



Environmental Assessment

FEMA DR-4461-IL, Project 117416

Loran Road Relocation

Florence Township, Stephenson County, IL

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List of Acronyms, Chemical Formulas, and Abbreviations

AADT	Average Annual Daily Traffic	NHPA	National Historic Preservation Act
ACS	American Community Survey	NO ₂	Nitrogen Dioxide
APE	Area of Potential Effect	NO _x	Nitrogen Oxides
bgs	below ground surface	NOAA	National Oceanic and Atmospheric Administration
CAA	Clean Air Act	NPDES	National Pollution Discharge Elimination System
CEQ	Council on Environmental Quality	NRCS	Natural Resources Conservation Service
C.F.R.	Code of Federal Regulations	NRHP	National Register of Historic Places
CO	Carbon Monoxide	O ₃	Ozone
CWA	Clean Water Act	OSHA	Occupational Safety and Health Administration
CY	cubic yards	Pb	Lead
EA	Environmental Assessment	PCB	Polychlorinated Biphenyls
EFH	Essential Fish Habitat	PDM	Pre-Disaster Mitigation
EJ	Environmental Justice	PM	Particulate Matter
EO	Executive Order	PVC	polyvinyl chloride
EPA	Environmental Protection Agency	RCRA	Resource Conservation and Recovery Act
FEMA	Federal Emergency Management Agency	SO ₂	Sulfur Dioxide
FONSI	Finding of No Significant Impact	SWP	Superior Watershed Partnership and Land Trust
GLRI	Great Lakes Restoration Initiation	USACE	United States Army Corp of Engineers
GLQWA	Great Lakes Water Quality Agreement	U.S.C.	United States Code
HASP	Health and Safety Plan	USFWS	United States Fish and Wildlife Service
HEPA	High-Efficiency Particulate Air	USGS	United States Geological Survey
IEPA	Illinois Environmental Protection Agency	VOC	Volatile Organic Compound
mph	miles per hour		
NAVD	North American Vertical Datum		
NAAQS	National Ambient Air Quality Standards		
NEPA	National Environmental Policy Act		
NFWF	National Fish and Wildlife Foundation		

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1 BACKGROUND

1.1 Project Authority

Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the state of Illinois on September 19, 2019, which made disaster recovery assistance available through the Federal Emergency Management Agency (FEMA). Florence Township applied for funding from FEMA's Public Assistance (PA) Program to underwrite the proposed project. FEMA's PA grant program provides federal assistance to government organizations and certain private nonprofit (PNP) organizations following a Presidential disaster declaration. Public Assistance is authorized by Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law [P.L.] 93-288), 42 U.S.C. §§ 5121-5207.

This environmental assessment (EA) was prepared in accordance with Section 102 of the National Environmental Policy Act (NEPA) of 1969, as amended; President's Council on Environmental Quality (CEQ) regulations to implement NEPA (40 Code of Federal Regulations [C.F.R.] Parts 1500 to 1508); the U.S. Department of Homeland Security (DHS) Directive No. 023-01; rev. 1, *Implementation of the National Environmental Policy Act* (Oct. 31, 2014); DHS Instruction Manual No. 023-01-001-01, rev. 1, *Implementation of the National Environmental Policy (NEPA) Act* (Nov. 6, 2014); FEMA Directive 108-01, *Environmental Planning and Historic Preservation Responsibilities and Program Requirements* (Aug. 22, 2016); and FEMA Instruction No. 108-1-1, *Instruction on Implementation of the Environmental and Historic Preservation Responsibilities and Program Requirements* (Aug. 22, 2016). FEMA is required to consider potential environmental impacts before funding or approving actions and projects. The purpose of this EA is to meet FEMA's responsibilities under NEPA and to analyze the potential environmental impacts of the proposed project. FEMA will use the findings in this EA to determine whether to prepare an environmental impact statement for the proposed project or to issue a finding of no significant impact (FONSI).

In accordance with federal laws and FEMA regulations, the EA process for a proposed federal action must include an evaluation of alternatives and a discussion of the potential environmental impacts. As part of this NEPA review, the requirements of other environmental laws and executive orders are addressed.

1.2 Project Location

The proposed project is in Florence Township, Stephenson County, Illinois. The site is approximately 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois (see **Appendix A**). Freeport, with a population of about 24,000, is the County seat and the largest city in Stephenson County. Loran Road, with an estimated Average Annual Daily Traffic (AADT) of 100 vehicles/day, is one of the primary access routes between the rural areas to the south of Yellow Creek and the City of Freeport.

Loran Road is a 2-lane, 2-way asphalt roadway with a rural section – meaning that it has roadstone shoulders and grassy roadside ditches with no concrete curb or gutter and no sewer other than crossing culverts. The setting is rural agricultural. The property to the south is row-crop farmland, and to the north is vacant wooded land along the escarpment of Yellow Creek. There are some aerial utilities (telephone and single-phase electric) along the northern property line.

1.3 Purpose and Need

The purpose of FEMA’s PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the state of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

Aerial photos document that Loran Road has existed along its current alignment since at least 1939. It is thought to have been paved for the first time in 1990. It has remained in place without notable incident until the events of 2019.

The project is needed because the rains and flooding that brought on the disaster declaration of 2019 caused a portion of the channel bank along Yellow Creek and the upslope portion of the Loran Road embankment to fail. This initially caused the north shoulder of the roadway to drop approximately six feet and the roadway to be undermined. The edge of water of Yellow Creek is approximately 70 feet north of the north edge of pavement of Loran Road, and the elevation difference from edge of pavement to top of water is approximately 35 feet. The continued instability of this slope has since caused approximately one-half of the Loran Road section to fall into Yellow Creek, and the failure has not yet settled. The road has been closed to traffic, and travelers who would have used this route to get to Freeport are routed about 1 mile to the south for a total detour route length of about 3 miles. Approximately 1 mile of the detour is not paved. The Proposed Action (see **Section 2.2**) meets the purpose and need for this project.

2 ALTERNATIVE ANALYSIS

NEPA requires FEMA to evaluate alternatives to the proposed project and describe the environmental impacts of each alternative. NEPA also requires an evaluation of the No Action Alternative, which is the future condition without the project. This section describes the No Action alternative, the Proposed Action, and reviews the alternatives that were previously considered but that were dismissed.

2.1 Alternative 1 – No Action

Under the No Action alternative, this segment of Loran Road would be abandoned, and this transportation link would remain closed indefinitely. Access to the homes and farmland along this link would use alternative routes. Vehicles previously used this route to reach Freeport, approximately 2 miles to the northeast along Bolton Road. If these travelers cannot access Bolton Road via Loran Road, they would need to follow a route that more than doubles the distance, driving on South Voss Road, which is narrow and unpaved, Sabin Church Road and West Bolton Road before vehicles can travel north on South Bolton Road for about 1.25 miles to reach the current Loran Road intersection.

At the Loran Road site, the continued erosion of the embankment would continue unabated. It is very possible that the collapse would make its way across Loran Road and continue into the farmland to the south. Infrastructure supported by Loran Road, such as the utility connections along the north property line, would have to be relocated and likely rerouted.

2.2 Action Alternative 2 – Proposed Action

The Proposed Action has two components:

- (1) Relocate a section of Loran Road.
- (2) Stabilize the bank of Yellow Creek.

The bank stabilization of Yellow Creek would allow for the restoration of that section of Loran Road as a useful buffer to the Yellow Creek. The project is designed to allow these two components to proceed on somewhat independent schedules. The benefits for proceeding with each component on its own schedule include reopening the closed road to traffic as soon as possible, while other work on the project continues.

2.2.1 Relocation of Loran Road

The first component of the project would relocate a 1,000-foot segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland. This new alignment is generally parallel to the existing alignment through the length of the project. See the attached design plans in **Appendix B** for a graphical depiction of the relocation.

The elevation of the relocated road would be similar to the existing roadway's elevation. However, the relocation would allow for a 4:1 H/V (Horizontal to Vertical) drop to Yellow Creek, as opposed to the 2:1 drop that currently exists. It would also put the roadway outside the currently evident failure circle in the slope, which has a kickout toe close to the existing bank of Yellow Creek.

The Road Relocation component will occur in the following sequence:

- Staging: Equipment is to be staged in the existing right-of-way on the closed portion of Loran Road to the east and to the west of the damaged portion of Loran Road.
- Erosion Control: Erosion control measures are to be installed, with specific focus on the expected stockpile areas at the west end of the site, allowing the primary access at the east end of the site to remain unobstructed. This project is designed to have a net-zero haul off, so little, if any material will be moved offsite.
- Demolition: The existing length of Loran Road will be removed, providing suitable fill for the new roadbed.
- Preliminary earthwork: The proposed length of Loran Road will be stripped and stockpiled for suitable stockpile restoration.
- Final earthwork: The proposed length of Loran Road will be filled and compacted. Roadstone will be supplied and installed.
- Roadway finishing: Final drainage infrastructure will be installed. The road will be paved, and shoulders and ditches will be finished and stabilized.

Project phasing will allow the contractor the flexibility to reopen the roadway as soon as possible.

2.2.2 Streambank and Slope Stabilization

The embankment adjacent to Yellow Creek continues to collapse. It will not be possible to adequately stabilize the existing right-of-way of Loran Road until this collapse is halted. A primary part of this operation is to stabilize the bank at the toe of the slope.

The Streambank and Slope Stabilization component will occur in the following sequence:

- Erosion control measures will be installed.
- The trees are to be cleared to allow access to the bank.
- A stabilized construction entrance will be installed between Loran Road and the work area.
- Stone toe (rip rap) bank protection will be installed.
- Any required fill and stabilization will be completed on the upstream bank.
- In the appropriate season, temporary erosion control and construction access measures will be removed, and permanent seeding and landscaping will be completed.

The work proposed impacts 506 linear feet of the streambank of Yellow Creek. The protection is placed along the existing bank and does not impact the existing cross-section of the creek. The

work proposes the use of a well-graded mix of clean, stone-dumped riprap toed to the same height as the expected high-water elevation of the creek. This toe will be keyed into the backslope perpendicular to the centerline of the creek.

Once the streambank protection is in place any remaining stockpiles will be graded into the slope. The entire disturbed slope will be covered with topsoil, seeded, and protected with erosion control blanket. A final site inspection would occur in the following Spring to ensure that an adequate growth of vegetated cover is in place.

2.3 Alternatives Considered and Eliminated from Further Consideration

In the fall of 2019, the Stephenson County Highway Department with the help of Willet, Hoffman, and Associates, Inc, of Moline, Illinois, conducted an alternatives analysis and budget estimates for possible actions on this section of roadway. They came up with the two following alternatives:

- **Reconstruct the Roadway in Place.** This alternative would require the installation of approximately 100 linear foot of steel sheet-pile wall along the area of failure. The engineers assumed two rows of walers to tie back the wall, with the top row anchored to concrete deadmen and the bottom row anchored to helical soil anchors. The bottom of the wall would be armored with a rip rap toe. This option was estimated to cost \$1.13 million, or three to five times as much as any other option considered. It was eliminated as economically unfeasible.
- **Relocate Loran Road.** This alternative is limited to component 1 of the proposed action, the relocation Loran Road, as described in section 2.2.1. However, it does not include the streambank or slope stabilization. This option would cost approximately \$211,000. The alternative was eliminated from further consideration because alternative does not solve the problem. The road stabilization will not be complete until the bank that supports the road and shoulder are also stabilized. As a part of this option, the community did consider alternate slope stabilization methods that would reduce impacts to the streambank, but ultimately determined these methods of repair would ultimately be undermined by the continued erosion of the streambank.

3 AFFECTED ENVIRONMENT AND CONSEQUENCES

This section describes the natural and human environment potentially affected by the alternatives, evaluates potential impacts, and recommends measures to avoid or reduce those impacts. When possible, quantitative information is provided to establish potential impacts, and the potential impacts are evaluated qualitatively based on the criteria listed in **Table 3.1**. The “study area” generally includes the treatment area and access and staging areas needed for the proposed action. If the study area for a particular resource category is different from the project area, the differences will be described in the appropriate subsection.

Table 3-1 Evaluation Criteria for Potential Impacts

Impact Scale	Criteria
None/Negligible	The resource area would not be affected, or changes or benefits would be either nondetectable or, if detected, would have effects that would be slight and local. Impacts would be well below regulatory standards, as applicable.
Minor	Changes to the resource would be measurable, although the changes would be small and localized. Impacts or benefits would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse effects.
Moderate	Changes to the resource would be measurable and have either localized or regional scale impacts/benefits. Impacts would be within or below regulatory standards, but historical conditions would be altered on a short-term basis. Mitigation measures would be necessary, and the measures would reduce any potential adverse effects.
Major	Changes would be readily measurable and would have substantial consequences on a local or regional level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse effects would be required to reduce impacts, but long-term changes to the resource would be expected.

3.1 Preliminary Screening of Assessment Categories

Based on a preliminary screening of resources and the project’s geographic location, the following resources do not require a detailed assessment.

- *Coastal Barrier Resources System (CBRS)*. The Coastal Barrier Resources Act is not applicable because the project is not within or near a CBRS unit (U.S. Fish and Wildlife Service [USFWS] 2019a).
- *Coastal Zone Management Act (CZMA)*. The Coastal Zone Management Act (CZMA), 16 U.S.C. § 1451 *et seq.*, enacted in 1972, was established to preserve, protect, develop, and, where possible, restore or enhance the resources of the nation’s coastal zone. The CZMA does not apply because the project is not in a Coastal Management Zone.
- *Seismic Risks*. Executive Order (EO) 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction does not apply because there is low

seismic risk in the project area based on seismic hazard maps developed by the U.S. Geological Survey (USGS).

- *Sole Source Aquifers*. There are no sole-source aquifers regulated by the Safe Drinking Water Act of 1974 in the vicinity of the project area (EPA 2019a).
- *Essential Fish Habitat (EFH)*. The Magnuson-Stevens Fishery Conservation and Management Act does not apply because there are no Habitat Areas of Particular Concern and no EFH Areas identified at the project site according to the NOAA Essential Fish Habitat Mapper (NOAA 2020).
- *Wild and Scenic Rivers*. The Wild and Scenic Rivers Act, 16 U.S.C. § 1271 *et seq.*, is not applicable because there are not any federally designated wild and scenic rivers in the project areas based on a review of the National Wild and Scenic Rivers System website maintained by the National Park Service (NPS 2019). The closest federally designated wild and scenic river is the Vermillion River, located in the Central Illinois, approximately 90 miles southeast of the project area.
- *Great Lakes Water Quality Agreement (GLWQA)*. The GLWQA is an international agreement between the United States and Canada to restore and protect the waters of the Great Lakes. The GLWQA does not apply because the site is not in the Great Lakes Basin.

3.2 Physical Environment

3.2.1 Geology, Soils, and Topography

Soils in the project area consist of Urban Land type soils and were identified using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA 2020). The NRCS reports that approximately 90 percent of the project area is composed of loess over stratified outwash (see **Soils Reports, Appendix F, Technical Reports**). The underlying outwash is in the Cahokia Formation, and consists of bedded silts, clays, sand, and gravel deposited in the floodplains and channels of modern rivers and streams. The depth to bedrock is 50-100'.

The topography of the area is rolling. There is about 30' of relief between the highest point of Loran Road and the bank of Yellow Creek. The escarpment between Loran Road and Yellow Creek is relatively steep, with degrading slopes of up to 8%.

The purpose of the Farmland Protection Policy Act of 1981, 7 U.S.C. §§ 4201 *et seq.*, is to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of prime and important farmland to non-agricultural uses. The Farmland Protection Policy Act process must be used whenever Federal funding or time is used in the direct or indirect conversion of prime farmland unless an exemption exists. Though a portion of the project area contains prime and important farmland, as noted on the Impact Rating Form (NRCS CPA-106), less than 1.0 acre will be directly converted for this project. The Illinois Department of Agriculture determined in a letter dated March 18, 2021, that the project complies with the

Illinois Farmland Preservation Act (505 ILCS 75/1 et seq.). The NRCS Farmland Protection Policy Act Manual § 523.11.E(1) (Aug. 2012) notes that where a local Land Evaluation and Site Assessment system has been approved by a state conservationist, the project meets the small acreage exemption (i.e., 10 acres or less per linear mile or 3 acres where there is a project for an existing bridge or interchange). The NRCS established this exemption to avoid new construction and encourage improvements to existing linear projects. Correspondence related to the Farmland Conversion Impact Rating and small acreage exemption is included in **Appendix C**.

Alternative 1 – No Action

Under the No Action alternative, streambank stabilization measures would not be implemented. There would be no effect on geology. There would be minor long-term impacts from erosion to stream bank and the escarpment to the south of Yellow Creek. Loran Road would remain closed and unusable. In time, the erosion would begin to take the farmland on the south side of Loran Road. There would be negligible impacts to topography.

Action Alternative 2 – Proposed Action

The proposal involves surface modifications and will not affect the geology of the site. The relocation of Loran Road would have negligible impacts on the topography but will have minor short-term impacts from excavation and site preparation. The proposed road profile generally follows the existing ground profile and would not result in any significant changes. The streambank stabilization is proposed to maintain the exiting bluff and escarpment, resulting in minor long-term benefits from preserving the existing topography.

Approximately 0.83 acres of farmland would be converted to road right-of-way consisting of an asphalt pavement and grassy roadside ditches. The streambank and slope stabilization would have temporary impact to the soils during construction, but once the project is complete the acreage of impervious coverage and pervious ground will remain the same. Approximately 0.8 acres of roadway will be returned to an unimproved condition and will remain vacant as additional buffer to the stream. In the long-term, stream bank and slope erosion would be significantly reduced. The net impact on soils would be to preserve site soils.

3.2.2 Water Resources and Water Quality

Water resources include surface water, groundwater, stormwater, and drinking water (wetlands are evaluated in **Section 3.3.2**). Surface waters and wetlands in the project area are shown in **Wetland Delineation Report of Appendix F, Technical Reports**.

The Clean Water Act (CWA) of 1977, 33 U.S.C. § 1251 *et seq.*, regulates the discharge of pollutants into water, with various sections falling under the jurisdiction of USACE and the U.S. Environmental Protection Agency (EPA) or as delegated to the state. Section 401 of the CWA is administered by the Illinois Environmental Protection Agency (IEPA) and provides regulations for the protection of water quality on projects that involve dredge or fill in waters of the United States. Under the National Pollution Discharge Elimination System (NPDES) (Section 402 of the

CWA), regulation of both point and nonpoint pollutant sources, including stormwater and stormwater runoff, has been delegated to the state and is administered by IEPA. USACE regulation of activities within navigable waters is also authorized under the Rivers and Harbors Act of 1899, 33 U.S.C. § 403 *et seq.* Section 404 of the CWA establishes USACE permit requirements for discharge of dredged or fill materials into waters of the United States.

Alternative 1 – No Action

Under the No Action alternative, the deterioration of the bank of the Yellow Creek Would continue unabated, causing minor long-term impacts on water quality downstream because of sedimentation from soil erosion and pollutants from runoff. No impact on, or withdrawal of, groundwater is anticipated under the No Action alternative.

Alternative 2 – Proposed Action

Minor short-term impacts on water quality are likely to occur during the construction phase for the proposed action. These impacts include possible site runoff, turbidity, and sedimentation caused by construction activities. However, once the bank is stabilized there will be minor long-term benefit from improved erosion and sediment control, and a minor long-term benefit from the installation of a larger vegetated buffer area between Loran Road and Yellow Creek.

3.2.3 Floodplain Management (Executive Order 11988)

Executive Order (EO) 11988, Floodplain Management, requires federal agencies to minimize occupancy and modification of the floodplain. Specifically, EO 11988 prohibits federal agencies from funding construction in the 100-year floodplain unless there are no practicable alternatives. FEMA's regulations for complying with EO 11988 are spelled out in 44 C.F.R. Part 9.

The Yellow Creek adjacent to the site is the flooding source for a Special Flood Hazard Area (SFHA) Approximate Zone A as shown on the FEMA Flood Insurance Rate Map (FIRM) panel 17177C0325D, effective 3/16/2015. The FIRMette is included in **Appendix A, Maps and Figures**.

In an Approximate Zone A, the area is known to be subject to the 1-percent-annual-chance flood event, but the boundary is generally determined using approximate methods and no Base Flood Elevation (BFE) or flood depth is indicated. Areas in an Approximate Zone A are assumed to be in a floodway. In Illinois, projects in floodways are regulated by the Illinois Department of Water Resources (IDNR) Office of Water Resources (OWR).

Alternative 1 – No Action

Under the No Action alternative, there would be no construction, and therefore, no direct modification of the floodplain. However, there would be minor long-term impacts from continued erosion. As the erosion degrades the southern escarpment between the Yellow Creek and Loran Road, the area subject to the 1-percent-annual-chance flood event will also expand.

Action Alternative 2 – Proposed Action

The proposed action will stabilize the existing stream bank and maintain the current boundary of the Special Flood Hazard Area. However, because the unstable bank is in the SFHA, there is no way to address this bank without performing some work in the SFHA. Some work and related temporary impacts in the floodplain cannot be avoided.

The work proposed is regulated by the Illinois Department of Natural Resources. The work is designed to meet the General Conditions of IDNR-OWR Statewide Permit Number 9, authorizing minor shoreline, stream bank, and channel protection activities which have an insignificant impact on those factors under the jurisdiction of the IDNR-OWR. It is not necessary to apply for or obtain an individual permit from the IDNR-OWR for projects covered under this statewide permit. However, the General Conditions of this permit are very similar to the General Conditions of the USACE Regional Permit Number 16, which is reviewed individually by USACE and for which this project has independently been found to qualify. USACE Regional Permit 16 is more stringent than IDNR-OWR Statewide Permit 9. Copies of these permits are included in **Appendix C, Permits.**

In the short-term, impacts to the Floodplain would be minimized per the terms of the permits under which the work is covered. In the long-term, the proposed work will protect against erosion and sedimentation, maintaining the current flood zone boundary and mitigating against future damages by limiting the expansion of the flood Hazard Area.

3.2.4 Air Quality

The Clean Air Act (CAA) of 1970, 42 U.S.C. § 7401 *et seq.*, requires EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The CAA *established* two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Current criteria pollutants are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), lead (Pb), particulate matter (PM), and sulfur dioxide (SO₂).

Federally funded actions in nonattainment and maintenance areas are subject to EPA conformity regulations, 40 C.F.R. Parts 51 and 93. The air conformity analysis process ensures that emissions of air pollutants from planned federally funded activities would not affect the state's ability to achieve the CAA goal of meeting the NAAQS. Section 176(c) of the CAA requires that federally funded projects must not cause any violations of the NAAQS, increase the frequency or severity of NAAQS violations, or delay timely attainment of the NAAQS or any interim milestone. Activities that would cause an exceedance of the NAAQS or cause an area to fall out of attainment status would be considered a significant impact. The emissions from construction activities are subject to air conformity review.

Under the general conformity regulations, a determination for federal actions is required for each criteria pollutant or precursor in nonattainment or maintenance areas where the action's direct and indirect emissions have the potential to emit one or more of the six criteria pollutants at rates equal to or exceeding the prescribed *de minimis* rates for that pollutant. The prescribed annual rates are 50 tons of volatile organic compounds (VOCs) and 100 tons of nitrogen oxides (NO_x) (O₃ precursors) and 100 tons of PM_{2.5}, SO₂, or NO_x (PM_{2.5} and precursors).

An area is classified as nonattainment when it does not meet NAAQS standards. A maintenance area is an area that was previously non-attainment, but that has graduated out and is currently on a maintenance plan. According to EPA's NAAQS county attainment record, Stephenson County is in attainment for all NAAQS criteria pollutants (EPA 2019c). This means that Stephenson County currently meets NAAQS criteria for national air quality standards.

Alternative 1 – No Action

Construction activities would not occur under the No Action alternative. Detours and longer vehicular trips resulting from the closure of this transportation link will continue and would cause a minor increase in localized emissions. The AADT on Loran Road is listed at 100 vehicles per day, and the detour adds approximately 3-miles to the trip length. The No Action alternative therefore imposes an estimated cost of 300 vehicle miles per day along with the associated emissions of these trips. The short- and long-term impacts on air quality are minor, but measurable.

Action Alternative 2 – Proposed Action

The Proposed Action would have minor short-term impacts on air quality owing to the use of construction equipment with diesel and gasoline engines. Emissions from construction equipment could have minor temporary effects on the levels of some pollutants, including CO, VOCs, NO₂, O₃, and PM. Emissions would be temporary and localized, and only minor impacts to air quality in the project area would occur.

Best Management Practices (BMPs) and mitigation measures for air quality impacts are provided in **Section 6.2**.

In the long-term, the proposed action would avoid the increased trip lengths, calculated as a total of 300 vehicle-miles per day that would be imposed by the Do Nothing Alternative. The proposed action would be slightly better for air quality due to a net reduction in emissions over the long-term.

3.3 Biological Environment

3.3.1 Terrestrial and Aquatic Environment

The subject property has been a wooded stream portion of Yellow Creek just north of East Loran Road and surrounded by agricultural fields for over 80 years. These historic conditions are apparent in Illinois aerial photography as early as 1939 (ISGS, 2008).

The lowest area on the property is along Yellow Creek. Yellow Creek is a 50-mile watercourse that drains a basin of approximately 140,000 acres. The EPA has classified the condition of the stream as good to fair. The stream is a riparian wetland. A fringe of wooded scrubland is present along the southern escarpment of the creek and on the steep slopes between the water and the upland Loran Road. The remainder of the site is agricultural property supporting straight row crops.

Alternative 1 – No Action

Under the No Action alternative, there would be minor, long-term, adverse impacts on the terrestrial and aquatic environment. Continued flooding of the roadway, surface runoff, and soil erosion could contain pollutants that would impact water quality. The existing streambank would continue to degrade with impacts including increased turbidity and associated pollution. The upland portion of the project area does not currently provide a viable habitat for wildlife, and this situation would continue unchanged.

Alternative 2 – Proposed Action

Under the Proposed Action, there would be minor, short-term, adverse impacts on the terrestrial and aquatic environment (wetlands). The upland portion of the project area does not currently provide a viable habitat for wildlife, and this situation would continue unchanged. Nonetheless, Loran Road would be relocated away from Yellow Creek and the territory between Loran Road and Yellow Creek would be stabilized. This stabilization work would inflict short-term impacts on any available habitats in the area between Loran Road and Yellow Creek. However, once the stabilization is complete, the stabilized area would act as a wider buffer between Loran Road and Yellow Creek, providing more stable habitat opportunities and runoff treatment capabilities than previously existed. The stabilized bank would likewise provide more aquatic microhabitat resources, while reducing soil erosion and the associated pollution and turbidity issues in the aquatic habitat.

3.3.2 Wetlands (Executive Order 11990)

Executive Order (EO) 11990, Protection of Wetlands, requires federal agencies to take action to minimize the loss of wetlands. FEMA regulation 44 C.F.R. Part 9, *Floodplain Management and Protection of Wetlands* sets forth the policy, procedures, and responsibilities to implement and enforce EO 11990. EO 11990 prohibits FEMA from funding activities in a wetland unless no practicable alternatives are available.

The NEPA compliance process requires federal agencies to consider direct and indirect impacts on wetlands which may result from federally funded actions. The eight-step decision-making process to ensure compliance with EO 11990 is provided in **Appendix A, Maps and Figures**.

USACE and EPA define wetlands as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (40 C.F.R. § 122.2).

Alternative 1 – No Action

Under the No Action alternative, there would be no project-related impacts on the identified wetlands because there would be no relocation of the roadway or utilities. However, since the bank of Yellow Creek will continue to erode and deposit sediment into the waterway, there will be continued minor short-term and long-term impacts to the quality of the wetland.

Alternative 2 – Proposed Action

The proposed action will require the stabilization of about 500 linear feet of the southern bank of Yellow Creek. This work will have a short-term impact to the Creek. However, this work is permitted under USACE Regional Permit 16 (CEMVR-OD-P-2020-0691), which permits minor streambank stabilization projects along the banks of jurisdictional streams and rivers. Copies of the permit, permit conditions, and clearance letter are included in **Appendix C, Permits**.

The proposed action would stabilize the existing bank of Yellow Creek. The long-term result would be no net impact to the riparian wetland due to sediment deposition. However, there will be some minor long-term benefit to the wetland from a wider vegetated buffer between Loran Road and Yellow Creek. In the short-term, construction impacts would be mitigated with temporary erosion control and stabilization measures. Compliance with the BMPs and mitigation measures set forth in the USACE and NPDES permits is required to keep this impact below the level of significance. The permit conditions are described in **Section 6.2**.

3.3.3 Threatened and Endangered Species

The Endangered Species Act (ESA) of 1973, 16 U.S.C. § 1531 - 1544, provides a framework for the conservation of endangered and threatened species and their habitats. Federal agencies are required to ensure that actions they fund, authorize, or carry out are not likely to jeopardize the continued existence of any listed species (including plant species) or result in the destruction or adverse modification of designated critical habitats for such species.

Alternative 1 – No Action

The No Action alternative would not directly impact federally listed threatened or endangered species because there would be no construction activity impacting any species or species habitats.

Alternative 2 – Proposed Action

In compliance with Section 7 of the Endangered Species Act, a review of the potential impacts to federally listed endangered, threatened, and candidate species has been completed with reference to the Proposed Action. The review found that following federally listed species are known to occur in Stephenson County: Indiana bat (Endangered), northern long-eared bat (threatened), and the eastern prairie fringed orchid (threatened).

FEMA found that there is no suitable habitat in the project area for the eastern fringed orchid. FEMA also made a “no effect” determination for the Indiana bat and the northern long-eared bat provided the time of year tree removal restrictions are met. FEMA has required a general condition restricting the removal of trees to outside of the period April 1-September 30 of any given year. The USFWS has concurred with FEMA findings, and they have no objection to the proposed action.

Based on these findings, the Proposed Action will have “no effect” on the listed species, habitats, or proposed or designated critical habitat. Correspondence between USFWS and FEMA is provided in **Appendix D, Agency Consultations**.

3.3.4 Migratory Birds

A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. The Migratory Bird Treaty Act (MBTA) of 1918, as amended, 16 U.S.C. §§ 703–712, protects migratory birds and their nests, eggs, and body parts from harm, sale, or other injurious actions. All native birds, including common species such as American robin (*Turdus migratorius*) and American crow (*Corvus brachyrhynchos*) are protected by the MBTA.

Additionally, the Bald and Golden Eagle Protection Act prohibits the take, possession, sale, or other harmful action of any golden (Aquila chrysaetos) or bald eagle (Haliaeetus leucocephalus), alive or dead, including any part, nest, or egg (16 U.S.C. § 668(a)).

Alternative 1 – No Action

The No Action alternative would not directly impact migratory birds because there would be no construction. However, the bluff between Loran Road and Yellow Creek would continue to erode, which could result in a minor long-term, adverse impact from loss of habitat opportunities for migratory birds.

Alternative 2 – Proposed Action

The Proposed Action alternative would have minor short-term impacts associated with construction activities from the removal of approximately 1.0 acres of vegetation (including trees) and impacts to approximately 506 linear feet of stream. However, all disturbed areas will be revegetated using native species and the Proposed Action will result in approximately 0.8

acres of property being used as vegetative buffer between Loran Road and Yellow Creek, which should result in a long-term increase in habitat opportunities for migratory birds.

3.3.5 Invasive Species

An invasive species is a non-native species whose introduction is likely to cause harm to the environment, economy, or human health. EO 13112, Invasive Species, requires federal agencies to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health impacts caused by invasive species.

Alternative 1 – No Action

The No Action alternative would have no project-related impacts because construction would not occur. However, there could be minor long-term impacts on the area as any existing invasive species would continue to persist.

Action Alternative 2 – Proposed Action

The Proposed Action alternative would have minor short-term impacts from the potential spread of invasive species caused by construction activities. Construction activities on land could result in the transport of invasive weed species outside of the project area through cuttings and seeds attached to vehicles. Invasive insect species could spread as individuals, larvae, or eggs via transport of cleared vegetation. This alternative would also have minor long-term benefits as disturbed areas will be revegetated with native species, providing less opportunity for invasive species to become established.

BMPs to minimize the spread of invasive species are provided in Section 6.2.

3.4 Hazardous Materials

Hazardous materials are any items or agents (biological, chemical, radiological, or physical) that have the potential to cause harm to humans, animals, or the environment either by itself or through interaction with other factors. Sites within or adjacent to the project area, regulated by federal hazardous materials laws such as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601 *et seq.*, and the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901 *et seq.*, were identified using the Nationwide Environmental Title Research, LLC (NETR) online search service.

The NETR Environmental Radius Report reviews 16 public databases for hazard site locations within ¼-mile, ½-mile, and 1-mile envelopes of the target site. The NETR Environmental Radius Report found no records of concern within 1 mile of the Loran Road relocation project. The NETR Environmental Radius report is included in **Appendix F, Technical Reports**.

The data sources reviewed in the NETR Environmental Radius Report are summarized in **the following table:**

Table 3-2: Federally Regulated Sites in the Project Vicinity

Source	Description	Result
National Priorities List (NPL)	The National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.	No sites identified
CERCLIS list	The EPA investigates known or suspected uncontrolled or abandoned hazardous substance facilities and maintains a list in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS).	No sites identified
CERCLIS NFRAP	CERCLIS sites that are designated “No Further Remedial Action Planned” NFRAP have been removed from CERCLIS but can still be found on the NFRAP list.	No sites identified
RCRA CORRACTS Facilities	Under the Resource Conservation and Recovery Act (RCRA), the EPA maintains a Corrective Action Report (CORRACTS) to track facilities that are undergoing a corrective action.	No sites identified
RCRA non-CORRACTS TSD Facilities	RCRA TSD facilities are Permitted Treatment, Storage, and Disposal (TSD) facilities which handle hazardous waste.	No sites identified
Federal Institutional Control/ Engineering Control Registry	The Federal Institutional Control and Engineering Control Registry.	No sites identified
Emergency Response Notification Systems (ERNS)	ERNS is a national database used to store information on unauthorized releases of oil and hazardous substances.	No sites identified
US Toxic Release Inventory	The US Toxic Release Inventory (TRI) is an EPA database that tracks toxic chemical releases and other waste management activities reported by covered industry groups and federal facilities.	No sites identified
US RCRA Generators (CESQG, SQG, LQG)	An EPA RCRA database that tracks facilities that generate hazardous waste. Included are Conditionally Exempt Small Quantity Generators (CESQG), Small Quantity Generators (SQG) and Large Quantity Generators (LQG)	No sites identified
US ACRES (Brownfields)	Brownfields are Real Property affected by the presence of a hazardous substance, pollutant, or contaminant. Brownfields grantees are tracked in the Assessment, Cleanup and Redevelopment Exchange System (ACRES) database.	No sites identified

Source	Description	Result
US NPDES	The US NPDES Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act	No sites identified
US Air Facility System (AIRS/AFS)	The Air Facility System (AIRS/AFS) contains compliance and permit data for stationary sources of air pollution (such as power plants, mills, factories, and universities) regulated by EPA, State, and local air pollution agencies	No sites identified
IL Underground Storage Tanks	The Illinois State Fire Marshall (OSFM) maintains a registry of Underground Storage Tanks (UST) containing hazardous or petroleum substances.	No sites identified
IL Leaking Underground Storage Tanks	The Illinois EPA maintains a Leaking Underground Storage Tanks (LUST) Incident Tracking (LIT) database of incidents reported to the Illinois Emergency Management Agency (IEMA)	No sites identified
IL Redevelopment Assessment Database	The Office of Site Evaluation maintains a database identifying the status of all properties within the state where they have conducted a municipal Brownfield Redevelopment Assessment.	No sites identified
IL Site Remediation Program	The Site Remediation Program (SRP) tracks the status of all voluntary remediation projects administered under the program.	No sites identified

Alternative 1 – No Action

Under the No Action alternative, there would be no impacts related to hazardous materials.

Action Alternative 2 – Proposed Action

Under the Proposed Action, there would be no impacts related to hazardous materials, as there are no known sources of hazardous materials within a one-mile radius of the project site.

3.5 Socioeconomics

3.5.1 Zoning and Land Use

Stephenson County is responsible for the development and enforcement of the zoning code, the official zoning map, and the land use plan titled *Future Land Use Plan for Stephenson County, 2000*. The zoning code and map specify the permitted land uses within the project area, while the master land use plan guides potential future development for zoned areas. These documents were used to evaluate the project's consistency with local zoning and land use. The project area is currently zoned for agricultural uses. There is no plan to change the land uses in this area within the County's planning horizon (**See Stephenson County Comprehensive Plan, Appendix F, Technical Reports**).

Alternative 1 – No Action

The No Action alternative would have a negligible impact on existing zoning for properties within the project area, and there would be no immediate changes to existing land uses.

Action Alternative 2 – Proposed Action

The Proposed Action would have negligible short- and long-term impacts on land use as there is no conflict with any of the existing land uses or zoning in the project area. The Proposed Action would be consistent with the future land use proposed for the project area in the Community Master Plan.

3.5.2 Noise

The Noise Control Act of 1972 defines “noise” as an undesirable sound. Noise is regulated at the federal level by the Noise Control Act of 1972, 42 U.S.C. § 4901, *et seq.*. Noise standards developed by EPA (1974) provide a basis for state and local governments’ judgments in setting local noise standards. Florence Township and Stephenson have not established a noise standard for Agricultural Zones, although excessive noise from engine braking systems (Jake Brakes) is prohibited in residential areas (Code of Ordinances, Stephenson County, Part II § 309-7). Residential areas are designated by the Public Works Committee of the County Board and posted with signs that state “Engine Braking Prohibited.” There is no such zone designated in the project area.

Alternative 1 – No Action

The No Action alternative would not change ambient noise levels in the project area. The closure of Ioran Road would reroute traffic noises to other routes, but those noise changes are unlikely to be significant as most of that traffic would be routed to Bolton Road. There would be negligible short and long-term changes in noise levels.

Action Alternative 2 – Proposed Action

The Proposed Action would cause short-term changes in the ambient noise levels in the area associated with construction activities. Short-term impacts related to construction activities would include trucks hauling materials to the site and the operation of equipment such as mass excavators, construction vehicles, and haul trucks. In the long run, the relocated road would function in very much the same manner as the existing condition, and there would be negligible significant long-term changes in noise level.

3.5.3 Public Services and Utilities

Florence Township is served by the Stephenson County Sheriff, the Freeport Rural Fire Department, and the Pearl City Community School District. No police, fire, public schools, or municipal facilities are located within or adjacent to the project area. FHN Memorial Hospital is the hospital closest to the project site about 7.5 miles west in Freeport. Local homes are on

private well and septic systems for water and sewer. Power is provided by ComEd, an Exelon Company, and Cable/Telephone by Frontier Communications.

Alternative 1 – No Action

The No Action alternative would have a minor short- and long-term impact on public services in the project area. Road closures due to storm damage would continue to require detours and could cause delays for emergency and service vehicles from increased travel distances on detour routes. Wired utilities in the Loran Road right-of-way will likely have to be relocated.

Action Alternative 2 – Proposed Action

The Proposed Action would maintain the existing traffic network as is and there would be no long-term effects. In the short-term, the link is already closed due to the flood damage. The proposed action would have no additional short-term effects.

3.5.4 Traffic and Circulation

Data on roads and transit services were obtained from the Illinois Department of Transportation (IDOT). Loran Road is classified as a local road that has an estimated AADT volume of 100 vehicles.

The roads impacted by the project include those on the detour, consisting of South Voss Road, Sabin Church Road, and West Bolton Road. South Voss Road is a narrow, unpaved local road with an estimated AADT of 25 vehicles per day. Sabin Church Road and Bolton Road are collectors with an estimated AADT of 300 vpd on Sabin Road and 1,000 vpd on Bolton Road. Bolton Road provides the most direct access to the nearest City, Freeport, about 4 miles to the northeast.

There is no transit offered on this portion of the network. There is no pedestrian or bicycle accommodation other than the road network itself. This network is configured to provide efficient transportation access to local farms and related residences.

Alternative 1 – No Action

The No Action alternative would have minor short- and long-term impacts on traffic and circulation in the area. Loran Road would remain closed, and traffic would remain routed on the detour. This detour incurs longer vehicle trips – an estimated increase of about 300 vehicle miles per day when compared to the intact network.

Action Alternative 2 – Proposed Action

The Proposed Action would restore the network to its functional condition prior to the damage incurred by the flooding. There will be a minor, short-term increase in traffic during construction detours, after which the traffic will return to its base rate. Given that Loran Road is a local road, the population affected by the detour are almost exclusively local. The restoration of the

network will restore the level of service and access locally and reduce the daily vehicle miles traveled by about 300 when compared to the No Action alternative.

3.5.5 Environmental Justice (Executive Order 12898)

EO 12898, Federal Actions to Address Environmental Justice (EJ) in minority and low-income Populations, requires agencies to identify and address disproportionately high and adverse human health or environmental effects their activities may have on minority or low-income populations. EJSCREEN, a screening and mapping tool developed by EPA, was used to identify low-income and minority populations in the project area based on the 2013–2017 ACS developed by the U.S. Census Bureau (EPA 2018d).

Minority or low-income populations can in a project area can be identified by meeting either one or both of the following criteria: a) The affected area (e.g., census block group) contains 50 percent or more minority persons or 25 percent or more low-income persons and/or b) the percentage of minority or low-income persons in an affected area (e.g., census block group) is more than 10 percent greater than the average of the surrounding county.

To get a more accurate assessment of the specific site area, this analysis focused on buffers centered on the project site. A project location buffer looked at the zone within 1 mile of the site and covering about 3.14 square miles and an estimated population of 102 people. A project area buffer looked at the zone within 5 miles of the site and covering an area of about 78.5 square miles and an estimated population of 6,517 people. The data summarized in the table below indicates an area with a low demographic index, reasonable levels of basic education, and that skews older, but that is otherwise close to the median on most measures. The 1-mile and 5-mile buffers yield similar results on most measures, indicating that the location is typical of the area. Nonetheless, we find that the significantly represented vulnerable population in the area is the elderly.

Table 3-3: Demographic Indicators

	Location [%]	Area [%]	Percentile in State	Percentile in Region 5	Percentile in Nation
Demographic Index	16	19	33	43	27
People of Color	3	13	46	46	26
Low Income	29	25	48	46	42
Linguistically Isolated	0	0	44	59	45
Population with Less than high school Education	3	4	23	23	23
Population Under 5 years of age	3	3	17	17	18
Population over 64 years of age	19	31	75	72	74

Alternative 1 – No Action

The No Action alternative would have minor short- and long-term impacts on vulnerable populations in the area. Loran Road would remain closed, and traffic would remain routed on the detour. To the extent that this closure would reduce access for populations that rely on public and ride-share services, this detour would have a minor impact.

Action Alternative 2 – Proposed Action

The Proposed Action would restore the network to its functional condition prior to the closure of Loran Road. There will be no change short-term impacts to any population during construction, and in the long-term the access and connectivity of the system will be restored to its base level. Therefore, the Proposed Action will have a minor long-term beneficial effect on EJ groups.

3.5.6 Safety and Security

The Occupational Safety and Health Act, 29 U.S.C. §§ 651 – 678, requires safe and healthful conditions for working men and women by setting and enforcing standards; and providing training, outreach, and education and compliance assistance. The act created the Occupational Safety and Health Administration (OSHA) which established construction standards under 29 C.F.R. Part 1926. The construction and safety standards set forth general rules for the safe use, operation, and maintenance of equipment, and for safe work practices pertaining to all employers and employees performing construction operations. No health and safety plan is required for this project under any considered alternative. There will be negligible short-term impacts during construction.

3.6 Historic and Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, 16 U.S.C. § 470 *et seq.*, requires that federal agencies consider the potential effects on cultural resources of actions it proposes to fund. Cultural resources are defined as prehistoric or historic archaeology sites, historic standing structures, historic districts, objects, artifacts, cultural properties of historic or traditional significance—referred to as Traditional Cultural Properties—that may have religious or cultural significance to federally-recognized Indian Tribes (Tribes), or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons.

