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December 14, 2023

Jay C. Johnson

T 202.344.4698
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Danielle Gosselin
Director
Office of Environmental Analysis
Surface Transportation Board
395 E Street, SW
Washington, DC 20423

Re: Docket No. FD 36500, CPKC Moravia Siding Project Update

Dear Ms. Gosselin:

I'm writing to follow up on my October letter describing changes to four of the capital improvements studied in the Environmental Impact Statement. One of those changes was the selection of a new site for the passing siding at Moravia. At OEA's request, this letter encloses additional information about that site.

The enclosures with this letter are: (1) an environmental visit site report for the new site prepared by HDR; (2) a cultural resource literature review prepared by In Situ Archaeological Consulting, LLC; and (3) a roll plot showing the location of the new siding. These enclosures show that the new Moravia siding location does not have significant environmental impacts and that the impacts it does have are consistent with the impacts of the Moravia location that was studied in the EIS.

For your information, the work on the new Moravia siding location requires CPKC to file a pre-construction notification with the U.S. Army Corps of Engineers. As part of that process, the Corps is complying with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act.

As always, please feel free to contact me if you have any questions.

Sincerely,

Jay C. Johnson

Enclosures

cc: Elizabeth Webster
Joe Van Humbeck
Glen Wilson

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Archaeological Consulting

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December 8, 2023

Jeff Melby
Pinnacle Engineering
11541 95th Avenue North
Minneapolis, MN 55369
jmelby@pineng.com

Subject: **Phase Ia Literature Review for the Proposed CPKC Siding Project, Appanoose County, Iowa.**
Not for Public Disclosure

Dear Mr. Melby,

This report presents the results of a Phase Ia Cultural Resource Literature Review conducted by In Situ Archaeological Consulting, LLC (In Situ) for the proposed construction of a new siding adjacent to the existing rail line and within the existing rail right of way located south of Moravia in Appanoose County, Iowa. The proposed project area encompasses approximately 2.15 miles of railroad right of way and is located within the legal locations listed in Table 1.

Table 1: Legal Locations of the Proposed project area

Township (T)	Range (R)	Section(s)
70 North	17 West	4, 8, 9, 17

The proposed project area is located on privately owned land consisting of agricultural fields and railroad right of way. The file search was conducted by Abraham Ledezma of In Situ on December 7, 2023, using files maintained by the Iowa State Historic Preservation Office (SHPO) and the Iowa Office of the State Archaeologist (OSA). The literature review will assist the client in identifying the locations of previous cultural resources, locations on the National Register of Historic Places (NRHP), previous cultural resource inventories/surveys, and the potential for cultural resources within and around the project area.

This cultural resource literature review was performed in support of the proposed project on behalf of Pinnacle Engineering and CPKC in order to satisfy the Section 20 requirements for the Nationwide 14 Permit of the Army Corps of Engineers (USACE) that will trigger Section 106 of the National Historic Preservation Act.

BACKGROUND RESEARCH

A literature review consisted of identifying any previously recorded archaeological sites and architectural properties within a 2-mile study area surrounding the proposed project area (1 mile from each side of the project area). The task was completed using files maintained by SHPO and OSA. In addition, background research was completed by reviewing NRHP data, historic maps, atlases, current aerial photographs, soil maps, topographic and geomorphic data, and other sources

that might provide information for the locations of historic-era sites, areas of prior disturbance, etc. (Figures 1-8). The literature/records search revealed six previous cultural resource inventories/surveys, no previously recorded archaeological sites, 23 previously recorded architectural resources, and five notable locations within the study area.

The records search revealed six previous cultural resource inventories/surveys that were completed within the study area between 1998 and 2014 (Table 2). The previous inventories/surveys were conducted in support of a variety of projects. None of the previous surveys overlap with the proposed project area.

Table 2: Previous Cultural Resource Inventories/Surveys within the Study Area.

Manuscript Number	Title	Authors	Year
19980604036	Phase I Archaeological Survey for the Moravia Sewage Lagoon Expansion Project in Appanoose County, Iowa	Butler, Todd L., and Susan E. Butler	1998
20020604114	Phase I Intensive Archaeological Survey of a Proposed Cellular Tower Location and Access Road (a.k.a. Rathbun M&S 102417), Section 19, T70N-R17W, Appanoose County, Iowa	Nagel, Cindy L.	2002
20021204035	Phase I Intensive Archaeological Survey of the Proposed Moravia CDBG Sewer Improvement Project, Appanoose County, Iowa	Finn, Michael R.	2002
20091004010	Phase I Intensive Archaeological Investigation of the Proposed Communications Tower Location (a.k.a. SEI Wireless, LLC RRW#6 Moravia #163-0043) Project, Section 4, T70N-R17W, Appanoose County, Iowa	Sorensen, Andrew C., and Adam Newman	2009
20100100108	Phase I Archaeological Survey for the Lathen A Retrofit Project, Monroe County, Iowa	Schoen, Christopher M.	2012
20140804045	Phase I Archaeological Survey and Architectural History Review IA03 Moravia 600 South Brandon Avenue Moravia, Appanoose County, Iowa	Holven, Adam C., and Emily Shepard	2014

The data gathered revealed 23 previously recorded architectural resources within the study area (Table 3). The resources consist of one NRHP *listed* resource, three NRHP *eligible* resources, 15 resources that are *not eligible* for the NRHP, and three resources that are *unevaluated* for the NRHP. One of the previously recorded architectural resources (04-00047 – *not eligible* resource) overlaps with the project area. In addition, the subject railroad is older than 45 years, and is considered *eligible* for the NRHP.

Table 3: Previously Recorded Architectural Resources within the Study Area.

Site (NRHP #)	Site Name/Type	Address/Location	NRHP Eligibility
04-00047	Soo Railroad Underpass	2.8 mi SW of Moravia, sec. 20	Not Eligible
04-00288	Wabash Combination Depot--Moravia	West North Street	Listed
04-00387	Opera House	W Montgomery St and N William St	Not Eligible
04-00407	Swame, Frank, Funeral Home	508 S East St	Not Eligible

Table 3: Previously Recorded Architectural Resources within the Study Area.			
Site (NRHP #)	**Site Name/Type**	**Address/Location**	**NRHP Eligibility**
04-00408	House	207 S William St	Not Eligible
04-00409	House	506 S East St	Not Eligible
04-00410	Spilman House	301 E North St	Not Eligible
04-00411	Moravia United Brethren in Christ Church	101 E North St	Not Eligible
04-00416	Fairview-Main Station Church	22053 430th St	Unevaluated
04-00426	House	303 E Chariton St	Not Eligible
04-00441	House	804 W North St	Eligible
04-00444	Butz, Gerald W. and Dona L., House	908 W North St	Not Eligible
04-00445	Nash, Cornelius S., House	704 W North St	Eligible
04-00446	Scott, Jack L., House	101 N East St	Eligible
04-00447	Dr. Slavin's Office	104 N East St	Not Eligible
04-00448	House	103 S East St	Not Eligible
04-00451	Cyrene, Pam J., House	107 E North St	Not Eligible
04-00454	Iowa Trust and Savings Bank	102 N William St	Not Eligible
04-00456	Cox, Carl and Katie, House	315 N East St	Not Eligible
04-00460	South Soap Creek Bridge # 066040	250th Ave	Not Eligible
04-00496	Hillcrest Cemetery	S side of Moravia	Unevaluated
04-00497	Moravia Cemetery	S side of Moravia	Unevaluated
04-00527	Fairview Church Cemetery	3.3 miles SW of Moravia	Unevaluated

The records search revealed five notable locations within the study area (Table 4). A notable location is a resource that may have significance but has not been formally recorded or evaluated by a historian or archaeologist. The notable locations are *unevaluated* for the NRHP. None of the notable locations are located within the proposed project area.

Table 4: Previously Recorded Notable Locations within the Study Area.				
Site	**Legal Description**	**Cultural Affiliation**	**Site Type**	**NRHP Eligibility**
XX843	NW SW SW Sec 3, T70N, R17W	Historic Euro-American	Moravian Church	Unevaluated
XX4010	SW SE Sec 4, T70N, R17W	Historic Euro-American	Hillcrest Cemetery	Unevaluated
XX4011	SE SE Sec 4, T70N, R17W	Historic Euro-American	Moravia Cemetery	Unevaluated
XX4819	SW SW SW Sec 18, T70N, R17W	Historic Euro-American	Fairview Church Cemetery	Unevaluated
XX8863	NW NW NE Sec 9, T70N, R17W	Historic Euro-American	Machine Gun Molly Bolin's childhood home	Unevaluated

CULTURAL RESOURCE POTENTIAL

For the assessment of archaeological resource potential within the proposed project area, factors consisting of the general terrain, water resources, geomorphological setting, and topographic

factors are considered in order to assess the absence or likelihood of any cultural resources within the project area. Areas identified as disturbed areas, areas with a slope greater than 20 degrees, areas of poorly drained soils, and low lying-wet areas are considered to have a low potential for containing archaeological sites. However, for an area to be considered to have a potential for an archaeological site, the following factors are considered:

- Located within undisturbed land;
- Located on a topographically significant landscape feature;
- Proximity of a suitable former or existing water source (named waterbody and perennial streams; within 200 m for high potential and within 500 m for moderate potential);
- Proximity of a previously recorded archaeological site or historic structure (within 200 m).

Using these parameters, In Situ identified any areas of cultural resource potential within the project area. This cultural resource potential generated by In Situ revealed areas of archaeological resource potential within the project area.

The project area is located in the landform region known as the Southern Iowa Drift Plain. The Southern Iowa Drift Plain is composed almost entirely of deep glacial drifts with streams that have formed well-defined drainage systems, causing the terrain to vary considerably with steep rolling hills and valleys (Prior 1991). Soils within the project area consist of poorly drained to somewhat poorly drained soils (Natural Resources Conservation Service 2023). These soils are formed on bottom land setting and are classified as thick loess, shallow to pre-Wisconsin paleosol, or loess-mantled terrace/thick loess. The archaeological deposition within these soils is typically located at the ground surface or are shallowly buried. The project is located within railroad right of way in an area of agricultural fields with fairly flat terrain and is on a landform with no topographically significant landscape features. The project area is approximately 1.5 miles east of the Buck Branch, 2.9 miles east of Rathbum Lake/Chariton River, 0.4 mile north of Snyder Branch, 0.4 mile south of Inghram Branch, and crosses South Soap Creek and other unnamed intermittent drainages/streams. Typically, archaeological sites that have been found along intermittent streams are short-term occupation sites with low artifact densities (Anderson and Smith 2003; MNDOT 2002; MNDOT 2019). Sources of fresh water and landforms such as river terraces have high potential for archaeological sites (MNDOT 2002; MNDOT 2019). Long-term occupations sites are more likely to occur along permanent water sources, as more resources are readily available (Anderson and Smith 2003; MNDOT 2002; MNDOT 2019). The soils within the project area are poorly drained, supporting that the landforms of the project area not typically suitable for long term occupation, as the area may be subject to frequent flooding. With the exception of the subject railroad, historic maps, namely the BLM GLO map, revealed a historic trail that crosses the project area. In addition, there are no previously recorded archaeological resources within the study area. Due to these factors, typically, the project area would have moderate archaeological potential.

