IOWA 58 – VIKING ROAD CORRIDOR
FROM U.S. 20 TO GREENHILL ROAD
IN
CEDAR FALLS, BLACK HAWK COUNTY, IOWA
NHSX-U-58-1(91)--8S-07

ENVIRONMENTAL ASSESSMENT

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

By The

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
IOWA NORTHLAND REGIONAL COUNCIL OF GOVERNMENTS
and
CITY OF CEDAR FALLS, IOWA

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

For the City of Cedar Falls

For the Office of Location & Environment
Iowa Department of Transportation

For the Iowa Division Administrator
Federal Highway Administration

8/31/2015
Date of Approval for Public Availability

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PREFACE

The Transportation Equity Act of the 21st 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	
☑	☑ Land Use	☑	☑ Wetlands
☐	☐ Community Cohesion	☑	☐ Surface Waters and Water Quality
☐	☐ Churches and Schools	☐	☐ Wild and Scenic Rivers
☐	☐ Environmental Justice	☑	☑ Floodplains
☑	☐ Economic	☐	☐ Wildlife and Habitat
☐	☐ Joint Development	☐	☐ Threatened and Endangered Species
☑	☑ Parklands and Recreational Areas	☐	☐ Woodlands
☑	☑ Bicycle and Pedestrian Facilities	☑	☑ Farmlands
☑	☑ Right-of-Way		
☑	☑ Relocation Potential		
☑	☑ Construction and Emergency Routes		
☐	☐ Transportation		

CULTURAL		PHYSICAL	
☑	☐ Historical Sites or Districts	☑	☑ Noise
☑	☐ Archaeological Sites	☐	☐ Air Quality
☐	☐ Cemeteries	☑	☐ Mobile Source Air Toxics (MSATs)
		☐	☐ Energy
		☑	☐ Contaminated and Regulated Materials Sites
		☐	☐ Visual
		☑	☐ Utilities

☐	**CONTROVERSY POTENTIAL** Click here to enter text.
☑	**Section 4(f): Park or Recreation Areas- Cedar Prairie Trail; Greenhill Trails; El Dorado Heights Park; Main St Cul-de-Sac Park**

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1.0 DESCRIPTION OF THE 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.

1.1 Project Description

The Proposed Action consists of the improvement of Iowa Highway 58 (IA 58) from U.S. Highway 20 (U.S. 20) north to Greenhill Road in Cedar Falls (Black Hawk County, Iowa). The improvement would include limiting at-grade access to IA 58 by adding one or more interchanges to the corridor which would be located at Viking Road, Greenhill Road, and reconfiguring the U.S. 20 interchange (Figure 1). In order to construct these interchanges and associated ramps, the pavement of IA 58 would be reconstructed. In a couple of locations, the alignment of IA 58 would be shifted. These are described under the Alternatives section below.

1.2 Study Area

The primary area of investigation for the project is generally bounded by Greenhill Road on the north and U.S. 20 on the south (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 outlines the Study Area of the Proposed Action.

2.0 PROJECT HISTORY

This project was originally conceived as a study of Viking Road and IA 58 because since 1996, traffic volumes have steadily increased on IA 58 due to continued business development in the area. This has created congestion, delays and backups as well as safety issues, particularly at the intersection with Viking Road. Because IA 58 is a link in the Avenue of the Saints corridor, from a continuity standpoint, it made sense to include the roadway between U.S. 20 and Greenhill Road. There was also concern that upgrading only Viking Road to an interchange would increase traffic issues at Greenhill Road and Ridgeway Avenue. The Greenhill Road intersection had previously been evaluated for an interchange, but that project was never completed.

In 2011, then renewed in 2014, the Iowa Department of Transportation (Iowa DOT) distributed a map showing the Corridor Preservation Zone for the IA 58 Corridor. This zone indicated possible interchanges at Performance Drive and Greenhill Road. These options, as well as a possible interchange at Viking Road and potential changes to the U.S. 20 interchange, will be evaluated as part of the project.

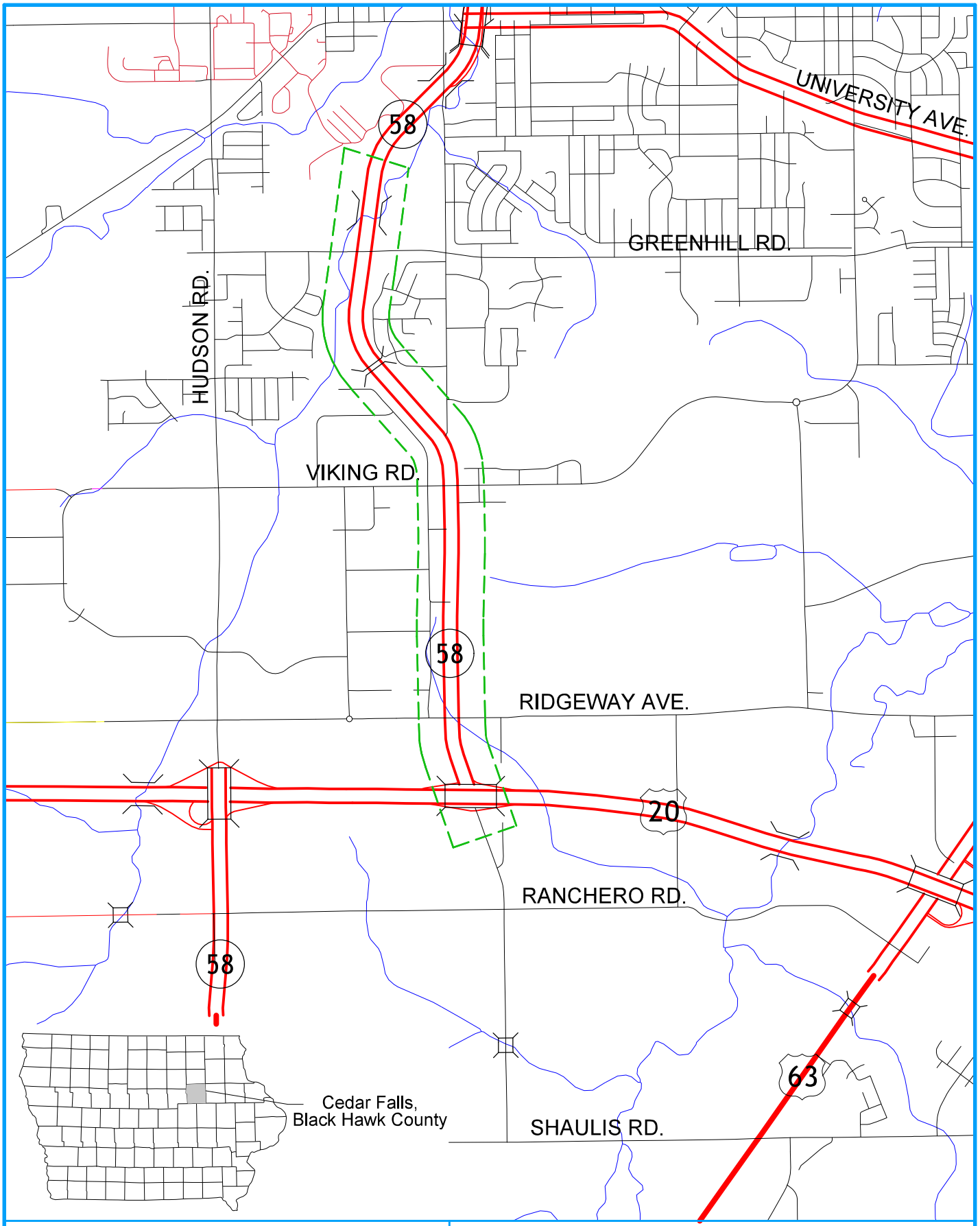

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Figure 1
Location Map
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

SEPTEMBER 2015

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3.0 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 the City of Cedar Falls.

3.1 Purpose of the Proposed Action

The purpose of the IA 58 / Viking Road Corridor improvement project is to increase safety for vehicles, pedestrians and bicyclists; to improve the flow of traffic; and to provide adequate capacity to accommodate future traffic growth in the corridor.

3.2 Need for Action

The need for the project is supported by several factors, including safety concerns, traffic congestion, project traffic volumes, and the need to accommodate future traffic generators. These factors are discussed below

3.2.1 Safety

- In a recent 5-year period (2008-2012), 168 traffic crashes were recorded in the IA 58 Corridor between Ridgeway Avenue and Greenhill Road (see Table 3-1). Many of these crashes involved rear-end collisions and left-turn violations at the signalized intersections.

- Many of the traffic crashes were serious enough to cause injuries. A total of 35 injuries were recorded within the 5-year period. An additional 50 “possible injuries” were recorded on the crash reports.

- The crash rate at the IA 58 / Viking Road intersection is approximately 1.4 crashes per 100 million vehicles passing through the intersection. This rate is approximately 40% higher than the statewide average for similar roadways.

TABLE 3-1
TRAFFIC CRASHES ON IOWA 58
BETWEEN RIDGEWAY AVENUE AND GREENHILL ROAD
FROM 2008-2012

		Injuries			Total
	Fatalities	Major	Minor	Possible	Crashes
Ridgeway Avenue	0	2	10	10	35
Shawnee Road	0	0	0	0	5
Viking Road	2*	5	7	23	77
Greenhill Road	0	2	9	17	51
Total	2	9	26	50	168
**During previous 5-year period, 1 additional fatality occurred.*					

- Two fatalities were recorded at the IA 58 / Viking Road intersection in this 5-year period. One of these fatalities involved a pedestrian attempting to cross IA 58.

- At least one additional fatality occurred in the IA 58 corridor in the years preceding the above 5-year period. This fatality occurred at the Greenhill Road intersection.

- Pedestrian crossings on IA 58 are becoming a significant safety concern. The current development along IA 58 includes several motels on the west side of IA 58 and a large commercial / restaurant area on the east side. This pattern of development results in a significant flow of pedestrians who cross IA 58 at the Viking Road intersection. The at-grade crosswalks at this intersection currently cross 6 lanes of traffic, making it more difficult for some pedestrians to cross the street. The pedestrian fatality described above occurred at the Viking Road intersection.

- The state of Iowa maintains a ranked list of "Intersection Safety Improvement Candidates," indicating those intersections which have the most severe safety records. The intersection of IA 58 and Viking Road, located in the center of the project corridor, is ranked No. 4 on this statewide list and is the highest ranked intersection in the Cedar Falls-Waterloo metropolitan area.

3.2.2 Traffic

- Traffic volumes have been increasing substantially in the IA 58 Corridor in recent years.

    - On IA 58 north of Viking Road, traffic has increased by over 40% in the last 12 years. Current traffic volumes in this segment are approximately 25,000 vehicles per day.

    - On Viking Road, current traffic volumes just east of IA 58 are approximately 19,600 vehicles per day. This traffic volume has increased by over 1,030% (more than a 10-fold increase) in the last 12 years.

- Much of the increased traffic can be attributed to a rapidly-growing industrial and commercial area adjacent to the IA 58 Corridor.

    - The Cedar Falls Industrial Park is located just west of IA 58, from Ridgeway Avenue to north of Viking Road, and has been growing steadily in recent years.

    - A major commercial area has developed on Viking Road just east of IA 58 and now includes five "big-box" stores, as well as numerous out-lots and smaller businesses.

    - The majority of traffic generated by the above areas utilizes IA 58 as the primary highway access point, which accounts for the rapid growth of traffic on IA 58 and connecting streets.

- Turning traffic frequently backs up beyond the left-turn lanes at the Viking Road intersection, causing stopped vehicles to queue up in the high-speed through lanes. This situation occurs even though Iowa DOT recently lengthened the turn lanes.

- During the peak shopping days of the year, traffic in the IA 58 Corridor is observed to be significantly higher than normal, resulting in additional traffic flow problems.

- Frequent traffic delays occur along IA 58 and connecting streets, particularly during the peak afternoon hours and during peak shopping days. Traffic delays and starting / stopping traffic contribute to wasted time, increased fuel consumption, increased air quality emissions, increased traffic noise, and increased costs to road users.

3.2.3 Accommodation of Future Traffic Growth

- In addition to the land development which has already occurred in the IA 58 Corridor, there are still large areas of undeveloped land adjacent to the corridor which could potentially develop in the future. Over 250 acres of undeveloped land are located on properties immediately abutting IA 58; and several hundred additional acres of potential development are located along Viking Road to the east of IA 58. The City anticipates that significant new development will continue to occur throughout this corridor.

- Additional development in the IA 58 Corridor will add more traffic to the roadway system, which is already strained to meet the existing traffic demands. As traffic volumes increase, it is anticipated that the traffic congestion, delays, noise, air quality emissions, traffic crashes, injuries and fatalities will continue to increase in this corridor.

- The Iowa DOT maintains a regional forecasting model to predict the future traffic volumes throughout the metropolitan area. The Iowa DOT model predicts that traffic on IA 58 (north of Viking Road) will increase an additional 80% between 2013 and 2040, resulting in traffic volumes exceeding 45,000 vehicles per day. This volume of traffic would substantially exceed the capacity of the existing 4-lane, at-grade highway which has a recommended maximum volume of approximately 37,000 vehicles per day. In addition, the heavy southbound to eastbound and eastbound to northbound left-turn movements cause significant signal delay, in part because they are at right angles to each other rather than being directly opposite of each other.

4.0 ALTERNATIVES

This section discusses the alternatives investigated to address the project's purpose and need for the Proposed Action. A range of alternatives were developed, including various interchange configurations at intersections on IA 58, followed by a screening process to narrow the range of alternatives. The No Build Alternative, the alternatives considered but dismissed, and the Preferred Alternative are discussed below.

4.1 No Build Alternative

Under the No Build Alternative, no improvements would be made to the existing roadway. Only maintenance and repairs would be done. The roadway's geometric features and access control would remain the same. The No Build Alternative would not have any direct or indirect impacts to adjacent properties. No additional right-of-way would be acquired, and no modifications would be done to the roadway.

The No Build Alternative would not meet the purpose and need for the project. It would not improve the safety and operations of IA 58 between U.S. 20 and Greenhill Road. Although it does not meet the purpose and need, the No-Build Alternative will be carried forward to provide a baseline for comparing the potential impacts of the Preferred Alternative, and consideration of a No Build Alternative is required by Council on Environmental Quality regulations for implementing NEPA (40 CFR 1500-1508).

4.2 Alternatives Considered but Dismissed

This project would add interchanges along IA 58 in Cedar Falls, Iowa. Various interchange configurations have been considered for U.S. 20, Viking Road and Greenhill Road. In addition, an interchange at Performance Drive was considered. Through meetings with City staff, INRCOG and Iowa DOT, as well as input from the public, the alternatives were narrowed to an interim build and an ultimate build alternative at U.S. 20, and one build alternative at Viking Road and Greenhill Road. Alternatives considered but dismissed at each of these intersections, including Performance Drive, are discussed below.

4.2.1 U.S. 20 Alternatives

Numerous alternatives were considered for the U.S. 20 area. These nine alternatives can be grouped into two categories: system interchanges that do not connect to Ridgeway Avenue, and system interchanges that do connect to Ridgeway Avenue.

System Interchanges - No Connection to Ridgeway Avenue

Six system interchanges were developed which did not include an at-grade connection to Ridgeway Avenue. Three of these interchange alternatives included a loop exit ramp. All of these interchanges would handle the forecast traffic volumes; however, they were eliminated from consideration because not connecting to Ridgeway Avenue would not meet the purpose and need. In addition, the alternatives that contained loop ramps were considered undesirable and substandard from an engineering perspective.

System Interchanges - Connection to Ridgeway Avenue

Three system interchanges were developed that connect to Ridgeway Avenue, one of which included extending Butterfield Road, located just to the east of the interchange. The alternative which included the Butterfield Road Extension was eliminated because there was not a significant benefit and it would require constructing and maintaining an additional bridge over U.S. 20. The other system interchange alternatives were eliminated because, although they met purpose and need, they were not the best configuration from an operations standpoint.

4.2.2 Performance Drive

In examining the overall IA 58 Corridor, consideration was given to adding an interchange at Performance Drive, which is located approximately 0.5 mile south of Viking Road. The concept was for a standard diamond interchange at this location instead of an interchange at Viking Road. Future access roads would need to be constructed, including a Performance Drive Extension to the east and north-south route connecting Ridgeway Avenue and Viking Road.

This alternative was dismissed because an interchange at this location would not do enough to alleviate traffic congestion and flow problems that exist at Viking Road without the future access roads in-place. There are no plans to construct these access roads on the current planning horizon. In addition, construction of this interchange would prevent an interchange with Ridgeway Avenue.

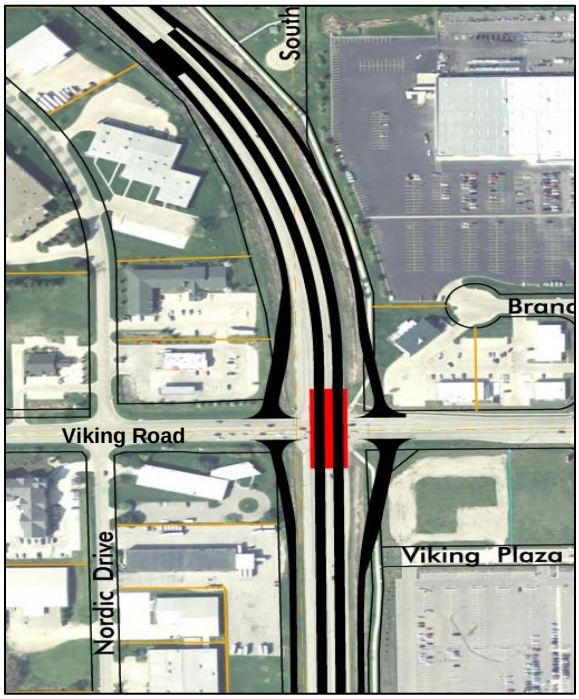
4.2.3 Viking Road

Tight Diamond Interchange

An alternative considered at Viking Road was a tight diamond interchange. This is very similar to a standard diamond interchange; however, in a tight diamond interchange, the ramps are close to the mainline lanes of the roadway. A tight diamond interchange uses less right-of-way than the standard diamond interchange.

This alternative was dismissed from consideration because of right-of-way impacts from widening Viking Road, traffic signal operations which are more difficult than with a single-point interchange, and it did not provide the best solution to handle the traffic congestion and operations at this location.