Cultural resources listed, eligible for listing, or potentially eligible for listing on the National Register of Historic Places (NRHP) are subject to protection from adverse impacts resulting from a federally funded undertaking. To be considered eligible, a cultural resource must meet one or more of the criteria regarding the resource’s significance, as well as demonstrate integrity of features or other characteristics that are related to that significance. Eligibility criteria for listing a property in the NRHP are detailed in 36 C.F.R. Part 60. Sites not yet evaluated may be considered potentially eligible for inclusion in the NRHP and are afforded the same regulatory

consideration as nominated properties. The SHPO maintains records of known historic properties in the state.

Pursuant to 36 C.F.R. § 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the undertaking may directly or indirectly affect cultural resources. Within the APE, impacts on cultural resources are evaluated for both historic structures (aboveground cultural resources) and archaeology (belowground cultural resources).

In addition to the NHPA, FEMA must also comply with other federal laws that relate to historic and cultural resources:

- American Indian Religious Freedom Act of 1978, 42 U.S.C. § 1996, which provides for the protection and preservation of American Indian sites, possessions, and ceremonial and traditional rites.
- Archaeological Resources Protection Act of 1979, 16 U.S.C. §§ 470aa–470 mm, which provides for the protection of archaeological resources on public lands and Indian lands.
- Native American Graves Protection and Repatriation Act, 25 U.S.C. §§ 3001–3013, in cases where Native American cultural items are found on federal and tribal lands.

To comply with the NHPA, FEMA and Florence Township consulted with the Illinois State Historic Preservation Office (SHPO), and SHPO requested a Phase 1 survey of the area. This survey was completed Midwest Archeological Research Services (MARS) in December of 2020. MARS did not identify any cultural material during their survey, and they have recommended clearance for this site. Based on this and other information, FEMA found and SHPO concurred on March 8, 2021, that the project would not affect historic properties.

3.6.1 Archaeological Resources

The Phase I Survey of the APE did not recover any prehistoric or historic archaeological materials and due to the nature of the historic land use in the APE the survey determined that it was highly unlikely any intact prehistoric material is present.

Alternative 1 – No Action

The No Action alternative would have no effect on known archaeological resources as no construction or ground disturbance activities would occur and such resources are not expected to be present.

Action Alternative 2 – Proposed Action

The Proposed Action alternative would have no effect on known archaeological resources as no such resources are expected to be present. The following project conditions provide additional protection to unknown archaeological sites:

- The subrecipient will monitor ground disturbance during the construction phase. Per FEMA standard project condition, should human skeletal remains or historic or

archaeological materials be discovered during construction, all ground-disturbing activities on the project site shall cease and the subrecipient will notify the coroner's office (in the case of human remains), the recipient (Illinois Emergency Management Agency), and FEMA. FEMA will notify the SHPO and the Office of the State Archaeologist.

- All borrow or fill material must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g. a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a sub-recipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at closeout.

3.6.2 Tribal Coordination and Religious Sites

EO 13175, Consultation and Coordination with Indian Tribal Governments, directs federal agencies, "to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes...."

Requests for information on the presence or absence of known archaeological and Indian religious sites within the proposed project area were submitted to federally recognized tribal nations with potential interests in the project. FEMA initiated consultation with the following tribal nations:

- Forest County Potawatomi Community of Wisconsin Tribe
- Ho-Chunk Nation
- Miami Tribe of Oklahoma
- Sac and Fox Nation
- Sac and Fox Nation of Missouri in Kansas and Nebraska
- Sac and Fox Tribe of the Mississippi in Iowa
- Winnebago Tribe of Nebraska
- Osage Nation

FEMA sent a letter to each tribe with details about the project location and proposed activity and requested comments from each tribal government within 30 days of the date of the letter. The Miami Tribe of Oklahoma responded on March 2, 2021, and The Winnebago Tribe responded on February 5, 2021, both offering no objection to FEMA's determination. To date, no other responses have been received.

Alternative 1 – No Action

The No Action alternative would have no effect on known archaeological or Indian religious sites as no construction or ground disturbance activities would occur.

Action Alternative 2 – Proposed Action

The Proposed Action would have no effect on known archaeological or Indian religious sites. Per the project condition noted in section 3.6.1, applicant will monitor ground disturbance and if any potential archaeological resources are discovered, will immediately cease construction in that area and notify the State and FEMA.

3.7 Comparison of Alternatives

Table 3-4 Comparison of Alternatives

No Action Impacts	Proposed Action Impacts	Mitigation
Geology, Soils, and Topography		
<ul style="list-style-type: none">• No effect on Geology• Minor long-term impacts from continued soil erosion.• Negligible impacts to topography	<ul style="list-style-type: none">• No effect on Geology• Minor short-term impacts from excavation and site preparation.• Minor Long-term benefit from streambank stabilization.• Negligible impacts to topography.• Less than one acre of farmland to be converted to non-agricultural use, within the limits of the small acreage exemption.	<ul style="list-style-type: none">• See Section 6.2, Conditions 1 and 2.
Water Resources and Water Quality		
<ul style="list-style-type: none">• Moderate short-term impacts due to erosion and sediment damage.• Minor long-term impacts on water quality from sedimentation, soil erosion, and pollutants from stormwater runoff.• No impact on groundwater.	<ul style="list-style-type: none">• Minor short-term impact on water quality during construction.• Minor long-term benefit from improved erosion and sediment control.• Minor long-term benefit from the installation of a larger vegetated buffer area between the road and Yellow Creek.• No impact on groundwater.	<ul style="list-style-type: none">• See Section 6.2, Conditions 3 through 5.

No Action Impacts	Proposed Action Impacts	Mitigation
Floodplain Management		
<ul style="list-style-type: none"> Minor long-term impacts from continued erosion and the resulting expansion of the special flood hazard area. 	<ul style="list-style-type: none"> Permitting requirements minimize short-term impacts, protecting against erosion and sedimentation. No long-term impacts. 	<ul style="list-style-type: none"> See Section 6.2, Conditions 6 and 7.
Air Quality		
<ul style="list-style-type: none"> Minor short- and long-term impacts from longer vehicle trips driven. 	<ul style="list-style-type: none"> Minor short-term impacts from construction equipment Minor long-term impact from reduced vehicle miles driven. 	<ul style="list-style-type: none"> See Section 6.2, Conditions 9 through 11.
Terrestrial and Aquatic Environment		
<ul style="list-style-type: none"> Minor long-term adverse impacts on water quality and streambank stability from erosion and flooding. 	<ul style="list-style-type: none"> Minor short-term impact due to work in the wetland. Minor long-term benefits due to a stabilized shoreline and increase in the width of the buffer between Loran Road and Yellow Creek. 	<ul style="list-style-type: none"> See Section 6.2, Conditions 3 through 8.
Wetlands		
<ul style="list-style-type: none"> Minor short-term impacts from deposition of sediments. Minor long-term impacts from continued erosion and sedimentation of the wetlands. 	<ul style="list-style-type: none"> Minor short-term impacts due to work in the wetland consisting of streambank stabilization. Minor long-term benefits due to the establishment of an improved vegetative buffer between the roadway and Yellow Creek. 	<ul style="list-style-type: none"> See Section 6.2, conditions 3 through 5.
Threatened and Endangered Species		
<ul style="list-style-type: none"> No project-related short or long-term impacts. 	<ul style="list-style-type: none"> No project-related short- or long-term effects. 	<ul style="list-style-type: none"> See Section 6.2, Condition 8.
Migratory Birds		
<ul style="list-style-type: none"> Potential minor long-term adverse effect from continued loss of habitat as vegetated bank erodes. 	<ul style="list-style-type: none"> Minor short-term impact on habitat opportunities from tree removal during construction. Minor long-term benefit on habitat opportunities from the creation of 0.8 acres of new vegetated buffer area 	<ul style="list-style-type: none"> See Section 6.2, Condition 14.

No Action Impacts	Proposed Action Impacts	Mitigation
Invasive Species		
<ul style="list-style-type: none"> Minor long-term impact as invasive species persists in the area. 	<ul style="list-style-type: none"> Minor short-term impact from the potential spread of invasive weeds outside of the project area as both cuttings and attached to construction equipment and vehicles. Minor long-term benefits minimizing opportunities for invasive species. 	<ul style="list-style-type: none"> See Section 6.2, Conditions 15 and 16.
Hazardous Materials		
<ul style="list-style-type: none"> No impact 	<ul style="list-style-type: none"> No Impact 	<ul style="list-style-type: none"> See Section 6.2, Condition 13.
Zoning and Land Use		
<ul style="list-style-type: none"> Negligible short- and long-term impact on land use. 	<ul style="list-style-type: none"> Negligible short- and long-term impact on land use. 	<ul style="list-style-type: none"> None
Noise		
<ul style="list-style-type: none"> Negligible impact 	<ul style="list-style-type: none"> Negligible short-term impact during construction. 	<ul style="list-style-type: none"> See Section 6.2, Condition 12.
Public Services and Utilities		
<ul style="list-style-type: none"> Minor short- and long-term impact to public services access due to road closure. 	<ul style="list-style-type: none"> No short- or long-term effects 	<ul style="list-style-type: none"> None
Traffic and Circulation		
<ul style="list-style-type: none"> Minor short- and long-term impact on traffic levels on alternative routes due to road closure 	<ul style="list-style-type: none"> Minor, short-term increase in traffic during construction. Long-term restoration of access provides beneficial effects. 	<ul style="list-style-type: none"> None
Environmental Justice		
<ul style="list-style-type: none"> Minor short- and long-term impact on transportation access due to road closure 	<ul style="list-style-type: none"> No short-term effects. Minor long-term beneficial effects from restoring roadway access. 	<ul style="list-style-type: none"> None
Safety and Security		
<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Negligible short-term impact during construction 	<ul style="list-style-type: none"> See Section 6.2, Conditions 17 through 19.

No Action Impacts	Proposed Action Impacts	Mitigation
Historic and Cultural Resources		
• No Effect	• No Effect	• None
Archeological Resources		
• No Effect	No Effect	• See Section 6.2 , Conditions 2, 20, and 21.
Tribal Coordination and Religious Sites		
• No Effect	• No Effect	• See Section 6.2 , Conditions 2, 20, and 21.

4 CUMULATIVE IMPACTS

This section evaluates the potential cumulative impacts associated with the implementation of the Proposed Action. Cumulative impacts are defined in CEQ regulations for implementing NEPA (40 C.F.R. § 1508.7) as:

“The impacts of a proposed action when combined with impacts of past, present, or reasonably foreseeable future actions undertaken by any agency or person.”

CEQ regulations require an assessment of cumulative effects during the decision-making process for federal projects. Cumulative impacts can result from individually minor but collectively significant actions.

The County Comprehensive Land Use Plan shows that the area in the vicinity of the project is expected to remain in agricultural uses for the foreseeable future. No plans for rezoning or development of the area currently exist. There are no foreseeable actions and no cumulative effects predicted for any of the assessment categories discussed above.

5 PUBLIC PARTICIPATION

This project is discussed as a standing item on the agenda for the Loran Township Board of Trustees regular meeting, which is open to the public. The meetings were held at the Office of the Town Clerk at the Township Garage Office on: October 13, 2020; November 9, 2020; December 14, 2020; January 11, 2021; and March 8, 2021. The project is discussed under “Old Business, Loran Road Update.” A sample agenda and meeting minutes for October 2020 – March 2021 are included in Appendix E, Public Notice & Comments.

Given that this was a small project with small amounts of ROW acquisition, individual property owner contacts are considered appropriate for public participation. Property owners were contacted and interviewed by Charles Davidson, MAI, SRA, AI-GRS, of Davidson & Associates. Mr. Davidson spoke to Robert and Bryan Janssen, and with Jay Leary, representing David Leary on 1/29/2021. These contacts are documented in Property Appraisal Reports (Form LA33A) for Parcel 1 and Parcel 2 available at the Stephenson County Highway Department. This EA is available for agency and public review and comment for a period of 30 days. It is available on FEMA’s website at <https://www.fema.gov/emergencymanagers/practitioners/environmental-historic/region/5> and on the Stephenson County Facebook Page:

[Stephenson County Highway Department - Home | Facebook](#)

A hard copy of this EA is available for review at:

Stephenson County Highway Department
295 West Lamm Road
Freeport, IL 61032

This EA reflects the evaluation and assessment of the federal government, the decision-maker for the federal action; however, FEMA will take into consideration any substantive comments received during the public review period to inform the final decision regarding grant approval and project implementation. The public is invited to submit written comments by emailing fema-r5-environmental@fema.dhs.gov or via mail to:

Duane Castaldi, Regional Environmental Officer
Attn: Loran Road Relocation Project EA Comments
FEMA Region V
536 South Clark Street, 6th Floor
Chicago, IL 60605

If FEMA receives no substantive comments from the public and/or agency reviewers, this EA will be adopted as final, and FEMA will issue a FONSI. If FEMA receives substantive comments, it will evaluate and address those comments as part of the FONSI documentation and may consider whether changes to the grant or project implementation are appropriate.

6 MITIGATION MEASURES AND PERMITS

6.1 Permits

The subrecipient has obtained permits for impacts on waters of the U.S. and waters of the state in accordance with Clean Water Act. The U.S. Army Corps of Engineers (USACE) has authorized the road relocation fills through a Regional Permit 16, Bank Stabilization Projects (USACE File Number CEMVR-RD-2020-1784). See **Appendix C** for copies of the permits.

Table 6-1 summarizes the necessary permits to implement the Proposed Action and their status.

Table 6-1: Permit Summary

Issuing Agency	Resource	Permit Title	Applicable Regulation/Law	Status
USACE	Wetlands	Regional Permit 14	Section 404, Clean Water Act	USACE has found that the Proposed Action is covered under RP 16. See Appendix C .
IDNR-OWR	Floodplain	Statewide Permits 6, 9	Rivers, Lakes and Streams Act, 615 ILCS 5	IDNR has found that the Proposed Action is covered under State Permits 6 and 9. See Appendix C .
IEPA	Water Quality	IEPA Cond. Certification Log # C-0162-20	Section 401, Clean Water Act	IEPA has issued a Conditional Water Quality Certification for work covered under USACE RP 16. See Appendix C .
IEPA	Soils (Erosion)	Soil Erosion and Construction Stormwater	Section 402, Clean Water Act	This permit is to be applied for once construction is imminent. IEPA has cleared the site for State Listed Threatened and Endangered Species, which clearance is required for a Notice of Intent to Construct. See Appendix C .

6.2 Project Conditions

The subrecipient is responsible for compliance with federal, state, and local laws and regulations, including obtaining any necessary permits prior to beginning construction activities, and adhering to any conditions laid out in these permits. Any substantive change to the scope of work will require re-evaluation by FEMA for compliance with NEPA and any other laws or EOs. Failure to comply with FEMA grant conditions may jeopardize federal funding.

General Project Conditions

1. The subrecipient is responsible for obtaining and complying with all required local, state, and federal permits and approvals.
2. If deviations from the proposed scope of work result in substantial design changes, the need for additional ground disturbance, additional removal of vegetation, or any other unanticipated changes to the physical environment, the subrecipient must contact FEMA so that the revised project scope can be evaluated for compliance with NEPA and other applicable environmental laws.

Water Resources and Water Quality, Wetlands, and Soils:

3. Prior to beginning work, the subrecipient will coordinate with the Illinois Environmental Protection Agency (IEPA) to secure an issued Notice of Intent (NOI) to Construct.
4. At the conclusion of the work, the subrecipient will coordinate with the Illinois Environmental Protection Agency (IEPA) to secure a Notice of Termination (NOT).
5. The subrecipient is responsible for compliance with all conditions required by the following permits, as well as any others required by this project:
 - USACE CEMVR-OD-P-2020-0691 (Regional Permit 16)
 - IEPA Conditional Water Quality Certification, Log # C-0162-20, dated September 30, 2020.
 - IDNR-OWR Statewide Permit 6, Statewide Permit 9.

Floodplain Management

6. The subrecipient will obtain written approval or a local floodplain development permit from the Stephenson County floodplain manager and the subrecipient must follow all conditions of approval.
7. Construction staging and access for the Proposed Action will occur outside the mapped floodplain to the extent practical.

Threatened and Endangered Species

8. No trees 3 inches in diameter or greater at breast height may be cut between April 1 and September 30 of any year. If this time restriction cannot be met, the applicant will contact the IEMA and FEMA or additional consultation with USFWS.

Air Quality

9. The subrecipient will implement EPA recommendations for mitigation included in Appendix X to the extent practical.
10. To reduce the emission of criteria pollutants, construction equipment engine idling will be minimized to the extent practicable, and engines will be kept properly maintained.
11. Open construction areas will be minimized and watered as needed to minimize particulates such as fugitive dust.

Noise

12. The subrecipient will minimize noise impacts by limiting construction activities to allowable construction noise to daylight hours.

Hazardous Materials

13. The project is subject to IDOT Bureau of Design and Environment (BDE) Special Provisions, file 80407, checklist item 1, Removal and Disposal of Regulated Substances.

Migratory Birds

14. Vegetation removal should be avoided during the migratory bird nesting season to the extent practicable.

Invasive Species

15. The contractors will ensure that any seed and mulch landscaping comply with state regulations.
16. The contractors will wash soil and plant material off all equipment tires and treads each time before leaving the project site.

Safety and Security

17. To minimize risks to safety and human health, construction activities will be performed using qualified personnel trained to use the required equipment properly.
18. The construction site will be secured from public access.
19. All construction activities will be conducted in accordance with the standards specified in the Occupational Safety and Health Administration (OSHA) regulations and LARA Construction and Safety Standards.

Archeological, Tribal, and Religious Sites

20. The subrecipient will monitor ground disturbance during the construction phase. Per FEMA standard project condition, should human skeletal remains or historic or archaeological materials be discovered during construction, all ground-disturbing activities on the project site shall cease and the subrecipient will notify the coroner's office (in the case of human remains), the recipient (Illinois Emergency Management Agency), and FEMA. FEMA will notify the SHPO and the Office of the State Archaeologist.
21. All borrow or fill material must come from pre-existing stockpiles, material reclaimed from maintained roadside ditches (provided the designed width or depth of the ditch is not increased), or commercially procured material from a source existing prior to the event. For any FEMA-funded project requiring the use of a non-commercial source or a commercial source that was not permitted to operate prior to the event (e.g. a new pit, agricultural fields, road ROWs, etc.) in whole or in part, regardless of cost, the Applicant must notify FEMA and the Recipient prior to extracting material. FEMA must review the source for compliance with all applicable federal environmental planning and historic preservation laws and executive orders prior to a sub-recipient or their contractor commencing borrow extraction. Consultation and regulatory permitting may be required. Non-compliance with this requirement may jeopardize receipt of federal funding. Documentation of borrow sources utilized is required at closeout.

7 CONSULTATIONS AND REFERENCES

The following agencies were consulted during the preparation of this EA:

7.1 Federal, State, and Local Agencies

- U.S. Army Corps of Engineers, Rock Island District Regulatory Division
- U.S. Environmental Protection Agency Region V
- U.S. Fish and Wildlife Service, Rock Island Ecological Services
- Illinois Department of Natural Resources, Endangered Plants and Animals
- Illinois Department of Natural Resources, Office of Water Resources
- Illinois Department of Transportation, District 2
- Illinois Environmental Protection Agency, Division of Water Pollution Control
- Stephenson County Floodplain Management
- Illinois State Historic Preservation Office

7.2 Tribal Nations

- Forest County Potawatomi Community of Wisconsin Tribe
- Ho-Chunk Nation
- Miami Tribe of Oklahoma
- Sac and Fox Nation
- Sac and Fox Nation of Missouri in Kansas and Nebraska
- Sac and Fox Tribe of the Mississippi in Iowa
- Winnebago Tribe of Nebraska
- Osage Nation

7.3 References

Illinois Department of Natural Resources, EcoCAT, Ecological Compliance Assessment Tool,
<https://www2.illinois.gov/dnr/programs/EcoCAT/Pages/default.aspx>

Illinois Department of Natural Resources, Statewide Permit Number 6, Authorizing Minor Non-Obstructive Floodway Construction Activities.

Illinois Department of Natural Resources, Statewide Permit Number 9, Authorizing Minor Shoreline, Streambank, and Channel Protection Activities.

Illinois Environmental Protection Agency, National Pollutant Discharge Elimination Program, Illinois General Permit No. ILR10, Stormwater Discharges from Construction Site Activities

National Oceanic and Atmospheric Administration (NOAA). 2020. Essential Fish Habitat Mapper,
<https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper>

National Park Service (NPS). Interactive Map of NPS Wild and Scenic Rivers.
<https://www.nps.gov/orgs/1912/plan-your-visit.htm>

National Resource Conservation Service (NRCS). Web Soil Survey.
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

[Nationwide Environmental Title Research, LLC, NETROnline Environmental Data,](#)
<https://netronline.com/>

Stephenson County, Code of Ordinances, Part 1: General Legislation, Chapter 400: Zoning

Stephenson County, Future Land Use Plan for Stephenson County, July 12, 2000

Stephenson County, Multi-Hazard Mitigation Plan, 2016-2021

U.S. Army Corps of Engineers, Rock Island District, Department of the Army Permit, Regional Permit 16, Bank Stabilization Activities in the State of Illinois.

U.S. Census Bureau. 2017. 2013-2017 American Community Survey 5-Year Demographic and Housing Estimates (ID DP05):
<https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

U.S. Environmental Protection Agency, EJSCREEN: Environmental Justice Screening and Mapping Tool, <https://www.epa.gov/ejscreen>

U.S. Geological Service, Stream Stats, <https://streamstats.usgs.gov/ss/>

Willet Hoffman and Associates, Loran Road Flood Damage near South Mill Road, Budgetary Cost Estimates, WHA No. 1360M19, October 1, 2019.

8 LIST OF PREPARERS

Federal Emergency Management Agency

Reviewers	Experience and Expertise	Role in Preparation
Duane Castaldi	Regional Environmental Officer	Project Monitor
Maureen Cunningham	Regional Counsel	Legal Review
Daniell DiGiuseppe	Environmental Protection Specialist	Technical Monitor
Nicholas Dorochoff	Deputy REO	Technical Review

Chastain and Associates, LLC; Olson Ecological Solutions, LLC; Tallgrass Restoration, LLC; Midwest Archeological Research Service, LLC; and Davidson and Associates:

Preparers	Experience and Expertise	Role in Preparation
Curtis Cook, PE	Principal	Supervision and Coordination
Thomas Okite, PE	Project Manager	Environmental Assessment Report
Anthony Fortin, PE	Engineering Lead	Engineering Designs, Calculations, Specifications, Quantities, and Estimates
James Madara	Engineering Technician	Engineering Plans, Exhibits
Randall Beck	Engineering Technician	Engineering Field Survey
Rebecca Olson	Ecologist	Water Resources and Water Quality, Wetlands, Habitat, Threatened and Endangered Species, Migratory Birds, and Invasive Species
Kirsten Adams	GIS Specialist	GIS/Graphics
Ayssa Robinson	Environmental Planner	Field Reconnaissance, Environmental Reports
Jay Martinez, MA, RPA	Archeologist	Archeological Survey
Charles Davidson, MAI, SRA, AI-GRS	Appraiser	Property Appraisal

APPENDICES

Appendix A Maps and Figures

Appendix B Design Plans

Appendix C Permits

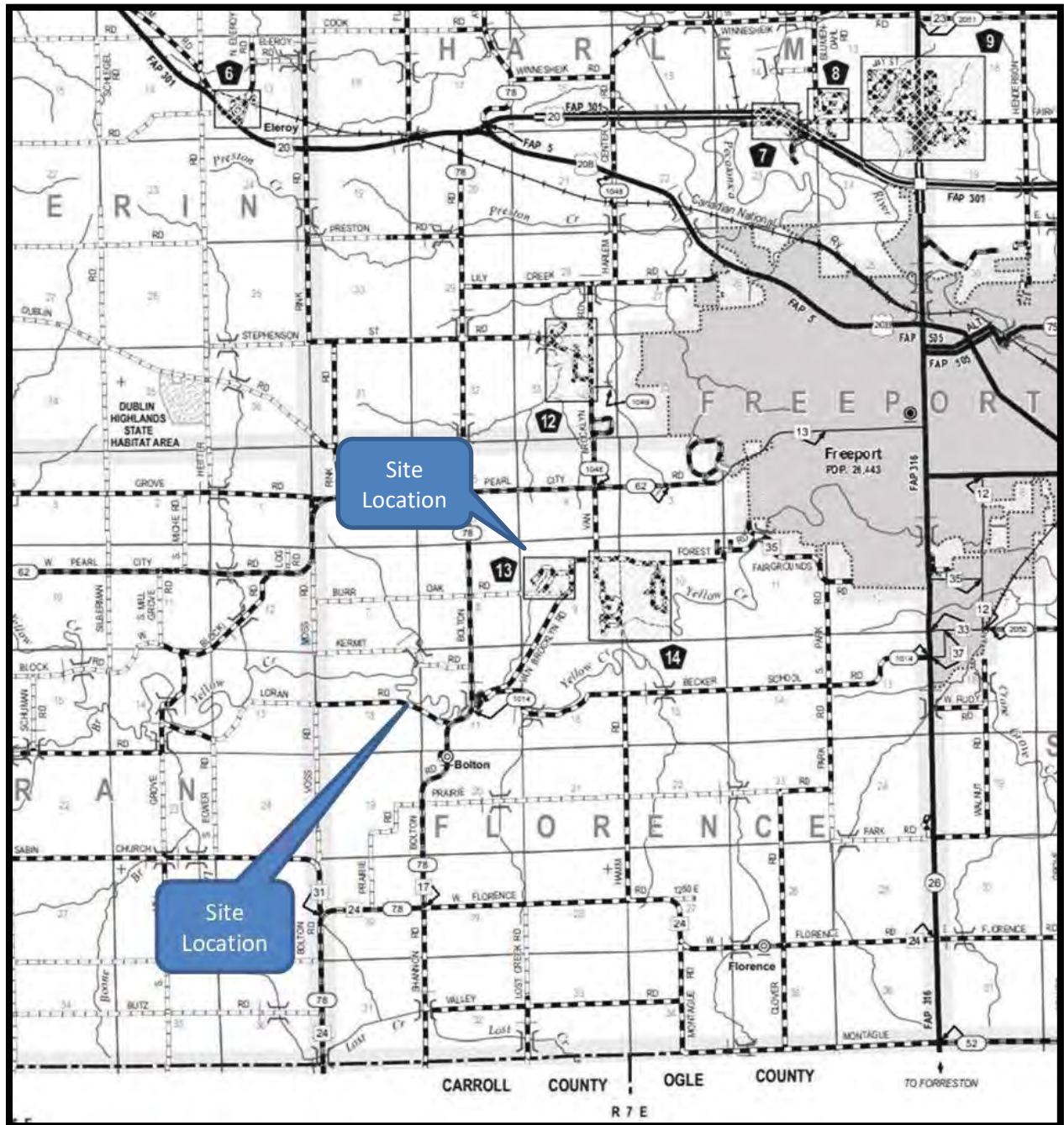
Appendix D Agency Consultation

Appendix E Public Notice & Comments

Appendix F Technical Reports

APPENDIX A

Maps and Figures



Attachment 1: Project Location Map

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/26/2020 at 5:39:29 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

42°15'7.25"N



USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

42°14'40.62"N

89°43'32.08"W



US Army Corps
of Engineers ®

Executive Order 11988

Flood Plain Management Decision Making Process

Description and Intent

Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities" for the following actions:

- acquiring, managing, and disposing of federal lands and facilities;
- providing federally-undertaken, financed, or assisted construction and improvements;
- federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities.

Summary of the 8-Step Decision Making Process

The guidelines address an eight-step process that agencies should carry out as part of their decision-making on projects that have potential impacts to or within the floodplain. The eight steps, which are summarized below, reflect the decision-making process required in Section 2(a) of the Executive Order.

1. Determine if a proposed action is in the base floodplain (area with a one percent or greater chance of flooding in any given year).
2. Conduct early public review, including public notice.
3. Identify and evaluate practicable alternatives to locating in the base floodplain, including alternative sites outside of the floodplain.
4. Identify impacts of the proposed action.
5. Minimize threats to life and property and to natural and beneficial floodplain values. Restore and preserve natural and beneficial floodplain values.
6. Reevaluate alternatives.
7. Issue findings and a public explanation.
8. Implement the action.

Summary of EO 11988 Evaluation Process

Evaluation of a federal activity by a District office should consider the potential for loss of life, the possibility of repeatable flood damages, and the affect of suspending operation of a critical facility during a flood event. General procedures for evaluating federal activities are as follows:

1. Identify the location of the proposed federal activity on an effective Flood Insurance Rate Map (FIRM).
 - a. If FIRM does not exist, consider conducting "Approximate Zone A" evaluation.
2. Note whether the activity location lies within a FEMA designated floodway.
 - a. If in floodway, reevaluate alternative
3. Determine if the federal activity involves a critical facility.
 - a. If critical facility, proceed to step 4
 - b. If not a critical facility, proceed to step 6
4. If possible, identify new location for critical facility outside of 0.2% annual chance floodplain.
5. If critical facility required to be located within the 1% annual chance floodplain.
 - a. Ensure first floor elevated at or above 0.2% annual chance flood elevation, or
 - b. Ensure facility may be protected by barrier, floodwall, or levee at or above 0.2% annual chance flood elevation.
6. If possible, identify new location for federal activity outside of 1.0% annual chance floodplain.
7. If federal activity is required to be located within the 1% annual chance floodplain, ensure first floor elevation and all utilities are located above the 1.0% annual chance flood elevation.
8. Issue findings.

APPENDIX B

Design Plans

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES, SUMMARY OF QUANTITIES, RATES OF APPLICATION, AND TYPICAL SECTION
- 3 ALIGNMENT, TIES, AND BENCHMARKS
- 4 TRAFFIC CONTROL
- 5 REMOVAL PLAN
- 6 GRADING, EROSION CONTROL, & RESTORATION
- 7-8 PLAN AND PROFILE
- 9-12 CROSS SECTIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
ROAD RELOCATION

LORAN ROAD
STEPHENSON COUNTY
FLORENCE TOWNSHIP

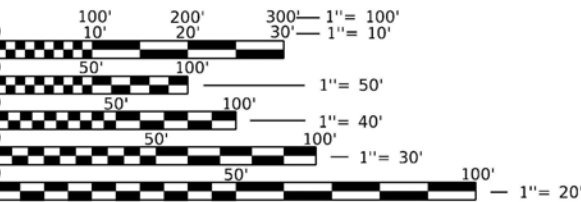
HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 701901-08 TRAFFIC CONTROL DEVICES
- BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

COMMUNICATIONS: COMED
PUBLIC RELOCATION DEPT.
630-437-4855

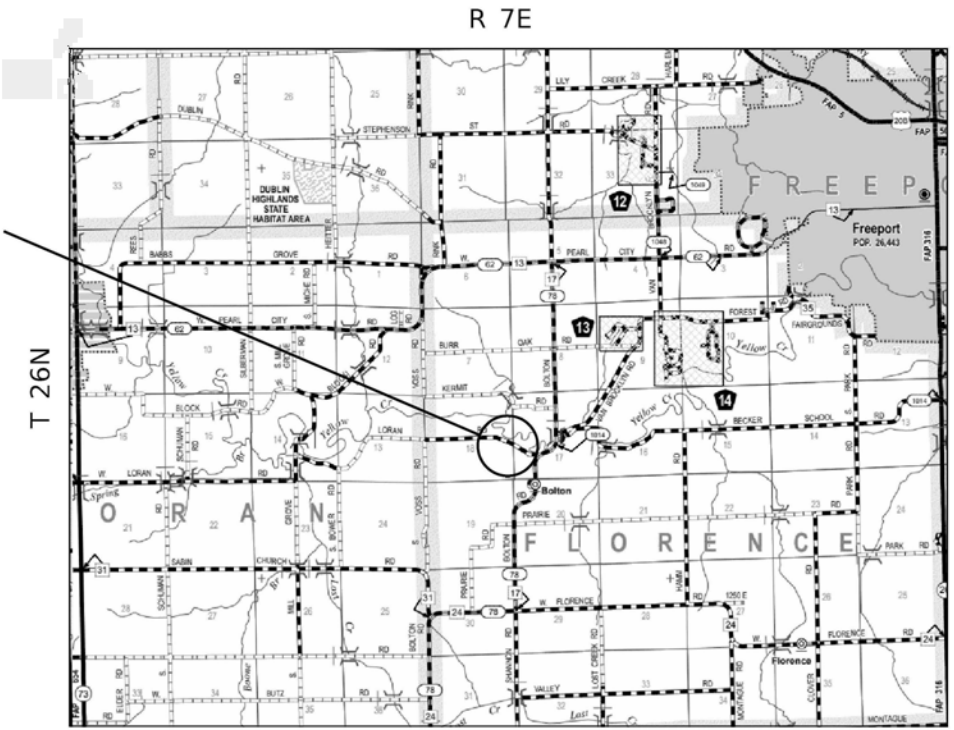
FRONTIER COMMUNICATIONS
KALIN HINSHAW
815-895-1515



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

HLC PROJECT NO. 7604

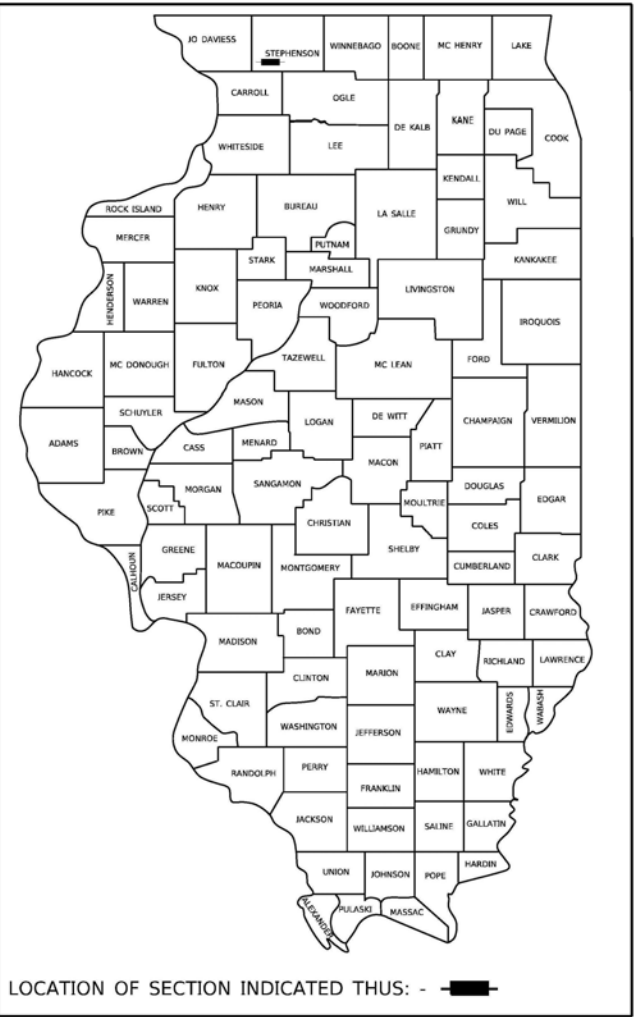


LOCATION MAP

TOTAL LENGTH = 1,125 FT. = 0.21 MILE



F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		STEPHENSON		1
FLORENCE TWP		ILLINOIS		



FUNCTIONAL CLASSIFICATION - LOCAL ROAD
2019 ADT = 100
DESIGN SPEED = 30 MPH

APPROVED _____ 20 _____

FLORENCE ROAD DISTRICT HIGHWAY COMMISSIONER

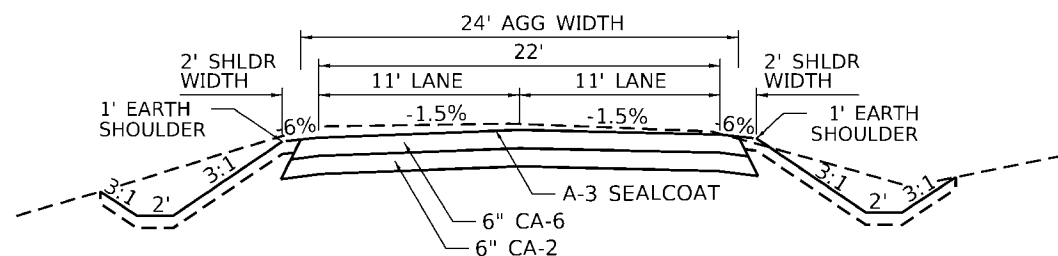
APPROVED _____ 20 _____

COUNTY ENGINEER

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
DECATUR (217) 422-8544
SCHAUMBURG (773) 714-0050
ROCKFORD (815) 489-0050
184-001397

GENERAL NOTES

1. WHEREVER IN THE PLANS OR SPECIFICATIONS THE TERM STANDARD SPECIFICATIONS IS USED, IT SHALL BE UNDERSTOOD BY THE CONTRACTOR TO MEAN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS PREPARED BY THE DEPARTMENT OF TRANSPORTATION OF THE STATE OF ILLINOIS AND ADOPTED APRIL 1, 2016.
2. EXISTING ROAD SIGNS THAT CONFLICT WITH CONSTRUCTION OPERATIONS SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER, THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT PAY ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR.
3. EXCEPT WHERE DESIGNATED OTHERWISE, THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS & MUST BE CONSIDERED APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. CONTACT J.U.L.I.E., PHONE 800-892-0123, AND ALL UTILITY COMPANIES PRIOR TO DIGGING.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS PRIOR TO BEGINNING DEMOLITION AND/OR CONSTRUCTION OPERATIONS.
5. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PROTECT PUBLIC AND PRIVATE PROPERTY. IF AT ANY TIME THE CONTRACTOR DAMAGES OR DESTROYS PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, RESTORE SUCH PROPERTY TO A CONDITION EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE.
6. THE CONTRACTOR SHALL NOTIFY THE HIGHWAY DEPARTMENT RESIDENT ENGINEER AND THE COUNTY ENGINEER 72 HOURS IN ADVANCE OF CONSTRUCTION WORK.
7. UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES AT THE TIME OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THEY PERFORM THEIR WORK.
8. GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
9. EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE INSTALLED AND OPERATIONAL PRIOR TO BEGINNING ANY OTHER DEMOLITION AND/OR CONSTRUCTION WORK.
10. SEEDING SHALL BE DONE ON ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS AS DIRECTED BY THE ENGINEER. SEEDING SHALL BE PAID FOR ONLY WITHIN THE PROPOSED CONSTRUCTION LIMITS. ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE PROPOSED CONSTRUCTION LIMIT SHALL BE SEEDD AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.



