedimentation.

Build Alternatives Impacts: Impacts to surface waters are anticipated to be minor, provided that standard measures are followed to protect water quality (see Section 5.8).

Build Alternatives Mitigation: No additional mitigation measures are required other than those outlined to protect water quality (Section 5.8) and wetlands (Section 5.6).

No Build Alternative Impacts: This alternative would have no impacts to surface waters unless the bridge collapsed into the Des Moines River. Such a collapse would be an adverse impact to the Des Moines River because it would result in large amounts of concrete and steel in the river which could interfere with the flow of the river.

No Build Alternative Mitigation: No mitigation is required for this alternative unless the bridge collapsed into the Des Moines River. Such a collapse would result in a requirement to remove the material from the river.

5.8 Water Quality

The Clean Water Act provides the authority to establish water quality standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for dredged or fill material. The use of appropriate mitigation measures and construction controls applicable to the proposal would mean that state water quality standards and any Federal, state, and local permit requirements can be met. These factors include storm and sanitary sewer design, erosion controls to prevent siltation, designs to preserve existing drainage or to minimize dredge and fill to the extent applicable.

Early consultation was conducted with local, state, and Federal agencies charged with implementation of water quality regulations and issuance of permits. Normally, these agencies would identify issues with regard to water quality. Negative impacts to water quality can be avoided by design considerations, controls during construction and other mitigation measures. If an environmental assessment and the appropriate consultation demonstrate that water quality standards can be met, that no special water-related problem exists, and that no anticipated permit difficulty is indicated, it may be assumed that there would be no significant impact on water quality.

Consultation with the EPA regional office is not required because the potential for contamination of an aquifer designated by the EPA as a sole or principal drinking water resource for the area pursuant to section 1424(e) of the Safe Drinking Water Act, as amended, is not anticipated.

The clearing of vegetation would be kept to a minimum to minimize potential erosion problems. Silt fencing would be erected to provide temporary soil erosion control measures. Any areas cleared during construction would be reseeded and revegetated upon completion of grading and other associated earthwork.

The Proposed Action would require a NPDES permit in accordance with Section 402 of the Clean Water Act because construction would disturb greater than one acre.

Build Alternatives Impacts: Impacts to water quality are anticipated to be minor, provided that standard sediment and erosion control measures are followed.

Build Alternatives Mitigation: Obtaining the required permits and following standard water quality protection measures during construction would prevent or minimize impacts. The following additional mitigation measures may be followed to further minimize impacts to water resources during construction or operation of the proposed project:

- Use construction controls to minimize erosion and sedimentation.
- Use pervious surfaces where practicable.
- Control runoff and spoil disposal in order to avoid contamination of ground and surface water.
- Control use of pesticides, herbicides, and fertilizer.
- Maintain vegetative buffers to reduce sedimentation and delivery of chemical pollutants to the water body.
- Elevate facilities above base flood level and locate nonconforming structures and facilities out of the floodplain.

No Build Alternative Impacts: No impacts to water quality would occur as part of the No Build Alternative unless the bridge failed and collapsed into the river.

No Build Alternative Mitigation: No mitigation would be required for the No Build Alternative. In the event of a collapse of the existing bridge into the Des Moines River, removal of the bridge would require coordination between the Iowa DOT, the FHWA, the Corps, and the Iowa DNR.

5.9 Floodplains

Portions of the 100-year floodplain of the Des Moines River and Indian Creek are found within the project area. Figure 10 shows the location of the floodplains in the project area as defined by the Federal Emergency Management Agency (FEMA).



Figure 10. Floodplains in the Project Area

A portion of each of the four action alternatives would occur in the 100-year floodplain. The Iowa DOT is conducting the appropriate level of planning and agency coordination to ensure that the selected alternative would be consistent with State and Federal requirements to maintain the flow of the river and to minimize risks of flooding. It is anticipated that fill inside the 100-year floodplain would be necessary for this project. Further study of the floodplain and floodway in the project area may be necessary once an alternative has been selected. Iowa DOT would consult with Iowa DNR for permitting and compliance involved with constructing in the floodplain.

Build Alternatives Impacts: Impacts associated with construction within the 100-year floodplain would be minor, provided that the appropriate level of planning and agency coordination occurs during final design.

Build Alternatives Mitigation: If required, the appropriate mitigation measures would be developed through the agency coordination that would be conducted during final design.

No Build Alternative Impacts: This alternative would have no impact to the floodplain.

No Build Alternative Mitigation: No mitigation would be required for the No Build Alternative.

5.10 Wildlife and Habitat

Early coordination with the Iowa Department of Natural Resources (DNR) and the U.S. Fish and Wildlife Service (USFWS) was conducted to determine if rare, threatened, or endangered plants and/or animals exist in the project corridor. Correspondence received from the USFWS and the Iowa DNR indicated that four federally listed species have the potential to be present in the vicinity of the proposed action based on historic records of occurrences of these species in the past (Table 3).

Table 3: Federally Listed Species Potentially Found in Vicinity

Classification	Common Name	Scientific Name	Habitat
Endangered	Indiana bat	<i>Myotis sodalis</i>	Caves, mines; rivers and reservoirs adjacent to forests
Threatened	Bald eagle	<i>Haliaeetus leucocephalus</i>	Wintering, breeding habitat in tall trees near lakes, reservoirs, or large rivers
Threatened	Prairie bush clover	<i>Lespedeza leptostachya</i>	Dry to mesic prairies with gravelly soil
Threatened	Western prairie fringed orchid	<i>Plantanthera praeclara</i>	Mesic to wet prairies

Source: U.S. Fish and Wildlife Service, Rock Island Field Office

Indiana Bat

In Iowa, the Indiana bat is known to occur in Van Buren County. During the summer, the Indiana bat frequents the corridors of small streams with well-developed riparian woods as well as mature upland forests. It forages for insects along the stream corridor, within the canopy of floodplain and upland forests, over clearings with early successional vegetation, along the borders of croplands, along wooded fencerows, and over farm ponds and in pastures. It has been shown that the foraging range for the bats varies by season, age, and sex and ranges up

to 81 acres. It roosts and rears its young beneath the loose bark of large dead or dying trees. It winters in caves and abandoned mines. Indiana bats may not be harmed, harassed, or disturbed when present. Minor alterations of Indiana bat habitat, such as the clearing of trees may be accomplished between the dates of September 16 and April 14. Large-scale habitat alterations within known or potential Indiana bat habitat should not be permitted without a bat survey and/or Section 7 consultation.

Field surveys conducted in August 2001 identified suitable Indiana bat summer habitat in the trees within and adjacent to the wetlands located both north and south of existing Iowa 2. Many of these trees had a 9-inch or greater diameter, although the majority were live eastern cottonwood and silver maple with less than 10% coverage of loose bark. These trees were located adjacent to Iowa 2 and Iowa 81. The USFWS and Iowa DNR recommends that all tree clearing activity be conducted between September 16 and April 14.

Bald Eagle

The threatened bald eagle is listed as breeding and wintering in Van Buren County along large rivers, lakes, and reservoirs. During the winter, this species feeds on fish in the open water areas created by dam tailwaters, the warm water effluents of power plants and municipal and industrial discharges, or in power plant cooling ponds. The more severe the winter, the greater the ice coverage and the more concentrated the eagles become. They roost at night in groups in large trees adjacent to the river in areas that are protected from the harsh winter elements. They perch in large shoreline trees to rest or feed on fish. There is no critical habitat designated for this species. The eagle may not be harassed, harmed, or disturbed when present nor may nest trees be cleared.

The August 2001 field survey did identify potentially suitable habitat within the project corridor; however, no bald eagles or their nests were observed in the project vicinity. Subsequent field surveys conducted in 2004 did not identify bald eagle nests in the project vicinity.

Prairie Bush Clover

The prairie bush clover is listed as threatened and is considered to potentially occur statewide in Iowa based on historical habitat. It occupies dry to mesic prairies with gravelly soil. Prairie bush clover habitat was not encountered during the August 2001 field visit.

Western Prairie Fringed Orchid

The western prairie fringed orchid is listed as threatened and is considered to potentially occur statewide in Iowa based on historical records and habitat distribution. It occupies wet grassland habitats. Western prairie fringed orchid habitat was not encountered during the August 2001 field visit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the taking of migratory birds without a permit. This act applies to both migratory game birds and migratory songbirds and protects the birds, their young, and active nests. The existing Farmington bridge provides nesting habitat for migratory songbirds, primarily swallows. Considerable numbers of active swallow nests were observed during a May 2001 site visit. Hundreds of swallows were observed flying around and nesting on the trusses of the nearly 800-foot-long bridge. However, during an August 2001 field survey, only a few swallows were observed flying around the bridge and no active nests were observed. Impacts to migratory birds that may nest on the existing bridge can be avoided by performing demolition work during the non-breeding season, which is between the dates of

September 15 and April 15. The USFWS recommends that demolition of the existing bridge be conducted between September 15 and April 15.

Aquatic Resources

Performing demolition work during the non-breeding season between September 15 and April 15 would minimize the potential for impacting fishery resources during the spawning season. Measures to ensure compliance with water quality standards should be implemented during demolition and construction activities to minimize impacts to aquatic resources. The USFWS recommends that measures to ensure compliance with water quality standards be implemented during demolition and construction.

Further Recommendations

The USFWS recommends that priority consideration should be given to avoid and minimize impacts to wetland habitats in the project area. Unavoidable impacts will require mitigation to compensate for any losses of wetland functions and values. Minimizing impacts to forested habitats should also be given priority consideration. Clearing of vegetation should be kept to a minimum to avoid impacts to the species listed above, to prevent potential erosion problems, and to maintain adequate cover for other wildlife species. Any areas cleared of vegetation should be restored immediately upon completion of the work.

Build Alternatives Impacts: No impacts are anticipated to any listed species as long as the mitigation measures outlined below are implemented. Implementation of these mitigation measures would also minimize impacts to wildlife and habitat.

Build Alternatives Mitigation: The following mitigation measures are either required or recommended:

- **REQUIRED:** Conduct tree clearing activity between September 16 and April 14 to avoid potential impacts to Indiana bat colonies.
- **REQUIRED:** Do not allow construction activity to harass, harm, or disturb bald eagles, if present. Do not clear any nest trees, if present.
- **REQUIRED:** Perform bridge demolition work during the non-breeding season between September 15 and April 15 to minimize the potential for impacting either nesting migratory birds or fishery resources.
- **RECOMMENDED:** Impacts to forested habitats and vegetation should be minimized to the extent practicable. Areas cleared of vegetation should be restored immediately upon completion of the work.

No Build Alternative Impacts: This alternative would have no impacts to biological resources in the project area.