Trucks, in particular, would have a challenge with this interchange alternative, as it requires sharp turns to navigate the corners.

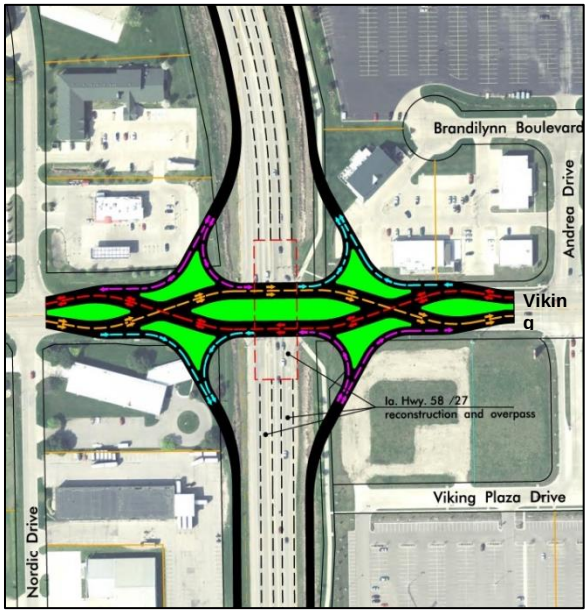


Tight Diamond Interchange at Viking Road

Diverging Diamond Interchange

Another alternative considered at Viking Road was the diverging diamond interchange. This type of interchange is a variation of a diamond interchange where the two directions of traffic (on Viking Road) cross to the opposite side on both sides of the bridge at the mainline (IA 58). This interchange type is able to handle large volumes of traffic efficiently. The graphic to the right shows an example.

This alternative was dismissed from consideration because of right-of-way impacts. It would encroach on existing businesses in all four corners of the intersection. In addition, the close proximity of signalized intersections (at Nordic Drive and Andrea Drive) would cause traffic operation problems.



Diverging Diamond Interchange at Viking Road

4.2.4 Greenhill Road

Tight Diamond Interchange

An alternative considered at Greenhill Road was a tight diamond interchange. This is very similar to a standard diamond interchange; however, in a tight diamond interchange, the ramps are close to the mainline lanes of the roadway. A tight diamond interchange uses less right-of-way than the standard diamond interchange. This would look similar to the tight diamond shown previously.

This alternative was dismissed from consideration because there is an earthen noise berm and a park located in the southeast quadrant of the intersection called El Dorado Heights Park. Also in the southwest quadrant, there are wetlands, floodplain and wooded open space. These would be impacted by this alternative more than the Preferred Alternative.

3-Quadrant Loop Ramp Interchange

Another alternative considered at Greenhill Road was the 3-quadrant interchange with a loop ramp in the northwest quadrant. The graphic on the next page shows this alternative.

This alternative was dismissed from consideration because it did not have desirable traffic operations and had impacts to wetlands on the west side of IA 58. Also, it added impacts in the northwest quadrant to prairie plots, land used for research by the University of Northern Iowa.

Loop Ramp Alternative at Greenhill Road

4.3 Preferred Alternative

The following sections describe the Preferred Alternative at each intersection / interchange location: U.S. 20, Viking Road and Greenhill Road. Figure 2 shows an overall view of the corridor.

4.3.1 U.S. 20 – Interim

The ultimate U.S. 20 system interchange is proposed in the future. Therefore, some interim improvements are needed until that time to reduce congestion and improve efficiency and flow of traffic. These improvements include changes at Ridgeway Avenue and at IA 58 on the south side of the U.S. 20 interchange as shown to the right.

Interim Improvements at U.S. 20 and Ridgeway Avenue

The interim improvements at Ridgeway Avenue propose to add dual left-turn lanes for IA 58 southbound and northbound traffic. A designated right-turn lane would be added on IA 58 north of Ridgeway Avenue. Portions of IA 58 would be reconstructed to add these turn lanes.

At the U.S. 20 interchange, one of the heaviest traffic patterns is from IA 58 southbound to U.S. 20 eastbound. Therefore, it is proposed to add dual turn lanes from IA 58 onto the eastbound U.S. 20 entrance ramp and construct a two-lane entrance ramp onto U.S. 20.

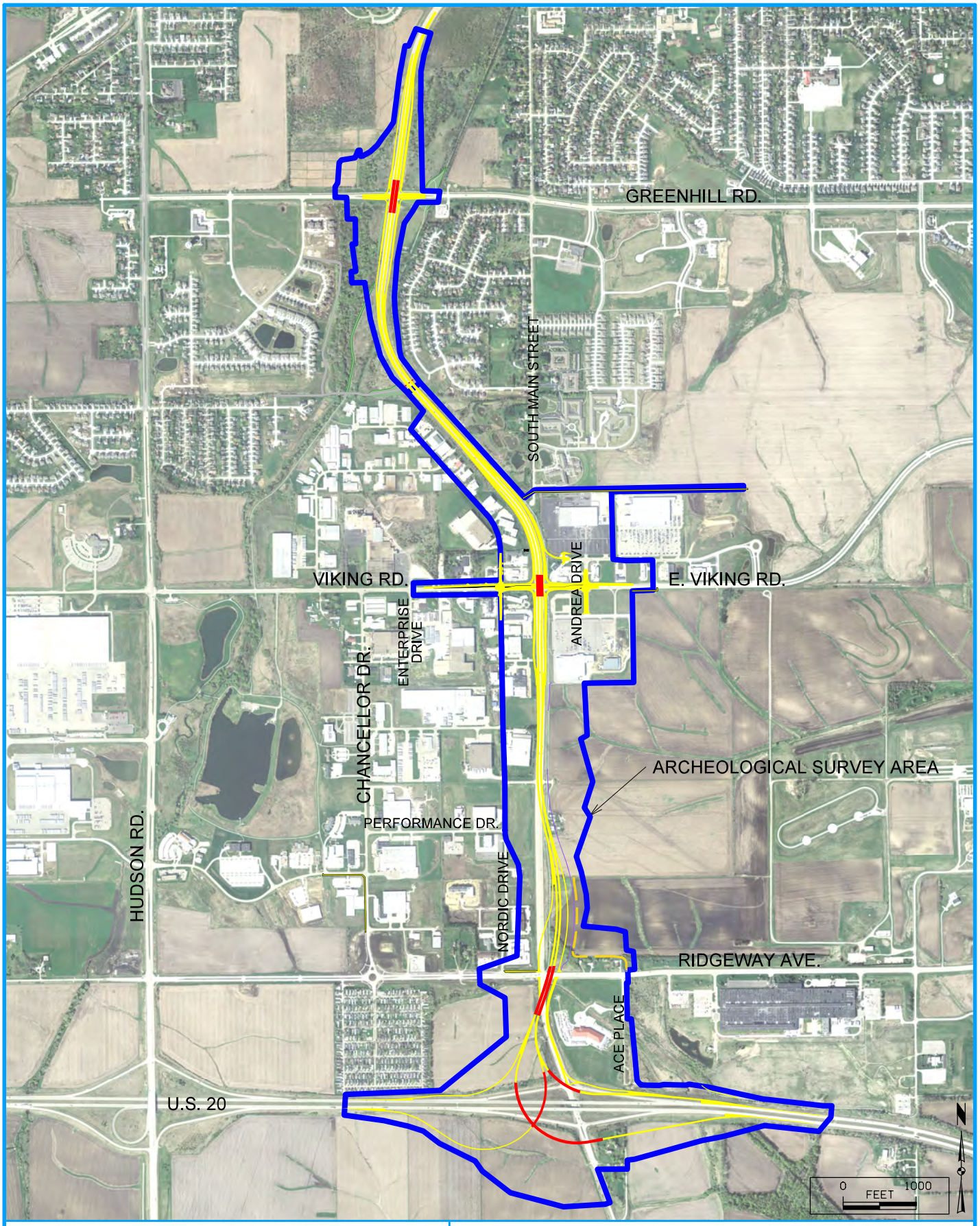


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Figure 2
Overall View
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

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4.3.2 U.S. 20 – System Interchange

With future traffic projections, it is anticipated that a system interchange will be needed to efficiently accommodate forecasted traffic volumes (Figure 3). A system interchange allows a vehicle to travel from one highway to another without having to come to a stop on a ramp before continuing onto the other highway, as is common in a standard diamond interchange. This interchange would have flyover ramps with two new bridges traveling over U.S. 20. Heading north, IA 58 would travel over Ridgeway Avenue and continue to Viking Road. However, ramps would be provided from the system interchange to allow a vehicle access to at-grade properties and Ridgeway Avenue.

Constructing the interchange would require shifting the alignment of IA 58 to the west, south of Ridgeway Avenue, and to the east, north of Ridgeway Avenue. An access road would be provided off Ridgeway Avenue to access agricultural properties north of Ridgeway Avenue.

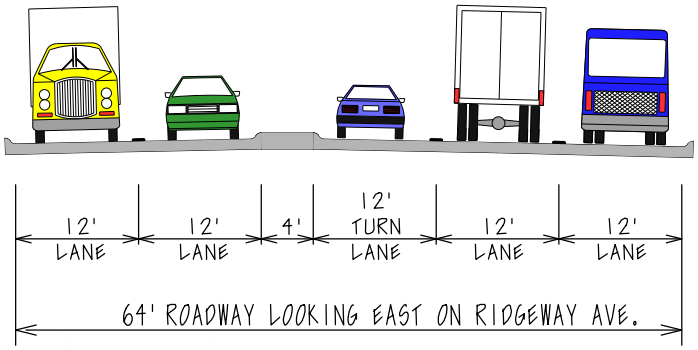
4.3.3 Viking Road

At this location, two alternatives were considered; one in which IA 58 would go over Viking Road and the other in which IA 58 would go under Viking Road. Although they are different from a driver's standpoint and from an engineering perspective, both could be constructed within the same footprint. Therefore, they had the same right-of-way related impacts.

The Preferred Alternative for this location is a single point interchange, with IA 58 traveling under Viking Road (Figure 4). One new bridge on Viking Road would be necessary as part of the interchange. Ramps north on IA 58 from Viking Road would extend approximately 2,500 feet and south of Viking Road would be approximately 1,730 feet long. IA 58 mainline pavement would be reconstructed through this same area in order to go under Viking Road and to match the grade of the ramps. A slight shift to the east in the IA 58 alignment would occur near Viking Road.

Viking Road would be reconstructed 1,065 feet west of Nordic Drive and 645 feet east of Andrea Drive. Dual left-turn lanes would be added as well as right-turn lanes. Dual turn lanes would be added on Viking Road at Andrea Drive. A portion of Andrea Drive would be reconstructed to add turn lanes north and south of the intersection with Viking Road.

A recreational bike trail (Cedar Prairie Trail) is currently located on the east side of IA 58 through this intersection. The Preferred Alternative would remove the trail between the south edge of the Target property (approximately 1,350 feet south of Viking Road) to the Main Street Cul-de-Sac Park (approximately 1,275 feet north of Viking Road). The Cedar Prairie Trail would be re-routed around the Target retail area on existing recreational trail, crossing Viking Road at Walmart Drive and continuing behind the Walmart retail area. Information on recreational trails and related impacts is discussed more in the impacts section (Section 5).



0 400 FEET

Proposed New Bridge

Proposed Pavement

X Road Closure/Trail removed

Relocated Access

SHAWNEE RD.

PROPOSED TRAIL RELOCATION

NORDIC DR.

CHANCELLOR DR.

RIDGEWAY AVE.

ACE PLACE

CEDAR PRAIRIE TRAIL

U.S.. 20

BUTTERFIELD RD.

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Figure 3
U.S. 20 Interchange
IA 58 Improvement Corridor
Cedar Falls, Iowa
Black Hawk County, Iowa
Environmental Assessment

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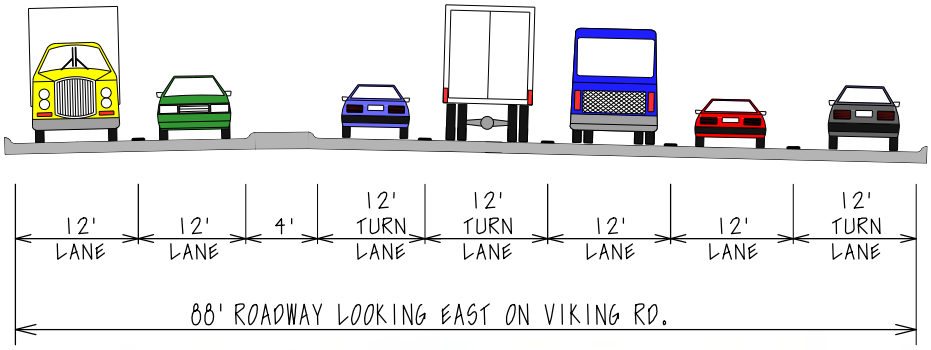

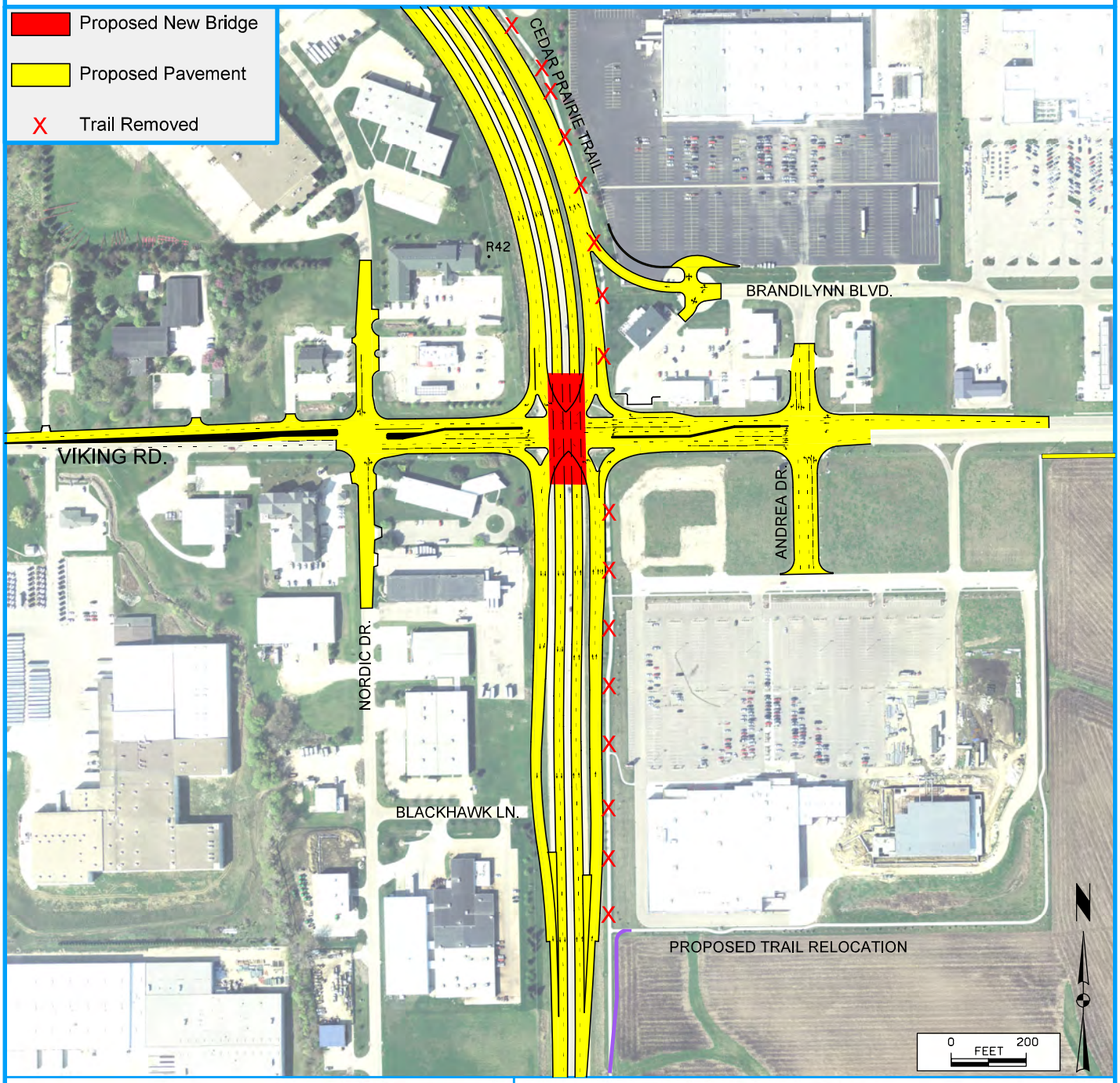

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Figure 4
Viking Road Interchange
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

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4.3.4 Greenhill Road

The Preferred Alternative for this location is a single point interchange, with IA 58 traveling over Greenhill Road (Figure 5). This interchange would require two new bridges on IA 58. The ramps would extend approximately 2,500 feet north of Greenhill Road and 2,060 feet south of Greenhill Road. Right- and left-turn lanes would be added on Greenhill Road. IA 58 mainline would be reconstructed through this area in order to go over Greenhill Road and match grade with the interchange ramps.

The bike trail underpass located 460 feet east of IA 58 will not be impacted by the construction of this interchange. A recreational bike trail is located on the north side of Greenhill Road. This trail will remain in its existing location, passing under the interchange. However, during construction, there will be temporary disruption of the trail. This is discussed more in the impacts section later in this document (Section 5).

