

US HIGHWAY 18/US HIGHWAY 218/IA HIGHWAY 27 CORRIDOR  
From COUNTY ROAD B-35 to 0.8 MILES WEST of LIBERTY STREET  
in  
FLOYD COUNTY, IOWA  
NHSX-018-6(85)--3H-34

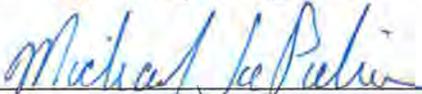
**ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to 42 USC 4332(2)(c)

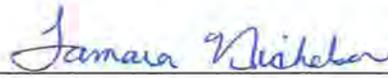
By The

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
And  
IOWA DEPARTMENT OF TRANSPORTATION  
OFFICE OF LOCATION AND ENVIRONMENT

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 requests to fund the preferred alternative.



For the Iowa Division Administrator  
Federal Highway Administration



For the Office of Location and Environment  
Iowa Department of Transportation



Date of Approval for Public Availability

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## PREFACE

The Transportation Equity Act of the 21<sup>st</sup> Century (TEA-21) (23 CFR) mandated environmental streamlining in order to improve transportation project delivery without compromising environmental protection. In accordance with TEA-21, the environmental review process for this project has been documented as a Streamlined Environmental Assessment (EA). This document addresses only those resources or features that apply to the project. This allowed study and discussion of resources present in the study area, rather than expend effort on resources that were either not present or not impacted. Although not all resources are discussed in the EA, they were considered during the planning process and are documented in the Streamlined Resource Summary, shown in Appendix A.

The following table shows the resources considered during the environmental review for this project. The first column with a check means the resource is present in the project area. The second column with a check means the impact to the resource warrants more discussion in this document. The other listed resources have been reviewed and are included in the Streamlined Resource Summary.

**Table P-1: Resources Considered**

SOCIOECONOMIC	NATURAL ENVIRONMENT
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Land Use <input type="checkbox"/> <input type="checkbox"/> Community Cohesion <input type="checkbox"/> <input type="checkbox"/> Churches and Schools <input type="checkbox"/> <input type="checkbox"/> Environmental Justice <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Economic <input type="checkbox"/> <input type="checkbox"/> Joint Development <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Parklands and Recreational Areas <input type="checkbox"/> <input type="checkbox"/> Bicycle and Pedestrian Facilities <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Right-of-Way <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Relocation Potential <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Construction and Emergency Routes <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Transportation	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Wetlands <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Surface Waters and Water Quality <input type="checkbox"/> <input type="checkbox"/> Wild and Scenic Rivers <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Floodplains <input checked="" type="checkbox"/> <input type="checkbox"/> Wildlife and Habitat <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Threatened and Endangered Species <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Woodlands <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Farmlands
CULTURAL	PHYSICAL
<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Historical Sites or Districts <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Archaeological Sites <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Cemeteries	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Noise <input type="checkbox"/> <input type="checkbox"/> Air Quality <input type="checkbox"/> <input type="checkbox"/> Mobile Source Air Toxics (MSATs) <input type="checkbox"/> <input type="checkbox"/> Energy <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Contaminated and Regulated Materials Sites <input type="checkbox"/> <input type="checkbox"/> Visual <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Utilities
<input type="checkbox"/> <b>CONTROVERSY POTENTIAL</b>	
<input checked="" type="checkbox"/> <b>Section 4(f):</b> City of Floyd Recreational Fields – No Use Mink Creek Wetland Mitigation Site – Temporary Impact During Construction	



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# **SECTION 1**

## **DESCRIPTION OF PROPOSED ACTION**

This Environmental Assessment (EA) has been prepared in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA). This EA informs the public and interested agencies of the proposed action and alternatives to the proposed action in order to gather feedback on the improvements under consideration.

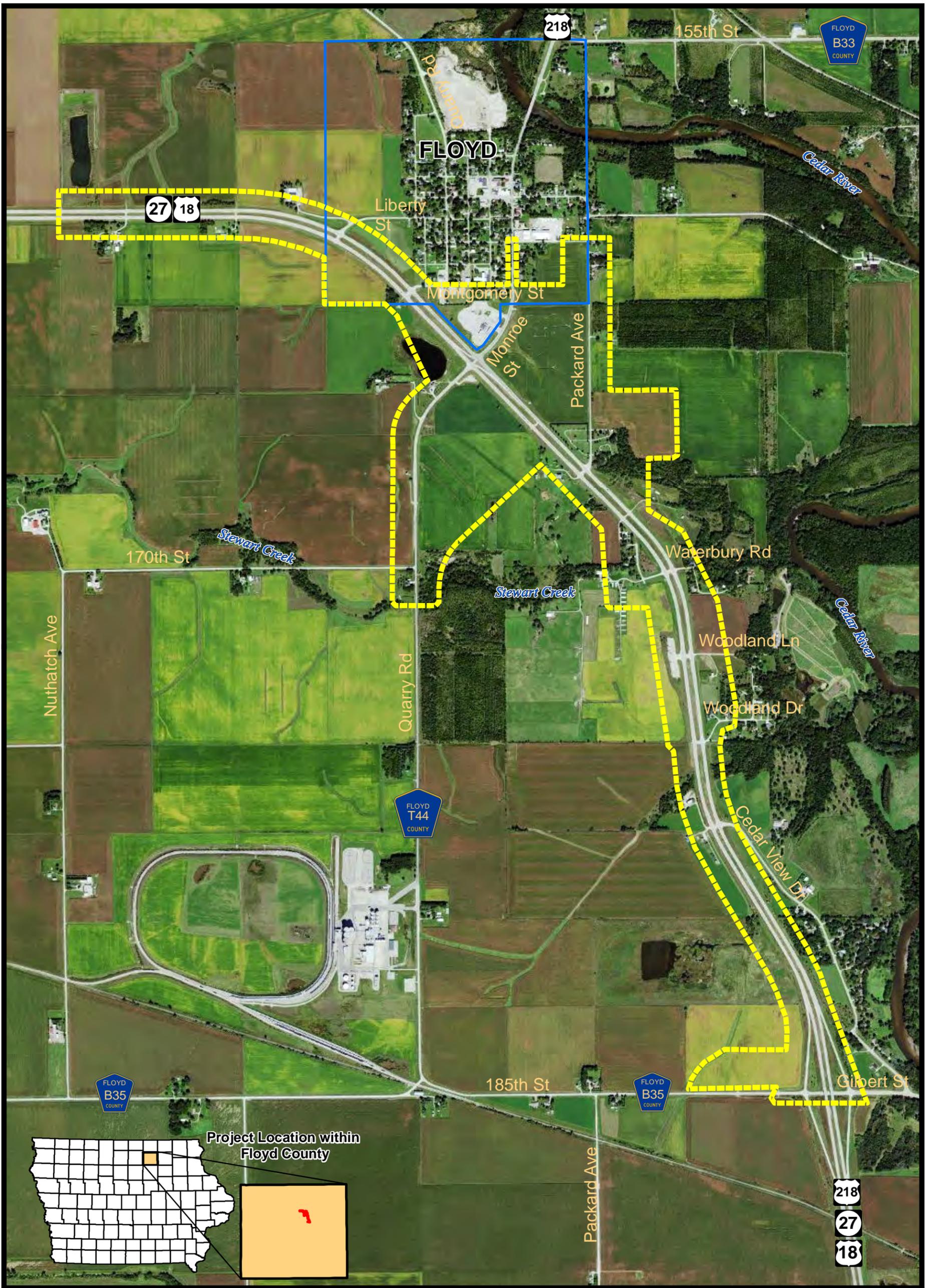
### **Proposed Action**

The Iowa Department of Transportation (Iowa DOT) and the Federal Highway Administration (FHWA) are evaluating potential alternatives to improve the U.S. 18/U.S. 218/Iowa 27 corridor from County Road B-35 north to 0.8 miles west of Liberty Street, near the City of Floyd, in Floyd County, Iowa. Improvements will include an interchange at County Road T-44 near Floyd along with frontage road improvements for access control along the corridor.

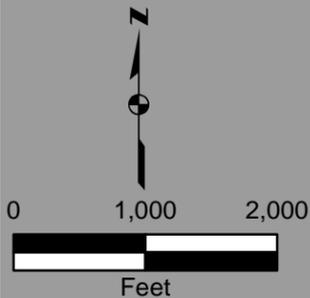
### **Study Area**

The primary area of investigation for the Project is generally a corridor along U.S. 18/U.S. 218/Iowa 27 beginning south of County Road B-35 and proceeding north to the City of Floyd and then west to 0.8 miles west of Liberty Street. This includes a larger investigation area at County Road T-44 for the development of interchange alternatives. For the purposes of this discussion, this area will be referred to as the Study Area. The Study Area boundaries were established to allow the development of a wide range of alternatives that could address the purpose of and need for the project. The Study Area is larger than the area proposed for construction activities for the Project. However, some impacts may extend beyond the Study Area; where this occurs will be noted and addressed in the Environmental Analysis Section (Section 5). Figure 1-1 outlines the Study Area of the proposed action.





Created August 2015  
2015 NAIP Aerial



- Project Study Area
- Corporate Limits

**FIGURE 1-1:  
PROJECT STUDY AREA**

NHSX-018-6(85)--3H-34

US18/218/IA27 Hwy Improvement  
and Interchange

Floyd County, Iowa



## **SECTION 2**

### **PROJECT HISTORY**

The U.S. 18/U.S. 218/Iowa 27 corridor in the Floyd County area was constructed in 1926 as a two-lane highway. In 1988, the Iowa DOT's Transportation Commission identified the U.S. 18/U.S. 218/Iowa 27 corridor as part of the State's Commercial Industrial Network (CIN)<sup>1</sup>. As part of the CIN, segments of U.S. 18/U.S. 218/Iowa 27 in Iowa have been developed as four-lane expressways or freeway facilities with posted speed limits of 65 mph in rural areas. In 2000, the segment of U.S. 18/U.S. 218/Iowa 27 from the City of Rudd to the City of Charles City was upgraded to a four-lane expressway with at-grade access. These upgrades, completed as part of the Avenue of the Saints<sup>2</sup> project, resulted in traffic growth in the area. Traffic increased by over 100 percent between 1998 and 2013 and safety and operational issues have been noted.

At the City of Floyd, the intersection of U.S. 18/IA 27 and U.S. 218/County Road T-44 has had some operational issues caused by turning traffic movements. Meetings were held with local jurisdictions and law enforcement agencies to discuss possible solutions to the issues. In an effort to improve the operational issues, an offset right turn lane for U.S. 218 traffic was constructed in 2003 and later reconstructed to further offset it from the mainline. Since then, additional signage and pavement markings have been added to assist drivers with this intersection. As these improvements did not significantly improve safety in the area, another short-term improvement at this intersection was completed in 2011 that added offset left turn lanes to improve sight lines for truck and vehicular traffic and to provide more storage.

A public information meeting (PIM) was held on May 11, 2006 at the Floyd Community Center located at 706 Fairfield Street in Floyd. Forty-nine (49) people attended the meeting. The purpose of this meeting was to introduce the project to the public, to gather information and feedback from the public regarding transportation issues in the area, and to present preliminary improvement concepts for the U.S. 18/U.S. 218/Iowa 27 intersection with County Road T-44.

Comments received at the meeting and during the comment period were generally focused on making the intersection of U.S. 18/218/IA 27 and County Road T-44 safer as soon as possible and including improvements to it in the Iowa DOT's Five-Year Transportation Improvement Program. Additional comments included: concerns if access to properties in the study corridor would be maintained or eliminated; concerns on how an interchange would impact access to the truck stop, local restaurant, and the City of Floyd; and the drivability of loop ramps in relation to trucks and large agricultural equipment.

<sup>1</sup> The Iowa DOT defines the Commercial Industrial Network (CIN) as a "designated road system of primary highways that connect the State's regional growth areas and carry a significant amount of the State's commercial traffic; the CIN does not include the interstate system.

<sup>2</sup> The Avenue of the Saints is a multi-lane highway corridor that extends 536 miles from St. Paul, Minnesota to St. Louis, Missouri, of which 268 miles are located in Iowa. This corridor was established to create new economic development opportunities as there are an estimated 7 million people and 250,000 businesses located along the route. The concept for the Avenue of the Saints began in 1985, with Iowa construction projects starting in the early 1990's and completed in 2006.



## **SECTION 3**

### **PURPOSE AND NEED FOR ACTION**

This section describes the purpose of and need for the proposed action based on the transportation system problems that currently exist in the Study Area. This section details the substandard nature of the existing highway, and explains the importance of the highway as a principal arterial in Floyd County and the region.

#### **Purpose of the Proposed Action**

The purpose of the proposed improvements to the U.S. 18/U.S. 218/Iowa 27 Corridor is to provide a safer transportation facility to accommodate existing and future traffic in the area and control access in the corridor from the interchange with County Road B-35 to just west of the City of Floyd.

#### **Need for the Proposed Action**

The need for the proposed action is based on a combination of factors, as follows:

- Traffic Demand – Designated as part of the Avenue of the Saints Expressway, traffic volume has more than doubled since the four-lane facility was opened in 2000.
- Operational Issues – A history of operational issues have been observed at the U.S. 18/U.S. 218/Iowa 27 intersection with County Road T-44, in the City of Floyd.
- Traffic Safety – The crash rate on this segment is above the statewide average.
- System Continuity – This corridor has numerous at-grade entrances, private driveways, and median openings.

These deficiencies are discussed in more detail below.

#### **Traffic Demand**

The study corridor has become a significant route for local and through vehicles alike. Traffic on the Avenue of the Saints Expressway has grown considerably since its construction and designation. Previous to the four-lane facility opening in 2000, the 1998 AADT was 4,550 vehicles. In 2013, the AADT was 10,100 vehicles with 20 percent being trucks. This accounts for a 122 percent increase in total traffic.

Traffic projections have been forecasted for program year 2018 and design year 2038. Based on these forecasts, the 2018 ADT is 11,600 vehicles with 23 percent being trucks and the 2038 ADT is 18,700 vehicles with 26 percent being trucks.

Even with a projected increase in 2038 ADT to 18,700 vehicles, the four-lane divided U.S. 18/U.S. 218/Iowa 27 corridor is expected to perform at free-flow conditions and level of service (LOS) capacity B. However, the operations at the main intersection with the City of Floyd (County Road T-44) will most likely degrade as more traffic and trucks exert pressure on turning movements and gap-acceptance decisions by drivers. This can have the net effect of increasing the number of accidents in the corridor and the severity of crashes in an already above-average state crash rate location.

### **Operational Issues**

There have been noted operational issues at the U.S. 18/U.S. 218/Iowa 27 intersection with County Road T-44 which is due to the increase of traffic, especially truck traffic, in the area since 2000. In an effort to improve these issues, an offset right turn lane for U.S. Highway 218 northbound traffic was constructed in 2003 and later reconstructed to be further offset to alleviate shadowing for the vehicle at the stop sign located on the U.S. Highway 218 southbound lane. Signs have been installed to indicate that “Cross Traffic Does Not Stop” along with flashing beacons warning drivers on this intersection.

Changes that have been made in the crossover median include stop bar pavement markings at the stop signs. These were placed to address the issue of truck trailers overhanging into the travel lanes of the expressway, and to inform drivers of how and where to align their vehicles as they approach. There was also a conflict with trucks sitting in the median at the stop sign traveling south or east with trucks in the eastbound to northbound left turn lane on the mainline. The driver could not go around the truck in the median and the truck in the median had no sight distance of the mainline in order to clear out. This not only created a standstill in the median, but had also caused trucks to back up and sit in the mainline of westbound U.S. Highway 18/Iowa 27.

Offset left turn lanes were installed in 2011 for both directions of U.S. 18/ U.S. 218/Iowa 27 to increase vehicle capacity and give trucks a clear space to maneuver. With this intersection configuration, there will be instances when vehicles will be stopped at the stop signs at the end of the turn lanes and the median at the same time.

### **Traffic Safety**

Along the project corridor, a five year period of crash data was studied from 2009 through 2013. There were 90 crashes including 24 personal injury crashes and 66 property damage only crashes. The 90 crashes on this road segment equate to a calculated 161 crashes per 100 million vehicle miles, which is well above the statewide average of 49 crashes per 100 million vehicle

miles for rural U.S. highways. There were a total of 36 injuries on this road segment during this study period with no fatalities.

At the U.S. 18/U.S. 218/Iowa 27 intersection with County Road T-44, a five year period of crash data was studied from 2009 through 2013. There were 19 crashes including 9 personal injury crashes and 10 property damage only crashes. The 19 crashes at this intersection equate to a calculated 1.94 crashes per million entering vehicles, which is well above the statewide average of 0.8 crashes per million entering vehicles for rural intersections. There were a total of 17 injuries at this intersection during this study period with no fatalities.

### **System Continuity**

The highway corridor between the City of Charles City and the City of Floyd is a four-lane expressway with Priority 3 access control. The adjacent land uses in this area includes a number of rural residential subdivisions, individual acreages, and commercial businesses. These properties rely on the highway for access and as such, there are at-grade intersections with every public roadway and at ¼ mile spacing.

There is a vast differential of speeds between vehicles entering and exiting the highway through these at-grade intersections and vehicles travelling on the posted 65 MPH facility. The expectancy of drivers on a four-lane divided facility is to have controlled access at interchanges only, such as the Charles City bypass directly to the south of the project area, and not along the highway with at-grade intersections.



## **SECTION 4 ALTERNATIVES**

This section discusses the alternatives investigated to address the purpose of and need for the proposed action. A range of alternatives were developed and then a screening process was used for narrowing the range of alternatives. This section will discuss the No Build Alternative, the alternatives considered but dismissed, and the Proposed Alternative.

### **No Build Alternative**

Under the No Build Alternative, neither the proposed interchange at U.S. 18/U.S. 218/Iowa 27 and County Road T-44 nor the proposed frontage road network would be constructed. The road network would continue to be used in its existing configuration. All of the at-grade intersections in the project corridor would remain in place. This alternative would not improve traffic safety, would not provide system continuity for more efficient traffic flow, would not alleviate the demand for higher traffic volumes on U.S. 18/U.S. 218/Iowa 27, and would not resolve the operational issues in the project corridor. Although it does not meet the purpose and need, the No-Build Alternative was carried forward for detailed study because it provides a baseline for comparing the potential impacts of other alternatives and consideration of a no action alternative is required by the Council on Environmental Quality regulations for implementing NEPA (40 CFR 1500-1508).

### **Alternatives Considered but Dismissed**

Three interchange alternatives were considered for development at the intersection of U.S. 18/U.S. 218/Iowa 27 and County Road T-44; the Folded-Diamond interchange with County Road T-44 over the mainline highway, the Three-Quadrant interchange, and the Folded-Diamond interchange with County Road T-44 under the mainline highway. There were also two frontage road alternatives considered for development in the project corridor, Priority I access control and Priority II access control.

### **Corridor Access Control/Frontage Roads**

To improve traffic operations on U.S. 18/U.S. 218/Iowa 27 in the project corridor, all three interchange alternatives proposed the development of frontage road alternatives to reduce direct access to and from the highway. The Iowa DOT has developed the Iowa Primary Highway Access Management Policy, last updated January 2012, to establish rules for control of access to primary highways. Regulation and overall control of highway access are necessary to provide efficient and safe highway operation and to utilize the full potential of the highway investment.

The highway corridor in the Study Area currently has Priority III access control. To develop tighter control of entrances to the highway, both Priority I access control and Priority II access

control were examined for consideration with the interchange alternatives. This would require a system of frontage roads on both sides of the highway to allow for residential, commercial, recreational, and agricultural access. The three different levels of access control studied through the development of this project are defined as:

***Priority I Highway*** - A primary highway constructed as a fully controlled access highway. Permanent access to the facility is allowed only at interchange locations. No permanent at-grade access is allowed.

***Priority II Highway*** - A primary highway constructed as a two-lane or multilane (more than two lanes) facility with a high degree of access control. Access to the facility is allowed only at interchanges and selected at-grade locations. The minimum allowable spacing between access locations is one-half mile. Limiting primary highway access to existing public road intersections at intervals of one mile is preferable.

***Priority III Highway*** - A primary highway constructed as a two-lane or multilane facility. Access to the facility is allowed at interchanges and at-grade locations. The minimum allowable spacing between access locations is 1,000 feet. Spacing of one-quarter mile is preferable.

Priority I access control would eliminate all direct access to U.S. 18/U.S. 218/Iowa 27 except at the interchanges. Local traffic would have to utilize a frontage road system and access the highway at either the existing interchange at County Road B-35 or the proposed interchange at County Road T-44 (Figure 4-1).

Priority II access control would maintain access to U.S. 18/U.S. 218/Iowa 27 at ½ mile spacing plus the existing interchange at County Road B-35 and the proposed interchange at County Road T-44. The intersections at Woodland Lane and Cedar View Drive would remain open and be improved for better access while the remainder of the intersections would be closed. These closures include Liberty and Montgomery Streets that currently provide access to the Town of Floyd north of the proposed interchange and Packard Avenue south of the proposed interchange by the Oakwood Cemetery. A network of frontage roads would be developed on both sides of the highway to maintain access for property owners and agricultural properties in the corridor (Figure 4-2).

The Priority I access control alternative was eliminated from consideration early on in project development. Dismissal of this alternative was due to negative public feedback, the anticipated environmental consequences, and the potential impact to the Mink Creek Wildlife Management Area, a Section 4(f) property. In addition, the predominant number of crashes in the corridor are occurring at the intersection of U.S. 18/U.S. 218/Iowa 27 and County Road T-44 and not the other side road locations. Based on these considerations, the Iowa DOT has determined to proceed with Priority II access control in the project corridor. This was included in the evaluation of the three interchange alternatives below and the impacts are included in Section 5, Environmental Analysis.

## Folded-Diamond Interchange – County Road T-44 Over

This Folded-Diamond interchange was comprised of two loops and two ramps that would serve entering and exiting traffic (Figure 4-3). County Road T-44 would cross over mainline U.S. 18/U.S. 218/Iowa 27 to serve traffic to and from the City of Floyd and also traffic south of town. This interchange configuration minimizes direct impacts to the truck stop on the east side of the mainline highway, avoids the borrow pond on the west side, but will directly impact the automobile dealership also on the west side. The north bound parallel exit ramp layout was calculated with a reduced design speed of 55 mph instead of 65 mph, avoiding impacts to the Oakwood Cemetery south of town. As previously mentioned, Priority II access control would be developed for the frontage road network.

This Folded-Diamond interchange, with County Road T-44 over, was eliminated from further consideration for several reasons. This type of interchange configuration, with entrance and exit loops, is not ideal for traffic operations and is typically used to avoid existing constraints in the interchange area. The exit loops generally have a poorer safety performance than entrance loops. This is because high-speed mainline traffic must slow down significantly by the time it reaches the gore area to safely negotiate the low speed geometry of a loop. This operation is not optimal for vehicles at the southbound exit loop, especially the heavier weighted trucks, as a vehicle travelling too fast for the loop could potentially lose control and flip.

Although the entrance loop performs better than an exit loop, traffic still enters the entrance loop at a lower speed from the side road intersection. Vehicles need to accelerate to mainline speeds after negotiating the low speed loop radius, causing potential conflicts with merging operations. As mentioned, these acceleration and deceleration movements have a greater impact on truck operations than they do on passenger vehicles.

This interchange configuration also causes potential conflicts on County Road T-44 in that the roadway would be elevated above the mainline highway. Vehicles, especially trucks, exiting the truck stop to go south would have to accelerate uphill to pass through the interchange area. This would diminish traffic operations as vehicles would be travelling at much slower speeds. In the winter season, vehicles travelling north and into the truck stop may have a difficult time slowing down in inclement weather due to ice and/or snow covering the elevated bridge and roadway.