However, since the proposed project will be updating an existing railroad right of way, it is likely that the majority of the project area may likely have been heavily impacted by the previous railroad construction. It is probable that those activities would have significantly, if not totally impacted any archaeological resources that may or may not have been present in relation to the project area, leaving a nominal potential for the intact presence of significant archaeological remains within the proposed project area. This conclusion is further supported due to the small scale of the proposed project (i.e. the proposed construction of new siding adjacent to the existing rail line and within

the existing rail right of way), which is likely to be constructed within the existing, previously disturbed areas and will likely remain within the extents of what has already been vertically and horizontally impacted. Considering these factors, the Project area has a low potential for archaeological resources, however, if archaeological resources were present, they would likely be previously impacted and/or not significant and ineligible for the NRHP. Even though the probability of intact and/or significant archaeological resources is low, the subject railroad is older than 45 years, and is considered *eligible* for the NRHP.

REPORT SUMMARY

In Situ completed a Phase Ia Cultural Resource Literature Review for the proposed CPKC Siding Project in Appanoose County, Iowa. The literature/records search revealed six previous cultural resource inventories/surveys, no previously recorded archaeological sites, 23 previously recorded architectural resources, and five notable locations within the study area. One of the previously recorded architectural resources (04-00047 – *not eligible* resource) overlaps with the project area. In addition, the subject railroad is older than 45 years, and is considered *eligible* for the NRHP.

The project is located within railroad right of way in an area of agricultural fields with fairly flat terrain and is on a landform with no topographically significant landscape features. The project area is approximately 1.5 miles east of the Buck Branch, 2.9 miles east of Rathbum Lake/Chariton River, 0.4 mile north of Snyder Branch, 0.4 mile south of Inghram Branch, and crosses South Soap Creek and other unnamed intermittent drainages/streams. The soils within the project area are poorly drained, supporting that the landforms of the project area not typically suitable for long term occupation, as the area may be subject to frequent flooding. With the exception of the subject railroad, historic maps, namely the BLM GLO map, revealed a historic trail that crosses the project area. In addition, there are no previously recorded archaeological resources within the study area. Due to these factors, typically, the project area would have moderate archaeological potential.

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Please contact me at 952.658.8891 or aledezma@insitucrm.com should you have any further questions or concerns regarding the information assembled.

Sincerely,

Abraham Ledezma, M.S., RPA - Principal Investigator
Enclosures: Figures 1-8: Project and Literature Review Maps

REFERENCES CITED

Anderson, David G. and Steven D. Smith
2003 *Archaeology, History, and Predictive Modeling: Research at Fort Polk, 1972-2002*. University of Alabama Press, Tuscaloosa, Alabama.

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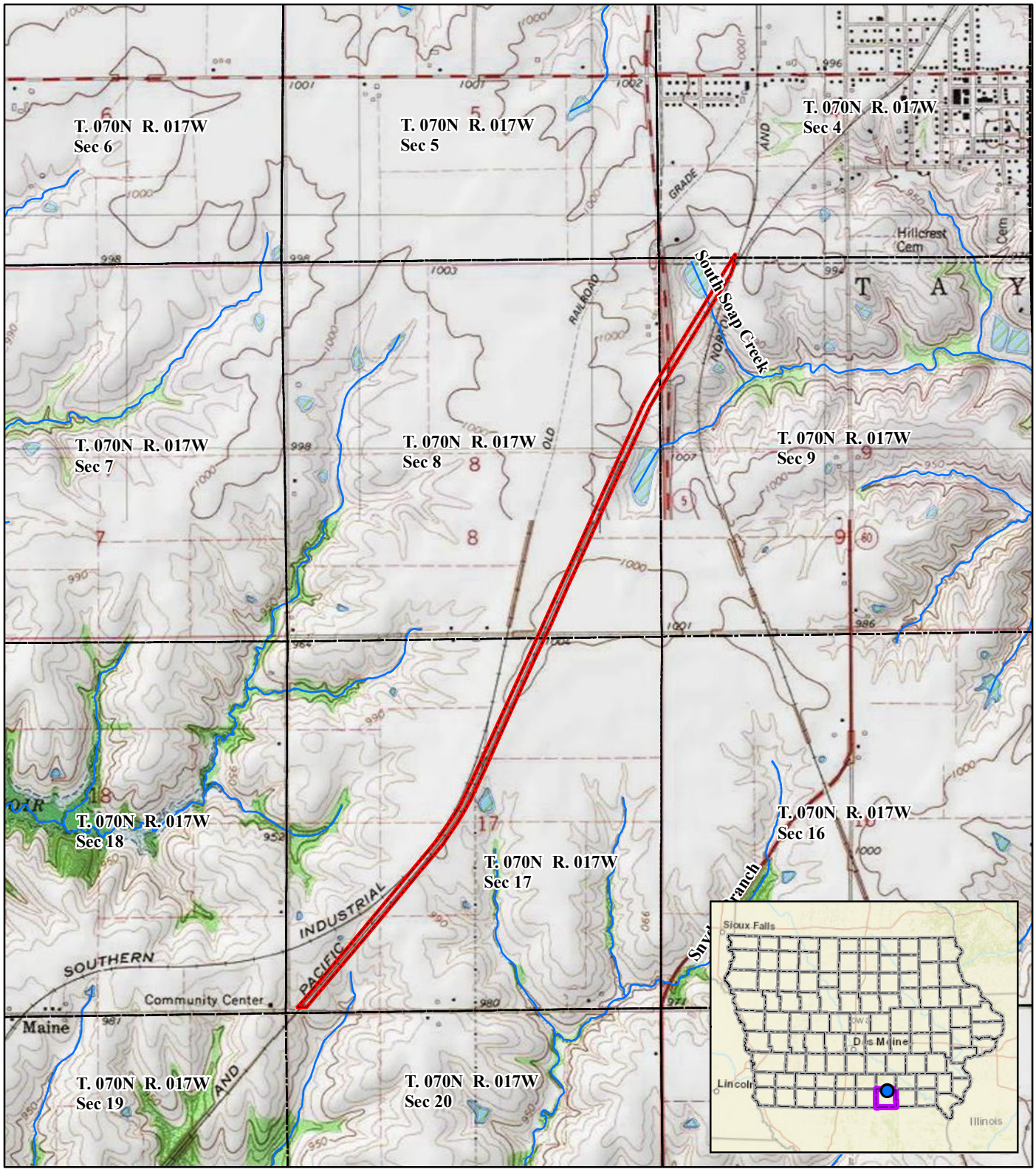


Legend

- Project Location
- Township Boundary
- Township/Range/Section
- Stream/River
- Waterbody
- Project Location
- Appanoose County

N W E S

1:24,000 — 1 inch equals 2,000 feet

Approximate Scale in Feet

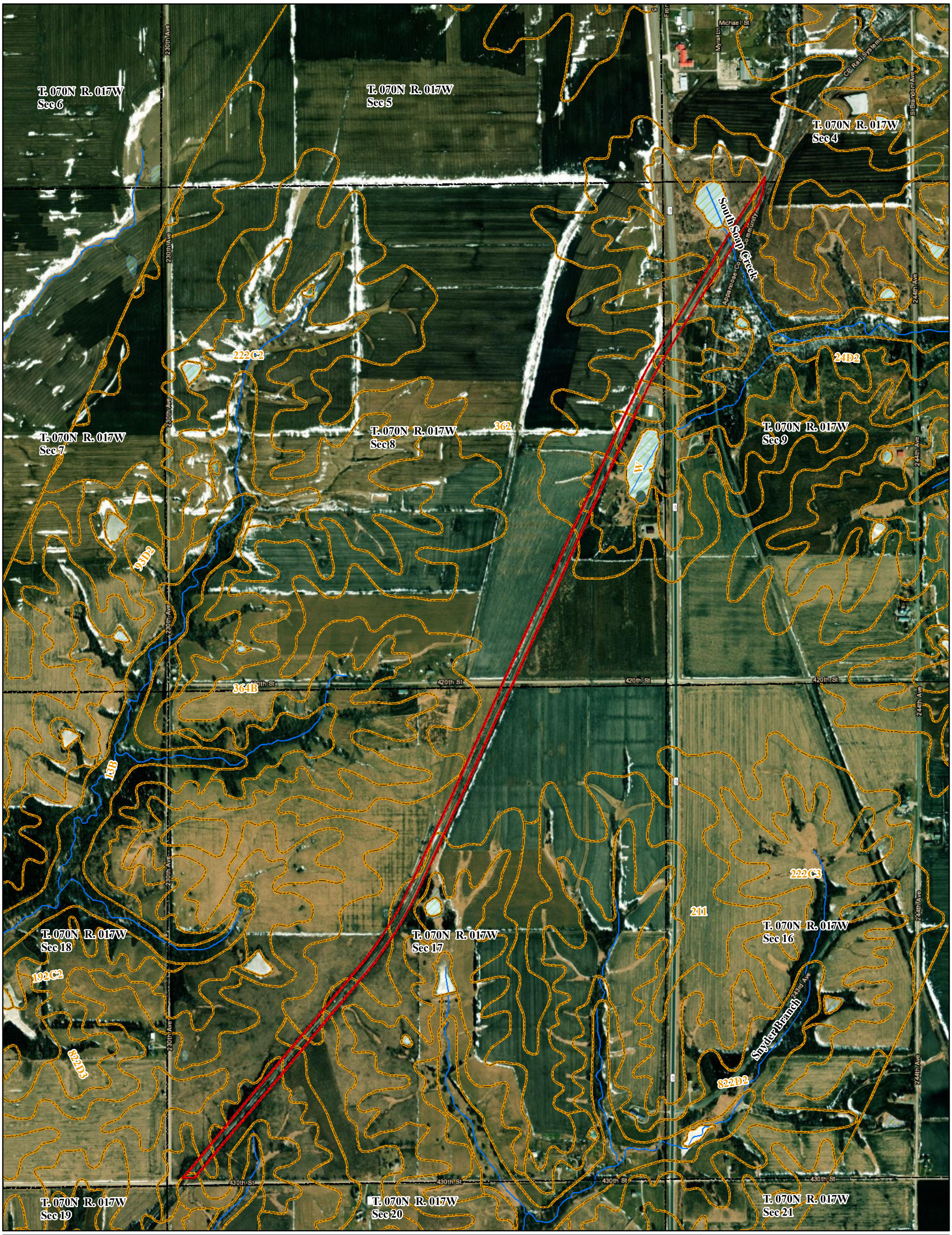
0 — 3,200 — 6,400

TOPOGRAPHIC MAP

CPKC Siding Project
Appanoose County, Iowa

Note: Imagery courtesy of ESRI

Figure 1. Project location on the USGS *1966 Hiattsville, IA* 7.5 minute series topographic map.