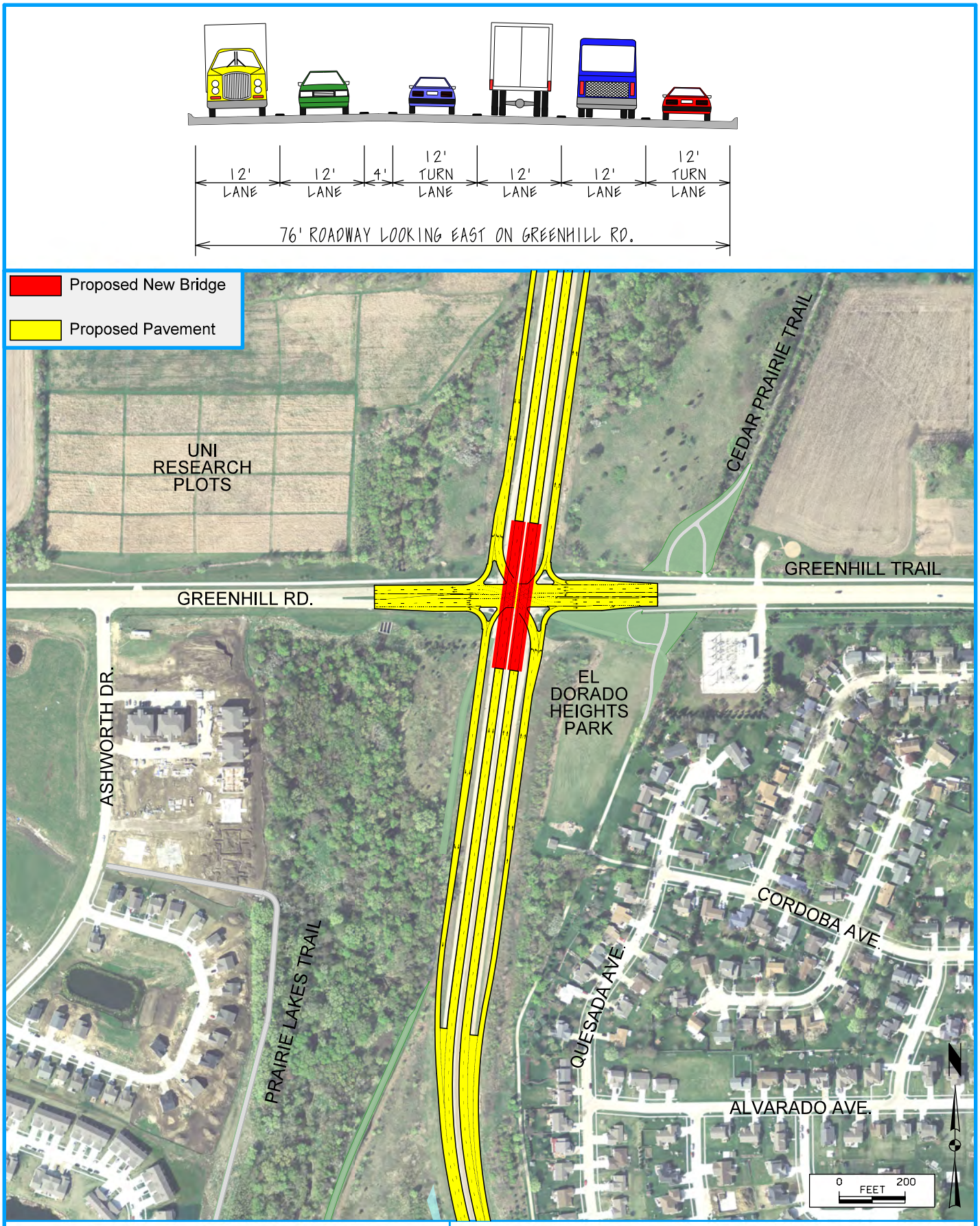

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Figure 5
Greenhill Road Interchange
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

SEPTEMBER 2015

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5.0 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 Preferred Alternative. The resources with a check in the second column in Table P-1, located at the beginning of this document, are discussed below. Figure 6 shows an overall view of impacts in the corridor.

Each resource section includes an analysis of the impacts of the No Build Alternative and the Preferred 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.

Project impacts were analyzed for each interchange area as follows: U.S. 20 impacts cover the system interchange north to Shawnee Road; Viking Road impacts are from Shawnee Road north to the Mayors Pedestrian Bridge; and Greenhill Road impacts cover from the Mayors Pedestrian Bridge north to the end of the ramp (Figures 7 - 9).

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.

5.1.1 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 IA 58 Corridor is a mix of land uses, from agricultural to industrial. As recently as the 1990s, this area was dominated by farmland. Over the past two decades, land has been developed into commercial retail and industrial land uses. In addition, near Greenhill Road, residential subdivisions have developed. Agricultural land still exists near Ridgeway Avenue and U.S. 20, along with some rural residences, but overall the character of the corridor is more urban in nature. The urbanization of the corridor is expected to continue as more businesses locate here with several new commercial and retail spaces becoming available in 2015 alone.

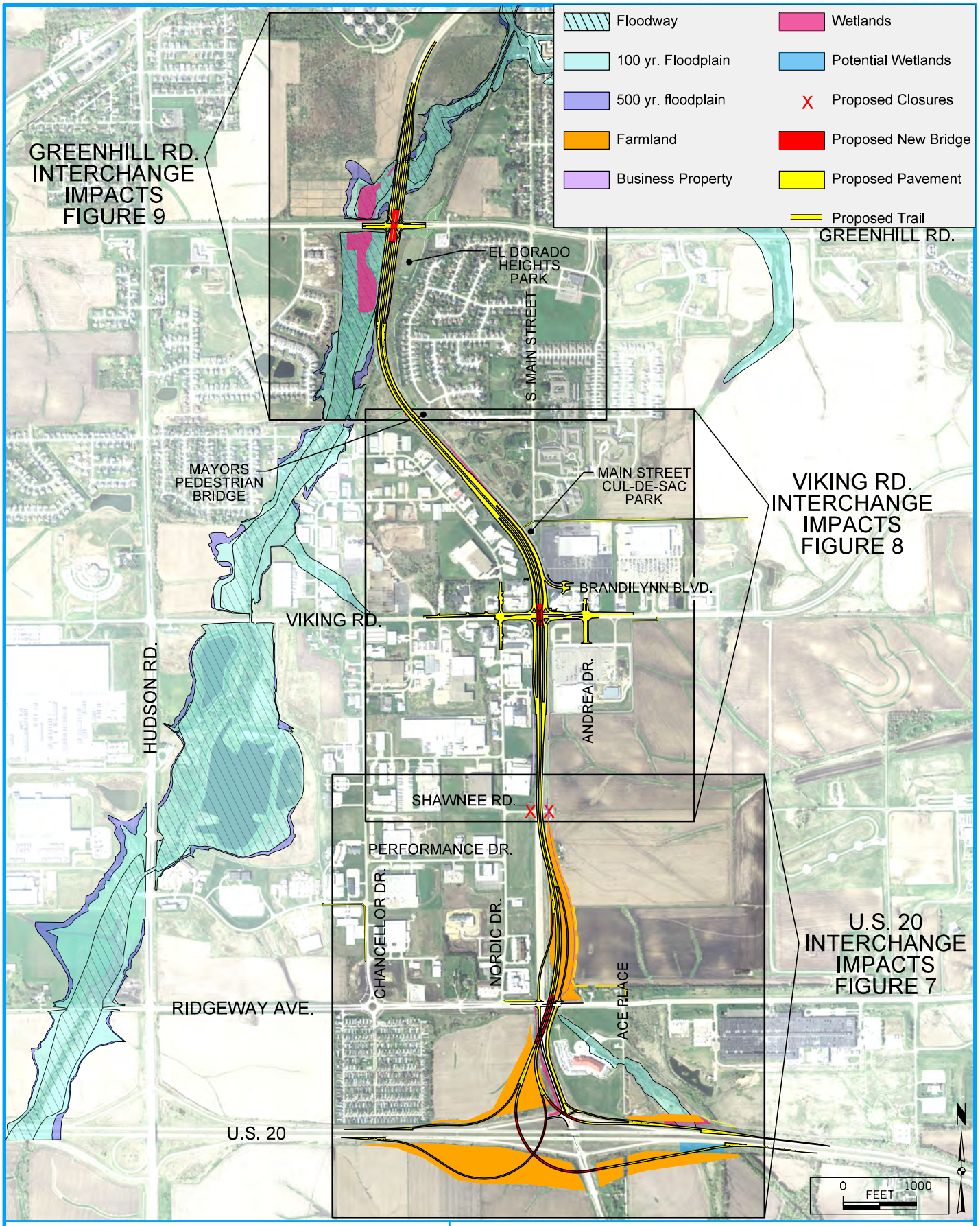

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Figure 6
Overall Impacts View
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

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No Build Alternative

The No Build Alternative would result in continued use of the highway. This continued use would not affect the overall land use.

U.S. 20 Preferred Alternative

The U.S. 20 interchange area falls into two jurisdictions: Hudson and Cedar Falls. North of U.S. 20 is within the City of Cedar Falls jurisdiction, and south of U.S. 20 is within the City of Hudson. Both will be discussed as is appropriate to this alternative.

The Interim Alternative at U.S. 20 involves the improvement of the Ridgeway Avenue / IA 58 intersection and minimal right-of-way, as well as some changes to lane configuration at the U.S. 20 interchange eastbound entrance ramp. These changes are consistent with both Cedar Falls and Hudson comprehensive plans.

The Preferred Alternative at U.S. 20 is a system interchange. On the north side, the City of Cedar Falls shows this area as a commercial corridor. With the interchange, in-place access will be maintained to Ridgeway Avenue so that businesses along this roadway are not bypassed by IA 58 traffic. Therefore, this is compatible with the City's comprehensive plan for this area.

On the south side of U.S. 20, the City of Hudson has incorporated this area but has not developed the land. Currently, it is used as agricultural and residential land uses. There is a proposed industrial/commercial development on the southwest quadrant of U.S. 20/IA 58, with seven lots proposed to be platted. The U.S. 20 system interchange would have an impact on businesses located here. Likely, any businesses in this area would have to be acquired. The severity of the impact will depend on the number and size of business(es) and the design standards at the time of construction.

Iowa DOT implemented corridor preservation for this area in 2008 and then renewed in 2014 so that, in the intervening years, this land is available for use for roadway development and construction.

Viking Road Preferred Alternative

At the Viking Road intersection, the land use is made up of industrial, commercial and retail land uses. Many of the businesses are located close to the highway right-of-way. In order to construct the proposed interchange, strip right-of-way will be needed from several different owners. Right-of way needs are discussed further in Section 5.1.4 below. No businesses would be displaced and all will be able to remain open throughout construction. Access would be maintained. Following completion of the interchange, traffic would be able to reach businesses in this area more safely and efficiently since traffic flow and operations are expected to be improved. The addition of an interchange at Viking Road is consistent with land use plans the City has in-place.

Greenhill Road Preferred Alternative

At the Greenhill Road intersection, land use is primarily residential, with subdivisions on the east and west sides of IA 58 south of Greenhill Road. There is some open land on the north side of Greenhill Road. In the northwest quadrant, the University of Northern Iowa owns the land and uses part of it for research. In the northeast quadrant, a church owns some of the open land and has future plans to build a new facility. The addition of an interchange at Greenhill Road is consistent with land use plans the City has in-place.

5.1.2 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 recreational 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 parks located in the project corridor: El Dorado Heights Park and Main Street Cul-de-Sac Park. El Dorado Heights Park is located near the intersection of Greenhill Road and IA 58. It is approximately 2.25 acres in size and includes a shelter, playground equipment and open play field. The Cedar Prairie Trail passes along the edge of the park. Main Street Cul-de-Sac Park is approximately 1.4 acres in size and has a shelter and parking for access to the Cedar Prairie Trail. In a letter from Iowa DNR, it was determined that neither park received Land & Water Conservation Funds or other federal program funds (see letter dated June 7, 2013, in Appendix B).

In addition to the parks, there are recreational trails within the project corridor, including the Cedar Prairie Trail and Greenhill Trail. Cedar Prairie Trail runs through much of the project, from Ridgeway Avenue north to Greenhill Road. Greenhill Trail is an east-west trail which passes through the project area. Some impacts to these trails would occur as a result of the project. These impacts are discussed below in Section 5.1.3 - Bicycle and Pedestrian Facilities. The parks and trails are shown on Figures 7-9.

No Build Alternative

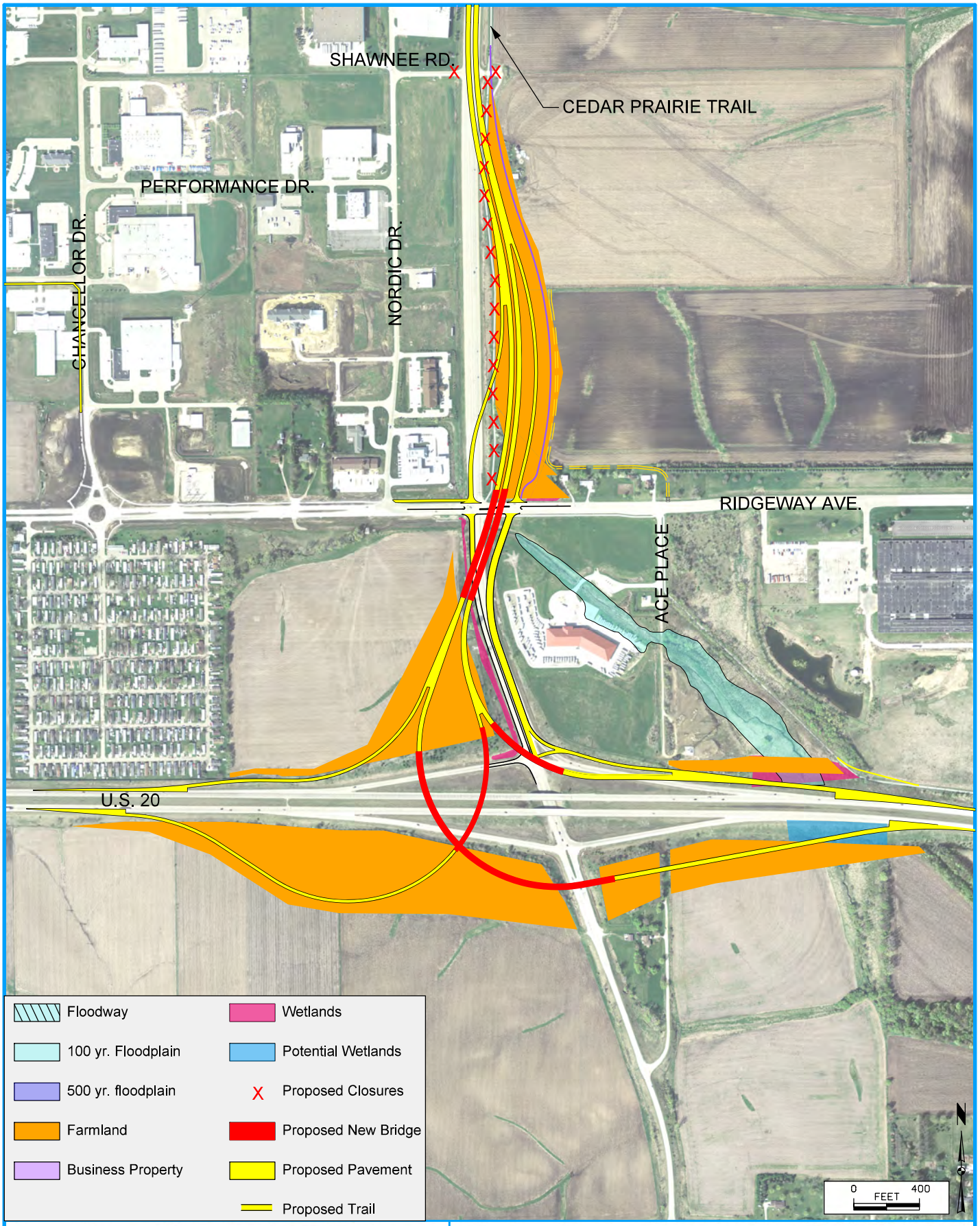
The No Build Alternative would not require acquisition of any land from parks or recreational properties.

U.S. 20 Preferred Alternative

No parks or recreational trails would be impacted by the proposed project, with the exception of a temporary impact during construction. This temporary impact is discussed below in Section 5.1.3 - Bicycle and Pedestrian Facilities.

Viking Road Preferred Alternative

There is one park near Viking Road and a recreational bike trail -- Main Street Cul-de-Sac Park and Cedar Prairie Trail.