In addition to the operational issues of this alternative, there are also several constructability reasons why it was dismissed. It would not be possible to maintain multiple lanes of traffic on the U.S. 18/U.S. 218/Iowa 27 mainline as there is no way to funnel traffic away from the construction areas with this configuration. With the construction staging, it would take approximately 2 ½ years to build this alternative. This would include a 10-plus mile detour of the same 2 ½ year timeframe with traffic needing to utilize the interchange at Iowa 14 near the City of Charles City. The detour would go either east or west on this paved roadway before travelling north around the construction area. Local traffic would still be accommodated by the interchange at County Road B-35 but would be required to use the detour route to go north or to get to the City of Floyd.

## Folded-Diamond Interchange – County Road T-44 Under

This Folded-Diamond interchange was comprised of two loops and two ramps that would serve entering and exiting traffic (Figure 4-4). County Road T-44 would cross under mainline U.S. 18/U.S. 218/Iowa 27 at the existing roadway elevation to serve traffic to and from the City of Floyd and also traffic south of town. This interchange configuration minimizes direct impacts to the truck stop on the east side of the mainline highway, avoids the borrow pond on the west side, but will directly impact the automobile dealership also on the west side. The north bound parallel exit ramp layout was calculated with a reduced design speed of 55 mph instead of 65 mph, avoiding impacts to the Oakwood Cemetery south of town. As previously mentioned, Priority II access control would be developed for the frontage road network.

This Folded-Diamond interchange, with County Road T-44 under, was eliminated from further consideration for several reasons. This type of interchange configuration, with entrance and exit loops, is not ideal for traffic operations and is typically used to avoid existing constraints in the interchange area. The exit loops generally have a poorer safety performance than entrance loops. This is because high-speed mainline traffic must slow down significantly by the time it reaches the gore area to safely negotiate the low speed geometry of a loop.

With this configuration, the mainline U.S. 18/U.S. 218/Iowa 27 will traverse uphill and over the crossroad. This will affect driver expectancy at the southbound exit loop with a reduced sight distance as vehicles will not be able to visualize the exit until the bridge approach is reached. In the winter season at this location, vehicles travelling south and exiting the mainline highway will need to slow down on the southbound bridge. During inclement weather, this may be difficult due to ice and/or snow covering the elevated bridge and roadway. These situations are not optimal for vehicles at the southbound exit loop, especially the heavier weighted trucks, as a vehicle travelling too fast for the loop could potentially lose control and flip.

Although the entrance loop performs better than an exit loop, traffic still enters the entrance loop at a lower speed from the side road intersection. Vehicles need to accelerate to mainline speeds after negotiating the low speed loop radius, causing potential conflicts with merging operations. With this side road under configuration, vehicles on the northbound entrance ramp will need to accelerate uphill before merging with mainline traffic. This would diminish traffic operations as vehicles would be travelling at slower speeds as they enter onto U.S. 18/U.S. 218/Iowa 27. As mentioned, these acceleration and deceleration movements have a greater impact on truck operations than they do on passenger vehicles.

In addition to the operational issues of this alternative, there are also several constructability reasons why it was dismissed. It would not be possible to maintain multiple lanes of traffic on the U.S. 18/U.S. 218/Iowa 27 mainline as there is no way to funnel traffic away from the construction areas with this configuration. With the construction staging, it would take approximately 2 ½ years to build this alternative. This would include a 10-plus mile detour of the same 2 ½ year timeframe with traffic needing to utilize the interchange at Iowa 14 near the City of Charles City. The detour would go either east or west on this paved roadway before travelling north around the construction area. Local traffic would still be accommodated by the

interchange at County Road B-35 but would be required to use the detour route to go north or to get to the City of Floyd.

## **Proposed Alternative**

After reviewing the reasonable alternatives under consideration, the Iowa DOT has identified the Three-Quadrant interchange along with Priority II access control for the frontage road network as the Proposed Alternative. This alternative is considered preferred because it best meets the project purpose and need while improving traffic operations and minimizing overall impacts. This alternative consists of constructing a new interchange at the U.S. 18/U.S. 218/Iowa 27 intersection with County Road T-44. Similar to the alternatives that were dismissed, the Proposed Alternative will remove several at-grade intersections to create Priority II access control along the study corridor. The Iowa DOT will develop a final preferred construction scenario during the design process.

### **Three-Quadrant Interchange**

The Three-Quadrant interchange is comprised of an entrance and exit ramp on the west side of the interchange and an entrance loop ramp and exit ramp taper on the east side (Figure 4-5). The mainline U.S. 18/U.S. 218/Iowa 27 will cross over County Road T-44. Traffic to and from the City of Floyd along with traffic south of town will travel under U.S. 18/U.S. 218/Iowa 27 at the existing roadway elevation. Although this interchange configuration minimizes direct impacts to the truck stop on the east side of the mainline highway, the southbound exit and entrance ramps will directly impact the borrow pond and the automobile dealership on the west side of the proposed interchange. The north bound parallel exit ramp layout was calculated with a reduced design speed of 55 mph instead of 65 mph, avoiding impacts to the Oakwood Cemetery south of town.

This Proposed Alternative was chosen for a several reasons. This type of interchange configuration has southbound exit and entrance ramps which eliminates the southbound exit loop as shown on the two dismissed alternatives. The driver expectancy of this exit ramp will provide safer traffic operations, especially for trucks, as it avoids the sight distance issues as seen in an exit loop. It eliminates the need for high-speed mainline traffic to slow down significantly by the time it reaches the gore area to safely negotiate the low speed geometry of an exit loop.

Although this interchange configuration still has a northbound entrance loop, entrance loops do perform better, operational wise, than exit loops. This entrance loop was included in the Proposed Alternative since it minimizes direct impacts to both the existing and proposed truck stops located on the east side of the mainline highway.

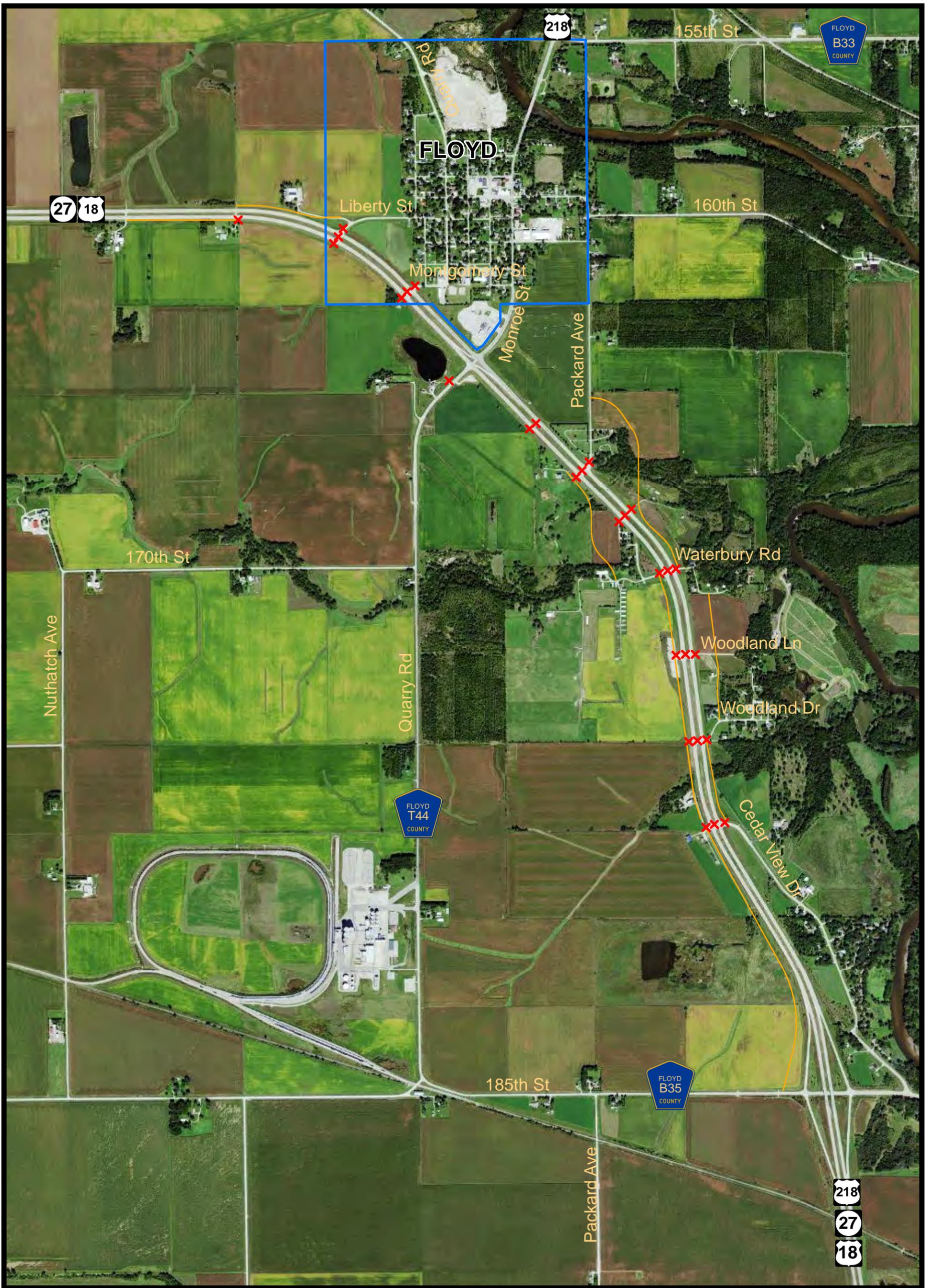
In addition to the operational benefits of this alternative, there are also several constructability reasons why it was chosen. The construction staging was more desirable than the dismissed alternatives due to the southbound exit and entrance ramps. These would be built early on in the construction project so that southbound traffic could be diverted off of the mainline and through

the area. The shift in northbound traffic would correspond with construction of the mainline bridges allowing traffic and access to be maintained through the corridor during construction.

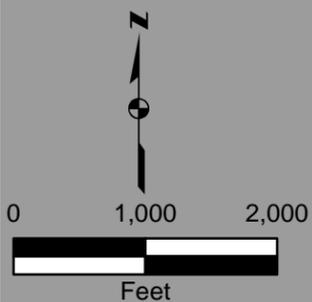
The timeframe to construct this Proposed Alternative has a shorter duration than the other two alternatives that were dismissed, from approximately 2 ½ years down to approximately 1 ¾ years. With the ability through construction staging to maintain traffic and access in the project corridor during construction, there will be no long out of distance detours required for this alternative.

Similar to the two alternatives that were dismissed, the Proposed Alternative includes the development of Priority II access control along the project corridor. Access to U.S. 18/U.S. 218/Iowa 27 would be developed at ½ mile spacing plus the existing interchange at County Road B-35 and the proposed interchange at County Road T-44. Two existing intersections would remain open and be improved for better access, at Woodland Lane and Cedar View Drive, while the remainder of the intersections would be closed. A network of frontage roads would be developed on both sides of the highway to maintain access for properties in the corridor.

Final selection of the preferred alternative, including a construction scenario, will not occur until FHWA and Iowa DOT evaluate all comments received as a result of their review of this document and the public hearing on the U.S. 18/U.S. 218/Iowa 27 Improvement Study. Following public and agency review of this EA, FHWA and Iowa DOT will determine if an EIS is required. If one is not required, the selected alternative will be identified in the Finding of No Significant Impact (FONSI) document. If an EIS is required, then a preferred alternative would be selected through that process.



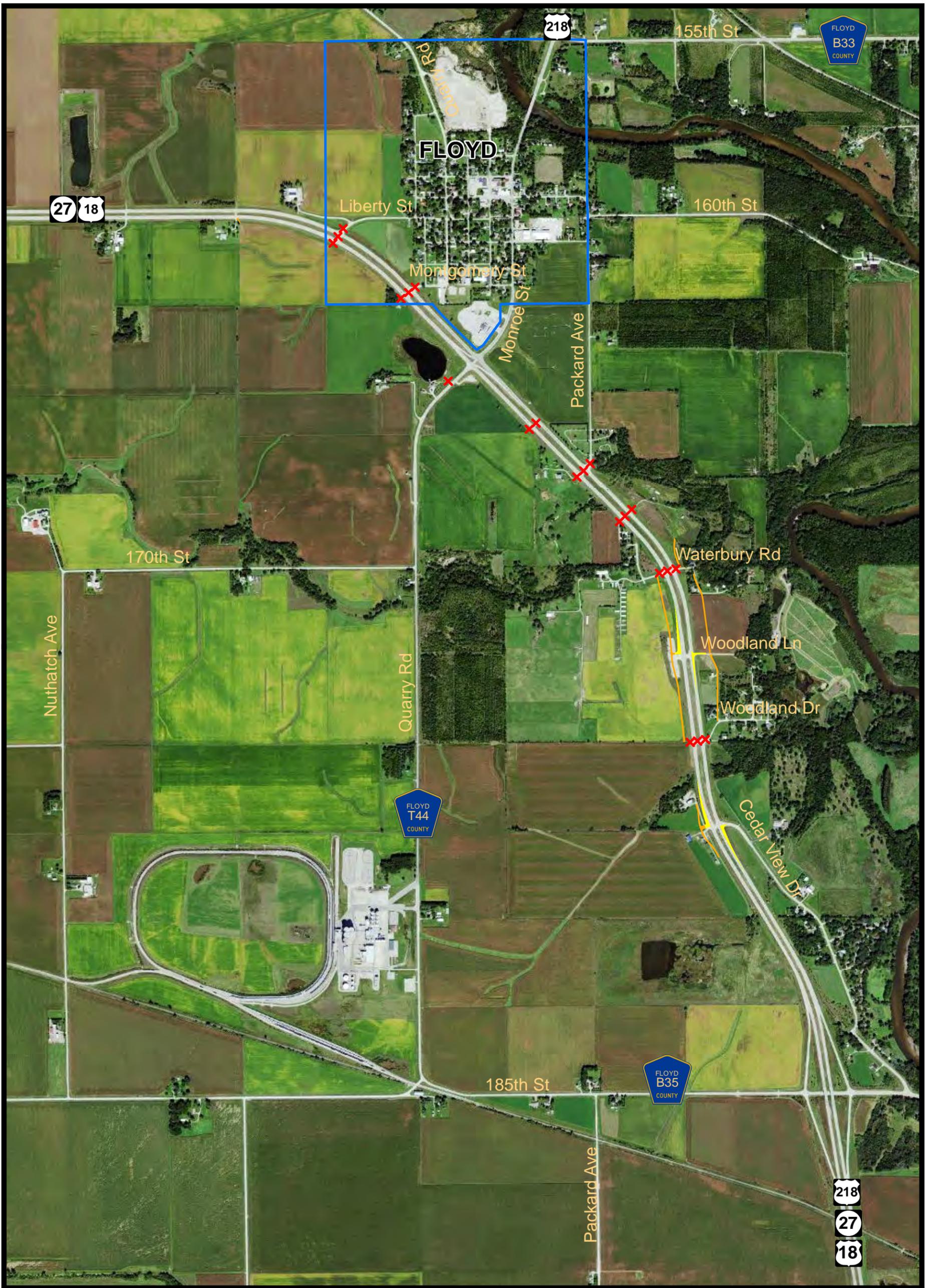
Created August 2015  
2015 NAIP Aerial



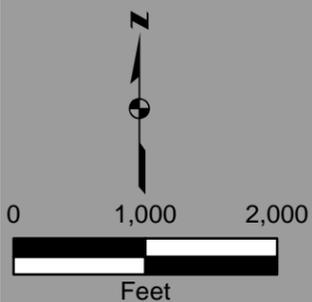
- X Proposed Closures
- Proposed Granular
- Corporate Limits

**FIGURE 4-1:  
FRONTAGE ROAD SYSTEM  
PRIORITY I ACCESS CONTROL**  
NHSX-018-6(85)--3H-34  
US18/218/IA27 Hwy Improvement  
and Interchange  
Floyd County, Iowa





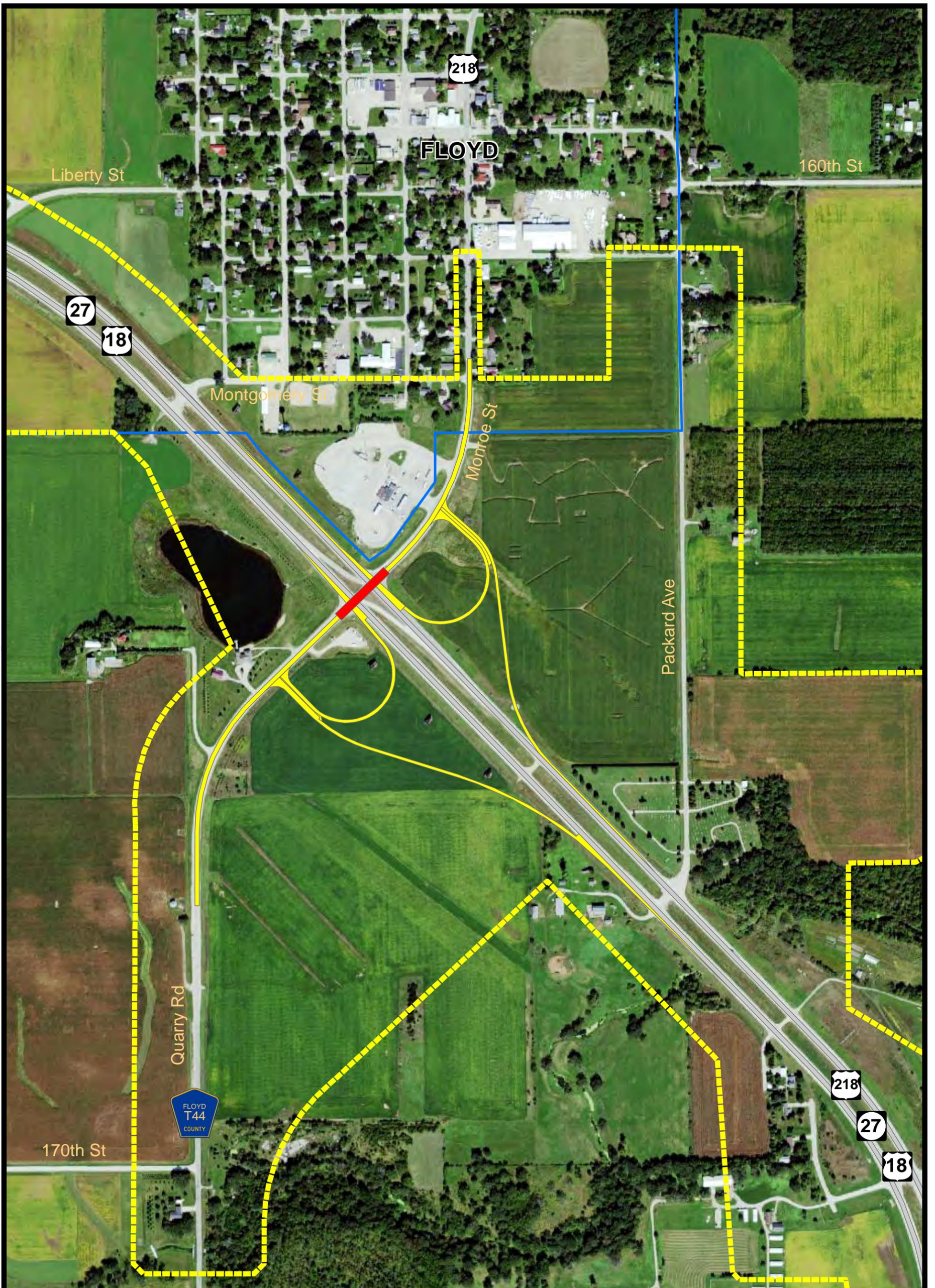
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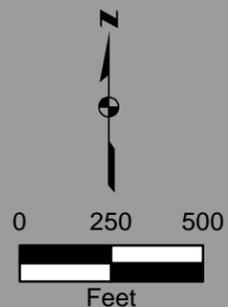
- ✕ Proposed Closures
- Proposed Granular
- Proposed Pavement
- Corporate Limits

**FIGURE 4-2:  
FRONTAGE ROAD SYSTEM  
PRIORITY II ACCESS CONTROL**  
NHSX-018-6(85)--3H-34  
US18/218/IA27 Hwy Improvement  
and Interchange  
Floyd County, Iowa





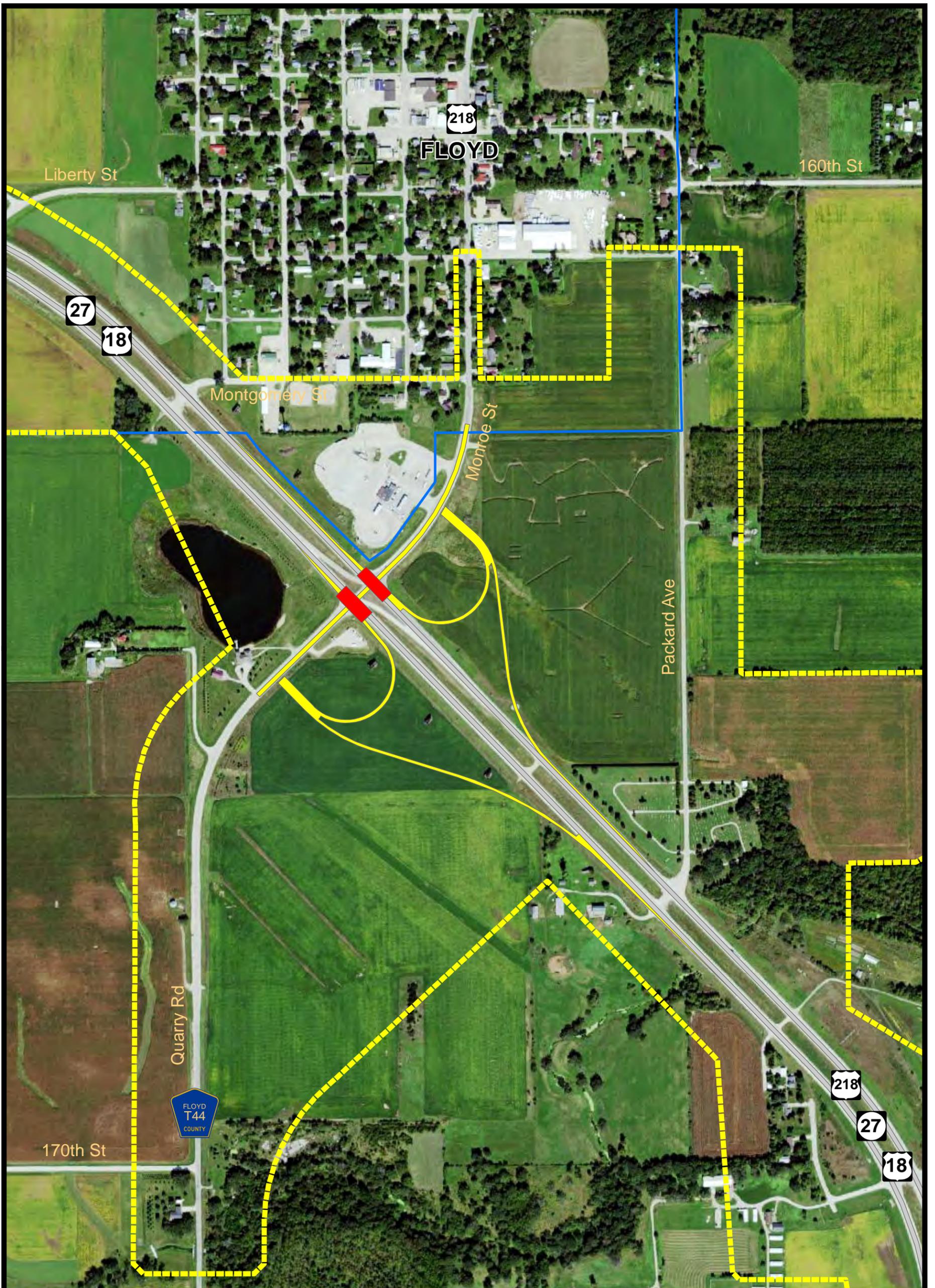
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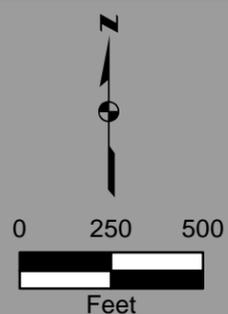
- Proposed New Bridge
- Proposed Pavement
- Proposed Interchange
- Project Study Area
- Corporate Limits