Legend

- Project Location
- Soils
- Township Boundary
- Township/Range/Section
- Stream/River
- Waterbody

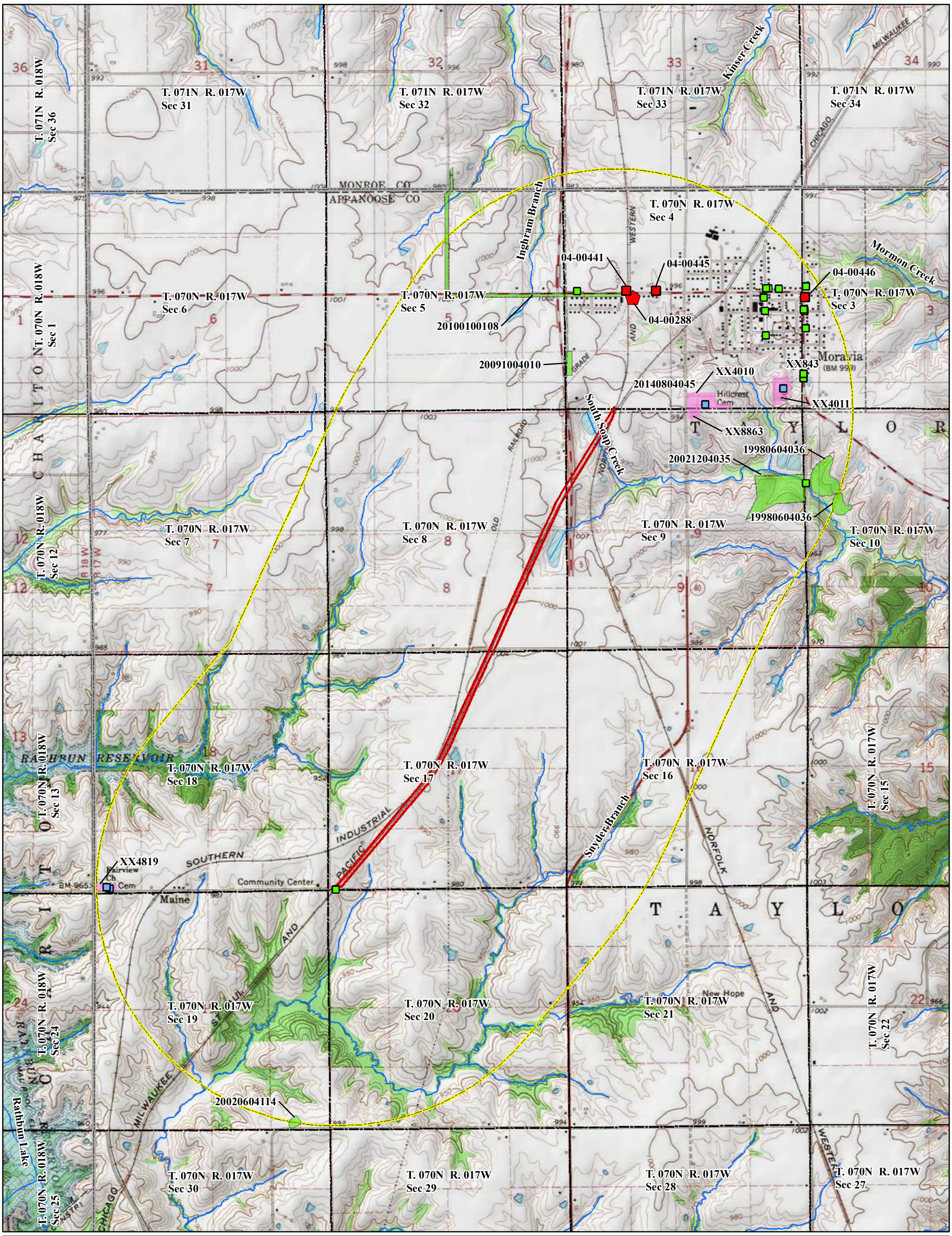
N
W E
S

958 0 958
Feet
1:11,500 1 inch equals 958 feet

Aerial Map
CPKC Siding Project
Appanoose County, Iowa

Note: Aerial Imagery courtesy of ESRI

Figure 2. Project location on an aerial map



Legend

- Listed Architecture
- Eligible Architecture
- Unevaluated Architecture
- Not Eligible Architecture
- Notable Locations
- Previous Surveys
- Project Location
- 1-Mile Study Area
- Township Boundary
- Township/Range/Section
- Stream/River
- Waterbody

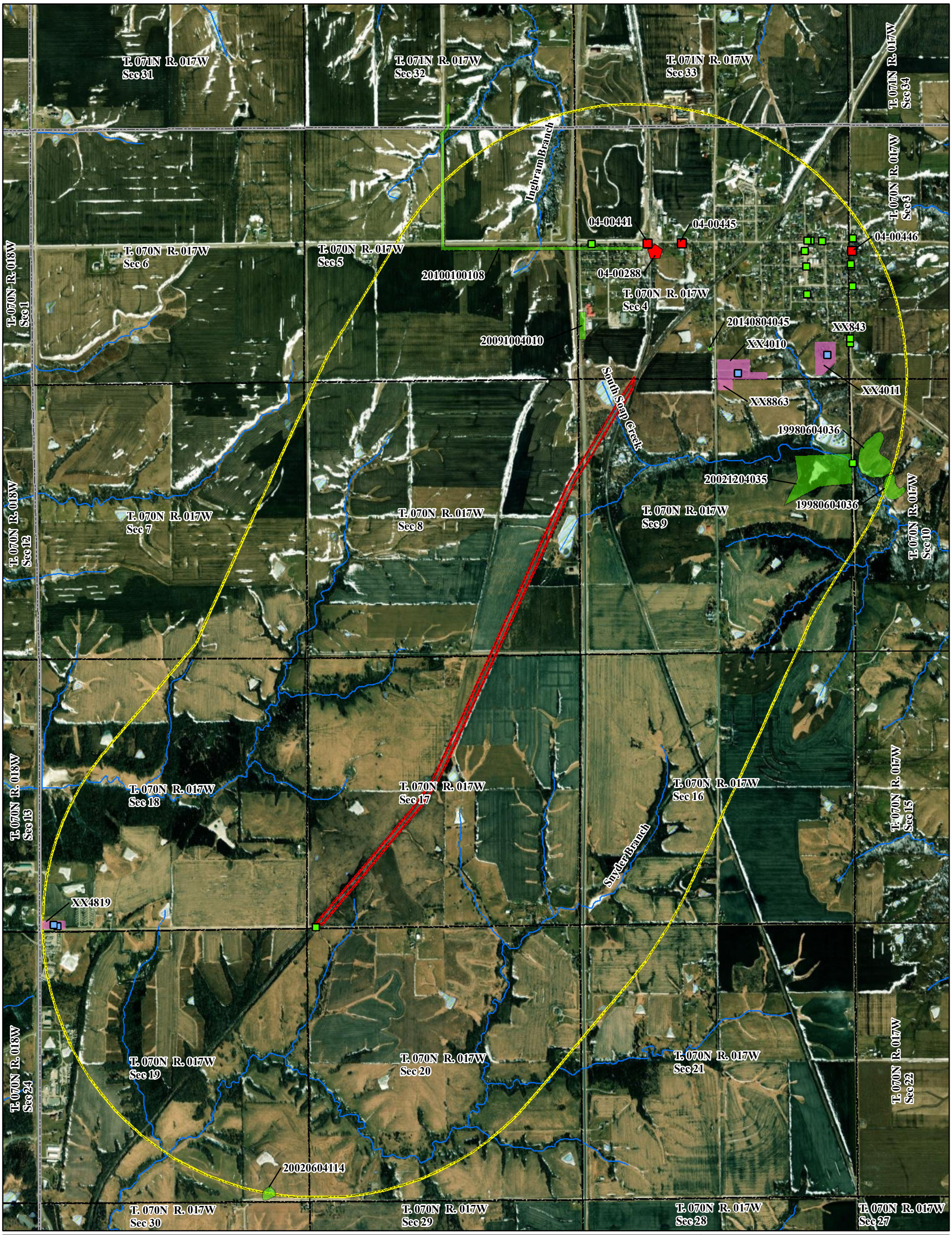
N W E S

2,000 0 2,000
Feet
1:24,000 1 inch equals 2,000 feet

LITERATURE REVIEW TOPOGRAPHIC MAP
CPKC Siding Project
Appanoose County, Iowa
DO NOT RELEASE
Archaeological Site Location
Not for Public Disclosure

Note: Aerial Imagery courtesy of ESRI

Figure 3. Topographic map with previous cultural resources surveys and previously recorded sites.



Legend

- Listed Architecture
- Eligible Architecture
- Unevaluated Architecture
- Not Eligible Architecture
- Notable Locations
- Previous Surveys
- Project Location
- 1-Mile Study Area
- Township Boundary
- Township/Range/Section
- Stream/River
- Waterbody