AECOM

Figure 7
U.S. 20 / Ridgeway Ave. Impacts View
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

SEPTEMBER 2015

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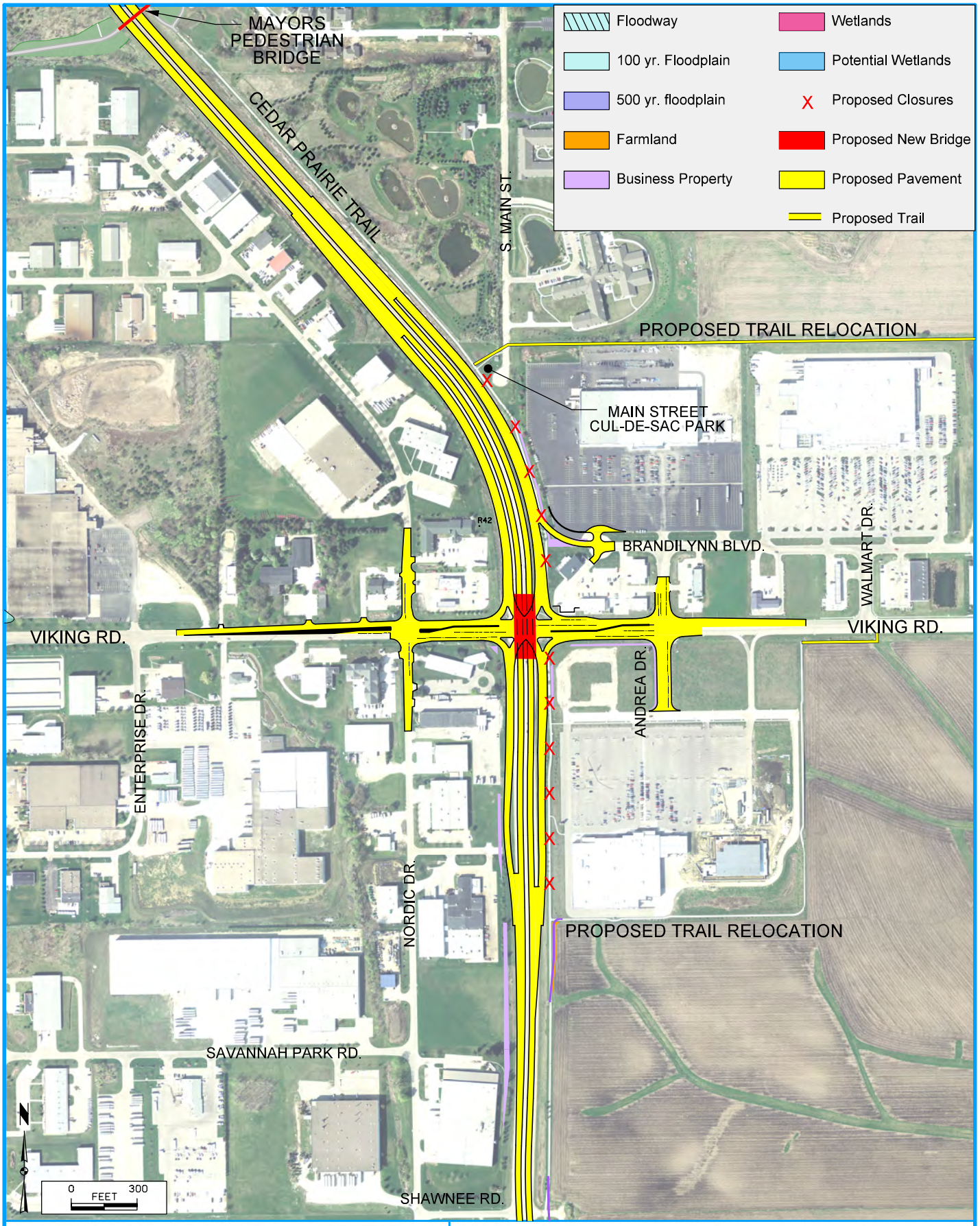

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Figure 8
Viking Road Impacts View
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

SEPTEMBER 2015

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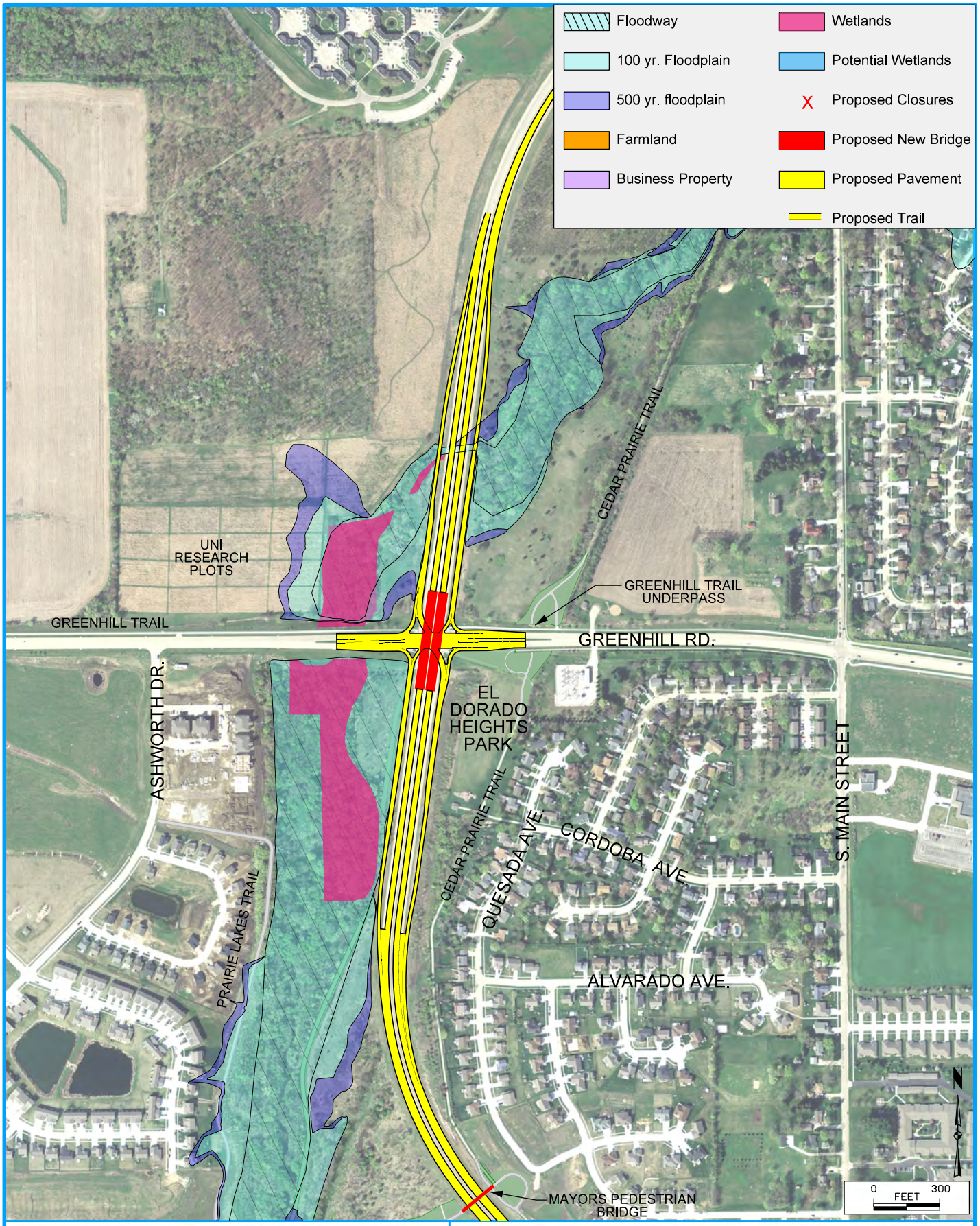

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Figure 9
Greenhill Road Impacts View
IA 58 Improvement Corridor
Cedar Falls, Iowa

Black Hawk County, Iowa
Environmental Assessment

SEPTEMBER 2015

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Main Street Cul-de-Sac Park is located 1,275 feet north of Viking Road and acts as a trailhead for the Cedar Prairie Trail. This park will not be impacted by the roadway project. However, the Cedar Prairie Trail is planned to be relocated and will enter the park from the east. Coordination with the City, Iowa DOT and FHWA for a Negative Declaration has been done (see letter in Appendix B).

The Cedar Prairie Trail would be relocated around the commercial retail area on the east side of IA 58. A portion of this trail would be permanently closed through the interchange of Viking Road and IA 58. This impact is discussed below in Section 5.1.3 - Bicycle and Pedestrian Facilities.

Greenhill Road Preferred Alternative

There is one park near Greenhill Road -- El Dorado Heights Park.

El Dorado Heights Park, acquired in 1996, is located at the corner of Greenhill Road and IA 58, behind the existing earthen noise berm which is parallel to IA 58. This park will be avoided by the project and will not have any right-of-way acquired from it.

5.1.3 Bicycle and Pedestrian Facilities

There is an extensive network of bike trails through the IA 58 Corridor and Study Area. The Cedar Prairie Trail runs parallel to IA 58, from Ridgeway Avenue to Greenhill Road. This trail connects with other routes traveling east-west at Ridgeway Avenue, the Mayors Pedestrian Bridge and Greenhill Road. Figures 7-9 show the trail network in more detail.

No Build Alternative

The No Build Alternative would not require the use of bicycle and pedestrian facilities along the highway.

U.S. 20 Preferred Alternative

An approximately 535-foot length of trail is proposed to be constructed on Ridgeway Avenue, from Nordic Drive to IA 58, to connect with an existing trail. This will provide better access from Cedar Prairie Trail to the Prairie Lakes Trail, which is west and north of the industrial park, as well as to the southeast on Sergeant Road Trail. Once the system interchange is in-place, the trail would be able to pass under the interchange bridges and would not be closed or relocated.

However, during the time of construction, there would be some disruption to users of the bike facility. This disruption in use would be temporary, and the trail would be restored to its original condition or better after roadway construction is complete. The City, Iowa DOT and FHWA have agreed to certain stipulations in regard to this temporary impact since the Cedar Prairie Trail is a Section 4(f) resource under 23 CFR 771.135. As such, this law requires that the resource be avoided or impacts minimized in order to comply with this law.

Viking Road Preferred Alternative

At Viking Road currently, the Cedar Prairie Trail runs parallel on the east side of IA 58 and crosses at the intersection. This is the location of the heaviest traffic with frequent turning movements. In the years from 2004-2013, there have been multiple pedestrian crashes at this location, some of which resulted in injuries. With the addition of a proposed single point interchange at this intersection, a portion of the trail will be permanently closed and relocated. This is because there is not enough right-of-way to fit the trail and also because moving the trail away from this interchange will improve its safety. A length of approximately 1,300 feet north and south of Viking Road will be closed. Cedar Prairie Trail is proposed to be re-routed around the back of retail areas instead of traveling through the proposed interchange. On the south side, there is an existing trail which passes behind the Target / Scheel's shopping area, crossing Viking Road at Andrea Street. This would be designated as Cedar Prairie Trail. On the north side, Cedar Prairie Trail would travel along Prairie Parkway and behind the Walmart / Blaine's shopping area to the Main Street Cul-de-Sac Park adjacent to IA 58.

However, during the time of construction, there would be some disruption to users of the bike facility. This disruption in use would be temporary, and the trail would be restored to its original condition or better after roadway construction is complete. The City, Iowa DOT and FHWA have agreed to certain stipulations in regard to this temporary impact since the Cedar Prairie Trail is a Section 4(f) resource under 23 CFR 771.135. As such, this law requires that the resource be avoided or impacts minimized in order to comply with this law.

Greenhill Road Preferred Alternative

Greenhill Road and IA 58 is the junction of two trails: Cedar Prairie Trail and Greenhill Trail. Currently, the Cedar Prairie Trail crosses Greenhill Road via a tunnel under the roadway to connect with Greenhill Trail or continue on to Cedar Prairie Trail. This tunnel, located approximately 460 feet east of the intersection, would not be impacted by the construction of the interchange at this location. Likewise, Cedar Prairie Trail would remain in its current location with the interchange in-place. The Greenhill Trail would be accommodated with the new proposed single point interchange. Approximately 2,650 feet south of Greenhill Road is the location of the Mayors Pedestrian Bridge. This bridge connects the Cedar Prairie Trail with trails on the west side, including Prairie Lakes Trail and trail connections into nearby neighborhoods. This bridge would not be impacted by construction of the project.

During the time of construction, there would be some disruption to users of the Greenhill Trail at Greenhill Road and IA 58. This disruption in use would be temporary, and the trail would be restored to its original condition or better condition after roadway construction is complete. The City, Iowa DOT and FHWA have agreed to certain stipulations in regard to this temporary impact since the Cedar Prairie Trail is a Section 4(f) resource under 23 CFR 771.135. As such, this law requires that the resource be avoided or impacts minimized in order to comply with this law.

5.1.4 Right-of-Way

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

No Build Alternative

The No Build Alternative would not require acquisition of any right-of-way along the highway.

Preferred Alternative – U.S. 20, Viking Road and Greenhill Road

The Proposed Action includes, within the preliminary impact area, a total of 44 parcels. The preliminary impact area (outside of existing right-of-way) includes approximately 44 acres of agricultural land, 3.8 acres of commercial land, and less than 1 acre of exempt land. The total approximate amount of new right-of-way needed is 73 acres. During final design, an effort would be made to minimize right-of-way acquisition and relocations to the extent practicable. Right-of-way 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.).

The table below summarizes the amount of right-of-way estimated to be required for each interchange.

TABLE 5-1
RIGHT-OF-WAY IMPACTS BY INTERCHANGE

Interchange	Number Parcels	Area (acres)
U.S. 20 System Interchange	19	62
Viking Road	19	4
Greenhill Road	6	7
Total	44	73

5.1.5 Relocation Potential

To assess the potential impacts associated with the Preferred Alternative, right-of-way 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 the relocation of any homes or businesses.

U.S. 20, Viking Road and Greenhill Road Preferred Alternatives

No businesses or homes would be acquired for construction of this project. However, there would be several partial acquisitions in the form of strip right-of-way. At U.S. 20, there is a potential development in the early planning stages. It would be located in the southwest

quadrant of the U.S. 20 interchange off of IA 58 and would include seven (7) developable lots. If this comes to fruition, one or more lots/businesses could be impacted when the U.S. 20 system interchange is constructed. The following table shows the number of partial acquisitions by interchange area.

TABLE 5-2
PARTIAL ACQUISITIONS BY PROPERTY TYPE

Interchange Area	Number of Parcels		
	Commercial / Industrial	Farmland	Government / Institutional
U.S. 20	4*	10	5
Viking Road	15	1	3
Greenhill Road	0	0	6

* An additional seven (7) parcels are anticipated southwest of U.S. 20. One or more of the lots/ businesses may be impacted at the time of construction for U.S. 20.

During final design, efforts will be made to minimize the amount of right-of-way needed from adjacent landowners. The number of parcels above represents the best estimate of the impact at this time.

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.

5.1.6 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. The IA 58 Corridor is a vital emergency corridor from southwestern parts of the City to and from downtown Cedar Falls. No hospitals or emergency service facilities are located within the Study Area. Several major hospital facilities are located in downtown Cedar Falls and are directly accessible from IA 58. The nearest fire department to the Study Area is the Cedar Falls Fire Rescue Department Station 3, located near the intersection of South Main Street and Bluebell Road. This station covers the area of the City south of University Avenue which includes the Study Area (City of Cedar Falls 2014a). The Cedar Falls Police Department is located in the Cedar Falls City Hall on Clay Street off of IA 57 (City of Cedar Falls 2014b). Iowa 57 and City Hall can both be accessed from the southwestern parts of the City via IA 58 through the Study Area.

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 4-lane highway 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.

U.S. 20 Preferred Alternative

The U.S. 20 Preferred Alternative would be improved in stages, first with the addition of turn lanes at Ridgeway Avenue and IA 58 on the south side of the U.S. 20 interchange, then later with the addition of a system interchange at U.S. 20 and IA 58. Both the interim and the final implementation of the U.S. 20 Preferred Alternative would result in improvements in emergency response times for vehicles as compared to the existing configuration. Additional impacts associated with construction of the Preferred Alternative are discussed in the Construction and Emergency Routes Summary section.

Viking Road Preferred Alternative

Local access at IA 58 would be terminated at Viking Road and replaced with an interchange. The Preferred Alternative would result in improvements in emergency response times for vehicles utilizing this new interchange as compared to the existing intersection. Additional impacts associated with construction of the Preferred Alternative are discussed in the Construction and Emergency Routes Summary section.

Greenhill Road Preferred Alternative

Local access at IA 58 would be terminated at Greenhill Road and replaced with an interchange. The Preferred Alternative would result in improvements in emergency response times for vehicles utilizing this new interchange as compared to the existing intersection. Additional impacts associated with construction of the Preferred Alternative are discussed in the Construction and Emergency Routes Summary section.

Construction and Emergency Routes Summary

Under all of the Preferred Alternatives, the IA 58 Corridor would remain open during construction, though temporary lane closures would likely be implemented at certain stages of construction. Any delays associated with construction of the Preferred Alternative should be coordinated to minimize access limitations, when possible. During periods of temporary lane closures, temporary and minor delays to traffic operations would be anticipated due to reduced roadway capacity, particularly during high traffic periods. These delays and lane closures could result in temporary delays for emergency services. The duration of lane closures and the associated delays would be minimized to the extent possible by scheduling such construction activities during low traffic periods, such as evenings or weekday non-peak periods.

The introduction of construction equipment would add slightly to the level of traffic within the Study Area. Movement of the equipment would occur throughout the period of construction but is not anticipated to adversely affect traffic operations or emergency services access.

Emergency responders, local residents and businesses, and the traveling public would be notified in advance of all temporary detours, closures and traffic control changes in the IA 58 Corridor throughout the construction period. Local emergency responders will be consulted and coordinated with to ensure that response times remain acceptable. Adjacent property owners

will also be consulted prior to construction to convey expectations and durations of road closures, detours and permanent modifications.

5.2 Cultural Impacts

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.

Title 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.

This section addresses potential direct and indirect impacts on both historic and archaeological resources located within the Study Area.

5.2.1 Historical Sites or Districts

A Phase I Historic Architecture Survey was completed in September 2014 for the Study Area. A total of 44 buildings (or groups of buildings) were recorded. Of these, 40 were modern structures (less than 50 years old). Of the four remaining historic structures, one met criteria for listing on the National Register of Historic Places (NRHP). This potentially eligible site is located within the Study Area near the U.S. 20 / IA 58 interchange. The site consists of a barn located south of U.S. 20 and east of IA 58 on Butterfield Road. Historic sites of significance that are eligible for the NRHP are protected under Section 4(f). This property, therefore, is considered to be a Section 4(f) property.

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 right-of-way would be needed. Therefore, the No Build Alternative would have no effect on historic structures or districts.

U.S. 20 Preferred Alternative

An alternative has been developed that avoids the National Register-eligible barn. This barn would be 27 feet from the toe of slope and 142 feet from the traveling lanes. Based on this alternative, SHPO determined the project will have No Adverse Effect with conditions on the historic barn (see letter dated 12/12/14 in Appendix B).

The following conditions will be detailed within the Special Provision of the design plans.

- A preconstruction survey of the Butterfield banked/basement barn (07-13291) will be completed that will document the present condition. The preconstruction survey will also establish a peak particle velocity (PPV) threshold for vibration.

- Sensors (crack and/or seismic) will be installed and tested daily. If 80 percent of the PPV threshold is reached, sensors will alert the contractor and, in turn, the construction engineer.

- If the PPV is reached, a meeting with the contractor and the construction engineer will identify alternative demolition/construction methods and/or equipment to be used to minimize project vibration.

- A post-construction survey will be performed.

Viking Road and Greenhill Road Preferred Alternatives

No historical sites or districts were identified within the Viking Road and Greenhill Road Preferred Alternative Study Areas. There would be no effect on historic structures or districts. Therefore, no further work is warranted.

5.2.2 Archaeological Sites

A Phase I Archaeological Survey was completed in September 2014 for the Study Area. A total of 489.9 acres were surveyed, and eight previously unrecorded archaeological sites were identified during the survey. These sites are not eligible for the NRHP; and no further work is recommended. Iowa SHPO concurred with this on December 12, 2014 (see letter in Appendix B).

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 right-of-way would be needed. Therefore, the No Build Alternative would have no effect on archeological sites.

U.S. 20, Viking Road and Greenhill Road Preferred Alternatives

During the archaeological surveys, eight previously unrecorded sites were found. However, none of them were determined to be eligible for the NRHP. Therefore, no further work is warranted.

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, floodplains and farmlands.

5.3.1 Wetlands

Waters of the U.S., including wetlands, waterways, 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 waters of the U.S. (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.