**FIGURE 4-3:**  
**FOLDED DIAMOND INTERCHANGE**  
**COUNTY ROAD T-44 OVER**  
**NHSX-018-6(85)--3H-34**  
**US18/218/IA27 Hwy Improvement**  
**and Interchange**  
**Floyd County, Iowa**





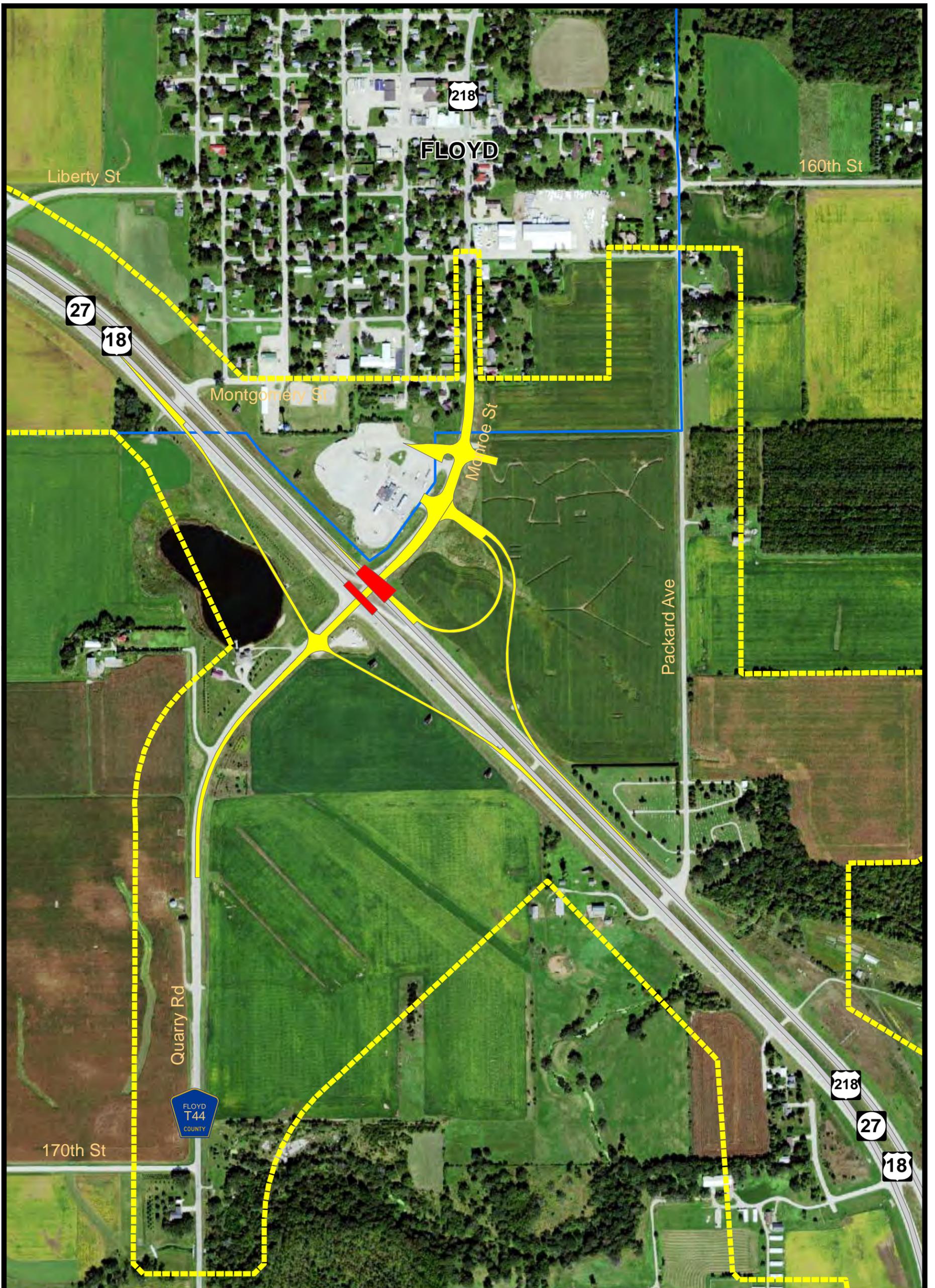
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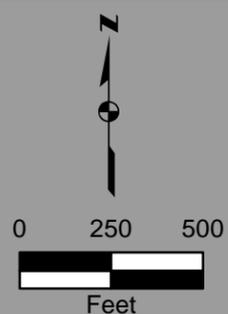
- Proposed New Bridge
- Proposed Pavement
- Proposed Interchange
- Project Study Area
- Corporate Limits

**FIGURE 4-4:**  
**FOLDED DIAMOND INTERCHANGE**  
**COUNTY ROAD T-44 UNDER**  
**NHSX-018-6(85)--3H-34**  
**US18/218/IA27 Hwy Improvement**  
**and Interchange**  
**Floyd County, Iowa**





Created August 2015  
2015 NAIP Aerial



- Proposed New Bridge
- Proposed Pavement
- Proposed Interchange
- Project Study Area
- Corporate Limits

**FIGURE 4-5:  
THREE QUADRANT  
INTERCHANGE**

**NHSX-018-6(85)--3H-34**

**US18/218/IA27 Hwy Improvement  
and Interchange**

**Floyd County, Iowa**



## **SECTION 5 ENVIRONMENTAL ANALYSIS**

This section describes the existing socioeconomic, natural, and physical environments in the project corridor that will be directly or indirectly impacted by the Proposed Alternative. The resources with a check in the second column in Table P-1, located at the beginning of this document, are discussed below.

Each resource section includes an analysis of the impacts of the No Build Alternative and the Proposed Alternative. Because it is early in the design process, a preliminary NEPA impact area was used for estimating direct and indirect impacts on the evaluated environmental resources. The preliminary NEPA impact area includes roadway right-of-way needs and the area where construction could occur. The area actually impacted by the Project will likely be less than what is portrayed within the preliminary NEPA impact area, and some impacts to resources are expected to be minimized or avoided as the Project design is refined. Consequently, the potential impacts discussed in this section of the EA are conservative, as efforts to minimize direct and indirect impacts will be made during final design.

For the purpose of this document in identifying impacts, the Proposed Alternative includes both the Three-Quadrant interchange and Frontage Road alternative with Priority II access control.

### **5.1 Socioeconomic Impacts**

Evaluating the direct and indirect impacts that a transportation project has on socioeconomic resources requires consideration of impacts on land use as well as the project's consistency with development and planning by a city or other public entity.

#### **Land Use**

Evaluation of land use as it relates to transportation projects refers to the determination of direct and indirect effects on existing land uses, such as agricultural, residential, and commercial/industrial, as well as consistency with regional development and land use planning. Direct effects on existing and future land uses were determined by comparing the preliminary impact area to the existing land uses. Indirect effects were determined by evaluating potential access restrictions, out-of-distance travel, and induced development.

The project Study Area is situated in both a rural area of Floyd County and an urban area of the City of Floyd, bounded by County Road B-35 on the south end and a location 0.8 miles west of Liberty Street on the north end. A majority of the land use is for agriculture with rural farmsteads and rural residential subdivisions adjacent to U.S. 18/U.S. 218/Iowa 27. Small areas of scattered commercial and recreational uses are also present. The northern portion of the Study Area extends into the City of Floyd where there is a mixture of residential, commercial, and recreational land uses.

Floyd County has developed the Floyd County Zoning Ordinance to lay out each zoning district in the county and to define what is permitted within each district (refer to Figure 5-1 for the Floyd County Zoning Map). The latest version of the zoning ordinance was written by the Floyd County Zoning Commission, with assistance from the North Iowa Area Council of Governments (NIACOG) and was adopted by the Floyd County Board of Supervisors on December 27, 2011. Floyd County has identified a majority of the land in the Study Area as Agricultural. There are scattered areas of Commercial and Light Industrial south of the City of Floyd along with several Low Density Residential districts on the east side of the highway corridor.

Direct effects on existing land use would occur through the acquisition of new right-of-way (ROW) for roadway purposes. A specific discussion on ROW and acquisitions impacts is provided in a later section titled Right-of-Way. The affected area within the Study Area was determined by identifying land uses through GIS applications and windshield surveys and comparing results to local planning efforts. Changes in land use as a result of future development were considered, and the alternatives were reviewed for consistency with city and county policies.

### ***No Build Alternative***

The No Build Alternative would result in the continued use of U.S. 18/U.S. 218/Iowa 27 and adjacent roadway network and would not affect the overall land use. The land use, characterized as agriculture, rural residential, and scattered commercial, would remain essentially unchanged.

### ***Proposed Alternative***

The proposed interchange at U.S. 18/U.S. 218/Iowa 27 and County Road T-44 would be constructed in an area that has a mix of land uses including commercial, agricultural, and rural residential. The Proposed Alternative also includes modifying the frontage road system, including the closure of several at-grade intersections, to create Priority II access control in the Study Area. The land uses in these areas of improvement are also mixed and include commercial, agricultural, rural residential, and recreational. Construction of the Proposed Alternative would result in the direct conversion of approximately 56.6 acres of agricultural land, 31.1 acres of residential land, and 18.2 acres of commercial land. It would also cause a slight increase in out-of-distance travel, mainly for rural residential land uses, due to the elimination of the at-grade intersections. These improvements are consistent with the existing land uses in the Study Area and are also consistent with the permitted uses as outlined in the Floyd County Zoning Ordinance.

## **Economic**

This section addresses the economic character of the Study Area. The sources for information are a site visit and the Floyd County assessor's database. There are three businesses that operate within the Study Area (refer to Figure 5-2) that include a truck stop located at the northeast intersection of U.S. 18/U.S. 218/Iowa 27 and County Road T-44, an automobile dealership located at the southwest intersection of U.S. 18/U.S. 218/Iowa 27 and County Road T-44, and a modular/manufactured home seller located west of the intersection of U.S. 18/U.S. 218/Iowa 27

and Cedar Views Drive. There are also three billboards located in the Study Area on the west side of U.S. 18/U.S. 218/Iowa 27 just south of County Road T-44.

In addition to these, there are several businesses that are adjacent to the Study Area. Besides the businesses located with the City of Floyd, there is a restaurant located just east of the intersection of U.S. 18/U.S. 218/Iowa 27 and Montgomery Street, a rock quarry located north of Floyd on Quarry Road which accesses U.S. 18/U.S. 218/Iowa 27 on Montgomery Street, a motorcycle dealership located east of the intersection of U.S. 18/U.S. 218/Iowa 27 and Cedar View Drive, and an ethanol plant located on County Road T-44 just west of the Study Area. There are also two known business developments that are proposed in the Study Area. One is a truck stop located at the northeast intersection of U.S. 18/U.S. 218/Iowa 27 and County Road T-44 and the other is an organic farm and vineyard, with plans for a future small commercial outlet, located on the east side of U.S. 18/U.S. 218/Iowa 27 between Packard Avenue and Waterbury Road.

Taxable valuations for fiscal years 2014 and 2015 in Floyd County are approximately \$1.50 billion and \$1.49 billion respectively (Floyd County Assessor's Office). Other tax levying entities in the Study Area include the City of Floyd, Floyd Township, and Charles City School District.

### ***No Build Alternative***

The No Build Alternative would result in continued use of the highway. New development is not expected to be induced by continued use of the existing highway.

### ***Proposed Alternative***

The existing businesses located within the Study Area, as well as those businesses located adjacent to the Study Area, would be affected by the Proposed Alternative due to restrictions in access and route modifications during construction. Access to all business will be maintained during construction. There is one potential displaced business, the automobile dealership which also has another location north of the City of Floyd, due to construction of this alternative and the three billboards will need to be removed/relocated to accommodate the proposed interchange.

After construction, the rock quarry north of Floyd and the restaurant in Floyd would be affected as both businesses utilize the Montgomery Street access with U.S. 18/U.S. 218/Iowa 27. This access point will be closed to accommodate the proposed interchange and out-of-distance travel will increase slightly to reach those destinations. Also, the proposed organic farm and vineyard location will be affected with a slight increase in out-of-distance travel as the current access to the site will be relocated south to Waterbury Road.

The Proposed Alternative includes intersection modifications at U.S. 18/U.S. 218/Iowa 27 and Cedar View Drive, comprising of off-set right turn lanes for both northbound and southbound traffic. Although these improvements would affect the modular/manufactured home seller and motorcycle dealership during construction, the overall access to these sites would be improved by addressing the safety concerns at this intersection and along the corridor. The intersection improvements would require the frontage road adjacent to the modular/manufactured home seller

to be relocated further to the west. This business would be temporarily affected as several of the existing homes on display would need to be relocated to accommodate this alignment change.

The existing truck stop at U.S. 18/U.S. 218/Iowa 27 and County Road T-44 would be temporarily affected by this proposed project as the entrances to this site would be slightly modified to accommodate the interchange ramp geometry. Adjacent to this location, the Iowa DOT has been working with the owners of the proposed truck stop so that their site design will be compatible with the proposed interchange layout. Overall, access to these sites will be improved as the preliminary layout of the interchange took into consideration the operational issues due to the increased truck traffic generated by these facilities.

Right-of-way for this alternative would need to be acquired from agricultural, commercial, and residential landowners. Construction of the Proposed Alternative would require approximately 106 acres of additional ROW that would be removed from the Floyd County tax base. This amount is approximately 0.03 percent of the total land in Floyd County. Consequently, the decrease in the amount to tax revenue from the affected property owners would be very small.

## **Parklands and Recreational Areas**

To assess the potential impacts associated with the Build Alternative, sources were reviewed and a site visit was performed to identify parkland and recreational areas within and near the Study Area. Parks and recreation areas were evaluated to determine the eligibility of properties or sites for protection under Section 4(f) of the U.S. Department of Transportation Act and to evaluate them relative to the alternatives being considered.

There are two recreational properties located in the Study Area. There is a city park located within the City of Floyd limits just east of the intersection of U.S. 18/U.S. 218/Iowa 27 and Montgomery Street. This facility includes a shelter house, playground equipment, and two play fields and is considered a Section 4(f) property. The other property is the Mink Creek Wildlife Management Area (WMA) located on the west side of U.S. 18/U.S. 218/Iowa 27 just north of the interchange with County Road B-35. This facility is owned and managed by the Floyd County Conservation Board (FCCB) and is open to the public. The main purpose of this property is for wildlife management; however it does provide for recreational opportunities such as hiking and bird watching and is considered a Section 4(f) property. The Mink Creek site is a former Iowa DOT borrow area (from the previous U.S. 18/U.S. 218/Iowa 27 construction project) that was developed as a wetland mitigation area and also a land farm for petroleum contaminated soil. Ownership and maintenance of this property was then transferred to the FCCB.

During the early coordination for this project, a correspondence from the Iowa DNR dated August 31, 2011 stated that there were no known recreational sites within the Study Area that received Land & Water Conservation Funds or other federal program funds that would affect any Federal or State rules.

### ***No Build Alternative***

The No Build Alternative would not require acquisition of any land from parks or recreational properties.

### ***Proposed Alternative***

The Proposed Alternative does not require permanent property acquisition from either of the recreational properties and it will not affect the activities, features or attributes that qualify the properties for Section 4(f) protection. However, there will be a temporary impact - no Section 4(f) Use of the Mink Creek WMA during construction of the Proposed Alternative relating to facility access.

The Proposed Alternative includes a new southbound right-hand turn-lane at the intersection of U.S. 18/U.S. 218/Iowa 27 and Cedar View Drive to access this Section 4(f) property along with several others. The construction of this new lane will require the access driveways of the adjacent properties to be relocated to the west to accommodate current geometric standards. The effect to the Mink Creek WMA will be temporary and there will be no use of this Section 4(f) property. The FCCB, having jurisdiction over the Mink Creek WMA, is in agreement that this proposed reconstruction project and the impacts to their site is acceptable and meets the criteria for a temporary – no Section 4(f) use of the property.

### **Right-of-Way**

To assess the potential impacts associated with the alternatives, ROW acquisition and property relocations were evaluated based on existing ROW, private and public property boundaries, and future ROW needs.

Construction of the proposed project will require the acquisition of additional ROW. The Study Area is approximately 776 acres in size and includes approximately 89 parcels of agricultural, commercial, industrial, and residential land. Approximately 6 commercial properties and 22 homes are included in the Study Area.

### ***No Build Alternative***

The No Build Alternative would not require acquisition of any ROW along the highway.

### ***Proposed Alternative***

The Proposed Alternative includes, within the preliminary impact area, a total of 36 parcels. The preliminary impact area (outside of existing ROW) includes approximately 56.6 acres of agricultural land, 31.1 acres of residential land, and 18.2 acres of commercial land. The amount of ROW acquisition has not yet been determined. During final design, an effort would be made to minimize ROW acquisition and relocations to the extent practicable. ROW acquisition and relocations would be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S. Code (USC) 4601 et seq.).

## **Relocation Potential**

To assess the potential impacts associated with the Proposed Alternative, ROW acquisition and property relocations were evaluated based on the conceptual design for the proposed expansion of the highway. The affected area for this analysis is the preliminary impact area.

### ***No Build Alternative***

The No Build Alternative would not require relocation or acquisition of any property.

### ***Proposed Alternative***

The proposed alternative could potentially require the total acquisition of one commercial property and one rural owner-occupied property which does not appear to be a farmstead. Both properties are located on the west side of the highway near the proposed interchange at U.S. 18/U.S. 218/Iowa 27 and County Road T-44 (refer to Figure 5-2). The commercial property is an automobile sales business with no permanent structures other than a gravel parking lot. The rural residential property is used mainly as storage for a nearby commercial business. Commercial and rural acreages are in extremely limited supply in the vicinity of the Study Area. It is unlikely that there would be an ample market to absorb the needs of the displaced property owners who may search for replacement properties. Although there are building contractors in the area, the market is nearly non-existent for rural properties which to build on. Displaced property owners could potentially be relocated within Floyd, Charles City, or other nearby towns.

Relocations would be conducted in conformance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended by the Surface Transportation Assistance Act of 1987 and 49 Code of Federal Regulations, Part 24, effective April 1989. Relocation assistance would be made available to all affected persons without discrimination.

## **Construction and Emergency Routes**

This section addresses potential impacts from construction routes and impacts on emergency routes. Emergency vehicles (ambulances, fire trucks, and police cruisers) respond to events using routes that are designated to reduce response times and account for access limitations. Any construction delays should be coordinated to minimize access limitations, when possible, during construction.

U.S. 18/U.S. 218/Iowa 27 is a vital emergency corridor serving Floyd, Charles City, and other smaller neighboring communities in the Floyd County area. Floyd County Memorial Hospital is the only hospital in the area and is located south of the Study Area in the City of Charles City. The Floyd Volunteer Fire Department is located near the Study Area in the City of Floyd and is currently planning on building a new fire station. Police service in the Study Area is provided by the Floyd County Sheriff's Office and the Iowa Highway Patrol.

### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. There would be continued use of the existing side road connections that experiences frequent crashes and does not meet the anticipated future traffic demands. The increased risk of crashes could require occasional detours off the highway during emergency situations. Access to and from emergency service providers would continue along the same routes as currently used.

### ***Proposed Alternative***

Construction of the Proposed Alternative would not require a detour route for emergency vehicles traveling along U.S. 18/U.S. 218/Iowa 27. Direct access would be maintained to all properties along the highway during construction as the project will utilize a phased construction approach. Although there are several proposed closures of existing access point locations to the side road system in the Study Area, emergency route impacts will be minimized as all properties will maintain access during construction of this project.

## **Transportation**

Transportation resources include the highway and the surrounding network of roadways, railroads, airports, and waterways as well as the equipment used (such as public transit buses) for the movement of people and materials. Transportation resources in the Study Area include U.S.18/U.S. 218/Iowa 27, U.S. 218, County Road T-44, County Road B-35, and the surrounding local road network. Rail, airport, and water transportation are not present in the Study Area and are not discussed in this EA.

### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area, and the highway would remain a four-lane highway with at-grade intersections. Traffic operating conditions would not improve as the traffic demand along U.S. 18/U.S. 218/ Iowa 27 continues to grow. Accidents would continue to occur at a rate above the statewide average for rural highways. No other reasonably foreseeable projects planned in the Study Area would address these issues.

### ***Proposed Alternative***

Construction of the proposed interchange at U.S. 18/U.S. 218/ Iowa 27 and County Road T-44 along with modifications of the local roadway network would result in the closing of several access point locations. These closures are located at Liberty Street and Montgomery Street in the City of Floyd, the median access between the proposed interchange and Packard Avenue, Packard Avenue, the access between Packard Avenue and Waterbury Road, Waterbury Road, and Woodland Drive. The Proposed Alternative also includes intersection modifications along U.S. 18/U.S. 218/ Iowa 27 at Woodland Lane and Cedar View Drive.

Construction of the proposed interchange and modifications of the existing side road network would create a safer highway facility in the Study Area. Although several routes will have

longer out-of-distance travel as a result of the proposed action, construction of the interchange and modifications to the highway access would create safer crossings of U.S. 18/U.S. 218/ Iowa 27 while at the same time improving the flow of through traffic along this corridor.

## **5.2 Cultural Impacts**

This section identifies existing historic and archaeological resources and potential impact on those resources. The Study Area was assessed to determine whether historic properties are present and whether property acquisition or temporary easements would impact the historically significant properties. Indirect effects on cultural resources as a result of noise, vibration, and access restrictions were also evaluated.

According to Title 36 CFR, Part 800.8, federal agencies are encouraged to coordinate compliance of Section 106 and any steps taken to meet the requirements of NEPA. Coordination of both reviews should occur early in the process to fulfill the respective requirements.

36 CFR 800.8 also details the general principles of coordinating NEPA and Section 106, relevant NEPA actions, and the use of the NEPA process for satisfying portions of the Section 106 requirements, including standards for developing NEPA environmental documents for Section 106 purposes.

### **Historical Sites or Districts**

A Phase I Intensive Architectural History Survey was completed to identify and investigate the potential impacts to historical resources in the Study Area. Properties were identified and evaluated to determine if any were potentially eligible for inclusion in the National Register of Historic Places (NRHP). The investigation included on-site review of all properties and examination of a number of primary and secondary sources.

A total of 43 architectural properties were examined during this investigation, including seven previously identified properties that were reevaluated. Of the seven properties previously identified, two individual buildings have been restored and are now recommended eligible for the NRHP under Criterion A for their association with the history of Floyd and the Changing Iowa Farm context and Criterion C for their outstanding architecture. Two previously unidentified properties are also recommended eligible for the NRHP. One under Criterion C for its outstanding architecture and the other under Criterion A for its association with the history of Floyd and the Changing Iowa Farm context and Criterion C for its outstanding architecture. In addition, the Oakwood Cemetery is located in the Study Area and will be avoided by this project, although its NRHP eligibility remains not determined. There is more discussion on the property later in this document under the Cemetery Section.