No Build Alternative Mitigation: No mitigation is required for the No Build Alternative.

5.11 Historic Property

A Phase I archaeological reconnaissance survey of the project area of potential effect (APE) was conducted by the Highway Archaeology Program of the University of Iowa in 2003 (Perry 2003). One important archaeological site, 13VB655, was identified in the project APE. The Iowa DOT determined on November 18, 2003 that this site is eligible for listing in the National Register of Historic Places (National Register) for its potential to contain information important to

the understanding of past lifeways. The Iowa State Historic Preservation Officer (SHPO) concurred with this determination of eligibility on December 11, 2003. This site can be avoided by construction activity associated with any of the four action alternatives. A supplemental Phase I archaeological reconnaissance survey was completed of potential borrow areas in 2004. The Iowa DOT determined that no historic properties would be affected by the use of these borrow areas. The Iowa SHPO concurred with this determination on October 25, 2004 (Appendix A).

A Phase I historic architectural survey of the project APE was conducted by the Highway Archaeology Program of the University of Iowa in 2004 (Carlson 2004). A total of 29 buildings were identified as either individually eligible for listing in the National Register or contributing resources in a possible National Register historic district. None of these buildings would be impacted by construction activity associated with any of the four action alternatives. The No Build Alternative would not result in any impacts to any of these buildings.

Build Alternatives Impacts: The Iowa DOT determined that no historic properties would be affected by the proposed project and communicated this determination to the Iowa SHPO on March 19, 2004. The Iowa SHPO concurred with this determination in April of 2004.

Build Alternatives Mitigation: No mitigation is required. It is recommended that the above discussed archaeological site be protected by field fence if ground disturbing activity would take place nearby.

The following provisions are recommended in the unlikely event that previously unevaluated historic property is discovered during construction. If archaeological resources are uncovered during construction, the construction should halt in the immediate area for evaluation of the resources by a qualified archaeological professional. In the event that resources of archaeological importance are encountered, all construction and excavation activities should cease immediately within the area. The area should be secured, the material left in place with no further disturbance, and the Iowa DOT, the Iowa SHPO or the Iowa Office of the State Archaeologist (OSA), as appropriate, should be contacted immediately.

No human remains or suspected mortuary features have been identified within the project area and none are anticipated to be found during the implementation of this undertaking. However, it is understood that any human remains, mortuary features, and/or grave-associated funerary objects discovered within the project area are protected by provisions of the Iowa Codes 144.34 and 263B.7 through 263B.9, and the Iowa Administrative Code Section 685, Chapter 11. In accordance with Iowa Code, all construction and excavation activities must cease immediately within the area if human remains, mortuary features, and/or grave associated objects are encountered. The area must be secured and the material left in place with no further disturbance. A tarp, plastic sheeting, or other appropriate covering must be placed over the exposed remains and weighted with loose soil along the edges and the top. The Iowa DOT, Iowa SHPO and the Iowa OSA Director of the Burials Program (telephone: 319-384-0740) must be contacted immediately in the event that human remains are discovered during construction or excavation activity.

No Build Alternative Impacts: This alternative would have no impacts on historic properties in the project area.

No Build Alternative Mitigation: There is no mitigation required for the No Build Alternative.

5.12 Noise

Noise is "unwelcome/unwanted" sound usually caused by human activity and added to the natural acoustic setting of a locale. Further defined, noise is sound that disrupts normal activities or diminishes the quality of the environment. Noise is usually undesirable because it interferes with speech communication and hearing or is otherwise annoying.

Noise sensitive receivers are generally places where people work, play, and learn. Places like homes, schools, libraries, hospitals, and recreational areas are considered sensitive receivers.

Build Alternatives Impacts: Implementing any of the "Build" Alternatives 1 through 4 or the no action alternative would not increase the amount of traffic using the roadway. Therefore, there would not be an increase in the amount of traffic-generated noise associated with any of the alternatives.

Businesses and residents in the project area would experience an increase in construction-generated noise during the construction of any of the Alternatives 1 through 4. The noise from construction activities, such as bridge pile driving, would be audible throughout the community but would be loudest at or near the bridge. Construction noise would be intermittent and would occur during daylight hours. Construction of any of the Build Alternatives could take up to two years.

Build Alternatives Mitigation: No mitigation is required for these alternatives.

No Build Alternative Impacts: This alternative would not have any additional noise impacts.

No Build Alternative Mitigation: There is no mitigation required for the No Build Alternative.

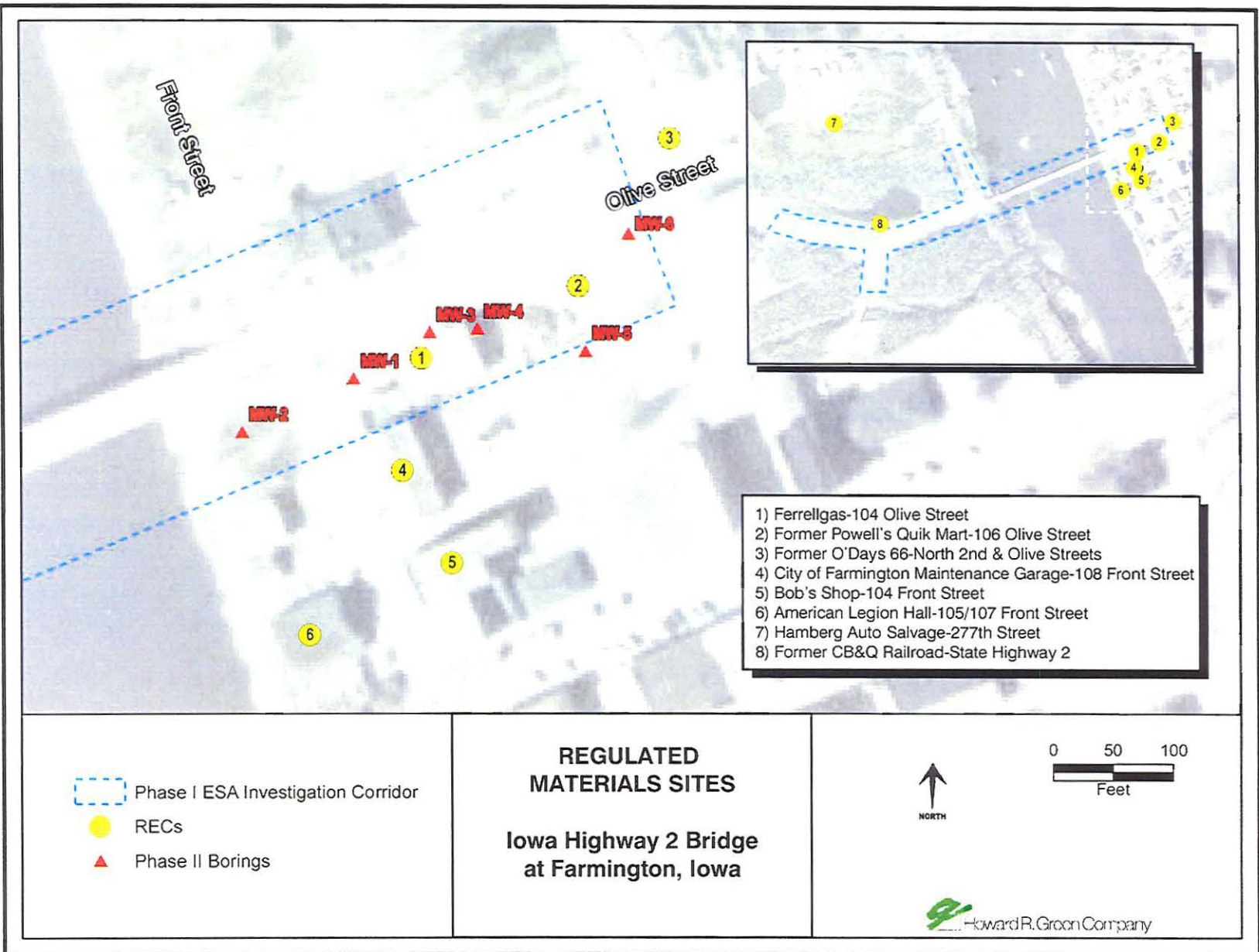
5.13 Regulated Materials Sites

A Phase I Environmental Site Assessment (ESA) was conducted in July 2001 in accordance with the standard practice of the American Society for Testing and Materials (ASTM) designation E 1527-00. The purpose of the study was to determine if evidence of possible contamination existed in the corridor. Nineteen Recognized Environmental Conditions (RECs) were identified in the project corridor. Eight of these were identified to likely impact the project corridor (Figure 11):

1. Ferrellgas – 104 Olive Street
2. Former Powell's Quik Mart – 106 Olive Street
3. Former O'Days 66 – North 2nd & Olive Streets
4. City of Farmington Maintenance Garage – 108 Front Street
5. Bob's Shop – 104 Front Street
6. American Legion Hall – 105/107 Front Street
7. Hamberg Auto Salvage – 277th Street (west side of Des Moines River)
8. Former CB&Q Railroad – State Highway 2 (west side of Des Moines River)

A Phase II ESA investigation was recommended. Iowa DOT selected two of these properties, Ferrellgas at 104 Olive Street and Former Powell's Quik Mart at 106 Olive Street, for further evaluation by a Limited Phase II investigation. Limited Phase II investigations were conducted at both sites in July 2004.

Figure 11. Regulated Material Sites in the Project Area



Both sites are considered environmentally impaired because of soil or groundwater contamination levels compared with the Iowa DNR Tier 1 action levels set forth in Iowa Administrative Code (IAC) Chapter 135: *Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks*. The Iowa DOT has recommended the acquisition of both of these properties by permanent easement.

The Ferrellgas property at 104 Olive Street was historically an automobile service and repair shop, livery, warehouse and gas station. Analytical results of the soil samples indicated the presence of petroleum hydrocarbons (crude oil byproducts) at each boring location of four locations onsite and offsite. Petroleum hydrocarbons at sample location MW-4 (Figure 11) at the depth of 14 feet were above the Iowa DNR Tier 1 Action Levels. Petroleum Hydrocarbons and a gasoline additive known as Methyl Tertiary Butyl Ether (MTBE) were detected in groundwater at all four sample locations. Constituent concentrations present in three of the four wells exceeded their respective Iowa DNR Tier 1 action levels.