Field reviews were conducted to delineate the wetlands located within the study area. National Wetland Inventory (NWI) data were collected prior to the site visits and confirmed or denied based on observed on-ground conditions. Stantec Consulting Services, Inc., (Stantec) performed a delineation of wetland boundaries within the Study Area. The survey covered the area between the U.S. 20 interchange to just north of the IA 58 / Greenhill Road intersection, and included the proposed bike trail segment that extends east from IA 58 and will connect to the future Prairie Parkway that is currently under construction. The wetland delineation was conducted on June 19, 2013, and July 29, 2014. Wetlands were identified through a combination of a review of the 2012 Black Hawk County Soil Survey, the National Resources Conservation Service list of hydric soils for Black Hawk County, and the U.S. Fish and Wildlife National Wetlands Inventory to identify previously classified wetlands and areas with a high potential for the presence of wetlands. The field survey was conducted in accordance with the USACE wetland delineation guidance: 1) the plant communities were characterized, 2) the soil was evaluated for hydric characteristics, and 3) hydrology was assessed through observation (Stantec 2014).

Nine wetlands, covering approximately 13.42 total acres, were identified within the Study Area. The wetlands present within the Study Area include palustrine forested wetlands, palustrine emergent wetlands, and palustrine emergency / scrub-shrub wetlands. Two streams (the perennial Dry Run Creek and an unnamed intermittent stream) are also present within the Study Area. Both streams have a defined bed, bank, and ordinary high water mark and are therefore classified as Waters of the U.S. (Stantec 2014).

No Build Alternative

The No Build Alternative would not result in any roadway modifications within the Study Area. No construction activities would occur, and no new right-of-way would be needed. Therefore, the No Build Alternative would not impact any wetlands.

U.S. 20 Preferred Alternative

Four of the nine identified wetlands within the Study Area would be potentially impacted by the U.S. 20 Preferred Alternative. A total of 6.06 acres of wetlands are present in the U.S. 20 Preferred Alternative Study Area. A total of 5.44 (89.7%) of these wetlands would be impacted by the U.S. 20 Preferred Alternative. Table 5-3 presents the total wetlands within the U.S. 20 Preferred Alternative that would be impacted by the project. Given the extent of potential wetland impacts, a USACE Section 404 Clean Water Act Permit (Section 404 Permit) would be required for the U.S. 20 Preferred Alternative.

TABLE 5-3
WETLANDS AND WETLAND IMPACTS
ASSOCIATED WITH THE U.S. 20 PREFERRED ALTERNATIVE

	Type	Total Acres	Estimated Impacted Acres	Percent Impacted
Wetland 3	Palustrine emergent	0.96	0.96	100%
Wetland B	Palustrine emergent	0.28	0.002	7%
Wetland C	Palustrine emergent / scrub-shrub	2.00	1.8	90%
Wetland D	Potential palustrine emergent	2.82	2.68	95%
Total		6.06	5.44	89.7%

Viking Road Preferred Alternative

One of the nine identified wetlands within the Study Area would be potentially impacted by the Viking Road Preferred Alternative. A total of 1.37 acres of wetland are present in the Viking Road Preferred Alternative Study Area. All 1.37 acres of this wetland (100%) would be impacted by the Viking Road Preferred Alternative. Table 5-4 presents the total wetlands within the Viking Road Preferred Alternative that would be impacted by the project. Given the extent of potential wetland impacts, a USACE Section 404 Clean Water Act Permit (Section 404 Permit) would be required for the Viking Road Preferred Alternative.

TABLE 5-4
WETLANDS AND WETLAND IMPACTS
ASSOCIATED WITH THE VIKING ROAD PREFERRED ALTERNATIVE

	Type	Total Acres	Estimated Impacted Acres	Percent Impacted
Wetland 2	Palustrine emergent	1.37	1.37	100%

Greenhill Road Preferred Alternative

Two of the nine identified wetlands within the Study Area would be potentially impacted by the Greenhill Road Preferred Alternative. A total of 5.89 acres of wetlands are present in the Greenhill Road Preferred Alternative Study Area. A total of 0.24 (4.1%) of these wetlands would be impacted by the Greenhill Road Preferred Alternative. Table 5-5 presents the total wetlands within the Greenhill Road Preferred Alternative that would be impacted by the project. Given the extent of potential wetland impacts, a USACE Section 404 Clean Water Act Permit (Section 404 Permit) would be required for the Greenhill Road Preferred Alternative.

TABLE 5-5
WETLANDS AND WETLAND IMPACTS
ASSOCIATED WITH THE GREENHILL ROAD PREFERRED ALTERNATIVE

	Type	Total Acres	Estimated Impacted Acres	Percent Impacted
Wetland 1	Palustrine forested	0.13	0.06	46%
Wetland 5	Palustrine forested	5.76	0.18	3%
Total		5.89	0.24	4.1%

Wetlands Summary

Seven of the nine identified wetlands within the Study Area would be potentially impacted by the Preferred Alternative at full build-out. The Study Area was refined slightly following completion of the Stantec survey. The total wetlands within the Study Area (approximately 13.8 acres) and the total amount of wetlands potentially impacted at full project build-out (approximately 7.07 acres) are included in Table 5-6. Given the extent of potential wetland impacts, a USACE Section 404 Clean Water Act Permit (Section 404 Permit) would be required for the Viking Road Preferred Alternative.

TABLE 5-6
TOTAL WETLANDS AND WETLAND IMPACTS
ASSOCIATED WITH FULL PROJECT BUILD-OUT

	Type	Total Acres	Estimated Impacted Acres	Percent Impacted
Wetland 1	Palustrine forested	0.13	0.06	46%
Wetland 2	Palustrine emergent	1.37	1.37	100%
Wetland 3	Palustrine emergent	0.96	0.96	100%
Wetland 4	Palustrine emergent / scrub-shrub	0.26	0	0%
Wetland 5	Palustrine forested	5.76	0.18	3%
Wetland A	Palustrine emergent	0.22	0	0%
Wetland B	Palustrine emergent	0.28	0.002	7%
Wetland C	Palustrine emergent / scrub-shrub	2.00	1.8	90%
Wetland D	Potential palustrine emergent	2.82	2.68	95%
Total		13.8	7.05	51.1%

The individual Preferred Alternatives were evaluated based on the latest design and wetland determination boundaries, with the understanding that adjustments can be made later in the process to minimize wetland impacts. During final design, potential minimization of wetland impacts would be evaluated subsequent to wetland delineation. The design would be altered to minimize wetland impacts where practical. The USACE Section 404 Permit application would include the detailed final design as well as efforts to minimize impacts on wetlands and other Waters of the U.S.

Where wetland impacts cannot be avoided, mitigation would occur at ratios determined by the USACE. Iowa DOT would select a location for mitigation, subject to USACE approval. Mitigation ratios are determined based on the type and location of mitigation proposed for the affected wetlands, but mitigation would be completed in a manner consistent with project permits. A preliminary analysis of suitable sites would be performed and included in the mitigation concept for the USACE Section 404 Permit application and the Iowa Section 401 Water Quality Certification. The permit and certification process would occur after completion of the NEPA process.

5.3.2 Floodplains and Floodways

Black Hawk County, Iowa, is a participant in the National Flood Insurance Program (NFIP) and has an established FEMA Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRMs) delineating floodplain and floodway information for the community. The FIRMs depict the 100-year base floodplain (1-percent-annual-chance flood), 500-year floodplain (0.2-percent-annual-chance flood), and the floodway (the channel of a stream plus any adjacent floodplain areas) that must be kept free of encroachment so that the base flood can be carried without substantial increases in flood heights. The FIS and FIRMs for Black Hawk County, Iowa, and incorporated areas were revised and updated July 18, 2011.

As part of this project, FIRMs delineating the floodplains and the regulatory floodways, as well as topographic information, were reviewed for the Study Area. Regulatory agency guidelines for working within a floodplain or floodway were also reviewed, and coordination with the Iowa DNR has taken place (see letter dated June 17, 2013 in Appendix B).

The review of the FIRMs determined that floodplains and floodways are present within the Study Area, as delineated on Figures 6-9. This exhibit depicts the 100-year floodplain, floodway and 500-year floodplains for Dry Run Creek that have potential to be impacted as part of the corridor improvement project as described in the alternatives below.

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 right-of-way would be needed. The No Build Alternative would have no impact on the floodplains in the Study Area.

U.S. 20 Preferred Alternative

A small drainageway is located on the northeast side of the U.S. 20 / IA 58 interchange. This was noted after a review of the topographic and aerial information, as well as the FIRMs. According to the FIRM, this area is identified as Zone A Floodplain for which no base flood elevation has been determined. However, this area is outside of the proposed construction area and will not be impacted. In addition, construction debris would be kept out of the Zone A floodplain. Therefore, the U.S. 20 Preferred Alternative would have no impact on the floodplains in the Study Area.

Viking Road Preferred Alternative

There are no delineated floodplains located within the Viking Road portion of the Study Area. Therefore, the Viking Road Preferred Alternative would have no impact on the floodplains in the Study Area.

Greenhill Road Preferred Alternative

The Dry Run Creek 100-year floodplain and designated regulatory floodway are located in the western portion of the Greenhill Road Preferred Alternative Study Area. Refer to Figure 9 for more information. The majority of the construction in this area would occur outside of the

floodplain and floodway. However, some impacts will be required for the construction on the western side of the Study Area. The floodplain encroachments will be designed to be consistent with federal, state and local floodplain rules and objectives, and will be coordinated during the design and permitting phase with the appropriate regulatory agencies. Required hydraulic modeling would be done using HEC-RAS or other appropriate computer models to ensure that backwater increases are within federal, state and local standards. Following construction, the roadway side slopes will be reseeded with fast-growing grasses to prevent sedimentation in the floodplain and in Dry Run Creek. In addition, construction debris would be kept out of the floodplain and stream. Impacts to natural and beneficial floodplain values, beyond those associated with construction, would be minimized by strict access control along the construction alignment.

Floodplain Summary

Impacts to floodplains and floodways vary based on the individual Preferred Alternatives, as discussed above. For most of the Study Area, no impacts to floodplains and floodways will be anticipated. For the Greenhill Road Preferred Alternative, some impacts may occur. These impacts will be designed according to all federal, state and local standards and will only impact areas necessary for construction. The unavoidable impacts will be mitigated and should be temporary and minor.

5.3.3 Farmlands

A Federal project, program or other activity that requires acquisition of right-of-way 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 non-agricultural 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.

The Study Area is a mix of commercial, industrial, residential and agricultural land uses. The majority of agricultural land is located near the U.S. 20 interchange and north toward Viking Road. The farmland in the study area is mainly cropland (corn and soybeans). There are a total of 50.6 acres of farmland (including prime farmland and farmland of statewide importance) within the Study Area.

No Build Alternative

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

U.S. 20 Preferred 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 NRCS determined that there were approximately 34.3 acres of prime farmland and 16.3 acres of farmland of state importance within the 50.6 acres in the U.S. 20 Preferred Alternative. The project received a score of 160.3 out of the possible 260 points (Appendix C). Based on this score, potential means to reduce the impact on farmland for revision of the NRCS-CPA-106 form were evaluated.

Viking Road and Greenhill Road Preferred Alternatives

No farmland is present within the Viking Road and Greenhill Road Preferred Alternative areas.

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 resource discussed in this section is noise.

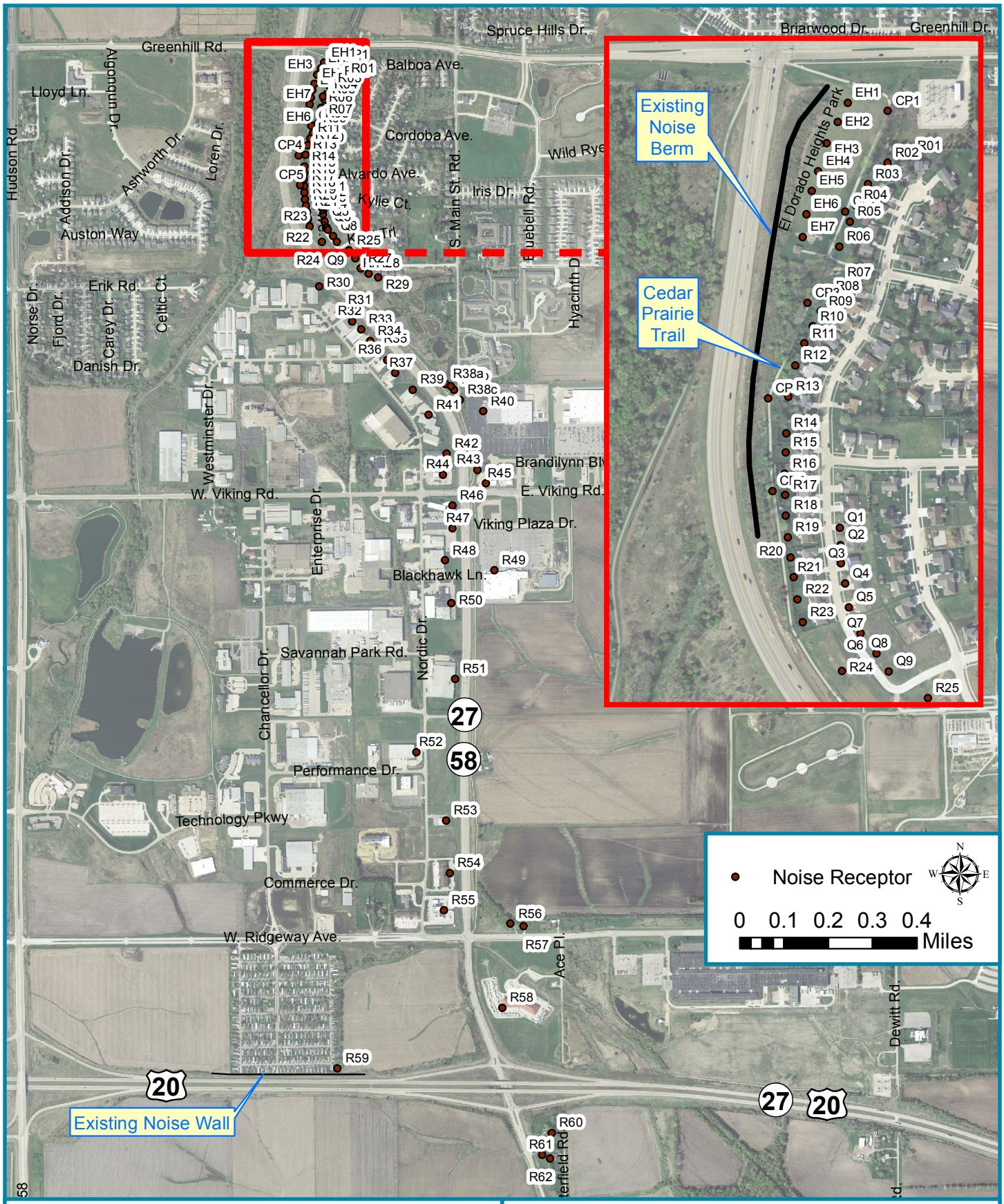
5.4.1 Noise

The proposed alignment evaluated in the noise study includes single point interchanges on IA 58 at Greenhill Road and Viking Road, as well as a system interchange with U.S. 20. Due to the proposed interchanges, the proposed planning improvement is considered a Type I Highway project and requires a noise analysis. Type I projects also require consideration of noise abatement measures when a determination of noise impact has been made. The noise analysis presented below is based on IA 58 going over Viking Road since this represents a worst case scenario. Because of the depressed roadway profile, noise impacts with IA 58 going under Viking Road have less of an impact on the Main Street Cul-de-Sac Park than with IA 58 going over Viking Road. Other impacts were generally similar between the two options.

Noise-sensitive areas in the project corridor include a park, a recreational trail, and a concentration of residences located east of an existing noise berm near Greenhill Road, numerous businesses near Viking Road, and a few scattered rural residences near the south end of the project (Figure 10).

Noise Abatement Criteria

The FHWA has developed Noise Abatement Criteria (NAC) and procedures to be used in the planning and design of highways. These criteria and procedures are set forth in 23 CFR 772. A traffic noise study was completed for the proposed improvements in August 2014. The study was conducted in accordance with Iowa DOT's Traffic Noise Policy and the requirements set



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AECOM

Figure 10
Noise Receptor Locations
IA 58 Improvement Corridor
Cedar Falls, Iowa

SEPTEMBER 2015

Black Hawk County, Iowa
Environmental Assessment

60287018

forth in the FHWA Noise Standard at 23 Code of Federal Regulations (CFR) Part 772. A complete copy of the noise study report is available through Iowa DOT.

In analyzing traffic noise levels, emphasis was given to the two main noise criteria for a traffic noise impact as set forth in 23 CFR 772. A comparison will be made between the predicted traffic noise levels and the noise abatement criteria (NAC) to determine if a traffic noise impact exists due to the noise levels approaching or exceeding the criteria. Applicable noise abatement criteria are presented in Table 5-7. Also, a comparison will be made between existing noise levels and future predicted traffic noise levels to determine if a noise impact occurs due to a substantial increase in noise.

The Iowa DOT generally considers that a noise impact occurs and abatement measures will be considered for the impacts if:

1) The predicted design year noise levels approach or exceed the noise abatement criteria. Iowa DOT has established that a noise level of 1 decibel less than the NAC in the FHWA Noise Standards constitutes “approaching” the NAC; e.g., 66 dBA for residences.

2) Predicted future noise levels are 10 dBA or more above existing levels. This 10 dBA predicted increase would be considered a “substantial increase” in the predicted noise level.

Under Iowa DOT’s Traffic Noise Policy, noise-sensitive areas are considered to be impacted only if at least one of the above criteria is met.

TABLE 5-7
NOISE ABATEMENT CRITERIA

Hourly A-Weighted Sound Level – Decibels (dBA)				
Activity Category	Noise Abatement Criterion		Evaluation Location	Description of Activity Category
	FHWA	Iowa DOT		
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67	66	Exterior	Residential
C	67	66	Exterior	Active sports areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreational areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	51	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72	71	Exterior	Hotels, motels, offices, restaurants / bars, and other developed lands, properties or activities not included in A-D or F.
F	--	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing.
G	--	--	--	Undeveloped lands that are not permitted.

Noise Prediction Method

Traffic noise levels associated with three different scenarios were predicted for this noise study:

- The Existing Condition Scenario assumed current (2013) traffic volumes, vehicle mix (broken down by autos, medium trucks, heavy trucks and motorcycles) and roadway characteristics.