**Table 5-1: Architectural Sites in Study Area**

Site	Eligibility	Property Name	Recommendations
34-00133	Eligible (A,C)	Kimball/Dierks Barn	Avoidance or Mitigation
34-00139	Eligible (A,C)	Kimball/Dierks Silo	Avoidance or Mitigation
34-00583	Eligible (C)	Schmidt/Ewalt House	Avoidance or Mitigation
34-00584	Eligible (A,C)	Schmidt Barn	Avoidance or Mitigation
34-00698	Not Determined	Oakwood Cemetery	Avoidance or Mitigation

***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. No construction activities would occur, and no new ROW would be needed. Therefore, the No Build Alternative would have no effect on historic structures or districts.

***Proposed Alternative***

The Proposed Alternative will not impact any of the identified historic properties in the Study Area as they will all be avoided. The project has been reviewed by the Iowa DOT Cultural Resources Section and the State Historic Preservation Officer (SHPO) and they have concurred with an agency determination of ***No Historic Properties Affected***, dated February 19, 2015 for this undertaking.

**Archaeological Sites**

A Phase I Intensive Archaeological Investigation was completed to identify and investigate the potential impacts to archaeological resources in the Study Area. The archaeological survey consisted of an archival and site records search along with field investigation. The initial archaeological investigation included a pedestrian survey and subsurface testing on 327 acres of previously unsurveyed areas, and reassessed 187 acres of previous survey. A combined total of 627 acres were reviewed for this Phase I investigation (see below concerning the expanded area).

During this investigation, a total of 21 sites were identified and examined including five previously recorded sites and 16 previously unrecorded sites. There were nine sites identified during this investigation that were recommended for additional work or avoidance including; four historic scatters, three historic limestone quarries, one late-nineteenth century Euro American farmstead and one mid-nineteenth century Euro American habitation site.

Through the course of the preliminary design process for this project, several modifications to the alternatives and adjustments to the potential project alignment were made after the Phase I Intensive Archaeological Investigation. A Supplemental Phase I Intensive Archaeological Investigation was required and completed on 113 acres of the expanded Study Area. This investigation included a thorough review of archival records including census data, an assessment of the physiographic region and geomorphology, intensive surface survey, and shovel testing.

As additional project alternatives were created, it appeared that the mid-nineteenth century Euro American habitation site might be impacted by the project. This site had been determined to be potentially eligible for the NRHP and required further evaluation. A Phase II National Register archaeological evaluation was completed and recommended this site to be eligible for the NRHP. The site consists of two spatially discrete components; the older of which dates to the middle of the nineteenth-century and likely reflects the early settlement of the area by the Oliver Hubbard family. This component has been recommended eligible under Criteria A as it is associated with events that have made a significant contribution to the broad patterns of our history, and Criteria D as it has yielded or may be likely to yield, information important in history or prehistory (See Appendix B for SHPO communication). The second component is consistent with a late-nineteenth to mid-twentieth century deposit and is considered a non-contributing resource to the site.

**Table 5-2: Archaeological Sites in Study Area**

Site	Eligibility	Property Name/Type	Recommendations
13FD51	Potentially Eligible	Historic Scatter	Avoidance or Evaluation
13FD139	Not Determined	Historic Farmstead	No Further Work in the Project Area
13FD141	Potentially Eligible	Limestone Quarry	Avoidance or Evaluation
13FD144	Potentially Eligible	Limestone Quarry	Avoidance or Evaluation
13FD147	Potentially Eligible	Historic Scatter	Avoidance or Evaluation
13FD148	Potentially Eligible	Limestone Quarry	Avoidance or Evaluation
13FD149	Not Determined	Historic Scatter	No Further Work in the Project Area
13FD151	Not Determined	Historic Scatter	No Further Work in the Project Area
13FD153	Eligible	Hubbard Cabin Site	Avoidance or Mitigation

***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. No construction activities would occur, and no new ROW would be needed. Therefore, the No Build Alternative would have no effect on archeological sites.

***Proposed Alternative***

The Proposed Alternative will not impact any of the identified archaeological properties in the Study Area as they will all be avoided. The project has been reviewed by the Iowa DOT Cultural Resources Section and the State Historic Preservation Officer (SHPO) and they have concurred with an agency determination of ***No Historic Properties Affected***, dated February 19, 2015 for this undertaking.

## **Cemeteries**

A cemetery is located within the Project Study Area. The Oakwood Cemetery is located just north of the intersection of U.S.18/U.S. 218/Iowa 27 and Packard Avenue (see Figure 5-3) and sits on both the east and west sides of this crossroad.

### ***No Build Alternative***

The No Build Alternative would not result in any expansion of U.S.18/U.S. 218/Iowa 27 in the Study Area nor would it include a new interchange at County Road T-44. No construction activities would occur and no new ROW would be needed. Therefore, the No Build Alternative would not impact the Oakwood Cemetery.

### ***Proposed Alternative***

The Proposed Alternative includes an interchange at U.S.18/U.S. 218/Iowa 27 and County Road T-44 which includes an exit ramp located adjacent to the Oakwood Cemetery. The geometry of the northbound exit ramp taper has been modified to avoid impacts to the Oakwood Cemetery and no new ROW will be required from the property.

The Proposed Alternative also includes modifications to the side road system to allow for Priority II access control. This will be accomplished by closing several at-grade intersections along the U.S.18/U.S. 218/Iowa 27 corridor including the intersection with Packard Avenue. Accessing Oakwood Cemetery from the south will no longer be possible. To access the site from U.S.18/U.S. 218/Iowa 27, it will be required to exit the highway at the new interchange location and proceed north, then east on Pearl Street, and south on Packard Avenue.

## **5.3 Natural Environment Impacts**

This section characterizes the natural resources in the Study Area and addresses potential impacts of the No Build Alternative and the Proposed Alternative. The resources discussed are wetlands, surface waters and water quality, floodplains, woodlands, and farmlands.

### **Wetlands**

Waters of the United States (WUS), including wetlands, streams, rivers and other drainages, lakes, natural ponds, and impoundments, are regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), which requires a permit to authorize the discharge of dredged or fill material into WUS (33 USC 1251 et seq.). Executive Order 11990, Protection of Wetlands, requires Federal agencies (including FHWA) to implement “no net loss” measures for wetlands (42 Federal Register (FR) 26951). These no net loss measures include a phased approach to wetland impact avoidance, then minimization of impacts if wetlands cannot be avoided, and finally mitigation for unavoidable impacts.

Iowa DOT conducted a preliminary desktop review to identify WUS and other environmental habitats present in the Study Area. The desktop review included a review of National Wetland Inventory (NWI) maps, soil maps, LIDAR, USGS Quad-maps and the best available aerial images. In addition, Iowa DOT staff conducted field reviews in August 2012 to confirm or deny the desktop data based on observed on-ground conditions and to delineate the wetlands located within the Study Area.

Based on the results of the delineations, approximately 1.43 acres of wetlands were identified within the Study Area (Figure 5-3) and categorized into four different types: Farmed Wetlands (FW), Palustrine Emergent Wetlands (PEM), Palustrine Forested Wetlands (PFO) and Palustrine Sapling-Shrub Wetlands (PSS). These wetlands were found mainly at the edge of streams, drainages, fringe wetlands in an existing borrow pit area, and in a non-farmed drainage. Potential impacts to individual wetland areas are generally small and vary from 0.003 acres to 0.45 acres in size. Based on observed vegetation, there have been prior disturbances in most of the wetland areas.

#### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. No construction activities would occur, and no new ROW would be needed. Therefore, the No Build Alternative would not impact any wetlands.

#### ***Proposed Alternative***

Due to the nature and size of the proposed project, unavoidable wetland impacts are expected. The Proposed Alternative could potentially impact approximately 0.89 acres of wetlands. As design advances, efforts will be made to further reduce the impact on wetlands. Impacts as a result of the project are expected to require a Section 404 permit from U.S. Army Corps of Engineers (USACE). The USACE was contacted during the early coordination efforts for this project and the Iowa DOT received a reply dated September 15, 2011. The Iowa DOT is committed to the minimization of impacts consisting of a list of appropriate and practicable steps to minimize unavoidable adverse impacts. Compensatory mitigation will include plans to restore or create wetlands to mitigate unavoidable project wetland impacts. It is the intent of the Iowa DOT to mitigate impacts at a serviceable wetland mitigation bank. If one is not available, Iowa DOT will provide appropriate compensatory mitigation.

**Table 5-3: Potential Impacts to Wetlands**

<b>Wetland Number</b>	<b>Wetland Type</b>	<b>Wetland Size (acres)</b>	<b>Area Impacted (acres)</b>	<b>Proposed Mitigation (acres)</b>
1	Farmed Wetland (FW)	0.15	0.15	0.23
2	Palustrine Emergent (PEM)	0.77	0.45	0.68
3	Palustrine Forested (PFO)	0.31	0.11	0.22
4	Palustrine Sapling-Shrub (PSS)	0.20	0.18	0.27
	<b>Total:</b>	<b>1.43</b>	<b>0.89</b>	<b>1.40</b>

The Iowa DOT expects this work to be covered by an Individual Permit unless wetland impacts can be reduced to less than 0.5 acres during final design for this project. Projects with less than 0.5 acres of wetland impact are candidates for a Nationwide Permit, which does not require permitting review by all regulatory agencies and a public comment period. This determination and permitting process will occur after completion of the NEPA process.

### **Surface Waters and Water Quality**

Water resources include rivers, lakes, ponds, and other surface water bodies. For the purpose of this analysis, the topic of water quality is also assumed to apply to groundwater. Important criteria in evaluating surface water and groundwater are adequate quantity and quality of these waters. Surface water features in the Study Area were determined through the use of aerial photography and topographic mapping.

On-site WUS determinations were also performed in August 2012 in accordance with guidance received from the USACE for all significant drainages within the project limits. These WUS determinations indicated approximately 5,676 feet of streams and approximately 5.01 acres of open water (surface water) in the Study Area (Figure 5-3). There are no streams listed as an Outstanding Iowa Water (OIW) or other Specially Protected streams designated by IA DNR within the Study Area. However, Stewart Creek located just south of Packard Avenue, has several pool/riffle complexes which are Special Aquatic Sites and are located just outside the existing ROW. The sources of surface water include small agricultural drainages, roadway drainage ditches, streams and ponds.

#### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. The No Build Alternative would have no impact on the quality of surface water or groundwater in the Study Area.

#### ***Proposed Alternative***

The Proposed Alternative would potentially impact approximately 950 linear feet of streams, of which includes 623 linear feet of existing culverts, and 5.01 acres of open water. However,

stream and open water impacts are expected to decrease as the project proceeds through final design. The proposed stream impacts will be minimal, located near existing culverts, and would be largely associated with impacts to wetlands, as the streams run through or near many of the wetlands. For any unavoidable stream impacts, a Section 401 Water Quality Certification would also be required. A State 401 Water Quality Certification is issued by the Iowa Department of Natural Resources (DNR) pursuant to Section 401 of the Clean Water Act. State Certification is required by the USACE before a Section 404 permit can be issued. Section 401 Certification represents the Iowa DNR's concurrence that the project certified is consistent with Iowa's water quality standards as set forth in Chapter 61, Iowa Administrative Code 567. In addition, unavoidable stream impacts as a result of this project would need to be authorized by the USACE Section 404 permit. It will be determined during final design if impacts to Stewart Creek can be avoided. If avoiding this stream is not possible, it is anticipated that stream mitigation will be required. Stream mitigation is usually performed at the impact locations rather than at an offsite location, however, it is determined on a case by case basis as part of the Section 404 permitting process.

Surface water runoff would increase after construction is completed because the surface area of the new roadways and interchange would be larger than that of the existing at-grade intersections. Pollutants from street runoff (oil, grease, salt, metals) would be dispersed differently as a result of the new roadway and interchange configurations. Because the increase in traffic volumes resulting from the improvements would be negligible, the increase in pollutants also would be negligible and would not adversely impact water quality.

The contractor would be required to implement Iowa DOT's Construction Manual to minimize temporary impacts on water quality during construction. Iowa DNR administers the Federal National Pollutant Discharge Elimination System (NPDES) program and issues general permits for stormwater discharges from construction activities. The purpose of the program is to improve water quality by reducing or eliminating contaminants in stormwater. The NPDES program requires preparation of a Stormwater Pollution Prevention Plan (SWPPP) for construction sites of more than 1 acre.

The specific sediment, erosion control, and spill prevention measures would be developed during the detailed design phase and would be included in the plans and specifications. The SWPPP would address requirements specified by Iowa DOT in its Construction Manual, which are often implemented to meet measures anticipated by Iowa DNR. Although it is not possible to speculate on specific details of the SWPPP at this stage in the design process, the SWPPP is likely to include installation of silt fences, buffer strips, or other features to be used in various combinations as well as the stipulation that drums of petroleum products be placed in secondary containment to prevent leakage onto ground surfaces. A standard construction best management practice (BMP) is revegetation and stabilization of roadside ditches to provide opportunities for the runoff from the impermeable area to infiltrate, to reduce the runoff velocities, and to minimize increases in sedimentation. Iowa DOT would require the contractor to comply with measures specified in the SWPPP.

## **Floodplains**

Floodplains present in the Study Area were identified by reviewing Federal Emergency Management Agency (FEMA) Flood Insurance Maps and United States Geological Survey (USGS) 7.5-minute quadrangle maps. The Study Area crosses 3 areas of FEMA mapped 100-year floodplains with a total area of 8.6 acres (Figure 5-3). The 100-year (base) flood is identified as the flood having a one percent probability of being equaled or exceeded in any given year. The regulatory “floodway” is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood discharge can be conveyed without increasing the base flood elevation more than a predetermined volume.

### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. No construction activities would occur, and no new ROW would be needed. The No Build Alternative would have no impact on the floodplains in the Study Area.

### ***Proposed Alternative***

Of the 8.6 acres of FEMA-mapped floodplains in the Study Area, approximately 3.0 acres could be potentially impacted from the three floodplain areas that are within the preliminary impact area for the proposed improvements along the U.S. 18/U.S. 218/Iowa 27 corridor. The three floodplain areas, located on both the east and west sides of the highway, are just south of the intersection with Liberty Street, south of the intersection with Packard Avenue, and between Woodland and Cedar View Drives. These floodplain areas could potentially be impacted by work being done along the U.S. 18/U.S. 218/Iowa 27 mainline.

Coordination with Iowa DNR and FEMA occurred as part of the early consultation process. Comments received from the DNR in a letter dated September 13, 2011 indicated that any construction within the 100-year floodplain will require a DNR floodplain development permit. As design advances, efforts will be made to reduce any potential impacts on floodplains. An Iowa DNR Flood Plain Development Permit and Section 404 Permit will be applied for during final design if required. Figure 5-3 shows the location of floodplains relative to the preliminary impact areas.

## **Threatened and Endangered Species**

Section 7 (c) of the Endangered Species Act of 1973, as amended, requires Federal agencies to consult with the Secretaries of the Interior and Commerce to ensure that actions are “not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of the critical habitat of such species.” Consultations will be conducted with the USFWS regarding a determination of potential effects to listed species.

Coordination with USFWS and Iowa DNR occurred as part of the early coordination process. Comments received from the Iowa DNR stated that the Department searched for records of rare species and significant natural communities in the Study Area. In a letter dated November 15,

2011 Iowa DNR indicated that they found no site specific records that would be impacted by this project.

Iowa DOT Staff conducted reviews of the USFWS list of federally-listed species as well as the Iowa DNR's Natural Areas Inventory (NAI) to determine the likelihood of impacts to threatened and/or endangered species in the Study Area. No documented occurrences of threatened or endangered species are located within a one-mile radius of the project and suitable habitat does not exist in the project area.

### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. No construction activities would occur, and no new ROW would be needed. The No Build Alternative would have no impact to threatened and endangered species in the Study Area.

### ***Proposed Alternative***

The proposed project falls within a county designated by the USFWS as range of the northern long-eared bat (*Myotis septentrionalis*) in Iowa. However, suitable habitat for the northern long-eared bat will not be impacted and no special clearing restrictions apply.

Iowa DOT has determined, under the delegated authority provided by the Federal Highway Administration, that there will be **No Effect** on federally or state listed species and the project will not result in the destruction or adverse modification of federally designated critical habitat.

## **Woodlands**

The Iowa DOT considers woodland impacts to occur if the area to be impacted consists of 2 acres or greater of forested land having at least 200 trees (3-inch diameter at breast height or greater) per acre. Woodland impacts are not considered to occur if the area impacted is less than 2 acres.

There are three woodland areas in the Study Area consisting of approximately 13.3 acres that were identified through preliminary desk top reviews and verified by field surveys. All three woodland areas are located on the east side of U.S. 18/U.S. 218/Iowa 27 just east of Packard Avenue, between Woodland and Cedar View Drives, and between Cedar View Drive and the interchange with County Road B-35.

### ***No Build Alternative***

The No Build Alternative would not result in any expansion of the highway in the Study Area. No construction activities would occur, and no new ROW would be needed. The No Build Alternative would have no impact on the woodlands in the Study Area.

### ***Proposed Alternative***

Of the three woodland areas identified in the Study Area, one area could potentially be impacted by the Proposed Alternative. This woodland area is located just east of Packard Avenue and consists of 0.07 acres that are within the preliminary impact area for this proposed improvement (Figure5-3). The impacts are less than 2 acres and do not meet the Iowa DOT criteria for woodlands impacts and mitigation is not required for this project.

### **Farmlands**

A Federal project, program, or other activity that requires acquisition of ROW must comply with the provisions of the Farmland Protection Policy Act (FPPA). The purpose of the FPPA Section 5 is to “minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland” (7 USC 4201(b)).

The FPPA governs impacts on farmland only. The FPPA defines farmland as prime farmland, unique farmland, or farmland that is of state or local importance. Land that is already in or committed to urban development or water storage does not qualify as farmland and is therefore not subject to the FPPA.

### ***No Build Alternative***

Under the No Build Alternative, no impacts on farmland or farm facilities would occur.

### ***Proposed Alternative***

Early in the engineering design process, the USDA NRCS Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106) form was completed for the generalized corridor to assess the effects of this conversion on farming and farm-related services in the area. This assessment considers the effects that the conversion of farmland as a result of a project would have on existing and future land use, the amount of existing farmable land in the county, the creation of economically non-farmable parcels, impacts on other on-farm investments, and effects on local farm services. Sites receiving a score of less than 160 points need not be given further consideration for protection.

The potential total amount of farmland (outside of the existing ROW) converted to transportation use by this alternative is approximately 56.6 acres. The alternative received a score of 133 out of the possible 260 points on the NRCS-CPA-106 form (Appendix C). Because the score was less than 160 points, this alternative does not warrant an in-depth site review and is cleared from significant concerns in conjunction with the FPPA. The proposed alternative would not create any non-farmable land and all of the farmable land in the Study Area would still be accessible from the existing and proposed roadway system.

## 5.4 Physical Impacts

This section characterizes physical resources in the Study Area and addresses potential impacts of the No Build Alternative and the Proposed Alternative. The resources discussed are noise, contaminated and regulated materials sites, and utilities.

### Noise

This project is considered a Type I highway project for noise impacts because of the proposed interchange at U.S. 18/U.S. 218/Iowa 27 and County Road T-44. Per Iowa DOT policy, noise analyses are conducted for all Type I Highway projects. As such, a traffic noise analysis was completed in October 2014 to evaluate noise impacts in the Study Area. The analysis was conducted in accordance with the Iowa DOT's traffic noise policy for the purpose of meeting the requirements set forth in the FHWA "Procedures for Abatement of Highway Traffic Noise and Construction Noise" in 23 CFR 772 and all applicable state laws. The Study Area is predominantly a rural area as it traverses the southwestern edge of the City of Floyd. There are rural residential subdivisions in the area adjacent to U.S. 18/U.S. 218/Iowa 27 along with several businesses.

The FHWA has developed Noise Abatement Criteria (NAC) and procedures to be used in the planning and design of highways. For residential areas and cemeteries (as well as other designated sensitive land uses), the NAC is 67 dBA; for businesses, it is 72 dBA. The Iowa DOT noise policy defines a noise impact as occurring when levels approach or exceed the NAC or when predicted future noise levels are 10 dBA or more above existing levels. Iowa DOT defines "approach" as coming within 1 dBA of the NAC, which are 66 dBA for residential areas and 71 dBA for businesses.

Per Iowa DOT noise policy, a receptor is defined as a location of a noise sensitive area, primarily a residential exterior that is frequently used by people. The traffic noise analysis indicated a total of fourteen noise receptors that were identified to represent noise sensitive land uses in the Study Area (Figure 5-4). Noise levels were estimated for the each of the identified noise receptors using the FHWA's Traffic Noise Model (TNM) for the existing (2009), No Build Alternative (design year 2038), and Proposed Alternative (design year 2038) as shown in Table 5-4 below. The predicted noise levels were also compared to the NAC to determine noise impacts. The comparison indicated three noise receptors could potentially be impacted by the preferred alternative.

**Table 5-4 Noise Receptors and Estimated Noise Levels**

Receptor Address	Land Use Type	Existing (2009) Noise Level	No Build (2038) Noise Level	Build Condition Design Year (2038) Noise Level	Difference Between Existing and Build Condition Noise Levels	Leq(h) Noise Abatement Criteria
1629 Quarry St.	Residential	59	62	61	2	66
68 Monroe St.	Commercial	58	62	62	4	71
200 Washington	Residential	58	61	62	4	66
309 Washington	Residential	57	60	60	3	66
205 Adams	Residential	56	59	60	3	66
<b>2395 Highway 18</b>	Residential	63	<b>66</b>	<b>66</b>	3	66
1661 Highway 18	Residential	62	65	65	3	66
Oakwood Cemetery	Cemetery	61	64	64	3	66
<b>1687 Jess Lane</b>	Residential	<b>67</b>	<b>70</b>	<b>69</b>	2	66
1689 Jess Lane	Residential	61	64	63	2	66
1691 Jess Lane	Residential	58	61	61	3	66
<b>2530 Waterbury Rd</b>	Residential	64	<b>67</b>	<b>67</b>	3	66
2525 Waterbury Rd	Residential	60	63	63	3	66
Avenue Auto Sales	Commercial	65	68	70	5	71

**Bold** numbering indicates a noise level approaching or exceeding the noise abatement criteria (NAC).

According to the Iowa DOT traffic noise policy, noise abatement must be considered and evaluated for feasibility and reasonableness if traffic noise impacts are identified. Feasibility refers to the ability to provide abatement in a given location considering the acoustic and engineering limitations of the site. A noise abatement option must achieve a 5 dB(A) traffic noise reduction at an impacted receptor to be considered feasible. In addition, each of the following three factors must be met in order for noise abatement to be considered reasonable:

- Noise abatement measures shall not exceed a cost of \$40,000 per benefitted receptor.
- Noise abatement measures must provide a benefit of a minimum of 10 dB(A) for at least one benefitted receptor.
- Viewpoints of owners and residents considered benefitted by a noise abatement option that meets the above criteria must be obtained. For noise abatement to be considered reasonable, a majority of responses must be in favor.

***No Build Alternative***

Under the No Build Alternative, noise levels in 2038 are estimated to be in the same range as the Proposed Alternative due to the fact that the existing U.S. 18/U.S. 218/Iowa 27 lanes will remain in place. The No Build traffic levels would be similar to the Proposed Alternative traffic levels; therefore, noise impacts would also be similar.

***Proposed Alternative***

Of the fourteen receptors identified, three noise receptors were considered impacted. Two of the three impacted receptors were eliminated from further noise barrier consideration due to the fact that they are isolated receptors. Isolated receptors have not shown potential for cost reasonable noise abatement and do not meet the Iowa DOT’s noise abatement criteria for cost vs. benefit. The remaining receptor, representing the residence at 1687 Jess Lane, had two other residential receptors in close enough proximity to consider modeling a noise barrier. The barrier was modeled in TNM using build conditions. The barrier model results are summarized in Table 5-5 below.