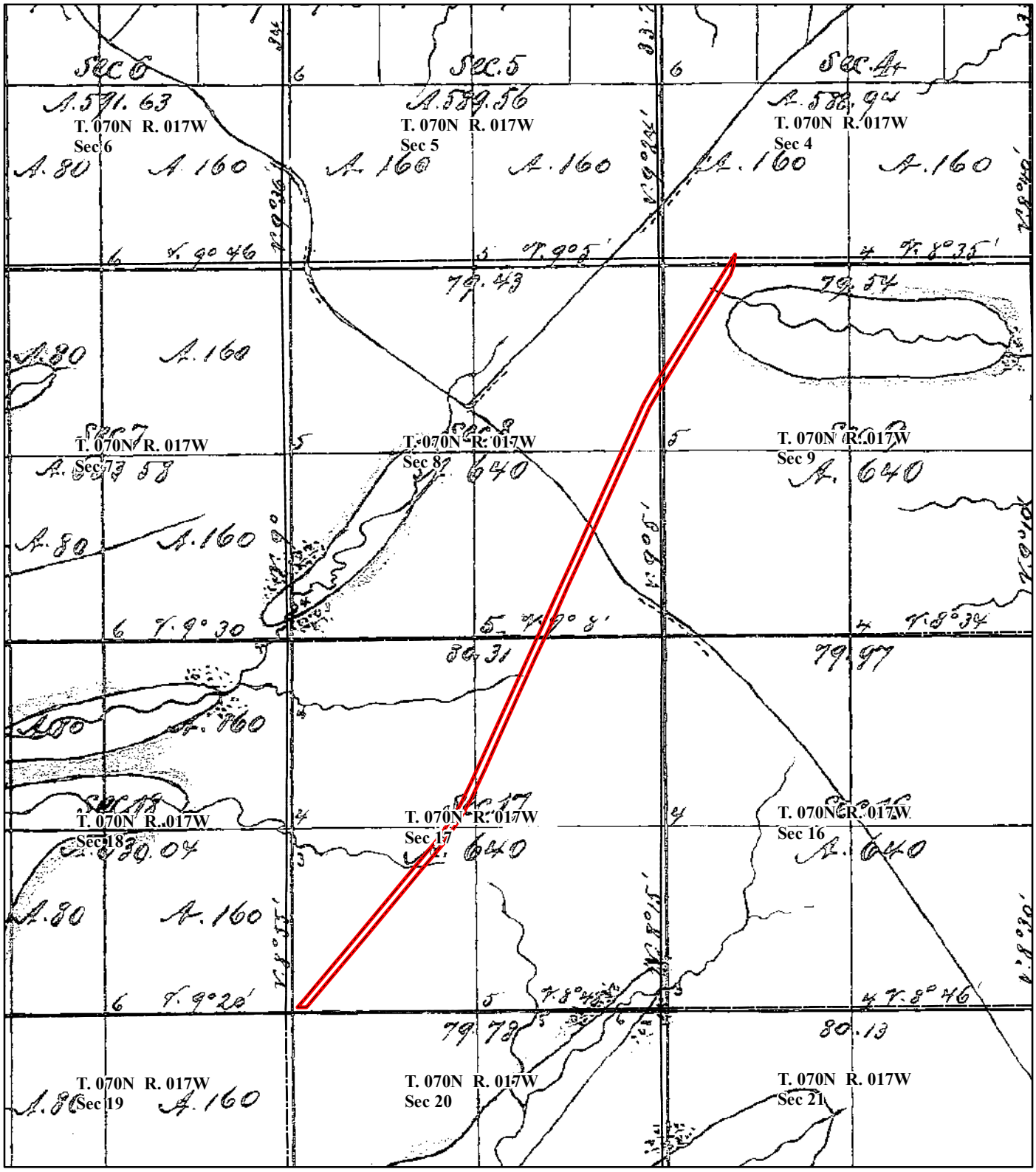
N W E S

1,750 0 1,750
Feet
1:21,000 1 inch equals 1,750 feet

LITERATURE REVIEW AERIAL MAP
CPKC Siding Project
Appanoose County, Iowa
DO NOT RELEASE
Archaeological Site Location Not for Public Disclosure

Note: Aerial Imagery courtesy of ESRI

Figure 4. Aerial map with previous cultural resources surveys and previously recorded sites.



Legend

- Project Location
- Township Boundary
- Township/Range/Section

N
W E
S

1:24,000 — 1 inch equals 2,000 feet

Approximate Scale in Feet

0 — 3,200 — 6,400

HISTORICAL BLM GLO PLAT MAP

CPKC Siding Project
Appanoose County, Iowa

Note: Imagery courtesy of the U.S. Department of the Interior Bureau of Land Management.

Figure 5. Project location on the 1845 BLM GLO Plat map.

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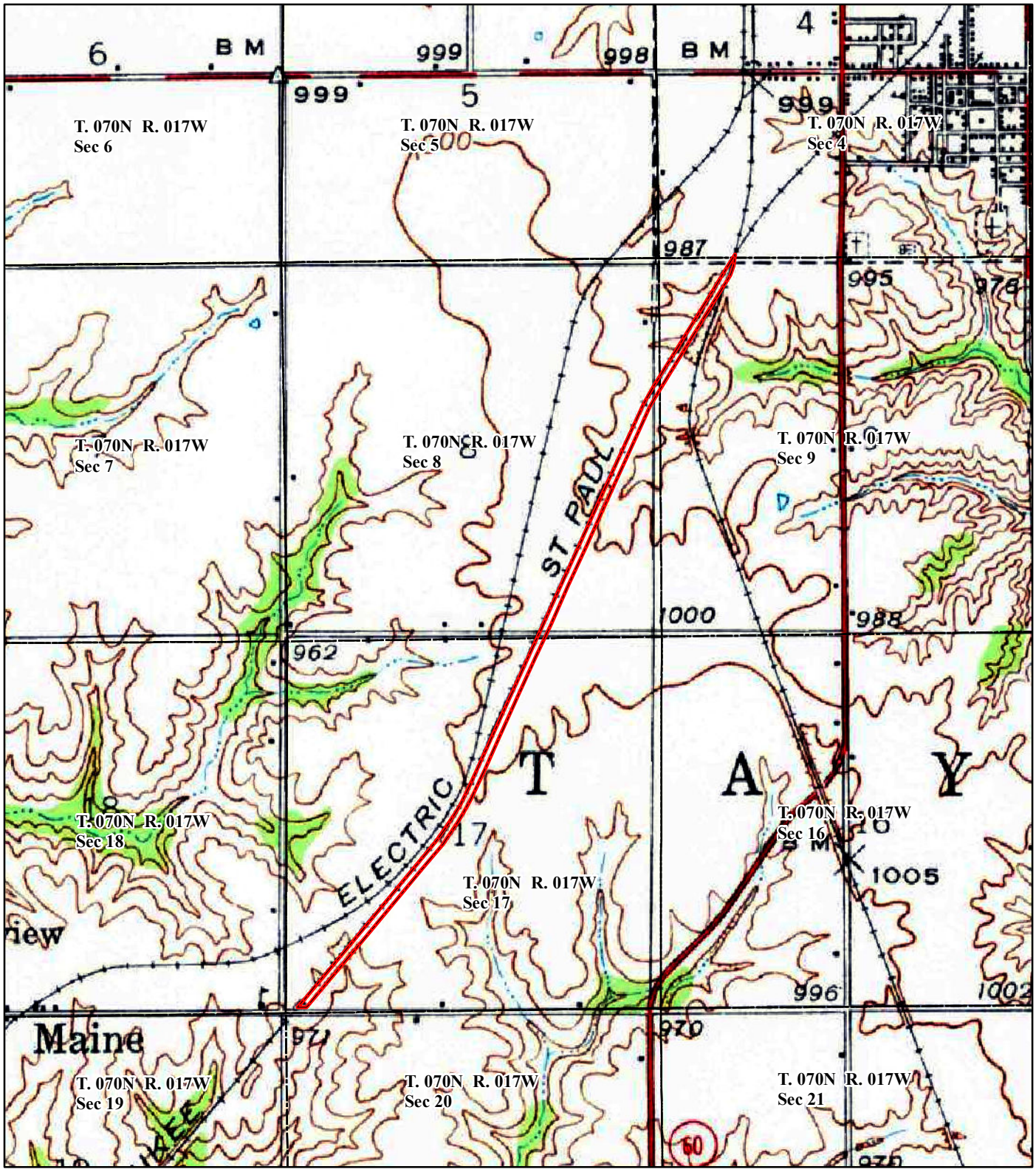


Legend

- Project Location
- Township Boundary
- Township/Range/Section

1:24,000

Approximate Scale in Feet

0 3,200 6,400

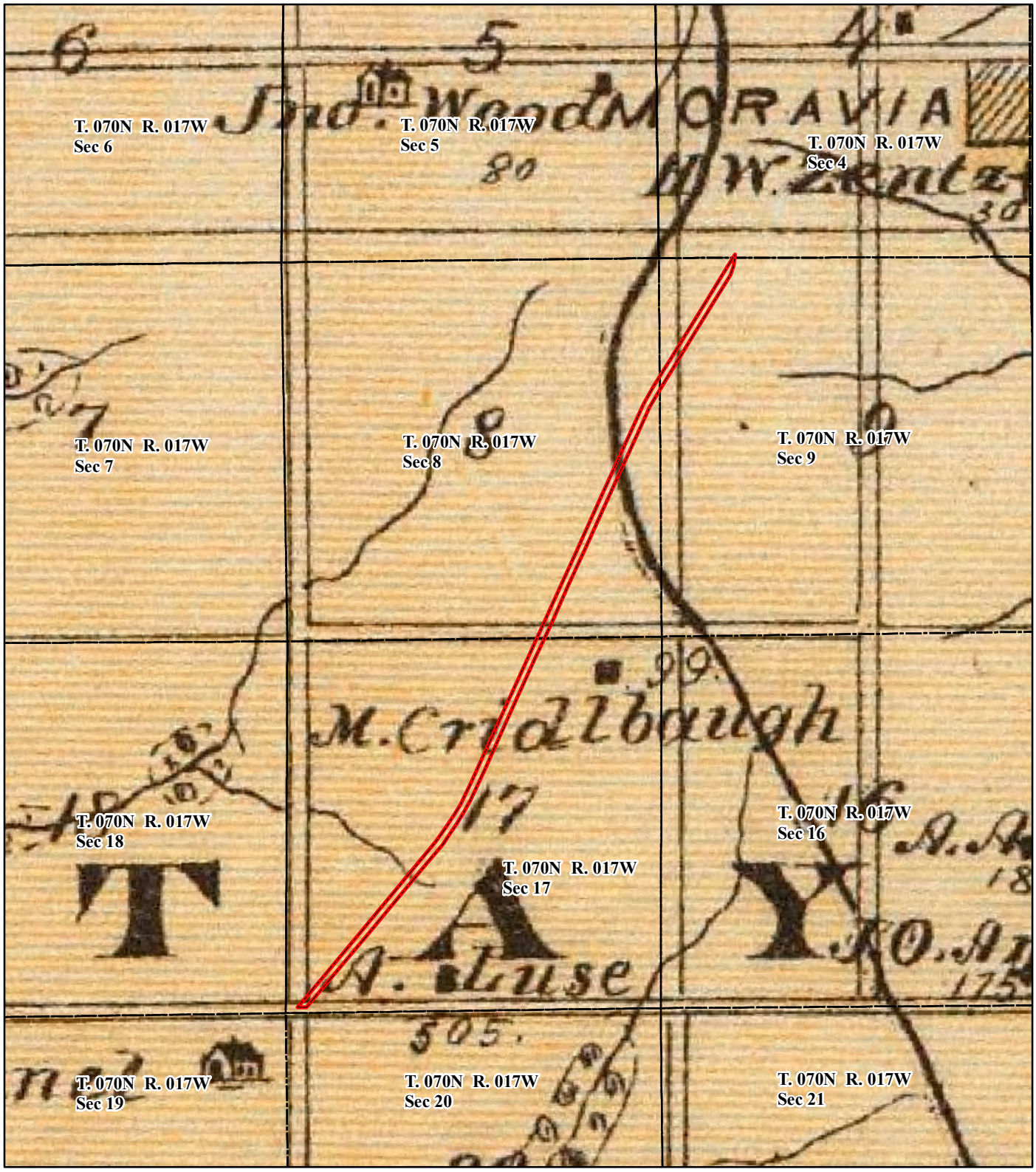
1 inch equals 2,000 feet

HISTORICAL TOPOGRAPHIC MAP

CPKC Siding Project
Appanoose County, Iowa

Note: Imagery courtesy of the USGS.