Access to the Former Powell's Quik Mart was at 106 Oliver Street was not granted to Iowa DOT. The property was a registered UST facility (No. 198607657) and a LUST site (No. 7LTH33). Two soil borings were placed at locations upgradient and downgradient of the site, one on Iowa DOT ROW and one on the Ferrellgas property to the south. Analytical results of the soil samples indicated the presence of petroleum hydrocarbons at the two boring locations below Iowa DNR Tier 1 action levels. Petroleum hydrocarbons and MTBE were detected in groundwater at the two sample locations. Benzene and Total Extractable Hydrocarbons (TEH) exceeded their respective Iowa DNR Tier 1 action levels at MW-5. Benzene, toluene, ethyl benzene, and TEH concentrations in MW-6 exceeded their respective Tier 1 action levels. A geotechnical boring separate from the Limited Phase II investigation was advanced at the northeast corner of the property in Iowa DOT ROW in June 2004. The boring was terminated at a depth of four feet below ground surface due to apparent petroleum contamination.

The results of these studies point to several petroleum contamination plumes in the project area. Contaminated groundwater was shallow, 10.7-12.7 feet at 104 Olive Street adjacent to the Iowa 2 bridge, and appears to be a contamination vector in the project area. The petroleum encountered at four feet below ground surface at the northeast corner (near MW-6) during geotechnical drilling indicates the potential for existing utility corridors to act as contamination pathways in the area.

Build Alternatives Impacts: A minor environmental impact could occur if excavation on the east side of the bridge encounters existing petroleum contamination.

Build Alternatives Mitigation: No mitigation is required; however, if petroleum or a petroleum smell is encountered during construction, construction activity should be halted and the Iowa DOT should be contacted immediately.

No Build Alternative Impacts: This alternative would not have any Regulated Materials impacts.

No Build Alternative Mitigation: No mitigation is required for the No Build Alternative.

5.14 Construction and Traffic Maintenance

Maintaining traffic flow over the Des Moines River is essential to the emergency response services in Farmington. The bridge provides the quickest route to the nearest hospital, which is

18 miles northwest of Farmington in Keosauqua, Iowa. Emergency response vehicles, such as ambulances, fire trucks, and police cruisers, from Farmington use the bridge to access the hospital and citizens on the west side of the Des Moines River. Without the bridge, emergency vehicles would need to cross the Des Moines River in Bonaparte, Iowa. The increase in trip length would negatively impact medical, fire, and police response time.

Build Alternatives Impacts: All four construction alternatives incorporate a design that would allow bridge construction to occur while maintaining traffic across the Des Moines River. Alternatives 1 and 4 include constructing a replacement bridge that would shift the west end either to the north or south, respectively, of the existing bridge. Staged construction of these two alternatives would allow at least one lane of traffic to remain open over the Des Moines River. Traffic would be controlled by automatic traffic signals to provide alternating one-way traffic across the river during construction. The implementation of Alternatives 1 and 4 could have a minor adverse impact to emergency response time if emergency vehicles are stopped by the automatic traffic signal.

Alternatives 2 and 3 include constructing a replacement bridge either north or south, respectively of the existing bridge. Construction of Alternative 2 or 3 would allow the existing bridge to remain open to traffic until the new bridge is complete. Minor impacts to traffic could occur at various times throughout the construction of Alternative 2 or 3 as construction equipment maneuver into position. These impacts would be minor and would not substantially impede traffic.

Build Alternatives Mitigation: Mitigation would not be necessary for Alternatives 1 – 4.

No Build Alternative Impacts: This alternative would have no construction or traffic maintenance impacts.

No Build Alternative Mitigation: No mitigation would be required for the No Build Alternative.

5.15 Cumulative Impacts

This section addresses those issues not covered in the Specific Impact Categories of this environmental assessment:

- Possible conflicts between the Proposed Action and the objectives of Federal, regional, State, and local land use plans, policies and controls for the area concerned (CEQ 1502.16(c)).
- Any inconsistency of a Proposed Action with any approved State or local plan and laws whether or not the action is federally sanctioned (CEQ 1506.2(d)).
- Means to mitigate adverse environmental impacts (CEQ 1502.16(h)) which were not included in the Alternatives section and are important in judging the significance of an impact or in supporting particular alternatives findings.
- The degree of controversy on environmental grounds.

No conflicts have been identified between the any of the four action alternatives and the objectives of Federal, regional, State, and local land use plans, policies and controls for the area concerned. The four action alternatives are consistent with plans, goals, policies, or controls that have been adopted for the area in which the proposed project is located. The no

action alternative is in conflict with the FHWA and Iowa DOT goals for providing a long-term, safe IA 2 crossing of the Des Moines River at Farmington.

The four action alternatives would not be inconsistent with any approved State or local plan and laws whether or not the action is federally sanctioned. They are consistent with Federal, state, and local laws and administrative determinations relating to the environment. All practicable means to mitigate adverse environmental impacts that are known to exist were included in each relevant section.

The four action alternatives are not known to be highly controversial on environmental grounds with regard to any impacts. The selection of the no action alternative would be controversial due to its disruption of local and regional travel patterns and associated consequential socioeconomic impacts.

Very modest economic development is currently taking place within the Farmington area and no substantial increase in economic development is anticipated. No additional crossings of the Des Moines River are forecast to be constructed between the nearest upstream crossing at Bonaparte and the nearest downstream crossing at St. Francisville, Missouri. No changes in water level through impoundments or diversions are forecast for the Des Moines River.

Build Alternatives Impacts: No cumulative impacts are anticipated to be associated with any of the build alternatives.

Build Alternatives Mitigation: Mitigation would not be necessary for Alternatives 1 – 4.

No Build Alternative Impacts: This alternative could have an adverse cumulative impact if the existing bridge were closed at some point in the future. Such a closure could result in an economic downturn in the Farmington area because traffic would be routed to other crossing points.

No Build Alternative Mitigation: Cumulative impacts associated with the No Build Alternative could be mitigated by providing some form of all-weather crossing of the Des Moines River at or near Farmington.

5.16 Streamlined Summary

The implementation of any of the four action alternatives would have environmental impacts that are below significance. This determination is based on assessment of impacts identified through the streamlining process and mitigation requirements outlined for wetlands and biological resources and the appropriate implementation of applicable federal and state requirements for soil erosion, water quality, and regulated materials.

The use of the streamlined environmental impact analysis process allowed the Iowa DOT to focus effort in areas where impacts would likely occur and scale back effort in areas where impacts were unlikely to occur. This focus on developing sufficient information about likely impacts facilitated the interagency coordination required as part of the wetlands permitting process under Section 404 of the Clean Water Act.

6.0 COMMENTS AND COORDINATION

6.1 Agency Coordination

Appropriate federal, state, regional, and local agencies were contacted on May 22, 2001, as part of the early coordination process. This process requested agencies' comments concerning this proposed project. Comment letters received are in Appendix A. The agencies contacted are listed in Table 4.

Table 4. Agencies and Organizations Contacted During Early Coordination Process

Agency Type	Agency	Date of Response
Federal	Federal Emergency Management Agency	None
Federal	National Resource Conservation Services	None
Federal	U.S. Army Corps of Engineers, Rock Island District	6/20/01
Federal	U.S. Department of Housing and Urban Development	6/5/01
Federal	U.S. Department of Interior, Bureau of Indian Affairs	None
Federal	U.S. Department of Interior, Fish and Wildlife Service	6/19/01 & 6/28/01
Federal	U.S. Department of Interior, National Park Service	None
Federal	U.S. Environmental Protection Agency, Region VII	None
State	Iowa Department of Economic Development	6/7/01
State	Iowa Department of Natural Resources	6/21/01
State	State Historical Society of Iowa	7/21/01
Regional	Southeast Iowa Regional Planning Commission	None
County	Van Buren County Board of Supervisors	None
County	Van Buren County Conservation Board	None
County	Van Buren County Engineer	None
County	Van Buren County Historical Society	None
City	City of Farmington Historical Society	None
City	City of Farmington Mayor	None

6.2 NEPA/ 404 Concurrence Process

The Iowa DOT initially began the environmental process to evaluate and consider replacing the IA 2 Farmington bridge in May 2001. Coordination with the following agencies has been ongoing since that time.

- Federal Highway Administration
- Iowa Department of Natural Resources
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish & Wildlife Service

To ensure compliance of the Clean Water Act, the Section 404-permit process was started in conjunction with the NEPA process. Section 404 permits are issued by the U.S. Army Corps of Engineers and are required when working in the waters of the United States. The Des Moines River is considered a waterway of the United States. Agencies involved in the concurrent NEPA/Section 404 process have agreed on the four concurrence points discussed in Table 5.

7.0 CONCLUSION AND RECOMMENDATION

This Environmental Assessment documents the absence of significant impacts associated with the implementation of any of the four action alternatives discussed in Section 4.0. If no other studies identify impacts in the future or if no other impacts are introduced at the public meeting in June 2005, then a Finding of No Significant Impact (FONSI) would be the appropriate document for this project. This determination is based on the completion of mitigation requirements outlined for wetlands and biological resources and the appropriate implementation of applicable federal and state requirements for soil erosion, water quality, and regulated materials.

8.0 REFERENCES

- American Association of State Highway and Transportation Officials. *A Policy on Geometric Design of Highways and Streets*. AASHTO, 1994.
- Carlson, Richard. Highway Archaeology Program, University of Iowa. *A Phase I Historic Architectural Survey of Primary Roads Project BRF-2-9(17)- - 38-89, Van Buren County, Iowa*. 2004.
- Federal Emergency Management Agency. "Flood Insurance Rate Map, Community Number 190267". July 16, 1987.
- Federal Highway Administration. "Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges." December 1995.
- Iowa Department of Transportation. *Design Manual, English*. Iowa Department of Transportation, 2001.
- Iowa Department of Transportation. "Protecting our Bridges for the Future." October, 1998.
www.dot.state.ia.us/bridges.pdf.
- Holland, Raymond. Personal Communication. City of Farmington. Farmington, IA. August, 2001.
- Howard R. Green Company. "Phase I Environmental Site Assessment, Iowa Highway 2 Bridge Replacement, Van Buren County, Farmington, Iowa, BRF-2-9(17)--38-89". July 31, 2001.
- Howard R. Green Company. "Limited Phase II Environmental Site Assessment, Iowa Highway 2 Bridge Project, BRF-2-9(17)--38-89, 104 Olive Street Property, Farmington (Van Buren County), Iowa." October 12, 2004.
- Howard R. Green Company. "Limited Phase II Environmental Site Assessment, Iowa Highway 2 Bridge Project, BRF-2-9(17)--38-89, 106 Olive Street Property, Farmington (Van Buren County), Iowa." October 12, 2004.
- http://800-tourvbc.com/canoe_vb.htm. "The Villages of Van Buren, Canoe Van Buren, July 14 & 15, 2001."
- <http://showcase.netins.net/web/villages/shimek.htm>. "Shimek State Forest."
- <http://showcase.netins.net/web/villages/indian.htm>. "Indian Lake Park."
- <http://shop.store.yahoo.com/trailresources/trail-iowa-indian-lake-park-trail.html>
- http://www.rootsweb.com/~iava.nbur/cemeteries_locations.htm. "Van Buren County, Iowa - Cemeteries."
- Iowa Department of Transportation. "Miles, Vehicle Miles, Crashes, and Crash Rates in Iowa by Road System 1995-1999". May, 2001.