**Table 5-5 Summary of Noise Barrier Analysis**

<b>Barrier/ Impactor Receptors</b>	<b>Insertion Loss, dB(A)</b>	<b>Barrier Length (ft)</b>	<b>Barrier Height (ft)</b>	<b>Total Cost</b>	<b>Total Number of Impacted Receptors</b>	<b>Number of Modeled/ Benefited Receptors</b>	<b>Cost of Abatement per Benefited Receptor @ \$25ft<sup>2</sup></b>	<b>Cost Reasonable?</b>
Barrier 1/ 1687 Jess Lane	5.5	785	16/18	\$346,055	1	3/1	\$346,055	No

Barrier 1 attempted to protect three (3) receptors. The cost of the modeled barrier per benefitted receptor exceeded Iowa DOT’s cost criteria of \$40,000 per benefitted receptor. Additionally, Iowa DOT’s noise reduction design goal of 10 dB(A) for at least one receptor was not met for the modeled barrier. Because the impacted noise receptors do not appear to meet noise abatement feasibility and reasonableness criteria at this time, noise abatement is considered unlikely for this proposed alternative.

In addition to the traffic noise level, construction noise must also be identified and a level of effort must be made to minimize its effects. Noise from on-site construction equipment and construction activities would add to the noise environment in the immediate Study Area. The driving and operation of construction equipment would also generate ground vibrations. The vibrations are not projected to be of a sufficient magnitude to affect normal activities of occupants in the Study Area. Increased truck traffic on area roadways would also generate noise associated with the transport of heavy materials and equipment. The noise increase and vibrations from construction activities would be temporary in nature and are expected to occur during normal daytime working hours. Equipment operating at the project site would conform to contractual specifications requiring the contractor to comply with all local noise control rules,

regulations, and ordinances. Although construction noise impacts would be temporary, the following are mitigation measures for construction noise:

- Design Considerations: Plans includes measures and specifications to minimize or eliminate adverse noise impacts.
- Community Awareness: Local residents should be made aware of the possible inconvenience and to know its approximate duration so that they can plan their activities accordingly. It is Iowa DOT policy that information concerning the upcoming project construction be submitted to all local news media.
- Source Control: This involves reducing noise impacts from construction by controlling the noise emissions at their source. Install and maintain effective mufflers on equipment.
- Site Control: This involves limiting unnecessary idling of equipment, use of temporary noise barriers in front of equipment and operating stationary equipment as far away from sensitive areas as possible.
- Time and Activity Restraints: Whenever possible, limiting work hours on a construction site can be very beneficial during the hours of sleep or on Sundays and holidays.

### **Contaminated and Regulated Materials Sites**

Properties in the Study Area where hazardous materials have been stored may present a future risk if spills or leaks have occurred. Contaminated or potentially contaminated properties are of concern for transportation projects because of the associated liability of acquiring the property through ROW purchase, the potential cleanup costs, and safety concerns related to exposure to contaminated soil, surface water, or groundwater.

Iowa DOT staff conducted a preliminary review for the potential or known presence of regulated materials in the Study Area. The review was intended to identify those properties with potential or known Recognized Environmental Conditions (REC's) and was based on a review of DNR and EPA on-line databases, historic aerial photos and a Google Earth search. The results of the preliminary review identified three properties as having known REC's. These sites were then assessed for their potential risk using criteria published in Iowa DOT's Office of Location and Environment Manual (Iowa DOT 2009) and classified as high, low, or minimal risk sites. Sites classified as minimal risk do not warrant further investigation.

**Table 5-6 REC's in Study Area**

<b>Site</b>	<b>Address</b>	<b>REC</b>	<b>Risk</b>
Floyd Country Mart	1602 Quarry Road, Floyd	Underground Storage Tank Leaking UST	Minimal
218 Fuel Express	68 Monroe Street, Floyd	Underground Storage Tank UST	Low
Mink Creek Wetland Mitigation Site	1769 Highway 18/218, Floyd	Land Farm for Petroleum Contaminated Soil	Minimal

**No Build Alternative**

The No Build Alternative would not involve construction of the Project, and regulated materials sites would not be affected. Any contamination at the sites has the potential to migrate. Petroleum contamination could possibly degrade naturally over time.

**Proposed Alternative**

Two known REC’s were identified in the impact area for the Proposed Alternative, both of which are located near the interchange location of U.S 18/U.S. 218/Iowa 27 and County Road T-44 (Figure 5-3).

- 218 Fuel Express, 68 Monroe Street, Floyd. This facility has four registered underground storage tanks (DNR UST #200000061) that are currently active. Three of these tanks were installed in 2000 and one tank was installed in 2006.
- Floyd Country Mart, 1602 Quarry Road, Floyd. This facility has five registered underground storage tanks (DNR UST #198602662). One tank was reported removed in 1988 and the other four were reported removed in 1994. In addition, this is a leaking underground storage tank site (DNR LUST #8LTF79). The cleanup for this site began in 1993 and was completed in 2001. This site was acquired in the 1990’s as part of the U.S. 18 reconstruction project and is located within existing right of way.

Impacts to these properties will be determined as the project is developed and appropriate acquisition recommendations will be made (i.e. permanent easement versus fee title). When possible, any identified highly contaminated areas will be avoided. Should any contaminated material be encountered during construction, it will be handled in accordance with state and federal regulations.

**Utilities**

The potential for the Project to affect utilities in the Study Area was considered by identifying utility locations and orientation in relation to the project area. Potential effects were evaluated with respect to major utilities crossed by or located within the ROW for the Proposed Alternative.

**Table 5-7 Utilities in Study Area**

Utility Name	Utility Type
Butler County Rural Electric Cooperative	Electric
City of Floyd	Electric, Water, Sewer
Mid-American Energy	Natural Gas
OmniTel Communications	Telecommunications

### ***No Build Alternative***

Under the No Build Alternative, the highway would not be expanded and utility line relocation would not affect utility service.

### ***Proposed Alternative***

Construction of the Proposed Alternative would have potential relocation impacts to the natural gas lines of Mid-American Energy and the telecommunications lines of OmniTel Communications, most notably in and around the new interchange area. As detailed design plans are developed for the Proposed Alternative, construction activities would be coordinated with public utilities to avoid potential conflicts and to minimize planned interruptions of service. When service interruptions are unavoidable, an effort would be made to limit their duration.

## **5.5 Cumulative**

A cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). Cumulative impacts include the direct and indirect impacts of a project together with impacts from reasonably foreseeable future actions of others. For a project to be reasonably foreseeable, it must have advanced far enough in the planning process that its implementation is likely. The impacts of reasonably foreseeable future actions not associated with a new interchange include the impacts of other Federal, state, and private actions. Reasonably foreseeable actions are not speculative, are likely to occur based on reliable sources, and are typically characterized in planning documents.

### **Past Actions:**

**Transportation Improvements** – The U.S. 18/U.S. 218/Iowa 27 corridor in the Study Area was constructed in 1926 as a two-lane highway. In 2000, the segment of U.S. 18/U.S. 218/Iowa 27 from the City of Rudd to the City of Charles City was upgraded to a four-lane expressway with at-grade access.

At the City of Floyd, the intersection of U.S. 18/IA 27 and U.S. 218/County Road T-44 has had some operational issues so an offset right turn lane for U.S. 218 traffic was constructed in 2003 and later reconstructed to further offset it from the mainline. Since then, additional signage and pavement markings have been added to assist drivers with this intersection. Another short-term improvement at this intersection was completed in 2011 that added offset left turn lanes to improve sight lines for truck and vehicular traffic and to provide more storage.

**Commercial/Industrial Developments** – There is some commercial and industrial land uses scattered in and adjacent to the Study Area. In and near the City of Floyd, there is a rock quarry located north of Floyd on Quarry Road, a restaurant located on Montgomery Street, a truck stop

and an automobile dealership located on County Road T-44. South of the City of Floyd, there is a modular/manufactured home seller and a motorcycle dealership located on Cedar View Drive. To the west of the Study Area, there is an ethanol plant located on County Road T-44.

**Residential Developments** – There are several rural residential subdivisions south of the City of Floyd that are in and adjacent to the Study Area. Highway access to these subdivisions are located on Waterbury Road, Woodland Lane, Woodland Drive, and Cedar View Drive. A majority of these homes were built in the 1960's and 1970's, with some dating back to the 1900's and 1920's.

### **Present Actions:**

**Commercial Developments** – There is a current proposal to build a new truck stop in the City of Floyd. This new facility will be located northeast of the proposed interchange on U.S. 218, directly across from the existing truck stop. The Iowa DOT has been working with the developers of this proposed facility to accommodate the development with the geometry of the entrance and exit ramps of the new interchange.

### **Future Actions:**

**Transportation Improvements** – Although the Iowa DOT does not have any immediate future plans for transportation improvements in and around the Study Area, there are several current proposals for improvements by other entities. The City of Charles City plans to replace a bridge on Cleveland Avenue over Hyer Creek and to reconstruct S. Main Street from 15<sup>th</sup> Street south to the corporate limits. Also, Floyd County has plans to rehabilitate County Road T-26 from 210<sup>th</sup> Street to 270<sup>th</sup> Street, located south and west of the Study Area.

**Commercial Developments** – Other than the current proposal for a truck stop located in the City of Floyd, there are also two other known business developments that are proposed in the Study Area. The first commercial development would be an organic farm and vineyard located on the east side of U.S. 18/U.S. 218/Iowa 27 between Packard Avenue and Waterbury Road. This facility may also have the potential to develop a vegetable stand in the future. The other development, located just north of the proposed interchange and adjacent to the planned truck stop, is currently zoned agricultural but the property owner has plans to develop it as commercial property. There is an existing access to the property off of U.S. 218 and the owner has been working with the Iowa DOT to investigate access issues based on the Proposed Alternative.

### **Summary of Cumulative Impacts:**

The analysis of cumulative impacts focuses on the key resources potentially affected by the Proposed Alternative and other reasonably foreseeable actions in the vicinity of the Study Area. Specifically, the analysis focuses on wetlands, floodplains and surface waters, farmland, relocation potential, transportation, construction and emergency routes.

**Table 5-8 Potential Cumulative Impacts**

<b>Key Resource Affected</b>	<b>Direct and Indirect Effects</b>	<b>Potential Cumulative Impacts</b>
Wetlands	Approximately 0.9 total acres of wetlands converted to roadway use.	Potential loss of habitat and loss of water quality. Impacts minimized to the extent practicable through mitigation and using best management practices.
Floodplains/Surface waters/Water Quality	Construction of the Proposed Alternative would potentially cause approximately 3.0 acres of impact to three floodplain areas, approximately 5.0 acres of impact to open water, and approximately 950 linear feet of stream impacts.	Increased sedimentation and pollutant loading; altered hydrology; potential impact to designated water uses; increase in storm water runoff. Impacts minimized to the extent practicable by using best management practices.
Farmland/ROW	Potential net loss of approximately 56.6 acres of farmland, 31.1 acres of residential, and 18.2 acres of commercial properties.	Other reasonably foreseeable projects may result in net loss of available farm land. ROW acquired will be minimized to extent possible as design advances.
Relocation Potential	Potential total acquisition of 1 rural residential property and 1 commercial property that would require relocation assistance.	Loss of personal property. Potential relocations of displaced properties owners are expected to be relocated within the same county.
Transportation, construction and emergency routes	Longer out of distance travel to reach certain destinations along U.S. 18/U.S. 218/Iowa 27 and the surrounding areas.	Creation of alternate routes to reach destinations. Safer crossings of U.S. 18/U.S. 218/Iowa 27 along the Study Area and improved traffic flow.

The Proposed Alternative has been designed to avoid and minimize impacts of resources to the greatest extent possible. Remaining impacts that cannot be avoided will be mitigated. As a result, the overall cumulative impacts of the U.S. 18/U.S. 218/Iowa 27 Improvement project have been evaluated and are not considered to be collectively significant.

## **5.6 Streamlined Resource Summary**

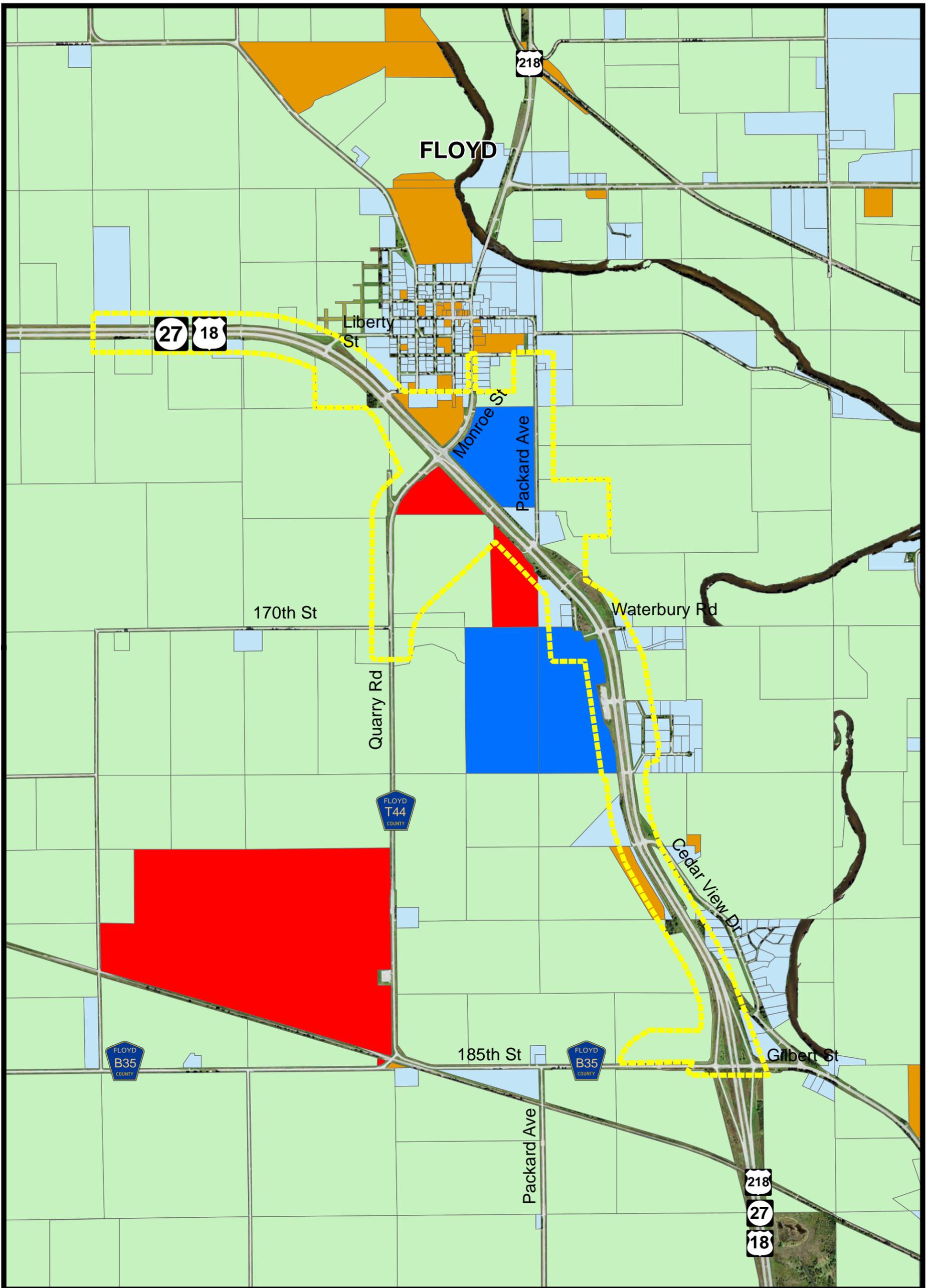
Resources not discussed in the body of the EA are located in the Streamlined Resource Summary, Appendix A. The summary includes information about the resources, the method used to evaluate them, and when the evaluation was completed. Table 5-9 summarizes the Proposed Alternative's impacts to resources discussed in the sections above.

**Table 5-9: Summary of Impacts**

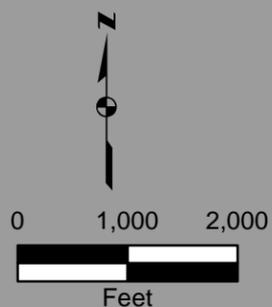
Resource	No Build Alternative	Proposed Alternative
Land Use	No change	Conversion of potentially 56.6 acres of agricultural land, 31.1 acres of residential land, and 18.2 acres of commercial land to transportation use.
Economic	No impact	Loss of tax revenue due to acquisition of ROW. Increase travel distance and access modifications for businesses and their customers.
Parklands and Recreational Areas	No impact	Temporary No Section 4(f) Use of the Mink Creek WMA due to access modifications.
Right-of-Way	No impact	Potential acquisition of approximately 106 acres of additional ROW from property owners.
Relocation Potential	No impact	Potential total acquisition of 1 owner occupied rural home and 1 commercial property.
Construction and Emergency Routes	No construction impacts or change in emergency routes	Increased travel distance and rerouting for emergency routes. Long term improved access along U.S. 18/U.S. 218/Iowa 27.
Transportation	No impact	Modification of highway access points to increase safety and improve traffic movements along U.S. 18/U.S. 218/Iowa 27.
Historical Sites or Districts	No impact	No sites or districts impacted
Archaeological Sites	No impact	No sites impacted
Cemeteries	No impact	Modification of access to the highway with no direct impact.
Wetlands	No impact	0.89 acres converted to transportation use.
Surface Water and Water Quality	No impact	Potential impact to 950 linear feet of stream and 5.0 acres of open water converted to transportation use.
Floodplains	No impact	Approximately 3.0 acres converted to transportation use.

Resource	No Build Alternative	Proposed Alternative
Threatened and Endangered Species	No impact	No Effect on federally or state listed species. Will not result in the destruction or adverse modification of federally designated critical habitat.
Woodlands	No impact	0.07 acres converted to transportation use. Does not meet DOT criteria for woodland impact-no mitigation required.
Farmlands	No impact	56.6 acres of farmland converted to transportation use.
Noise	3 residential receptors impacted.	3 residential receptors impacted. Noise abatement not required.
Contaminated and Regulated Material Sites Recognized Environmental Conditions (REC's)	No impact	2 known REC's impacted-low to moderate risk.
Utilities	No Impact	Potential relocation impacts to telecommunication and gas lines. When service interruptions are unavoidable, an effort would be made to limit their duration.





Created September 2015  
2015 NAIP Aerial

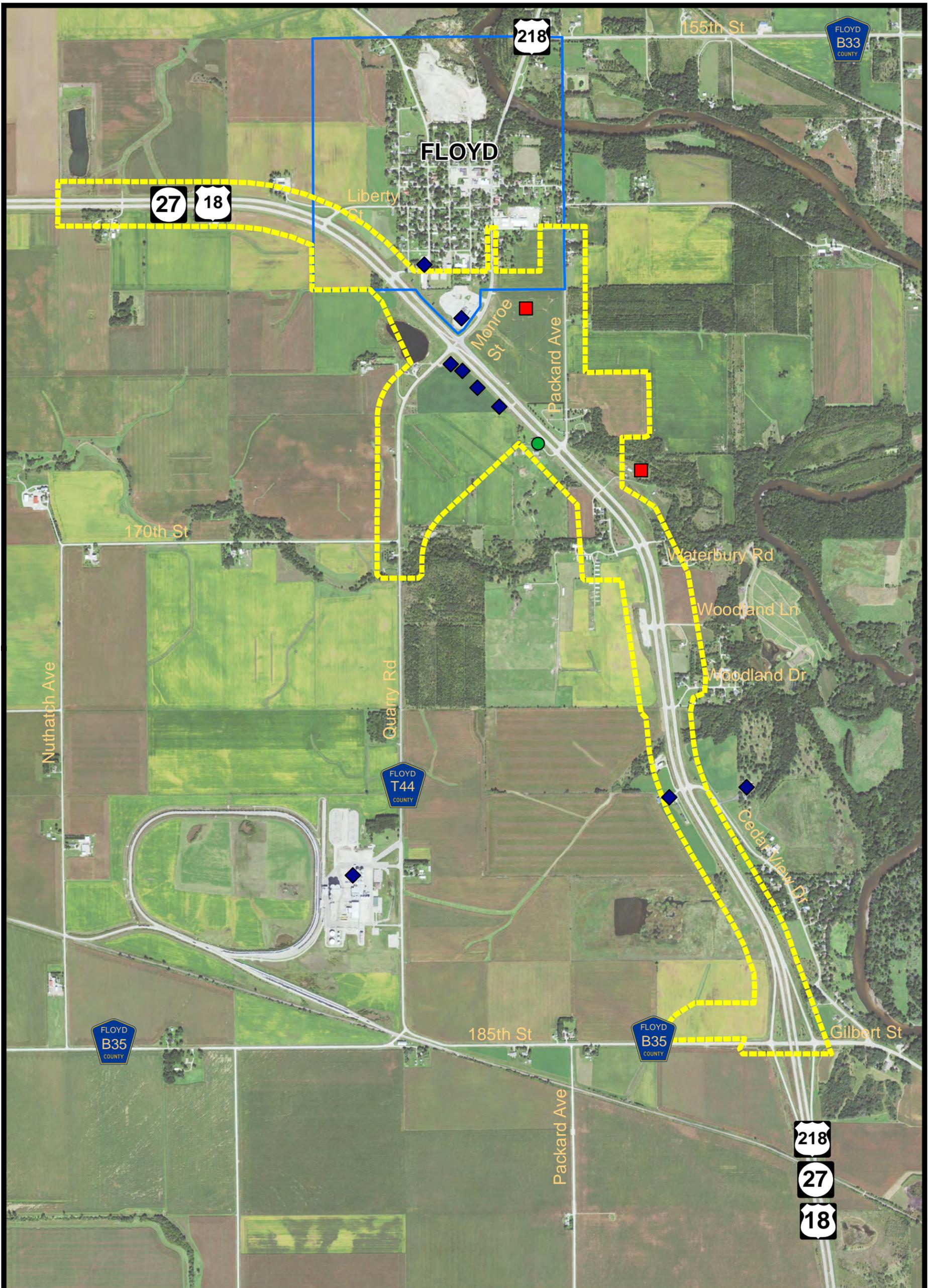


-  Project Study Area
-  Agricultural Parcels
-  C-1 Parcels
-  Commercial Parcels
-  Industrial Parcels
-  Residential Parcels

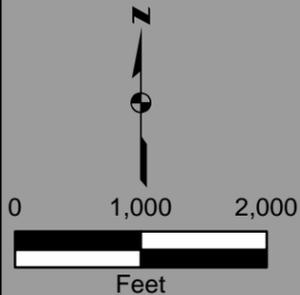
### FIGURE 5-1: Floyd County Zoning Map

NHSX-018-6(85)--3H-34  
US18/218/IA27 Hwy Improvement  
and Interchange  
Floyd County, Iowa