Figure 6. Project location on the *1939 Mystic, IA* 62,500 series topographic map.



Legend

- Project Location
- Township Boundary
- Township/Range/Section

N
W E
S

1:24,000 — 1 inch equals 2,000 feet

Approximate Scale in Feet

0 — 3,200 — 6,400

HISTORICAL ATLAS MAP

CPKC Siding Project

Appanoose County, Iowa

Note: Imagery courtesy of the University of Iowa.

Figure 7. Project location on the 1875 Andreas Atlas.

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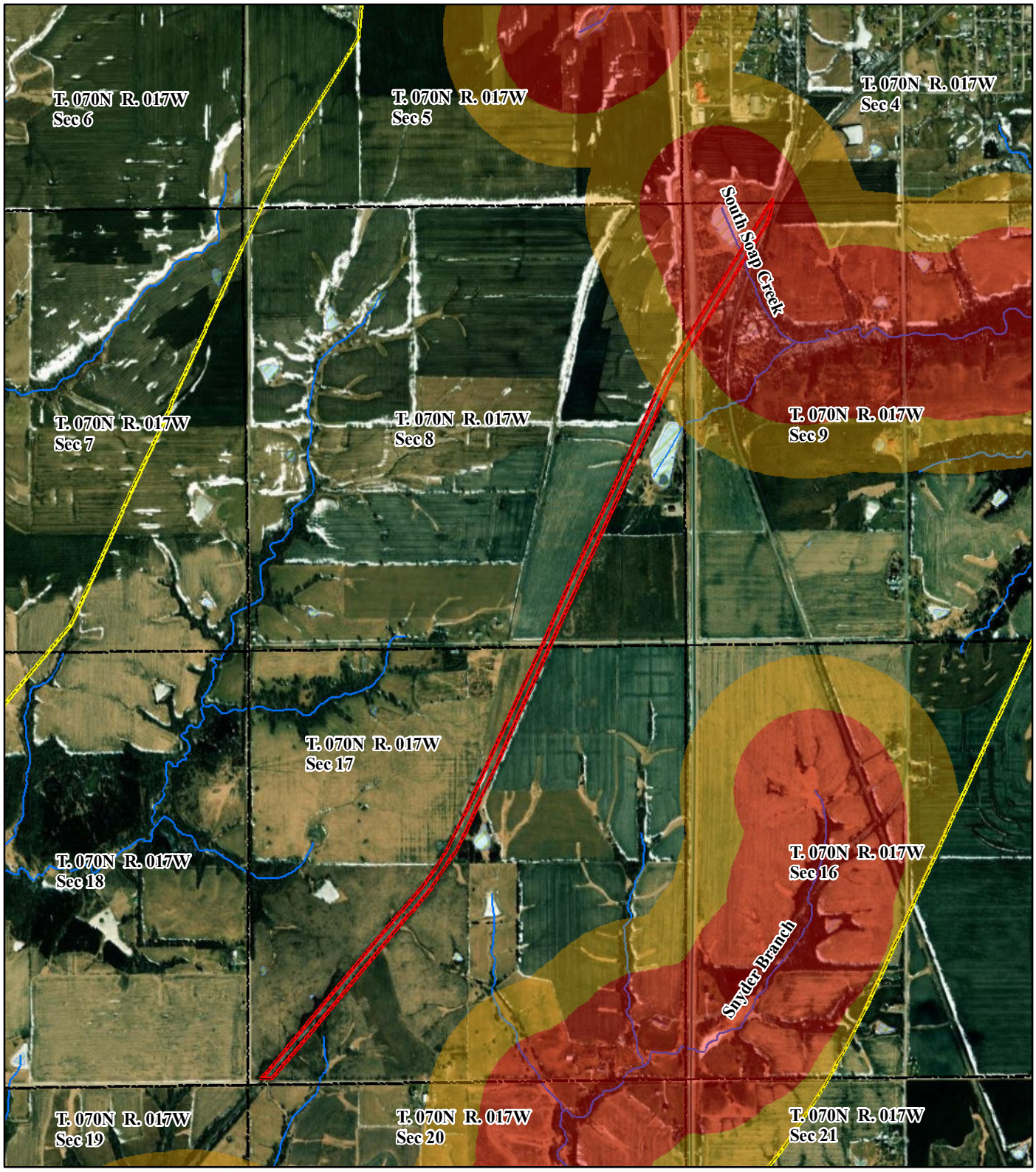

Legend

- High Resource Potential
- Moderate Resource Potential
- Project Location
- 1-Mile Study Area
- Township Boundary
- Township/Range/Section
- Stream/River
- Waterbody

N W E S

1:20,566 — 1 inch equals 1,714 feet

Approximate Scale in Feet

0 — 2,750 — 5,500

FIELDWORK MAP

CPKC Siding Project
Appanoose County, Iowa

Note: Imagery courtesy of Client.

Figure 8. Project location on an aerial map showing areas of resource potential.

N

Proposed Moravia Alternative Siding

Environmental Visit Report

Prepared for Canadian Pacific Railway

Appanoose County, Iowa

December 2023

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Geology, Soils, and Topography/Landforms 2
Water Resources 4
Sensitive Ecological Resources 4
Conclusion 8

Appendices

Appendix A – Figures
Appendix B – Photo Log
Appendix C - USFWS IPaC Report

Introduction

Canadian Pacific Kansas City Railway (CPKC) has proposed the Moravia Alternative Siding Project on the existing CPKC Kansas City Subdivision (Mile Post (MP) 328.0-MP 330.2). On September 8th, Katie Lueth, an Environmental Scientist with HDR Engineering, Inc. (HDR), visited the proposed Moravia Alternative Siding in order to document existing environmental conditions and identify potential environmental issues that may be applicable to the planning and construction of the proposed siding. Additional coordination with regulators may be required in order to minimize impacts to environmental features.

Project Description

The proposed alternative siding is located at MP 328.0-MP 330.2 southwest of the City of Moravia in Appanoose County, Iowa. The study area (Study Area) includes an approximately 35 acre, 100ft wide corridor centered on the existing railway and is located in Sections 4, 8, 9, and 17 of Township 70N, Range 17W of Appanoose County in south-central Iowa (Appendix A-Figure 1).

Methodology

The site visit relied on visual observations taken from the existing track as accessed by a hi-rail vehicle on September 8th, 2023. Photos of environmental features are included in Appendix B. In addition to physical observations, publicly available data such as published literature, online resources, regulatory agencies, reports, maps, aerial photography, databases, public records, and geographic information system (GIS) data sets were reviewed in order to identify potential environmental issues.

Environmental Features

Geology, Soils, and Topography/Landforms

Geology

According to the Iowa Department of Natural Resources, the Study Area is located within Ecoregion 40a: Loess Flats and Till Plains. This ecological region is associated with deep to moderate loess deposits over glacial till and dark, shallow soils. Land uses within this region include areas of cropland, pastures, and bands of woodlands. Corn and soybeans are the major crops within this ecoregion.

Soils

HDR queried the USDA-NRCS Soil Survey Geographic database soils for the Study Area. Soil units mapped within the Study Area including hydrology rating, farmland rating, and drainage rating are summarized in Table 1. Mapped soil units are shown in Appendix A – Figure 2.

Table 1 .Soil Units Within Study Area

Map Unit Symbol	Map Unit Name	Hydric Rating	Farmland Classification	Acres In Study Area	Percentage of Study Area
211	Edina silt loam, 0 to 1 percent slopes	100	Prime farmland if drained	0.5	1.5%
222C2	Clarinda silty clay loam, 5 to 9 percent slopes, moderately eroded	100	Farmland of statewide importance	9.4	27.1%
362	Haig silty clay loam, 0 to 2 percent slopes	100	Prime farmland if drained	11.9	34.2%
364B	Grundy silty clay loam, 2 to 5 percent slopes	10	All areas are prime farmland	11.9	34.2%
822D2	Lamoni silty clay loam, 9 to 15 percent slopes, moderately eroded	10	Farmland of statewide importance	1.1	3.0%

Source: USDA NRCS Web Soil Survey

A hydric soil is a soil that is "formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part". Three hydric soil types are mapped within the Study Area, Edina silt loam, 0 to 1 percent slopes, Clarinda silty clay loam, 5 to 9 percent slopes, moderately eroded, and Haig silty clay loam, 0 to 2 percent slopes. These hydric soil map units accounts for 63% of mapped soils within the Study Area and are shown in Appendix A – Figure 2.

USDA-NRCS has classified farmland soils into three categories: prime, unique, and statewide importance, based on suitability for agricultural uses. The USDA has defined prime farmland (PFL) as "soils that are best suited to producing crops, feed, forage, fiber, oil seed crops, and that are also available for land uses including cropland, pastureland, rangeland, forest land, or other lands not including urban build-up or water." These soils produce the highest yields with minimal inputs of energy and economic resources. Unique farmlands are those that have a special set of properties that are unique for producing certain high value crops. Farmlands of statewide importance are lands that do not meet the requirements for prime farmland but that are of statewide importance for the production of food, feed, fiber, forage, and oil seed crops.

Topography

Topography of the Study Area is generally flat with gradual slopes associated with drainage to the west and east via small stream channels. The lowest areas of elevation (964ft above sea level) are associated with the overpass bridge over 430th St in the southern end of the project. The highest areas of elevation (1010ft above sea level) are located in the northern portion of the Study Area and are associated with the State Highway 5 bridge. Contour data showing the topography of the Study Area is included in Appendix A – Figure 2.

Water Resources

Surface Waters

Surface waters in the Study Area were identified by reviewing National Wetland Inventory (NWI). Two NWI features occur within the Study Area and include a freshwater pond, and stream. NWI features within the Study Area are shown on Appendix A - Figure 2.

There are no Iowa DNR Classified Trout Streams or Protected Waters were identified within the Study Area or surrounding areas. A review of Iowa DNR Impaired Waters Map shows there are no impaired water bodies within the Study Area.

A wetland delineation was not conducted during the September 8th 2023 site visit. A field delineation of wetlands and other potential waters of the U.S. will be required as part of any site specific regulatory permitting.

Floodplains and Shorelands

Floodplains are flat, or nearly flat, land adjacent to a river or stream that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which includes areas covered by the flood, but which do not experience a strong current. Floodplains prevent flood damage by detaining debris, sediment, water, and ice. The Federal Emergency Management Agency (FEMA) delineates floodplains and determines flood risks in areas susceptible to flooding. The base flood that FEMA uses, known as the 100-year flood, has a one percent chance of occurring during each year.