IN REPLY REFER
TO:

FWS/RIFO

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Rock Island Field Office (ES)
4469 - 48th Avenue Court
Rock Island, Illinois 61201
Tel: 309/793-5800 Fax: 309/793-5804

June 19, 2001

Stacy E. Woodson
Howard R. Green Company
8710 Earhart Lane SW
Cedar Rapids, Iowa 52404

Dear Ms. Woodson:

We have reviewed your May 22, 2001, request for information concerning any impacts to federally listed threatened or endangered species as a result of proposed replacement of the Iowa 2 - Farmington Bridge in Van Buren County, Iowa.

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, Federal agencies are required to obtain from the Fish and Wildlife Service information concerning any species, listed or proposed to be listed, which may be present in the area of a proposed action. Therefore, we are furnishing you the following list of species which may be present in the concerned area:

<u>Classification</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Habitat</u>
Endangered	Indiana bat	<i>Myotis sodalis</i>	Caves, mines; rivers and reservoirs adjacent to forests
Threatened	Bald eagle	<i>Haliaeetus leucocephalus</i>	Wintering, Breeding
Threatened	Prairie bush clover	<i>Lespedeza leptostachya</i>	Dry to mesic prairies with gravelly soil
Threatened	Western prairie fringed orchid	<i>Platanthera praeclara</i>	Mesic to wet prairies

In Iowa, the Indiana bat is known to occur in Van Buren County. During the summer, the Indiana bat frequents the corridors of small streams with well developed riparian woods as well as mature upland forests. It forages for insects along the stream corridor, within the canopy of floodplain and upland forests, over clearings with early successional vegetation (old fields),

Stacy E. Woodson

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The prairie bush clover (*Lespedeza leptostachya*) is listed as threatened and is considered to potentially occur statewide in Iowa based on historical habitat. It occupies dry to mesic prairies with gravelly soil. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of state law or regulation, including state criminal trespass law. This species should be searched for whenever prairie remnants are encountered.

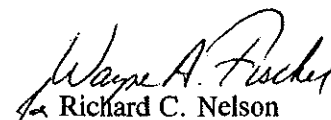
The western prairie fringed orchid (*Platanthera praeclara*) is listed as threatened and is considered to potentially occur statewide in Iowa based on historical records and habitat distribution. It occupies wet grassland habitats. There is no critical habitat designated for this species. Federal regulations prohibit any commercial activity involving this species or the destruction, malicious damage or removal of this species from Federal land or any other lands in knowing violation of state law or regulation, including state criminal trespass law. This species should be searched for whenever wet prairie remnants are encountered.

The Corps of Engineers is the Federal agency responsible for wetland regulation, and we recommend that you contact them for assistance in delineating the wetland types and acreage within the project boundary. Priority consideration should be given to avoid impacts to wetland areas. Any future activities in the study area that would alter wetlands may require a Section 404 permit. Unavoidable impacts will require a mitigation plan to compensate for any losses of wetland functions and values. The U.S. Army Corps of Engineers, Clock Tower Building, P.O. Box 2004, Rock Island, Illinois, 61201, should be contacted for information about the permit process.

These comments provide technical assistance only and do not constitute the report of the Secretary of the Interior on the project within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act, do not fulfill the requirements under Section 7 of the Endangered Species Act, nor do they represent the review comments of the U.S. Department of the Interior on any forthcoming environmental statement.

Thank you for the opportunity to provide comments early in the planning process. If you have any additional questions or concerns, please contact Heidi Woeber of my staff.

Sincerely,


Richard C. Nelson
Supervisor

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IN REPLY REFER
TO:

FWS/RIFO

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Rock Island Field Office
4469 48th Avenue Court
Rock Island, Illinois 61201
Phone: (309) 793-5800 Fax: (309) 793-5804



June 28, 2001

Stacy E. Woodson
Howard R. Green Company
8710 Earhart Lane SW
Cedar Rapids, IA 52404

Dear Ms. Woodson:

This responds to your request for natural resource information relevant to the Iowa Highway 2-Farmington Bridge replacement project on the Des Moines River in Van Buren County, IA. This information is provided for consideration during future project planning and to facilitate completion of the Environmental Assessment for the project.

To facilitate compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, we are furnishing you the following list of species which may be present in the concerned area:

<u>Status</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Habitat</u>
Threatened	Bald eagle	<i>Haliaeetus leucocephalus</i>	Large shoreline trees adjacent to open water
Endangered	Indiana bat	<i>Myotis sodalis</i>	Well developed riparian woods; upland forests; caves and mines

The threatened bald eagle (*Haliaeetus leucocephalus*) is known to breed and winter along the Des Moines River in Van Buren County. It hunts for fish in open water areas and utilizes large shoreline trees for perching, roosting, and nesting. Eagles may not be harassed, harmed, or disturbed when present, and clearing of large shoreline trees and potential nest trees should be avoided.

The endangered Indiana bat (*Myotis sodalis*) is known to occur in Van Buren County and

Stacy E. Woodson

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could potentially occur in the project area. During the summer, the Indiana bat forages for insects under the tree canopy and roosts and rears its young beneath the loose bark of large dead or dying trees in well developed riparian woods and mature upland forests. It winters in caves and abandoned mines.

Suitable summer habitat is considered to have the following characteristics within a ½ mile radius of the project site:

- 1) forest cover of 15% or greater;
- 2) permanent water;
- 3) one or more of the following tree species 9 inches diameter at breast height (dbh) or greater: shagbark hickory, bitternut hickory, American elm, slippery elm, eastern cottonwood, silver maple, white oak, red oak, post oak, and shingle oak;
- 4) at least 1 potential roost tree per 2.5 acres;
- 5) potential roost trees must have greater than 10% coverage of loose bark (by visual estimation of peeling bark on trunks and main limbs).

If the project site contains any habitat that fits the above description, it may be necessary to conduct a survey to determine whether the bat is present. If Indiana bats are known to be present, they must not be harmed, harassed, or disturbed and their habitat must not be destroyed. Indiana bat habitat may be altered (i.e., minor tree clearing) only between the dates of October 1 and March 31.

Impacts to migratory birds which may nest on the existing bridge can easily be avoided by performing demolition work during the non-breeding season between the dates of September 15 and April 15. This will also minimize the potential for impacting fishery resources during the spawning season. Measures to ensure compliance with water quality standards should also be implemented during demolition and construction activities to minimize impacts to aquatic resources.

Priority consideration should be given to avoid and minimize impacts to wetland habitats in the project area. Unavoidable impacts will require mitigation. The Corps of Engineers is the Federal agency responsible for regulating construction activities affecting waters of the United States, and we recommend that you contact them for assistance if you have not already done so. The proposed activities may require a Clean Water Act, Section 404 permit. The U.S. Army Corps of Engineers, Clock Tower Building, P.O. Box 2004, Rock Island, IL, 61204, should be contacted for more information.

Minimizing impacts to forested habitats should also be given priority consideration. Clearing of vegetation should be kept to a minimum to avoid impacts to the species listed above, to prevent potential erosion problems, and to maintain adequate cover for other wildlife species. Any areas cleared of vegetation should be restored immediately upon completion of the work.

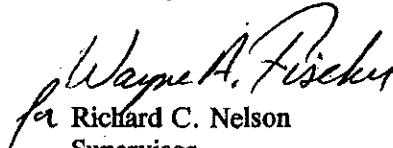
We appreciate the opportunity to provide comments on this project early in the planning process. These comments are provided under the authority of and in accordance with the

Stacy E. Woodson

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provisions of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.; 48 Stat. 401), as amended; and the Endangered Species Act of 1973, as amended. If you have any questions concerning these comments, please contact Lauri Walters of my staff at 309/793-5800, ext 513.

Sincerely,


for Richard C. Nelson
Supervisor

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U.S. Department of Housing and Urban Development
Iowa State Office
Federal Building
210 Walnut Street, Room 239
Des Moines, Iowa 50308-2155

June 5, 2001

Howard R. Green Company
Stacy E. Woodson
8710 Earhart Lane SW
Cedar Rapids, IA 52404

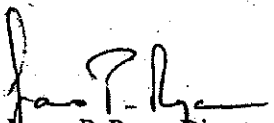
Dear Stacy Woodson:

Subject: Iowa Hwy #2 - Replacement of Farmington Bridge
Project Number: BRF-2-9(17)—38-89

We have received your inquiry to the subject location for Environmental Assessment
Documentation and have reviewed such.

We do not contemplate any detrimental effects on any of our projects in the area under
review.

Sincerely,


James P. Ryan, Director
Des Moines Multifamily
Program Center

ENCLOSURE

THIS DOCUMENT CONTAINS NEITHER RECOMMENDATIONS NOR CONCLUSIONS OF THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT. IT IS THE PROPERTY OF THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AND IS LOANED TO YOUR AGENCY; IT AND ITS CONTENTS ARE NOT TO BE DISTRIBUTED OUTSIDE YOUR AGENCY.

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Visit our web site at <http://www.hud.gov/local/des/des.html>



STATE OF IOWA

THOMAS J. VILSACK, GOVERNOR
SALLY J. PEDERSON, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
JEFFREY R. VONK, DIRECTOR

June 21, 2001

**M. Stacy E. Woodson
Howard R. Green Company
8710 Earhart Lane SW
Cedar Rapids, IA 52404**

RE: Iowa 2 bridge replacement, Des Moines River, Farmington Bridge, Van Buren County

Dear M. Woodson:

Thank you for inviting our comments on the impact of the above referenced project on protected species and rare natural communities.

The Department has some concerns about potential wetland impacts and whether any wetland mitigation actions are appropriate. Also, the Department would like to know what safeguards will be taken to prevent erosion and siltation during demolition and construction. Will the pilings be left in the river or will they be taken out?

The Indiana bat (*Myotis sodalis*, state and federal endangered) is known from this part of the state and may occur in the area of this project. Indiana bats are found in areas of mature upland forest and along wooded corridors of small streams. They forage for insects beneath the canopy. Females form maternity colonies under loose bark of trees. Trees 9 inches or greater in diameter as described in the attached guidelines are potential roost trees. If trees of this size are to be cleared between April 1 and September 30, please contact the DNR Division of Parks, Recreation and Preserves at (515) 281-8524. You may need to survey habitat in the construction zone to determine if the area is potential summer habitat for the Indiana bat. The enclosed guidelines provide information about the habitat requirements and survey methods for Indiana bat summer habitat.