PROPOSED TYPICAL SECTION

STA 2+50.00 TO STA 13+25.00
NTS

SUMMARY OF QUANTITIES

[illegible]

RATES OF APPLICATION

ITEMS		RATE OF APPLICATION
AGGREGATE SHOULDERS	=	2.05 TONS/ CU YD
RIPRAP	=	2.05 TONS/ CU YD
BITUMINOUS PRIME COAT	=	0.25 GAL/SQ YD/APPLICATION
BITUMINOUS ASPHALT	=	0.4 GAL/SQ YD/APPLICATION
COVER AND SEAL COAT AGGREGATE	=	25 LBS/SQ YD/APPLICATION

MODEL: Default
FILE: Loran_Road_Twp_County7604_Florence_Twp_Loran_Road1CADD1CADD_Civil17604.sht 03-Align1Ties.dgn

CHASTAIN
& ASSOCIATES, LLC

DECATUR
CHICAGO
ROCKFORD

(217) 422-8544
(773) 714-0100
(815) 489-0029

184-001397

USER NAME	= jmadara
DESIGNED	- TWO
DRAWN	- JDM
PLOT SCALE	=
CHECKED	- TWO
DATE	- 10/06/2020
REVIS	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LORAN ROAD (FLORENCE TOWNSHIP)
ALIGNMENT, TIES, AND BENCHMARK

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	3
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PROP. CURVE FLOR_CL_3
PI STA. = 4+48.69
 Δ = 23° 10' 09" (RT)
D = 9° 32' 57"
R = 600.00'
T = 122.99'
L = 242.63'
E = 12.48'
e =
T.R. =
S.E. RUN =
P.C. STA. = 3+25.69
P.T. STA. = 5+68.32

BEGIN PROJECT
STA. 2+25.00
N 2,033,547.32
E 2,413,973.74

PROP. CURVE FLOR_CL_6
PI STA. = 8+13.11
 Δ = 8° 06' 00" (LT)
D = 3° 49' 11"
R = 1,500.00'
T = 106.20'
L = 212.06'
E = 3.76'
e =
T.R. =
S.E. RUN =
P.C. STA. = 7+06.90
P.T. STA. = 9+18.96

PROP. CURVE FLOR_CL_9
PI STA. = 11+67.62
 Δ = 8° 06' 00" (RT)
D = 3° 49' 11"
R = 1,500.00'
T = 106.20'
L = 212.06'
E = 3.76'
e =
T.R. =
S.E. RUN =
P.C. STA. = 10+61.41
P.T. STA. = 12+73.47

END PROJECT
STA. 13+50.00
N 2,033,279.89
E 2,415,055.70

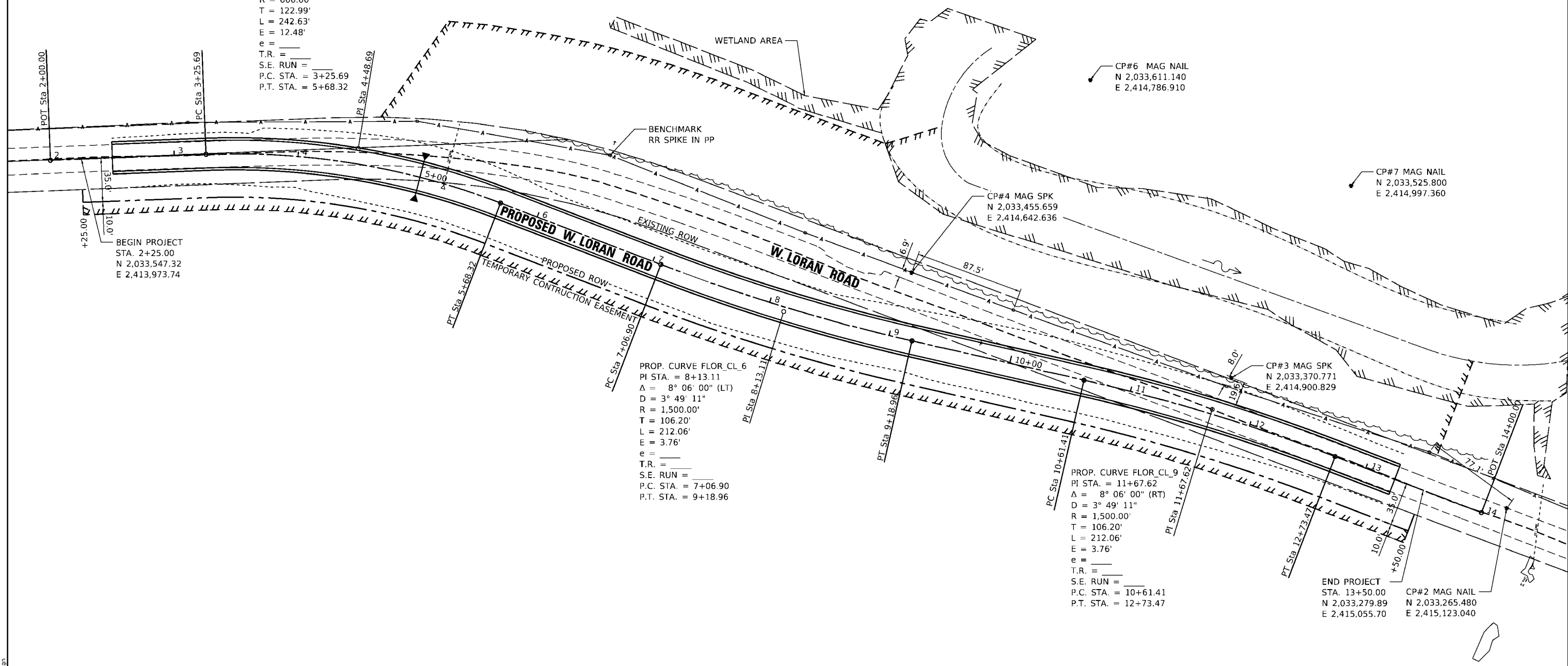
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E 2,415,123.040

CP#3 MAG SPK
N 2,033,370.771
E 2,414,900.829

CP#4 MAG SPK
N 2,033,455.659
E 2,414,642.636

CP#6 MAG NAIL
N 2,033,611.140
E 2,414,786.910



CP#7 MAG NAIL
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E 2,414,997.360

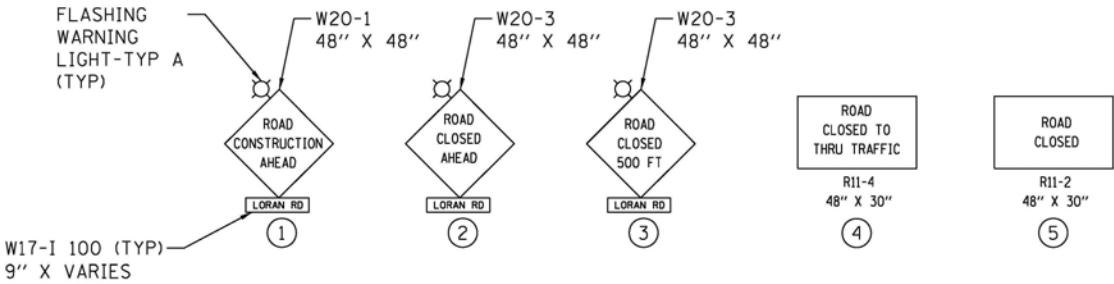
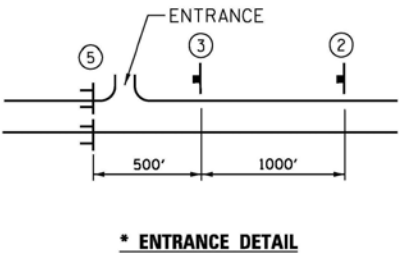
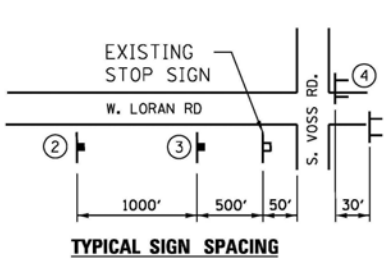


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TRAFFIC CONTROL LEGEND

-  INDICATES TYPE III BARRICADE WITH SIGN UNLESS OTHERWISE NOTED PER STANDARD 701901. (WITH TWO WARNING LIGHTS EACH BARRICADE)
-  INDICATES DESIGNATED SIGN POST-MOUNTED IN GROUND PER ARTICLE 701.14 & STANDARD 701901 (SEE SIGN DETAIL BELOW)



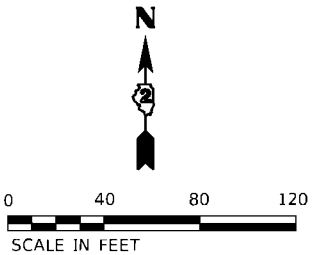
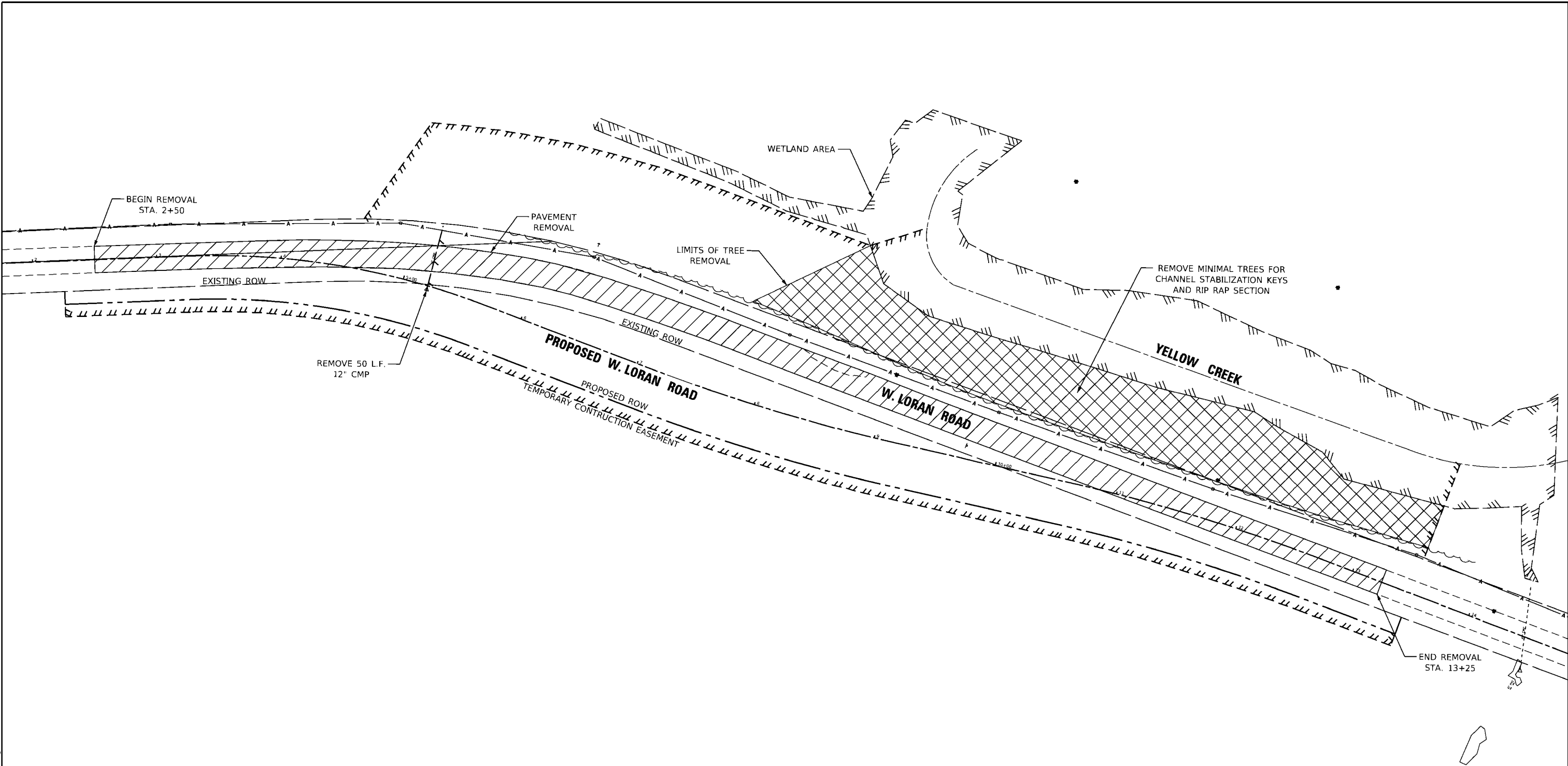
CHASTAIN & ASSOCIATES, LLC
CONSULTING ENGINEERS
REGISTERS
CHICAGO
ROCKFORD
184-001397

USER NAME = jmadara	DESIGNED - TWO	REVISED -
	DRAWN - JDM	REVISED -
PLOT SCALE =	CHECKED - TWO	REVISED -
PLOT DATE = 10/16/2020	DATE - 10/06/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LORAN ROAD (FLORENCE TOWNSHIP) TRAFFIC CONTROL PLAN			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	4
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



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FILE: Route_Rt01_County7604_Florence_Twp_Loran_Road\CADD\CADD_Civil\7604-shr_05-Removal.dgn

CHASTAIN & ASSOCIATES, LLC
CONSULTING ENGINEERS
DECATUR (217) 422-8544
CHICAGO (773) 714-0066
ROCKFORD (815) 499-0059
184-001397

USER NAME = jmadara	DESIGNED - TWO	REVISED -
	DRAWN - JDM	REVISED -
PLOT SCALE =	CHECKED - TWO	REVISED -
PLOT DATE = 10/16/2020	DATE - 10/06/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

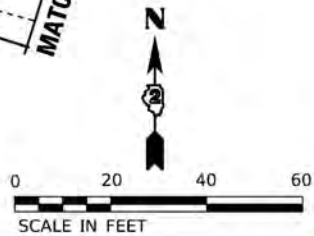
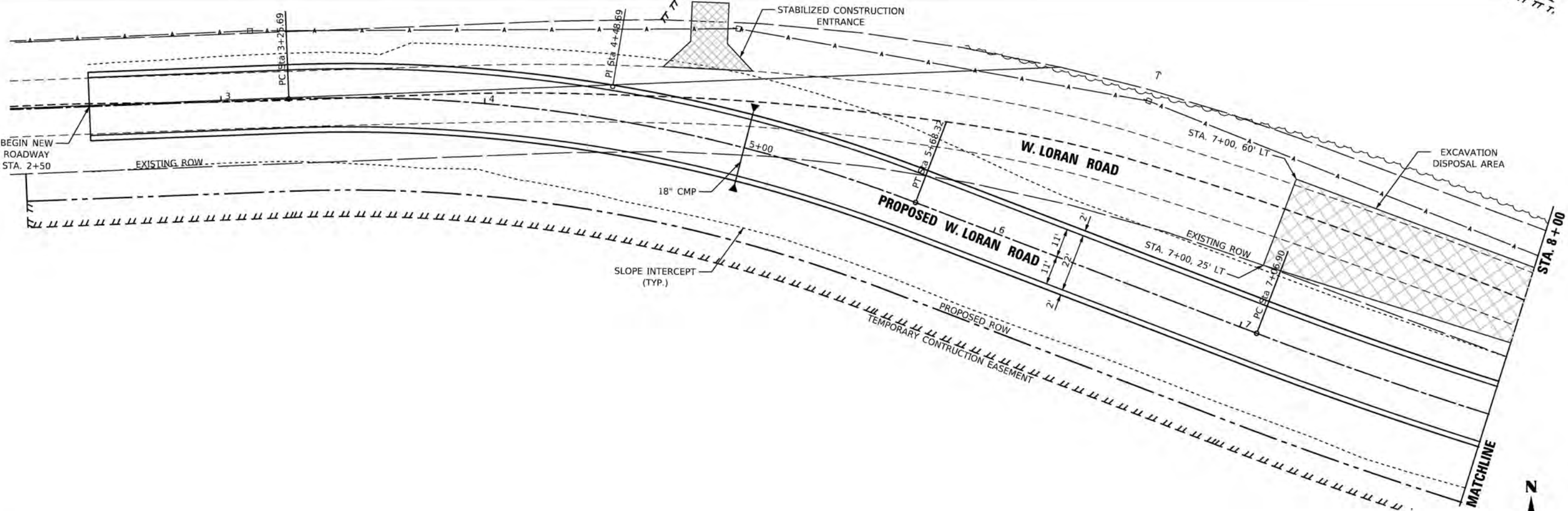
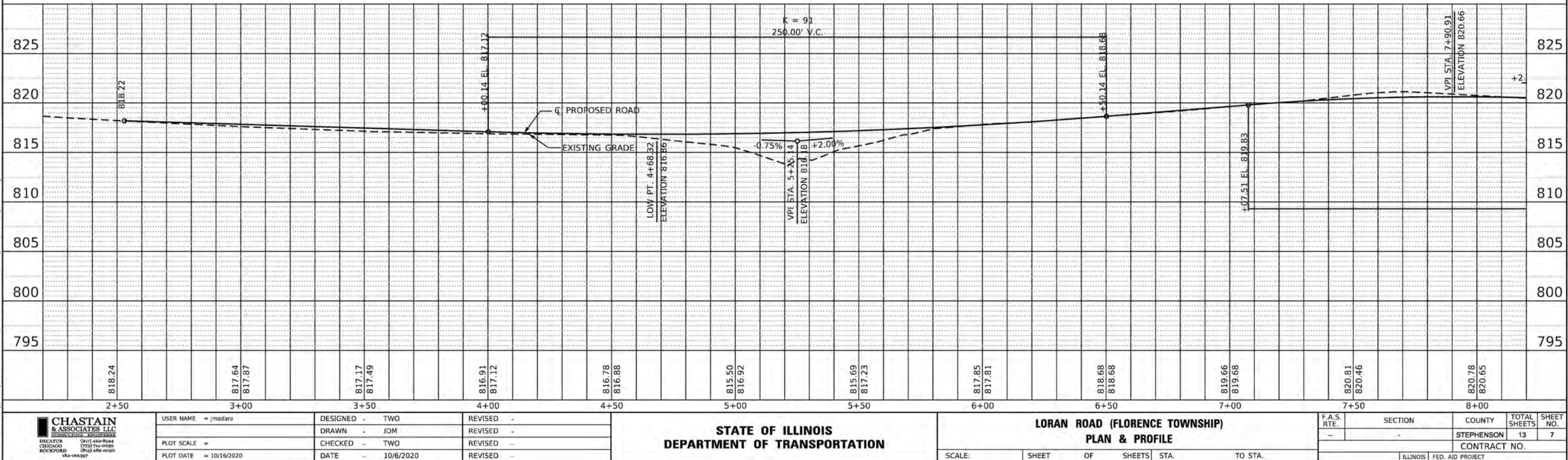
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	5
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	DATE
	NOTED	BY
NOTE BOOK	PERMITTED	
	ALIGNMENT CHECKED	
NO.	CONSTRUCTION	
	CAD FILE NAME	

PROFILE	SURVEYED	DATE
	NOTED	BY
NOTE BOOK	PERMITTED	
	ALIGNMENT CHECKED	
NO.	CONSTRUCTION	
	CAD FILE NAME	

MODEL: Default
FILE NAME: R:\P\ County\604 Florence Twp Loran Road\CA01\CA01 Civil\7604-sht 01.dwg
DATE: 10/16/2020



CHASTAIN & ASSOCIATES, LLC
1000 N. LAKE ST. SUITE 200
CHICAGO, IL 60610
(312) 422-8044
(773) 714-0080
FAX: (312) 422-8045
www.chastain.com

USER NAME	= jmadara
DESIGNED	- TWO
DRAWN	- JDM
CHECKED	- TWO
DATE	- 10/6/2020

REVISED	-
REVISED	-
REVISED	-
REVISED	-

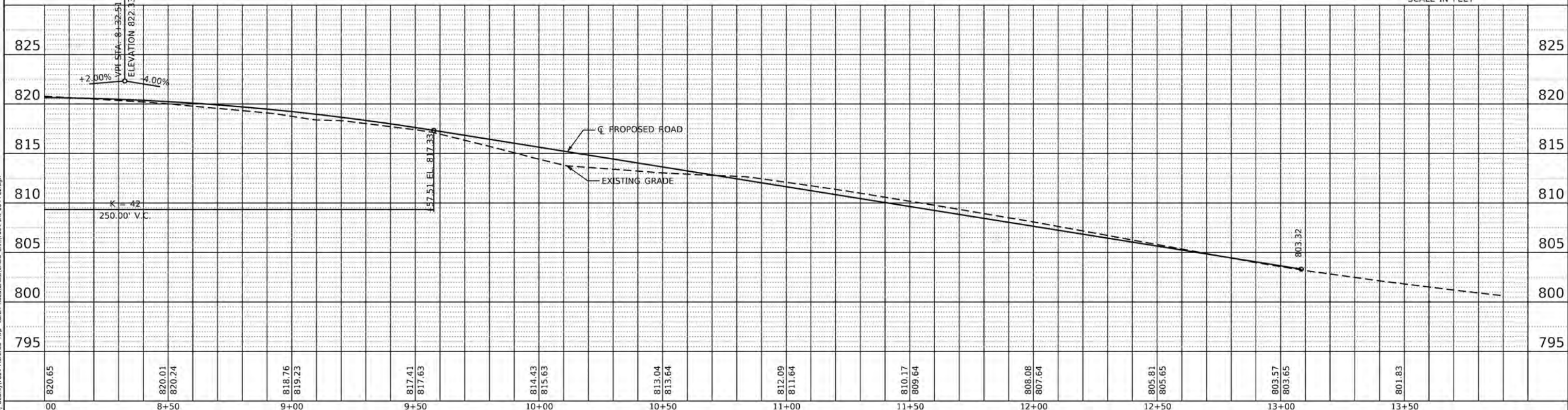
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LORAN ROAD (FLORENCE TOWNSHIP)
PLAN & PROFILE

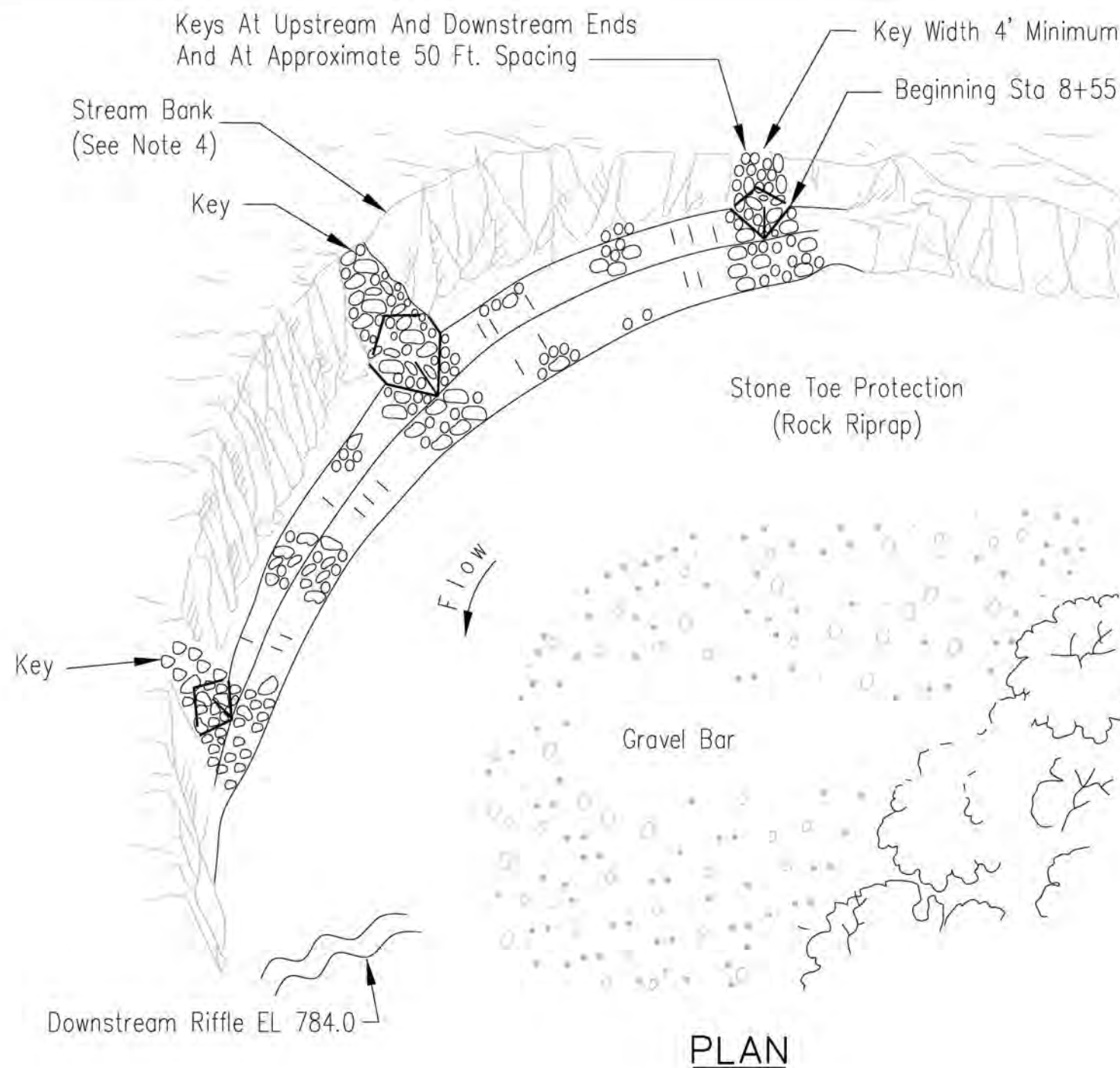
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	7
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PROFILE		SURVIVED _____		BY _____		DATE _____	
NOTE BOOK _____		PLOTTER _____					
NO. _____		GRADES CHECKED _____					
		B.J.L. NOTED _____					
		STRUCTURE NOTATIONS CHECKED _____					



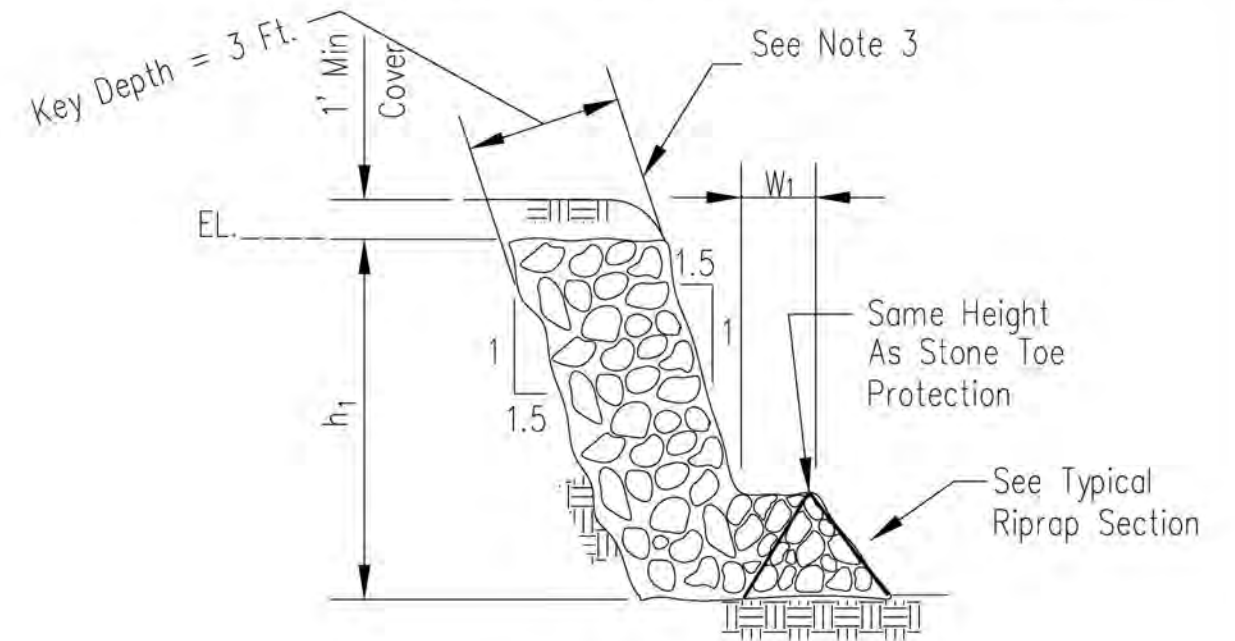
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	8
		CONTRACT NO.		
		BLISSHOFF EED AND PROJECT		



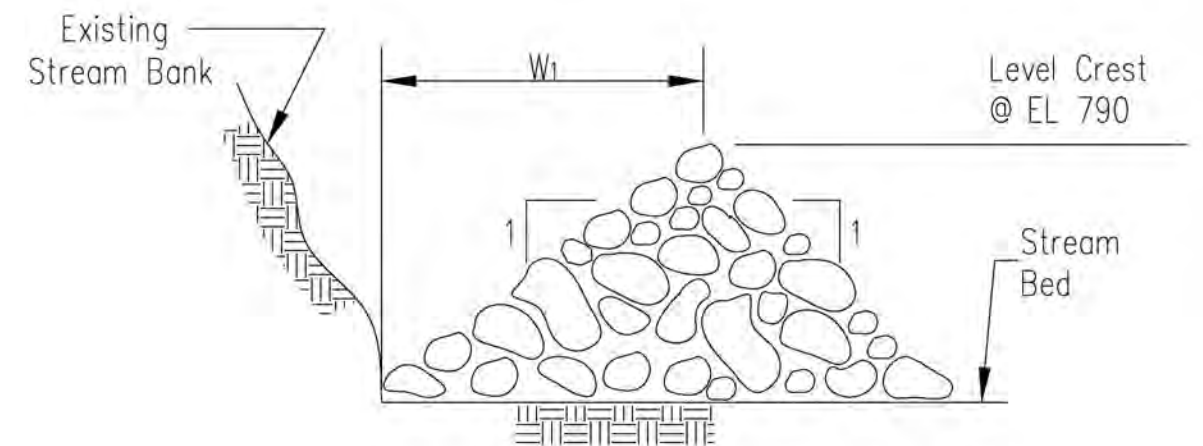
Benchmark EL. _____
 Description _____

 Beginning Sta. Description _____

- Notes:
1. Rock gradation shall meet IDOT requirements for GRAD. NO. RR4 riprap, quality designation "A", or as designated by engineer.
 2. Stone Toe 506 ft @ 2.70 Tons/Ft. average
 Keys 11 @ 60 Tons Each
 Total Rock Amount (Estimate) 2025 Tons
 3. Key shall be constructed so that the vertical section remains embedded in the existing stream bank.
 4. Location RT side of streambank looking downstream.




KEY DETAIL

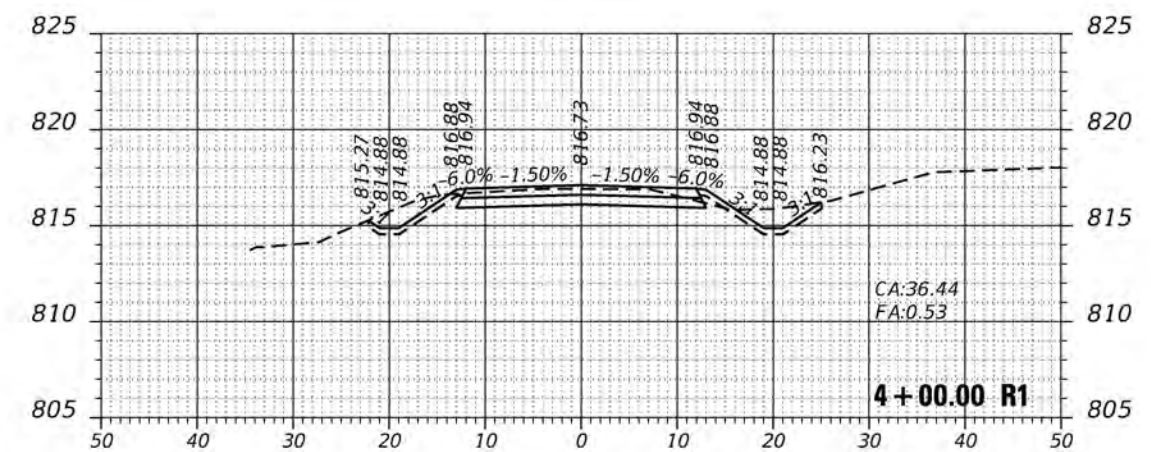
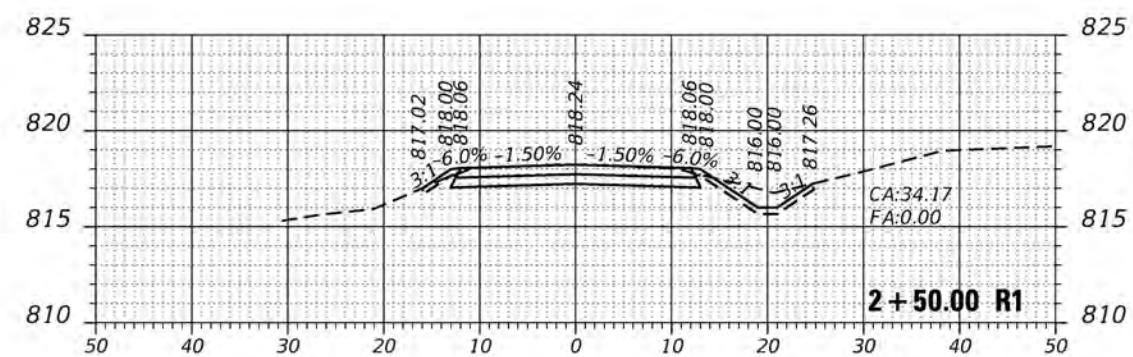
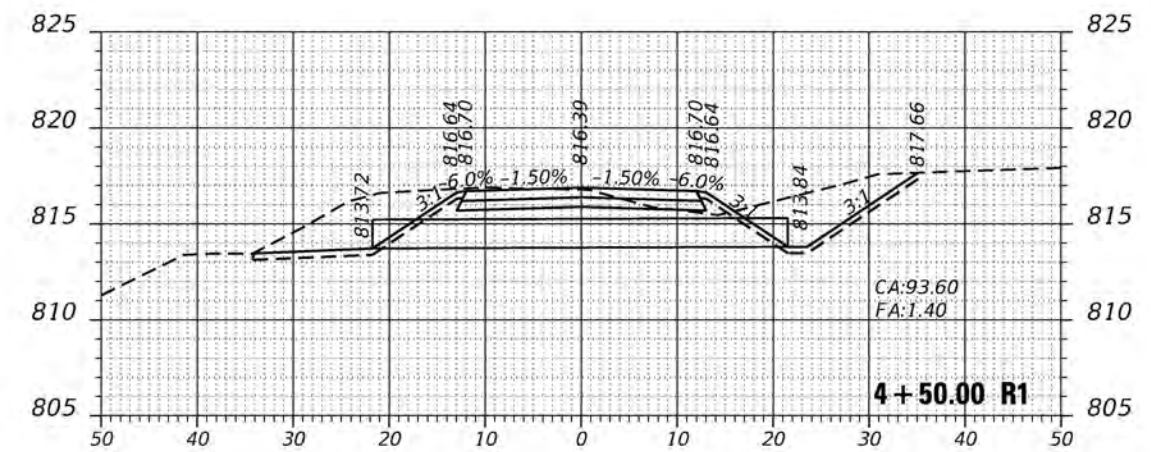
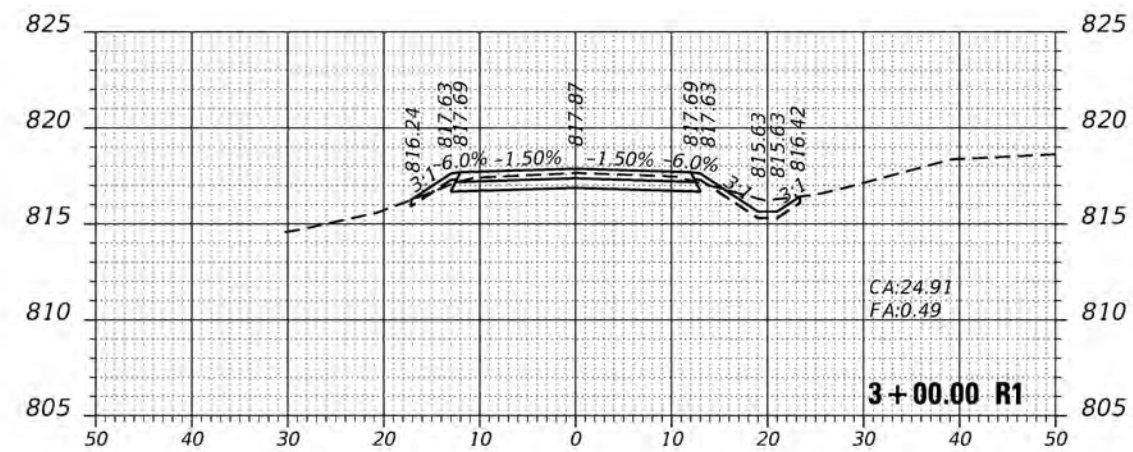
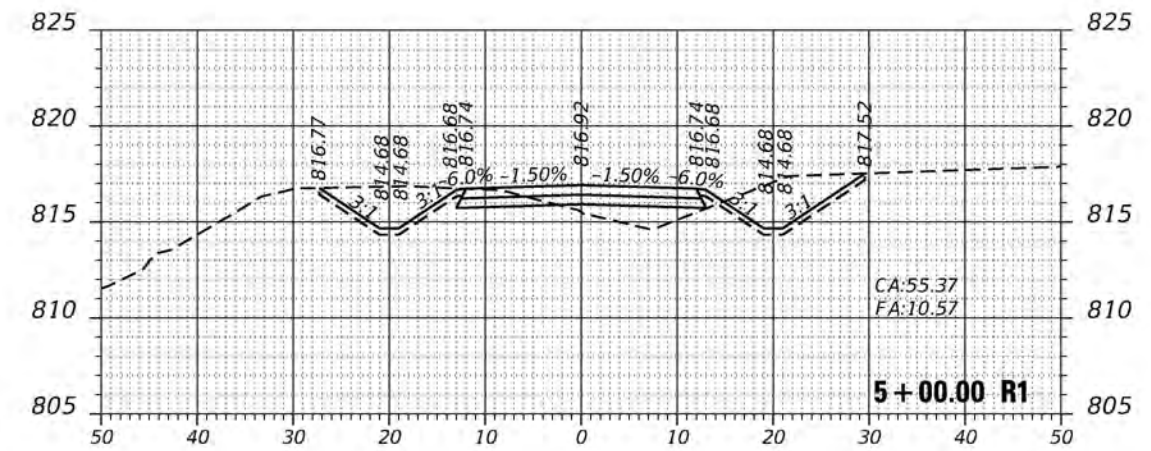
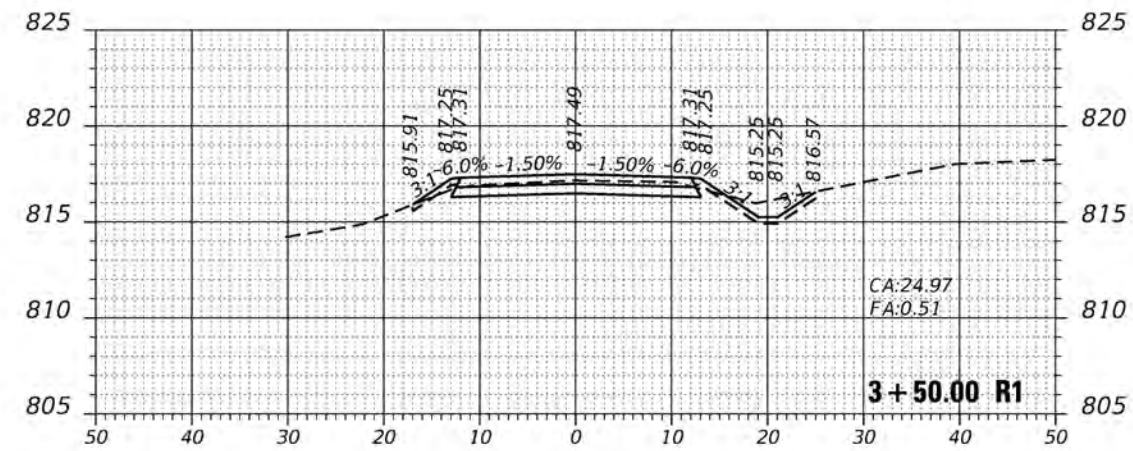


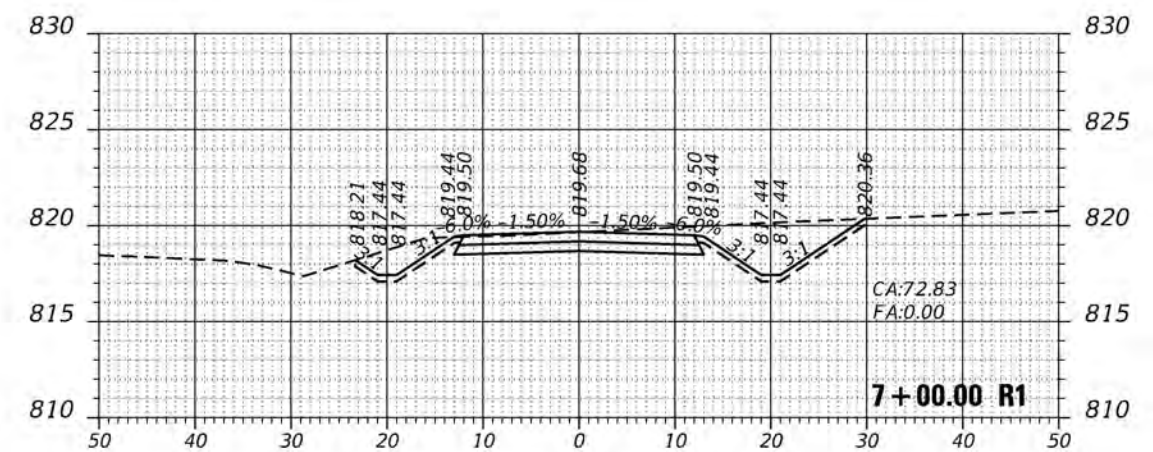
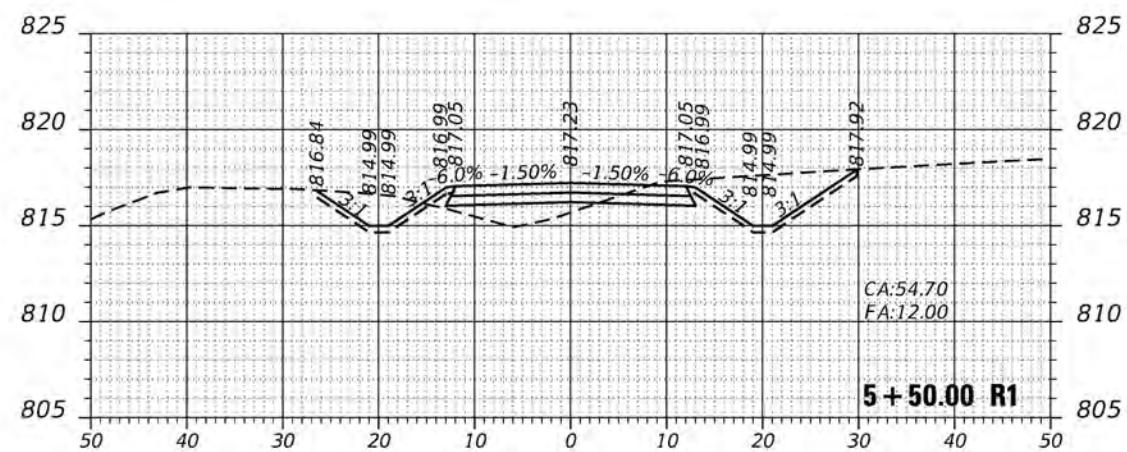
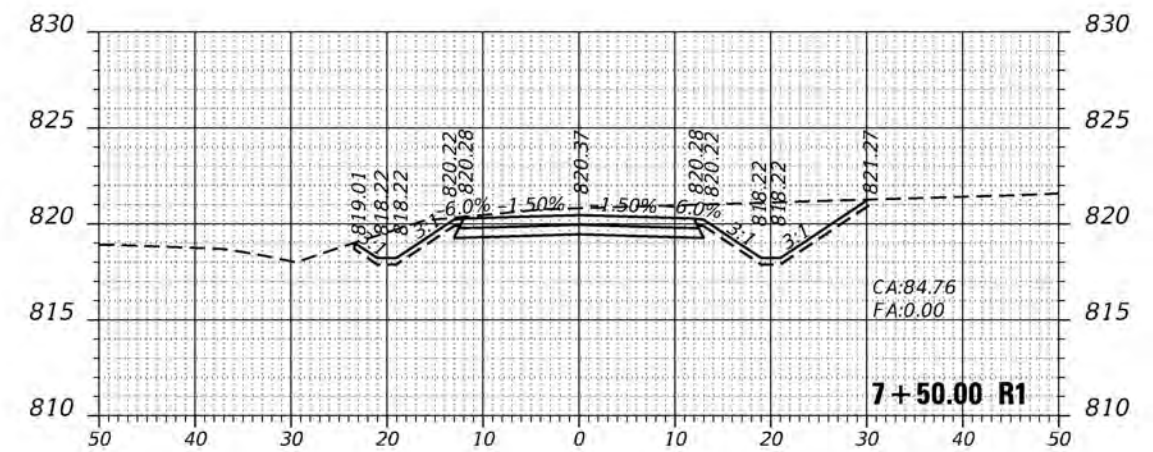
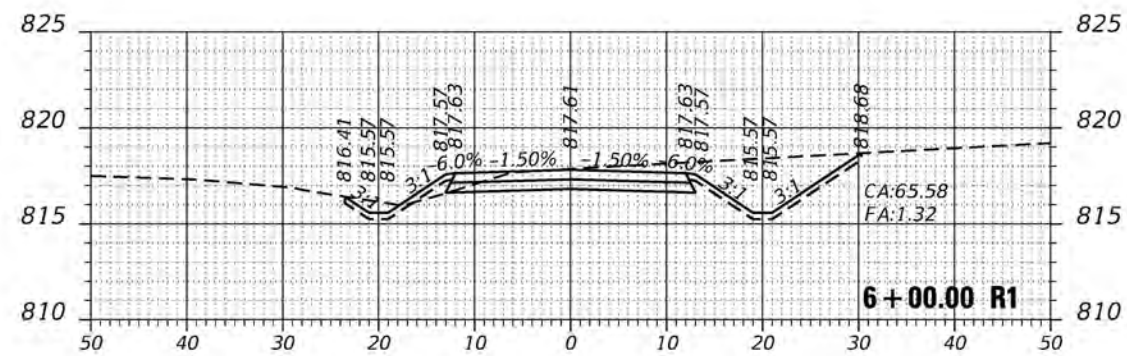
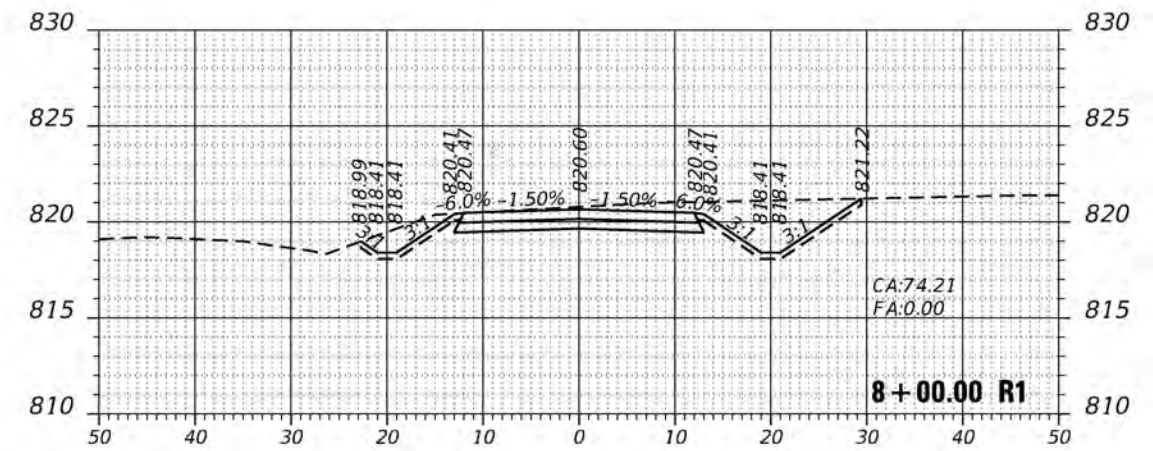
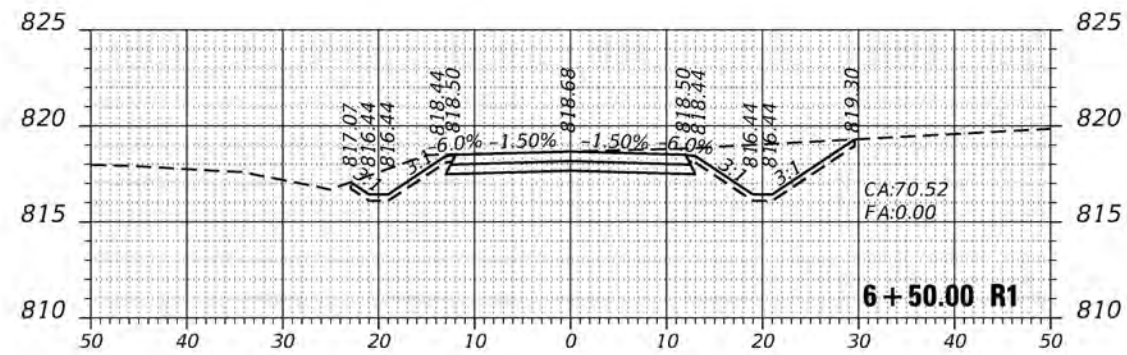
TYPICAL RIPRAP SECTION