No FEMA Flood Hazard Areas are mapped within the Study Area (Appendix A – Figure 2).

Sensitive Ecological Resources

Federal Threatened and Endangered Species

HDR reviewed USFWS Information for Planning and Consultation tool (IPaC) to identify potential federally listed threatened and endangered species that may occur in the Study Area. IPaC identified five species that may potentially occur within the Study Area. Two of these are federally listed species, one is a proposed for listing as endangered, one is a candidate species and one is threatened. The IPaC species list is included in Appendix C. The IPaC results indicate that there are no USFWS designated critical habitats present within the Project area. Species identified by IPaC, as well as their habitat and likelihood of occurrence within the Study Area, are shown in Table 3.

Table 3 – Federally Listed Species Potentially Occurring within the Study Area

Common Name	Scientific Name	Status	Habitat	Likely To Occur In Study Area?
Northern Long-eared Bat (NLEB)	*Myotis septentrionalis*	Threatened	Northern Long-eared Bats have been found in the winter in natural caves, and in mines. Hibernacula	There are no known, identified roost or hibernaculum trees present.

Common Name	Scientific Name	Status	Habitat	Likely To Occur In Study Area?
			are shared between both sexes and often multiple species of bats. Preferred sites typically have high humidity levels, minimal airflow, and a constant temperature. After spring emergence, bats migrate to summer roosting and foraging grounds. Foraging habitats include closed-canopy forests, forested hillsides and ridges, and small ponds and streams. In summer, the species is often associated with forested habitats where they make use of tree roosts, especially near water sources. Loose bark, broken tree limbs, cavities, and cracks in a tree can all be utilized by bats as roosting sites.	However, the wooded portions of the site may be suitable for either roosting or hibernacula.
Indiana Bat	*Myotis sodalis*	Endangered	Indiana bats occupy roost sites in forested areas under the exfoliating bark od dead or dying trees. Roost trees are often within canopy gaps in a forest, in a fence line, or along a wooded edge. During winter, Indiana bats are restricted to suitable underground hibernacula in karst areas or other cave-like locations such as abandoned mines.	There are no known, identified roost or hibernaculum trees present. However, the wooded portions of the site may be suitable for summer roosting.
Tricolored Bat	*Perimyotis subflavus*	Proposed Endangered	Tricolored bats primarily roost among live and dead leaf clusters of live or recently dead deciduous hardwood trees. In addition, tricolored bats have been observed roosting during summer among pine needles, eastern red cedar, within artificial roosts like barns, beneath porch roofs, bridges, concrete bunkers, and rarely within caves. Female tricolored bats exhibit high site fidelity, returning year after year to the same summer roosting locations. Female tricolored bats form maternity colonies and switch roost trees regularly. Males roost singly. In the winter, tricolor bats roost in caves and mines.	There are no known, identified roost or hibernaculum trees present. However, the wooded portions of the site may be suitable for either roosting or hibernacula.
Eastern Prairie Fringed-Orchid	*Platanthera leucophaea*	Threatened	Eastern prairie fringed-orchid occurs in a wide variety of habitats, from wet to mesic prairie, to wetland communities, including sedge meadow, fen, marsh and marsh edge. It can occupy a very wide moisture gradient of prairie and wetland vegetation. In general, the habitat is moist or moderately moist. The orchid requires full sun for optimal growth and flowering. However, in some	There is marginal habitat for eastern prairie fringed-orchid within the Study Area. A field survey of the site during the peak growing season would be needed to positively determine presence or absence of the species.

Common Name	Scientific Name	Status	Habitat	Likely To Occur In Study Area?
			plant communities where there are encroaching species such as cattail and/or dogwood, the orchid may be interspersed or within the edge zones of these communities and thus can sometimes occur in partially shaded areas. The substrate of the sites where this orchid occurs include glacial soils, lake plain deposits, muck or peat. In some cases, the species may also occur along ditches or roadways where this type of habitat is present.	
Monarch Butterfly	*Danaus plexippus*	Candidate	During the breeding season, monarchs lay their eggs on their obligate milkweed host plant and larvae emerge after two to five days.	Species is likely to occur within suitable habitat in the Study Area

Source: USFWS, 2023.

The USFWS listed the northern long-eared bat as endangered effective March 31, 2023. Ensuring construction and operation are consistent with USFWS guidance would minimize impacts to this species. A presence/likely absence study may be required to determine whether NLEB are present prior to tree clearing in the Study Area. Any tree removal should avoid the active season (April 1-September 30) for the Northern long-eared bat. Alternatively, the removal of potential roost trees may occur after consulting the Interim Consultation Framework streamlining tool being developed by USFWS to ensure compliance with the guidelines of the former 4(D) rule.

No federally listed species or signs of their presence were observed during the September 8th, 2023 site visit.

State Threatened and Endangered Species

There are 48 species in Appanoose County Iowa that are listed as state-endangered or state-threatened. No state listed threatened or endangered species were observed within the Study Area during the September 8th, 2023 site visit.

Species Observed Within Study Area

A number of species that thrive in agricultural edges and disturbed areas were observed during the initial environmental site visit on September 8th, 2023. Bird species observed included gray cat bird (*Dumetella carolinensis*), ringneck pheasant (*Phasianus colchius*), red tailed hawk (*Buteo jamaicensis*), and cliff swallows (*Petrochelidon pyrrhonota)*. No nests were observed within the Study Area during the site visit but further investigations during late fall and winter when leaves may not obstruct nests are recommended to confirm the presence or absence of nests. Mammal species observed included the eastern gray squirrel (*Sciurus carolinensis*). Insect species observed included cabbage white butterflies (*Pieris rapae*). No threatened, endangered, or otherwise protected species were observed within the Study Area.

The adjacent land use of the Study Area was primarily agricultural row crops planted with corn (*Zea mays*), soybeans (*Glycine max*) and pastureland. The habitat within the study corridor consisted of disturbance-tolerant plant species including ragweed (*Ambrosia artemiisifolia*), sunflower (*Helianthus spp*.), sweet clover (*Meliotus officinalis*), foxtail (*Setaria viridis*), small to medium green ash (*Fraxinus pennsylvanica*) and other small trees. Because of the disturbed nature of the railway corridor and the adjacent land under active agricultural production, no areas of high quality or rare habitat were observed.

Migratory Birds and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act (MBTA) of 1918 prohibits the "take" of migratory birds. The MBTA covers several species that could occur in the Study Area and is executed and enforced by the USFWS. A USFWS IPaC query indicates that there is 1 federally recognized migratory bird species, Chimney Swift (*Chaetura pelagica*), protected under the Migratory Bird Treaty Act and occurs on the USFWS Birds of Conservation Concern (BCC) list or warrants special attention in the Study Area. Further information regarding the list is available in Appendix C. Should clearing of vegetation occur during the migratory bird nest season, (generally March through October) it is recommended that a nest survey be conducted prior to clearing, and active nests be avoided and protected until they become inactive.

The list also includes the Bald Eagle and Golden Eagle. The Bald and Golden Eagle Protection Act (BGEPA) prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts, nests, or eggs. The USFWS IPaC query indicates a strong likelihood of bald eagles present year-round within or near the Study Area, and a minimal likelihood that golden eagles are present.

Rare or Unique Habitats

Bird Conservation Areas are areas identified by the Iowa Department of Natural Resources as areas of key bird habitat. The Study Area intersects with the western corner of the Soap Creek – Stephens Forest Bird Conservation Area (Appendix A – Figure 3).

No calcareous fens are mapped within Appanoose County. No fens were observed within the Study Area.

No known Historic Forest Stands are mapped within the Study Area.

No IDNR Public Prairies are mapped within the Study Area.

Parks and Public Lands

According to the Appanoose County Conservation Board (ACCB), no public lands including parks, trails, campgrounds, or public hunting areas are mapped within the Study Area.

According to the IDNR Public Hunting Atlas, no Iowa Public Hunting Lands and no Wildlife Management Areas (WMA) are mapped within the Study Area.

Conclusion

There are several resources within the Study Area that HDR recommends should be avoided during the design process of the alternative siding.

NWI data, topographic maps, site visits, and aerial imagery indicate potentially jurisdictional features, (i.e., wetlands and streams) present in the Study Area. Impacts to wetlands and/or streams would trigger Corps CWA Section 404/401 permitting.

Although no state or federally listed species were observed during the September 8th 2023 site visit, state and federally listed species may be within the Study Area. Development of the Study Area could potentially require further consultation with USFWS to avoid potential impacts to listed species.

Resources

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A

Appendix A – Figures

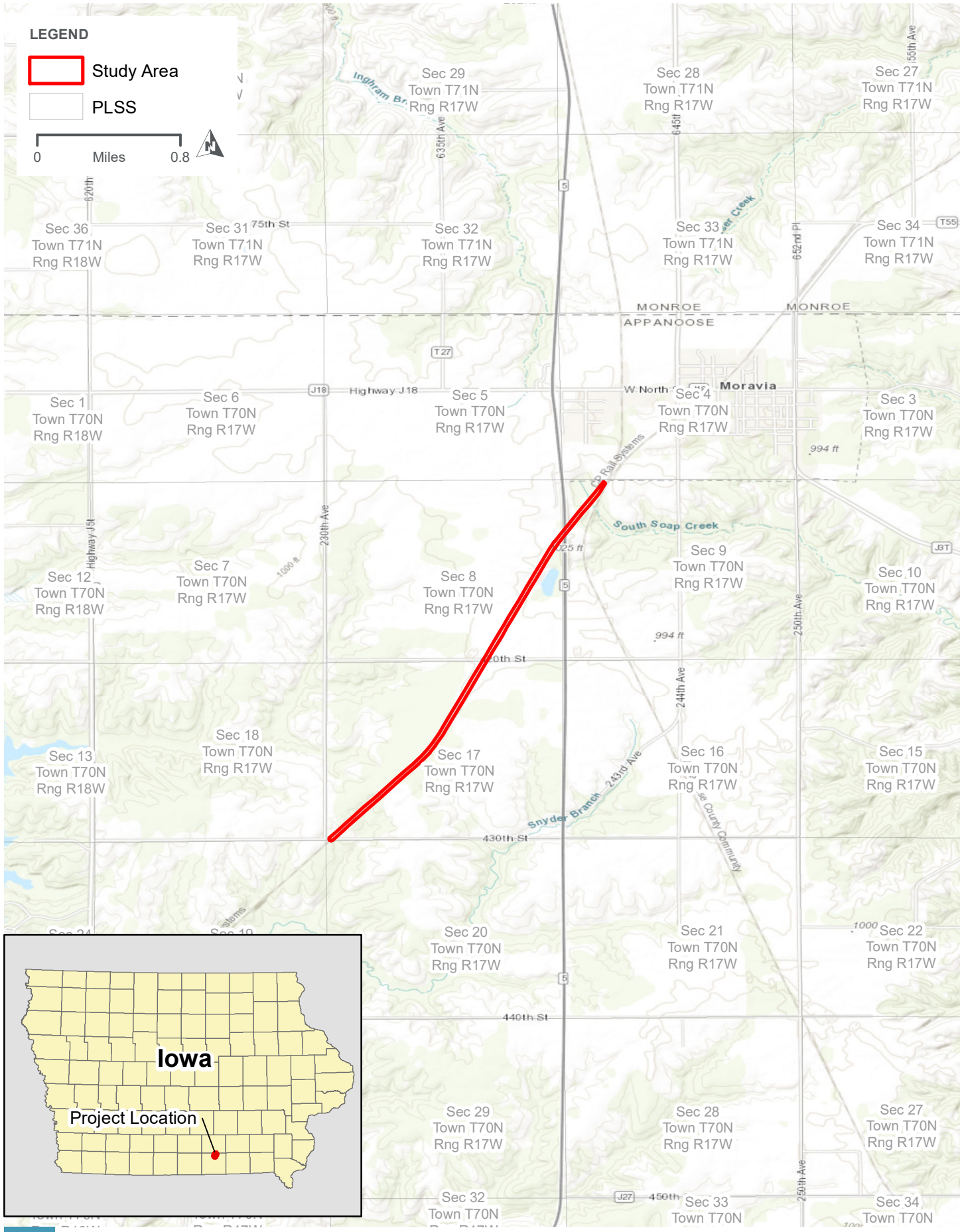

FIGURE 1: PROJECT LOCATION MAP

MORAVIA ALTERNATIVE SIDING

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ENVIRONMENTAL SITE VISIT 09/08/2023