If it appears that you will disturb potential Indiana bat summer habitat, we suggest that you contact the U.S. Fish and Wildlife Service regarding this project. Their office at Rock Island may be reached at (309) 793-5800.

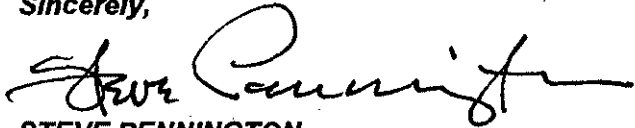
This letter is a record of review for protected species and rare natural communities in the project area. It does not constitute a permit and before proceeding with the project, you may need to obtain permits from the DNR or other state and federal agencies.

01-323L.doc

WALLACE STATE OFFICE BUILDING / DES MOINES, IOWA 50319
515-281-5918 TDD 515-242-5967 FAX 515-281-6794 WWW.STATE.IA.US/DNR

***If you have any questions about this letter or if you require further information,
please contact Keith Dohrmann at (515) 281-8967.***

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Pennington", written in a cursive style.

**STEVE PENNINGTON
IOWA DEPARTMENT OF NATURAL RESOURCES**

SP:kd

Revised February 28, 2000

IOWA DEPARTMENT OF NATURAL RESOURCES
GUIDELINES FOR PROTECTION OF INDIANA BAT SUMMER HABITAT

These guidelines were prepared to provide information about the Indiana bat and its summer habitat requirements in Iowa and to prevent inadvertent harm to the species through various human activities. This update of the guidelines is in response to changes in the U.S Fish and Wildlife Service requirements for protecting this endangered species. The changes include:

- Adding Poweshiek and Iowa Counties
- No cut dates expanded to April 1 through September 30
- Tree size changed from 11 inches to 9 inches (dbh)

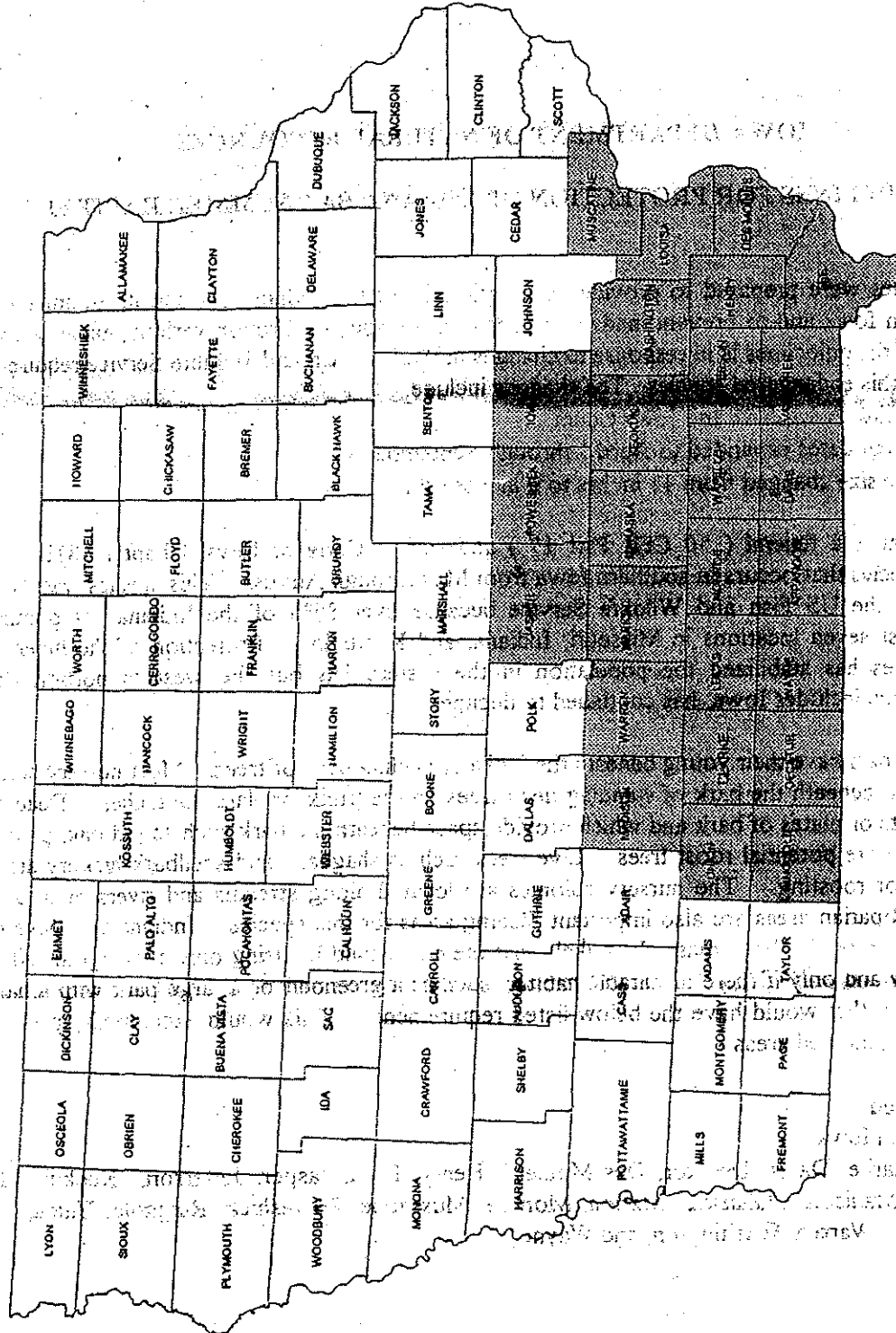
The Indiana bat is a federal (50 CFR Part 17) and state (Code of Iowa, Chapter 481B) listed endangered species that occurs in southern Iowa from May through August. This species was listed as endangered by the US Fish and Wildlife Service because over 85% of the Indiana bat population hibernate in just seven locations in Missouri, Indiana, and Kentucky. Protection of the hibernation es and mines has stabilized the population in the eastern US but the western portion of the population, which includes Iowa, has continued to decline.

Female Indiana bats have their young beneath the loose or peeling bark of trees. Most nursery colonies have been found beneath the bark of standing dead trees on the trunk or large branches. Dead trees that retain sheets or plates of bark and which provide space beneath the bark such as red oak, post oak, and cottonwood are potential roost trees. Live trees such as shagbark and shellbark hickory are also used at times for roosting. The nursery colonies are located along streams and rivers or in upland forest areas. Riparian areas are also important feeding areas for this species. Indiana bats have been captured on the edge of urban areas. It is likely that the bats would be using only areas on the edge of the town or city and only if there is suitable habitat such as a greenbelt or a large park with a natural forest component that would have the below listed requirements. This would exclude city parks that are maintained as mowed areas.

Counties affected

Summer Range in Iowa:

Appanoose, Clarke, Davis, Decatur, Des Moines, Henry, Iowa, Jasper, Jefferson, Keokuk, Lee, Louisa, Lucas, Madison, Mahaska, Marion, Monroe, Muscatine, Poweshiek, Ringgold, Union, Van Buren, Wapello, Warren, Washington, and Wayne.



Summer Habitat Requirements for the Indiana bat

Essential summer habitat in Illinois was considered to be 30% or greater deciduous forest cover within a 6/10 mile radius, permanent water within a 6/10 mile radius, and suitable roost trees within a 3/10 mile radius. Areas of as low as 5% deciduous forest cover provided suitable habitat as long as water and roost trees were within the listed distances in Illinois. In Iowa records for the Indiana bat have occurred in areas of 15% or greater forest cover and near permanent water. Tree species that have been identified as roost trees from studies in other states are shagbark and shellbark hickory that may be alive or dead and dead, bitternut hickory, American elm, slippery elm, eastern cottonwood, silver maple, white oak, red oak, post oak, and shingle oak with slabs or plates of loose bark.

Suitable summer habitat in Iowa is considered to have the following within a 1/2 mile radius of a location:

- 1) Forest cover of 15% or-greater
- 2) Permanent water
- 3) One or more of the listed tree species 9 inches dbh or greater
- 4) At least 1 potential roost tree per 2.5 acres.
- 5) The potential roost trees ranked as moderate or high for peeling or loose bark

Survey Methods for Indiana Bat Summer Habitat

Step 1

Determine if there is 15% or greater forest cover and permanent water in a 1/2 mile radius of the project site.

If not then there is no need to continue survey efforts.

If these requirements are met go to Step 2.

Step 2

Conduct a survey of the project area that will be cleared or cut to determine if suitable roost trees are present. This will include both upland and floodplain forests. Areas that are too large for complete counts may be sampled using techniques such as point- quarter, tenth-hectare quadrats or other acceptable forest sampling techniques. The information to be collected during sampling includes the following:

Standing trees 9 inches or greater (dbh) diameter at breast height per acre -- (alive or dead) shagbark and shellbark hickory (dead) all other species listed above that have 10% or greater loose or peeling bark on the trunks and main limbs. The amount of loose or peeling bark is based on visual estimation. The number of potential roosts per acre.

If a survey of the habitat within the project area finds that suitable summer habitat for the Indiana Bat, as defined above, is present then there are two options available.

Option 1:

Conduct a mist net survey of the project area for Indiana Bats

Survey period May 15 - August 31

Temperature above 50 degrees F at night

No precipitation

Wind - calm

Light conditions (moonlight) at net site

No considerations if nets are under closed forest canopy

If the net is in an open site there should be cloud cover or less than 1/2 moon

Mist nets stacked at least 4 m (13 feet) high

Net set distance - 1 set per 1/2 mile of stream corridor or upland sites

Nets set 3 nights from sunset to at least 0200 hours

Nets to cover from ground or water surface to enclosing foliage or banks on sides

Nets must be checked every 20 minutes

No disturbance within 50 meters of the net sites

Survey results should be submitted to the Iowa Department of Natural Resources, Wallace State Office Building, 900 East Grand, Des Moines, Iowa (Attention: Daryl Howell) for a prompt Determination. The IDNR will then provide a letter stating Effect or No Effect.

If Indiana bats are found during the survey then no removal of the trees will be allowed between April 1 and September 30.

Option 2 :

Conduct tree clearing and cutting between October 1 and March 31 or remove all potential roost trees identified during the habitat survey between October 1 and March 31.

Activities such as timber stand improvement that do not cut potential roost trees or fell other trees on potential roost trees are not considered to cause harm to Indiana bats because of their short-term natural limited disturbance. In some cases the girdling of trees 9 inches or larger can create potential roost trees, maintaining dead trees with loose bark and maintaining the diversity of tree species can be positive in providing roosting habitat for the Indiana bat.