NOT TO SCALE

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Landowner				Stream		YELLOW CREEK		Location		LORAN ROAD, STEPHENSEN COUNTY		NOT TO SCALE															
 CHASTAIN & ASSOCIATES, LLC <small>DESIGNER</small> <small>CHICAGO</small> <small>ILLINOIS</small> <small>TEL: 773.422.8544</small> <small>FAX: 773.422.8544</small> <small>WWW.CHASTAIN-LLC.COM</small>	USER NAME = jmadara		DESIGNED = TWO		REVISED =		STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		LORAN ROAD (FLORENCE TOWNSHIP) STREAM BANK STABILIZATION STONE TOE PROTECTION		F.A.S. RTE.		SECTION		COUNTY		TOTAL SHEETS		SHEET NO.								
			DRAWN = JDM		REVISED =						-		-		STEPHENSON		13		9								
	PLOT SCALE =		CHECKED = TWO		REVISED =										CONTRACT NO.												
	PLOT DATE = 10/16/2020		DATE = 10/06/2020		REVISED =																						
										SCALE:		SHEET		OF		SHEETS		STA.		TO		STA.		ILLINOIS		FED. AID PROJECT	





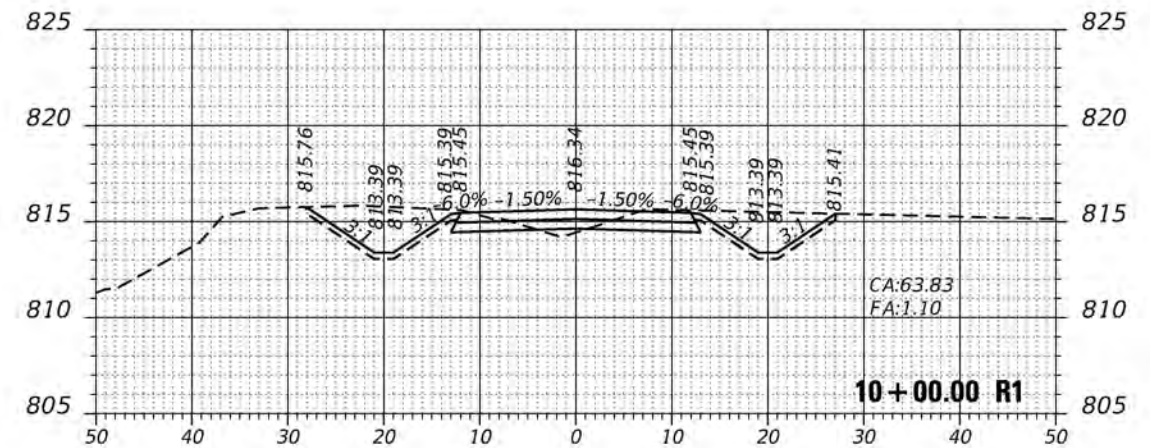
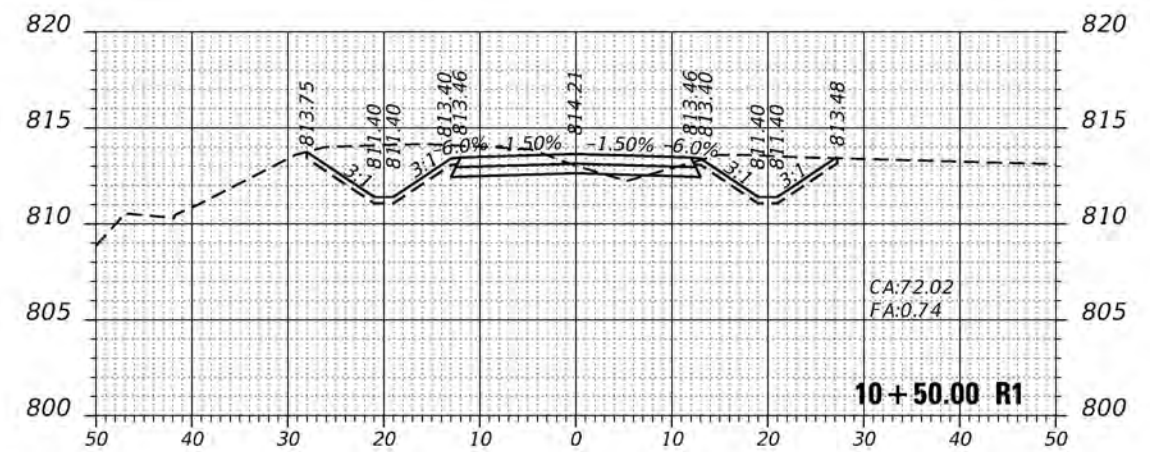
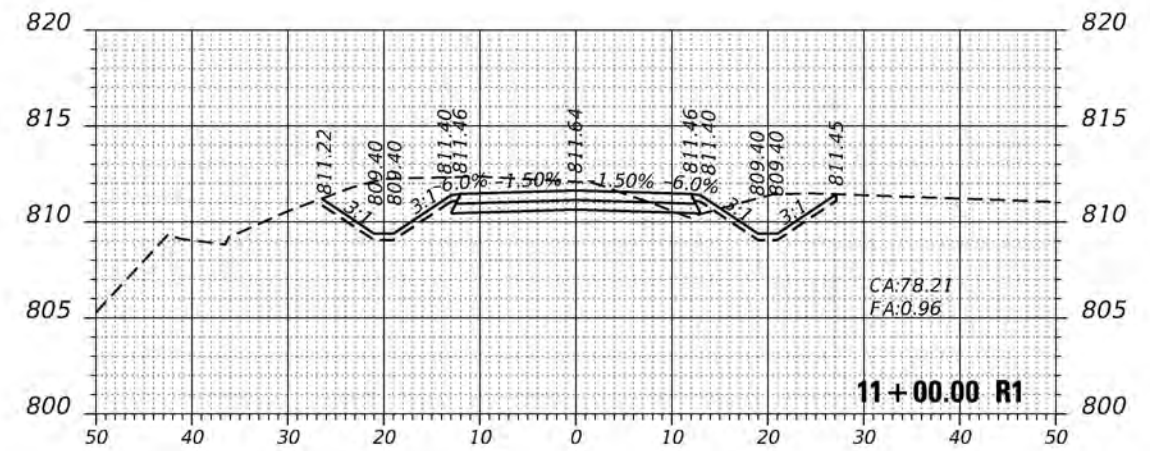
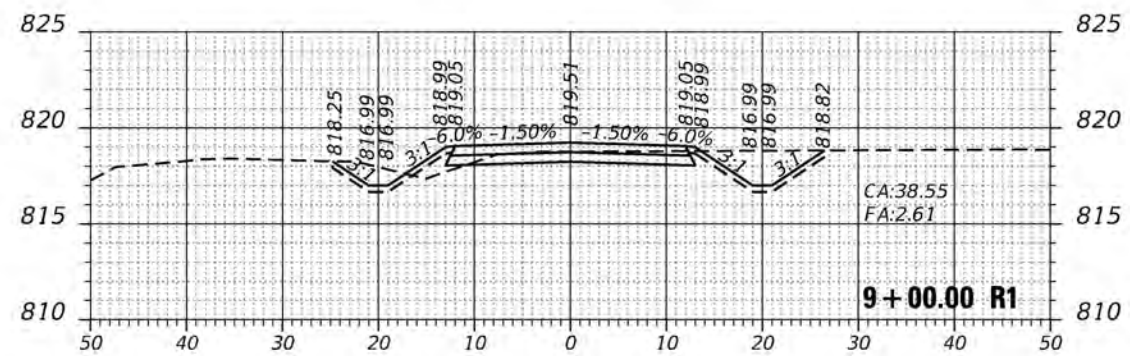
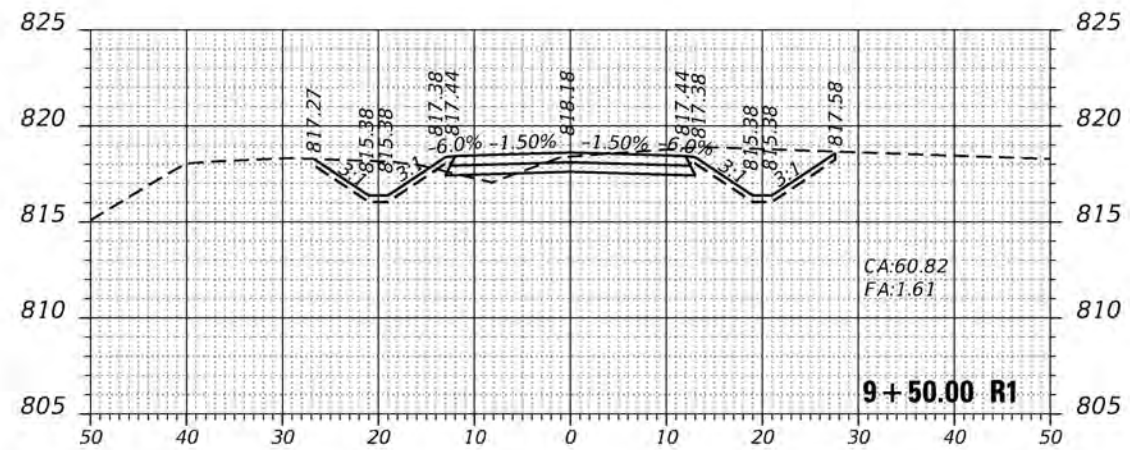
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PLOT DATE = 10/15/2020	DATE = 10/06/2020	REVISED =

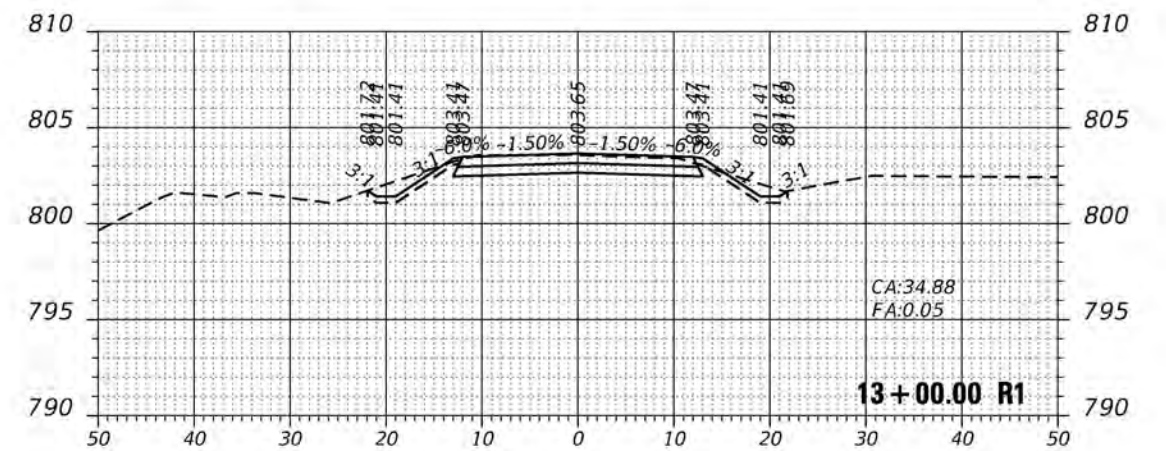
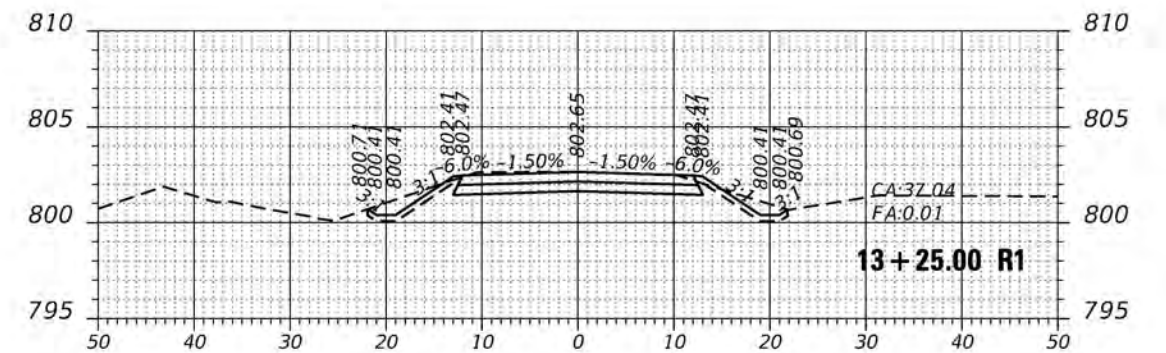
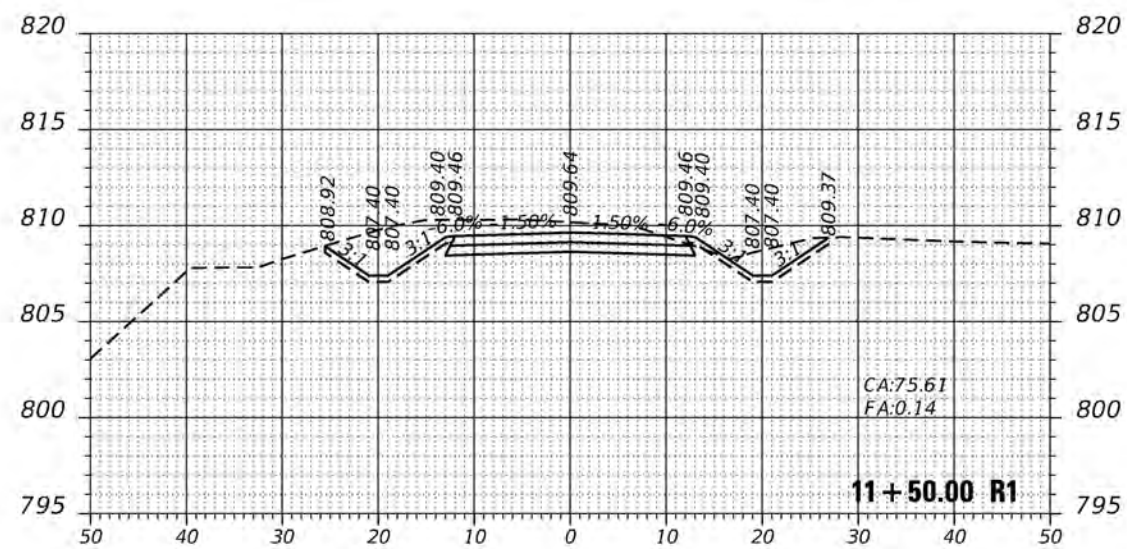
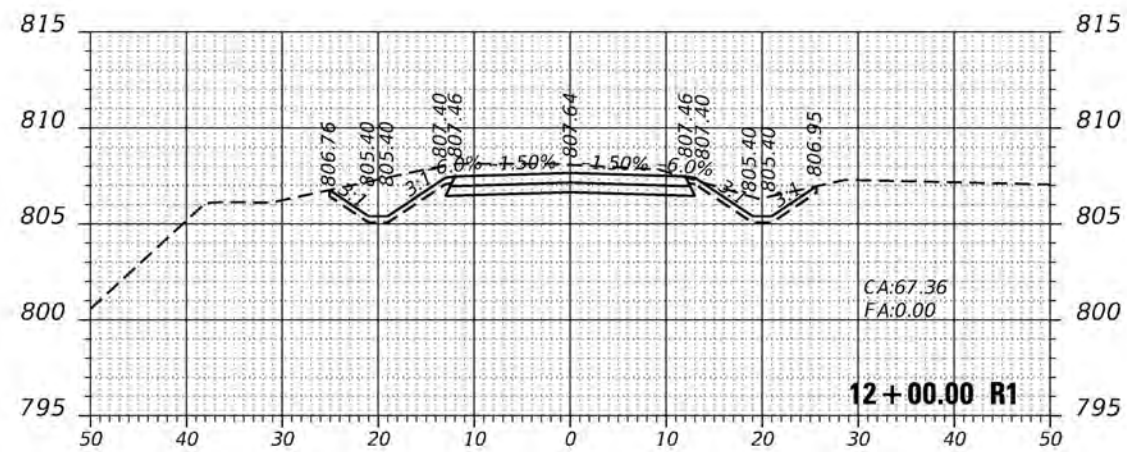
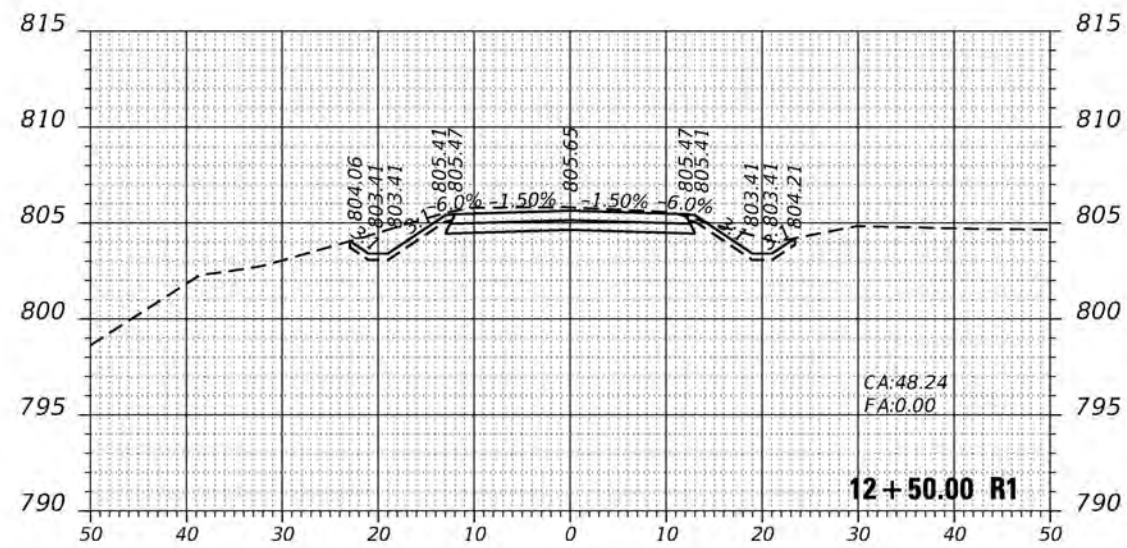
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LORAN ROAD (FLORENCE TOWNSHIP)
CROSS SECTIONS

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	11
CONTRACT NO.				
ILLINOIS		FED. AID PROJECT		





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USER NAME	jmadara	DESIGNED	TWO	REVISED	
DRAWN	JDM	REVISOR		REVISED	
PLOT SCALE		CHECKED	TWO	REVISED	
PLOT DATE	10/15/2020	DATE	10/06/2020	REVISED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LORAN ROAD (FLORENCE TOWNSHIP)
CROSS SECTIONS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		STEPHENSON	13	13
		CONTRACT NO.		
		ILLINOIS	FED. AID PROJECT	

APPENDIX C

Permits



REPLY TO
ATTENTION OF

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

January 22, 2021

Regulatory Division

SUBJECT: CEMVR-RD-2020-1784

William Murphy
Stephenson County Highway Department
6228 W. Prairie Road
Shannon, Illinois 61078

Dear Mr. Murphy:

Our office has reviewed your application received November 18, 2020, concerning the proposed streambank stabilization project on an unnamed tributary located in Section 34, Township 27 North, Range 7 East, Stephenson County, Illinois.

Your project meets the criteria specified under CEMVR-OD-P-2020-0691 (Regional Permit 16), if the work is done in accordance with the General Conditions included in the permit. The Corps has also made a determination of no effect on federally threatened and endangered species or critical habitat. The Illinois Environmental Protection Agency (IEPA) has also issued Section 401 Water Quality Certification with conditions for this nationwide permit. Please note these additional conditions included in the Fact Sheet. The decision regarding this action is based on information found in the administrative record, which documents the District's decision-making process, the basis for the decision, and the final decision.

This verification is valid until March 18, 2022, unless the nationwide permit is modified, reissued, or revoked. It is your responsibility to remain informed of changes to the nationwide permit program. We will issue a public notice announcing any changes if and when they occur. Furthermore, if you commence or are under contract to commence this activity before the date the nationwide permit is modified or revoked, you will have twelve months from that date to complete your activity under the present terms and conditions of this nationwide permit. If the project plans change, you should contact our office for another determination.

This authorization does not eliminate the requirement that you must still acquire other applicable Federal, state, and local permits. If you have not already coordinated your project with the Illinois Department of Natural Resources – Offices of Water Resources, please contact them at 217/782-3863 to determine if a floodplain development permit is required for your project.

You may contact the IEPA Facility Evaluation Unit at 217/782-3362 to determine whether additional authorizations are required from the IEPA. Please send any electronic correspondence to Epa.401.docs@illinois.gov.


Please notify this office prior to starting and completion of work. You are required to complete and return the enclosed "Complete Work Certification" upon completion of your project. A representative of this office will make periodic inspections of the work.

You may contact the IEPA Facility Evaluation Unit at 217/782-3362 to determine whether additional authorizations are required from the IEPA. Please send any electronic correspondence to Epa.401.docs@illinois.gov.

Please notify this office prior to starting and completion of work. You are required to complete and return the enclosed "Complete Work Certification" upon completion of your project. A representative of this office will make periodic inspections of the work.

Should you have any questions, please contact our Regulatory Division by letter, or telephone Ms. Samantha Chavez at 309/794-5104 or email at samantha.j.chavez@usace.army.mil.

Sincerely,

 Digitally signed by
James C. Kelley Jr.
Date: 2021.01.22
11:35:45 -06'00'

for Trevor Popkin
Chief, Eastern Branch
Regulatory Division

Copies Furnished:

w/o enclosures:

Mr. William Milner, P.E.
Section Chief - Downstate Regulatory Programs
Illinois Department of Natural Resources
Office of Water Resources
1 Natural Resources Way
Springfield, Illinois 62702
bill.milner@illinois.gov

Mr. Darin LeCrone, P.E.
Manager, Permit Section, 15
Division of Water Pollution Control
Illinois Environmental Protection Agency
1021 North Grand Avenue East
PO Box 19276
Springfield, Illinois 62794-9276
darin.lecrone@Illinois.gov

COMPLETED WORK CERTIFICATION

Permit Number: CEMVR-RD-2020-1784

Name of Permittee: Stephenson County Highway Department

County/State: Stephenson / Illinois

Date of Issuance: January 22, 2021

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Engineer District, Rock Island
ATTN: Regulatory Division
Clock Tower Building
Post Office Box 2004
Rock Island, Illinois 61204-2004

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above reference permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

SC

FEMA-R5-Environmental

From: Milner, Bill <Bill.Milner@Illinois.gov>
Sent: Wednesday, February 17, 2021 10:05 AM
To: FEMA-R5-Environmental
Cc: Sucoe, Marilyn; Reimann, Ashley
Subject: RE: New FEMA Project - NEPA Scoping Document - Stephenson County
Attachments: Stephenson CountyHighwayDept_SW6-SW9.pdf

Good Morning,

IDNR/OWR reviewed the project, submitted by Olson Ecological Solutions, on behalf of the Stephenson County Highway Department, and determined that the proposed road relocation and bank stabilization met the conditions of Statewide Permits #6 and #9. Please see the attached Statewide Permit notification letter.

Let me know if you have any other questions.

William Milner Jr, P.E., CFM
Section Chief, Downstate Regulatory Program
Illinois Department of Natural Resources
Office of Water Resources
One Natural Resources Way
Springfield, IL 62702-1271
(217) 524-1458
bill.milner@illinois.gov

From: FEMA-R5-Environmental <fema-r5-environmental@fema.dhs.gov>
Sent: Friday, February 12, 2021 3:02 PM
To: Milner, Bill <Bill.Milner@Illinois.gov>
Cc: Sucoe, Marilyn <Marilyn.Sucoe@illinois.gov>; Reimann, Ashley <ashley.reimann@fema.dhs.gov>
Subject: [External] New FEMA Project - NEPA Scoping Document - Stephenson County

Please see attached.

Region V Environmental and Historic Preservation
Office: 312.408.5549 | fema-r5-environmental@fema.dhs.gov

FEMA Region V, Regional Environmental Officer
536 South Clark Street, 6th Floor
Chicago, IL 60605

Federal Emergency Management Agency
[fema.gov](https://www.fema.gov)



State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

February 4, 2021

STEPHENSON COUNTY HIGHWAY DEPARTMENT
APPLICATION FOR PERMIT NO. S20200341

BANK STABILIZATION/ROADWAY
YELLOW CREEK

STATEWIDE PERMIT NOTIFICATION LETTER

Thank you for your recent submittal regarding the project as shown on the enclosed copy of your submittal. Based on the information you have submitted, it appears that the project qualifies for approval under the Illinois Department of Natural Resources, Office of Water Resources statewide permit program. The applicable statewide permit(s) (as noted below) can be obtained on our website at: <http://www.dnr.illinois.gov/WaterResources/Pages/PermitsStatewideRegionalGeneral.aspx>.

Please review this material to confirm whether your work will meet the terms and conditions of the permit(s). If any of the conditions would not be met, please inform us of the differences and we will continue with the formal permit process.

If we do not hear from you within thirty (30) days, we will assume it is your intention to comply with the conditions of the statewide permit(s).

This letter should not be construed as a release from any other federal, state or local requirements. If you have not already done so, you should contact the local regulatory agency to ascertain applicable local floodplain construction requirements.

If you have any questions, feel free to contact the person noted below at 217/524-1458.

☐ Jesse Tinch
☐ William Lavelle

☐ Kristian Peterson
☒ William Milner

BY: William B. Milner

Enclosure

cc: Olson Ecological Solutions, LLC (Rebecca Olson)
Stephenson County Zoning (Terry Groves)

Statewide Permit(s):

- | | |
|--|--|
| <input type="checkbox"/> SW 1 - Fringe Construction | <input type="checkbox"/> SW 8 - Underground Crossings |
| <input type="checkbox"/> SW 2 - Rural Bridges | <input checked="" type="checkbox"/> SW 9 - Shoreline/Streambank Protection |
| <input type="checkbox"/> SW 3 - Barge Fleeting Facilities | <input type="checkbox"/> SW 10 - Additions/Accessory Structures |
| <input type="checkbox"/> SW 4 - Aerial Utility Crossings | <input type="checkbox"/> SW 11 - Dredging |
| <input type="checkbox"/> SW 5 - Minor Boat Docks | <input type="checkbox"/> SW 12 - Replacement Structures |
| <input checked="" type="checkbox"/> SW 6 - Minor Floodway Construction | <input type="checkbox"/> SW 13 - Temporary Construction |
| <input type="checkbox"/> SW 7 - Outfalls | <input type="checkbox"/> SW 14 - Special Use of Public Water |

APPENDICES D

Agency Consultation



FEMA

January 27, 2021

Tim Prescott, Resource Inventory/GIS Specialist
USDA - NRCS
2118 West Park Court
Champaign, IL 61821

Re: Realignment of Loran Road (Route 261), Florence Township, Stephenson County (DR-4461-IL, PW 887)
42.248974, -89.733089 to 42.2482206, -89.7290874 / T26N R7E S18

Dear Mr. Prescott:

In accordance with the Farmland Protection Policy Act (FPPA) and other legislation, FEMA determined that the captioned project constitutes a federally assisted undertaking, requiring review under FPPA. As a result of severe storms and flooding in the State of Illinois, President Trump signed Disaster Declaration 4461-DR-IL on September 19, 2019. Under this declaration, Florence Township is proposing to relocate a damaged section of Loran Road to mitigate future flooding impacts.

In-kind repairs to Loran Road would not provide a viable long-term solution for repeated flooding at this location. Therefore, FEMA funding will be used to relocate a 1,075-foot section of the roadway approximately 60 feet south of the current location and away from Yellow Creek. The new right-of-way (ROW) will extend approximately 17.5 feet from the relocated roadway's centerline with an estimated disturbance of approximately 1 acre of farmland. Please find attached Farmland Conversion Impact Rating, Form AD-1006. Additionally, embankment protection will occur to the north between Loran Road and Yellow Creek but will occur solely on the stream bank and outside of any land useable for farming. The existing road ROW, classified as farmland of statewide importance, has already been converted for road use and has been removed from consideration. However, FEMA requests your assistance in evaluating potential conversion of prime, unique or important farmland outside of the existing ROW and within the proposed location south of the existing section of Loran Road.

If you have questions, do not hesitate to contact Jack Dapo at 202-717-0219 or jack.dapo@fema.dhs.gov. We would appreciate a response by mail or email from your office within thirty (30) days and thank you for your consideration.

Sincerely,

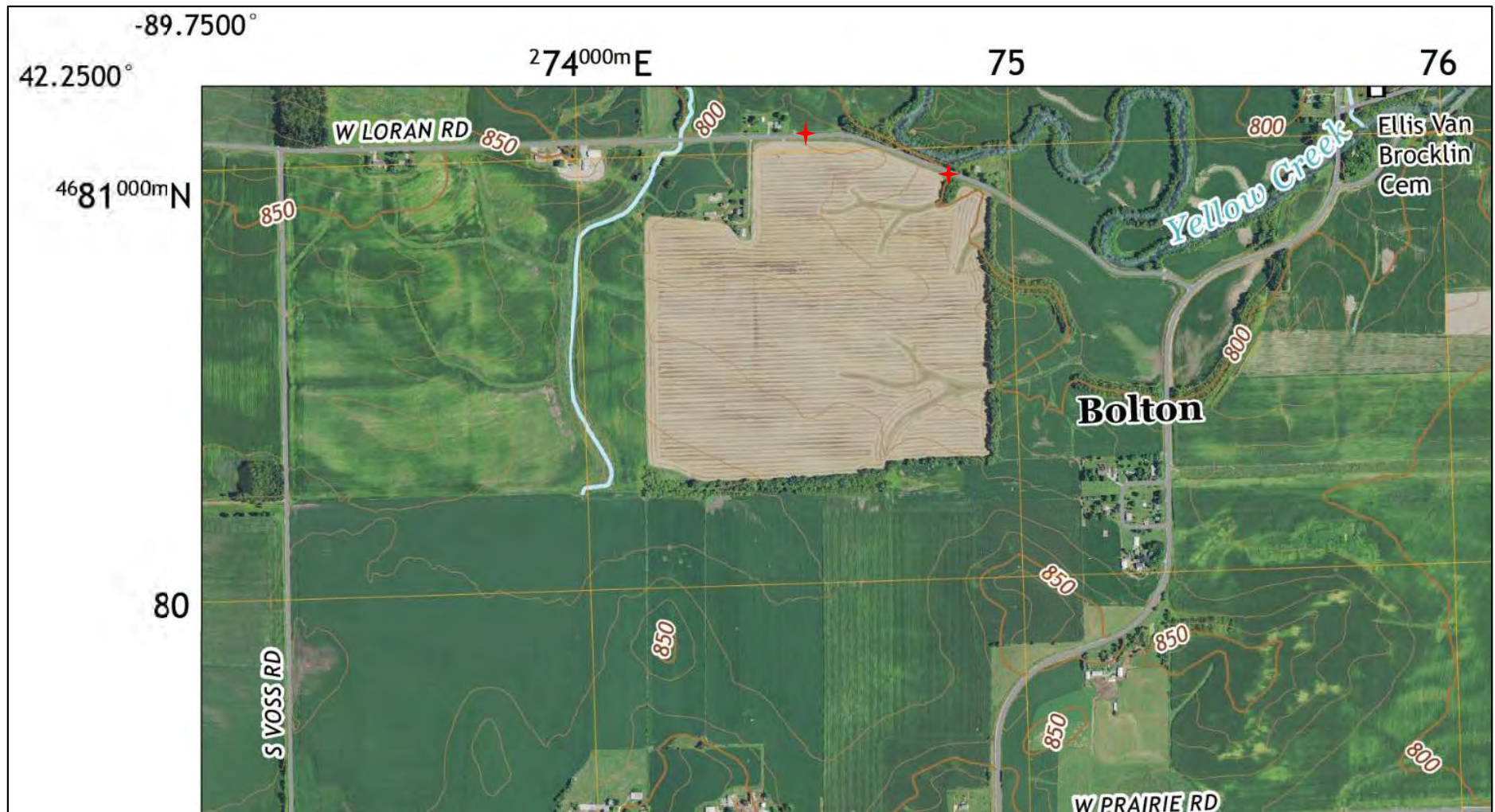
Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure: Maps and Figures, Farmland Conversion Impact Rating, & Farmland Classification

Maps and Photos



Google Earth accessed 1/26/2021. Damaged portion of Loran Road.



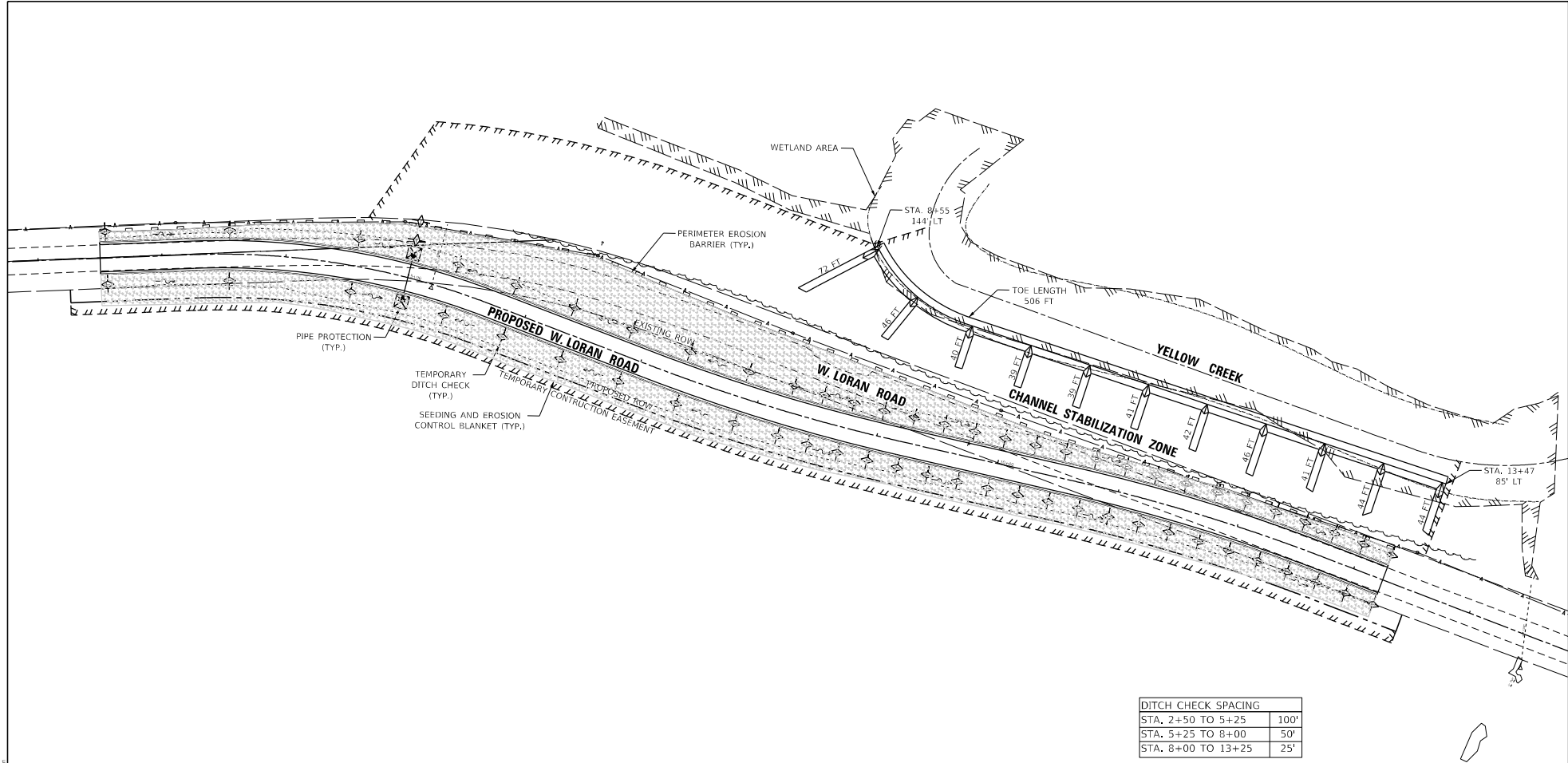
USGS Map “Shannon, IL 2018” 7.5 Minute Series, enlarged to show detail. Red markers show damaged section of Loran Road.



USGS Map “Shannon, IL 2018” 7.5 Minute Series, enlarged to show detail. Red markers show damaged section of Loran Road.

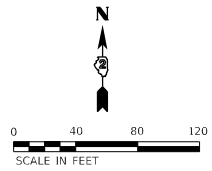


LORAN ROAD RELOCATION



- LEGEND**
- INLET AND PIPE PROTECTION
 - PERIMETER EROSION BARRIER
 - TEMPORARY DITCH CHECK
 - SEEDING AND EROSION CONTROL BLANKET

DITCH CHECK SPACING	
STA. 2+50 TO 5+25	100'
STA. 5+25 TO 8+00	50'
STA. 8+00 TO 13+25	25'



CHASTAIN & ASSOCIATES, LLC
CHASTAIN & ASSOCIATES, LLC
 1001 W. 12TH STREET
 CHICAGO, IL 60604
 (773) 326-1000
 www.chastain.com

USER NAME	DESIGNED	DRAWN	REVISED
JDH	TWO	JDM	-
PLOT SCALE	CHECKED	DATE	REVISED
1" = 40'	TWO	10/06/2020	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LORAN ROAD (FLORENCE TOWNSHIP)
GRADING, EROSION CONTROL, AND RESTORATION

F.A.S. SITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	-	STEPHENSON	13	6
CONTRACT NO.				

SCALE: SHEET OF SHEETS

STA. TO STA.

ILLINOIS FED. AID PROJECT

MODEL: D:\model\Drawings\1001\1001.dwg
 FILE NAME: 1001.dwg
 USER: JDM
 DATE: 10/06/2020
 PLOT DATE: 10/06/2020

PART I (To be completed by Federal Agency)			Date Of Land Evaluation Request January 27, 2021			
Name of Project Loran Road Realignment			Federal Agency Involved FEMA			
Proposed Land Use Transportation			County and State Stephenson, IL			
PART II (To be completed by NRCS)			Date Request Received By NRCS		Person Completing Form:	
			<input type="checkbox"/> <input type="checkbox"/>			
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			1			
B. Total Acres To Be Converted Indirectly			0			
C. Total Acres In Site			1			
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
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	0	0	0
PART VII (To be completed by Federal Agency)						
Relative Value Of Farmland (From Part V)			100	0	0	0
Total Site Assessment (From Part VI above or local site assessment)			160	0	0	0
TOTAL POINTS (Total of above 2 lines)			260	0	0	0
Site Selected:		Date Of Selection		Was A Local Site Assessment Used?		
				YES <input type="checkbox"/> NO <input type="checkbox"/>		
Reason For Selection:						
Name of Federal agency representative completing this form:					Date:	

(See Instructions on reverse side)

Form AD-1006 (03-02)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM *(For Federal Agency)*

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

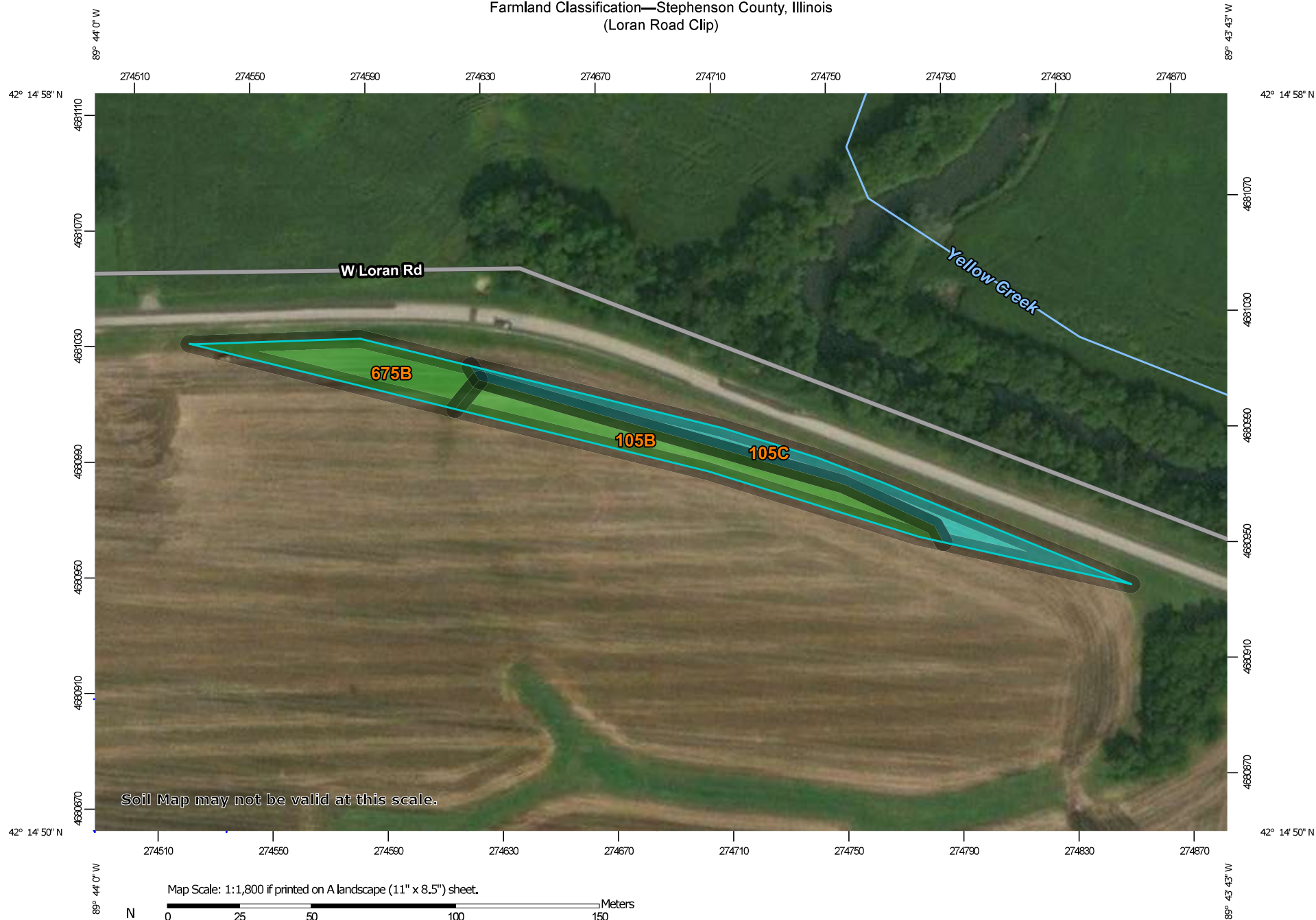
Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$

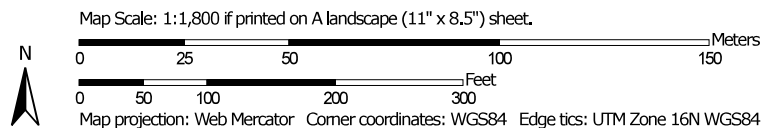
For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

Farmland Classification—Stephenson County, Illinois (Loran Road Clip)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**


Web Soil Survey
National Cooperative Soil Survey

1/27/2021
Page 1 of 5

Farmland Classification—Stephenson County, Illinois
(Loran Road Clip)









MAP LEGEND








Area of Interest (AOI)







 Area of Interest (AOI)








Soils



Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60






































-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

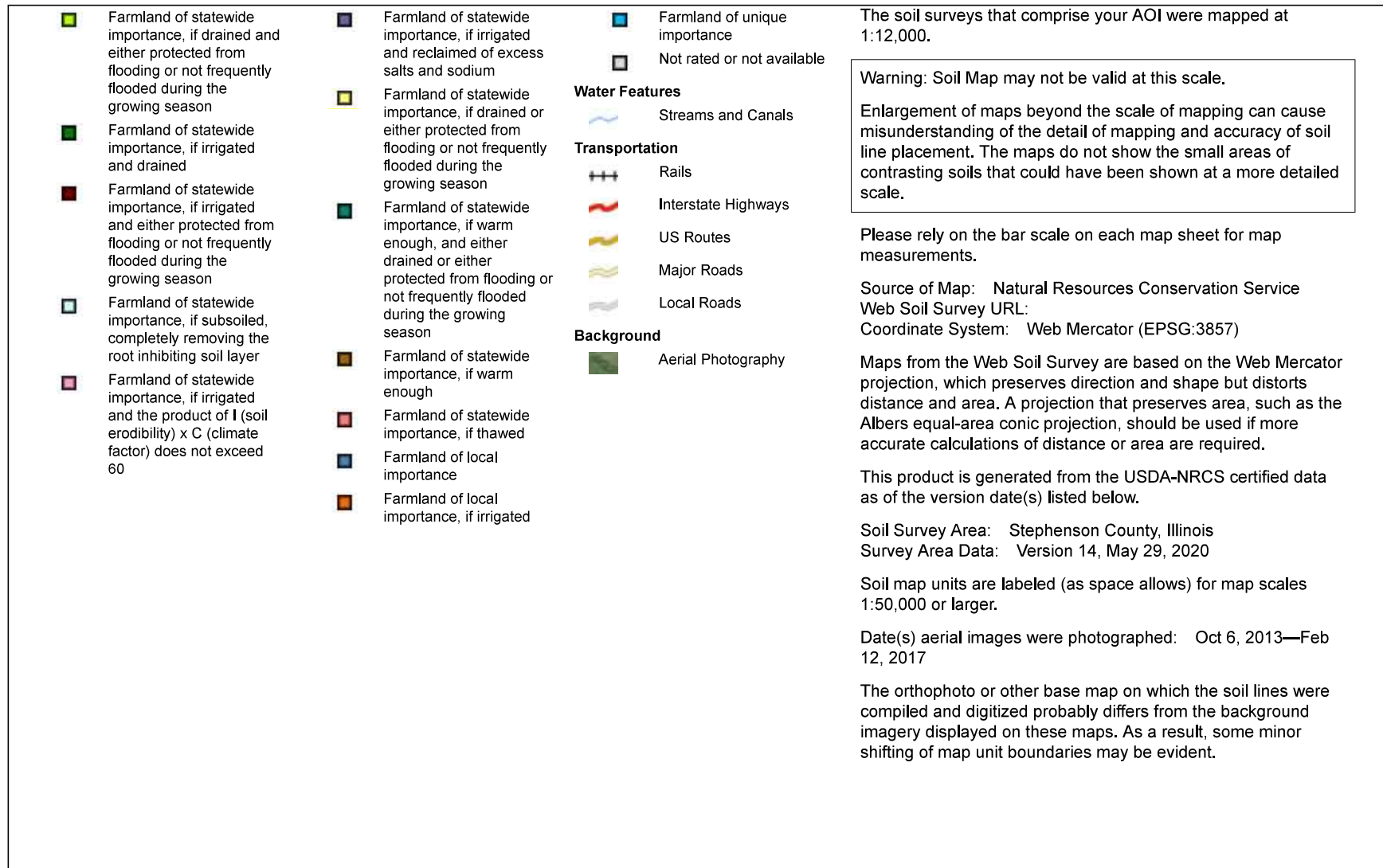
Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Farmland Classification—Stephenson County, Illinois
(Loran Road Clip)

	Prime farmland if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium		Farmland of unique importance		Prime farmland if subsoiled, completely removing the root inhibiting soil layer
	Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if irrigated and drained		Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season		Not rated or not available		Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
	Prime farmland if irrigated and reclaimed of excess salts and sodium		Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season		Soil Rating Points		Prime farmland if irrigated and reclaimed of excess salts and sodium
	Farmland of statewide importance		Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer		Farmland of statewide importance, if warm enough		Not prime farmland		Farmland of statewide importance
	Farmland of statewide importance, if drained		Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60		Farmland of statewide importance, if thawed		Prime farmland if drained		Farmland of statewide importance, if drained
	Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season				Farmland of local importance		Prime farmland if protected from flooding or not frequently flooded during the growing season		Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
	Farmland of statewide importance, if irrigated				Farmland of local importance, if irrigated		Prime farmland if irrigated		Farmland of statewide importance, if irrigated
							Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season		
							Prime farmland if irrigated and drained		
							Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season		

Farmland Classification—Stephenson County, Illinois
(Loran Road Clip)



Farmland Classification

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
105B	Batavia silt loam, 2 to 5 percent slopes	All areas are prime farmland	0.4	38.8%
105C	Batavia silt loam, 5 to 10 percent slopes	Farmland of statewide importance	0.4	34.8%
675B	Greenbush silt loam, 2 to 5 percent slopes	All areas are prime farmland	0.3	26.5%
Totals for Area of Interest			1.0	100.0%

Description

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Rating Options

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower



March 4, 2021

Brian Rennecker, Acting Bureau Chief
IDA, Bureau of Land & Water Resources
State Fairgrounds, P.O. Box 19281
Springfield, IL 62794-9281

Re: Loran Road Realignment
Stephenson County, Illinois

Dear Mr. Rennecker:

Enclosed is Form CPA-106 for the above project. If you have questions, please call me.