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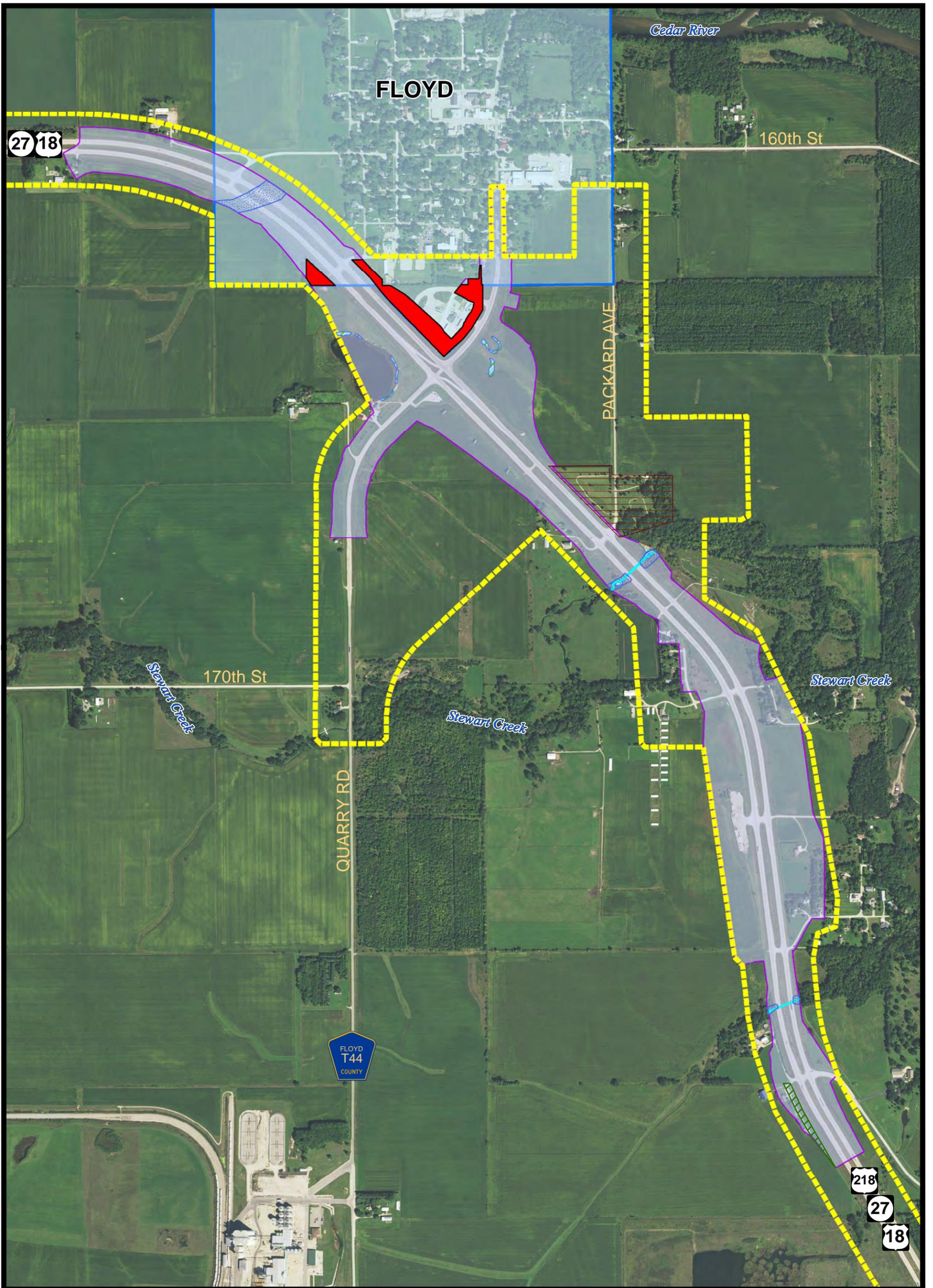


- Known Business Developments
- ◆ Business Locations
- Residential Location
- Project Study Area
- Corporate Limits

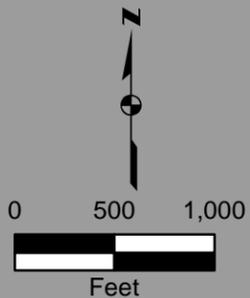
### FIGURE 5-2: Potentially Affected Businesses & Residences

NHSX-018-6(85)--3H-34  
US18/218/IA27 Hwy Improvement  
and Interchange  
Floyd County, Iowa





Created August 2015  
2014 NAIP Aerial



- |                     |                    |
|---------------------|--------------------|
| Floodplains         | Woodlands          |
| Recreation Areas    | Oakwood Cemetery   |
| Regulated Materials | Impact Area        |
| Streams             | Project Study Area |
| Wetlands            | Corporate Limits   |

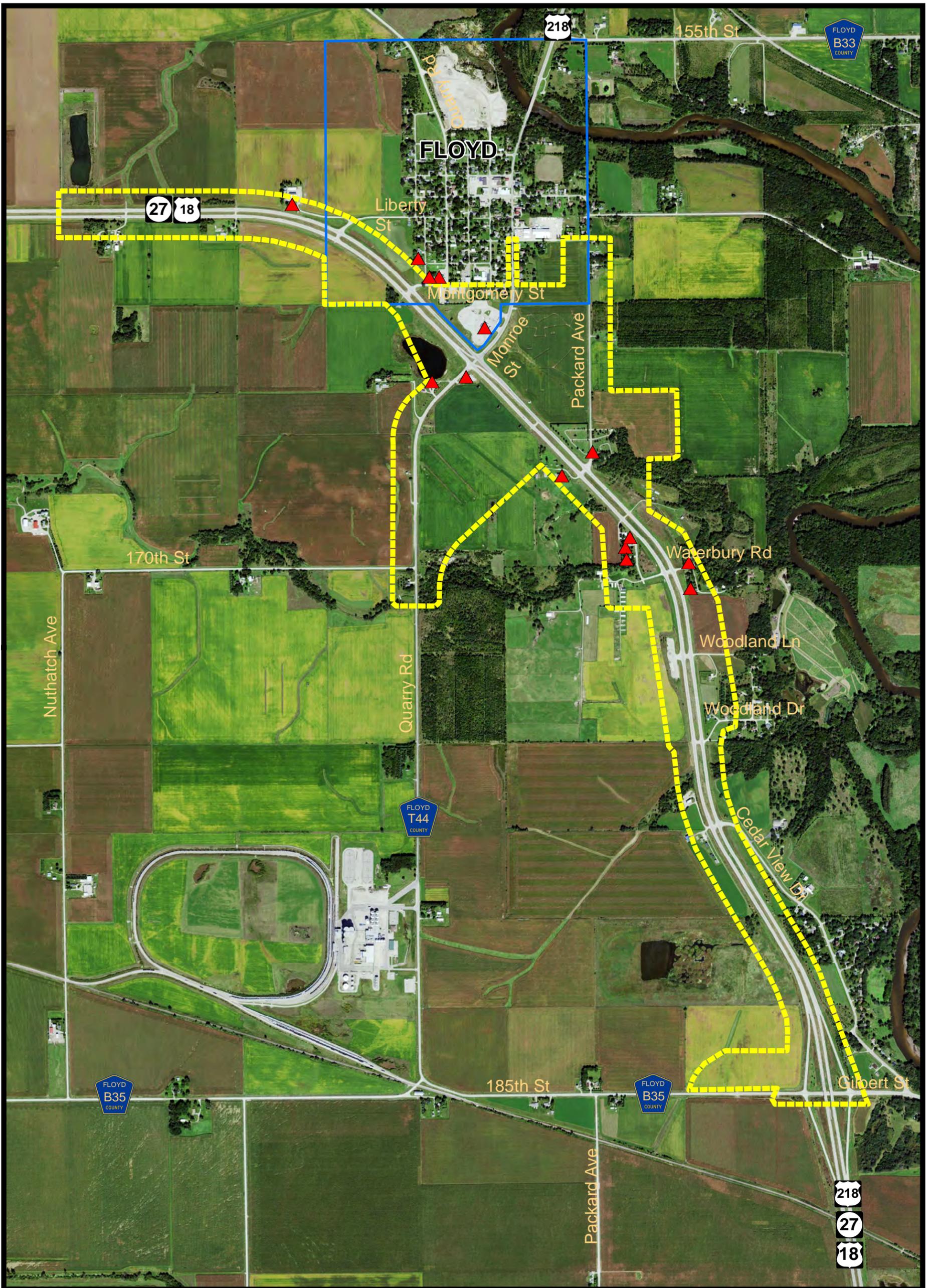
**FIGURE 5-3:  
ENVIRONMENTAL CONSTRAINTS**

**NHSX-018-6(85)--3H-34**

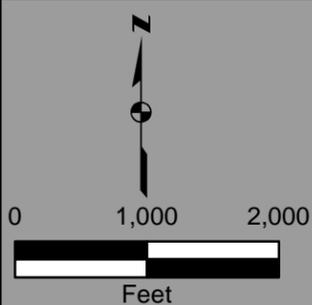
**US18/218/IA27 Hwy Improvement  
and Interchange**

**Floyd County, Iowa**





Created September 2015  
2015 NAIP Aerial



- ▲ Receptor Locations
- Project Study Area
- Corporate Limits

### FIGURE 5-4: Noise Receptors

NHSX-018-6(85)--3H-34

US18/218/IA27 Hwy Improvement  
and Interchange

Floyd County, Iowa



## **SECTION 6 DISPOSITION**

This Streamlined EA concludes that the proposed project is necessary for safe and efficient travel within the project corridor and that the proposed project meets the purpose and need. The project would have no significant adverse social, economic, or environmental impacts of a level that would warrant an environmental impact statement. Alternative selection will occur following completion of the public review period and public hearing.

This EA is being distributed to the agencies and organizations listed. Individuals receiving this EA are not listed for privacy reasons.

### **Federal Agencies**

Federal Aviation Administration  
Federal Emergency Management Agency  
U.S. Army Corps of Engineers – Rock Island District  
U.S. Department of Agriculture – Natural Resources Conservation Service  
U.S. Department of the Interior – Office of Environmental Policy and Compliance  
U.S. Environmental Protection Agency – Region 7, National Environmental Policy Act Team  
U.S. Fish & Wildlife Service – Rock Island Field Office

### **State Agencies**

Iowa Department of Natural Resources – State Office and Field Office #2 (Mason City)  
Iowa Soil and Water Conservation – Floyd County Office (Charles City)  
State Historical Society of Iowa

### **Local/Regional Units Of Government**

Floyd County Board of Supervisors  
Floyd County Conservation Board  
Floyd County Engineer  
Floyd County Historical Society  
City of Floyd – Mayor  
City of Floyd – City Clerk  
North Iowa Area Council of Governments  
Charles City Area Chamber of Commerce  
Charles City Area Development Corporation

## **Locations Where This Document Is Available For Public Review:**

Charles City Public Library  
106 Milwaukee Street  
Charles City, Iowa 50616

Federal Highway Administration  
105 6<sup>th</sup> Street  
Ames, IA 50010

Iowa Department of Transportation  
800 Lincoln Way  
Ames, IA 50010

Iowa Department of Transportation  
1420 Fourth Street S.E.  
Mason City, IA 50401

## **Potential Permits Required For This Project:**

- Department of Army Permit from U.S. Army Corps of Engineers, Rock Island District (Section 404 Wetland Permit)
- Water Quality Certification from Iowa DNR (Section 401 Water Quality Certification)
- Iowa DNR Flood Plain Development Permit
- Iowa DNR National Pollutant Discharge Elimination System General Permit No. 2 for Storm Water Discharge Associated with Construction Activities (NPDES Storm Water Permit)

Unless significant impacts are identified as a result of the public review or at the public hearing, a Finding of No Significant Impact (FONSI) will be prepared for the proposed action as a basis for federal-aid corridor location approval.

The proposed project is included in the FY 2018 Iowa Highway Program with \$1.0 million for design costs.

## SECTION 7 COMMENTS AND COORDINATION

### Agency and Tribal Coordination

This section includes a summary of agency coordination, public involvement, and tribal coordination that has occurred during the development of this EA. Future public involvement efforts that are planned for the Project are also discussed. Appendix B contains agency and tribal comment letters received in response to Iowa DOT's coordination request letters to initiate the NEPA process for the Project.

Early agency coordination began on August 18, 2011, with letters sent to the Federal, state, and local government agencies listed below. The letters announced the initiation of the NEPA process for the highway project, solicited feedback as it relates to the agencies' relevant areas of expertise, and solicited tribal interest in the Project. Table 7-1 lists the agencies that were contacted through early coordination and the response date, if applicable. Written responses to the early coordination requests are provided in Appendix B.

As part of the early coordination process, Iowa DOT also notified the Tribes of initiation of the proposed project and solicited their feedback. The Tribes contacted are listed in Table 7-2. The coordination information sent to the Tribes is included in Appendix B.

**Table 7-1: Agency Coordination**

Agency Type	Agency	Date of Response
Federal	Federal Aviation Administration	August 25, 2011
Federal	Federal Emergency Management Agency	NA
Federal	Federal Railroad Administration	NA
Federal	Federal Transit Administration, Region VII	NA
Federal	U.S. Army Corps of Engineers	September 15, 2011
Federal	U.S. Coast Guard	August 26, 2011
Federal	U.S. Department of Agriculture, NRCS	October 4, 2011
Federal	U.S. Department of Agriculture, Cedar Valley RC&D Coordinator	NA
Federal	Floyd Soil and Water Conservation District	NA
Federal	U.S. Department of Housing and Urban Development	NA
Federal	U.S. Department of Interior	August 23, 2011
Federal	U.S. Environmental Protection Agency	NA
Federal	U.S. Fish and Wildlife Service	NA
State	State Historical Society of Iowa	September 19, 2011
State	Iowa Department of Natural Resources, Section 6(f) Funds	August 31, 2011,
State	Iowa Department of Natural Resources, Environmental Services	September 13, 2011
State	Iowa Department of Natural Resources, Conservation Division	November 15, 2011
State	Iowa Department of Agriculture and Land Stewardship	September 19, 2011
State	Iowa Emergency Management Division	NA
Regional	North Iowa Area Council of Governments	NA
Regional	Charles City Area Chamber of Commerce	NA
Regional	Charles City Area Development Corporation	NA
County	Floyd County Board of Supervisors	NA

County	Floyd County Emergency Management	NA
County	Floyd County Conservation Board	September 14, 2011
County	Floyd County Engineer	NA
County	Floyd County Zoning Administrator	NA
County	Floyd County Sheriff	NA
County	Floyd County Historical Society	NA
Local	City of Floyd Mayor	NA
Local	City of Floyd City Clerk	NA
Utility	Canadian Pacific Railway	NA

**Table 7-2: Tribal Coordination**

Tribe	Date of Coordination	Date of Response
Ho-Chunk Nation	October 4, 2010	NA
Iowa Tribe of Kansas and Nebraska	October 4, 2010	October 13, 2010
Iowa Tribe of Oklahoma	October 4, 2010	NA
Otoe-Missouria Tribe	October 4, 2010	NA
Sac & Fox of Oklahoma	October 4, 2010	NA
Sac & Fox Nation of Mississippi in Iowa	October 4, 2010	NA
Sac & Fox Nation of Missouri	October 4, 2010	NA
Sisseton-Wahpeton Dakota Nation	October 4, 2010	NA
Winnebago Tribe of Nebraska	October 4, 2010	October 15, 2010

The comments received from federal, state, county, and local agencies and tribes are summarized as follows:

- Iowa Tribe of Kansas and Nebraska – No objections to the proposed project if cleared through SHPO. However, if human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, please stop immediately and notify the proper NAGPRA Representative.
- Federal Aviation Administration – The project will require formal notice and review for airspace review under Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace.
- Iowa Department of Natural Resources – No known recreational sites within the study area that would affect any federal or state rules; Waters of the U.S. (includes wetlands) should not be disturbed if a less environmentally damaging alternative exists. Unavoidable adverse impacts should be minimized to the extent practicable. Any remaining adverse impacts should be compensated for through restoration, enhancement, creation and/or preservation activities; Best Management Practices should be used to control erosion and protect water quality near the project; Conduct construction activities during a period of low flow; Seed all disturbed areas with native grasses and implement appropriate erosion control measures to insure that sediments are not introduced into Waters of the U.S. during construction; Clearing of vegetation should be limited to that which is absolutely necessary; Any construction within the 100-year floodplain will require an Iowa DNR floodplain development permit; There are no issues with leaking UST's and/or free product within 1000 feet of the project study area.

- United States Coast Guard – The project has been reviewed and determined that it does not include a bridge crossing over navigable water.
- Iowa Department of Cultural Affairs – Per the programmatic agreement with the Iowa DOT and the Federal Highway Administration, our office understands that the appropriate cultural resources investigations will be implemented and conducted to determine whether any historic properties will be affected by the proposed undertaking. If a cultural resource is identified, our agency can provide further technical assistance.
- United States Army, Corps of Engineers – Does not involve Rock Island District administered land – no further Rock Island District real estate coordination is necessary; Any proposed placement of dredged or fill material into waters of the U.S. (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act; Coordinate with the Iowa Historic Preservation Agency; Coordinate with the Rock Island Field Office of the U.S. Fish and Wildlife Service to determine if any federally-listed endangered species are being impacted; Coordinate with the Iowa Emergency Management Division to determine if the project may impact areas designated as floodway.
- Floyd County Conservation Board – Our only area of concern, from a Conservation Board standpoint, would be to maintain the integrity of the wetland mitigation site (Mink Creek).
- Iowa Department of Agriculture and Land Stewardship – Our greatest concern is controlling or minimizing soil erosion. Erosion often occurs at significant levels during construction and grading when large areas are exposed and unprotected. We assume you will be following a written erosion control plan.
- Natural Resources Conservation Service – Please take into account if applicable prime farmland losses associated with the undertaking. See Form AD-1006 if necessary; Please insure that your project will not impact wetlands through actions such as filling and clearing woody vegetation or increase drainage.

### **NEPA/404 Merge Coordination**

FHWA and Iowa DOT coordinated with resource agencies using the Iowa DOT concurrence point process. The process incorporates planning, design, agency coordination, public involvement elements, and integrates compliance with NEPA and Section 404 of the Clean Water Act. The transportation agencies request agency concurrence regarding four points in the NEPA process:

- Concurrence Point 1 – Purpose and Need
- Concurrence Point 2 – Alternatives to be Considered
- Concurrence Point 3 – Alternatives to be Carried Forward
- Concurrence Point 4 – Preferred Alternative

Concurrence Points 1 and 2 were conducted at the same time on December 7, 2011. Representatives from the USACE, USFWS, USEPA, FHWA, Iowa DNR, and Iowa DOT

attended the webinar. The purpose and need for the project and the alternatives being considered were discussed. Concurrence on Points 1 and 2 was received from the agencies during the meeting.

It was determined that the remainder of the Concurrence Point Process could be reviewed via the “Streamlined” approach. Rather than attending a webinar, the Project Packets for Concurrence Point 3 were emailed to the USACE, USFWS, USEPA, FHWA, Iowa DNR, and additional Iowa DOT staff on September 7, 2012. There were several alternatives considered at Concurrence Point 2 including the no-build alternative, 3 interchange alternatives, and a frontage road alternative that provided Priority 1 access (eliminating all direct access to the highway except at the interchanges). Through review and refinement of the alternatives, 1 of the interchange alternatives was eliminated from further consideration and the frontage road alternative was modified to provide Priority 2 access (maintaining access to the highway at ½ mile spacing plus the interchanges). Concurrence Point 3 was concluded on October 9, 2012 after all the agencies concurred by email correspondence.

## **Public Involvement**

Three public meetings have been held to date. The first public information meeting was held on May 11, 2006 at the Floyd Community Center located at 706 Fairfield Street in Floyd, Iowa. The purpose of the meeting was to discuss alternatives for the proposed project. The meeting was held from 5:00 to 7:00 PM and was attended by 49 people. In general, Comments received at the meeting and during the comment period were generally focused on making the intersection of U.S. 18/218/IA 27 and County Road T-44 safer as soon as possible and including improvements to it in the Iowa DOT’s Five-Year Transportation Improvement Program. Additional comments included: concerns if access to properties in the study corridor would be maintained or eliminated; concerns on how an interchange would impact access to the truck stop, local restaurant, and the City of Floyd; and the drivability of loop ramps in relation to trucks and large agricultural equipment. The Iowa DOT summarized written comments received and prepared responses to comments on June 21, 2006.

The second public meeting was held on October 20, 2011 at the Floyd Community Center located at 706 Fairfield Street in Floyd, Iowa. The purpose of the meeting was to reintroduce the project to the public, discuss the alternatives, and explain what kinds of studies are being done. The meeting was held from 5:00 to 7:00 PM and was attended by 62 people. In general, comments received during the meeting were generally focused on the intersection of U.S. 18/218/IA 27 and County Road T-44. The community feels that this is a dangerous intersection and that the interim safety projects at this location (ie: offset left-turn lanes) have not improved the motorists safety. The general consensus is that an interchange needs to be built and that Alternative #3, with mainline over and double loop ramps, was the most popular alternative. Additional comments included: concerns on the proposed access control along the corridor between the interchange at County Road B-35 and the City of Floyd; concerns on how to accommodate the agriculture industry and vehicles; and discussions on the increased truck traffic in the corridor. The Iowa DOT summarized written comments received and had responses prepared by January 9, 2012.

The third public meeting was held on June 7, 2012 at the Floyd Community Center located at 706 Fairfield Street in Floyd, Iowa. The purpose of the meeting was to discuss the 2 alternatives that were being moved forward with this project and to discuss the frontage road options. The meeting was held from 5:00 to 7:00 PM and was attended by 79 people. In general, comments received during the meeting were directed at the different impacts of each alternative, traffic flow on the proposed frontage road, traffic noise concerns, access to farm fields and access through the project area with larger farm equipment, loosing access to Floyd, and a general consensus that the pond in the northwest quadrant of the interchange needs to be avoided. The Iowa DOT summarized written comments received and had responses prepared by July 6, 2012.



## **APPENDIX A**

### **STREAMLINED RESOURCE SUMMARY**



**SOCIOECONOMIC IMPACTS SECTION:**

<b>Land Use</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 10/20/2011
<b>Community Cohesion</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 10/20/2011
<b>Churches and Schools</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 10/20/2011
<b>Environmental Justice</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Report
Completed by and Date:	OLE NEPA Manager, 12/19/2011
<b>Economic</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Other
Completed by and Date:	OLE NEPA Manager, 2/10/2016
<b>Joint Development</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Other
Completed by and Date:	OLE NEPA Manager, 12/19/2011
<b>Parklands and Recreational Areas</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 11/28/2011
<b>Bicycle and Pedestrian Facilities</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 10/20/2011
<b>Right-of-Way</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Database
Completed by and Date:	OLE Staff, 5/15/2013
<b>Relocation Potential</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	OLE Staff, 5/15/2013

**SOCIOECONOMIC IMPACTS SECTION Continued:**

<b>Construction and Emergency Routes</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 2/11/2016
<b>Transportation</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 2/11/2016

**CULTURAL IMPACTS SECTION:**

<b>Historic Sites or Districts</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Consultant, 2/19/2015
<b>Archaeological Sites</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Consultant, 2/19/2015
<b>Cemeteries</b>	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 12/2/2011

**NATURAL ENVIRONMENT IMPACTS SECTION:**

<b>Wetlands</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 9/18/2012
<b>Surface Waters and Water Quality</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 9/18/2012
<b>Wild and Scenic Rivers</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE NEPA Manager, 10/20/2011
<b>Floodplains</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Database
Completed by and Date:	OLE NEPA Manager, 2/19/2016
<b>Wildlife and Habitat</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 9/18/2012
<b>Threatened and Endangered Species</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 11/9/2015
<b>Woodlands</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 11/9/2015
<b>Farmlands</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Resource Agency, 8/5/2015

**PHYSICAL IMPACTS SECTION:**

<b>Noise</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	OLE Staff, 10/1/2014
<b>Air Quality</b>	
Evaluation:	The proposed project complies with both Iowa's current State Implementation Plan for attaining the national ambient air quality standards (which contains no transportation control measures), and with the conformity requirements for the Clean Air Act Amendments of 1990. Short-term air quality impacts associated with dust and equipment emissions during construction are controlled by standard contract and equipment specifications.
Method of Evaluation:	Database
Completed by and Date:	OLE NEPA Manager, 12/9/2011
<b>MSATs</b>	
Evaluation:	This project has been determined to generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special MSAT concerns. As such, this project will not result in changes in traffic volumes, vehicle mix, basic project location, or any other factor that would cause an increase in MSAT impacts of the project from that of the no-build alternative.  Moreover, EPA regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with EPA's MOBILE6.2 model forecasts a combined reduction of 72 percent in the total annual emission rate for the priority MSAT from 1999 to 2050 while vehicle-miles of travel are projected to increase by 145 percent. This will both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from this project.
Method of Evaluation:	FHWA Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, September 30, 2009
Completed by and Date:	OLE NEPA Manager, 2/18/2016
<b>Energy</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 10/20/2011
<b>Contaminated and Regulated Materials Sites</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	OLE Staff, 2/15/2016

**PHYSICAL IMPACTS SECTION Continued:**

<b>Visual</b>	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	OLE Staff, 10/20/2011
<b>Utilities</b>	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	OLE Staff, 2/15/2016



## **APPENDIX B**

### **AGENCY AND TRIBAL COORDINATION**





RECEIVED

DEC 29 2011

Office of Location & Environment

STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
ROGER L. LANDE, DIRECTOR

November 15, 2011

44357 DEC20'11 11:10:44

Iowa Department of Transportation  
Attn: Matthew J. Oetker  
800 Lincoln Way  
Ames, IA 50010

RE: Environmental Review for Natural Resources  
U.S. Highway 18/ U.S. Highway 218/ Iowa Highway 27 Corridor Study  
NHSX-018-6(85)—3H-34  
Floyd County

Dear Mr. Oetker,

Thank you for inviting Department comment on the impact of this project. The Department has searched for records of rare species and significant natural communities in the project area and found no site-specific records that would be impacted by this project. However, immediately southeast of the south end of the project (in SE quadrant of Hwy 18/Hwy 218/Hwy 27 intersection with Gilbert Street, outside of the DOT ROW) there are records for several state-listed plant species, thus the Department recommends that this area be avoided should the planning corridor change. The Department records and data are not the result of thorough field surveys. If listed species or rare communities are found during the planning or construction phases, additional studies and/or mitigation may be required. If the construction plans change, the Department should be contacted for another review.