The IDNR can offer assistance in identifying qualified professionals to conduct habitat surveys and bat surveys. Contact Daryl Howell if you have questions about these guidelines at the above listed address or (515) 281-8524.

These guidelines may be revised based on the availability of new research or management information or to clarify particular points in the guidelines. You may wish to check with the DNR to determine if you have the most current set of guidelines.

Many of the above recommendations were taken from the report by James D. Garner and James E. Gardner, 1992. Determination of summer distribution and habitat utilization of the Indiana Bat (*Myotis sodalis*) in Illinois. Final report to the U.S. Fish and Wildlife Service, Project E-3, 23 pp.

Revised February 2004

IOWA DEPARTMENT OF NATURAL RESOURCES

GUIDELINES FOR PROTECTION OF INDIANA BAT SUMMER HABITAT

These guidelines were prepared to provide information about the Indiana bat and its summer habitat requirements in Iowa and to prevent inadvertent harm to the species through various human activities. This update of the guidelines is in response to changes in the U.S. Fish and Wildlife Service requirements for protecting this endangered species. The changes include:

- No cut dates changed to April 15 through September 15
- Drop the requirement for the number of roost trees/acre
- Use the U.S. Fish and Wildlife Service guidelines for mist net surveys

The Indiana bat is a federal (50 CFR Part 17) and state (Code of Iowa, Chapter 481B) listed endangered species that occurs in southern Iowa from May through August.

Female Indiana bats have their young beneath the loose or peeling bark of trees. Most nursery colonies have been found beneath the bark of standing dead trees on the trunk or large branches. Dead trees that retain sheets or plates of bark and which provide space beneath the bark such as red oak, post oak, and cottonwood are potential roost trees. Live trees such as shagbark and shellbark hickory are also used at times for roosting. The nursery colonies are located along streams and rivers or in upland forest areas. Riparian areas are also important feeding areas for this species. Indiana bats have been captured on the edge of urban areas. It is likely that the bats would be using only areas on the edge of the town or city and only if there is suitable habitat such as a greenbelt or a large park with a natural forest component that would have the below listed requirements. This would exclude city parks that are maintained as mowed areas.

Counties affected

Summer Range in Iowa:

Appanoose, Clarke, Davis, Decatur, Des Moines, Henry, Iowa, Jasper, Jefferson, Keokuk, Lee, Louisa, Lucas, Madison, Mahaska, Marion, Monroe, Muscatine, Poweshiek, Ringgold, Union, Van Buren, Wapello, Warren, Washington, and Wayne.

The U.S. Fish and Wildlife Service considers all counties south of Interstate 80, including those portions of Dallas, Polk, Jasper, Poweshiek, Iowa, Johnson, Muscatine, and Scott counties south of Interstate 80, as being within the potential range of the species in Iowa.

Summer Habitat Requirements for the Indiana bat

Essential summer habitat in Illinois was considered to be 30% or greater deciduous forest cover within a 6/10 mile radius, permanent water within a 6/10 mile radius, and suitable roost trees within a 3/10 mile radius. Areas of as low as 5% deciduous forest cover provided suitable habitat as long as water and roost trees were within the listed distances in Illinois. In Iowa, records for the Indiana bat have occurred in areas of 15% or greater forest cover and near permanent water. Tree species that have been identified as roost trees from studies in other states are shagbark and shellbark hickory that may be alive or dead and dead, bitternut hickory, American elm, slippery elm, eastern cottonwood, silver maple, white oak, red oak, post oak, and shingle oak with slabs or plates of loose bark.

Suitable summer habitat in Iowa is considered to have the following within a 1/2 mile radius of a location:

- 1) Forest cover of 15% or greater
- 2) Permanent water
- 3) One or more of the listed tree species 9 inches dbh or greater
- 4) The potential roost trees ranked as moderate or high for peeling or loose bark

Survey Methods for Indiana Bat Summer Habitat

Step 1

Determine if there is 15% or greater forest cover and permanent water in a 1/2 mile radius of the project site.

If not then there is no need to continue survey efforts.

If these requirements are met go to Step 2.

Step 2

Conduct a survey of the project area that will be cleared or cut to determine if suitable roost trees are present. This will include both upland and floodplain forests. Areas that are too large for complete counts may be sampled using techniques such as point-quarter, tenth-hectare quadrats or other acceptable forest sampling techniques. The information to be collected during sampling includes the following:

Standing trees 9 inches or greater (dbh) diameter at breast height per acre -- (alive or dead) shagbark and shellbark hickory (dead) all other species listed above that have 10% or greater loose or peeling bark on the trunks and main limbs. The amount of loose or peeling bark is based on visual estimation.

If clearing and grubbing activities will not begin until after April 15 the survey should extend 50 yards beyond the area to be cleared. This buffer will reduce the potential for harm to roosting bats near the edge of the area to be disturbed.

If a survey of the habitat within the project area finds that suitable summer habitat for the Indiana Bat, as defined above, is present then there are two options available.

Option 1:

Conduct a mist net survey of the project area for Indiana Bats

The U.S. Fish and Wildlife Service developed guidelines for conducting mist net surveys. A copy titled "Mist Netting Guidelines" may be obtained from the following office:

U. S. Fish and Wildlife Service
4469 48th Avenue Court
Rock Island, Illinois 61201

Survey results should be submitted to:

Iowa Department of Natural Resources,
Wallace State Office Building
502 East Ninth
Des Moines, IA 50319
(Attention: Daryl Howell)

U.S. Fish & Wildlife Service
4469 48th Ave. Court
Rock Island, IL 61201

If Indiana bats are found during the survey then no removal of the trees will be allowed between April 15 and September 15.

Option 2:

Conduct tree clearing and cutting between September 16 and April 14 or remove all potential roost trees identified during the habitat survey between these dates.

The IDNR can offer assistance in identifying qualified professionals to conduct habitat surveys and bat surveys. Contact Daryl Howell if you have questions about these guidelines at the above listed address or (515) 281-8524.

Please contact the U.S. Fish and Wildlife Service at the above listed address or (309) 793-5800, for information about the most current federal guidelines for the Indiana bat.

These guidelines may be revised based on the availability of new research or management information or to clarify particular points in the guidelines. You may wish to check with the DNR to determine if you have the most current set of guidelines.

The Historical Division of the Department of Cultural Affairs

STATE HISTORICAL SOCIETY OF IOWA

Where past meets future

July 21, 2001

In reply refer to:
R&C#: 010589167

Stacy E. Woodson, Staff Engineer
Howard R. Green Company
8710 Earhart Lane SW
PO Box 9009
Cedar Rapids, Iowa 52404

American Gothic House
Eldon

Blood Run NHL
Larchwood

Centennial Building
Iowa City

Matthew Edel Blacksmith Shop
Marshalltown

Abbie Gardner Cabin
Arnolds Park

Iowa Historical Building
Des Moines

Montauk Governor's Home
Union Sunday School
Clermont Museum
Clermont

Plum Grove Governor's Home
Iowa City

Toolesboro Indian Mounds
Toolesboro

Western Historic Trails Center
Council Bluffs

RE: FHWA - VAN BUREN COUNTY - REPLACEMENT OF THE FARMINGTON
BRIDGE OVER THE DES MOINES RIVER ON IOWA HIGHWAY 2 -
PREPARATION OF AN ENVIRONMENTAL ASSESSMENT

Dear Ms. Woodson,

Thank you for notifying our office about the above referenced proposed project. We understand that this project will be a federal undertaking and will need to comply with Section 106 of the National Historic Preservation Act. We look forward to consulting with you and/or the Iowa Department of Transportation on the Area of Potential Effect for this proposed project and whether this project will affect any significant historic properties under 36 CFR Part 800.4. We will need the following types of information for our review:

- The Area of Potential Effect (APE) for this project needs to be adequately defined (36 CFR Part 800.16 (d)).
- Information on what types of cultural resources are or may be located in the APE (36 CFR Part 800.4).
- The significance of the historic properties in the APE in consideration of the National Register of Historic Places Criteria.
- A determination from the responsible federal agency of the undertaking's effects on historical properties within the APE (36 CFR Part 800.5).

If your agency will be the primary contact for this project, the responsible federal agency which we presume is the Federal Highway Administration, needs to notify us that they have authorized you to consult with our office on this project in accordance with 36 CFR Part 800.2(c)(4). Also, the responsible federal agency will need to identify and contact all potential consulting parties that may have an interest in historic properties within the project APE (36 CFR 36 Part 800.2 (c)).

Please reference the Review and Compliance Number provided above in all future submitted correspondence to our office for this project. We look forward to further consulting with you, the Iowa Department of Transportation, and the Federal Highway Administration on this project.

IOWA HISTORICAL BUILDING

600 East Locust • Des Moines, Iowa 50319-0290

Phone: (515) 281-6412 • Fax: (515) 242-6498 or (515) 282-0502

www.iowahistory.org

Should you have any questions please contact me at the number below.

Sincerely, *Douglas W. Jones*

Douglas W. Jones, Archaeologist
Community Programs Bureau
(515) 281-4358

cc: Gerry Kennedy, FHWA
Randall Faber, Office of Environmental Services, IDOT
Steve Larson, IDOT



June 7, 2001

Mr. Bobby Blackmon
Division Administrator
Howard R. Green Company
Federal Highway Administration
105 6th Street
Ames, IA 50010

RECEIVED
JUN 8
FHWA, AMES, IA

RECEIVED
JUN 14 2001
OFFICE OF ENVIRONMENTAL SERVICES

RE: IA010522-380

Dear Mr. Blackmon:

The Iowa State Clearinghouse has performed the required review of your grant application for the Environmental Assessment funding in accordance with the Iowa Intergovernmental Review System.

The review:

- did not generate any comments from those who examined the file.
- found no serious environmental problems which may result from the project or program.
- indicated that the proposal conforms to pertinent planning to this area.
- did not show that the proposal would result in duplicating any existing activity or project.

The Iowa Department of Natural Resource is in the process of reviewing this proposal and respond directly to you under separate cover.

The Clearinghouse is pleased to recommend that the application be approved for funding. A copy of this letter must be sent to the federal agency as evidence that the review has been performed.