Sincerely,

**RONALD
COLLMAN**

Digitally signed by
RONALD COLLMAN
Date: 2021.03.04 12:38:00
-06'00'

RONALD D. COLLMAN
State Soil Scientist

Enclosures

cc:

Jeremy Bowers, Assistant State Conservationist, 3605 N. IL Route 47, Suite C, Morris IL 60450
Josh Franks, District Conservationist, 4833 Owen Center Road, Rockford IL 61101
Jack Dapo, Environmental Protection Specialist, FEMA Region 5

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

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 1/27/21	4. Sheet 1 of 1	
1. Name of Project Loran Road Realignment		5. Federal Agency Involved FEMA		
2. Type of Project Road Realignment		6. County and State Stephenson County IL		
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 1/27/21	2. Person Completing Form Tim Prescott	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size N/A 372		
5. Major Crop(s) Corn, Soybeans, Wheat, Hay	6. Farmable Land in Government Jurisdiction Acres: 29,633,500 % 97		7. Amount of Farmland As Defined in FPPA Acres: 27,695,900 % 91	
8. Name Of Land Evaluation System Used Illinois	9. Name of Local Site Assessment System Statewide		10. Date Land Evaluation Returned by NRCS 3/4/21	
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment		
		Corridor A	Corridor B	Corridor C
A. Total Acres To Be Converted Directly		1		
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor		1		
PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland		1		
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0.000004		
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		35.5		
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)		136 **		
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		
2. Perimeter in Nonurban Use		10		
3. Percent Of Corridor Being Farmed		20		
4. Protection Provided By State And Local Government		20		
5. Size of Present Farm Unit Compared To Average		10		
6. Creation Of Nonfarmable Farmland		25		
7. Availability Of Farm Support Services		5		
8. On-Farm Investments		20		
9. Effects Of Conversion On Farm Support Services		25		
10. Compatibility With Existing Agricultural Use		10		
TOTAL CORRIDOR ASSESSMENT POINTS		160	0	0
PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)		100	136	0
Total Corridor Assessment (From Part VI above or a local site assessment)		160	0	0
TOTAL POINTS (Total of above 2 lines)		260	136	0
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project: 1	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	

5. Reason For Selection:

**** When utilizing the Illinois State Site Assessment Corridor factors, 150 points are assigned to the Land Evaluation portion, and 150 points are assigned to the Site Assessment portion of the LESA System for a maximum score of 300 points.**

Signature of Person Completing this Part:

Tim Prescott

DATE

3/4/21

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

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



Illinois
Department of
Agriculture

JB Pritzker, Governor
Jerry Costello II, Acting Director

Bureau of Land and Water Resources

State Fairgrounds • P.O. Box 19281 • Springfield, IL 62794-9281 • 217/782-6297 • TDD 866/287-2999 • Fax 217/557-0993

March 18, 2021

Mr. Jack Dapo
Federal Emergency Management Agency
U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60606-1521

Re: Florence Township
Loran Road Realignment
Stephenson County, Illinois
Federal Emergency Management Agency

Dear Mr. Dapo:

The Illinois Department of Agriculture (IDOA) has examined the above-referenced project for its potential impact to agricultural land to determine its compliance with the Illinois Farmland Preservation Act (505 ILCS 75/1 et seq.). Our analysis also relates to the federal Farmland Protection Policy Act (7 USC 4201 et seq.) which specifies that federal actions affecting farmland conversion shall be consistent with state and local programs to protect farmland.

The Loran Road is subject to repeated flooding along Yellow Creek. The project involves the relocation of a 1,075-foot section of Loran Road approximately 60 feet south of its current location and away from Yellow Creek. Realignment of the roadway will result in the loss of ± 1.0 acre of agricultural land. The Loran Road realignment has been designed to acquire the least possible amount of right-of-way, and farmland impacts have been mitigated to the greatest possible extent.

Because the roadway improvements have been designed to acquire the least amount of agricultural land, the IDOA has determined that the project complies with the Illinois' Farmland Preservation Act.

Enclosed are two copies of the USDA NRCS Form CPA-106. One copy must be included in the project's environmental assessment; the other is for your files. Should you have any questions or comments, please contact John Lohse of my staff at 217-785-4389.

Sincerely,

Brian Rennecker, Chief
Bureau of Land and Water Resources

BR:JL

Enclosures - 2

cc: Josh Franks, DC, Rockford
Agency project file

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

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request 1/27/21		4. Sheet 1 of 1	
1. Name of Project Loran Road Realignment		5. Federal Agency Involved FEMA			
2. Type of Project Road Realignment		6. County and State Stephenson County IL			
PART II (To be completed by NRCS)		1. Date Request Received by NRCS 1/27/21		2. Person Completing Form Tim Prescott	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated N/A		Average Farm Size 372	
5. Major Crop(s) Corn, Soybeans, Wheat, Hay	6. Farmable Land in Government Jurisdiction Acres: 29,633,500 % 97		7. Amount of Farmland As Defined in FPPA Acres: 27,695,900 % 91		
8. Name Of Land Evaluation System Used Illinois	9. Name of Local Site Assessment System Statewide		10. Date Land Evaluation Returned by NRCS 3/4/21		

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		1			
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres In Corridor		1			
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		1			
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted		0.000004			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value		35.5			
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)		136 **			
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			
2. Perimeter in Nonurban Use		10			
3. Percent Of Corridor Being Farmed		20			
4. Protection Provided By State A					
5. Size of Present Farm Unit Cor					
6. Creation Of Nonfarmable Farm					
7. Availability Of Farm Support S					
8. On-Farm Investments					
9. Effects Of Conversion On Farm					
10. Compatibility With Existing Ag.					
TOTAL CORRIDOR ASSESSMENT POINTS		160	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		150	136	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)		150	46	0	0
TOTAL POINTS (Total of above 2 lines)		300	182	0	0

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

**** When utilizing the Illinois State Site Assessment Corridor factors, 150 points are assigned to the Land Evaluation portion, and 150 points are assigned to the Site Assessment portion of the LESA System for a maximum score of 300 points.**

Signature of Person Completing this Part:
Tim Prescott

DATE
3/4/21

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

**Loran Road Realignment
Stephenson County, Illinois
Federal Highway Administration Funds**

PART VI-B		
Illinois Site Assessment <i>CORRIDOR</i> Factors	Maximum Points	Site A
1. Amount of agricultural land required	30	1
2. Location of the proposed alignment	30	30
3. Acres of off-site agricultural land required for borrow materials	15	15
4. Acres of Prime and Important farmland required for mitigation	15	0
5. Creation of severed farm parcels	10	0
6. Creation of uneconomical remnants	10	0
7. Creation of landlocked parcels	10	0
8. Creation of adverse travel	10	0
9. Relocations of rural residences and farm buildings	10	0
10. Utilization of minimum design standards	10	0
TOTAL SITE ASSESSMENT <i>CORRIDOR</i> POINTS	150	46

PART VII

Relative Value of Farmland	150	136
Total Site Assessment <i>CORRIDOR</i> Factors	150	46
TOTAL ILLINOIS LESA POINTS	300	182

* The Illinois LESA System applies the **225 point cutoff** when evaluating state and federally funded projects. Site or Corridor alternatives receiving **175 or fewer points** have a **low rating** for protection, and it is not necessary to evaluate additional alternatives. Those alternatives receiving **176 to 225 points** are in the **moderate range** for protection. In most cases, alternatives **exceeding the 225 point level should be retained for agricultural use**, and an alternate site should be utilized for the intended project. Selecting the alternative with the lowest total points will usually protect the best farmland located in the most agriculturally viable areas. LESA also serves to maintain and promote the agricultural industry in Illinois.



FEMA

February 16, 2021

MEMORANDUM FOR: File

FROM: Duane Castaldi, Regional Environmental Officer

SUBJECT: Section 7 Endangered Species Act Determination
DR-4461-IL PW 887 – Loran Road Relocation
Florence Township, Stephenson County, Illinois

Duane Castaldi

The Federal Emergency Management Agency (FEMA) is conducting an environmental review for the relocation of a section of Loran Road in Florence Township, Stephenson County, Illinois. The proposed project will include two components. First, the relocation of approximately 1,000 feet of the road approximately 60 feet south of its existing location onto the adjacent agricultural land. Second, the Yellow Creek embankment will need to be stabilized. To access the slope, tree removal is necessary along the riparian corridor of Yellow Creek.

In compliance with Section 7 of the Endangered Species Act, a review of the potential impacts to federally listed endangered, threatened and candidate species has been completed. According to the U.S. Fish and Wildlife Official Species List generated on February 12, 2021, the following federally listed species are known to occur in Stephenson County: Indiana bat (endangered), northern long-eared bat (threatened), and the eastern prairie fringed orchid (threatened).

FEMA has determined that the project will have no effect on the Indiana bat or northern long eared bat provided time of year tree removal restrictions are met. Therefore, FEMA will require the following grant condition:

No trees 3 inches in diameter or greater at breast height may be cut between April 1 and September 30 of any year. If this time restriction cannot be met, the applicant must contact the State and FEMA for additional consultation with USFWS.

In addition, FEMA has determined that there is no suitable habitat in the project area for the eastern prairie fringed orchid.

FEMA Region V e-mailed the project scoping document along with a notice of intent to make a no effect determination based on time of year tree removal restrictions on February 12, 2021. On February 16, 2021, the USFWS responded that they have no objection to the proposed project.

Based on the site description, project activity, and grant conditions, the Proposed Action will have “no effect” on the listed species, habitats or proposed or designated critical habitat.

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1

FEMA Region V, Regional Environmental Officer
536 South Clark Street, 6th Floor
Chicago, IL 60605

Federal Emergency Management Agency
[fema.gov](https://www.fema.gov)





U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

Kraig McPeck, Rock Island Ecological Services Field Office
US Fish and Wildlife Service
1511 47th Ave
Moline, IL 61265

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 / IPAC ID: 03E18000-2021-SLI-0770

Dear Mr. McPeck:

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

With this scoping document, FEMA would like to highlight that this project does include tree removal along the banks of the Yellow Creek. FEMA intends to issue a project condition to require seasonal tree clearance. The condition will read as follows:

No trees 3 inches in diameter or greater at breast height may be cut between April 1 and September 30 of any year. If this time restriction cannot be met, the applicant must contact the State and FEMA for additional consultation with USFWS.

According to the attached Official Species List, the Indiana bat (endangered), Northern Long-eared bat (threatened), and Eastern prairie fringed orchid (threatened) may be found in the project area. FEMA has reviewed available information including the attached Illinois DNR Ecological Compliance Assessment Tool, Official Species List and current site habitat.

With the time of year tree restriction condition, FEMA intends to make a no effect determination under Section 7 for all three species and does not intend to submit an informal consultation request.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. If our preliminary no effect determination is incorrect, please notify us. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Loran Road Relocation,
Florence Township,
Stephenson County,
Illinois
DR 4461 IL
February 12, 2021
Page 2

Sincerely,

A handwritten signature in blue ink, appearing to read "Duane Castaldi". The signature is fluid and cursive, with the first name "Duane" and last name "Castaldi" clearly distinguishable.

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: rockisland@fws.gov



FEMA

February 12, 2021

Environmental Assessment Scoping Document

SECTION ONE: BACKGROUND

1.1 Project Information

FEMA Grant Number:	DR-4461-IL, Project 117416, PW 887-0
Project Title:	Loran Road Relocation
Recipient:	Illinois Emergency Management Agency
Subrecipient:	Florence Township
Project Location:	Florence Township, Stephenson County, Illinois. 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois

1.2 Purpose and Need

The purpose of FEMA's PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the State of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

Aerial photos document that Loran Road has existed along its current alignment since at least 1939. It is thought to have been paved for the first time in 1990. It has remained in place without notable incident until the events of 2019.

The rains and flooding that brought on the disaster declaration of 2019 caused a portion of the channel bank along Yellow Creek and the upslope portion of the Loran Road embankment to fail. This initially caused the north shoulder of the roadway to drop approximately six feet and the roadway to be undermined. The edge of water of Yellow Creek is approximately 70 feet north of the north edge of pavement of Loran Road, and the elevation difference from edge of pavement to top of water is approximately 35 feet. The continued instability of this slope has

since caused approximately one-half of the Loran Road section to fall into Yellow Creek and the failure has not yet settled. The road has been closed to traffic, and travelers who would have used this route to get to Freeport are routed about 1 mile to the south for a total detour route length of about 3 miles. Approximately 1 mile of the detour is not paved.

SECTION TWO: ALTERNATIVE ANALYSIS

The subrecipient is required to provide alternatives to the proposed project and describe the environmental impacts of each alternative as provided below. NEPA requires FEMA to include an evaluation of the No Action alternative, which is the future condition without the project. This section describes the No Action alternative and the Proposed Action, and reviews alternatives that were previously considered but dismissed.

2.1 Alternative 1 – No Action Alternative

Under the No Action alternative, this segment of Loran Road would be abandoned, and this transportation link would remain closed indefinitely. Access to the homes and farmland along this link would use alternative routes. Vehicles using this route are very likely to be trying to get to the nearest city, Freeport, approximately 2 miles to the northeast along Bolton Road. If these travelers cannot access Bolton Road via Loran Road, then the closest intersection on Loran Road is South Voss Road approximately 0.8 miles to the west. South Voss Road is a narrow, unpaved, local rural with a listed current AADT of 25 vehicles per day. South Voss Road provides access to Sabin Church Road approximately 1 mile to the south. An additional mile further on Sabin Church Road, travelers can access West Bolton Road, and then vehicles can turn north on South Bolton Road and travel about 1.25 miles to be back at the Loran Road intersection. This detour more than doubles the trip length.

At the Loran Road site, the continued erosion of the embankment would continue unabated. It is very possible that the collapse would make its way across Loran Road and continue into the farmland to the south. Infrastructure supported by Loran Road, such as the utility connections along the north property line, would have to be relocated and likely rerouted.

2.2 Alternative 2 – Proposed Action

The Proposed Action has two components:

- 1) relocation of a section of Loran Road
- 2) stabilization of the bank of Yellow Creek

The bank stabilization of Yellow Creek would allow for the safe obliteration of the existing section of Loran Road and the restoration of that property as a useful buffer to the Yellow Creek. The project is designed so these two components can proceed on somewhat independent schedules. The benefits for proceeding with each component on its own schedule include reopening the closed road to traffic first, while, other work on the project continues.

Relocation of Loran Road

The first component of the project would relocate a 1,000-foot segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland. This new alignment is generally parallel to the existing alignment through the length of the project. See the attached maps for a graphical depiction of the relocation.

The relocated road would be at a very similar elevation as the existing roadway elevation. However, the relocation would allow for a 4:1 H/V (Horizontal to Vertical) drop to Yellow Creek, as opposed to the 2:1 drop that currently exists. It would also put the roadway outside the currently evident failure circle in the slope, which has a kickout toe at close to the existing bank of Yellow Creek.

The Road Relocation component will occur in the following sequence:

- Equipment is to be staged in the existing right-of-way on the closed portion of Loran Road to the east and to the west of the damaged portion of Loran Road.
- Erosion control measures are to be installed, with specific focus on the expected stockpile areas. The stockpile areas are expected to be at the west end of the site so that primary access at the east end of the site is maintained unobstructed. This project is designed to have a net-zero haul off, so little, if any material will be moved offsite.
- Demolition: The existing length of Loran Road will be obliterated to provide suitable fill for the new roadbed.
- Preliminary earthwork: The proposed length of Loran Road will be stripped and stockpiled for suitable stockpile restoration.
- Final earthwork: The proposed length of Loran Road will be filled and compacted to subgrade. Roadstone will be supplied and installed.
- Roadway finishing: Final drainage infrastructure will be installed. The road will be paved. The shoulders and ditches will be finished and stabilized.

The project is going to be phased in such a way that it will allow the contractor the practicable flexibility to reopen the roadway as expeditiously as possible.

2.2.2 Streambank and Slope Stabilization

The embankment adjacent to Yellow Creek continues to collapse. It will not be possible to adequately stabilize the existing right-of-way of Loran Road until this collapse is halted. A primary part of this operation is to stabilize the bank at the toe of the slope.

The Streambank and Slope Stabilization component will occur in the following sequence:

- Erosion control measures will be installed.
- The trees are to be cleared to allow access to the bank.
- A stabilized construction entrance will be installed between Loran Road and the work area.
- The Stone Toe (Rip Rap) Bank Protection will be installed.

- Any required fill and stabilization will be completed on the upstream bank.
- Temporary erosion control measures will be installed.
- In the appropriate season, temporary erosion control and construction access measures will be removed, and permanent seeding and landscaping will be completed.

The work proposed impacts 506 linear feet of the streambank of Yellow Creek. The protection is placed along the existing bank and does not impact the existing cross-section of the creek. The work proposes the use of a well-graded mix of a clean, stone-dumped riprap toed to the same height as the expected high-water elevation of the creek. This toe will be keyed into the backslope perpendicular to the centerline of the creek.

Once the streambank protection is in place any remaining stockpiles will be graded into the slope. The entire disturbed slope will be covered with topsoil, seeded, and protected with erosion control blanket. A final site inspection would occur in the following Spring to ensure that an adequate growth of vegetated cover is in place.

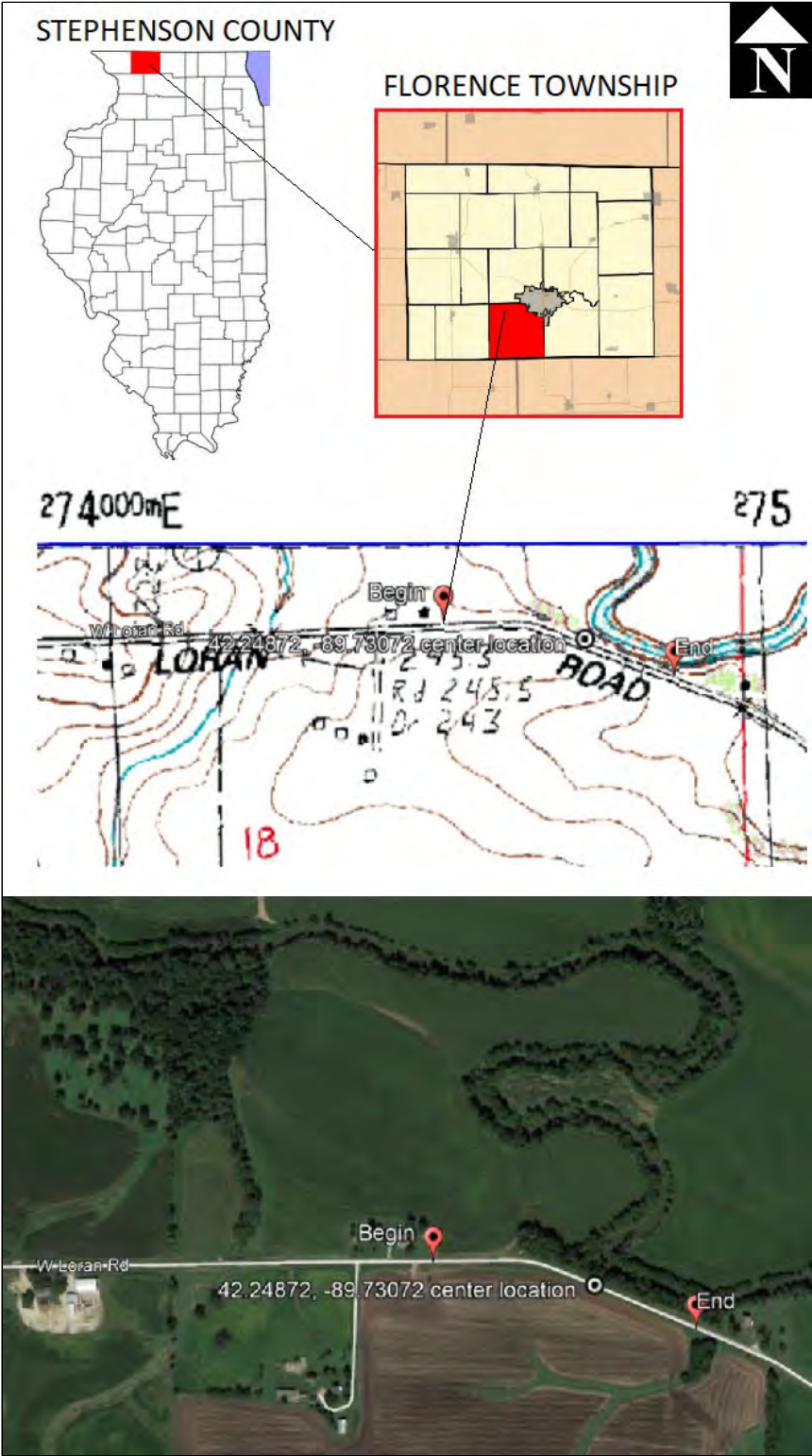
ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

In the fall of 2019, the Stephenson County Highway Department with the help of Willet, Hoffman, and Associates, Inc, of Moline, Illinois, conducted an alternatives analysis and budget estimates for possible actions on this section of roadway. They came up with two additional alternatives, including:

- **Reconstruct the Roadway in Place.** This alternative would require the installation of approximately 100 linear foot of steel sheet-pile wall along the area of failure. The engineers assumed two rows of walers to tie back the wall, with the top row anchored to concrete deadmen and the bottom row anchored to helical soil anchors. The bottom of the wall would be armored with a rip rap toe. This option was estimated to cost \$1.13 million, or three to five times as much as any other option considered. It was eliminated as economically unfeasible.
- **Relocate Loran Road Only.** This alternative is limited to component 1 of the proposed action, the relocation Loran Road, as described in section 2.2.1. However, it does not include the streambank or slope stabilization. The alternative was eliminated from further consideration because alternative does not solve the problem. The road stabilization will not be complete until the bank that supports the road and shoulder are also stabilized. As a part of this option, the community did consider slope stabilization methods that would reduce impacts to the streambank, but ultimately determined these methods of repair would ultimately be undermined by the continued erosion of the streambank.

Section Three: Affected Environment

3.1 Exhibit 1: Project Location



3.1 Exhibit 2: Project Scoping Area

Road re-alignment path displayed identified by dashed red line below.



Preliminary Screening of Assessment Categories

The alternatives listed above are likely to result in impacts governed by the federal laws and executive orders listed below. Checked items will require closer coordination with the appropriate agencies to identify and mitigate potentially significant impacts.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clean Water Act (CWA) | <input type="checkbox"/> Executive Order 13112 – Invasive Species |
| <input type="checkbox"/> Clean Air Act (CAA) | <input checked="" type="checkbox"/> Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments |
| <input checked="" type="checkbox"/> Endangered Species Act (ESA) | <input checked="" type="checkbox"/> Farmland Protection Policy Act (FPPA) |
| <input type="checkbox"/> Executive Order 11988 – Floodplains | <input type="checkbox"/> Migratory Bird Treaty Act (MBTA) |
| <input type="checkbox"/> Executive Order 11990 – Wetlands | <input checked="" type="checkbox"/> National Historic Preservation Act (NHPA) |
| <input type="checkbox"/> Executive Order 12898 – Environmental Justice for Low Income & Minority Populations | |

3.2 Reasonably Foreseeable Future Actions

There are no additional reasonably foreseeable future actions associated with this project. While, there are aerial utilities within the project area but due to the proposed stabilization effort it is not anticipated that these utilities will be moved.

SECTION FOUR: REFERENCES

Loran Road Flood Damage. Cost Estimates. For Stephenson County Highway Department. October 1, 2019. Willett Hofmann & Associates Inc.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Illinois-Iowa Ecological Services Field Office
Illinois & Iowa Ecological Services Field Office
1511 47th Ave
Moline, IL 61265-7022
Phone: (309) 757-5800 Fax: (309) 757-5807

In Reply Refer To:

February 12, 2021

Consultation Code: 03E18000-2021-SLI-0770

Event Code: 03E18000-2021-E-01870

Project Name: Loran Road Relocation and Yellow Creek Bank Stabilization

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service’s Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all wind energy projects, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.) and Migratory Bird Treaty Act (16 U.S.C. 703 et seq), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Illinois-Iowa Ecological Services Field Office

Illinois & Iowa Ecological Services Field Office

1511 47th Ave

Moline, IL 61265-7022

(309) 757-5800

Project Summary

Consultation Code: 03E18000-2021-SLI-0770

Event Code: 03E18000-2021-E-01870

Project Name: Loran Road Relocation and Yellow Creek Bank Stabilization

Project Type: TRANSPORTATION

Project Description: The project includes the relocation of a portion of Loran Road into adjacent farm fields as well as the stabilization of the Yellow Creek embankment. Trees will be removed to access the stream bank and to place the rip rap. Project will be timed so that tree removal will only occur in the Winter.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.248349950000005,-89.72952943803776,14z>



Counties: Stephenson County, Illinois

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [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.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid <i>Platanthera leucophaea</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/601	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Wetlands

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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

RIVERINE

- [R2UBH](#)
-

Applicant:	Federal Emergency Management Agency-Region V	IDNR Project Number:	2109654
Contact:	Jack Dapo	Date:	01/22/2021
Address:	536 S. Clark St., 6'th Floor Chicago, IL 60605	Alternate Number:	FEMA DR-4461-IL, Project 117416
Project:	Florence Township Road Relocation		
Address:	700 feet west of intersection of Loran Road and Bolton Road, Stephenson County		

Description: Road relocation and stream bank stabilization including work in water.

Natural Resource Review Results

This project was submitted for information only. It is not a consultation under Part 1075.

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Yellow Creek Bolton Reach INAI Site
Spike (*Elliptio dilatata*)

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Stephenson

Township, Range, Section:
26N, 7E, 18



IL Department of Natural Resources
Contact
Impact Assessment Section
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
Other

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

William Milner, P.E. Downstate Regulatory Programs Section Chief
Office of Water Resources, Illinois Department of Natural Resources
1 Natural Resources Way
Springfield, IL 62702

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 / CEMVR-RD-2020-1784

Dear Mr. Milner:

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

On January 22, 2021, the Rock Island District confirmed that this project meets Regional Permit 16.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: bill.milner@illinois.gov



February 12, 2021

Environmental Assessment Scoping Document

SECTION ONE: BACKGROUND

1.1 Project Information

FEMA Grant Number:	DR-4461-IL, Project 117416, PW 887-0
Project Title:	Loran Road Relocation
Recipient:	Illinois Emergency Management Agency
Subrecipient:	Florence Township
Project Location:	Florence Township, Stephenson County, Illinois. 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois

1.2 Purpose and Need

The purpose of FEMA's PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the State of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

Aerial photos document that Loran Road has existed along its current alignment since at least 1939. It is thought to have been paved for the first time in 1990. It has remained in place without notable incident until the events of 2019.

The rains and flooding that brought on the disaster declaration of 2019 caused a portion of the channel bank along Yellow Creek and the upslope portion of the Loran Road embankment to fail. This initially caused the north shoulder of the roadway to drop approximately six feet and the roadway to be undermined. The edge of water of Yellow Creek is approximately 70 feet north of the north edge of pavement of Loran Road, and the elevation difference from edge of pavement to top of water is approximately 35 feet. The continued instability of this slope has

since caused approximately one-half of the Loran Road section to fall into Yellow Creek and the failure has not yet settled. The road has been closed to traffic, and travelers who would have used this route to get to Freeport are routed about 1 mile to the south for a total detour route length of about 3 miles. Approximately 1 mile of the detour is not paved.

SECTION TWO: ALTERNATIVE ANALYSIS

The subrecipient is required to provide alternatives to the proposed project and describe the environmental impacts of each alternative as provided below. NEPA requires FEMA to include an evaluation of the No Action alternative, which is the future condition without the project. This section describes the No Action alternative and the Proposed Action, and reviews alternatives that were previously considered but dismissed.

2.1 Alternative 1 – No Action Alternative

Under the No Action alternative, this segment of Loran Road would be abandoned, and this transportation link would remain closed indefinitely. Access to the homes and farmland along this link would use alternative routes. Vehicles using this route are very likely to be trying to get to the nearest city, Freeport, approximately 2 miles to the northeast along Bolton Road. If these travelers cannot access Bolton Road via Loran Road, then the closest intersection on Loran Road is South Voss Road approximately 0.8 miles to the west. South Voss Road is a narrow, unpaved, local rural with a listed current AADT of 25 vehicles per day. South Voss Road provides access to Sabin Church Road approximately 1 mile to the south. An additional mile further on Sabin Church Road, travelers can access West Bolton Road, and then vehicles can turn north on South Bolton Road and travel about 1.25 miles to be back at the Loran Road intersection. This detour more than doubles the trip length.

At the Loran Road site, the continued erosion of the embankment would continue unabated. It is very possible that the collapse would make its way across Loran Road and continue into the farmland to the south. Infrastructure supported by Loran Road, such as the utility connections along the north property line, would have to be relocated and likely rerouted.

2.2 Alternative 2 – Proposed Action

The Proposed Action has two components:

- 1) relocation of a section of Loran Road
- 2) stabilization of the bank of Yellow Creek

The bank stabilization of Yellow Creek would allow for the safe obliteration of the existing section of Loran Road and the restoration of that property as a useful buffer to the Yellow Creek. The project is designed so these two components can proceed on somewhat independent schedules. The benefits for proceeding with each component on its own schedule include reopening the closed road to traffic first, while, other work on the project continues.

Relocation of Loran Road

The first component of the project would relocate a 1,000-foot segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland. This new alignment is generally parallel to the existing alignment through the length of the project. See the attached maps for a graphical depiction of the relocation.

The relocated road would be at a very similar elevation as the existing roadway elevation. However, the relocation would allow for a 4:1 H/V (Horizontal to Vertical) drop to Yellow Creek, as opposed to the 2:1 drop that currently exists. It would also put the roadway outside the currently evident failure circle in the slope, which has a kickout toe at close to the existing bank of Yellow Creek.

The Road Relocation component will occur in the following sequence:

- Equipment is to be staged in the existing right-of-way on the closed portion of Loran Road to the east and to the west of the damaged portion of Loran Road.
- Erosion control measures are to be installed, with specific focus on the expected stockpile areas. The stockpile areas are expected to be at the west end of the site so that primary access at the east end of the site is maintained unobstructed. This project is designed to have a net-zero haul off, so little, if any material will be moved offsite.
- Demolition: The existing length of Loran Road will be obliterated to provide suitable fill for the new roadbed.
- Preliminary earthwork: The proposed length of Loran Road will be stripped and stockpiled for suitable stockpile restoration.
- Final earthwork: The proposed length of Loran Road will be filled and compacted to subgrade. Roadstone will be supplied and installed.
- Roadway finishing: Final drainage infrastructure will be installed. The road will be paved. The shoulders and ditches will be finished and stabilized.

The project is going to be phased in such a way that it will allow the contractor the practicable flexibility to reopen the roadway as expeditiously as possible.

2.2.2 Streambank and Slope Stabilization

The embankment adjacent to Yellow Creek continues to collapse. It will not be possible to adequately stabilize the existing right-of-way of Loran Road until this collapse is halted. A primary part of this operation is to stabilize the bank at the toe of the slope.

The Streambank and Slope Stabilization component will occur in the following sequence:

- Erosion control measures will be installed.
- The trees are to be cleared to allow access to the bank.
- A stabilized construction entrance will be installed between Loran Road and the work area.
- The Stone Toe (Rip Rap) Bank Protection will be installed.

- Any required fill and stabilization will be completed on the upstream bank.
- Temporary erosion control measures will be installed.
- In the appropriate season, temporary erosion control and construction access measures will be removed, and permanent seeding and landscaping will be completed.

The work proposed impacts 506 linear feet of the streambank of Yellow Creek. The protection is placed along the existing bank and does not impact the existing cross-section of the creek. The work proposes the use of a well-graded mix of a clean, stone-dumped riprap toed to the same height as the expected high-water elevation of the creek. This toe will be keyed into the backslope perpendicular to the centerline of the creek.

Once the streambank protection is in place any remaining stockpiles will be graded into the slope. The entire disturbed slope will be covered with topsoil, seeded, and protected with erosion control blanket. A final site inspection would occur in the following Spring to ensure that an adequate growth of vegetated cover is in place.

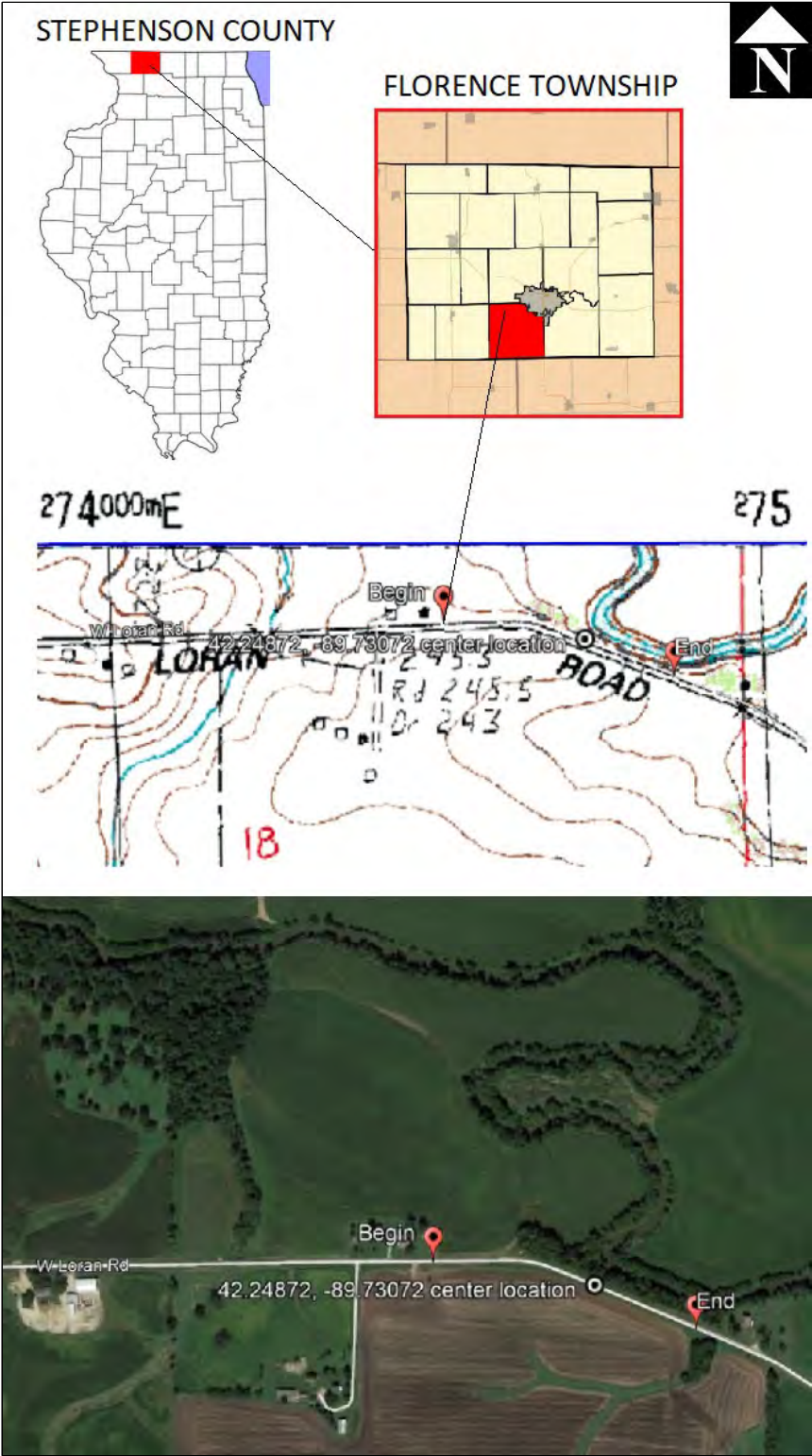
ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

In the fall of 2019, the Stephenson County Highway Department with the help of Willet, Hoffman, and Associates, Inc, of Moline, Illinois, conducted an alternatives analysis and budget estimates for possible actions on this section of roadway. They came up with two additional alternatives, including:

- **Reconstruct the Roadway in Place.** This alternative would require the installation of approximately 100 linear foot of steel sheet-pile wall along the area of failure. The engineers assumed two rows of walers to tie back the wall, with the top row anchored to concrete deadmen and the bottom row anchored to helical soil anchors. The bottom of the wall would be armored with a rip rap toe. This option was estimated to cost \$1.13 million, or three to five times as much as any other option considered. It was eliminated as economically unfeasible.
- **Relocate Loran Road Only.** This alternative is limited to component 1 of the proposed action, the relocation Loran Road, as described in section 2.2.1. However, it does not include the streambank or slope stabilization. The alternative was eliminated from further consideration because alternative does not solve the problem. The road stabilization will not be complete until the bank that supports the road and shoulder are also stabilized. As a part of this option, the community did consider slope stabilization methods that would reduce impacts to the streambank, but ultimately determined these methods of repair would ultimately be undermined by the continued erosion of the streambank.

Section Three: Affected Environment

3.1 Exhibit 1: Project Location



3.1 Exhibit 2: Project Scoping Area

Road re-alignment path displayed identified by dashed red line below.



Preliminary Screening of Assessment Categories

The alternatives listed above are likely to result in impacts governed by the federal laws and executive orders listed below. Checked items will require closer coordination with the appropriate agencies to identify and mitigate potentially significant impacts.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clean Water Act (CWA) | <input type="checkbox"/> Executive Order 13112 – Invasive Species |
| <input type="checkbox"/> Clean Air Act (CAA) | <input checked="" type="checkbox"/> Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments |
| <input checked="" type="checkbox"/> Endangered Species Act (ESA) | <input checked="" type="checkbox"/> Farmland Protection Policy Act (FPPA) |
| <input type="checkbox"/> Executive Order 11988 – Floodplains | <input type="checkbox"/> Migratory Bird Treaty Act (MBTA) |
| <input type="checkbox"/> Executive Order 11990 – Wetlands | <input checked="" type="checkbox"/> National Historic Preservation Act (NHPA) |
| <input type="checkbox"/> Executive Order 12898 – Environmental Justice for Low Income & Minority Populations | |

3.2 Reasonably Foreseeable Future Actions

There are no additional reasonably foreseeable future actions associated with this project. While, there are aerial utilities within the project area but due to the proposed stabilization effort it is not anticipated that these utilities will be moved.

SECTION FOUR: REFERENCES

Loran Road Flood Damage. Cost Estimates. For Stephenson County Highway Department. October 1, 2019. Willett Hofmann & Associates Inc.



FEMA

February 12, 2021

Endangered Plants and Animals
Illinois Department of Natural Resources
1 Natural Resources Way
Springfield, IL 62702

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 / IDNR No.: 2109654

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

FEMA utilized your Ecological Compliance Assessment Tool, which identified two resources in the project area. If any project conditions or best management practices are required, please notify our office.

- Spike
- Yellow Creek Bolton Reach INAI Site

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

A handwritten signature in blue ink that reads "Duane Castaldi".