- The 2040 No Build Scenario assumed current roadway characteristics and 2040 design year traffic volumes.

- The 2040 Build Condition Scenario assumed 2040 design year traffic volumes with the project constructed as per the alternative under detailed study illustrated in this report.

Traffic noise levels discussed in this document represent “peak hour” noise levels and were predicted in Leq(h) (hourly Leq) dBA.

The FHWA Highway Traffic Noise Prediction Model (FHWA Model) was the method used in this report to predict Leq dBA noise levels. The procedures included in the FHWA Model permit an analysis of variations in traffic noise in terms of traffic parameters, roadway, and receptor characteristics. These parameters are then identified for a particular traffic situation and transformed into noise level estimates through the use of this prediction method. Noise level predictions were computed using the FHWA Traffic Noise Model (TNM), Version 2.5.

Noise Impact Analysis

Noise levels were predicted using TNM for 2013 Existing Conditions and 2040 No-Build and Build Conditions for 83 representative receptors. In addition to the numerous residences and businesses modeled, five representative locations along the Cedar Prairie Trail were modeled in the area east of the noise berm at the north end of the project. Using the average frontage of residences located along Quesada Avenue to determine receiver number and spacing, noise was also modeled at seven representative locations in El Dorado Heights Park, which is also located east of the berm.

Table 5-8 lists the predicted noise levels obtained from the analysis. Receptors in which there is a noise impact as defined by Iowa DOT's Traffic Noise Policy are shown in dark shaded boxes.

TABLE 5-8
PREDICTED NOISE LEVELS

Receptor	NAC	Existing (2013) Noise Level	Predicted No-Build (2040) Noise Level	Difference Between Existing and No-Build	Build Condition Design Year (2040) Noise Level	Difference Between Existing and Build Condition Noise Levels
Greenhill Road Interchange Area						
R01	66	54	56	2	60	6
R02	66	54	56	2	61	7
R03	66	54	56	2	61	7
R04	66	54	56	2	61	7
R05	66	54	56	2	61	7
R06	66	54	56	2	62	8
R07	66	54	56	2	61	7
R08	66	54	56	2	61	7
R09	66	54	57	3	61	7
R10	66	55	57	2	61	6
R11	66	55	57	2	61	6
R12	66	56	58	2	60	4
R13	66	57	59	2	60	3
R14	66	57	59	2	60	3
R15	66	57	60	3	60	3

Receptor	NAC	Existing (2013) Noise Level	Predicted No-Build (2040) Noise Level	Difference Between Existing and No-Build	Build Condition Design Year (2040) Noise Level	Difference Between Existing and Build Condition Noise Levels
R16	66	58	60	2	60	2
R17	66	59	61	2	61	2
R18	66	60	62	2	62	2
R19	66	62	64	2	64	2
R20	66	63	65	2	64	1
R21	66	64	66	2	65	1
R22	66	65	67	2	66	1
R23	66	66	69	3	68	2
R24	66	64	66	2	65	1
Q1	66	57	59	2	59	2
Q2	66	57	60	3	59	2
Q3	66	58	60	2	60	2
Q4	66	58	61	3	60	2
Q5	66	59	61	2	60	1
Q6	66	59	61	2	60	1
Q7	66	59	61	2	60	1
Q8	66	59	61	2	60	1
Q9	66	59	61	2	60	1
Cedar Prairie Trail						
CP1	66	57	59	2	61	4
CP2	66	55	57	2	62	7
CP3	66	56	59	3	62	6
CP4	66	57	60	3	60	3
CP5	66	60	62	2	62	2
El Dorado Heights Park						
EH1	66	59	61	2	63	4
EH2	66	57	59	2	63	6
EH3	66	56	58	2	63	7
EH4	66	56	58	2	63	7
EH5	66	56	58	2	63	7
EH6	66	56	58	2	63	7
EH7	66	56	58	2	63	7
Begin Viking Road Interchange Area						
R25	66	58	60	2	59	1
R26	66	58	60	2	59	1

Receptor	NAC	Existing (2013) Noise Level	Predicted No-Build (2040) Noise Level	Difference Between Existing and No-Build	Build Condition Design Year (2040) Noise Level	Difference Between Existing and Build Condition Noise Levels
R27	66	58	61	3	60	2
R28	66	58	60	2	60	2
R29	66	57	59	2	59	2
R30	71	63	66	3	64	1
R31	71	64	66	2	65	1
R32	71	65	68	3	66	1
R33	71	66	69	3	67	1
R34	71	65	68	3	66	1
R35	71	65	67	2	66	1
R36	71	65	68	3	66	1
R37	71	64	66	2	64	0
R38	66	62	65	3	66	4
R39	71	65	67	2	65	0
R40	71	58	61	3	61	3
R41	71	63	65	2	65	2
R42	71	64	67	3	65	1
R43	71	66	68	2	69	3
R44	71	63	65	2	64	1
R45	71	66	68	2	68	2
R46	71	65	68	3	68	3
R47	71	64	67	3	65	1
R48	71	59	62	3	61	2
R49	71	58	61	3	61	3
R50	71	62	65	3	65	3
R51	71	66	70	4	68	2
End Viking Road Interchange Area						
R52	71	52	55	3	54	2
R53	71	59	62	3	57	-2
R54	66	61	64	3	58	-3
R55	71	60	63	3	60	0
R56	66	58	61	3	63	5
R57	66	59	62	3	63	4

Receptor	NAC	Existing (2013) Noise Level	Predicted No-Build (2040) Noise Level	Difference Between Existing and No-Build	Build Condition Design Year (2040) Noise Level	Difference Between Existing and Build Condition Noise Levels
R58	71	60	63	3	60	0
R59	66	55	56	1	57	2
R60	66	58	60	2	64	6
R61	66	55	58	3	59	4
R62	66	53	55	2	57	4

The noise level results for the 83 noise receptors are summarized below.

Existing Conditions

One existing condition receptor approaches the NAC and is considered to be impacted as defined by Iowa DOT's Traffic Noise Policy.

No Build Alternative

Under the No Build Alternative, noise levels in 2040 are predicted to be approximately 1 to 3 dBA higher than the existing noise levels. Of the 83 sensitive receivers in the Study Area, four residential properties and no businesses would approach or exceed the NAC under the No Build Alternative. No receptors would experience a substantial increase in highway traffic noise under this alternative. Under Iowa DOT's Traffic Noise Policy, only the four residences are considered to be impacted.

Preferred Alternative

Under the Preferred Alternative, noise levels in 2040 are predicted to range between -3 dBA lower and 8 dBA higher than the existing noise levels. Of the sensitive receivers in the Study Area, two residential properties, one park / picnic area, and no businesses would approach or exceed the NAC under the Preferred Alternative. No receptors would experience a substantial increase in highway traffic noise under this alternative, so only the receivers that have future noise levels approaching or exceeding the NAC are considered to be impacted under Iowa DOT's Traffic Noise Policy. A slight to moderate increase in noise levels at the north end of the project is attributable to the raising of the roadway profile, which slightly decreases the effectiveness of the existing noise berm in protecting residences located east of IA 58; these increases in traffic noise levels are not considered to be substantial, and the receptors at these locations are not considered to be impacted as defined by Iowa DOT's Traffic Noise Policy.

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. Although the Preferred Alternative does not cause noise impacts (i.e., more impacts were predicted for the No-Build scenario), noise barriers were evaluated for the Build scenario to determine if noise levels could be "feasibly" and "reasonably" reduced.

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 dBA traffic noise reduction at an impacted receptor to be considered feasible. In addition, each of the following three conditions 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 dBA for at least one benefitted receptor.
- Viewpoints of owners and residents considered to benefit from 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.

Two noise barriers were modeled in TNM attempting to reduce noise levels at impacted receptors: 1) using a noise wall to provide a 750-foot southerly extension of the existing noise berm at the north end of the project; and 2) a 1,450-foot noise wall to protect a small park and picnic area located at the end of South Main Street.

In the case of the northern barrier (Barrier #1), it was determined that not enough space was present to extend the berm itself south. For this reason a noise wall was used to extend the berm south to the approximate location of the existing Cedar Falls Mayors Pedestrian Bridge. In addition to the two impacted noise receivers in this area (Receivers R22 and R23), thirteen (13) additional unimpacted receivers were included in the barrier analysis to determine if they would receive a 5 dBA noise reduction as a result of noise wall construction.

In the case of the southern barrier (Barrier #2), it was determined that, based on a park frontage of approximately 350 feet and a residential frontage of approximately 85 feet (typical for residences located near the park), four receptors would be required to adequately represent noise levels in the park for the purpose of a barrier analysis.

The noise barrier analyses presented in Tables 5-9 and 5-10 show that each of the proposed barriers was somewhat effective in providing significant noise reduction; i.e., at least a +5 dBA reduction for a majority of impacted receptors.

TABLE 5-9
BARRIER ANALYSIS #1:
BERM EXTENSION USING WALL,
SE QUADRANT OF GREENHILL / IA 58 INTERSECTION

Length, ft.	750		Unit Cost	$25/sq ft	
Height, ft.	10	12	14	16	18
Noise Reduction:					
R19	2	3	4	5	5
R20	2	4	5	6	7
R21	3	5	7	8	8
R22	4	6	7	9	10
R23	5	6	8	9	10
R24	2	4	5	6	7
Q1	0	0	1	1	1
Q2	0	0	1	2	3
Q3	0	1	1	2	3
Q4	0	1	1	2	3
Q5	0	1	2	3	4
Q6	0	1	2	3	4
Q7	0	1	2	3	4
Q8	0	0	1	2	2
Q9	0	0	1	1	1
No. Benefited Receptors	1	3	5	6	6
Cost/Benefit Receptor	$187,557	$75,022	$52,516	$50,016	$56,267

TABLE 5-10
BARRIER ANALYSIS #2:
CITY PARK AT END OF SOUTH MAIN

Length, ft.	~1450		Unit Cost	$25/sq ft	
Height, ft.	10	12	14	16	18
Total Cost	$367,672	$441,206	$514,739	$588,273	$661,807
Noise Reduction					
R38	3	4	6	8	9
R38a	5	7	8	10	11
R38b	3	5	6	8	9
R38c	3	5	6	8	9
No. Benefitted Receptors	1	3	4	4	4
Cost / Benefit Receptor	$367,672	$147,069	$128,685	$147,068	$165,452

Iowa DOT's noise reduction design goal of 10 dBA for at least one receptor was met for both barrier scenarios. However, the cost of the walls per benefitted receptor exceeded Iowa DOT's cost criteria of $40,000 per benefitted receptor in both cases. Based on the noise analysis performed to date, there appear to be no feasible or reasonable solutions available to mitigate the noise impacts at the locations identified. Therefore, noise barriers are not recommended for any of the receivers.

Estimates of future worst-case noise levels in undeveloped areas of the project corridor have been developed. For areas adjacent to the proposed IA 58 mainline, it is recommended that future development falling into Activity Categories B and C should occur no closer than 190 feet from the IA 58 centerline, and that development falling into Activity Category E should occur no closer than 130 feet from the IA 58 centerline. For areas near the system interchange with U.S. 20 and Ridgeway Avenue, it is anticipated that maximum traffic noise levels of approximately 63 dBA will occur no more than 40 feet from the ramp centerlines; the proximity of future development falling into Activity Categories B, C and E to the ramps in these areas will therefore not be affected by anticipated noise levels.

Construction Noise and Vibration

During the construction phase of the project, 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 BMPs would be implemented to minimize such impacts:

- Whenever possible, limit operation of heavy equipment and other noisy procedures to non-sleeping hours.
- Install and maintain effective mufflers on equipment.
- Limit unnecessary idling of equipment.

5.4.2 Visual Impacts

The viewshed of the IA 58 corridor is a mix of urban built-up land use and open space used for farmland. IA 58 is a major 4-lane arterial through Cedar Falls which will not change with this project. Visual impacts have a potential of occurring at the proposed interchange locations of U.S. 20, Viking Road and Greenhill Road.

No Build Alternative

Under the No Build Alternative, there would be no change of the road nor from the road from a visual standpoint.

U.S. 20 Preferred Alternative

Surrounding the U.S. 20 interchange is farmland and a couple of commercial businesses. It is on the city's south edge and has a rural look and feel. The project proposes to construct some interim improvements and, in future years, construct a system interchange. Since there is currently an interchange at this location, the interim improvements are not expected to change the viewshed for users of the roadway nor for those viewing the road. However, the system interchange would add new large flyover bridges and ramps which would create a change in the view of the roadway as well as a change for those traveling on the roadway. Therefore it is not anticipated to have an impact from a visual standpoint in the short term; but with the addition of the system interchange, a visual impact is likely.

Viking Road Preferred Alternative

Near Viking Road, the area is built up with light industrial and commercial "big box" businesses. Currently, there is an at-grade intersection at Viking Road and IA 58. The addition of the interchange at Viking Road will have an impact from a visual standpoint. The view of the road from adjacent businesses will not be significantly different since IA 58 will go under Viking Road. These users will be able to see across IA 58 and Viking Road as they do currently. However, the view from the road will be different as drivers pass under Viking Road. They will pass under the bridge that will contain permanent lighting along the retaining walls. Overall, the visual impact at this location is minimal.

Greenhill Road Preferred Alternative

As IA 58 approaches Greenhill Road, the landscape begins to transition to residences in addition to open space. At this interchange, the roadway will be elevated to cross over Greenhill Road. Some of the homes in the vicinity, although behind a noise berm, will be able to see traffic crossing over Greenhill Road on IA 58 at its highest point. The view from the roadway will not be significantly different, except that drivers will have a better view of the backs of the homes that are near the interchange. Drivers in high-profile vehicles may be able to see over the existing noise berm. Therefore, the visual impact from the standpoint of those viewing the roadway would be negative, but there would be no visual impact for those using the roadway.

5.5 Cumulative Impacts

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.

5.5.1 Past Actions

In the 1980s, U.S. 20 was constructed on the south edge of Cedar Falls and an interchange was built with IA 58. In the 1990s, IA 58 was constructed as a 4-lane roadway. The improvements of these two 4-lane highways helped encourage growth in this area of Cedar Falls. In the late 1990s, the Cedar Falls Industrial Park, developed at Viking Road and IA 58, spurred on by the improvement of the adjacent highways. Since that time, many industrial and commercial retail businesses have located to the Viking Road area. Businesses such as UPS, Standard Golf Company, Iowa Laser Technology, and many more developed on the west side of IA 58, while Walmart and Blaine's Farm & Fleet located to the east side of IA 58. In addition, significant residential development has occurred near Greenhill Road and IA 58. Housing began developing here in the mid-1990s, with many more added in the early 2000s.

Crashes were occurring with traffic crossing through the median; and in order to help improve safety, a barrier was installed between the lanes of traffic on IA 58 in the mid-2000s.

In 2013, a pedestrian bridge was constructed over IA 58 north of Viking Road. This was added to help improve safety, reduce the number of bicyclists crossing at Viking Road and Greenhill Road, and to improve connectivity within the bike trail system.

Also in 2013, due to increasing traffic volumes, the City completed making Viking Road a 4-lane roadway from Hudson Road east to Nordic Drive.

5.5.2 Present Actions

Some commercial and residential developments are occurring in the area. Currently under construction are several businesses off of Viking Road, including fast food restaurants and retail stores. Additional housing is being added to a development on the west side of IA 58 near Greenhill Road; and homes continue to be constructed on the west side of IA 58 south of Greenhill Road as well.

5.5.3 Future Actions

The Cedar Prairie Trail would be re-routed around the retail area east of IA 58 and would reconnect with the existing trail at the Main Street Cul-de-Sac Park. Other trails are planned, including a trail along Prairie Parkway and filling in gaps to create connections to the Prairie Lakes Trail from Ridgeway Avenue.

Housing growth, both east and west of IA 58 near Greenhill Road, would be expected to continue. There is some available land in these subdivisions near Greenhill Road which would likely be developed in the future.

In the Viking Road area east of IA 58, there are available lots for commercial development. With the growth that is happening currently, it would be anticipated these lots will develop in the coming years.

Commercial/industrial development will likely occur in the southwest quadrant of the U.S. 20/ IA 58 interchange which is part of the City of Hudson. A total of seven lots are proposed by the City. Access would be from IA 58 south of U.S. 20.

5.5.4 Summary of Cumulative Impacts

Cumulative impacts to resources in the project study area may result from roadway development, as well as conversion of agricultural land to transportation and developed uses. Based on the Eleven Steps in Cumulative Analysis (CEQ, Considering Cumulative Effects Under the National Environmental Policy Act, January 1997), it was determined that cumulative impacts associated with the present and future actions and the Preferred Alternatives would be minor.

Resource areas potentially experiencing cumulative impacts include Land Use, Right-of-Way, Relocation Potential (partial acquisitions), Construction and Emergency Use, Wetlands and Farmlands. Land Use, Right-of-Way, Wetlands, and Farmlands would be affected by the conversion of agricultural and other lands to roads, and commercial/industrial purposes. These impacts would be minor and associated with the loss of farmlands or personal property.

The Proposed Action could result in minor impacts to Construction and Emergency Use resources associated with continued traffic impediments along this section of IA 58 associated with construction-related lane closures. These impacts would be temporary, and efforts will be made to minimize any emergency response delays. Impacts to Construction and Emergency Use resources are minor and are designed to improve safety and traffic flow. Therefore, any related impact would ultimately be beneficial.

After completion of the present actions, future actions and the Proposed Action, Construction and Emergency Use resources would experience beneficial cumulative impacts associated with safer roadways and potential reduced travel times once construction of the Proposed Action is complete.

The overall cumulative impacts of the IA 58 project are not considered to be collectively significant.

5.6 Streamlined Resource Summary

Resources not discussed in the body of the EA are located in Appendix A - Streamlined Resource Summary. The summary includes information regarding the resources, the method used to evaluate them, and when the evaluation was completed. Table 5-11 summarizes the Preferred Alternative's impacts to resources discussed in the sections above.

TABLE 5-11
SUMMARY OF IMPACTS

Resource	No Build Alternative	Preferred Alternatives		
		U.S. 20	Viking Road	Greenhill Road
Land Use	No Impact	Compatible With Existing Plans		
Right-of-Way (Acres)	0	62	4	7
Relocation Potential - Homes - Businesses (Partial Acquisitions)	 0 0	 0 4	 0 15	 0 0
Construction and Emergency Routes	No Impact	Coordination Required to Ensure Access		
Historical Sites or Districts	0	0	0	0
Archaeological Sites	0	0	0	0
Wetland Impacts (Acres)	0	5.46	1.37	0.24
Floodplain Impacts	0	No	No	Some Encroachment
Farmland Impacts (Acres)	0	50.6	0	0
Noise Impacts (Number of Receptors Impacted)	4	0	1	2

6.0 DISPOSITION

This environmental assessment (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.