Sincerely,

Steven R. McCann

Steven McCann
Federal Funds Coordinator
515/242-4719

cc: Stacy Woodson, Staff Engineer

SRM:rao
THOMAS J. VILSACK, GOVERNOR

SALLY J. PEDERSON, LT. GOVERNOR

C. J. Niles, Director • 200 East Grand Avenue • Des Moines, Iowa 50309-1827 • 515.242.4700 • Fax: 515.242.4809
info@ided.state.ia.us • TTY: 1.800.735.2942 • www.state.ia.us/ided

2002

ENVIRONMENTAL SERVICES

06/15/2001 FRI 08:20 FAX 5152391726

5152391726 -> HR GREEN - CR: Page 2

Received: 6/15/01 8:26j



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P.O. BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

June 20, 2001

Planning, Programs, and
Project Management Division

Ms. Stacy E. Woodson
Staff Engineer
Howard R. Green Company
8710 Earhart Lane EW
P.O. Box 9009
Cedar Rapids, Iowa 52409-9009

Dear Ms. Woodson:

I received your letter dated May 22, 2001, concerning replacement of the Iowa 2 highway bridge at Farmington, Iowa. Rock Island District staff reviewed the information you provided and have the following comments:

a. Your proposal does not involve Corps of Engineers (Corps) administered land; therefore, no further Corps real estate coordination is necessary.

b. Any proposed placement of fill or dredged material into waters of the United States (including wetlands) requires Department of the Army (DA) authorization under Section 404 of the Clean Water Act. Any potential obstruction to navigation in or over a navigable waterway (including the Des Moines River) requires DA authorization under Section 10 of the Rivers and Harbors Act. Based on the information provided to date, a Section 10 and 404 permit will be required for this project. When detailed information is available, please complete and submit the enclosed application packet to the Rock Island District for processing (enclosure). The application should include determinations of wetlands and other waters of the United States, size estimations of impacts to those areas, and wetland types and relative functions.

Prior to completing the permit review process and in compliance with the Clean Water Act Section 404(b)(1) guidelines, we also require sequential mitigation involving an alternatives analysis, minimization of impacts, and compensatory mitigation for any unavoidable impacts. The alternatives analysis must demonstrate how you will avoid impacts by selecting the least environmentally damaging practicable alternative based on wetland sizes, locations, types, and relative functions. Minimization of impacts should consist of a list of appropriate and practicable steps to minimize unavoidable adverse impacts. Compensatory mitigation must include plans to

-2-

restore or create wetlands to mitigate unavoidable project wetland impacts. If you have any questions regarding permit requirements under Section 404 of the Clean Water Act, please contact Mr. Neal Johnson of our Regulatory Branch. You may reach Mr. Johnson by writing to our address above, ATTN: Regulatory Branch (Neal Johnson), or by telephoning 309/794-5379.

c. The Responsible Federal Agency should coordinate with the Iowa State Historic Preservation Officer, Capitol Complex, Des Moines, Iowa 50319 to determine impacts to historic properties.

d. The Rock Island Field Office of the U.S. Fish and Wildlife Service should be contacted to determine if any federally listed endangered species are being impacted and, if so, how to avoid or minimize impacts. The Rock Island Field Office address is: 4469 - 48th Avenue Court, Rock Island, Illinois 61201. Mr. Rick Nelson is the Field Supervisor. You can reach him by calling 309/793-5800.

e. The Iowa Emergency Management Division should be contacted to determine if the proposed project may impact areas designated as floodway. Mr. Dennis Harper is the Iowa State Hazard Mitigation Officer. His address is: Hoover State Office Building, Level A, Des Moines, Iowa 50319. You can reach him by calling 515-281-3231.

No other concerns surfaced during our review. Thank you for the opportunity to comment on your proposal. If you need more information, please call Mr. Randy Kraciun of our Environmental Analysis Section, telephone 309/794-5174.

You may find additional information about the Corps' Rock Island District on our web site at <http://www.mvr.usace.army.mil>. To find out about other Districts within the Corps, you may visit web site: <http://www.usace.army.mil/divdistmap.html>.

Sincerely,



for Kenneth A. Barr
Chief, Economic and Environmental
Analysis Branch

Enclosure



Iowa Department of Transportation

NOV 23

800 Lincoln Way, Ames, Iowa 50010

515-239-1097
515-239-1726 FAX

November 18, 2003

Ref: BRF-2-9(17)—38-89
PIN: 00-89-002-10
Van Buren
Primary

Doug Jones
Review and Compliance
Bureau of Historic Preservation
State Historical Society of Iowa
600 East Locust
Des Moines, IA 50319

R&C: 030989027

Dear Doug:

**RE: Bridge Replacement along Iowa 2, over the Des Moines River
Van Buren County, Iowa. FHWA: 050320 Sec. 17, T70N-R11W**

Enclosed for your information is the Phase I Archaeological Survey for the above-mentioned federal-funded project. The project purposes the replacement of a 781 x 26 ft. steel-girder bridge (FHWA:050270) along Iowa 2 in Van Buren County, Iowa. This bridge, built 1948, was determined not eligible for the National Register.

The total area of potential effect encompasses a project corridor that 1400ft. in length with a width up to 120 ft. A total project area of 12.6 acres was investigated for this survey.

This investigation was conducted using an extensive records / archival search along with a pedestrian survey, cut-bank inspections, bucket-auger testing and post-hole testing. During this investigation two previously recorded sites, 13VB256 and 13VB257 were relocated and investigated. In addition, two previously unrecorded sites, 13VB655 and 13VB656 were discovered.

Sites 13VB256 and 13VB257 were first recorded in 1981, during which Site 13VB256 was determined to be a prehistoric occupation site with a historic component. This component encompasses a historic scatter associates with a former farmstead. At the same time, Site 13VB257 was determined to represent the foundation of farmhouse.

Additional research and investigation determined that 13VB257 should be considered part of the historic component to Site 13VB256. The two previously recorded sites have been combined under site number 13VB256 and a supplemental site form describing the site as presently conceived has been filed at the OSA office. The newly defined Site 13VB256, however, will not be impacted by present design plans.

Site 13VB655 represents a Woodland period, prehistoric habitation site. This site appears to have intact archaeological features and avoidance or further Phase II investigations are recommended for it. Due to the location of Site 13VB655, the site cannot be avoided, due to this a Programmatic Agreement is being written for your office's review concerning additional archaeological investigations to take place at the site.

Site 13VB656 represents the remains of the old River Road, a historic roadway in Van Buren County. This segment was abandoned in the 1930's and the site was determined not eligible for the National Register, due to its low potential for important historical information.

If you agree with the findings of this survey, please sign the concurrence line below, add your comments and return this letter. As mentioned, a programmatic agreement is being developed with your office concerning the additional archaeological investigation at Site 13VB655. This agreement will be forwarded to your office for review and signature, once completed. If you have any questions, please do not hesitate to contact me.

Sincerely,

Matthew J. Donovan

Matt Donovan
Office of Location and Environment
Matt.Donovan@dot.state.ia.us

MJFD
Enclosure

cc: ✓ Kris Riesenbergs- Location and Environment
Larry Jackson- District 5 Engineer
Mike Perry- Project Archaeologist / HAP

Concur:

Douglas W. Jones
SHPO Archaeologist

12/11/2003
Date:

Comments:

The number of bucket auger tests conducted in the survey area was not specified in the text. We recommend that this should be clarified in the report.

MAR 23 2004



Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1795

FAX 515-239-1726

March 19, 2004

Ref. No BRF-2-9(17)-38-89
PIN 00-89-002-010
Van Buren County
Primary

Ralph Christian/Doug Jones
Review & Compliance
Community Program Bureau
State Historical Society of Iowa
600 East Locust St.
Des Moines, IA 50319

R&C# 030989027

Dear Ralph/Doug:

RE: Farmington Bridge: Determination of Effect

Enclosed for your review and comment are the architectural report and final concept information for the above-mentioned project. The project proposes to replace the IA 2 bridge over the Des Moines River at Farmington. The preferred alternative will replace the bridge immediately downstream from the existing bridge. The highway will be reconstructed to tie back into the existing alignment at 2nd St. northeast of the bridge and approximately 1400 ft southwest of the bridge. A two-way paved runaround will be temporarily constructed at the southwest end of the project.

Historic Architectural Report

The structures within a block of a potential corridor on northeast side of the bridge were surveyed. The historic survey included background research, site inventory forms and photographs. The bridge did not qualify for the National Register during the Iowa Historic Bridge Inventory. Ingalls's (2002) historic evaluation also concluded the bridge does not qualify for listing on the National Register.

The survey recorded 38 older and 8 modern properties. Twenty-nine properties were listed as eligible for the National Register either as a contributing element of a potential historic district or individually eligible. The district has been tentatively defined as between Tremont St. and Elm St. and from North 2nd St. to North 4th St. The historic structures and potential district are outside the present project limits.

The historic Lumber Yard located on the east corner of North 2nd and IA 2 is the closest historic structure to the project. The reconstructed highway will tie back into the existing roadway at North 2nd St. The lumberyard will not be affected.

Archaeological Site

Site 13VB655 was recorded as a potentially eligible site and reported to your office November 18, 2003. The site is located at the west end of the project corridor. After discussing the site with the designers, it was determined that the runaround will avoid

Ralph Christian/Doug Jones
March 19, 2004
IA 2 - Farmington

impacting the site. To assure avoidance a protective field fence will be constructed between the site and the construction zone prior to construction activity.

Based on the results of the attached architectural survey and proposed project, we have determined that **No Historic Properties** will be affected. If agree with the determination, please sign the concurrence line below and return this letter. If you should require more information or if you have any questions, please do not hesitate to contact me.

Sincerely,

Judy McDonald

Judy McDonald
Office of Location & Environment
judy.mcdonald@dot.state.ia.us

JM

Enclosure

cc: Larry Jackson, District 5
Keith Cadwell, Road Design
Sharon Dumdei, Right of Way

Concur:

Ralph J. Christian
SHPO Historian

April 22, 2004
Date

Douglas W. Jones
SHPO Archaeologist

April 22, 2004
Date

Comments

*concerned by expiration of 30 day
comment period*

Form 535002
10-01



Iowa Department of Transportation
TRIBAL NOTIFICATION

November 18, 2003

IA DOT contact Math Donovan

ADOT project # BRF-2-9(17) - 38-89

Phone # 515-239-1097

Location Van Buren County, Iowa

E-mail math.donovana@dot.state.ia.us

Description Bridge Replacement along Iowa Highway 2.