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: DNR.EndSpec@illinois.gov



FEMA

February 12, 2021

Environmental Assessment Scoping Document

SECTION ONE: BACKGROUND

1.1 Project Information

FEMA Grant Number:	DR-4461-IL, Project 117416, PW 887-0
Project Title:	Loran Road Relocation
Recipient:	Illinois Emergency Management Agency
Subrecipient:	Florence Township
Project Location:	Florence Township, Stephenson County, Illinois. 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois

1.2 Purpose and Need

The purpose of FEMA's PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the State of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

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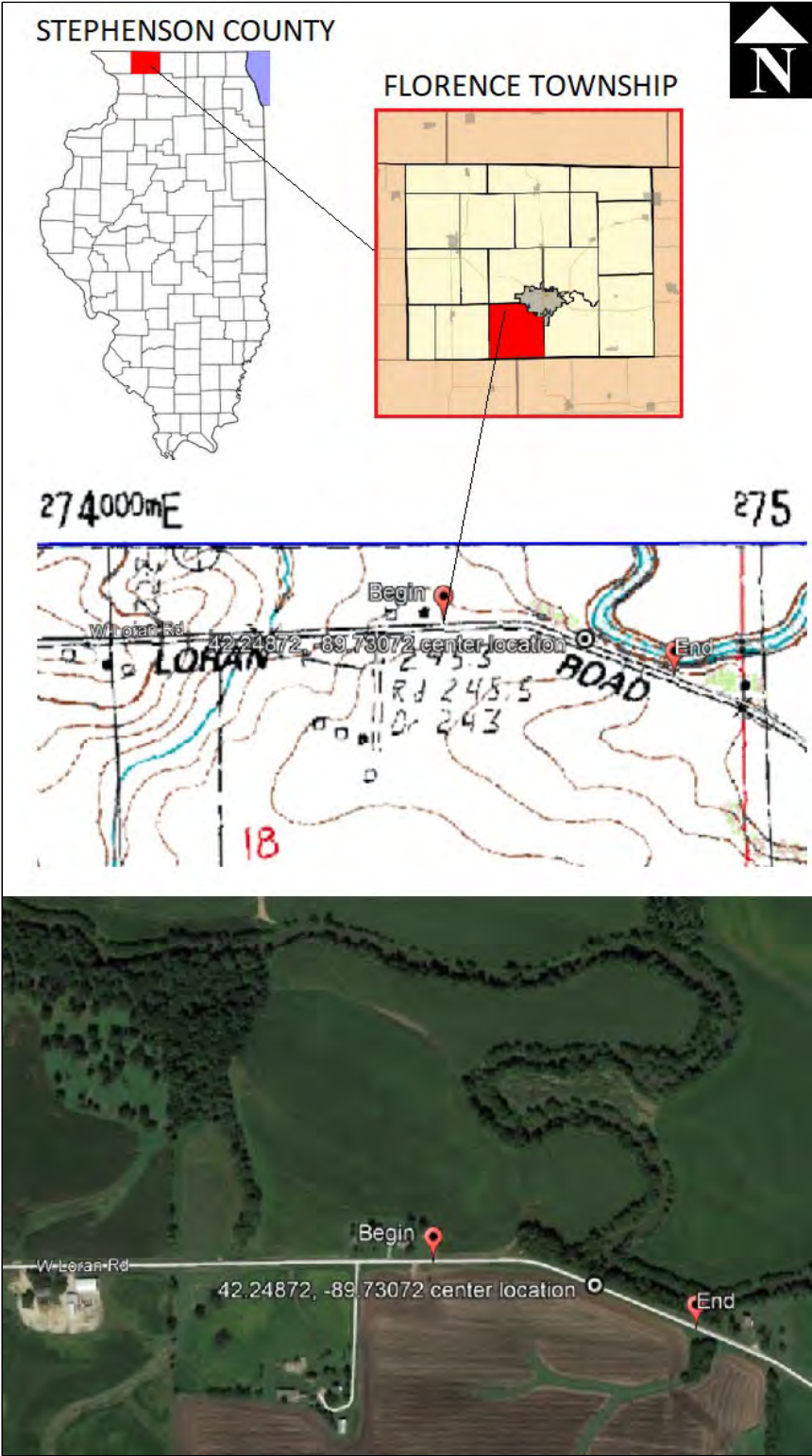
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Section Three: Affected Environment

3.1 Exhibit 1: Project Location



3.1 Exhibit 2: Project Scoping Area

Road re-alignment path displayed identified by dashed red line below.



Preliminary Screening of Assessment Categories

The alternatives listed above are likely to result in impacts governed by the federal laws and executive orders listed below. Checked items will require closer coordination with the appropriate agencies to identify and mitigate potentially significant impacts.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clean Water Act (CWA) | <input type="checkbox"/> Executive Order 13112 – Invasive Species |
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SECTION FOUR: REFERENCES

Loran Road Flood Damage. Cost Estimates. For Stephenson County Highway Department. October 1, 2019. Willett Hofmann & Associates Inc.

FEMA-R5-Environmental

From: Milner, Bill <Bill.Milner@Illinois.gov>
Sent: Wednesday, February 17, 2021 10:05 AM
To: FEMA-R5-Environmental
Cc: Sucoe, Marilyn; Reimann, Ashley
Subject: RE: New FEMA Project - NEPA Scoping Document - Stephenson County
Attachments: Stephenson CountyHighwayDept_SW6-SW9.pdf

Good Morning,

IDNR/OWR reviewed the project, submitted by Olson Ecological Solutions, on behalf of the Stephenson County Highway Department, and determined that the proposed road relocation and bank stabilization met the conditions of Statewide Permits #6 and #9. Please see the attached Statewide Permit notification letter.

Let me know if you have any other questions.

William Milner Jr, P.E., CFM
Section Chief, Downstate Regulatory Program
Illinois Department of Natural Resources
Office of Water Resources
One Natural Resources Way
Springfield, IL 62702-1271
(217) 524-1458
bill.milner@illinois.gov

From: FEMA-R5-Environmental <fema-r5-environmental@fema.dhs.gov>
Sent: Friday, February 12, 2021 3:02 PM
To: Milner, Bill <Bill.Milner@Illinois.gov>
Cc: Sucoe, Marilyn <Marilyn.Sucoe@illinois.gov>; Reimann, Ashley <ashley.reimann@fema.dhs.gov>
Subject: [External] New FEMA Project - NEPA Scoping Document - Stephenson County

Please see attached.

Region V Environmental and Historic Preservation
Office: 312.408.5549 | fema-r5-environmental@fema.dhs.gov

FEMA Region V, Regional Environmental Officer
536 South Clark Street, 6th Floor
Chicago, IL 60605

Federal Emergency Management Agency
[fema.gov](https://www.fema.gov)



State of Illinois - CONFIDENTIALITY NOTICE: The information contained in this communication is confidential, may be attorney-client privileged or attorney work product, may constitute inside information or internal deliberative staff communication, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying of this communication or any part thereof is strictly prohibited and may be unlawful. If you have received this communication in error, please notify the sender immediately by return e-mail and destroy this communication and all copies thereof, including all attachments. Receipt by an unintended recipient does not waive attorney-client privilege, attorney work product privilege, or any other exemption from disclosure.



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

February 4, 2021

STEPHENSON COUNTY HIGHWAY DEPARTMENT
APPLICATION FOR PERMIT NO. S20200341

BANK STABILIZATION/ROADWAY
YELLOW CREEK

STATEWIDE PERMIT NOTIFICATION LETTER

Thank you for your recent submittal regarding the project as shown on the enclosed copy of your submittal. Based on the information you have submitted, it appears that the project qualifies for approval under the Illinois Department of Natural Resources, Office of Water Resources statewide permit program. The applicable statewide permit(s) (as noted below) can be obtained on our website at: <http://www.dnr.illinois.gov/WaterResources/Pages/PermitsStatewideRegionalGeneral.aspx>.

Please review this material to confirm whether your work will meet the terms and conditions of the permit(s). If any of the conditions would not be met, please inform us of the differences and we will continue with the formal permit process.

If we do not hear from you within thirty (30) days, we will assume it is your intention to comply with the conditions of the statewide permit(s).

This letter should not be construed as a release from any other federal, state or local requirements. If you have not already done so, you should contact the local regulatory agency to ascertain applicable local floodplain construction requirements.

If you have any questions, feel free to contact the person noted below at 217/524-1458.

☐ Jesse Tinch
☐ William Lavelle

☐ Kristian Peterson
☒ William Milner

BY: William B. Milner

Enclosure

cc: Olson Ecological Solutions, LLC (Rebecca Olson)
Stephenson County Zoning (Terry Groves)

Statewide Permit(s):

- | | |
|--|--|
| <input type="checkbox"/> SW 1 - Fringe Construction | <input type="checkbox"/> SW 8 - Underground Crossings |
| <input type="checkbox"/> SW 2 - Rural Bridges | <input checked="" type="checkbox"/> SW 9 - Shoreline/Streambank Protection |
| <input type="checkbox"/> SW 3 - Barge Fleeting Facilities | <input type="checkbox"/> SW 10 - Additions/Accessory Structures |
| <input type="checkbox"/> SW 4 - Aerial Utility Crossings | <input type="checkbox"/> SW 11 - Dredging |
| <input type="checkbox"/> SW 5 - Minor Boat Docks | <input type="checkbox"/> SW 12 - Replacement Structures |
| <input checked="" type="checkbox"/> SW 6 - Minor Floodway Construction | <input type="checkbox"/> SW 13 - Temporary Construction |
| <input type="checkbox"/> SW 7 - Outfalls | <input type="checkbox"/> SW 14 - Special Use of Public Water |



U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

Darin LeCrone, P.E., Manager Permit Section, 15
Division Of Water Pollution Control, Illinois Environmental Protection Agency
1021 N Grand Ave E, PO Box 19276
Springfield, IL 62794-9276

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 / CEMVR-RD-2020-1784

Dear Mr. LeCrone:

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

The applicant was notified on December 16, 2020, that because this project will be covered under a Regional Permit no further communication with Illinois EPA is required. FEMA understands that Illinois EPA may have no further comment on this project.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: morgan.holthaus@illinois.gov



February 12, 2021

Environmental Assessment Scoping Document

SECTION ONE: BACKGROUND

1.1 Project Information

FEMA Grant Number:	DR-4461-IL, Project 117416, PW 887-0
Project Title:	Loran Road Relocation
Recipient:	Illinois Emergency Management Agency
Subrecipient:	Florence Township
Project Location:	Florence Township, Stephenson County, Illinois. 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois

1.2 Purpose and Need

The purpose of FEMA's PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the State of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

Aerial photos document that Loran Road has existed along its current alignment since at least 1939. It is thought to have been paved for the first time in 1990. It has remained in place without notable incident until the events of 2019.

The rains and flooding that brought on the disaster declaration of 2019 caused a portion of the channel bank along Yellow Creek and the upslope portion of the Loran Road embankment to fail. This initially caused the north shoulder of the roadway to drop approximately six feet and the roadway to be undermined. The edge of water of Yellow Creek is approximately 70 feet north of the north edge of pavement of Loran Road, and the elevation difference from edge of pavement to top of water is approximately 35 feet. The continued instability of this slope has

since caused approximately one-half of the Loran Road section to fall into Yellow Creek and the failure has not yet settled. The road has been closed to traffic, and travelers who would have used this route to get to Freeport are routed about 1 mile to the south for a total detour route length of about 3 miles. Approximately 1 mile of the detour is not paved.

SECTION TWO: ALTERNATIVE ANALYSIS

The subrecipient is required to provide alternatives to the proposed project and describe the environmental impacts of each alternative as provided below. NEPA requires FEMA to include an evaluation of the No Action alternative, which is the future condition without the project. This section describes the No Action alternative and the Proposed Action, and reviews alternatives that were previously considered but dismissed.

2.1 Alternative 1 – No Action Alternative

Under the No Action alternative, this segment of Loran Road would be abandoned, and this transportation link would remain closed indefinitely. Access to the homes and farmland along this link would use alternative routes. Vehicles using this route are very likely to be trying to get to the nearest city, Freeport, approximately 2 miles to the northeast along Bolton Road. If these travelers cannot access Bolton Road via Loran Road, then the closest intersection on Loran Road is South Voss Road approximately 0.8 miles to the west. South Voss Road is a narrow, unpaved, local rural with a listed current AADT of 25 vehicles per day. South Voss Road provides access to Sabin Church Road approximately 1 mile to the south. An additional mile further on Sabin Church Road, travelers can access West Bolton Road, and then vehicles can turn north on South Bolton Road and travel about 1.25 miles to be back at the Loran Road intersection. This detour more than doubles the trip length.

At the Loran Road site, the continued erosion of the embankment would continue unabated. It is very possible that the collapse would make its way across Loran Road and continue into the farmland to the south. Infrastructure supported by Loran Road, such as the utility connections along the north property line, would have to be relocated and likely rerouted.

2.2 Alternative 2 – Proposed Action

The Proposed Action has two components:

- 1) relocation of a section of Loran Road
- 2) stabilization of the bank of Yellow Creek

The bank stabilization of Yellow Creek would allow for the safe obliteration of the existing section of Loran Road and the restoration of that property as a useful buffer to the Yellow Creek. The project is designed so these two components can proceed on somewhat independent schedules. The benefits for proceeding with each component on its own schedule include reopening the closed road to traffic first, while, other work on the project continues.

Relocation of Loran Road

The first component of the project would relocate a 1,000-foot segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland. This new alignment is generally parallel to the existing alignment through the length of the project. See the attached maps for a graphical depiction of the relocation.

The relocated road would be at a very similar elevation as the existing roadway elevation. However, the relocation would allow for a 4:1 H/V (Horizontal to Vertical) drop to Yellow Creek, as opposed to the 2:1 drop that currently exists. It would also put the roadway outside the currently evident failure circle in the slope, which has a kickout toe at close to the existing bank of Yellow Creek.

The Road Relocation component will occur in the following sequence:

- Equipment is to be staged in the existing right-of-way on the closed portion of Loran Road to the east and to the west of the damaged portion of Loran Road.
- Erosion control measures are to be installed, with specific focus on the expected stockpile areas. The stockpile areas are expected to be at the west end of the site so that primary access at the east end of the site is maintained unobstructed. This project is designed to have a net-zero haul off, so little, if any material will be moved offsite.
- Demolition: The existing length of Loran Road will be obliterated to provide suitable fill for the new roadbed.
- Preliminary earthwork: The proposed length of Loran Road will be stripped and stockpiled for suitable stockpile restoration.
- Final earthwork: The proposed length of Loran Road will be filled and compacted to subgrade. Roadstone will be supplied and installed.
- Roadway finishing: Final drainage infrastructure will be installed. The road will be paved. The shoulders and ditches will be finished and stabilized.

The project is going to be phased in such a way that it will allow the contractor the practicable flexibility to reopen the roadway as expeditiously as possible.

2.2.2 Streambank and Slope Stabilization

The embankment adjacent to Yellow Creek continues to collapse. It will not be possible to adequately stabilize the existing right-of-way of Loran Road until this collapse is halted. A primary part of this operation is to stabilize the bank at the toe of the slope.

The Streambank and Slope Stabilization component will occur in the following sequence:

- Erosion control measures will be installed.
- The trees are to be cleared to allow access to the bank.
- A stabilized construction entrance will be installed between Loran Road and the work area.
- The Stone Toe (Rip Rap) Bank Protection will be installed.

- Any required fill and stabilization will be completed on the upstream bank.
- Temporary erosion control measures will be installed.
- In the appropriate season, temporary erosion control and construction access measures will be removed, and permanent seeding and landscaping will be completed.

The work proposed impacts 506 linear feet of the streambank of Yellow Creek. The protection is placed along the existing bank and does not impact the existing cross-section of the creek. The work proposes the use of a well-graded mix of a clean, stone-dumped riprap toed to the same height as the expected high-water elevation of the creek. This toe will be keyed into the backslope perpendicular to the centerline of the creek.

Once the streambank protection is in place any remaining stockpiles will be graded into the slope. The entire disturbed slope will be covered with topsoil, seeded, and protected with erosion control blanket. A final site inspection would occur in the following Spring to ensure that an adequate growth of vegetated cover is in place.

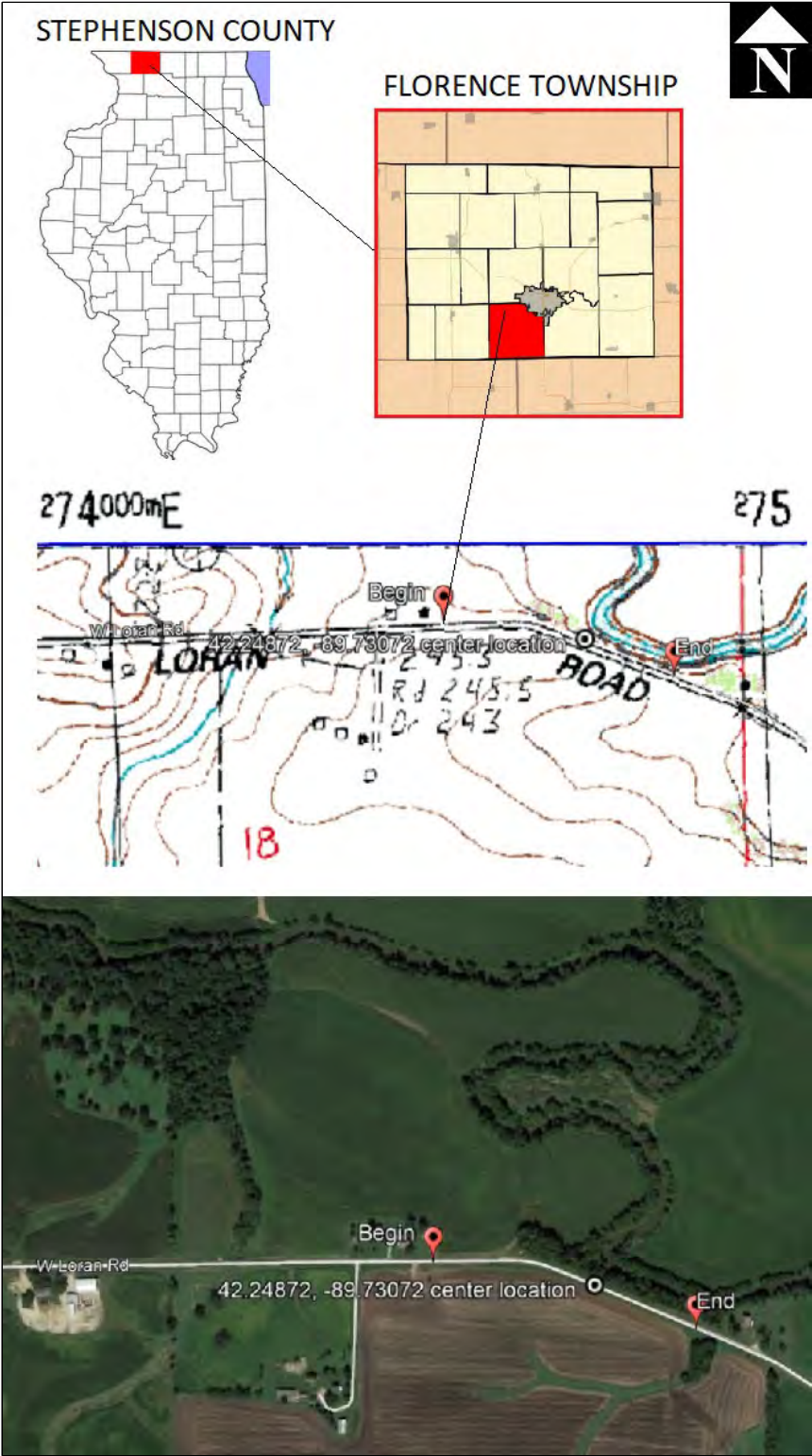
ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

In the fall of 2019, the Stephenson County Highway Department with the help of Willet, Hoffman, and Associates, Inc, of Moline, Illinois, conducted an alternatives analysis and budget estimates for possible actions on this section of roadway. They came up with two additional alternatives, including:

- **Reconstruct the Roadway in Place.** This alternative would require the installation of approximately 100 linear foot of steel sheet-pile wall along the area of failure. The engineers assumed two rows of walers to tie back the wall, with the top row anchored to concrete deadmen and the bottom row anchored to helical soil anchors. The bottom of the wall would be armored with a rip rap toe. This option was estimated to cost \$1.13 million, or three to five times as much as any other option considered. It was eliminated as economically unfeasible.
- **Relocate Loran Road Only.** This alternative is limited to component 1 of the proposed action, the relocation Loran Road, as described in section 2.2.1. However, it does not include the streambank or slope stabilization. The alternative was eliminated from further consideration because alternative does not solve the problem. The road stabilization will not be complete until the bank that supports the road and shoulder are also stabilized. As a part of this option, the community did consider slope stabilization methods that would reduce impacts to the streambank, but ultimately determined these methods of repair would ultimately be undermined by the continued erosion of the streambank.

Section Three: Affected Environment

3.1 Exhibit 1: Project Location



3.1 Exhibit 2: Project Scoping Area

Road re-alignment path displayed identified by dashed red line below.



Preliminary Screening of Assessment Categories

The alternatives listed above are likely to result in impacts governed by the federal laws and executive orders listed below. Checked items will require closer coordination with the appropriate agencies to identify and mitigate potentially significant impacts.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clean Water Act (CWA) | <input type="checkbox"/> Executive Order 13112 – Invasive Species |
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3.2 Reasonably Foreseeable Future Actions

There are no additional reasonably foreseeable future actions associated with this project. While, there are aerial utilities within the project area but due to the proposed stabilization effort it is not anticipated that these utilities will be moved.

SECTION FOUR: REFERENCES

Loran Road Flood Damage. Cost Estimates. For Stephenson County Highway Department. October 1, 2019. Willett Hofmann & Associates Inc.



U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

Ken Westlake, Deputy Director
Office of Regional Administrator, USEPA
77 W Jackson Blvd
Chicago, IL 60604

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 /

Dear Mr. Westlake:

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: westlake.kenneth@epa.gov



February 12, 2021

Environmental Assessment Scoping Document

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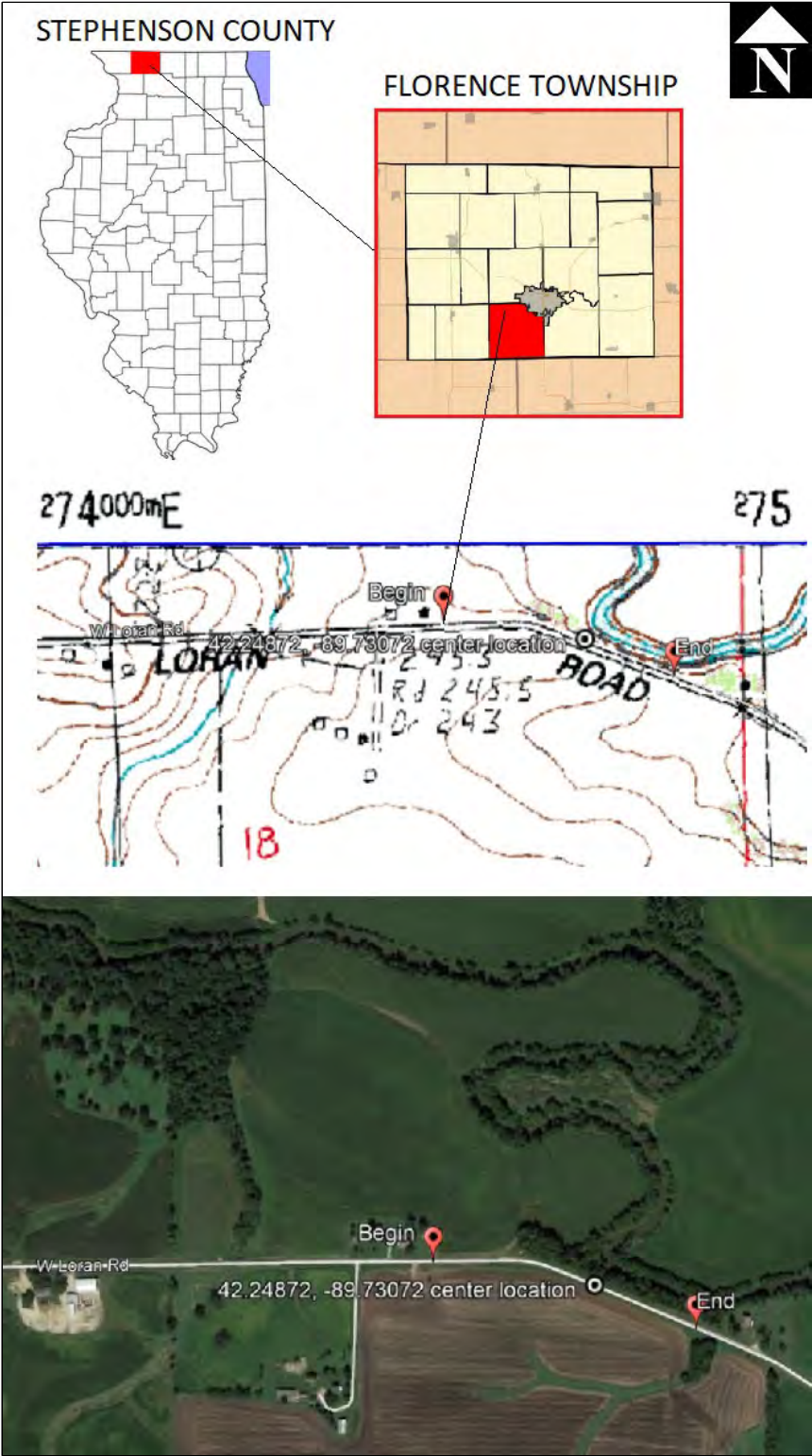
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

March 1, 2021

REPLY TO THE ATTENTION OF:

Mail Code RM-19J

Duane Castaldi
Federal Emergency Management Administration
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

Re: Project Scoping for the Relocation of Loran Road, Florence Township, Stephenson County, Illinois

Dear Mr. Castaldi:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced project scoping document, which was prepared by the Federal Emergency Management Agency (FEMA). We are providing comments pursuant to our authorities under the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

FEMA proposes to realign Loran Road 60 feet south of the existing road bed, for approximately 1,000 linear-feet in length, between South Voss Road and South Bolton Road. The existing streambank would be modified to prevent erosion. Two alternatives have been provided:

- Alternative 1 – No Action Alternative. The affected section of Loran Road would be closed indefinitely, and no erosion control measures would be constructed to prevent erosion on the south bank of Yellow Creek; and:
- Alternative 2 – Proposed Action. This alternative includes relocating Loran Road and constructing erosion control measures to prevent further erosion along the south bank of Yellow Creek. Specific actions include:
 - Relocate a 1,000-foot existing segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland;
 - Perform temporary erosion control measures;
 - Demolish the existing 1,000-foot segment of Loran Road;
 - Perform earthwork activities, including re-grading the current roadbed, and re-seeding;
 - Perform tree clearing along 506 linear feet of the south bank of Yellow Creek; and:
 - Installing Stone Toe (Rip Rap) Bank Protection along 506 linear feet of the south bank of Yellow Creek, including using a well-graded mix of clean, stone-dumped

riprap, which will be toed to the same height as the expected high-water elevation of the creek and keyed into the backslope perpendicular to the centerline of the creek. FEMA has selected Alternative 2 as the proposed project's preferred alternative. Based on our review of the scoping document, we have comments pertaining to air quality strategies, flood management and resiliency, pollinators and native plant species, and consultation records, as stated below.

Air Quality Strategies

We recommend FEMA consider implementing air quality best management practices (BMPs) during the construction phase of this proposed project. Several recommendations are included in an enclosure entitled, *U.S. Environmental Protection Agency Construction Emission Control Checklist*.

Flood Management and Resiliency

The National Climate Assessment finds that, in the Midwest, extreme heat, heavy downpours, and flooding will affect infrastructure, health, air and water quality, and more.¹ Storm events are occurring with greater frequency and intensity. The National Climate Assessment further concludes that, in the Midwest, extreme heat, heavy downpours, and flooding will affect infrastructure. To help ensure the health and safety of the public, we recommend FEMA account for increased storm intensity by ensuring the new roadbed is constructed at or above the 500-year flood elevation line.

Pollinators and Native Plant Species

Pollinators are critical contributors to our nation's economy, food system, and environmental health. Vegetation within the project area can provide vital habitat for pollinators, providing food, shelter, and connections to other patches of habitat. After the current road bed is demolished, we recommend FEMA consider planting native species and pollinator-friendly plants in the former road bed's footprint.

Consultation Records


EPA recommends attaching to the forthcoming draft environmental assessment (EA) inter-agency consultation documents regarding historic resources (Illinois State Historic Preservation Office), wetlands and streams (U.S. Army Corps of Engineers), and Federal and state threatened and endangered species (U.S. Fish and Wildlife Service and the Illinois Department of Natural Resources, respectively).

¹ U.S. Global Change Research Program, 2017 Climate Science Special Report: Fourth National Climate Assessment, Volume 1, available at: <https://www.globalchange.gov/browse/reports>

Please send us the EA when it becomes available. We are available to discuss these comments at your convenience. Please feel free to contact Mike Sedlacek of my staff at 312-886-1765, or by email at sedlacek.michael@epa.gov.

Sincerely,

KENNETH
WESTLAKE



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KENNETH WESTLAKE
Date: 2021.03.01
14:04:39 -06'00'

Kenneth A. Westlake
Deputy Director, Tribal and Multimedia Programs Office
Office of the Regional Administrator

Encl: U.S. Environmental Protection Agency Construction Emission Control Checklist

U.S. Environmental Protection Agency **Construction Emission Control Checklist**

Diesel emissions and fugitive dust from project construction may pose environmental and human health risks and should be minimized. In 2002, EPA classified diesel emissions as a likely human carcinogen, and in 2012 the International Agency for Research on Cancer concluded that diesel exhaust is carcinogenic to humans. Acute exposures can lead to other health problems, such as eye and nose irritation, headaches, nausea, asthma, and other respiratory system issues. Longer term exposure may worsen heart and lung disease.² We recommend FEMA consider the following protective measures and commit to applicable measures in the EA.

Mobile and Stationary Source Diesel Controls

Purchase or solicit bids that require the use of vehicles that are equipped with zero-emission technologies or the most advanced emission control systems available. Commit to the best available emissions control technologies for project equipment in order to meet the following standards.

- On-Highway Vehicles: On-highway vehicles should meet, or exceed, the EPA exhaust emissions standards for model year 2010 and newer heavy-duty, on-highway compression-ignition engines (e.g., long-haul trucks, refuse haulers, shuttle buses, etc.).³
- Non-road Vehicles and Equipment: Non-road vehicles and equipment should meet, or exceed, the EPA Tier 4 exhaust emissions standards for heavy-duty, non-road compression-ignition engines (e.g., construction equipment, non-road trucks, etc.).⁴
- Low Emission Equipment Exemptions: The equipment specifications outlined above should be met unless: 1) a piece of specialized equipment is not available for purchase or lease within the United States; or 2) the relevant project contractor has been awarded funds to retrofit existing equipment, or purchase/lease new equipment, but the funds are not yet available.

Consider requiring the following best practices through the construction contracting or oversight process:

- Establish and enforce a clear anti-idling policy for the construction site.
- Use onsite renewable electricity generation and/or grid-based electricity rather than diesel-powered generators or other equipment.
- Use electric starting aids such as block heaters with older vehicles to warm the engine.
- Regularly maintain diesel engines to keep exhaust emissions low. Follow the manufacturer's recommended maintenance schedule and procedures. Smoke color can signal the need for maintenance (e.g., blue/black smoke indicates that an engine requires servicing or tuning).
- Where possible, retrofit older-tier or Tier 0 nonroad engines with an exhaust filtration device before it enters the construction site to capture diesel particulate matter.
- Replace the engines of older vehicles and/or equipment with diesel- or alternatively-fueled engines certified to meet newer, more stringent emissions standards (e.g., plug-in hybrid-electric vehicles, battery-electric vehicles, fuel cell electric vehicles, advanced technology locomotives, etc.), or with zero emissions electric systems. Retire older vehicles, given the significant contribution of vehicle emissions to the poor air quality conditions. Implement programs to encourage the voluntary removal from use and the marketplace of pre-2010 model year on-highway vehicles (e.g., scrappage rebates) and replace them with newer vehicles that meet or exceed the latest EPA exhaust emissions standards, or with zero emissions electric vehicles and/or equipment.

² Carcinogenicity of diesel-engine and gasoline-engine exhausts and some nitroarenes. *The Lancet*. June 15, 2012

³ <http://www.epa.gov/otaq/standards/heavy-duty/hdci-exhaust.htm>

⁴ <http://www.epa.gov/otaq/standards/nonroad/nonroadci.htm>

Fugitive Dust Source Controls

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative, where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Occupational Health

- Reduce exposure through work practices and training, such as maintaining filtration devices and training diesel-equipment operators to perform routine inspections.
- Position the exhaust pipe so that diesel fumes are directed away from the operator and nearby workers, reducing the fume concentration to which personnel are exposed.
- Use enclosed, climate-controlled cabs pressurized and equipped with high-efficiency particulate air (HEPA) filters to reduce the operators' exposure to diesel fumes. Pressurization ensures that air moves from inside to outside. HEPA filters ensure that any incoming air is filtered first.
- Use respirators, which are only an interim measure to control exposure to diesel emissions. In most cases, an N95 respirator is adequate. Workers must be trained and fit-tested before they wear respirators. Depending on the type of work being conducted, and if oil is present, concentrations of particulates present will determine the efficiency and type of mask and respirator. Personnel familiar with the selection, care, and use of respirators must perform the fit testing. Respirators must bear a NIOSH approval number.

NEPA Documentation

- Per Executive Order 13045 on Children's Health⁵, EPA recommends the lead agency and project proponent pay particular attention to worksite proximity to places where children live, learn, and play, such as homes, schools, and playgrounds. Construction emission reduction measures should be strictly implemented near these locations in order to be protective of children's health. Specify how impacts to sensitive receptors, such as children, elderly, and the infirm will be minimized. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings

⁵ Children may be more highly exposed to contaminants because they generally eat more food, drink more water, and have higher inhalation rates relative to their size. Also, children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in higher exposures to contaminants as compared with adults. Children may be more vulnerable to the toxic effects of contaminants because their bodies and systems are not fully developed and their growing organs are more easily harmed. EPA views childhood as a sequence of life stages, from conception through fetal development, infancy, and adolescence.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

JB PRITZKER, GOVERNOR

JOHN J. KIM, DIRECTOR

12/15/2020

William Murphy
Stephenson County Highway Department
6228 W. Prairie Road
Shannon, IL 61078

Subject: Loran Road Location #1 (Stephenson County)
Proposed activity located at Stephenson
Pre-filing Meeting Request for Clean Water Act Section 401 Certification
Illinois EPA Log number: C-0318-20

Dear Applicant:

The Illinois EPA (Agency) received on Wednesday, November 25, 2020, your correspondence regarding the proposed relocation and reconstruction of Loran Road, and creek bank stabilization.

In accordance with federal rules under 40 CFR 121.5, the Agency hereby considers the referenced documentation to be a Pre-filing Meeting Request. The following information is provided to ensure that you are aware of applicable federal and state regulations that pertain to applications for a Clean Water Act Section 401 individual (case-specific) water quality certification, when one is required.

Provided the project proponent (applicant) has accurately determined or been advised by a federal agency or department that an individual 401 certification is required for the subject project, the following certification request schedule, federal application criteria, project specific environmental and/or discharge data requirements, and fee requirements must be complied with.

Certification request schedule

Regardless of the content or substance of the documentation already submitted, a certification request as defined by 40 CFR 121.4(a) shall be submitted at least 30 days after submittal of the pre-filing meeting request. Consequently, the Illinois EPA has established Wednesday, December 23, 2020 as the certification request acceptance date. The Agency will maintain your already submitted documentation for a period of one year in anticipation of a forthcoming certification request. When submitting a certification request, please ensure that the log number (C-0318-20) is referenced in each submittal.

Federal criteria in accordance with 40 CFR 121.5(b) states that a certification request for an individual license or permit shall:

- (1) Identify the project proponent(s) and a point of contact;
- (2) Identify the proposed project;
- (3) Identify the applicable federal license or permit;
- (4) Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters;
- (5) Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge;

2125 S. First Street, Champaign, IL 61820 (217) 278-5800
2009 Mall Street Collinsville, IL 62234 (618) 346-5120
9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000
595 S. State Street, Elgin, IL 60123 (847) 608-3131

2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200
412 SW Washington Street, Suite D, Peoria, IL 61602 (309) 671-3022
4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

- (6) Include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received;
- (7) Include documentation that a pre-filing meeting request was submitted to the certifying authority at least 30 days prior to submitting the certification request;
- (8) Contain the following statement: The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief; and
- (9) Contain the following statement: The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Project specific environmental and/or discharge information requirements.

Pursuant to 35 Illinois Administrative Code (IAC) Section 302.105, an antidegradation assessment must be completed for each new pollutant discharge to determine if the discharge will meet applicable water quality requirements. The applicant must provide, to the extent necessary, the following information in compliance with 35 IAC 302.105(f)(1):

- (1) Sufficient information to understand the scope of impacts to the environment in accordance with 35 IAC 302.105(f)(1)(E). Describe the purpose of the project and provide full descriptions of all work and activities that will impact the stream to include flow diversion, temporary work structures, planned vegetation removal, quantities and descriptions for all fill materials to include scour protection and cut and fill quantities for stream channel alterations. Provide plans, maps, diagrams or engineering drawings of appropriate details to show these activities.
- (2) Stream assessment and/or wetland delineation in accordance with 302.105(f)(1)(A). A physical, biological, and chemical characterization of the impacted waterbody is required to provide an assessment of the waterbody's uses that would be impacted or removed by the proposed activity.
 - a. For streams, a full characterization will not be required if the stream has already been assessed in accordance with Illinois EPA stream assessment protocols and is present on the Illinois EPA's 305(b) Integrated Water Quality Report or substantial evidence is available that demonstrates that the stream channel impacted by the activity is not capable of sustained aquatic life because of insufficient hydrology. Such demonstration must consist of the following:
 - (i) a delineation of the watershed area in square miles that is tributary to the subject stream at the point of furthest downstream impacts to the stream channel. StreamStats [<https://streamstats.usgs.gov/ss/>] may be used for this requirement.
 - (ii) survey of the stream corridor to document the absence of persistent sources of hydrology such as springs, groundwater fed pools, field tiles, etc. which allow for sustained aquatic life. Note, at a minimum the application shall provide a physical characterization of the streambanks, substrate and watershed tributary to the downstream reach of the impact area.
 - b. For wetlands, a delineation conducted by a wetland biologist that includes a floristic quality index of vegetation is required.
- (3) A detailed description and quantification of all proposed unavoidable impacts to the waterbody including lost aquatic habitat, lost function, and pollutant parameters for which there may be a new or increased pollutant loading (e.g. TSS, ammonia (as N)) in accordance with 302.105(f)(1)(B). Describe all potential effects on the water quality of downstream waters as a result of the project including short term and long term . Additionally provide a discussion of how each of the these impacts will or may affect the waterbody in the long term.
- (4) A discussion of the socio-economic benefits provided by the proposed project in accordance with 302.105(f)(1)(C) and 302.105(c)(2)(B)(iv).

(5) An assessment of the alternatives to the proposed project that result in a reduced pollutant load to the water body, no load increase or minimal environmental degradation in accordance with 302.105(f)(1)(D). The alternatives assessment must consider alternative project locations, minimized or avoided impacts, and a no action alternative.

(6) A discussion of how the proposed plan incorporates all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading in accordance with 302.105(c)(2)(B)(iii).

(7) A compensatory mitigation plan that demonstrates that existing uses are protected in accordance with 302.105(a), 302.105(c)(2)(B)(ii) and 302.105(f)(1)(E). For all unavoidable impact to aquatic impacts, describe the plan that will be implemented to compensate for lost aquatic habitat.

(8) Soil erosion and sediment control plan in accordance with 302.105(f)(1)(E). Please indicate the temporary and permanent vegetation or stabilization measures that will be used to minimize erosion of the work site and the finished project. Please specify the amount and types of seeding or plantings that will be used.

(9) Provide all correspondence submitted and received as part of a threatened and endangered species consultation with the Illinois Department of Natural Resources in accordance with 302.105(f)(1)(F). Consultation may be initiated using the EcoCAT web tool found at [<https://dnr2.illinois.gov/EcoPublic/>]. When using this tool, please indicate the Illinois Environmental Protection Agency as the government unit (state agency).

Discharge material testing requirements Pursuant to 35 IAC Section 395 Material analysis

If material other than washed quarry stone or sand or broken concrete free of protruding rebar and other contaminants will be discharged or placed within waterbodies, such material shall be sampled and tested in accordance with 35 IAC 395.205 (Material Testing). Analytical testing shall be conducted in accordance with approved testing methods in 40 CFR 136 using detection concentrations sufficiently low enough to meet Illinois water quality standards of 35 IAC 302.

Fee payment requirements

The Agency must receive fee payment in the appropriate amount pursuant to Section 12.6 of the Illinois Environmental Protection Act (415 ILCS) prior to issuance of an individual 401 certification. Please note that FEES ARE NOT REFUNDABLE. The Amount of the fee for certification is \$350 or 1% of the gross value of the proposed project, whichever is greater, but not to exceed \$10,000. We have attached a fee worksheet to this email that contains additional fee payment information and data that must be completed and submitted along with the appropriate fee check.

Other important information

Please be advised that this project may require a Construction Site Activities Storm Water NPDES Permit issued prior to initiating construction if the construction activity associated with the project will result in the disturbance of 1 (one) or more acres, total land area. Such permit requires separate submittal of a properly completed Notice of Intent (NOI) form by certified mail to the Agency's Division of Water Pollution Control, Permit Section or by visiting the following website: [<https://www2.illinois.gov/epa/topics/forms/water-permits/storm-water/Pages/construction.aspx/>].

Illinois EPA Bureau of Water, Permit Section staff will conduct a technical review of this project upon submittal of a valid certification request. At the time of the certification request, the Agency will provide notification to the

proponent and the federal permitting agency of the Agency's receipt and review of the certification request. At that time an engineer will be assigned to the project and will provide feedback about any additional information required for 401 water quality certification. If you have any questions about this notification or about the Illinois 401 review process, please contact: 217/782-3362.



Morgan Holthaus
Office Coordinator, Division of Water Pollution Control
Bureau of Water, Illinois EPA

Attachments(s)

CC: FederalAgency
Consultant
BOW_File



Rebecca Olson <rebecca@olsonecosolutions.com>

RE: [External] Re: Illinois EPA notification regarding Clean Water Act Section 401 related activity. IEPA Log number: C-0318-20

1 message

Holthaus, Morgan <Morgan.Holthaus@illinois.gov>
To: Rebecca Olson <rebecca@olsonecosolutions.com>

Wed, Dec 16, 2020 at 12:21 PM

Rebecca,

We won't need any other documents or anything from you since this will be covered under a regional permit.

Thank you for letting me know!

Morgan

From: Rebecca Olson <rebecca@olsonecosolutions.com>
Sent: Wednesday, December 16, 2020 12:09 PM
To: Holthaus, Morgan <Morgan.Holthaus@Illinois.gov>
Cc: williammurphy39@gmail.com; Wendy.M.Frohlich@usace.army.mil; EPA.401.BOW <EPA.401.BOW@Illinois.gov>
Subject: [External] Re: Illinois EPA notification regarding Clean Water Act Section 401 related activity. IEPA Log number: C-0318-20

Hello Morgan,

Thank you for the response. We have been working with the Corps and decided to process the request as a Regional Permit 16. Since this is a regional permit and not an individual permit, how does this affect the certification requirement and correspondence with the EPA?

Thank you,

Rebecca

On Tue, Dec 15, 2020 at 3:44 PM Holthaus, Morgan <Morgan.Holthaus@illinois.gov> wrote:

The attached documents are being transmitted digitally for your convenience. Please provide a response to this email if you have any questions about the attachment(s) or need a copy of this correspondence sent through the postal service.

Thank you!

Morgan Holthaus

Office Coordinator, 401 Permits

Bureau of Water, IEPA

Hours: 8:30-5:30

In-office Tuesdays and Thursdays

(Available via email all other days)

Please note- new office number: 217/785-6858

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--

Rebecca Olson, M.S.