A portion of the proposed project is included in the 2015-2019 Transportation Improvement Program, with $15 million to grade and pave the Viking Road Interchange project and $1 million for purchase of right-of-way. Both are in the Program for 2017.

Neither the Greenhill Road nor the U.S. 20/Ridgeway Avenue projects have been programmed at this time. However, commercial and residential development continues to expand and create more traffic along the Iowa 58 Corridor. This increasing traffic and congestion will continue to support the need for improving these intersections. In addition, the pavement condition on IA 58 from Ridgeway Avenue to U.S. 20 is deteriorating. If pavement conditions warrant reconstruction of the pavement, consideration should be given to reconstruction matching the interim build alternative. The pressure for improvements at Greenhill Road and the Interim Build Alternative at U.S. 20/Ridgeway Avenue will likely be significant when Viking Road is completed. Therefore it is anticipated the Greenhill Road Interchange Alternative and U.S. 20/Ridgeway Avenue Interim Build Alternative projects will be programmed in the near future. However, the U.S. 20 Full Build System Interchange Alternative is not currently programmed, and it will likely be 10 or more years before this portion of the project is advanced.

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 (Regulatory)
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
U.S. Department of Housing and Urban Development

State Agencies

Iowa Department of Agriculture and Land Stewardship
Iowa Department of Natural Resources – State Office and Field Office #1 in Manchester
Iowa Department of Transportation
Iowa Economic Development
Iowa Emergency Management Division
State Historical Society of Iowa

Local/Regional Units of Government

Iowa Northland Regional Council of Governments (INRCOG)
Black Hawk County Board of Supervisors
Black Hawk County Conservation Board
Black Hawk County Engineer
Cedar Falls Historical Society
City of Cedar Falls – Mayor, City Council
City of Cedar Falls – City Clerk
City of Cedar Falls - Human and Leisure Services

Locations Where This Document Is Available for Public Review:

Cedar Falls Public Library
524 Main Street
Cedar Falls, Iowa 50613

Federal Highway Administration
105 - 6th Street
Ames, Iowa 50010

Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Iowa Department of Transportation – District 2
1420 Fourth Street SE
Mason City, Iowa 50401

Online at Iowa DOT: http://www.iowadot.gov/ole/OLESite/nepadocuments.aspx

Potential Permits Required for the 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 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.

7.0 COMMENTS AND COORDINATION

7.1 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 June 5, 2013, 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 below 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.

TABLE 7-1
AGENCY CONTACTS AND RESPONSE DATES

Agency	Date of Response
Federal Aviation Administration	June 20, 2013
U.S. Department of Housing and Urban Development	
U.S. Department of Interior - Office of Environmental Policy and Compliance	
U.S. Environmental Protection Agency	
U.S. Fish and Wildlife Service	June 18, 2013
U.S. Army Corps of Engineers	June 25,2013
U.S. Department of Agriculture – NRCS	June 25, 2013
Iowa Department of Natural Resources:	
-Environmental Services Bureau	June 17, 2013
-Conservation and Recreation Bureau	July 5, 2013
-Budget and Finance Bureau (Land & Water Conservation Fund / 6(f))	June 7, 2013
Iowa Department of Transportation	
Iowa Emergency Management Division	
State Historical Society of Iowa	June 11, 2013
Iowa Economic Development	
Cedar Falls Community School District	
Cedar Falls Fire Department	
Cedar Falls Historical Society	
Cedar Falls Human and Leisure Services	
Cedar Falls Police Department	
Honorable Mayor Jon Crews, City of Cedar Falls	
Cedar Falls City Council Members	
Black Hawk County Engineer	

TABLE 7-1
AGENCY CONTACTS AND RESPONSE DATES
(Continued)

Agency	Date of Response
Black Hawk County Board of Supervisors	
Black Hawk County Conservation Board	June 6, 2013
Greater Cedar Valley Chamber of Commerce	
Cedar Valley Alliance	

Comments received include:

- The Federal Aviation Administration commented that the project may require formal notice and review for airspace considerations.

- U.S. Fish and Wildlife Service have no comments at this time.

- U.S. Army Corps of Engineers commented that the project does not involve any Corps administered land and that any placement of dredged or fill material into Waters of the U.S. requires a permit under Section 404 of the Clean Water Act.

- The Natural Resources Conservation Service provided information on how to check for an NRCS Conservation Easement, and commented that if the project is to impact prime farmland, a Form AD-1006 must be completed.

- Iowa DNR – Environmental Services commented that Waters of the U.S. should not be disturbed, if possible. Impacts should be minimized or mitigated using Best Management Practices.

- Iowa DNR – Conservation and Recreation Division commented that no site-specific records of rare species or significant natural communities were found in the project area.

- Iowa DNR – Budget and Finance Bureau commented that no parks in the project area have received State or Federal program funds, such as Land and Water Conservation Funds.

- State Historical Society of Iowa noted this project will need to comply with Section 106 of the National Historic Preservation Act and be in accordance with the Programmatic Agreement between FHWA, Iowa DOT and SHPO.

- Black Hawk County Conservation Board is unaware of any endangered species in the Study Area; however, they do not own or manage land in the corridor, so it has not been assessed for flora and fauna. They also commented that storm water runoff should be considered and mitigated.

7.2 Public Involvement

7.2.1 Public Information Meetings

The first public meeting was held on October 15, 2013, at the Cedar Falls Public Works Facility in Cedar Falls. Approximately 50 persons were in attendance at this meeting that gave an overview of the project's status. Maps of the project corridor were available, as was a summary of the purpose and need for the project, tentative schedule, and drawings of various alternatives.

There were questions and comments about the project, including access to existing and future businesses, pedestrian accommodations and the need for the project to improve safety. Several people expressed that they would like to see the project completed soon due to the traffic issues.

The second public information meeting was held on May 6, 2014, at the Cedar Falls Public Works Facility. Approximately 50 people were in attendance. Maps showing Build Alternatives at each intersection were available, as was a map of recreational bike trails. A short presentation gave attendees information on the alternatives, project update, schedule and project process.

Several attendees had questions and concerns regarding Viking Road, noise impacts, bike trail connections, business access and personal property impacts. There were also comments received regarding the interchange alternatives at all intersections being studied.

7.2.2 Other Stakeholder Meetings

Over the course of the project, several meetings were held with business owners and managers of businesses located in the Study Area. These meetings helped inform the businesses of the project and gather information from them with regard to traffic to and from their business, parking, and other concerns.

8.0 REFERENCES

City of Cedar Falls. 2012. Comprehensive Plan. Accessed Online at: http://content.yudu.com/Library/A1xuxi/CityofCedarFallsComp/resources/index.htm?referrerUrl=http%3A%2F%2Fwww.cedarfalls.com%2F

City of Cedar Falls. 2014a. Cedar Falls Iowa Fire Operations. Accessed online at: http://www.cedarfalls.com/index.aspx?NID=1148 on September 8, 2014

City of Cedar Falls. 2014b. Cedar Falls Iowa Police Operations. Accessed online at: http://www.cedarfalls.com/index.aspx?NID=1147 on September 8, 2014.

Federal Emergency Management Agency (FEMA). 2011a. Flood Rate Insurance Map Black Hawk County, Iowa and Incorporated Areas. Panel 277 of 500. Map Number 19013C0277F. National Flood Insurance Program. July 18.

Federal Emergency Management Agency (FEMA). 2011b. Flood Rate Insurance Map Black Hawk County, Iowa and Incorporated Areas. Panel 279 of 500. Map Number 19013C0279F. National Flood Insurance Program. July 18.

Stantec Consulting Services Inc. 2014. Environmental Resources Report Highway 58 Improvement Project, Cedar Falls, Iowa. Prepared for AECOM. August 14.

Tallgrass Historians, L.C. 2014. Iowa 58 / Viking Road Corridor Study, City of Cedar Falls, Black Hawk County, Iowa: Phase I Archaeological Investigation.

Tallgrass Historians, L.C. 2014. Iowa 58 / Viking Road Corridor Study, City of Cedar Falls, Black Hawk County, Iowa: Architectural / Hisotrical Intensive Survey and Evaluation.

APPENDIX A

STREAMLINED RESOURCE SUMMARY

APPENDIX A
STREAMLINED RESOURCE SUMMARY

SOCIOECONOMIC IMPACTS SECTION:

Land Use	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Resource Agency, 8/15/2013
Community Cohesion	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013
Churches and Schools	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013
Environmental Justice	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Database
Completed by and Date:	Consultant, 8/15/2013
Economic	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013
Joint Development	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Other
Completed by and Date:	Consultant, 8/15/2013
Parklands and Recreational Areas	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013
Bicycle and Pedestrian Facilities	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013
Right-of-Way	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Other
Completed by and Date:	Consultant, 8/22/2013
Relocation Potential	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 7/22/2014

SOCIOECONOMIC IMPACTS SECTION: Continued

Construction and Emergency Routes	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/22/2013
Transportation	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Database
Completed by and Date:	Consultant, 8/22/2013

CULTURAL IMPACTS SECTION:

Historic Sites or Districts	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Subconsultant, 9/17/2014
Archaeological Sites	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Subconsultant, 9/17/2014
Cemeteries	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013

NATURAL ENVIRONMENT IMPACTS SECTION:

Wetlands	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Subconsultant, 7/29/2013
Surface Waters and Water Quality	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 7/22/2014
Wild and Scenic Rivers	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Other
Completed by and Date:	Consultant, 8/15/2013
Floodplains	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 7/22/2014
Wildlife and Habitat	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Subconsultant, 7/29/2013
Threatened and Endangered Species	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Report
Completed by and Date:	Subconsultant, 7/29/2013
Woodlands	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Report
Completed by and Date:	Subconsultant, 7/29/2013
Farmlands	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 9/11/2013

PHYSICAL IMPACTS SECTION:

Noise	
Evaluation:	Resource is discussed in Section 5 of the Resource Analysis
Method of Evaluation:	Report
Completed by and Date:	Consultant, 9/3/2014
Air Quality	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Database
Completed by and Date:	Consultant, 8/15/2013
MSATs	
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:	Choose an item., Click here to enter a date.
Energy	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Other
Completed by and Date:	Consultant, 8/15/2013
Contaminated and Regulated Materials Sites	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Report
Completed by and Date:	Subconsultant, 4/21/2014
Visual	
Evaluation:	Resource is not in the study area
Method of Evaluation:	Field Review/Field Study
Completed by and Date:	Consultant, 8/15/2013
Utilities	
Evaluation:	Resource is in the study area but will not be impacted
Method of Evaluation:	Other
Completed by and Date:	Consultant, 7/22/2014

APPENDIX B

AGENCY COORDINATION LETTERS

BLACK HAWK COUNTY CONSERVATION BOARD

conservation@co.black-hawk.ia.us
www.BlackHawkCountyParks.com

June 6, 2013

AECOM
Brenda Durbahn, M.A.
NEPA Document Manager

Re: Iowa 58/Viking Road Corridor Study
Cedar Falls, Iowa - Environmental Assessment
Project # NHSX-U-58-1(91)- - 8S-07
AECOM Project No. 60287018

In response to the letter that you had sent regarding the above mentioned highway project dated June 5, 2013, the Black Hawk County Conservation Board does not manage, own or otherwise hold any interest in any of the real estate in the proposed work area corridor outlined on the map that was included with the letter.

Furthermore, we are unaware of any endangered plant or animal species along or in the proposed corridor. However, as we do not manage, own or otherwise hold any interest in any of the real estate within the corridor, we have never assessed the area for such findings.

We would only suggest that storm water run off be considered and mitigated as part of the project to help preserve and protect our water ways.

Thank you for including us in your planning process. Please feel free to contact me should you need further information from us.

Respectfully,

Vern Fish
Executive Director

Fields of Opportunities

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

June 7, 2013

Brenda Durbahn, MA
AECOM
501 Sycamore Street, Suite 222
Waterloo, IA 50703

Re: Iowa 58/Viking Road Corridor Study and Environmental Assessment
Cedar Falls, Iowa
Project No. NHSX-U-58-1(91)—8S-07
AECOM Project No. 60287018

Dear Ms. Durbahn:

This letter is in response to your request for informatioin on potential recreational impacts associated with an Environmental Assessment (AE) for improvements to Iowa 58/Viking Road from just south of US Highway 20 north to just north of Greenhill Road.

One park is located within the area of potential effect, Eldarado Heights Park, however, this park has not received either State or Federal funds from the programs that I work with that would require further investigation or need for mitigation.

The early coordination process is very helpful to our office and the National Park Service as we both are responsible for ensuring state and federal projects remain in outdoor recreation, and conversions are kept to a minimum. Thank you for keeping us informed of future projects.

If you have any questions, please contact me at 515-281-3013.

Sincerely,

Kathleen Moench

Kathleen Moench
Budget & Finance Bureau

Durbahn, Brenda

From: Jones, Doug [DCA] [Doug.Jones@iowa.gov]
Sent: Tuesday, June 11, 2013 4:18 PM
To: Durbahn, Brenda
Cc: Jones, Doug [DCA]; Strand, June [DCA]; Christian, Ralph [DCA]; Mike LaPietra (mike.lapietra@fhwa.dot.gov); Dolan, Brennan [DOT]; Oetker, Matthew [DOT]; Little, David [DOT]; Rostad, Krista [DOT]
Subject: 130607008 NHSX-U-58-1(91)--8S-07 Iowa 58 Viking Road Corridor Survey EA prep
Attachments: 130607008 NHSX-U-58-1(91)--8S-07 Iowa 58 Viking Road Corridor Survey 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.

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
and Interim Deputy State Historic Preservation Officer
State Historic Preservation Office
State Historical Society of Iowa
(515) 281-4358

IOWA DEPARTMENT OF
CULTURAL AFFAIRS

MARY COWNIE, DIRECTOR
CHRIS KRAMER, DEPUTY DIRECTOR

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

June 11, 2013

In reply refer to:
R&C#: 130607008

STATE HISTORICAL SOCIETY of IOWA
SARABETH ANDERSON
ADMINISTRATOR

STATE HISTORICAL MUSEUM of IOWA
SUSAN KLOEWER
MUSEUM DIRECTOR

IOWA ARTS COUNCIL
MATTHEW HARRIS
ADMINISTRATOR

Brenda Durbahn, M.A.
NEPA Document Manager
AECOM
801 Sycamore Street
Suite 222
Waterloo, Iowa 50703

RE: FHWA – BLACK HAWK COUNTY – NHSX-U58-1(91)—8S-07 – CITY OF CEDAR FALLS - PROPOSED IOWA 58 / VIKING ROAD CORRIDOR STUDY PROJECT – PREPARATION OF ENVIRONMENTAL ASSESSMENT

Dear Ms. Durbahn,

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 the programmatic agreement between Federal Highway Administration, the Iowa Department of Transportation, and our agency; 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 firm, the Federal Highway Administration, and the Iowa Department of Transportation.

Our office will be a consulting party to the responsible federal agency and the Iowa Department of Transportation 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 the Office of Location and Environment at the Iowa Department of Transportation 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)).

STATE HISTORICAL BUILDING
600 EAST LOCUST
DES MOINES, IOWA 50319

T. (515) 281-5111
F. (515) 242-6498

WWW.CULTURALAFFAIRS.ORG

- 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

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

cc: Mike La Pietra, FHWA
Brennan Dolan, OLE, IDOT, Ames
Matt Oetker, NEPA Compliance, OLE, IDOT, Ames
Ralph Christian, Historian, State Historical Society of Iowa
David Little, IDOT District 6
Krista Rostad, IDOT District 6

Fields of Opportunities

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

June 17, 2013

MS BRENDA DURBAHN
AECOM
501 SYCAMORE ST STE 222
WATERLOO IA 50703

RE: Iowa 58/Viking Road Corridor Study Cedar Falls, IA (Environmental Assessment)
Project No. NHSX-U-58-1(91)—8S-07 AECOM No. 60287018
S2, T88N, R14W & S24-25, 36, T89N, R14W, Black Hawk County

Dear Ms. Durbahn:

This letter is in response to the May 31, 2013 letter concerning the proposed Iowa 58/Viking Road Corridor project. Thank you for inviting our comments on the impact of the above referenced project.

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 and creation activities (enhancement and/or preservation may be in addition to the restoration/creation). We would ask that Best Management Practices be used to control erosion and protect water quality near the project.

Any proposed placement of dredged or fill material into waters of the United States (including jurisdictional wetlands) requires Department of the Army authorization. When detailed plans are available, please complete and submit the joint application form to the Rock Island District Corps of Engineers (1 copy) and Iowa Department of Natural Resources (2 copies) for processing. The application form may be obtained at:
http://www.iowadnr.gov/InsideDNR/RegulatoryWater/WetlandsPermitting.aspx .

An electronic copy of the application form and instructions may also be obtained on the Corps' website: http://www.mvr.usace.army.mil/Missions/Regulatory.aspx .

If you have any questions, please call me at (515)281-6615.

Sincerely,

Christine M. Schwake

Christine Schwake
Environmental Specialist

502 EAST 9th STREET / DES MOINES, IOWA 50319-0034
PHONE 515-281-5918 FAX 515-281-6794 www.iowadnr.gov

Durbahn, Brenda

From: McPeek, Kraig [kraig_mcpeek@fws.gov]
Sent: Tuesday, June 18, 2013 8:53 AM
To: Durbahn, Brenda
Subject: Iowa 58/Viking Road Corridor Study

Ms. Durbahn,

Thank you for your early coordination letter of May 31, 2013 regarding the Iowa 58/Viking Road Corridor Study. We have no comments at this time. Please use our website tool at (http://www.fws.gov/midwest/endangered/section7/s7process/index.html) to assist you in your review of potential impacts to federally endangered or threatened species.

Thank you again for your early coordination of this project.