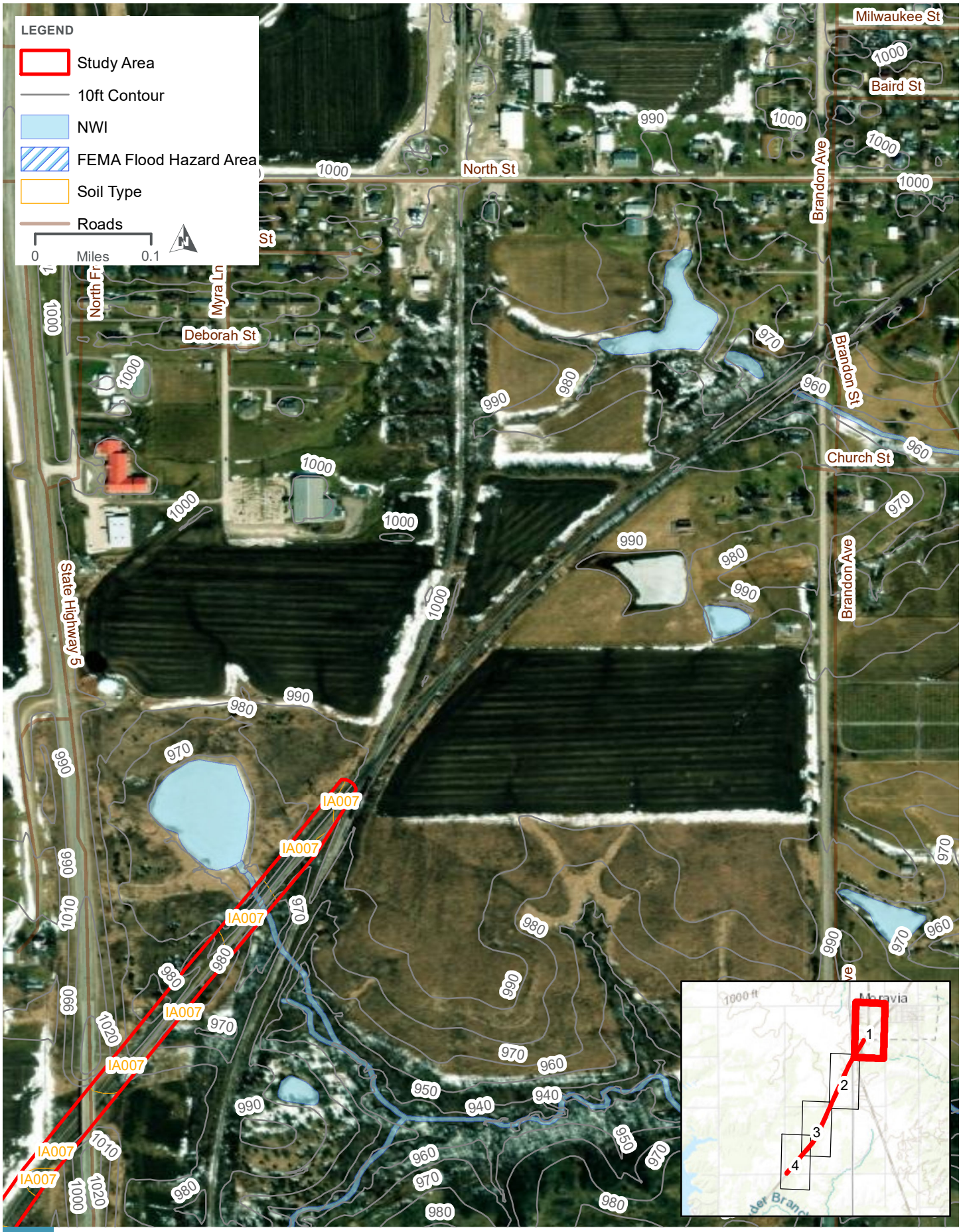

FIGURE 2: SOILS, HYDROLOGY, TOPOGRAPHY

MORAVIA ALTERNATIVE SIDING

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ENVIRONMENTAL SITE VISIT 09/08/2023

FIGURE 2: SOILS, HYDROLOGY, TOPOGRAPHY

MORAVIA ALTERNATIVE SIDING

MP 328.0 - MP 330.2

FIGURE 2: SOILS, HYDROLOGY, TOPOGRAPHY

MORAVIA ALTERNATIVE SIDING

MP 328.0 - MP 330.2

FIGURE 2: SOILS, HYDROLOGY, TOPOGRAPHY

MORAVIA ALTERNATIVE SIDING

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ENVIRONMENTAL SITE VISIT 09/08/2023

FIGURE 3: PHOTO LOCATIONS

MORAVIA ALTERNATIVE SIDING

MP 328.0 - MP 330.2

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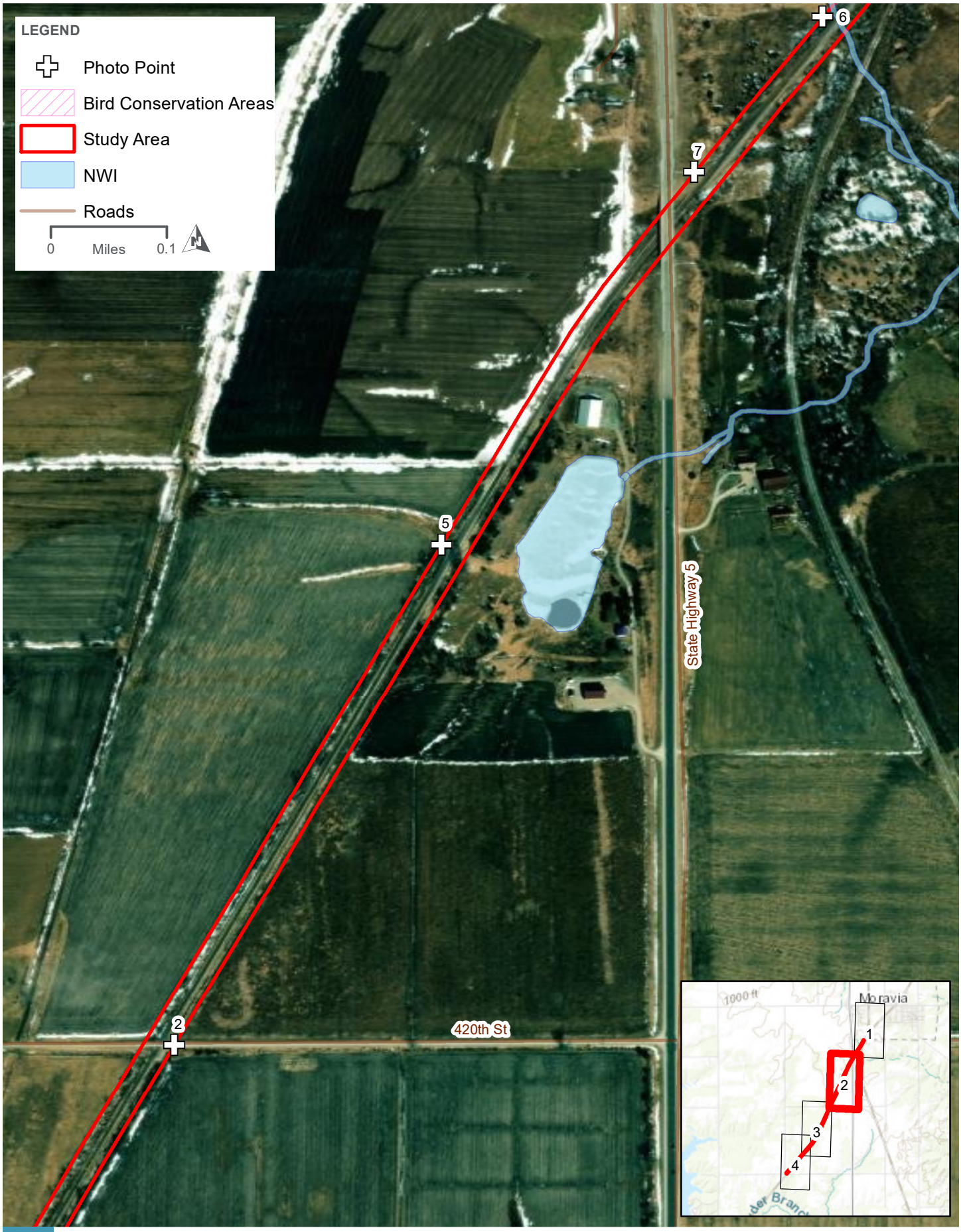