This letter is a record of review for protected species, rare natural communities, state lands and waters in the project area, including review by personnel representing state parks, preserves, recreation areas, fisheries and wildlife but does not include comment from the Environmental Services Division of this Department. This letter does not constitute a permit. Other permits may be required from the Department or other state or federal agencies before work begins on this project.

Any construction activity that bares the soil of an area greater than or equal to one acre including clearing, grading or excavation may require a storm water discharge permit from the Department. Construction activities may include the temporary or permanent storage of dredge material. For more information regarding this matter, please contact Ruth Rosdail at (515) 281-6782.

The Department administers regulations that pertain to fugitive dust IAW Iowa Administrative Code 567-23.3(2)"c." All persons shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of property during construction, alteration, repairing or demolishing of buildings, bridges or other vertical structures or haul roads. All questions regarding fugitive dust regulations should be directed to Jim McGraw at (515) 242-5167.

If you have questions about this letter or require further information, please contact me at (515) 281-8967.

Sincerely,



Kelly Poole  
Environmental Specialist  
Conservation and Recreation Division

FILE COPY: Kelly Poole

Tracking Number: 6567

CC: Chris Schwake, Iowa DNR (email)



Natural Resources Conservation Service  
210 Walnut Street, Room 693  
Des Moines, IA 50309-2180

RECEIVED

OCT 07 2011

October 4, 2011

Mr. Matthew J. Oetker  
Iowa Department of Transportation  
800 Lincoln Way  
Ames, IA 50010

Office of Location & Environment

RE: U.S. Highway 18/U.S. Highway 218/Iowa Highway 27 Corridor Study – Environmental Assessment – NHSX-018-6(85)—3H-34, Floyd County, Iowa

Dear Mr. Oetker:

Please take into account if applicable prime farmland losses associated with the undertaking. See Form AD-1006 if necessary. Please insure that your project will not impact wetlands through actions such as filling and clearing woody vegetation or increasing drainage.

If you have any further questions please contact me at 515/323-2211.

Sincerely,

A handwritten signature in blue ink that reads "Martin Adkins".

Martin Adkins  
State Resource Conservationist

Attachment (Form AD-1006)



IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP

Bill Northey, Secretary of Agriculture

September 19, 2011

RECEIVED

SEP 22 2011

Office of Location & Environment

Matthew J Oetker  
Office of Location & Environment  
NEPA Document Manager  
Iowa Department of Transportation  
800 Lincoln Way  
Ames IA 50010

RE: U.S. highway 18/U.S. Highway 218/Iowa Highway 27 Corridor Study – Environmental Assessment - NHSX-018-6(85)—3H-34 Floyd County, Iowa

Dear Mr. Oetker:

We appreciate the opportunity to provide input regarding the roadway improvement in Floyd County.

Our greatest concern is controlling or minimizing soil erosion. Erosion often occurs at significant levels during construction and grading when large areas are exposed and unprotected. We assume you will be following a written erosion control plan.

If you have any questions, we ask you to contact the Floyd Soil and Water Conservation District office in Charles City:

Dennis Sande, District Conservationist, USDA  
Natural Resources Conservation Service (NRCS)  
Also contact:  
Ann Voelker, State Secretary, IDALS  
623 Beck St.  
Charles City, 50616  
641-228-2725

All personnel in the district office are well informed and stand ready to assist and advise you with problems that can arise with an undertaking of the size and scope that you have outlined in your letter.

Thank you for the opportunity to provide this information.

Sincerely,

A handwritten signature in black ink that reads "Jim Gillespie".

Jim Gillespie, Acting Director  
Division of Soil Conservation

cc: Floyd SWCD

**From:** [Jones, Doug \[DCA\]](#)  
**To:** [Oetker, Matthew \[DOT\]](#)  
**Cc:** [Jones, Doug \[DCA\]](#); [Faber, Randall \[DOT\]](#); [Dolan, Brennan \[DOT\]](#); ["Mike Lapietra \(E-mail\)"](#); [Hofer, Brad \[DOT\]](#); [Christian, Ralph \[DCA\]](#); [Strand, June \[DCA\]](#); [Rostad, Krista \[DOT\]](#)  
**Subject:** 101034029 NHSX-018-6(85)--3H-34 US Hwy 18 & 218 & Iowa Hwy 27 Corridor Study EA Prep.pdf  
**Date:** Monday, September 19, 2011 2:02:45 PM  
**Attachments:** [101034029 NHSX-018-6\(85\)--3H-34 US Hwy 18 & 218 & Iowa Hwy 27 Corridor Study EA Prep.pdf](#)

---

Attached is the official SHPO comment letter for the above-referenced project, provided in accordance with Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations, 36 CFR Part 800 (revised, effective August 5, 2004). To read the document, you may need to download a free copy of Adobe Acrobat Reader at [www.adobe.com](http://www.adobe.com).

Please note that you will not receive a hard copy of this letter by mail. There is no need to reply to this email unless you have specific questions or have problems opening the document. Feel free to contact me by email or phone.

Douglas W. Jones, Archaeologist and Review and Compliance Program Manager  
State Historic Preservation Office  
State Historical Society of Iowa  
(515) 281-4358

# CULTURAL AFFAIRS

MARY TIFFANY COWNIE, DIRECTOR

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

September 19, 2011

**In reply refer to:  
R&C#: 101034029**



JEROME THOMPSON  
ADMINISTRATOR



MATTHEW HARRIS  
ADMINISTRATOR

600 E. LOCUST  
DES MOINES, IOWA  
50319

T. (515) 281-5111  
F. (515) 282-0502

CULTURALAFFAIRS.ORG

Matt Oetker, NEPA Document Manager  
Office of Location and Environment  
Iowa Department of Transportation  
800 Lincoln Way  
Ames, IA 50010

RE: FHWA – FLOYD COUNTY – NHSX-018-6(85)-3H-34 – US HIGHWAY 18 /  
US HIGHWAY 218 / IOWA HIGHWAY 27 CORRIDOR STUDY PROJECT–  
PROPOSED PREPARATION OF ENVIRONMENTAL ASSESSMENT

Dear Mr. Oetker,

Thank you for notifying our office about the above referenced proposed project. We understand that this project will be a federal undertaking for the Federal Highway Administration (FHWA) and will need to comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966 and its implementing regulations, 36 CFR Part 800 (revised, effective August 5, 2004) and with the National Environmental Policy Act (NEPA).

Per our programmatic agreement with your agency and the Federal Highway Administration, our office understands that the appropriate cultural resources investigations will be implemented and conducted to determine whether any historic properties will be affected by the proposed undertaking. If during your scoping process, a cultural resource issue is identified, our agency can provide further technical assistance to your agency.

Our office will be a consulting party to the responsible federal agency and your agency acting on behalf of FHWA in accordance with our Programmatic Agreement as part of the Section 106 consultation process. We request that all correspondence related to this undertaking for Section 106 consultation be provided to our office through the Office of Location and Environment at the Iowa Department of Transportation in accordance with our Programmatic Agreement.

We look forward to consulting with your office and the Federal Highway Administration 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).

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 the Office of Location and Environment at the Iowa Department of Transportation and the Federal Highway Administration on this project. Should you have any questions please contact me at the number below.

Sincerely,



Douglas W. Jones, Archaeologist and Review and Compliance Program Manager  
State Historic Preservation Office  
State Historical Society of Iowa  
(515) 281-4358

cc: Mike La Pietra, FHWA  
Randall Faber, OLE, IDOT, Ames  
Brennan Dolan, OLE, IDOT, Ames  
Brad Hofer, NEPA Compliance, OLE, IDOT, Ames  
Ralph Christian, Historian, State Historical Society of Iowa  
Krista Rostad, IDOT District 2 Planner



REPLY TO  
ATTENTION OF

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

September 15, 2011

**RECEIVED**

SEP 19 2011

Planning, Programs, and  
Project Management Division

**Office of Location & Environment**

Mr. Matthew J. Oetker  
NEPA Document Manager  
Office of Location & Environment  
Iowa Department of Transportation  
800 Lincoln Way  
Ames, Iowa 50010

Dear Mr. Oetker:

I received your letter dated August 18, 2011, concerning U.S. Highway 18/U.S. Highway 218/Iowa Highway 27 Corridor Study, Environmental Assessment, NHSX-018-6(85)--3H-34, in Floyd County, Iowa. Rock Island District Corps of Engineers staff reviewed the information you provided and have the following comments:

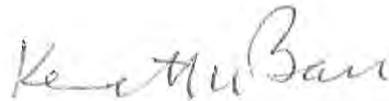
- a. Your proposal does not involve Rock Island District administered land; therefore, no further Rock Island District real estate coordination is necessary.
- b. Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization under Section 404 of the Clean Water Act. We require additional details of your project before we can make a final determination of permit requirements. When detailed plans are available, please complete and submit an application packet to the Rock Island District for processing. 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.
- c. The Responsible Federal Agency should coordinate with Ms. June Strand, Iowa Historic Preservation Agency, ATTN: Review and Compliance Program, State Historical Society of Iowa, 600 East Locust, State Historic Building, 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 (County) Field Office address is: 1511 - 47th Avenue, Moline, Illinois 61265. Mr. Rick Nelson is the Field Supervisor. You can reach him by calling 309/757-5800.

e. The Iowa Emergency Management Division should be contacted to determine if the proposed project may impact areas designated as floodway. Mr. John Wagman is the Iowa State Hazard Mitigation Team Leader. His address is: 7105 NW 70<sup>th</sup> Avenue, Camp Dodge-Building W4, Johnston, Iowa 50131. You can reach him by calling 515/725-3231.

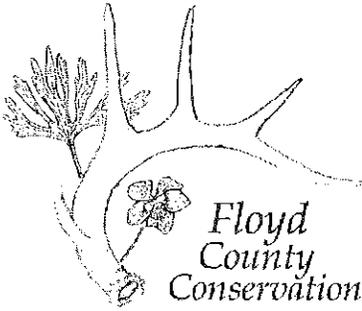
No other concerns surfaced during our review. Thank you for the opportunity to comment on your proposal. If you need more information, please call Mr. Randy Kraciun of our Environmental and Economic Branch, telephone 309/794-5174.

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

Sincerely,

A handwritten signature in cursive script that reads "Kenneth A. Barr".

Kenneth A. Barr  
Chief, Environmental and  
Economic Branch



**Floyd  
County  
Conservation**

1227 215th St. P.O. Box 495, Rockford, IA 50468-0495

(641) 756-3490

Fax (641) 756-3492

e-mail: fpcenter@myomnitel.com

**RECEIVED**

SEP 21 2011

Office of Location & Environment

**Floyd County  
Conservation Board  
Director**

*Doug Schroeder*

**President**

*Larry Hicok,  
Rockford*

**Vice President**

*Richard Uetz,  
Charles City*

**Secretary**

*Lori Paulus,  
Rockford*

**Members**

*Ann Schneckloth,  
Charles City*

*Lyle Wendland,  
Floyd*

**Preserving**

*our*

*natural*

*history*

**ensuring**

*the*

*future*

**Web Site:**  
[www.floydcoia.org](http://www.floydcoia.org)

September 14, 2011

Matthew J. Oetker  
Office of Location & Environment  
NEPA Document Manager  
Iowa Department of Transportation  
800 Lincoln Way, Ames Iowa 50010

RE: U.S. Highway 18/U.S. Highway 218/Iowa Highway 27 Corridor  
Study—Environmental Assessment—NHSX-018-6(85)—3H-34, Floyd  
County, Iowa

Dear Mr. Oetker:

Our only area of concern, from a Conservation Board standpoint, would be to  
maintain the integrity of the wetland mitigation site.

Sincerely,

Larry Hicok  
President, Floyd County Conservation Board



# STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
ROGER L. LANDE, DIRECTOR

September 13, 2011

**RECEIVED**

SEP 20 2011

Matthew Oetker  
NEPA Document Manager  
Iowa Department of Transportation  
800 Lincoln Way  
Ames, IA 50010

Office of Location & Environment

Dear Mr. Oetker:

This letter is in response to the August 18th request concerning the Floyd County US Highway 18 project. After a cursory review by our program staff, we have the following comments. You are welcome to visit our offices and conduct a more thorough review of our records.

Waters of the United States (includes wetlands) should not be disturbed if a less environmentally damaging alternative exists. Unavoidable adverse impacts should be minimized to the extent practicable. Any remaining adverse impacts should be compensated for through restoration, enhancement, creation and/or preservation activities.

We would ask that Best Management Practices be used to control erosion and protect water quality near the project, especially in vicinity of the Skunk River. You are encouraged to conduct your construction activities during a period of low flow. You are required to seed all disturbed areas with native grasses and to implement appropriate erosion control measures to insure that sediments are not introduced into waters of the United States during construction of this project. Clearing of vegetation, including trees located in or immediately adjacent to waters of the state, should be limited to that which is absolutely necessary for construction of the project.

Any construction within the 100-year floodplain will require a DNR floodplain development permit.

Regarding leaking underground storage tank sites, currently there are no issues with leaking USTs and/or free product within 1000' of the project study area.

It is our policy that companies and their consultants conduct their own review for these sites. If you need advice for locating relevant information, please call me at (515)281-7276.

Sincerely,

A handwritten signature in cursive script that reads "Christine Spackman".

Christine Spackman  
Business Assistance Coordinator

**From:** [Moench, Kathleen \[DNR\]](#)  
**To:** [Oetker, Matthew \[DOT\]](#)  
**Subject:** Hwy 18/Hwy 218 Corridor Study  
**Date:** Wednesday, August 31, 2011 3:19:39 PM

---

Matthew,

I've reviewed the information you have provided for the Hwy 18/218 EA Corridor Study. I have no known recreational sites within the study area that would affect any federal or state rules. I have no further comment. Thanks, Kathleen

---

*Kathleen Moench / Iowa Dept. of Natural Resources*  
*Wallace State Office Building / 502 East 9th Street / Des Moines, IA 50319*  
*phone 515-281-3013 / fax 515-281-6794*  
[kathleen.moench@dnr.iowa.gov](mailto:kathleen.moench@dnr.iowa.gov) / [www.iowadnr.gov](http://www.iowadnr.gov)

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander  
Eighth Coast Guard District

1222 Spruce Street  
St. Louis, MO 63103-2832  
Staff Symbol: dwb  
Phone: (314) 269-2380  
Fax: (314) 269-2379  
Email: Rodney.I.wurgler@uscg.mil  
www.uscg.mil/d8/westernriversbridges

16591.6/Iowa  
August 26, 2011

Mr. Matthew J. Oetker  
Office of Location & Environment  
NEPA Document Manager  
800 Lincoln Way  
Ames, IA 50010

**RECEIVED**

SEP 08 2011

Office of Location & Environment

Subj: U.S. Highway 18/U.S. Highway 218/Iowa 27 Corridor Study

Dear Mr. Oetker:

We have reviewed the information provided in your letter dated August 18, 2011 and determined that this project does not include a bridge crossing over navigable water. Therefore, the Coast Guard has no interest in the project.

If there are any questions, please contact Mr. Rodney Wurgler at the above listed number. We appreciate the opportunity to comment on the project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eric A. Washburn".

ERIC A. WASHBURN  
Bridge Administrator, Western Rivers  
By direction of the District Commander



U.S. Department  
Of Transportation

**Federal Aviation  
Administration**

Central Region  
Iowa, Kansas  
Missouri, Nebraska

**RECEIVED**

AUG 29 2011

**Office of Location & Environment**

901 Locust  
Kansas City, Missouri 64106-2325

August 25, 2011

Matthew J. Oetker  
Iowa Department of Transportation  
800 Lincoln Way  
Ames, IA 50010

Re: U.S. Highway 18/U.S. Highway 218/Iowa Highway 27 Corridor Study – Environmental Assessment – NHSX-018-6(85)—3H-34, Floyd county, Iowa

Dear Mr. Oetker:

The Federal Aviation Administration (FAA) reviews other federal agency environmental documents from the perspective of the FAA's area of responsibility; that is, whether the proposal will have negative effects on aviation. We generally do not provide comments from an environmental standpoint. Therefore, we have reviewed the material furnished with your letter dated August 18, 2011 and have no comments regarding environmental matters.

Airspace Considerations

The project will require formal notice and review for airspace review under Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace.

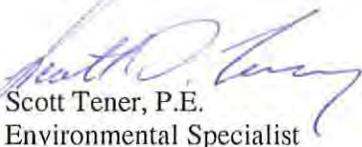
I recommend a 120-day notification to accommodate the review process and issue our determination letter. Proposals may be filed with FAA at <http://oeaaa.faa.gov> (requires free registration).

I encourage you to file a request for airspace study soon in order to determine if there are any potential effects to the airport from the proposed project. Be sure to submit information for any roads, objects, and temporary construction equipment (e.g. cranes) that exceed the notice criteria.

More information on this process may be found at:  
<http://www.faa.gov/airports/central/engineering/part77/>

If you have questions, please contact me at [scott.tener@faa.gov](mailto:scott.tener@faa.gov) or 816-329-2639.

Sincerely,



Scott Tener, P.E.  
Environmental Specialist

**From:** [Oetker, Matthew \[DOT\]](#)  
**To:** ["Lotz, Gail"](#)  
**Cc:** [Thomas, Terisa \[DOT\]](#)  
**Subject:** RE: Early Coordination Request  
**Date:** Tuesday, August 23, 2011 11:42:00 AM  
**Attachments:** [US18\\_218InterchangeLocMap.pdf](#)  
[I380\\_Tower\\_Terrace\\_Interchange\\_Loc\\_Map.pdf](#)

---

Gail,

Enclosed you will find the electronic copy of the project maps for both the US18/US218/IA27 Corridor Study and the I-380/Tower Terrace Study. Please let me know if you need any additional information or have any questions.

Thanks,

**Matt Oetker**

Iowa DOT | NEPA Section  
Phone: 515-239-1786  
[Matthew.Oetker@dot.iowa.gov](mailto:Matthew.Oetker@dot.iowa.gov)

---

**From:** Lotz, Gail [[mailto:Gail\\_Lotz@ios.doi.gov](mailto:Gail_Lotz@ios.doi.gov)]  
**Sent:** Tuesday, August 23, 2011 11:05 AM  
**To:** Oetker, Matthew [DOT]  
**Subject:** Early Coordination Request

Our office received the request for comments as part of early coordination regarding US Highway 18/US Highway 218/Iowa Highway 27 Corridor Study. Will you forward an electronic copy of the map that was enclosed so I can forward to the appropriate agencies? Also, we received another request for I-380/Tower Terrace Road Improvement. There was no contact information except the phone number at the top and that person is out until Friday. Is it also possible to forward an electronic copy of that map? Thank you.

Gail L. Lotz  
Regional Environmental Protection Assistant  
Office of Environmental Policy and Compliance  
U.S. Department of the Interior  
P.O. Box 25007 (D-108)  
Denver, CO 80225-0007  
Voice: (303) 445-2500  
Fax: (303) 445-6320  
Email: [gail\\_lotz@ios.doi.gov](mailto:gail_lotz@ios.doi.gov)



Iowa Department of Transportation  
TRIBAL NOTIFICATION

RECEIVED  
CHAIRMAN'S OFFICE  
10-12-10

Form 536002  
08-05

*pen*

Date October 04, 2010 IA DOT contact Libby Wielenga  
 IADOT project # NHSN-018-6(85)--2R-34 Phone # IA DOT - 515-239-1035 FHWA - 515-233-7300  
 Location Floyd County E-mail Libby.Wielenga @dot.iowa.gov  
 Description Phase I Archaeological Investigation for improvements to the U.S. 218 / U.S. 18 / IA 27 Intersection, and improvements for access control along U.S. 18 west of Floyd from march Avenue to County Road B35 (185th Street) south of Floyd

Type of Project (see map)

VERY SMALL - Disturb less than 12-inch depth (plow zone)  
 SMALL - Grading on existing road, shouldering, ditching, etc.  
 SMALL - Bridge or culvert replacement

LARGE - Improve existing road from 2 lanes to 4 lanes  
 LARGE - New alignment  
 X OTHER - New intersection and access roads

Type of Coordination/Consultation Points

1 - Early project notification (project map and description)  
 X 2 - Notification of survey findings (Phase I)  
 2a - Notification of site evaluation (Phase II)

3 - Consultation regarding site treatment  
 4 - Data Recovery Report  
 5 - Other

Type of Findings

No American Indian site found  
 --Section 106 Consultation Process ends\*  
 X American Indian sites found but not eligible for National Register listing -- Section 106 Consultation Process ends\*  
 Avoided American Indian sites eligible for National Register listing (see map and list of sites)  
 --Section 106 Consultation Process may or may not end

Potentially significant American Indian sites found (see map and list of sites)  
 American Indian sites eligible for National Register listing cannot be avoided (see map)

Burial site found

\* In the event of a late discovery, consultation will be reopened

1 # of non-significant prehistoric sites  
 0 # of potentially significant prehistoric sites  
 0 # of National Register-eligible prehistoric sites

Affected National Register Properties

Investigating avoidance or minimizing harm options  
 Avoided

Protected  
 Data Recovery/MOA

\*\*\*\*\*Please Respond\*\*\*\*\*

Who should we contact for site/project-related discussions?