Olson Ecological Solutions, LLC

815-985-2689

www.olsonecosolutions.com

2221 Hammond Dr.

Schaumburg, IL 60173

Applicant: Olson Ecological Solutions
Contact: Rebecca Olson
Address: 2221 Hammond Dr.
Schaumburg, IL 60173

IDNR Project Number: 2110823
Date: 02/24/2021
Alternate Number: 2110630

Project: Loran Road #1
Address: 6000-6498 West Loran Road, Freeport

Description: At this location, erosion and degradation of the Yellow Creek bank has undermined the river escarpment, and this has caused Loran Road to become dangerously unstable. We are proposing bank stabilization of Yellow Creek in order to limit continued migration of the River into the escarpment.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database shows the following protected resources may be in the vicinity of the project location:

Yellow Creek Bolton Reach INAI Site
Spike (*Elliptio dilatata*)

An IDNR staff member will evaluate this information and contact you to request additional information or to terminate consultation if adverse effects are unlikely.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Stephenson

Township, Range, Section:
26N, 7E, 18



**IL Department of Natural Resources
Contact**
Brian Willard
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Francisco Herrera
1021 N Grant Ave East
P.O. Box 19276
Springfield, Illinois 62794 -4059

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

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EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

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Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
<http://dnr.state.il.us>

JB Pritzker, Governor

Colleen Callahan, Director

March 01, 2021

Rebecca Olson
Olson Ecological Solutions
2221 Hammond Dr.
Schaumburg, IL 60173

RE: Loran Road #1
Project Number(s): 2110823 [2110630]
County: Stephenson

Dear Applicant:

This letter is in reference to the project you recently submitted for consultation. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary.

The natural resource review reflects the information existing in the Illinois Natural Heritage Database at the time of the project submittal, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, you must comply with the applicable statutes and regulations. Also, note that termination does not imply IDNR's authorization or endorsement of the proposed action.

Please contact me if you have questions regarding this review.

Brian Willard
Division of Ecosystems and Environment
217-785-5500



U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

Terry Groves, Zoning Director
Stephenson County Floodplain Management
295 W Lamm Rd
Freeport, IL 61032

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 /

Dear Mr. Groves:

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

The project is located in the Special Flood Hazard Area.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: tgroves@stephensoncountyil.gov



February 12, 2021

Environmental Assessment Scoping Document

SECTION ONE: BACKGROUND

1.1 Project Information

FEMA Grant Number:	DR-4461-IL, Project 117416, PW 887-0
Project Title:	Loran Road Relocation
Recipient:	Illinois Emergency Management Agency
Subrecipient:	Florence Township
Project Location:	Florence Township, Stephenson County, Illinois. 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois

1.2 Purpose and Need

The purpose of FEMA's PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the State of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

Aerial photos document that Loran Road has existed along its current alignment since at least 1939. It is thought to have been paved for the first time in 1990. It has remained in place without notable incident until the events of 2019.

The rains and flooding that brought on the disaster declaration of 2019 caused a portion of the channel bank along Yellow Creek and the upslope portion of the Loran Road embankment to fail. This initially caused the north shoulder of the roadway to drop approximately six feet and the roadway to be undermined. The edge of water of Yellow Creek is approximately 70 feet north of the north edge of pavement of Loran Road, and the elevation difference from edge of pavement to top of water is approximately 35 feet. The continued instability of this slope has

since caused approximately one-half of the Loran Road section to fall into Yellow Creek and the failure has not yet settled. The road has been closed to traffic, and travelers who would have used this route to get to Freeport are routed about 1 mile to the south for a total detour route length of about 3 miles. Approximately 1 mile of the detour is not paved.

SECTION TWO: ALTERNATIVE ANALYSIS

The subrecipient is required to provide alternatives to the proposed project and describe the environmental impacts of each alternative as provided below. NEPA requires FEMA to include an evaluation of the No Action alternative, which is the future condition without the project. This section describes the No Action alternative and the Proposed Action, and reviews alternatives that were previously considered but dismissed.

2.1 Alternative 1 – No Action Alternative

Under the No Action alternative, this segment of Loran Road would be abandoned, and this transportation link would remain closed indefinitely. Access to the homes and farmland along this link would use alternative routes. Vehicles using this route are very likely to be trying to get to the nearest city, Freeport, approximately 2 miles to the northeast along Bolton Road. If these travelers cannot access Bolton Road via Loran Road, then the closest intersection on Loran Road is South Voss Road approximately 0.8 miles to the west. South Voss Road is a narrow, unpaved, local rural with a listed current AADT of 25 vehicles per day. South Voss Road provides access to Sabin Church Road approximately 1 mile to the south. An additional mile further on Sabin Church Road, travelers can access West Bolton Road, and then vehicles can turn north on South Bolton Road and travel about 1.25 miles to be back at the Loran Road intersection. This detour more than doubles the trip length.

At the Loran Road site, the continued erosion of the embankment would continue unabated. It is very possible that the collapse would make its way across Loran Road and continue into the farmland to the south. Infrastructure supported by Loran Road, such as the utility connections along the north property line, would have to be relocated and likely rerouted.

2.2 Alternative 2 – Proposed Action

The Proposed Action has two components:

- 1) relocation of a section of Loran Road
- 2) stabilization of the bank of Yellow Creek

The bank stabilization of Yellow Creek would allow for the safe obliteration of the existing section of Loran Road and the restoration of that property as a useful buffer to the Yellow Creek. The project is designed so these two components can proceed on somewhat independent schedules. The benefits for proceeding with each component on its own schedule include reopening the closed road to traffic first, while, other work on the project continues.

Relocation of Loran Road

The first component of the project would relocate a 1,000-foot segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland. This new alignment is generally parallel to the existing alignment through the length of the project. See the attached maps for a graphical depiction of the relocation.

The relocated road would be at a very similar elevation as the existing roadway elevation. However, the relocation would allow for a 4:1 H/V (Horizontal to Vertical) drop to Yellow Creek, as opposed to the 2:1 drop that currently exists. It would also put the roadway outside the currently evident failure circle in the slope, which has a kickout toe at close to the existing bank of Yellow Creek.

The Road Relocation component will occur in the following sequence:

- Equipment is to be staged in the existing right-of-way on the closed portion of Loran Road to the east and to the west of the damaged portion of Loran Road.
- Erosion control measures are to be installed, with specific focus on the expected stockpile areas. The stockpile areas are expected to be at the west end of the site so that primary access at the east end of the site is maintained unobstructed. This project is designed to have a net-zero haul off, so little, if any material will be moved offsite.
- Demolition: The existing length of Loran Road will be obliterated to provide suitable fill for the new roadbed.
- Preliminary earthwork: The proposed length of Loran Road will be stripped and stockpiled for suitable stockpile restoration.
- Final earthwork: The proposed length of Loran Road will be filled and compacted to subgrade. Roadstone will be supplied and installed.
- Roadway finishing: Final drainage infrastructure will be installed. The road will be paved. The shoulders and ditches will be finished and stabilized.

The project is going to be phased in such a way that it will allow the contractor the practicable flexibility to reopen the roadway as expeditiously as possible.

2.2.2 Streambank and Slope Stabilization

The embankment adjacent to Yellow Creek continues to collapse. It will not be possible to adequately stabilize the existing right-of-way of Loran Road until this collapse is halted. A primary part of this operation is to stabilize the bank at the toe of the slope.

The Streambank and Slope Stabilization component will occur in the following sequence:

- Erosion control measures will be installed.
- The trees are to be cleared to allow access to the bank.
- A stabilized construction entrance will be installed between Loran Road and the work area.
- The Stone Toe (Rip Rap) Bank Protection will be installed.

- Any required fill and stabilization will be completed on the upstream bank.
- Temporary erosion control measures will be installed.
- In the appropriate season, temporary erosion control and construction access measures will be removed, and permanent seeding and landscaping will be completed.

The work proposed impacts 506 linear feet of the streambank of Yellow Creek. The protection is placed along the existing bank and does not impact the existing cross-section of the creek. The work proposes the use of a well-graded mix of a clean, stone-dumped riprap toed to the same height as the expected high-water elevation of the creek. This toe will be keyed into the backslope perpendicular to the centerline of the creek.

Once the streambank protection is in place any remaining stockpiles will be graded into the slope. The entire disturbed slope will be covered with topsoil, seeded, and protected with erosion control blanket. A final site inspection would occur in the following Spring to ensure that an adequate growth of vegetated cover is in place.

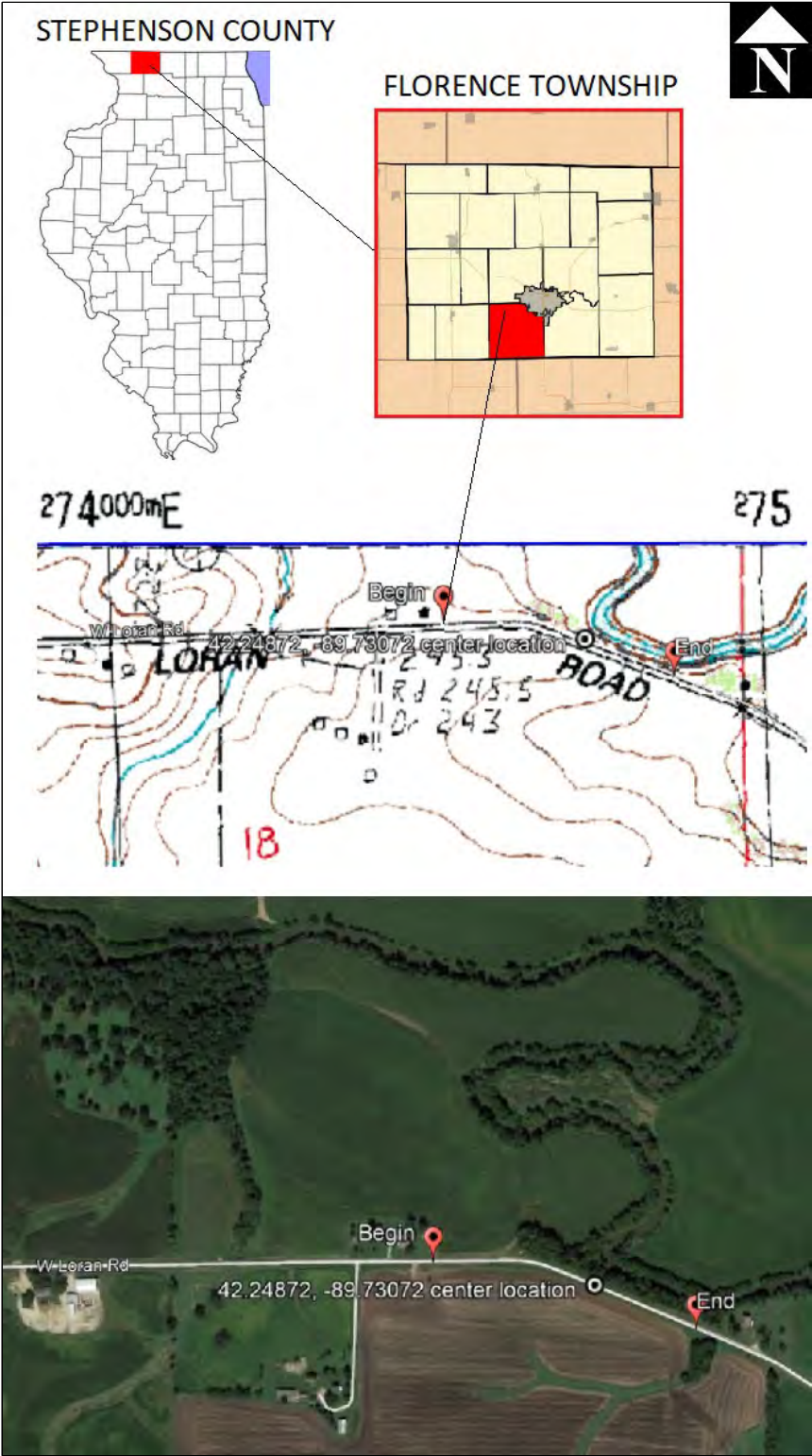
ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

In the fall of 2019, the Stephenson County Highway Department with the help of Willet, Hoffman, and Associates, Inc, of Moline, Illinois, conducted an alternatives analysis and budget estimates for possible actions on this section of roadway. They came up with two additional alternatives, including:

- **Reconstruct the Roadway in Place.** This alternative would require the installation of approximately 100 linear foot of steel sheet-pile wall along the area of failure. The engineers assumed two rows of walers to tie back the wall, with the top row anchored to concrete deadmen and the bottom row anchored to helical soil anchors. The bottom of the wall would be armored with a rip rap toe. This option was estimated to cost \$1.13 million, or three to five times as much as any other option considered. It was eliminated as economically unfeasible.
- **Relocate Loran Road Only.** This alternative is limited to component 1 of the proposed action, the relocation Loran Road, as described in section 2.2.1. However, it does not include the streambank or slope stabilization. The alternative was eliminated from further consideration because alternative does not solve the problem. The road stabilization will not be complete until the bank that supports the road and shoulder are also stabilized. As a part of this option, the community did consider slope stabilization methods that would reduce impacts to the streambank, but ultimately determined these methods of repair would ultimately be undermined by the continued erosion of the streambank.

Section Three: Affected Environment

3.1 Exhibit 1: Project Location



3.1 Exhibit 2: Project Scoping Area

Road re-alignment path displayed identified by dashed red line below.



Preliminary Screening of Assessment Categories

The alternatives listed above are likely to result in impacts governed by the federal laws and executive orders listed below. Checked items will require closer coordination with the appropriate agencies to identify and mitigate potentially significant impacts.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clean Water Act (CWA) | <input type="checkbox"/> Executive Order 13112 – Invasive Species |
| <input type="checkbox"/> Clean Air Act (CAA) | <input checked="" type="checkbox"/> Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments |
| <input checked="" type="checkbox"/> Endangered Species Act (ESA) | <input checked="" type="checkbox"/> Farmland Protection Policy Act (FPPA) |
| <input type="checkbox"/> Executive Order 11988 – Floodplains | <input type="checkbox"/> Migratory Bird Treaty Act (MBTA) |
| <input type="checkbox"/> Executive Order 11990 – Wetlands | <input checked="" type="checkbox"/> National Historic Preservation Act (NHPA) |
| <input type="checkbox"/> Executive Order 12898 – Environmental Justice for Low Income & Minority Populations | |

3.2 Reasonably Foreseeable Future Actions

There are no additional reasonably foreseeable future actions associated with this project. While, there are aerial utilities within the project area but due to the proposed stabilization effort it is not anticipated that these utilities will be moved.

SECTION FOUR: REFERENCES

Loran Road Flood Damage. Cost Estimates. For Stephenson County Highway Department. October 1, 2019. Willett Hofmann & Associates Inc.



U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

Masood Ahmad, District 2 Engineer
Illinois Department of Transportation District 2
819 Depot Street
Dixon, IL 61021-3546

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 /

Dear Mr. Ahmad:

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: masood.ahmad@illinois.gov



February 12, 2021

Environmental Assessment Scoping Document

SECTION ONE: BACKGROUND

1.1 Project Information

FEMA Grant Number:	DR-4461-IL, Project 117416, PW 887-0
Project Title:	Loran Road Relocation
Recipient:	Illinois Emergency Management Agency
Subrecipient:	Florence Township
Project Location:	Florence Township, Stephenson County, Illinois. 700' west of the intersection between Loran Road and Bolton Road (CTH17), and approximately 2 miles southwest of the city limits of Freeport, Illinois

1.2 Purpose and Need

The purpose of FEMA's PA Grant Program is to provide supplemental grants so that communities can quickly respond to and recover from major disasters or emergencies. Between February 24 to July 3, 2019, high winds and heavy rains resulted in flooding throughout the state of Illinois. President Trump issued disaster declaration DR-4461-IL for the State of Illinois on September 19, 2019, which made disaster recovery assistance available to Florence Township.

Aerial photos document that Loran Road has existed along its current alignment since at least 1939. It is thought to have been paved for the first time in 1990. It has remained in place without notable incident until the events of 2019.

The rains and flooding that brought on the disaster declaration of 2019 caused a portion of the channel bank along Yellow Creek and the upslope portion of the Loran Road embankment to fail. This initially caused the north shoulder of the roadway to drop approximately six feet and the roadway to be undermined. The edge of water of Yellow Creek is approximately 70 feet north of the north edge of pavement of Loran Road, and the elevation difference from edge of pavement to top of water is approximately 35 feet. The continued instability of this slope has

since caused approximately one-half of the Loran Road section to fall into Yellow Creek and the failure has not yet settled. The road has been closed to traffic, and travelers who would have used this route to get to Freeport are routed about 1 mile to the south for a total detour route length of about 3 miles. Approximately 1 mile of the detour is not paved.

SECTION TWO: ALTERNATIVE ANALYSIS

The subrecipient is required to provide alternatives to the proposed project and describe the environmental impacts of each alternative as provided below. NEPA requires FEMA to include an evaluation of the No Action alternative, which is the future condition without the project. This section describes the No Action alternative and the Proposed Action, and reviews alternatives that were previously considered but dismissed.

2.1 Alternative 1 – No Action Alternative

Under the No Action alternative, this segment of Loran Road would be abandoned, and this transportation link would remain closed indefinitely. Access to the homes and farmland along this link would use alternative routes. Vehicles using this route are very likely to be trying to get to the nearest city, Freeport, approximately 2 miles to the northeast along Bolton Road. If these travelers cannot access Bolton Road via Loran Road, then the closest intersection on Loran Road is South Voss Road approximately 0.8 miles to the west. South Voss Road is a narrow, unpaved, local rural with a listed current AADT of 25 vehicles per day. South Voss Road provides access to Sabin Church Road approximately 1 mile to the south. An additional mile further on Sabin Church Road, travelers can access West Bolton Road, and then vehicles can turn north on South Bolton Road and travel about 1.25 miles to be back at the Loran Road intersection. This detour more than doubles the trip length.

At the Loran Road site, the continued erosion of the embankment would continue unabated. It is very possible that the collapse would make its way across Loran Road and continue into the farmland to the south. Infrastructure supported by Loran Road, such as the utility connections along the north property line, would have to be relocated and likely rerouted.

2.2 Alternative 2 – Proposed Action

The Proposed Action has two components:

- 1) relocation of a section of Loran Road
- 2) stabilization of the bank of Yellow Creek

The bank stabilization of Yellow Creek would allow for the safe obliteration of the existing section of Loran Road and the restoration of that property as a useful buffer to the Yellow Creek. The project is designed so these two components can proceed on somewhat independent schedules. The benefits for proceeding with each component on its own schedule include reopening the closed road to traffic first, while, other work on the project continues.

Relocation of Loran Road

The first component of the project would relocate a 1,000-foot segment of Loran Road approximately 60 feet south onto property currently used as agricultural farmland. This new alignment is generally parallel to the existing alignment through the length of the project. See the attached maps for a graphical depiction of the relocation.

The relocated road would be at a very similar elevation as the existing roadway elevation. However, the relocation would allow for a 4:1 H/V (Horizontal to Vertical) drop to Yellow Creek, as opposed to the 2:1 drop that currently exists. It would also put the roadway outside the currently evident failure circle in the slope, which has a kickout toe at close to the existing bank of Yellow Creek.

The Road Relocation component will occur in the following sequence:

- Equipment is to be staged in the existing right-of-way on the closed portion of Loran Road to the east and to the west of the damaged portion of Loran Road.
- Erosion control measures are to be installed, with specific focus on the expected stockpile areas. The stockpile areas are expected to be at the west end of the site so that primary access at the east end of the site is maintained unobstructed. This project is designed to have a net-zero haul off, so little, if any material will be moved offsite.
- Demolition: The existing length of Loran Road will be obliterated to provide suitable fill for the new roadbed.
- Preliminary earthwork: The proposed length of Loran Road will be stripped and stockpiled for suitable stockpile restoration.
- Final earthwork: The proposed length of Loran Road will be filled and compacted to subgrade. Roadstone will be supplied and installed.
- Roadway finishing: Final drainage infrastructure will be installed. The road will be paved. The shoulders and ditches will be finished and stabilized.

The project is going to be phased in such a way that it will allow the contractor the practicable flexibility to reopen the roadway as expeditiously as possible.

2.2.2 Streambank and Slope Stabilization

The embankment adjacent to Yellow Creek continues to collapse. It will not be possible to adequately stabilize the existing right-of-way of Loran Road until this collapse is halted. A primary part of this operation is to stabilize the bank at the toe of the slope.

The Streambank and Slope Stabilization component will occur in the following sequence:

- Erosion control measures will be installed.
- The trees are to be cleared to allow access to the bank.
- A stabilized construction entrance will be installed between Loran Road and the work area.
- The Stone Toe (Rip Rap) Bank Protection will be installed.

- Any required fill and stabilization will be completed on the upstream bank.
- Temporary erosion control measures will be installed.
- In the appropriate season, temporary erosion control and construction access measures will be removed, and permanent seeding and landscaping will be completed.

The work proposed impacts 506 linear feet of the streambank of Yellow Creek. The protection is placed along the existing bank and does not impact the existing cross-section of the creek. The work proposes the use of a well-graded mix of a clean, stone-dumped riprap toed to the same height as the expected high-water elevation of the creek. This toe will be keyed into the backslope perpendicular to the centerline of the creek.

Once the streambank protection is in place any remaining stockpiles will be graded into the slope. The entire disturbed slope will be covered with topsoil, seeded, and protected with erosion control blanket. A final site inspection would occur in the following Spring to ensure that an adequate growth of vegetated cover is in place.

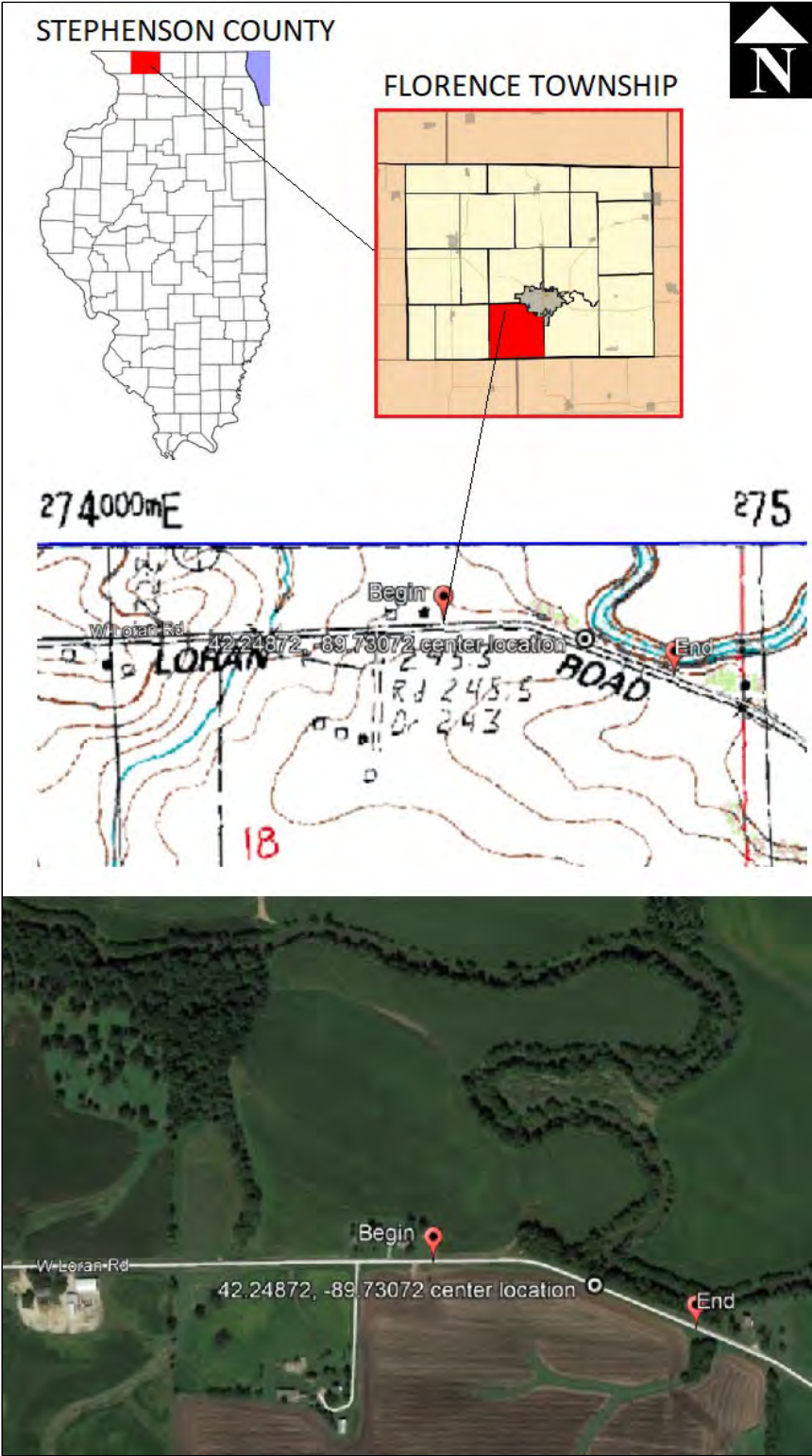
ALTERNATIVES CONSIDERED AND ELIMINATED FROM FURTHER CONSIDERATION

In the fall of 2019, the Stephenson County Highway Department with the help of Willet, Hoffman, and Associates, Inc, of Moline, Illinois, conducted an alternatives analysis and budget estimates for possible actions on this section of roadway. They came up with two additional alternatives, including:

- **Reconstruct the Roadway in Place.** This alternative would require the installation of approximately 100 linear foot of steel sheet-pile wall along the area of failure. The engineers assumed two rows of walers to tie back the wall, with the top row anchored to concrete deadmen and the bottom row anchored to helical soil anchors. The bottom of the wall would be armored with a rip rap toe. This option was estimated to cost \$1.13 million, or three to five times as much as any other option considered. It was eliminated as economically unfeasible.
- **Relocate Loran Road Only.** This alternative is limited to component 1 of the proposed action, the relocation Loran Road, as described in section 2.2.1. However, it does not include the streambank or slope stabilization. The alternative was eliminated from further consideration because alternative does not solve the problem. The road stabilization will not be complete until the bank that supports the road and shoulder are also stabilized. As a part of this option, the community did consider slope stabilization methods that would reduce impacts to the streambank, but ultimately determined these methods of repair would ultimately be undermined by the continued erosion of the streambank.

Section Three: Affected Environment

3.1 Exhibit 1: Project Location



3.1 Exhibit 2: Project Scoping Area

Road re-alignment path displayed identified by dashed red line below.



Preliminary Screening of Assessment Categories

The alternatives listed above are likely to result in impacts governed by the federal laws and executive orders listed below. Checked items will require closer coordination with the appropriate agencies to identify and mitigate potentially significant impacts.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clean Water Act (CWA) | <input type="checkbox"/> Executive Order 13112 – Invasive Species |
| <input type="checkbox"/> Clean Air Act (CAA) | <input checked="" type="checkbox"/> Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments |
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| <input type="checkbox"/> Executive Order 11988 – Floodplains | <input type="checkbox"/> Migratory Bird Treaty Act (MBTA) |
| <input type="checkbox"/> Executive Order 11990 – Wetlands | <input checked="" type="checkbox"/> National Historic Preservation Act (NHPA) |
| <input type="checkbox"/> Executive Order 12898 – Environmental Justice for Low Income & Minority Populations | |

3.2 Reasonably Foreseeable Future Actions

There are no additional reasonably foreseeable future actions associated with this project. While, there are aerial utilities within the project area but due to the proposed stabilization effort it is not anticipated that these utilities will be moved.

SECTION FOUR: REFERENCES

Loran Road Flood Damage. Cost Estimates. For Stephenson County Highway Department. October 1, 2019. Willett Hofmann & Associates Inc.



U.S. Department of Homeland Security
536 South Clark Street, 6th Floor
Chicago, Illinois 60605-1521

FEMA

February 12, 2021

Samantha Chavez
Rock Island District - Regulatory Division
PO Box 2004 Clock Tower Building
Rock Island, IL 61204-2004

Re: Loran Road Relocation Project
Florence Township, Stephenson County, Illinois
42.248683, -89.730830
FEMA Project ID: DR-4461-IL PW 887 / CEMVR-RD-2020-1784

Dear Ms. Chavez

The Illinois Emergency Management Agency and Florence Township have requested funding from the Federal Emergency Management Agency (FEMA) to support the captioned Public Assistance (PA) project. The objectives of FEMA's PA Program are to aid eligible state, territory, and local governments, along with federally recognized tribal governments, to quickly respond to and recover from major disasters.

The enclosed scoping document sets forth the draft purpose and need as well as areas of environmental review and study associated with the proposed project. The information is provided here in accord with the Council on Environmental Quality's regulations for complying with the National Environmental Policy Act to advise other agencies of FEMA's intent to prepare an Environmental Assessment for this project, note areas of expected environmental concern, and solicit any early comment regarding the project.

FEMA understands that Florence Township has already communicated with USACE and USACE responded on January 22, 2021. The applicant will be notified that as a condition of the FEMA award, all conditions associated with your letter and Regional Permit 16 must be met.

FEMA looks forward to any comments you may have on this project as we prepare the Environmental Assessment. We would appreciate a response by e-mail by March 15, 2021. If you have questions, please contact me at 312-408-5549 or at duane.castaldi@fema.dhs.gov.

Sincerely,

Duane Castaldi
Regional Environmental Officer
FEMA Region V

Enclosure

Sent by email to: samantha.j.chavez@usace.army.mil



February 12, 2021

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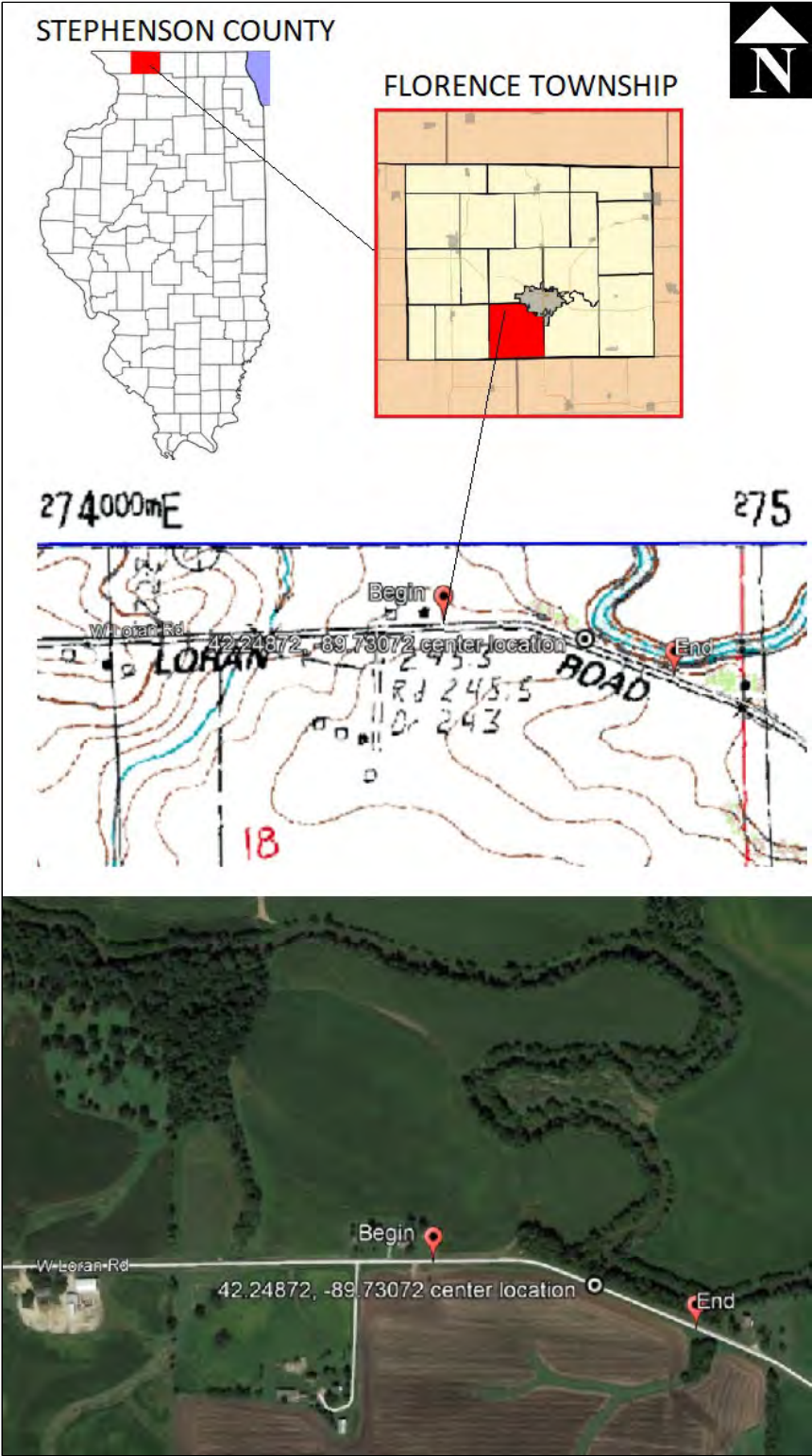
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Illinois Department of Natural Resources

www.dnr.illinois.gov

SURVEY REQUEST

JB Pritzker, Governor
Colleen Callahan, Director

Mailing address: State Historic Preservation Office, 1 Old State Capitol Plaza, Springfield, IL 62701

Stephenson County
Freeport
Loran Road/Route 261, NW of SR 17
FEMA
Roadway relocation/reconstruction - Florence Township

PLEASE REFER TO: SHPO LOG #020102620

November 16, 2020

Thomas Okite
Chastain and Associates, LLC
6832 Stalter Drive, Suite 100
Rockford, IL 61108

Dear Mr. Okite:

Thank you for requesting comments from our office concerning the possible effects of the project referenced above on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966 (16 USC 470), as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

The project area has not been surveyed and may contain prehistoric/historic archaeological resources. Accordingly, a Phase I archaeological reconnaissance survey to locate, identify, and record all archaeological resources within the project area will be required. This decision is based upon our understanding that there has not been any large scale disturbance of the ground surface (excluding agricultural activities) such as major construction activity within the project area which would have destroyed existing cultural resources prior to your project. If the area has been heavily disturbed prior to your project, please contact our office with the appropriate written and/or photographic evidence.

The area(s) that need(s) to be surveyed include(s) all area(s) that will be developed as a result of the issuance of the federal agency permit(s) or the granting of the federal grants, funds, or loan guarantees that have prompted this review. In addition to the archaeological survey please provide clear photographs of all structures in, or adjacent to, the current project area as part of the archaeological survey report.

Enclosed you will find an attachment briefly describing Phase I surveys and a list of archaeological contracting services. THE SHPO LOG NUMBER OR A COPY OF THIS LETTER SHOULD BE PROVIDED TO THE SELECTED PROFESSIONAL ARCHAEOLOGICAL CONTRACTOR TO ENSURE THAT THE SURVEY RESULTS ARE CONNECTED TO YOUR PROJECT PAPERWORK.

If you have further questions, please contact Jeff Kruchten, Chief Archaeologist at 217/785-1279 or jeffery.kruchten@illinois.gov.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

Enclosure



Illinois Department of Natural Resources

www.dnr.illinois.gov

JB Pritzker, Governor
Colleen Callahan, Director

Mailing address: State Historic Preservation Office, 1 Old State Capitol Plaza, Springfield, IL 62701

Stephenson County
Freeport
Loran Road/Route 261, NW of SR 17
Section:18-Township:26N-Range:7E
FEMA
Roadway relocation/reconstruction - Florence Township

PLEASE REFER TO: SHPO LOG #020102620

March 8, 2021

Duane Castaldi
U.S. Department of Homeland Security
Federal Emergency Management Agency
536 S. Clark St., 6th Floor
Chicago, IL 60605-1521

Dear Mr. Castaldi:

We have reviewed the documentation submitted for the referenced project(s) in accordance with 36 CFR Part 800.4. Based upon the information provided, no historic properties are affected. We, therefore, have no objection to the undertaking proceeding as planned.

Please retain this letter in your files as evidence of compliance with section 106 of the National Historic Preservation Act of 1966, as amended. This clearance remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Skeletal Remains Protection Act (20 ILCS 3440).

If you are an applicant, please submit a copy of this letter to the state or federal agency from which you obtain any permit, license, grant, or other assistance. If further assistance is needed contact Jeff Kruchten, Chief Archaeologist at 217/785-1279 or Jeffery.kruchten@illinois.gov.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

APPENDIX E

Public Notice & Comments

Certification of Publication

STATE OF ILLINOIS

Stephenson County, ss

I, Connie Kempel hereby certify that I am an authorized agent of the NORTHWESTERN ILLINOIS FARMER; I further certify that said newspaper is a newspaper as defined in 'an Act to revise the law in relation to notices' as amended by Act approved July 17, 1959-III. Revised Statutes, Chap. 100, Para. 1 & 5, printed and published in the Village of Lena, County of Stephenson and State of Illinois; that the advertisement or notice hereto attached, relating to the matter of FEMA PUBLIC NOTICE

EA for Loran Road Improvement project

Stephenson County Highway Dept.

has been published in said paper and in every copy and impression thereof for 1 weeks successively of the issues commencing

June 30 A.D. 20 21

ending A.D. 20

which are the dates of the first and last papers containing the same. I further certify that the said NORTHWESTERN ILLINOIS FARMER is a newspaper that has been regularly published for at least one year prior to the first publication of said notice.

Given under my hand this 30th day of

June A.D. 20 21

Publication Fees \$ 38.00

Connie Kempel

Federal Emergency
Management Agency
PUBLIC NOTICE
Notice of Availability of the Draft
Environmental Assessment
for the Loran Road Improvement Project
in Florence Township, Stephenson
County, Illinois

Environmental Assessment (EA) for the Loran Road Improvement Project (FEMA Disaster #DR-4461-IL, Project # 117416, PW 887).

Interested persons are hereby notified that the Federal Emergency Management Agency (FEMA)/Department of Homeland Security (DHS) is proposing to assist in the funding of a project located in Stephenson County, Illinois. In accordance with the National Environmental Policy Act (NEPA) of 1969 and the implementing regulations of FEMA, an EA is being prepared to assess the potential impacts of each of the proposed alternatives on the human and natural environment. This also provides public notice to invite public comments on the proposed project in accordance with Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands. In addition, this notice and the draft EA provide information to the public on potential impacts to historic and cultural resources from the proposed undertaking, as outlined in the National Historic Preservation Act (NHPA) of 1966.

This EA is available for agency and public review and comment for a period of 30 days. The EA is available on FEMA's website at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic-region/5>. The EA is also available on the Stephenson County Facebook page at [Stephenson County Highway Department - Home | Facebook](https://www.facebook.com/StephensonCountyHighwayDepartment-Home/) (<https://www.facebook.com/StephensonCountyHighwayDepartment/>). Interested parties may request an electronic copy of the EA from either of those websites.

A hard copy of this EA is available for review at the Stephenson County Highway Department, 295 West Lamm Road Freeport, IL 61032.

Written comments regarding this environmental action should be received no later than 5 p.m. on July 30, 2021, by mail to Duane Castaldi, Regional Environmental Officer, FEMA Region V, 536 South Clark Street, 6th Floor, Chicago, IL 60605-1521; or by email at FEMA-B5-Environmental@fema.dhs.gov. If no substantive comments are received by the above deadline, the draft EA and associated Finding of No Significant Impact (FONSI) will become final and be published by FEMA. Substantive comments will be addressed as appropriate in the final documents.

The public may request a copy of the final environmental documents from Duane Castaldi at the address listed above.

Minutes – Board of Town Trustees

State of Illinois, Stephenson County, Township of Florence

The Board of Town Trustees met at the office to the Town Clerk at the Township Garage
Office on Jan 11, 2021 at 7:00 P.M.

Present:

<u>Lynn Heeren</u>	Supervisor	<u>Brigitte Kloepping</u>	Town Clerk
<u>Larry Zumdahl</u>	Trustee	<u>Larry Krell</u>	Trustee
<u>Lee Eden</u>	Trustee	<u>Alan Harn</u>	Trustee

Lynn Heeren acting as Chairman, and Brigitte Kloepping as Clerk.

The following official business was transacted:

The minutes were read from last month's meeting. Supervisor, Lynn Heeren advised a correction to the General Road bills. Nebraska Iowa bill included an additional invoice for \$9.53, making total amount paid \$82.44. A motion was made by Larry Krell, second by Alan Harn to accept the minutes as read with noted correction.

The following bills were presented for payment from the General Road Fund:

SEE ATTACHED

The following bills were presented for payment from the General Town Fund:

29 – Will Murphy	Wage	\$3015.57
30 – Lynn Heeren	W2's & 1099 forms	\$36.10

A motion was made by Lee Eden, second by Larry Zumdahl to pay the preceding bills.
Motion carried.

Interest received for December is \$78.39

Supervisor Heeren reported the following bank balances as of December 31, 2020

Permanent Road Ending Balance	\$133,165.93	Building & Equip Ending Balance	^{76,770.80} \$73,770.80
Culvert Ending Balance	\$210,100.11	General Road Ending Balance	\$175,888.20
Town Fund Ending Balance	\$76,540.14	General Assistance Ending Balance	\$20,485.08

Old Business:

Loran Rd - Will Murphy provided paperwork from Chastain & Associates. This was submitted to FEMA, they returned for some corrections. The appraisal is done, pending from appraisal company. Will Murphy also advised there are bi-weekly meetings with the County, FEMA, IEMA, Chastain & Associates, & himself. If anyone is interested in attending, they are welcome.

Minutes – Board of Town Trustees

State of Illinois, Stephenson County, Township of Florence

**The Board of Town Trustees met at the office to the Town Clerk at the Township Garage
Office on March 8, 2021 at 7:00 P.M.**

Present:

<u>Lynn Heeren</u>	Supervisor	<u>Brigitte Kloepping</u>	Town Clerk
<u>Larry Zumdahl</u>	Trustee	<u>Larry Krell</u>	Trustee
<u>Lee Eden</u>	Trustee	<u>Alan Harn</u>	Trustee

Lynn Heeren acting as Chairman, and Brigitte Kloepping as Clerk.

The following official business was transacted:

The minutes were read from last month's meeting. No corrections or additions were made. A motion was made by Larry Krell, second by Alan Harn to accept the minutes as read.

The following bills were presented for payment from the General Road Fund:

SEE ATTACHED

The following bills were presented for payment from the General Town Fund:

37 – Will Murphy	Wage	\$3015.59
38 – IRS	941 tax	\$1049.60
39 – IL Dept of Rev	State Payroll tax	\$195.94
40 – Alan Harn	9 meetings – wage	\$393.29
41 – Larry Krell	10 meetings – wage	\$461.75
42 – Larry Zumdahl	11 meetings – wage	\$507.92
43 – Lee Eden	10 meetings – wage	\$437.00
44 – Brigitte Kloepping	Clerk wage	\$3146.40
45 – Lynn Heeren	Supervisor wage	\$5798.56

A motion was made by Larry Zumdahl, second by Lee Eden to pay the preceding bills.
Motion carried.

Interest received for January is \$38.40

Supervisor Heeren reported the following bank balances as of February 28, 2021

Permanent Road Ending Balance	\$124,446.54	Building & Equip Ending Balance	\$76,777.01
Culvert Ending Balance	\$210,149.04	General Road Ending Balance	\$159,963.59
Town Fund Ending Balance	\$69,116.49	General Assistance Ending Balance	\$20,486.74

Old Business:

Loran Rd - Will Murphy advised Chastain & Assoc is working on paperwork to be submitted to FEMA. Bob Jansen, owner of property on Loran Rd recently passed away. Unknown at this time if this presents any issues with purchasing the land for the repair of the road.

New Business:

Will Murphy advised the County has posted roads as of last week. Will is going to start posting Florence Twp roads beginning Tues, March 9th.

Annual meeting is Tues, April 13th at 7pm. The regular monthly meeting will follow the annual meeting.

Township resident, Barry Cummins attended the meeting.

There being no further business to come before this meeting, a motion was made by Alan Harn, second by Lee Eden to adjourn this meeting.

Meeting Adjourned

Brigitte Kloepping
Town Clerk

Minutes – Board of Town Trustees

State of Illinois, Stephenson County, Township of Florence

The Board of Town Trustees met at the office to the Town Clerk at the Township Garage
Office on Dec 14, 2020 at 7:00 P.M.

Present:

<u>Lynn Heeren</u>	Supervisor	<u>Brigitte Kloepping</u>	Town Clerk
<u>Larry Zumdahl</u>	Trustee	<u>Larry Krell</u>	Trustee
<u>Lee Eden</u>	Trustee	<u>Alan Harn</u>	Trustee

Lynn Heeren acting as Chairman, and Brigitte Kloepping as Clerk.