FIGURE 3: PHOTO LOCATIONS

MORAVIA ALTERNATIVE SIDING

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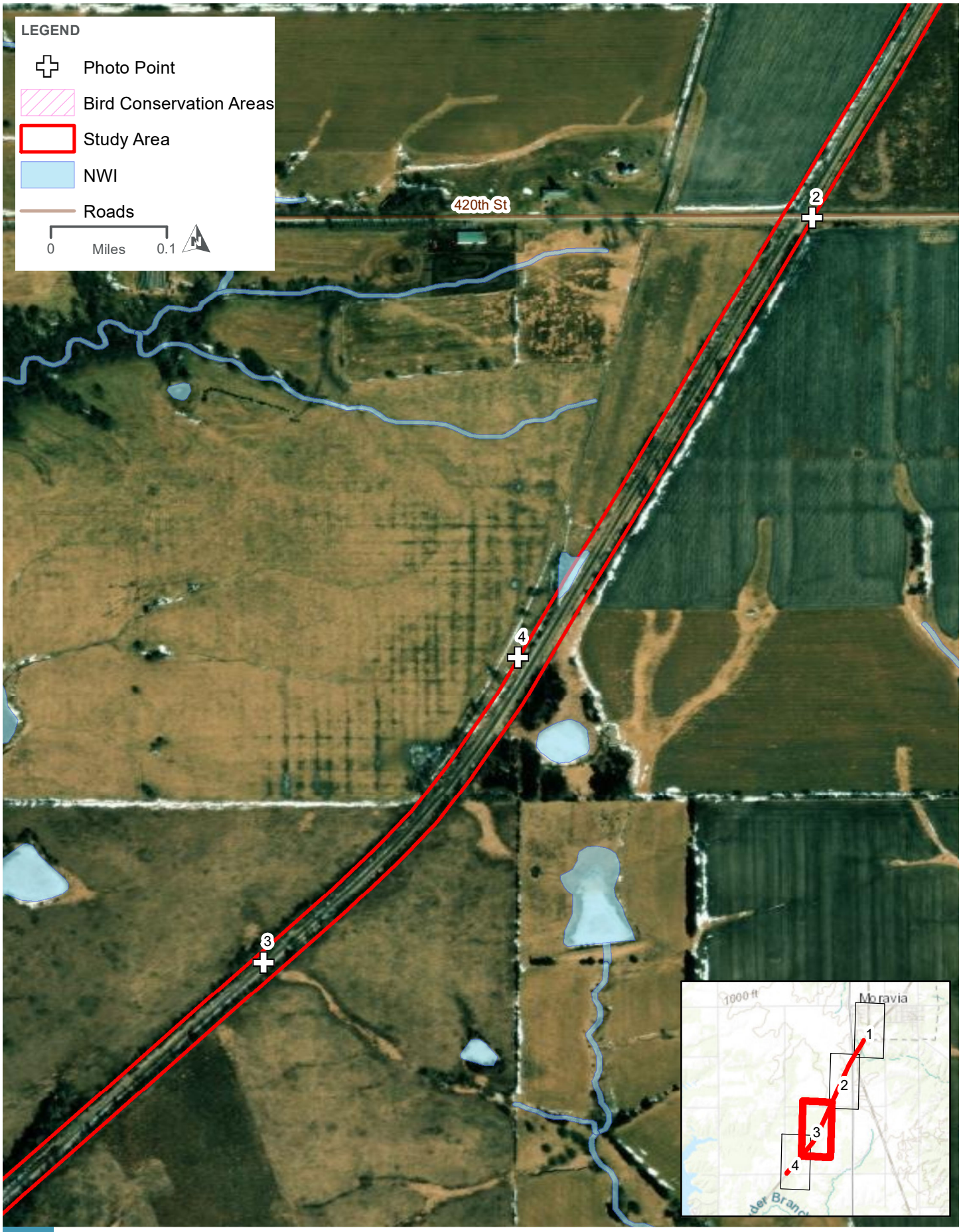

FIGURE 3: PHOTO LOCATIONS

MORAVIA ALTERNATIVE SIDING

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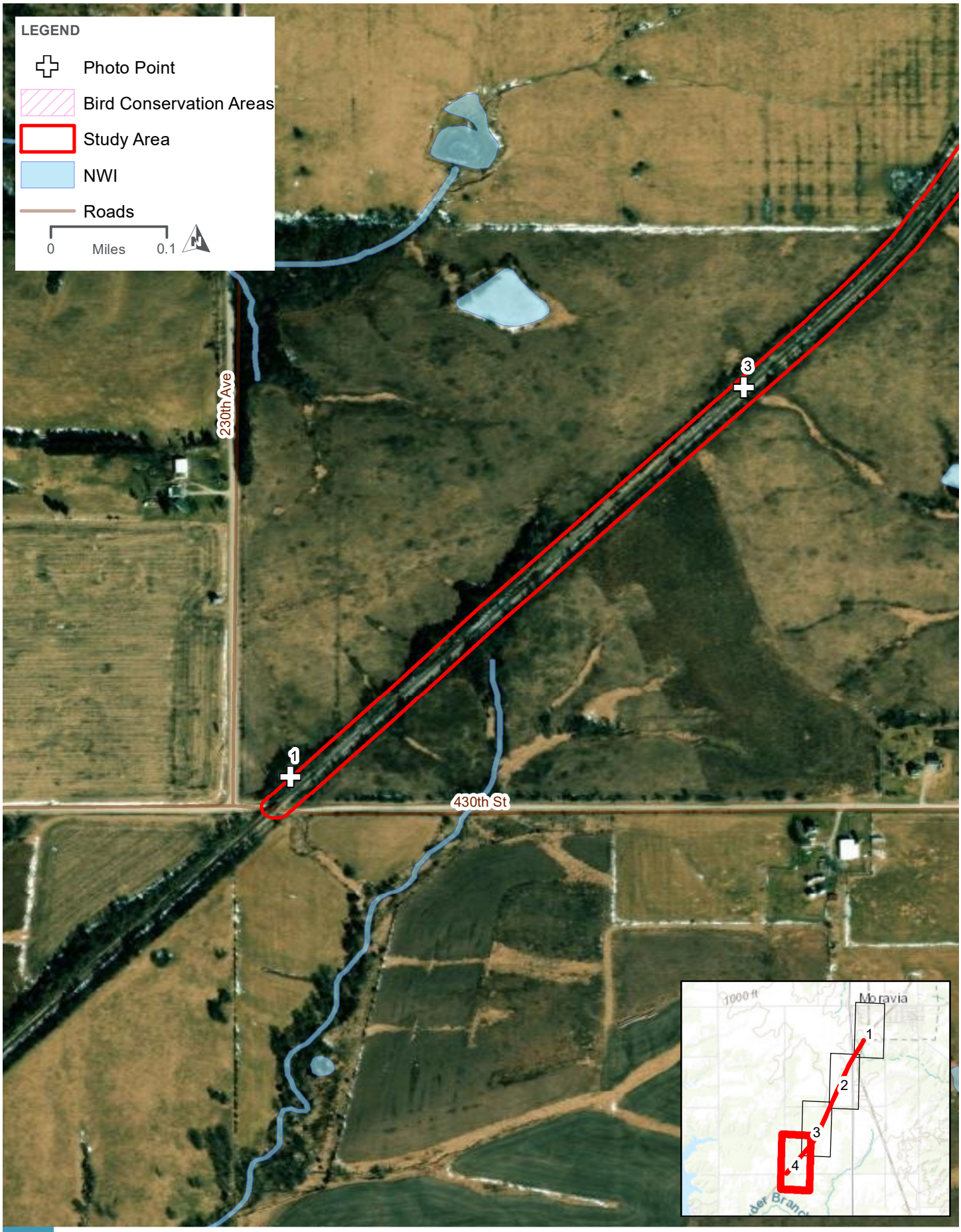

FIGURE 3: PHOTO LOCATIONS

MORAVIA ALTERNATIVE SIDING

MP 328.0 - MP 330.2

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ENVIRONMENTAL SITE VISIT 09/08/2023

B

Appendix B – Photo Log

Photo 1. Railroad bridge over 430th St facing Southwest.

Photo 2. ROW corridor near 420th St road crossing facing Northwest.

Photo Log
Proposed Moravia Alternative Siding
Appanoose County, IA

Photo 3. Representative vegetation in rail corridor facing Northeast.

Photo 4. Small pond between 420th St and 430th St facing East.

Photo 5. Small lake between 420th St and HWY 5 road crossings, facing East.

Photo 6. Edge of small lake East of HWY 5 and South of rail switch facing Southwest.

Photo 7. HWY 5 Bridge over study area facing Southwest. Species observed on bridge included cliff swallows. No signs of bat presence was observed.

Photo 8. Area of proposed access road at existing water tower, facing East.

C

Appendix C – USFWS IPaC Report

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Appanoose County, Iowa

Local office

Illinois-Iowa Ecological Services Field Office

(309) 757-5800
(309) 757-5807

Illinois & Iowa Ecological Services Field Office

1511 47th Ave
Moline, IL 61265-7022

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

NOT FOR CONSULTATION

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Indiana Bat Myotis sodalis Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat Perimyotis subflavus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid Platanthera leucophaea Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/601	Threatened

NOT FOR CONSULTATION

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

NOT FOR CONSULTATION

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

NOT FOR CONSULTATION

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Chimney Swift Chaetura pelagica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25

NOT FOR CONSULTATION

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events

for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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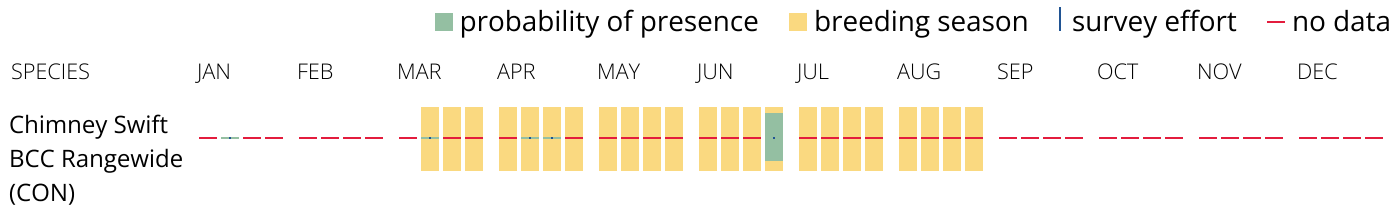

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the

locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

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3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

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The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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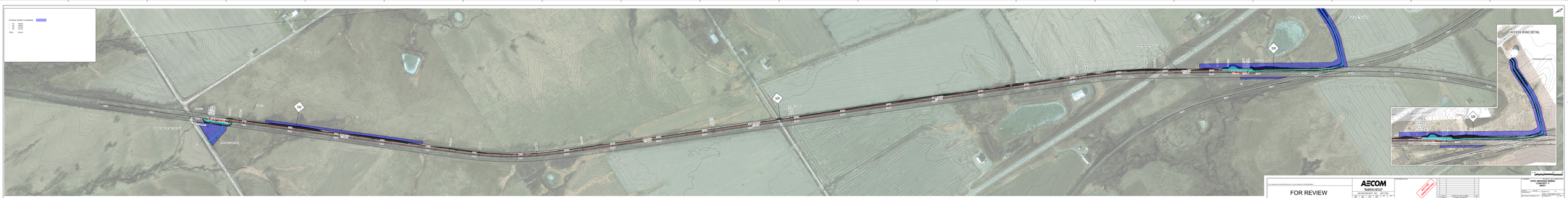
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