Kraig McPeek
Assistant Field Supervisor

US Fish and Wildlife Service
Rock Island Ecological Service Field Office
1511 47th Avenue
Moline, IL 61265
309-757-5800 x202
309-429-0362 (cell)
309-757-5807 (fax)

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60287018

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Durbahn, Brenda

From: glenn.helm@faa.gov
Sent: Thursday, June 20, 2013 9:07 AM
To: Durbahn, Brenda
Subject: Cedar Falls, IA - Iowa 58/Viking Road Corridor Study
Attachments: Cedar Falls - Iowa 58-Viking Road Corridor Study - EA.doc

Brenda. Comments are attached.

(See attached file: Cedar Falls - Iowa 58-Viking Road Corridor Study - EA.doc)

Glenn Helm, P.E.
Environmental Specialist
FAA, ACE-611F / 901 Locust St. / Kansas City, MO 64106-2325
Phone: 816-329-2617 / Fax: 816-329-2611
http://www.faa.gov/airports/central
glenn.helm@faa.gov

U.S. Department
Of Transportation

**Federal Aviation
Administration**

Central Region
Iowa, Kansas
Missouri, Nebraska

901 Locust
Kansas City, Missouri 64106-2325

June 20, 2013

Ms. Brenda Durbahn, M.A.
NEPA Document Manager
AECOM
501 Sycamore Street, Suite 222
Waterloo, IA 50703

Re: Iowa 58/Viking Road Corridor Study
Cedar Falls, Iowa – Environmental Assessment
Project NO. NHSX-U-58-1(91)—8S-07
AECOM Project No. 60287018

Dear Ms. Durbahn:

We have received your letter dated May 31, 2013. We generally do not provide comments from an environmental perspective.

Airspace Considerations
The project may require formal notice and review for airspace review under Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace. To determine if you need to file with FAA, go to http://oeaaa.faa.gov and click on the "Notice Criteria Tool" found at the left-hand side of the page.

If after using the tool you determine that filing with FAA is required, I recommend a 120-day notification to accommodate the review process and issue our determination letter. Proposals may be filed at http://oeaaa.faa.gov.

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 glenn.helm@faa.gov or 816-329-2617.

Sincerely,

Glenn Helm, P.E.
Environmental Specialist

NOTE: This letter was e-mailed to: brenda.durbahn@aecom.com No hard copy will follow.

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

REPLY TO
ATTENTION OF

June 25, 2013

Regional Planning and
Environmental Division North

Brenda Durbahn, M.A.
AECOM
501 Sycamore Street, Suite #222
Waterloo, Iowa 50703

Dear Mrs. Durbahn:

I received your letter dated May 31, 2013, concerning coordination of the Iowa 58/Viking Road Corridor Study in Cedar Falls, IA. 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. Based on the information you provided, a Section 404 permit may be required for this project. A completed application packet should be submitted to the Rock Island District for processing as soon as possible. The application should include final plans, wetland delineations using the Corps 1987 Wetland Delineation Manual and Midwest Regional Supplement, details of proposed impacts to wetlands and other waters of the United States, a statement explaining how impacts associated with the proposed activity are to be avoided, a description of planned components that are intended to minimize impacts to wetlands and streams, and a complete wetland/stream mitigation plan. The requirements for a complete mitigation plan are described in the Federal Register (Volume 73, No. 70) dated April 10, 2008, under "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule".

If you have any questions regarding permit requirements under Section 404 of the Clean Water Act, please contact Mr. Frohlich of our Regulatory Branch. You may reach him by writing to our address above, ATTN: Regulatory Branch Al Frohlich, or by telephoning 309/794-5859.

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 70th Ave., Camp Dodge-Bldg. 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 Ms. Wendy Frohlich of our Environmental Compliance Branch, telephone 309/794-5573.

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/Locations.aspx**.

Sincerely,

Kenneth A. Barr
Chief, Environmental Planning
Branch (RPEDN)

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

June 25, 2013

Ms. Brenda Durbahn
AECOM
501 Sycamore Street
Suite 222
Waterloo, IA 50703

SUBJECT: Request for Comments Regarding Environmental Impact, Road Corridor Study AECOM Project No. 60287018

Dear Ms. Durbahn:

In response to your inquiry dated May 31, 2013, the following resources of concern to the Iowa Natural Resources Conservation Service (NRCS) include:

- Existing NRCS Conservation Easements
  Please refer to http://gdwweb1.ftw.nrcs.usda.gov/ to see if your undertaking will affect an NRCS easement. Should an easement be affected, you may contact Sindra Jensen (515 323-2480) at the Iowa NRCS State Office for further information.

- Prime Farmland
  Should this undertaking involve Prime Farmland or Farmland of State Wide Importance, you will need to have a Form AD-1006 completed. Please fill out your portion of the form and send that along with maps showing the legal location(s) to the appropriate Area Resource Soil Scientist. See attached map for which Area Resource Soil Scientist needs to receive the form.

**Please be advised, the Iowa NRCS discourages actions that would cause a reduction in stream length or adversely affect wetlands.*

Please note that federally-protected species, state-protected species, historic properties and/or waters of the United States may be affected by this proposed project. These are important resources of concern and this office strongly advises you to consult with the following offices for more information:

Federally - Protected Species
US Fish and Wildlife Service
Rock Island Illinois Field Office
1511 47th Avenue, Moline, Illinois 61265
Phone: (309) 757-5800
Fax: (309) 757-5807

State - Protected Species
Iowa Department of Natural Resources
Environmental Review for Natural Resources
Conservation and Recreation Division
502 East 9th Street, Des Moines, Iowa 50319-0034
Phone: (515) 281-8967

Cultural Resources and Historic Properties
State Historical Society of Iowa
State Historic Preservation Office
600 E. Locust St, Des Moines, Iowa 50319-0290
Phone: (515) 281-8743

Waters of the United States
U.S. Army Corps of Engineers
Regulatory Branch
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004
Phone: (309) 794-5057

Thank you for your inquiry with the Iowa NRCS regarding your project proposal. It is our sincere expectation that the information proved is helpful to you. Should you require any further assistance please contact James Cronin, State Biologist, at (515) 323-2221.

Sincerely,

Allen Gehrig, acting for

Jay T. Mar
State Conservationist

Attachments

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request		
Name of Project	Federal Agency Involved		
Proposed Land Use	County and State		
PART II *(To be completed by NRCS)*	Date Request Received By NRCS	Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? YES ☐ NO ☐ *(If no, the FPPA does not apply - do not complete additional parts of this form)*		Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of State or Local Site Assessment System	Date Land Evaluation Returned by NRCS	

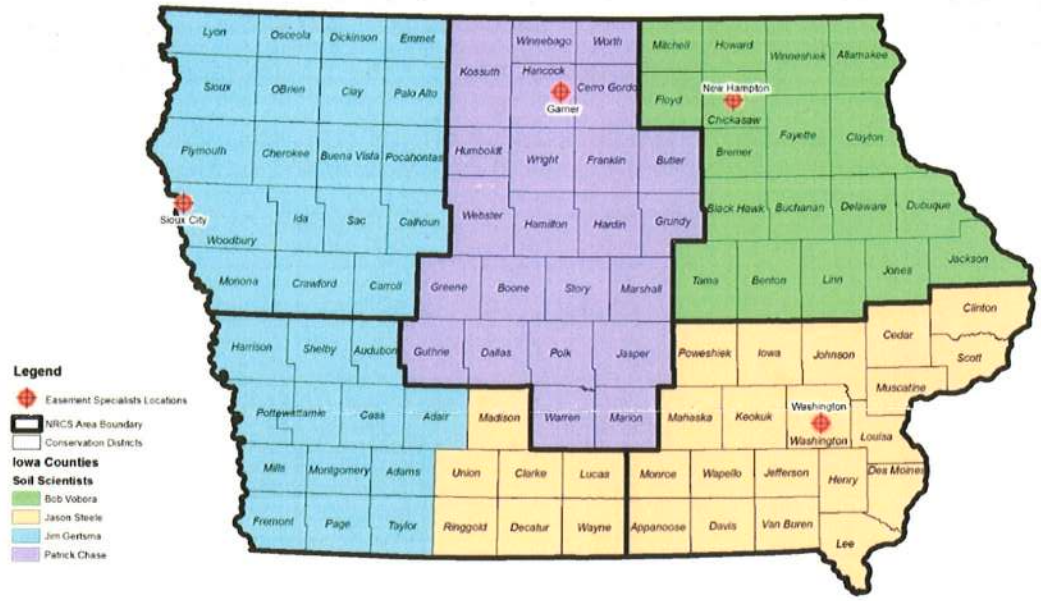
PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site				
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide Important or Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)				

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	**Maximum Points**	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)				
2. Perimeter In Non-urban Use	(10)				
3. Percent Of Site Being Farmed	(20)				
4. Protection Provided By State and Local Government	(20)				
5. Distance From Urban Built-up Area	(15)				
6. Distance To Urban Support Services	(15)				
7. Size Of Present Farm Unit Compared To Average	(10)				
8. Creation Of Non-farmable Farmland	(10)				
9. Availability Of Farm Support Services	(5)				
10. On-Farm Investments	(20)				
11. Effects Of Conversion On Farm Support Services	(10)				
12. Compatibility With Existing Agricultural Use	(10)				
TOTAL SITE ASSESSMENT POINTS	160				
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100				
Total Site Assessment *(From Part VI above or local site assessment)*	160				
TOTAL POINTS *(Total of above 2 lines)*	260				

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES ☐ NO ☐
Reason For Selection:		
Name of Federal agency representative completing this form:		Date:

(See Instructions on reverse side)

Form AD-1006 (03-02)



Jim Gertsma
3539 Southern Hills Drive, Ste 3
Sioux City, IA 51106-4707
Ph. 712 276-4648
Email, Jim.Gertsma@ia.usda.gov

Patrick Chase
531 South 29th Street
Fort Dodge, IA 50501-5530
Ph. 515 573-4351
Email, Patrick.Chase@ia.usda.gov

Robert Vobora
120 North Industrial Parkway, Ste 4
West Union, IA 52175-1612
Ph. 563 422-6201
Email, Robert.Vobora@ia.usda.gov

Jason Steele
1605 West Jefferson Avenue, Ste 2
Fairfield, IA 52556-4236
Ph. 641 472-6411
Email, Jason.Steele@ia.usda.gov

NRCS

Iowa Soil Scientist's Area of Responsibility

USDA-NRCS GIS Staff
Des Moines, IA March 2013

Fields of Opportunities

STATE OF IOWA

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

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

July 5, 2013

AECOM
Attn: BRENDA DURBAHN
501 SYCAMORE ST STE 222
WATERLOO IA 50703

RE: Environmental Review for Natural Resources
Iowa 58 Viking Rd Corridor Study
Cedar Falls, Ia
Black Hawk County
Section 24,25,36, Township 89 N, Range 13 W

Dear Ms Durbahn,

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, these 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.

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.

Please reference the following IDNR Environmental Review/Sovereign Land Program tracking number assigned to this project in all future correspondence related to this project: 8932.

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

Sincerely,

Kelly Poole

Kelly Poole
Environmental Specialist
Conservation and Recreation Division

FILE COPY: Kelly Poole
Tracking Number: 8932

cmz

502 EAST 9th STREET / DES MOINES, IOWA 50319-0034
PHONE 515-281-5918 FAX 515-281-6794 www.iowadnr.gov

R&C# 130607008

IOWA DOT
SMARTER I SIMPLER I CUSTOMER DRIVEN
www.iowadot.gov

Office of Location and Environment
800 Lincoln Way I Ames, Iowa 50010
Phone: 515.239.1795 I Email: brennan.dolan@dot.iowa.gov

November 26, 2014

Ref. NHSX-U-58-1(91)--8S-07
Local System
Black Hawk County
R&C: 20130607008

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

RE: Determination of Effect for the Iowa 58/Viking Road reconstruction Project, Greenhill Road to U.S. 20, Cedar Falls, Black Hawk County, Iowa; T88N-R14W Section 2; ***No Adverse Effect*** with conditions

Dear Ralph and Doug:

Enclosed for your review and comment is a comprehensive study of the proposed Iowa 58/Viking Road corridor (Figure 1). The project proposes to correct safety issues within this corridor by developing safer traffic low and providing adequate capacity for current and future traffic volumes. Currently, the proposed alternative includes changes to the intersections of Iowa 58 with U.S. 20, Ridgeway Avenue, Viking Road, and Greenhill road. These proposed intersection modifications will likely include a variety of interchange configurations. This project represents a partnership between the City of Cedar Falls and the Iowa DOT and other affiliated entities.

This study covered a total of 489.9 acres (202 ha). Enclosed for your records are two reports, associated Iowa Site Inventory Forms, photos, HADB and NADB forms and duplicate electronic records. Regarding architectural properties, the present study documented a total of 45 buildings. Of those only a single property, the Butterfield banked/basement barn (07-13291), has been recommended eligible for nomination to the National Register of Historic Places. As you will read this barn was built circa 1887 and represents an excellent surviving example of a gambrel-roofed banked basement barn, therefore the property was recommended eligible under Criterion C. This increasingly rare property type is no longer found across this part of Iowa like it once was. Of the 44 other properties identified by the study only four were historic in age and none of those were recommend eligible. Our office agrees with the recommendations made in the architectural report, and specifically with the eligibility of the Butterfield banked/basement barn. Currently, the preferred alternative near the Butterfield banked/basement barn has been re-designed to avoid this 4(f) property. Enclosed Figure 2 shows this alternative near the Butterfield banked/basement barn.

Due to the proximity of construction activities near Butterfield banked/basement barn the Iowa DOT will require a Special Provision for Vibration Monitoring within the project contract. The following steps will be detailed within the Special Provision to avoid any adverse effects to this property:

- A preconstruction survey of the Butterfield banked/basement barn (07-13291) will be completed that will document their present condition. The preconstruction survey will also establish a peak particle velocity (PPV) threshold for vibration.
- Sensors (crack and/or seismic) will be installed and tested daily. If 80 percent of the PPV threshold is reached sensors will alert the contractor and in turn the construction engineer.
- If the PPV is reached, a meeting with the contractor and the construction engineer will identify alternative demolition/construction methods and/or equipment to be used to minimize project vibration.
- A post construction survey will be performed.

Regarding archaeological properties the second study identified eight yet previously unrecorded sites. These sites include both prehistoric and historic site types. Table 1 below identifies some basic information about these sites. While field investigations thoroughly examined all sites, none of these sites yielded data sufficient enough to warrant additional investigation. Therefore, all eight sites were recommended for no further work, our office agrees with these recommendations.

Table 1

Site Number	Type	Cultural/Temporal Affiliation	National Register Status	Notes
13BH183	Historic farm/residence	Euro American	Not eligible	Single artifact
13BH184	Historic farm/residence	Euro American	Not eligible	No features present
13BH185	Prehistoric scatter	Undetermined prehistoric	Not eligible	Three flakes
13BH186	Prehistoric scatter	Undetermined prehistoric	Not eligible	Secondary context
13BH187	Prehistoric scatter	Undetermined prehistoric	Not eligible	Single flake
13BH188	Historic farm/residence	Euro American	Not eligible	Butterfield Barn
13BH189	Historic farm/residence	Euro American	Not eligible	Modern debris
13BH190	Historic farm/residence	Euro American	Not eligible	No features present

At this time we anticipate consultation with the Cedar Falls Historic Preservation Commission, Cedar Falls Historical Society and the Iowa Barn Foundation for this project. Per 36CFR800.3(f) we are requesting your input regarding other potential consulting parties for this undertaking.

With the above noted conditions in place we request your concurrence with our determination of **No Adverse Effect**. Lastly, it is FHWA's intent to make a *de minimis* impact determination based on your (SHPO's) written concurrence in the Section 106 determination of **No Adverse Effect.** 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.

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
Randy Lorenzen – City of Cedar Falls
Matt Oetker – NEPA Section
Leah Rogers – Tallgrass Historians
Brenda Durbahn – AECOM

Concur: _____ Date: 12/11/14
SHPO Historian
Comments:

Concur: _____ Date: 12/11/2014
SHPO Archaeologist
Comments:

APPENDIX C

FARMLAND CONVERSION IMPACT RATING FORM

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

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

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I *(To be completed by Federal Agency)*	3. Date of Land Evaluation Request **9/11/14**	4. Sheet 1 of **1**
1. Name of Project **Iowa 58 - Viking Road Corridor**	5. Federal Agency Involved **FHWA**	
2. Type of Project **Roadway construction**	6. County and State **Black Hawk County, Iowa**	

PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS **10/14/14**	2. Person Completing Form **Vobora**
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES ☑ NO ☐		4. Acres Irrigated | Average Farm Size **241**
5. Major Crop(s) **Corn-Soybeans**	6. Farmable Land in Government Jurisdiction **Acres: 332745** **% 91**	7. Amount of Farmland As Defined in FPPA **Acres: 332745** **% 91**
8. Name Of Land Evaluation System Used **Black Hawk County, Iowa**	9. Name of Local Site Assessment System **None**	10. Date Land Evaluation Returned by NRCS **10/20/14**

PART III *(To be completed by Federal Agency)*	Alternative Corridor For Segment ____ Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly	**50.6**			
B. Total Acres To Be Converted Indirectly, Or To Receive Services	**0**			
C. Total Acres In Corridor	**50.6**			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime And Unique Farmland	**34.3**			
B. Total Acres Statewide And Local Important Farmland	**16.3**			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	**.001**			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	**43.4**			
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)*	87.3			

PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	Maximum Points				
1. Area in Nonurban Use	15	**14**			
2. Perimeter in Nonurban Use	10	**9**			
3. Percent Of Corridor Being Farmed	20	**15**			
4. Protection Provided By State And Local Government	20	**20**			
5. Size of Present Farm Unit Compared To Average	10	**4**			
6. Creation Of Nonfarmable Farmland	25	**0**			
7. Availablility Of Farm Support Services	5	**5**			
8. On-Farm Investments	20	**1**			
9. Effects Of Conversion On Farm Support Services	25	**0**			
10. Compatibility With Existing Agricultural Use	10	**5**			
TOTAL CORRIDOR ASSESSMENT POINTS	160	**73**	**0**	**0**	**0**
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	**87.3**	**0**	**0**	**0**
Total Corridor Assessment (From Part VI above or a local site assessment)	160	**73**	**0**	**0**	**0**
TOTAL POINTS *(Total of above 2 lines)*	260	**160.3**	**0**	**0**	**0**

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
			YES ☐ NO ☐

5. Reason For Selection:

Signature of Person Completing this Part: **Brenda Durbahn**

DATE **9/10/14**

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

Clear Form

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