Emily Smith College Dr.  
 Name Street Address  
402 878 3313  
 Phone

Winnebago NE 68071  
 City, Zip Code  
smith-deleon 77@yahoo  
 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

Emily Smith Winnebago Tribe NE 10-15-10  
 Name Tribal name Date

(Comments continued on back)



## Iowa Tribe of Kansas and Nebraska

3345 B Thrasher Road  
White Cloud, Kansas 66094  
(785) 595-3258 or (785) 595-3259  
Fax (785) 595-6610

RECEIVED

OCT 20 2010

OFFICE OF LOCATION & ENVIRONMENT

October 13, 2010

Iowa Department of Transportation  
Libby Wielenga  
800 Lincoln Way  
Ames, IA 50010-9902

Thank you for your correspondence dated October 4, 2010 concerning the following project:

***RE: IADOT Project # NHSN-018-6(85)—2R-34 Phase 1 Archaeological Investigation for improvements to the U.S. 218/U.S. 18/ IA 27 Intersection, and improvements for access control along U.S. 18 west of Floyd from March Ave. to County Road B35 (185<sup>th</sup> Street) South of Floyd.***

The Iowa Tribe of Kansas and Nebraska has:

No interest in the area geographically

No comment on the proposed undertaking

No objections to the project as proposed if cleared through the SHPO. However, if human skeletal remains and/or any objects falling under NAGPRA are uncovered during construction, please stop immediately and notify the proper NAGPRA Representative.

An objection requires additional project information. Please send the following:

Sincerely,

Alan Kelley, Vice Chairman  
Iowa Tribe Executive Committee

Office of Location and Environment  
800 Lincoln Way | Ames, Iowa 50010

Phone: 515.239.1795 | Email: [brennan.dolan@dot.iowa.gov](mailto:brennan.dolan@dot.iowa.gov)

January 29, 2015

RECEIVED

Ref. NHSX-018-6(85)--3R-34

FEB 02 2015

Primary System

Floyd County

by SHPO

R&C: 2010034029

Mr. Ralph Christian and Mr. Doug Jones  
State Historic Preservation Office  
600 East Locust  
Des Moines, IA 50319

RE: Determination of Effect for the U.S. 18 Reconstruction Project, Floyd Intersection, Floyd County, Iowa; T96N-R16W Section 27; ***No Historic Properties Affected***

Dear Ralph and Doug:

Your office has reviewed various studies for this project including an intensive architectural investigation, various phase I archaeological surveys as well as a phase II archaeological evaluation. Our District 3 staff, as well as our Location Section engineers, have arrived at a preferred alternative for this project. I am happy to share with you that all previously identified historic properties will be avoided by this project as currently proposed. Table 1 below identifies all of the properties we have consulted on previously that have been determined eligible or have undetermined eligibility for National Register listing.

**Table 1**

Site	Eligibility	Property Name/Type	Recommendations
13FD139	Not determined	Historic farmstead	No further work in the project area
13FD141	Potentially eligible	Limestone quarry	Avoidance or evaluation
13FD144	Potentially eligible	Limestone quarry	Avoidance or evaluation
13FD149	Not determined	Historic scatter	No further work in the project area
13FD151	Not determined	Historic scatter	No further work in the project area
13FD153	Eligible	Hubbard Cabin Site	Avoidance or mitigation
34-00133	Eligible	Kimball/Dierks barn	Avoidance or mitigation
34-00139	Eligible	Kimball/Dierks silo	Avoidance or mitigation
34-00583	Eligible	Schmidt/Ewalt house	Avoidance or mitigation
34-00584	Eligible	Schmidt barn	Avoidance or mitigation
34-00698	Not determined	Oakwood cemetery	Avoidance or evaluation

The enclosed figures show the preferred alternative and the properties identified in Table 1. As you will see the reconstruction of U.S. 18 stays on existing alignment for the most part with the exception of the three quadrant intersection and a few minor access roads.

It is necessary to bring attention to the excellent design work that staff have delivered for this project. As you know the work we do requires us to balance the needs of our changing transportation system and historic preservation. In this instance the District 2 staff and the Location Section engineers have done an outstanding job.

We now request your concurrence with our determination of **No Historic Properties Affected**. As with any Iowa Department of Transportation project, should any new important archaeological, historical, or architectural materials be encountered during construction, project activities shall cease and the Office of Location and Environment shall be contacted immediately. If you have any questions, please feel free to contact me at 515-239-1795 or [brennan.dolan@dot.iowa.gov](mailto:brennan.dolan@dot.iowa.gov).

Sincerely,

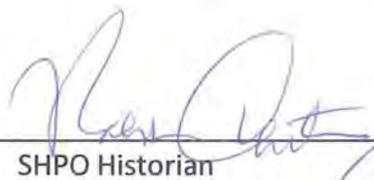


Brennan J. Dolan  
Office of Location and Environment

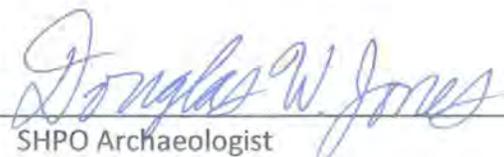
BJD:sm

Enclosures

cc: Jon Ranney – District 2 Engineer  
Dave Little – Assistant District 2 Engineer  
Krista Rostad – District 2 Planner  
DeeAnn Newell – NEPA Section Leader  
Gary Harris – Location Section Engineer

Concur:  \_\_\_\_\_ Date: Feb 10, 2015

Comments:

Concur:  \_\_\_\_\_ Date: 2/18/2015

Comments:

MAY 23 2013



# Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1795

Fax: 515-239-1726

May 20, 2013

Ref. NHSN-18-6(85)--3R-34

Primary System

Floyd County

WVA #723

Mr. Doug Jones  
State Historic Preservation Office  
600 East Locust  
Des Moines, IA 50319

R&C: 101034029

**RE: Phase II Testing of Site 13FD153; Proposed Improvements to US Highway 18/218, Floyd County, Iowa;[T96N-R16W Section 27]; No Determination of Effect**

Dear Doug:

Enclosed for your review and comment is the phase II archaeological evaluation of Site 13FD153. As you will read our consultant has recommended this site eligible for nomination to the National Register of Historic Places, and we agree with their recommendation. The site consists of two spatially discrete components; the older of which two dates to the middle of the nineteenth-century and likely reflects the early settlement of the area by the Oliver Hubbard family. The older component has been recommended eligible under Criteria A and D. The second component is consistent with a late-nineteenth to mid-twentieth century deposit and is considered a non-contributing resource to the site. We propose to avoid the older, mid-nineteenth-century component of Site 13FD153.

Various alternatives are still being considered for this project; therefore at this time a determination of effect cannot be offered. We will work to avoid all historic properties near this project. Table 1 below provides a summary of those properties:

**Table 1**

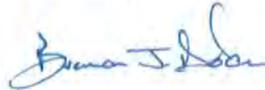
Site	Eligibility	Property Name/Type	Recommendations
13FD139	Not determined	Historic farmstead	No further work in the project area
13FD141	Potentially eligible	Limestone quarry	Avoidance or evaluation
13FD144	Potentially eligible	Limestone quarry	Avoidance or evaluation
13FD149	Not determined	Historic scatter	No further work in the project area
13FD151	Not determined	Historic scatter	No further work in the project area
13FD153	Eligible	Hubbard Cabin Site	Avoidance or mitigation
34-00133	Eligible	Kimball/Dierks barn	Avoidance or mitigation
34-00139	Eligible	Kimball/Dierks silo	Avoidance or mitigation
34-00583	Eligible	Schmidt/Ewalt house	Avoidance or mitigation
34-00584	Eligible	Schmidt barn	Avoidance or mitigation
-	Not determined	Oakwood cemetery	Avoidance or evaluation

Mr. Doug Jones  
Page 2  
May 20, 2013

If you concur with these findings of this report and the eligibility of Site 13FD153 please sign below, add any comments you may have, and return this letter to our office. Lastly, we would like to acknowledge the quality of this report, particularly when held in context of the narrow time constraints we provided our consultant for this National Register evaluation.

If you have any questions, please contact me at (515) 239-1795 or [brennan.dolan@dot.iowa.gov](mailto:brennan.dolan@dot.iowa.gov).

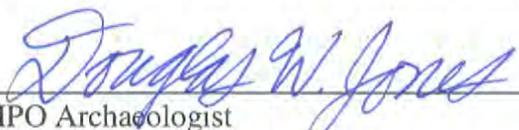
Sincerely,



Brennan J. Dolan  
Office of Location and Environment

BJD:sm  
Enclosures

cc: Vicki Dumdei – District 2 Engineer  
Dave Little – Assistant District 2 Engineer  
Gary Harris – Location Engineer  
DeeAnn Newell – NEPA Section Leader  
Nurit Finn – Wapsi Valley Archaeology

Concur:  Date: 5/28/2013  
SHPO Archaeologist

Comments:

FEB 04 2013



# Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1795

Fax: 515-239-1726

January 30, 2013

Ref. NHSN-18-6(85)--3R-34

Primary System

Floyd County

WVA 700

Mr. Doug Jones  
State Historic Preservation Office  
600 East Locust  
Des Moines, IA 50319

R&C: 101034029

## **RE: Supplemental Phase I Archaeological Survey for Proposed Improvements to US Highway 18/218, Floyd County, Iowa; No Determination**

Dear Doug:

Enclosed for your review and comment is the intensive phase I archaeological investigation for the above referenced project. As you will recall we last consulted with your office regarding this project on 10/21/2010 (Finn and Young 2010). Since then our location staff have continued to consider alternatives and adjust the potential project alignment. The current investigation reviewed 113.5 acres of expanded study area. This investigation included a thorough review of archival records including census data, an assessment of the physiographic region and geomorphology, intensive surface survey, and shovel testing. This report includes information on five previously documented sites and six newly recorded sites. Table 1 below provides a summary of information about these sites.

**Table 1**

Site	Eligibility	Recommendations
13FD53	Not eligible	No further work
13FD139	Not determined	No further work in the project area
13FD141	Potentially eligible	Avoidance or evaluation
13FD144	Potentially eligible	Avoidance or evaluation
13FD145	Not eligible	No further work
13FD149	Not determined	No further work in the project area
13FD150	Not eligible	No further work
13FD151	Not determined	No further work in the project area
13FD152	Not eligible	No further work in the project area
13FD153	Potentially eligible	Avoidance or evaluation
13FD154	Not eligible	No further work

Our consultant has recommended three sites as potentially eligible. Two of these sites (13FD141 and 13FD144) have been reviewed previously by your office, whereby you requested further information, stating your opinion that the National Register status of these sites should be considered not evaluated. We agree with your statement. If the forthcoming project plans suggest that impacts to these sites may be unavoidable, our office will proceed with evaluation of them.

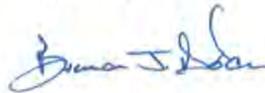
Mr. Doug Jones  
Page 2  
January 30, 2012

Because no final alignment has been selected at this time, no determination of effect can be made. Once an alignment has been selected, we will again consult with your office. Please note in addition to the eligible sites identified above we are working to avoid the following architectural properties: 34-00133 (Kimball/Dierks barn), 34-00139 (Kimball/Dierks silo), 34-00583 (Schmidt/Ewalt house), and 34-00584 (Schmidt barn). Lastly, our office has continued to avoid impacts to the Oakwood Cemetery.

If you concur with these findings and recommendations please sign below, add any comments you may have, and return this letter to our office. As with any Iowa Department of Transportation project, should any new important archaeological, historical, or architectural materials be encountered during construction, project activities shall cease and the Office of Location and Environment shall be contacted immediately.

If you have any questions, please contact me at (515) 239-1795 or [brennan.dolan@dot.iowa.gov](mailto:brennan.dolan@dot.iowa.gov).

Sincerely,



Brennan J. Dolan  
Office of Location and Environment

BJD:sm

Enclosures

cc: Vicki Dumdei – District 2 Engineer  
Dave Little – Assistant District 2 Engineer  
Gary Harris – Location Engineer  
DeeAnn Newell – NEPA Section Leader  
Nurit Finn – Wapsi Valley Archaeology

Concur: \_\_\_\_\_

  
SHPO Archaeologist

Date: \_\_\_\_\_



Comments:

October 21, 2010

**In reply refer to:  
R&C#: 101034029**

**RE: FHWA – FLOYD COUNTY – NHSN-018-6(85)—2R-34 – PROPOSED INTERCHANGE CONSTRUCTION AT US 218/US 18/IA 27 INTERSECTION PROJECT – PHASE I INTENSIVE ARCHAEOLOGICAL SURVEY FOR THE PROPOSED INTERCHANGE PROJECT US HIGHWAY 18 NEAR THE CITY OF FLOYD – WVA#498**

1. 13FD141, 13FD144, 13FD148. We can not currently concur with the consultant's recommendations that these abandoned limestone quarries now designated as archaeological sites should be regarded as potentially eligible for listing on the National Register of Historic Places because not enough information was provided to establish that these sites would be eligible for listing either individually or as part of a historic district related to limestone quarrying industry within this area. In our opinion, the status of these sites remains unevaluated. We do concur with the consultant's recommendation that further research would be needed to determine whether these archaeological sites would be eligible for listing on the National Register of Historic Places individually or as part of a historic district. If these sites will be within the Area of Potential Effect, and will be affected by the proposed undertaking, we would recommend that a historic context be prepared for the limestone quarrying industry within this area to provide the research questions that would guide any further archaeological or historical investigations of these properties.
2. Oak Wood Cemetery. We note that an Iowa Site Inventory form was not prepared for this property either within the archaeological survey or within the historical and architectural report. We request that an Iowa Site Inventory form be prepared for this cemetery. In our opinion, this property does not need to be fully evaluated as we are anticipating that you will be avoiding this cemetery. We are also anticipating that for the purposes of concluding the Section 106 consultation process for this cemetery, you will treat this cemetery as if it were potentially eligible for listing on the National Register and would provide our office with a Conditional No Adverse Effect determination for this cemetery with the understanding that this cemetery will not be impacted and affected by any proposed activities associated with this undertaking.



# Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1035 Fax 515-239-1726

October 4, 2010

Ref. No: NHSN-018-6(85)--2R-34

Floyd County

Primary

WVA #498

Mr. Douglas W. Jones  
Review and Compliance  
Bureau of Historic Preservation  
State Historical Society of Iowa  
600 East Locust  
Des Moines, IA 50319-0290

R&C: 1010.34 029

Dear Doug:

**RE: Phase I Archaeological Investigation for Improvements to the U.S. 218 / U.S. 18 / IA 27 Intersection near the City of Floyd**

Enclosed for your review and comment is the Phase I Archaeological Investigation for the above referenced federally funded project. This project proposes to construct an interchange at the intersection of U.S. 218 / U.S. 18 / IA 27, and improve access control along U.S. 18 west of Floyd from March Avenue to County Road B35 (185<sup>th</sup> Street) south of Floyd.

This archaeological investigation consisted of an archival and site records search, and field investigation. The field investigation included a pedestrian survey and subsurface testing on previously unsurveyed areas, totaling 327 acres (132 hectares). A total of 627 acres (254 hectares) were reviewed for this project.

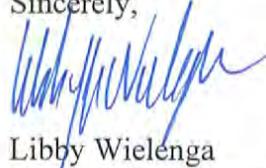
During this investigation, a total of 15 sites were identified and examined (five previously recorded sites and 10 previously unrecorded sites). The following sites were examined during this investigation and determined not eligible for the National Register of Historic Places (NRHP): 13FD52, 13FD53, 13FD110, 13FD111, 13FD139, 13FD140, 13FD142, 13FD143, 13FD145, and 13FD146.

The following five sites were examined during this investigation and determined potentially eligible for the NRHP: 13FD51, a historic scatter; 13FD141, a historic limestone quarry; 13FD144, a historic limestone quarry; 13FD147, an early nineteenth century historic scatter; and 13FD148, a historic limestone quarry. Avoidance for these sites is recommended.

Oakwood Cemetery, a known and platted cemetery, is located within the study area. This platted cemetery is protected under Iowa State Law and should be avoided.

A determination of effect will be established after project alignment information becomes available, and consultation regarding all historic properties has occurred. If you concur with the finding of this archaeological report, please sign the concurrence line below, add your comments, and return this letter. If you have any questions, please contact me.

Sincerely,



Libby Wielenga  
Office of Location and Environment  
Libby.Wielenga@dot.iowa.gov

Enclosure

cc: Vicki Dumdei, District 2 Engineer  
Dee Ann Newell, NEPA / OLE  
Nurit Finn, Wapsi Valley Archaeology

Concur: Douglas W. Jones Date: 10/21/2010  
SHPO Archaeologist

Comments:

SEE ATTACHED SHEET  
FOR ADDITIONAL COMMENTS



# Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

515-239-1035 Fax 515-239-1726

October 4, 2010

Ref. No: NHSN-018-6(85)--2R-34

Floyd County

Primary

WVA #508

Mr. Ralph Christian  
 Review and Compliance  
 Bureau of Historic Preservation  
 State Historical Society of Iowa  
 600 East Locust  
 Des Moines, IA 50319-0290

R&C: 101034029

Dear Ralph:

**RE: Intensive Architectural History Survey for Improvements to the U.S. 218 /  
 U.S. 18 / IA 27 Intersection near the City of Floyd**

Enclosed for your review and comment is the Intensive Architectural History Survey for the above referenced federally funded project. This project proposes to construct an interchange at the intersection of U.S. 218 / U.S. 18 / IA 27, and improve access control along U.S. 18 west of Floyd from March Avenue to County Road B35 (185<sup>th</sup> Street) south of Floyd.

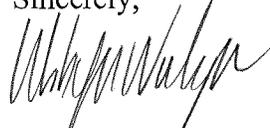
This survey identified and evaluated properties within and adjacent to the study area to determine their eligibility for inclusion to the National Register of Historic Places (NRHP). A total of forty-three architectural properties were examined during this survey, including seven previously identified properties that were reevaluated.

Of the seven previously identified properties, two individual buildings, the Kimball/Dierks barn (34-00133) and the Kimball/Dierks silo (34-00139) have been restored and are now recommended eligible for the NRHP under Criterion A for their association with the history of Floyd and the Changing Iowa Farm context, and Criterion C for their outstanding structural integrity. Avoidance of these buildings is recommended.

Two previously unidentified properties are also eligible for the NRHP. The Schmidt/Ewalt house (34-00583) is recommended eligible for the NRHP under Criterion C for its outstanding structural integrity. The Schmidt/Ewalt 1858 bank barn (34-00584), is recommended eligible for the NRHP under Criterion A for its association with the history of Floyd and the Changing Iowa Farm context, and Criterion C for its outstanding structural integrity. Avoidance of these buildings is recommended.

A determination of effect will be established after project alignment information becomes available, and consultation regarding all historic properties has occurred. If you concur with the results of this intensive architectural history survey, please sign the concurrence line below, add your comments, and return this letter. If you have any questions, please contact me.

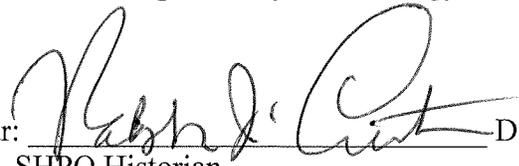
Sincerely,



Libby Wielenga  
Office of Location and Environment  
Libby.Wielenga@dot.iowa.gov

Enclosure

cc: Vicki Dumdei, District 2 Engineer  
Dee Ann Newell, NEPA / OLE  
Nurit Finn, Wapsi Valley Archaeology

Concur:  Date: 11/12/10  
SHPO Historian

Comments:

**APPENDIX C**

**FARMLAND PROTECTION FORM**



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

<b>PART I (To be completed by Federal Agency)</b>	3. Date of Land Evaluation Request <b>6/29/15</b>	4. Sheet 1 of <b>1</b>
---	--	------------------------

1. Name of Project <b>US 18/US218/Iowa 27 Corridor Project</b>	5. Federal Agency Involved <b>Federal Highway Administration</b>
--	--

2. Type of Project <b>Transportation Improvement</b>	6. County and State <b>Floyd, Iowa</b>
--	--

<b>PART II (To be completed by NRCS)</b>	1. Date Request Received by NRCS <b>6/29/15</b>	2. Person Completing Form <b>Jared Finley</b>
--	--	--

3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	4. Acres Irrigated   Average Farm Size <b>870</b>   <b>337</b>
--	---

5. Major Crop(s) <b>Corn - Soybeans</b>	6. Farmable Land in Government Jurisdiction Acres: <b>317,709</b> % <b>89.6</b>	7. Amount of Farmland As Defined in FPPA Acres: <b>175,420</b> % <b>55</b>
--	--	---

8. Name Of Land Evaluation System Used <b>CSR2</b>	9. Name of Local Site Assessment System <b>None - FPPA</b>	10. Date Land Evaluation Returned by NRCS <b>8/5/15</b>
---	---	--

<b>PART III (To be completed by Federal Agency)</b>	<b>Alternative Corridor For Segment</b>			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	<b>56.6</b>	<b>64.9</b>		
B. Total Acres To Be Converted Indirectly, Or To Receive Services	<b>0</b>	<b>0</b>		
C. Total Acres In Corridor	<b>56.6</b>	<b>64.9</b>		

<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres Prime And Unique Farmland	<b>30.6</b>	<b>35.1</b>		
B. Total Acres Statewide And Local Important Farmland	<b>0</b>	<b>0</b>		
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	<b>0</b>	<b>0</b>		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	<b>0</b>	<b>0</b>		

<b>PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)</b>	Corridor A	Corridor B	Corridor C	Corridor D
	<b>62</b>	<b>63</b>		

<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>	Maximum Points	Corridor A	Corridor B	Corridor C	Corridor D
1. Area in Nonurban Use	15	<b>10</b>	<b>10</b>		
2. Perimeter in Nonurban Use	10	<b>7</b>	<b>7</b>		
3. Percent Of Corridor Being Farmed	20	<b>9</b>	<b>9</b>		
4. Protection Provided By State And Local Government	20	<b>20</b>	<b>20</b>		
5. Size of Present Farm Unit Compared To Average	10	<b>0</b>	<b>0</b>		
6. Creation Of Nonfarmable Farmland	25	<b>0</b>	<b>0</b>		
7. Availability Of Farm Support Services	5	<b>5</b>	<b>5</b>		
8. On-Farm Investments	20	<b>10</b>	<b>10</b>		
9. Effects Of Conversion On Farm Support Services	25	<b>0</b>	<b>0</b>		
10. Compatibility With Existing Agricultural Use	10	<b>10</b>	<b>10</b>		
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>	<b>160</b>	<b>71</b>	<b>71</b>	<b>0</b>	<b>0</b>

<b>PART VII (To be completed by Federal Agency)</b>	Corridor A	Corridor B	Corridor C	Corridor D
Relative Value Of Farmland (From Part V)	<b>100</b>	<b>62</b>	<b>63</b>	<b>0</b>
Total Corridor Assessment (From Part VI above or a local site assessment)	<b>160</b>	<b>71</b>	<b>71</b>	<b>0</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>	<b>260</b>	<b>133</b>	<b>134</b>	<b>0</b>

1. Corridor Selected: <b>Corridor A</b>	2. Total Acres of Farmlands to be Converted by Project: <b>56.6</b>	3. Date Of Selection: <b>8/5/15</b>	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
--	--	--	---

5. Reason For Selection:  
**Corridor A minimizes impacts by staying on existing alignment and using minimal additional ROW when necessary in order to meet current design and safety standards.**

Signature of Person Completing this Part: <b>Matt Oetker</b>	DATE <b>8/5/15</b>
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NOTE: Complete a form for each segment with more than one Alternate Corridor

## CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points  
90 to 20 percent - 14 to 1 point(s)  
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points  
90 to 20 percent - 9 to 1 point(s)  
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points  
90 to 20 percent - 19 to 1 point(s)  
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points  
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)  
As large or larger - 10 points  
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points  
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)  
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points  
Some required services are available - 4 to 1 point(s)  
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points  
Moderate amount of on-farm investment - 19 to 1 point(s)  
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points  
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)  
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points  
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)  
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

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