Type of Project (see map)

- | | |
|--|---|
| <input type="checkbox"/> VERY SMALL - Disturb less than 12 inch depth (plow zone) | <input type="checkbox"/> LARGE - Improve existing road from 2-lanes to 4-lanes |
| <input type="checkbox"/> SMALL - Grading on existing road, shouldering, ditching, etc. | <input type="checkbox"/> LARGE - New alignment |
| <input type="checkbox"/> SMALL - Bridge or culvert replacement | <input checked="" type="checkbox"/> OTHER <u>Highway Br. Replacement - IA 2</u> |

Type of Coordination/Consultation Points

- | | |
|---|--|
| <input type="checkbox"/> 1-Early project notification (project map and description) | <input type="checkbox"/> 3-Consultation regarding site treatment |
| <input checked="" type="checkbox"/> 2-Notification of survey findings (Phase I) | <input type="checkbox"/> 4-Final Data Recovery Report |
| <input type="checkbox"/> 2a-Notification of site evaluation (Phase II) | |

Type of Findings Phase II to be conducted / Phase III if necessary

- | | |
|--|--|
| <input type="checkbox"/> No American Indian sites found
-Section 106 Consultation Process ends * | <input checked="" type="checkbox"/> Potentially significant American Indian sites found
Phase II evaluation conducted (see map and list of sites) |
| <input type="checkbox"/> No significant American Indian sites eligible for National Register
listing found--Section 106 Consultation Process ends * | <input type="checkbox"/> American Indian sites eligible for National Register listing
cannot be avoided (see map) |
| <input type="checkbox"/> Avoided American Indian sites eligible for National Register listing
(see map and list of sites)
-Section 106 Consultation Process may or may not end | <input type="checkbox"/> Burial site found |
| * in the event of a late discovery consultation will be reopened | _____ # of non-significant prehistoric sites |
| | _____ # of potentially significant prehistoric sites |
| | _____ # of National Register eligible prehistoric sites |

Affected National Register Properties

- | | |
|---|--|
| <input type="checkbox"/> Investigating avoidance or minimizing harm options | <input type="checkbox"/> Protected |
| <input type="checkbox"/> Avoided | <input type="checkbox"/> Data Recovery/MOA |

Please Respond

Who should we contact for site/project related discussions?

Michael Hudson
Name
580-765 2265
Phone

612 South 9th St.
Street Address

Brainerd City, Okla. 74601
City, Zip Code

E-mail

Do you know of any sensitive areas within or near the project the FHWA/DOT should avoid (please describe)?

- | | |
|---|---|
| <input type="checkbox"/> Thank you for the information; however, we do not need to consult on this particular project. | <input type="checkbox"/> Thank you for the information. We are satisfied with the planned site treatment. |
| <input checked="" type="checkbox"/> We do not have a comment at this time but request continued notification on this project. | <input type="checkbox"/> We have concerns and wish to consult. |
| <input type="checkbox"/> Please send a copy of the archaeology report. | <input type="checkbox"/> We wish to participate in the Memorandum of Agreement for this project. |

Comments

Name

Tribal Name

Date

(Comments continued on back)

Form 538002
10-01



Iowa Department of Transportation
TRIBAL NOTIFICATION

Date November 18, 2003
IA DOT contact MaH Donovan
IA DOT project # BRF-2-9(17) - 38-89
Phone # 515-239-1097
Location Van Buren County, Iowa
E-mail math.donovan@dot.state.ia.us
Description Bridge Replacement along Iowa Highway 2.

Type of Project (see map)

- | | |
|--|--|
| <input type="checkbox"/> VERY SMALL - Disturb less than 12 inch depth (plow zone) | <input type="checkbox"/> LARGE - Improve existing road from 2-lanes to 4-lanes |
| <input type="checkbox"/> SMALL - Grading on existing road, shouldering, ditching, etc. | <input type="checkbox"/> LARGE - New alignment |
| <input type="checkbox"/> SMALL - Bridge or culvert replacement | <input checked="" type="checkbox"/> OTHER Highway Br. Replacement - IA 2 |

Type of Coordination/Consultation Points

- | | |
|---|--|
| <input type="checkbox"/> 1-Early project notification (project map and description) | <input type="checkbox"/> 3-Consultation regarding site treatment |
| <input checked="" type="checkbox"/> 2-Notification of survey findings (Phase I) | <input type="checkbox"/> 4-Final Data Recovery Report |
| <input type="checkbox"/> 2a-Notification of site evaluation (Phase II) | |

Type of Findings Phase II to be conducted / Phase III if necessary

- | | |
|--|--|
| <input type="checkbox"/> No American Indian sites found
-Section 106 Consultation Process ends * | <input checked="" type="checkbox"/> Potentially significant American Indian sites found
Phase II evaluation conducted (see map and list of sites) |
| <input type="checkbox"/> No significant American Indian sites eligible for National Register
listing found-Section 106 Consultation Process ends * | <input type="checkbox"/> American Indian sites eligible for National Register listing
cannot be avoided (see map) |
| <input type="checkbox"/> Avoided American Indian sites eligible for National Register listing
(see map and list of sites)
-Section 106 Consultation Process may or may not end | <input type="checkbox"/> Burial site found |
| * in the event of a late discovery consultation will be reopened | |
| <div># of non-significant prehistoric sites _____</div> <div># of potentially significant prehistoric sites _____</div> <div># of National Register eligible prehistoric sites _____</div> | |

Affected National Register Properties

- | | |
|---|--|
| <input type="checkbox"/> Investigating avoidance or minimizing harm options | <input type="checkbox"/> Protected |
| <input type="checkbox"/> Avoided | <input type="checkbox"/> Data Recovery/MOA |

Please Respond

Who should we contact for site/project related discussions?

Name _____	Street Address _____	City, Zip Code _____
Phone _____	E-mail _____	

Do you know of any sensitive areas within or near the project the FHWA/DOT should avoid (please describe)? _____

- | | |
|--|---|
| <input type="checkbox"/> Thank you for the information; however, we do not need to consult on this particular project. | <input type="checkbox"/> Thank you for the information. We are satisfied with the planned site treatment. |
| <input type="checkbox"/> We do not have a comment at this time but request continued notification on this project. | <input type="checkbox"/> We have concerns and wish to consult. |
| <input checked="" type="checkbox"/> Please send a copy of the archaeology report of Phase II | <input checked="" type="checkbox"/> We wish to participate in the Memorandum of Agreement for this project. |

Comments _____

<u>Marianne Ly</u> Name	<u>Iowa Tribe of OK</u> Tribal Name	<u>11-25-03</u> Date
----------------------------	--	-------------------------

(Comments continued on back)

OCT 14 2004



Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1097
515-239-1726 FAX

October 12, 2004

Ref: BRF-2-9(17)-38-89
PIN: 00-89-002-10
Van Buren
Primary

Doug Jones
Review and Compliance
Bureau of Historic Preservation
State Historical Society of Iowa
600 East Locust
Des Moines, IA 50319

R&C: 030989027

Dear Doug:

RE: Supplemental Phase I Investigation for Proposed Borrow Areas associated with the Bridge Replacement along Iowa 2, over the Des Moines River, Van Buren County, Iowa. FHWA: 050320 Sec. 34, T68N-R8W

Enclosed for your information is the supplemental Phase I Archaeological Survey for the above-mentioned federal-funded project. This supplemental investigation surveyed three proposed borrow locations associated with the purposed replacement of a 781 x 26 ft. steel-girder bridge (FHWA:050270) along Iowa 2 in Van Buren County, Iowa.

These three borrow areas encompass a combined project area of 34.3 acres. Borrow Area 1 encompasses 12 acres, Borrow Area 2 encompasses 8.8 acres, and Borrow Area 3 encompasses 13.5 acres.

This investigation was conducted using an extensive records / archival search along with a pedestrian survey, soil probes, post-hole testing, and shovel testing. During these investigations, three previously unrecorded archaeological sites were identified. 13VB658, 13VB659, 13VB660, and 13VB661. Along with these sites, two spot-finds were recorded: fsVB19, fsVB20

Site 13VB658 represents a prehistoric lithic scatter, while 13VB659 represents the remains of a small prehistoric occupation site. Both of these sites were determined to be not eligible for the National Register and no further work was recommended for them.

Site 13VB660 represents a multi-component prehistoric and historic occupational site. This site has been highly disturbed by modern agricultural and past highway development activities. Due to this, Site 13VB660 has been determined not eligible for the National Register and no further work is recommended for it.

Site 13VB661 represents a prehistoric and historic scatter. This site has been heavily impacted by agricultural activities, and was determined not eligible for the National Register. No further work was recommended for this site.

The two spot-finds recorded during this investigation, fsVB19 and fsVB20, represent a single stoneware shard (fsVB19) and a small lead plumbing fixture part (fsVB20). Neither of these spot-finds was determined eligible for the National Register and no further work was recommended for them.

Based on the findings of this investigation, the determination for these proposed borrow areas is **No Historic Properties Affected**. If you concur, please sign the concurrence line below, and return this letter. If you have any questions concerning this project or this investigation, please do not hesitate to contact me.

Sincerely,



Matthew J.F. Donovan
Office of Location and Environment
Matt.Donovan@dot.state.ia.us

MJFD
Enclosure

cc: Kris Riesenbergs- Location and Environment
Larry Jackson- District 5 Engineer
Mike Perry- Project Archaeologist / HAP

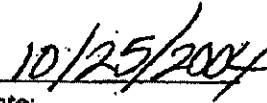
Concur:



SHPO Archaeologist

Comments:

Date:



APPENDIX B: STREAMLINED SUMMARY TABLE

The following tables are worksheets developed by the Iowa DOT and FHWA to streamline the NEPA process. These tables document that these resource areas were initially considered to be relevant for this project. They were subsequently determined to not have the potential for any impacts associated with any of the alternatives discussed in this NEPA document. Therefore, due to this lack of potential impact, there is no discussion of these resources in this NEPA document.

SOCIOECONOMIC Justification Section: (Project manager will delete fields that are covered in document.)

Community Cohesion	
Evaluation and Date:	6/30/04
Database Used:	Field Verification
Completed by:	Russell Sinram
Churches and Schools	
Evaluation and Date:	6/30/04
Database Used:	Field Verification
Completed by:	Russell Sinram
Energy	
Evaluation and Date:	7/14/04
Database Used:	N/A
Completed by:	Russell Sinram
Emergency Routes	
Evaluation and Date:	7/14/04
Database Used:	Field Verification
Completed by:	Consultant
Environmental Justice	
Evaluation and Date:	7/14/04
Database Used:	Census Data & Field Verification
Completed by:	Russell Sinram
Transportation	
Evaluation and Date:	7/14/04
Database Used:	N/A
Completed by:	Russell Sinram

NATURAL ENVIRONMENT Justification Section: (Project manager will delete fields that are covered in document.)

Wild and Scenic Rivers

Evaluation and Date: 7/14/04

Database Used:

Completed by: Russell Sinram

Farmlands

Evaluation and Date: 6/30/04

Database Used: Field Verification

Completed by: Russell Sinram

Physical Justification Section: (Project manager will delete fields that are covered in document.)

Air Quality

Evaluation and Date: 8/14/04

Database Used: Field Verification

Completed by: Russell Sinram

Visual

Evaluation and Date: 7/14/04

Database Used: Field Verification

Completed by: Russ Sinram