The following official business was transacted:

The minutes were read from last month's meeting. No corrections or additions were made.
A motion was made by Larry Krell, second by Lee Eden to accept the minutes as read.

The following bills were presented for payment from the General Road Fund:

SEE ATTACHED

The following bills were presented for payment from the General Town Fund:

28 – Northwest IL Farmer	Ad	19.00
--------------------------	----	-------

A motion was made by Lee Eden, second by Larry Zumdahl to pay the preceding bills.
Motion carried.

Interest received for November is \$75.31

Supervisor Heeren reported the following bank balances as of November 30, 2020

Permanent Road Ending Balance	\$160,046.64	Building & Equip Ending Balance	\$76,601.66
Culvert Ending Balance	\$215,264.54	General Road Ending Balance	\$181,902.45
Town Fund Ending Balance	\$75,523.89	General Assistance Ending Balance	\$20,459.26

Old Business:

Loran Rd - Will Murphy advised the appraiser will be out this week, on Thursday, to update plans for repairs to Loran Rd. To date, payments in the amount of \$51,836.25 has been paid to Chastain & Assoc.

Minutes – Board of Town Trustees

State of Illinois, Stephenson County, Township of Florence

The Board of Town Trustees met at the office to the Town Clerk at the Township Garage

Office on Nov 9, 2020 at 7:00 P.M.

Present:

<u>Lynn Heeren</u>	Supervisor	<u>Brigitte Kloepping</u>	Town Clerk
<u>Larry Zumdahl</u>	Trustee	<u>Larry Krell</u>	Trustee
<u>Lee Eden</u>	Trustee		Trustee

Lynn Heeren acting as Chairman, and Brigitte Kloepping as Clerk.

The following official business was transacted:

The minutes were read from last month's meeting. No corrections or additions were made. A motion was made by Larry Krell, second by Larry Zumdahl to accept the minutes as read.

The following bills were presented for payment from the General Road Fund:

89	Jay Leary	13 hrs @ \$15.00	\$170.43
90	Anthony Murphy	39.25 hrs @ \$15.00	\$487.57
91	Comed		\$60.45
92a	Civil Materials		\$68.76
92b	Civil Materials		\$50.00
93	Mobile Electronics		\$410.00
94	Lynn Heeren		\$51.54
95	941 tax		\$1,170.36
96	State tax		\$233.07
97	William murphy		\$3,009.58
98	Johnson Sign Shop		\$200.00

There were no bills presented for payment from the General Town Fund:

A motion was made by Lee Eden, second by Larry Zumdahl to pay the preceding bills.
Motion carried.

Interest received for October is \$78.98.

Supervisor Heeren reported the following bank balances as of October 31, 2020

Permanent Road Ending Balance	\$154,533.51	Building & Equip Ending Balance	\$75,446.47
Culvert Ending Balance	\$213,584.23	General Road Ending Balance	\$172,464.22
Town Fund Ending Balance	\$69,444.65	General Assistance Ending Balance	\$20,285.08

Lynn advised a deposit was made in the amount of \$1000 for fine money received.

Old Business:

Loran Rd - Will Murphy advised now that the corn has been picked, a representative from Chastain & Associates will contact Bob Jansen regarding purchase of land. Chastain & Associates will provide an update to the plan once that is done.

Supervisor, Lynn Heeren, advised she received a call from IEMA. The township needs to send a letter requesting funds before FEMA will pay anything. Lynn spoke to Bryan at the County building, pending confirmation on what is needed. We may need to obtain an attorney to assist with drawing up the letter. TOI may also be a good resource for assistance.

New Business:

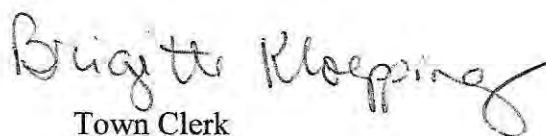
Supervisor, Lynn Heeren, advised the Levy is due at the next Township meeting. We will also set wages for the board for the next term.

The Township election will be in the spring. Lynn advised she spoke to Larry Krell, he will not be running for Trustee. Brigitte Kloepping will not be running for Town Clerk. Larry indicated if anyone knows of someone that would be interested, he would like to resign sooner. Lynn confirmed Lee Eden and Larry Zumdahl are planning to run for Trustee. Alan Harn was not in attendance, we were not able to confirm whether or not he would be running for Trustee.

Will Murphy received a check from Todd Schlacter in the amount of \$1800 for the snow plow from the old truck that has been replaced.

There being no further business to come before this meeting, a motion was made by Larry Krell, second by Lee Eden to adjourn this meeting.

Meeting Adjourned


Town Clerk

Minutes – Board of Town Trustees

State of Illinois, Stephenson County, Township of Florence

The Board of Town Trustees met at the office to the Town Clerk at the Township Garage
Office on October 13, 2020 at 7:00 P.M.

Present:

<u>Lynn Heeren</u>	<u>Supervisor</u>	<u>Brigitte Kloepping</u>	<u>Town Clerk</u>
<u>Larry Zumdahl</u>	<u>Trustee</u>	<u>Alan Harn</u>	<u>Trustee</u>
<u>Lee Eden</u>	<u>Trustee</u>		<u>Trustee</u>

Lynn Heeren acting as Chairman, and Brigitte Kloepping as Clerk.

The following official business was transacted:

The minutes were read from last month's meeting. No corrections or additions were made.
A motion was made by Lee Eden, second by Larry Zumdahl to accept the minutes as read.

The following bills were presented for payment from the General Road Fund:

77	Jay Leary 50 hrs @ \$15.00	\$655.50	
78	Nebraska-Iowa Industrial Fasteners	\$27.56	
79	Comed	\$30.60	
80a	Civil Materials	\$304.88	
80b	Civil Materials	\$642.50	
81	Pearl City Elevator	\$395.91	
82	IDES	\$41.41	
83	941 tax	\$1,602.46	
84	State tax	\$308.80	
85	Chastain & Associates	\$10,006.12	Perm Rd Fund
86	William Murphy	\$3,009.58	
87	JX Truck Center	\$115,968.00	
88	Monroe Truck Equipment	\$6,417.00	

The following bills were presented for payment from the General Town Fund:

26 – Lynn Heeren	reimburse stamps & ink cart.	104.56
27 – T & D Lawn Service	Aug/Sept Mowing	630.00

A motion was made by Alan Harn, second by Larry Zumdahl to pay the preceding bills.
Motion carried.

Interest received for September is \$77.26.

Supervisor Heeren reported the following bank balances as of September 30, 2020

Permanent Road Ending Balance	\$147,690.01	Building & Equip Ending Balance	\$71,911.40
Culvert Ending Balance	\$208,504.69	General Road Ending Balance	\$259,503.51
Town Fund Ending Balance	\$50,227.03	General Assistance Ending Balance	\$19,752.80

Old Business:

Loran Rd - Will Murphy presented the preliminary plans from Chastain & Assoc for road repairs. Currently, they anticipate purchasing $\frac{3}{4}$ - 1 acre to complete the project. Once the field is empty, they will stake off the land to be purchased & meet with Bob Jansen, the landowner.

New Business:

Will Murphy advised the new salt contract is for \$51+ per ton, down from \$91 last year. The LP contract was also received.

Supervisor, Lynn Heeren, advised a cemetery plot was sold at the Ellis Cemetery, in the amount of \$200.00. After some discussion regarding the current price of a plot, a motion was made by Alan Harn to increase the price to \$250.00. Motion second by Lee Eden. Motion passed with all ayes.

Will Murphy advised the new truck is having lettering completed. Also, Bonnell will be mounting the snowplow. Should be ready before the winter season starts.

There being no further business to come before this meeting, a motion was made by Alan Harn, second by Larry Zumdahl to adjourn this meeting.

Meeting Adjourned

Brigitte Klopping

Town Clerk

Minutes – Board of Town Trustees

State of Illinois, Stephenson County, Township of Florence

The Board of Town Trustees met at the office to the Town Clerk at the Township Garage
Office on March 8, 2021 at 7:00 P.M.

Present:

<u>Lynn Heeren</u>	Supervisor	<u>Brigitte Klopping</u>	Town Clerk
<u>Larry Zumdahl</u>	Trustee	<u>Larry Krell</u>	Trustee
<u>Lee Eden</u>	Trustee	<u>Alan Harn</u>	Trustee

Lynn Heeren acting as Chairman, and Brigitte Klopping as Clerk.

The following official business was transacted:

The minutes were read from last month's meeting. No corrections or additions were made. A motion was made by Larry Krell, second by Alan Harn to accept the minutes as read.

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The following bills were presented for payment from the General Town Fund:

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43 – Lee Eden	10 meetings – wage	\$437.00
44 – Brigitte Klopping	Clerk wage	\$3146.40
45 – Lynn Heeren	Supervisor wage	\$5798.56

A motion was made by Larry Zumdahl, second by Lee Eden to pay the preceding bills.
Motion carried.

Interest received for January is \$38.40

Supervisor Heeren reported the following bank balances as of February 28, 2021

Permanent Road Ending Balance	\$124,446.54	Building & Equip Ending Balance	\$76,777.01
Culvert Ending Balance	\$210,149.04	General Road Ending Balance	\$159,963.59
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Old Business:

Loran Rd - Will Murphy advised Chastain & Assoc is working on paperwork to be submitted to FEMA. Bob Jansen, owner of property on Loran Rd recently passed away. Unknown at this time if this presents any issues with purchasing the land for the repair of the road.

New Business:

Will Murphy advised the County has posted roads as of last week. Will is going to start posting Florence Twp roads beginning Tues, March 9th.

Annual meeting is Tues, April 13th at 7pm. The regular monthly meeting will follow the annual meeting.

Township resident, Barry Cummins attended the meeting.

There being no further business to come before this meeting, a motion was made by Alan Harn, second by Lee Eden to adjourn this meeting.

Meeting Adjourned

Brigitte Kloepping
Town Clerk

Florence Township Agenda:

March 8, 2021

✓ • Minutes from February meeting

✓ • General Road bills

✓ • Town bills

✓ • Bank balances:

✓ • Old business:
* Loran Road Update

✓ • New business:
Road Postings.

• Adjourn meeting

Annual Apr 13th @ 7:00

Reg @ 7:30

APPENDIX F

Technical Reports

Wetland Delineation of the Loran Road Location 1 Property

Located in
Freeport, Illinois, in Stephenson County



Created for: Thomas Okite, Chastain & Associates, LLC

Created by: Alyssa Robinson, Olson Ecological Solutions, LLC

September 2, 2020



ACKNOWLEDGEMENTS

Report Prepared for:
Thomas Okite, PE, Project Manager
Chastain & Associates, LLC
6832 Statler Drive, Suite 100
Rockford, IL, 61108
815.489.0050

Authors:

Report Written by:
Alyssa Robinson, Olson Ecological Solutions, LLC
2221 Hammond Dr., Schaumburg, IL 60173

Mapping by:
Kristin Adams, Tallgrass Restoration, LLC
2221 Hammond Dr., Schaumburg, IL 60173

Field Work by:
Rebecca Olson, Olson Ecological Solutions, LLC
Alyssa Robinson, Olson Ecological Solutions, LLC

Report Assistance by:
Rebecca Olson, Olson Ecological Solutions, LLC

Contact:
Alyssa Robinson
630.917.2401
alyssa@olsonecosolutions.com



Olson Ecological
Solutions, LLC



QUALIFICATIONS OF STAFF

Alyssa Robinson performed the delineation and wrote the report. Alyssa completed her Bachelor's degree of Science in Environmental Science at Wheaton College. Alyssa works for Olson Ecological Solutions as their Assistant Ecological Consultant and Field Operations Manager. Alyssa has worked with OES since 2019 to conduct wetland delineations, plant monitoring, and watershed planning. She completed her Wetland Delineator Certification through the Wetland Training Institute in 2018.

Rebecca Olson performed the delineation and reviewed the report. Rebecca Olson, the Founder and President of OES, holds a Master of Science degree in wildlife biology from Colorado State University. Her experience extends from wetland and stream delineation, restoration, and mitigation to ecological consulting and land conservation. She completed the Wetland Training Institute's Wetland Delineation course in 2010. Most of her time is balanced between wetland and stream mitigation and banking, writing and implementing Environmental Protection Agency-sponsored watershed based plans, and designing green infrastructure projects related to stormwater runoff. She also assists land transactions for conservation purposes.

Kristin Adams prepared both preliminary review and post-delineation mapping. Kristin completed her Bachelor's degree of Science in Biology at Illinois State University in 2010, obtained a GIS certification from Elmhurst College in 2015, and attended the Wisconsin DNR's Wetland Delineation course in 2016. Kristin works for Tallgrass Restoration as their GIS Specialist. Kristin has worked with OES for many years on numerous mapping and ecological design projects related to wetland and watershed planning and conducting wetland delineations.

For more information, visit the websites for OES and Tallgrass at the following links:

www.olsonecosolutions.com

www.tallgrassrestoration.com

INTRODUCTION

In July, Olson Ecological Solutions (OES) conducted a wetland delineation for an approximately 5-acre parcel planned for streambank stabilization by the applicant in Section 18, Township 26 North, Range 7 East, located near Freeport, Illinois in Stephenson County. At the time of investigation, the land use at the site was a wooded stream and agricultural fields bordering the woodland. Historically, the land use has not undergone significant changes (ISGS, 2008).

Thomas Okite of Chastain & Associates requested a wetland delineation of the site approximately bounded on the west and north by agricultural fields, the south by West Loran Rd., the east side by agricultural fields and a residential property. The location of the site was summarized in the Property Location Map (Figure 1). The purpose of the wetland delineation was to determine the location and size of wetlands associated with the Loran Road Relocation project.

As reviewed in the section *OES DELINEATED WETLANDS* below, all regulatory decisions and final determinations rest with the U.S. Army Corps of Engineers (ACOE). This report summarizes the process of our investigations and submits our findings. Marking the wetland boundaries with flagging and recording GPS points allow us to communicate a complex boundary to the ACOE. Due to the variance by the GPS unit, recorded GPS data is considered secondary to the flags placed in the field, which may be revised by the ACOE.

METHODS

Consultants from OES and TGR conducted the wetland delineation in July 2020 using the technical guidelines as described in the *Army Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory – ACOE, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (ACOE, 2010). This process included off-site procedures and a field investigation.

The off-site review of the study area included an analysis of the following maps and aerial photography, determination of normal precipitation, and a review of wetness signatures on recent aerial photography:

- Property Location Map
- Topographic Map
- Hillshade Elevation Map
- National Wetlands Inventory Map
- Floodzone Map
- Hydric Soils Map
- Recent Aerial Photography from 2005, 2012, 2014, 2015, 2017, and 2019
- Historical Aerial Photography from 1939
- Appendix A: Rainfall Determination Worksheets

We determined if the delineation time frame was drier than normal, normal, or wetter than normal using recent precipitation recorded at the local Freeport WWTP Weather Station for the months of May, June, and July compared to historic precipitation norms as determined by a W.E.T.S. Table created for years 1981-2010. We also considered antecedent precipitation found at Weather Underground's website. We then studied wetness signatures found on aerial photographs taken within times of normal precipitation and included these areas in our field investigation.

Field investigation took place during one day on July 22, 2020. After confirming the project boundary, we examined the site for the presence of natural or human induced changes affecting vegetation, soils, and hydrology, and we traversed the site in several places. We explored suspected wetland areas with mapped hydric soils, saturation or inundation visible on aerial imagery, areas indicated as wetlands by the National Wetlands Inventory, floodplains, and areas appearing as wetlands on historic imagery. We looked for drainage patterns and depressions in the landscape, and we conducted a final walk-through of the entire site.

We recorded data and marked a data point with a pink "Wetland Delineation" flag and recorded a GPS point in all suspected areas. For areas with mapped hydric soils, we looked for coinciding wetland vegetation and hydrology. In areas found to have the hydrology indicator of saturation or inundation visible on aerial imagery or if an area was a floodplain, drainage area, or indicated as wetland on the NWI map or historic aerial, we first looked for wetland vegetation and if found, we explored for additional hydrology indicators and then hydric soils.

We also took one point in assumed upland areas to confirm that they did not have wetlands present.

When wetland conditions were found, we took data at a point within the correlating upland and delineated the wetland boundary between the upland and wetland data points, dictated by site-specific wetland indicators. We labeled all data points with letters (e.g. AW for wetland and AU1, AU2, and BU for upland) and wetland boundaries with sequentially numbered flags (1, 2, 3, etc.).

RESULTS

Historical and Current Site Environmental Conditions

The subject property has been a wooded stream portion of Yellow Creek just north of East Loran Road and surrounded by agricultural fields for over 80 years. We gleaned the historic conditions from 1939 aerial photography (ISGS, 2008) for Illinois. We studied recent aerial photography for wetness signatures. The agricultural field in the northwest corner showed no wetness signatures, and this study was inconclusive for the remainder of the site due to heavy tree canopy blocking the view of the soil surface.

The topography at the site showed the lowest area on the property along the stream (Figure 2). The hillshade elevation also showed the drainage depression representing the stream and tributary on the north side of Loran Road, but also depicted depressions on the south side of Loran Road associated with an agricultural grassed waterway (Figure 3).

National Wetlands Inventory (NWI) was used to understand what existing wetlands were present at the site. The recorded wetlands were classified as a riverine, which encompassed Yellow Creek (Figure 4). The Federal Emergency Management Agency (FEMA) supplied flood hazard maps, which speculated areas prone to flooding. The areas within the creek and directly north and south of the creek presented flood hazards at this site (Figure 5).

Hydric soils were observed from data provided from the Natural Resources Conservation Service's Web Soil Survey. It showed one soil type potentially found on site with 1%-32% hydric levels present and four soil types with no hydric soils (Figure 6). The soil with hydric presence had a soil rating of 1%-32%. This soil was Muscatune silt loam, 2-5% slopes (51B), located south of Loran Road on the southwest side, and covered approximately 9% of the site (USDA NRCS, 2019). The remaining soils were not hydric.

All of the wetland points taken from this delineation showed hydric soils present in the form of Redox Dark Surfaces (F6), with the exception of data point CW, which qualified for both Redox Dark Surface (F6) and 2 cm Muck (A10).

Near the stream, hydrology for wetland areas was indicated by sparsely vegetated concave surfaces, sediment deposits, geomorphic position, and surface soil cracks. Upland areas near the stream lacked these hydrologic features. These wetland areas were also dominated by wetland plant species. Wetland points not associated with the main stem of the creek qualified for wetland areas due to wetland vegetation, surface water or geomorphic position and FAC-neutral test. The upland points were defined by a lack of hydrological features as well as predominantly upland plant species. One data point, AU2, had interesting hydrological features and hydric soil issues. The area surrounding AU2 was on a steep bank slope with washouts of concrete, asphalt, and other debris. The area had a change in vegetation and hydrology that made it seem likely to qualify for wetland and therefore move the wetland boundary pattern. However, even though the point qualified for hydrophytic vegetation and wetland hydrology, in the form of saturation to the surface, sediment deposits, and water-stained leaves, there was

no presence of hydric soils. Even though the area had a higher elevation on the streambank slope, water seemed to be seeping out of the soil. It is possible that a spring is located at this area. Wherever the water is coming from, it has not been present long enough at point AU2 to form hydric soils.

Climate in the three-month window before the investigation was normal. According to the Weather Underground website (2018), it rained 1.03 inches over the seven days prior to the delineation.

Wetlands

The chart below describes the wetland basins found on the site in terms of topography and drainage:

Wetland Basins		
Wetland(s)	Description	Representative Data Point(s)
1	This wetland surrounded Yellow Creek, where the creek was within the property lines, along with two small drainages that enter into Yellow Creek. It had the lowest elevation on the site and was within the 1% Annual Flood Hazard. It contained the riverine found on NWI as Yellow Creek.	AW, AU1, AU2, BU
2	This wetland surrounded a small depression with surface water present located within a grassed waterway just south of Loran Road. A drainage tile coming from the agricultural field south of the site empties into this small depression and then carries the water to a culvert under Loran Road into Yellow Creek (Wetland 1). According to NRCS Web Soil Survey, it had soils with hydric presence at 1%-32%.	CW, CU
3	This wetland surrounded another small depression within the grassed waterway. This wetland is just south of Wetland 2. According to NRCS Web Soil Survey, it had soils with hydric presence at 1%-32%.	DW, DU

More information regarding each indicator is detailed in the below charts that describe vegetation, hydrology, and soils for each wetland and associated upland.

Vegetation

Overall, vegetation on the site was native and unmowed. Along the roadsides were more disturbed, mowed vegetation and within the grassed waterway and agricultural fields were grass species and crops.

For each wetland basin and associated uplands, details of the vegetation are described below:

Vegetation			
Wetland(s)	Hydrophytic Vegetation Present	Description	Representative Data Point(s)
1	<i>Bidens frondosa</i> , <i>Impatiens capensis</i> , <i>Viola sororia</i> , <i>Cryptotaenia canadensis</i> , <i>Pilea pumila</i> , <i>Urtica dioica</i>	The vegetation surrounding Yellow Creek was native. <i>Impatiens capensis</i> and <i>Pilea pumila</i> were good indicators of wetlands near the stream. The upland species were characterized by <i>Juglans nigra</i> , <i>Prunus virginiana</i> , <i>Tilia americana</i> , and the distinct absence of <i>Impatiens capensis</i> and <i>Pilea pumila</i> . Additional upland points were taken in areas when vegetation seemed to be hydrophytic.	AW, AU1, AU2, BU
2	<i>Phalaris arundinacea</i> , <i>Echinochloa crus-galli</i>	The overall vegetation in this area was roadside weedy species. The shift to upland occurred when <i>Daucus carota</i> , <i>Bromus catharticus</i> , and <i>Sambucus canadensis</i> became dominant.	CW, CU
3	<i>Echinochloa crus-galli</i> , <i>Persicaria maculosa</i> , <i>Setaria parviflora</i> , <i>Cyperus strigosus</i> , <i>Carex vulpinoidea</i> , <i>Populus deltoides</i>	The overall vegetation in this area was graminoid species and other weedy forbs. The shift to upland occurred when <i>Phleum pratense</i> and <i>Setaria helvola</i> became dominant.	DW, DU

Hydrology

Wetland hydrology for wetland 1 was defined by sediment deposits, sparsely vegetated concave surface, surface soil cracks, and aquatic fauna in the form of mussel shells. Wetland hydrology for wetland 2 was defined by surface water and a drainage pattern. Wetland hydrology for wetland 3 was defined by a combination of geomorphic position and hydrophytic vegetation passing a FAC-neutral test.

For each wetland basin and associated uplands, details of the hydrology are described below:

Hydrology				
Wetland(s)	Wetland Hydrology Present	Indicators	Description	Representative Data Point(s)
1	Yes	Primary: High Water Table (A2), Saturation (A3), Sediment Deposits (B2), Sparsley Concave Surface (B8) Secondary: Surface Soil Cracks (B6), Geomorphic Position (D2), FAC-Neutral Test (D5)	Wetland hydrology was present in the form of a high water table at 12 inches and saturation at 10 inches. There were also sediment deposits on plants and a sparsely vegetated concave surface. It was located at a toe slope next to the creek. The upland points were all at a higher elevation. AU1 and BU did not have a water table or saturation and had no local relief. AU2 did pass for hydrology with saturation to the soil surface and sediment deposits. AU2, did not have hydric soils.	AW, AU1, AU2, BU
2	Yes	Primary: Surface Water (A1), High Water Table (A2), Saturation (A3) Secondary: Drainage Pattern (B10)	Wetland hydrology was present in the form of surface water present in the drainage depression, a high water table, and saturation to the soil surface. The upland point was more elevated and did not have any surface water present.	CW, CU
3	Yes	Primary: None Secondary: Geomorphic Position (D2), FAC-Neutral Test (D5)	Wetland hydrology was present due to a combination of both geomorphic position and by passing the FAC-neutral test. No surface water, saturation, or water table was present. The upland point exhibited wetland hydrology in the form of drift deposits. The upland point did not have hydrophytic vegetation or hydric soils.	DW, DU

Soils

The site contained both hydric and non-hydric soils. The most common indicator was Redox Dark Surface (F6). Soils were a critical indicator in delineating the wetland boundary. All upland points where soils were observed did not have hydric soils. One particularly unique data point was AU2. At this upland point located at the upper end of the backslope, surface water was dripping out of the soil and hydrophytic vegetation was present, but hydric soils were not present. We expected the wetland boundary to jut out here and include this very wet area; however, the lack of hydric soils prevented the inclusion of this area. At this data point, the soil and hydrology were naturally problematic as it was adjacent to a sharp bend (over 90 degrees) in Yellow Creek and likely that debris and high-water velocity washes against this slope. The soils and hydrology were also significantly disturbed as it was located just below the asphalt caving in at Loran Road. This area could be characterized as a man-induced wetland based on vegetation and hydrology alone according to Subsection 4 of the Corps Delineation Manual (1987), except that the hydrophytic vegetation is being maintained only because of man-induced wetland hydrology that would no longer exist if the road would be repaired. Therefore, we did not consider the area a wetland.

The site exhibited one mapped series of soils with hydric presence of 1% - 32% (51B) and four series of non-hydric soils (105C, 8239A, 199A, and 199B) as summarized below per basin. Batavia silt loam, 5-10% slopes, 105C accounted for 1.5 acres (31.1%) of the project site. Dorchester silt loam, 0-2% slopes, occasionally flooded, 8239A accounted for 1.3 acres (27.5%) of the project site. Plano silt loam, 0-2% slopes, 199A accounted for 1.3 acres (27.2%) of the project site. Muscatune silt loam, 2-5% slopes, 51B accounted for 0.4 acres (9%) of the project site. Plano silt loam, 2-5% slopes, 199B accounted for 0.3 acres (5.2%) of the project site.

OES Delineated Wetland Boundaries and Waters of the United States

Wetlands on the subject property were indicated by vegetation, hydrology, and soils as described above. The National Wetlands Inventory (NWI), which identified a riverine known as Yellow Creek, and FEMA Flood Hazard, which identified Yellow Creek and its streambanks, both suggested that wetlands were likely to be found in those areas. The boundaries of Wetland 1, shown in Figure 7: 1939 Historical Aerial Photography, confirmed these observations and encompassed both the NWI riverine and FEMA Flood Hazard area. The FEMA Flood Hazard encompassed a larger area than what was deemed to be wetland, while the NWI showed a smaller area, only the actual creek, than what was deemed wetland. On the property, there were two drainage swales that drained into the creek and were included in Wetland 1's boundaries. These two drainages were not identified by NWI or FEMA Flood Hazard. The first drainage was located on the southeast side of Wetland 1; this drainage receives water from the south from a culvert that runs under Loran Road. The other drainage swale was located on the west side of Wetland 1. The drainage consisted of a concave channel with sparse vegetation and extended from the project area boundary to Yellow Creek. This channel exhibited soil cracks and some sediment deposits. The concave channel was generally straight and had a relatively consistent width of approximately 2 feet and gently sloped banks extending out to a total width of about 6 feet until it slightly flared at its confluence with the river. The mapped soils for Wetland 1 were non-hydric.

The indicators that were most important for delineating Wetland 1 were the presence of facultative wet vegetation, particularly *Pilea pumula* and *Impatiens capensis*. To differentiate the wetland from upland, some upland and facultative upland species were useful in determining the wetland boundary, including *Polygonatum commutatum*, *Lonicera maackii*, *Juglans nigra*, *Tilia americana*, and *Prunus virginiana*. Hydrology was another revealing parameter, as a sparsely vegetated concave surfaces, sediments deposits, soil surface cracks, and aquatic fauna via mussel shells all aided in determining wetland boundaries.

One perplexing area located just outside Wetland 1 on the southwest side of the site was the area surrounding data point AU2. There was a washout here with an accumulation of debris collecting from the creek as well as Loran Road's asphalt eroding away toward the creek. Further south of AU2 and closer to Loran Road, the road's asphalt has started to cave in a fall down the slope towards the creek. Water was trickling down the hillside towards the creek. The data point AU2 revealed upland soils, although there were signs that the soils were in the process of developing into wetland soils. Perhaps the trickle of water has been recently exposed by the washout, creating different conditions that are trending toward wetland. Wetland hydrology and vegetation were present, but the soils had not yet had enough time to develop into wetland soils. Data point AU2 was located within the FEMA Flood Hazard, but it was not within NWI nor any mapped NRCS Web Soil Survey hydric soils.

Wetland 2 was located just south of Loran Road. A small swale-like depression with standing water received water from an agricultural drain tile outlet and then carried the water under Loran Road through a culvert into the drainage swale within Wetland 1. NWI, FEMA Flood

Hazard, and NRCS Web Soil Survey did not identify this area as supporting wetland habitat or having mapped hydric soils. The indicators that were most important for delineating Wetland 2 were the presence of standing surface water, drainage patterns, mucky soils, and facultative vegetation. The upland area was differentiated from the wetland area by having a higher elevation, lack of drainage patterns and standing water, and upland vegetation, including *Sambucus canadensis*, *Daucous carota*, and *Pastinaca sativa*.

Wetland 3 was located just south of Wetland 2 within a small depression of an agricultural grassed waterway. This wetland was the only wetland that had mapped hydric soils according to the NRCS Web Soil Survey. NWI and FEMA Flood Hazard did not identify this area as likely to support wetland habitat. The indicators that were most important for delineating Wetland 3 were the presence of facultative wet vegetation, particularly *Echinocloa crus-galli*, and the combined occurrence of geomorphic position and passing the FAC-neutral test. The correlating upland was defined within an area having drift deposits within the grassed waterway leading to the depression, the only area with potential and visible hydrology indicators. Upland vegetation occurred within this drainage, dominated by *Phleum pratense* and *Setaria helvola*. Soils were not hydric.

The boundaries of each wetland basin were reflected in the Delineated Wetland Boundaries Map. Figure 7: 1939 Historical Aerial Photography shows the entirety of the wetlands found on site, while Figure shows close up detail of the data points. The wetlands found were described as “Wetland 1”, “Wetland 2”, and “Wetland 3.” Acreages and descriptions were as follows:

Wetland Area	
Wetland(s)	Acres
1	1.13
2	0.002
3	0.006

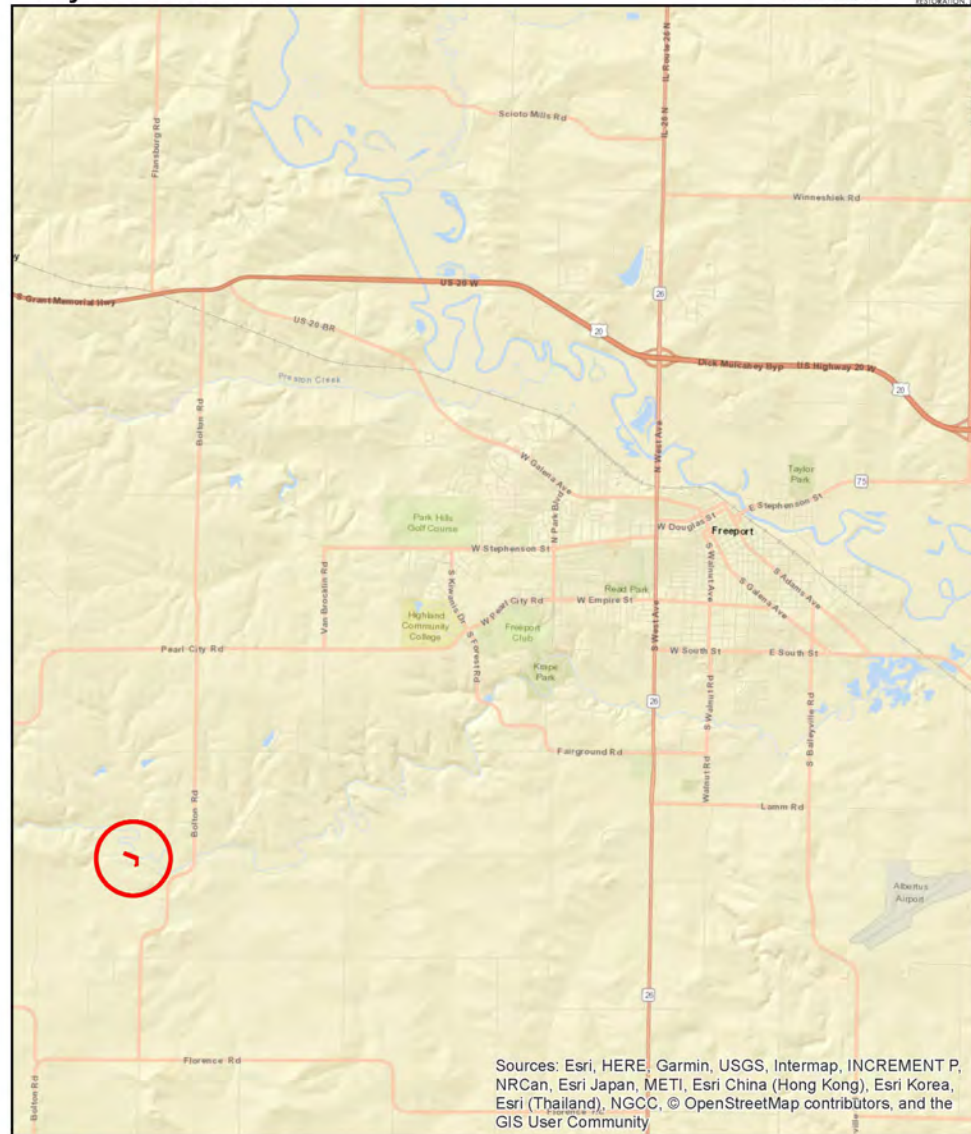
OES notes that final authority regarding regulatory jurisdiction rests with the USACOE and that the delineation is not final until so designated by the Corps. Notification of a final Jurisdictional Determination should be received from the Corps prior to any construction on the property. If any construction is planned for areas within a wetland it may require the filing of a joint permit to the USACOE and Illinois Department of Natural Resources.

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Figure 1: Project Location

East Loran Road Project Location



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

 East Loran Road Boundary

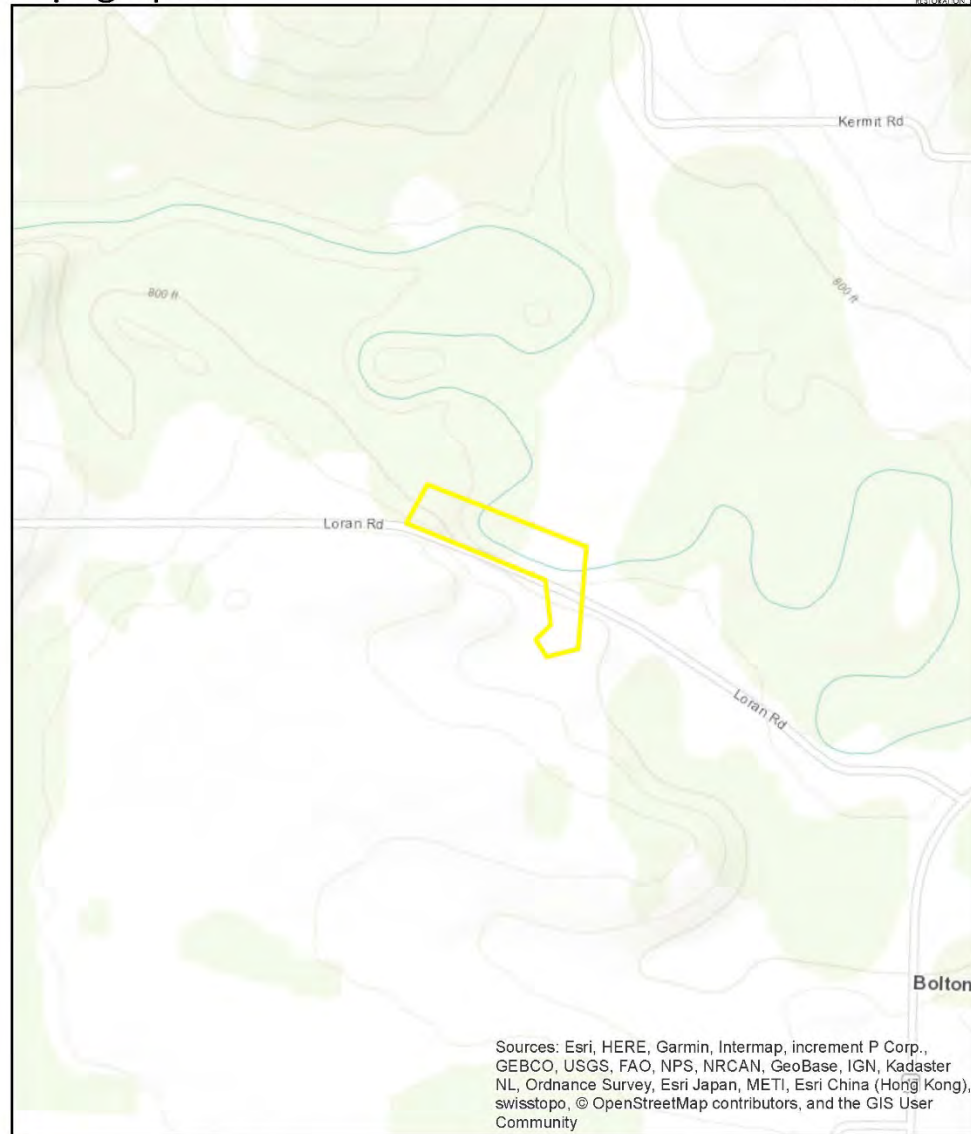
0 890 1,780 2,670 3,560
Meters




Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: ESRI
Edited August 4, 2020

Figure 2: Topography Map

East Loran Road Topographic



 East Loran Road Boundary

0 75 150 225 300
Meters



Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: ESRI
Edited July 7, 2020

Figure 3: Hillshade Elevation Map

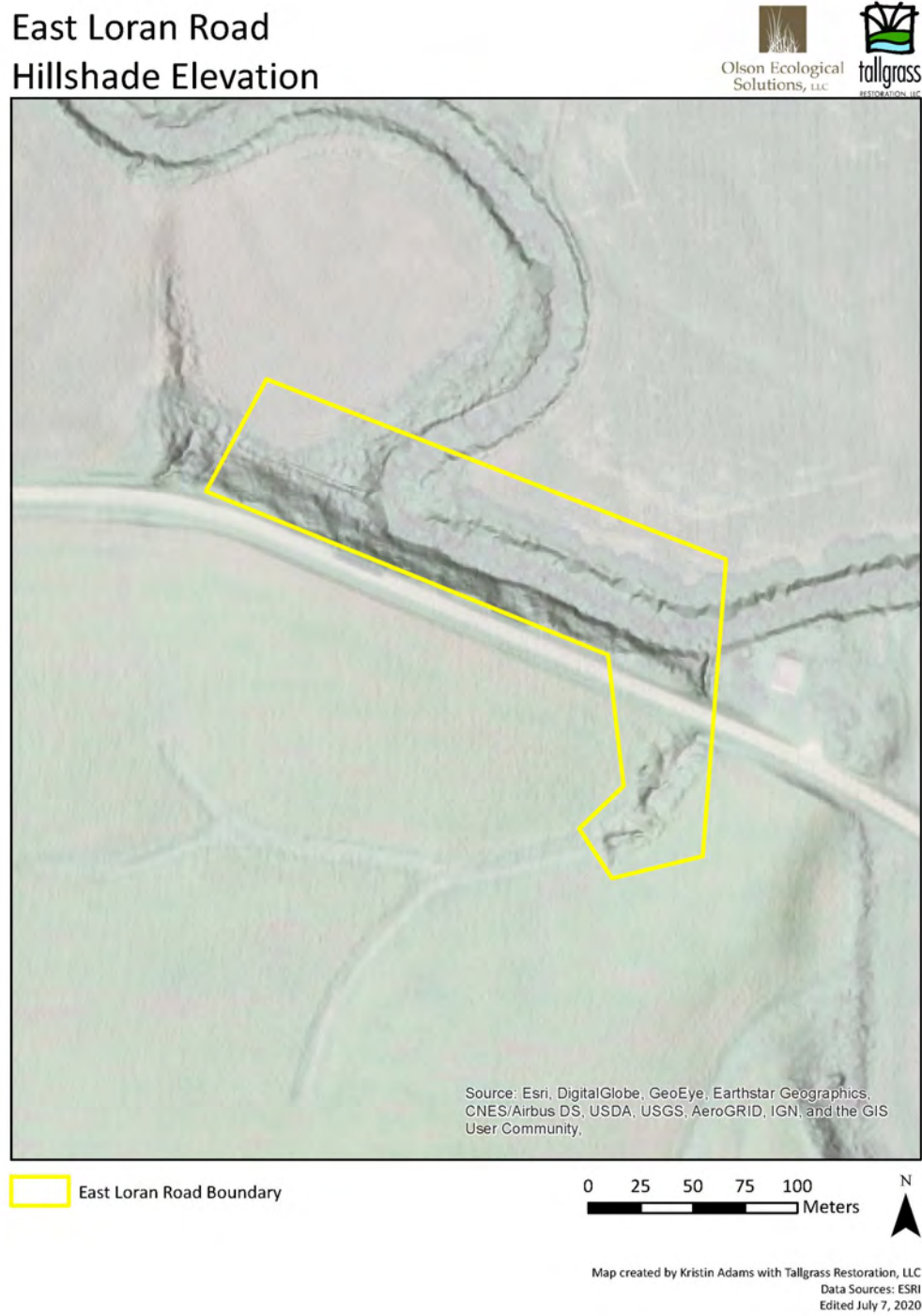


Figure 4: National Wetlands Inventory Map



Figure 5: FEMA Flood Hazard Map



Figure 6: Hydric Soils




Figure 7: 1939 Historical Aerial Photography

**East Loran Road
July 9, 1939 Historic Aerial**



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

 East Loran Road Boundary

0 30 60 90 120
Meters



Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: ESRI, USGS
Edited July 7, 2020

Figure 8: 2005 Aerial Photography



Figure 9: 2012 Aerial Photography



Figure 10: 2014 Aerial Photography

East Loran Road
July 7, 2014 Aerial



 East Loran Road Boundary

0 30 60 90 120
Meters



Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: ESRI, USGS
Edited July 7, 2020

Figure 11: 2015 Aerial Photography



Figure 12: 2017 Aerial Photography

East Loran Road
August 23, 2017 Aerial



 East Loran Road Boundary

0 30 60 90 120
Meters




Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: ESRI, ISGS
Edited July 7, 2020

Figure 13: 2019 Aerial Photography

East Loran Road
August 2, 2019 Aerial



 East Loran Road Boundary

0 30 60 90 120
Meters



Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: USGS
Edited August 16, 2020

Figure 14: OES Delineated Wetlands Boundaries Map

East Loran Road Delineated Wetland Boundary



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

0 10 20 30 40
Meters



- East Loran Road Boundary
- Data Point
- Delineated Wetland Boundary

Map created by Kristin Adams with Tallgrass Restoration, LLC
Data Sources: ESRI
Edited August 12, 2020

Figure 15: Wetlands Data Points Detail Map



GIS CITATIONS

All datum is North American 1983

Type: 2014 Aerial
Source/Agency: USDA-FSA-APFO
Date: July 2014
Description: Aerial Imagery from USGS Earth Explorer
<http://earthexplorer.usgs.gov/>
Data Accessed: 7/7/2020

Type: 2017 Aerial
Source/Agency: USDA-FSA-APFO
Date: August 2017
Description: Aerial Imagery from USGS Earth Explorer
<http://earthexplorer.usgs.gov/>
Data Accessed: 7/7/2020

Type: 2019 Aerial
Source/Agency: USDA-FSA-APFO
Date: August 2019
Description: Aerial Imagery from USGS Earth Explorer
<http://earthexplorer.usgs.gov/>
Data Accessed: 8/16/2020

Type: Aerial Images from Google Earth.
Date: As marked, 2005, 2012, 2015
Description: Each aerial was from Google's Timeline feature.

Type: Floodplain
Source/Agency: Federal Emergency Management Agency (FEMA)
Date: August 16, 2016
Description: FEMA Floodplain Map
<https://msc.fema.gov/nfhl>
Data accessed 7/7/2020

Type: Hillshade Elevation
Source/Agency: ESRI
Date: June 24, 2014 (frequently updated)
Description: This map provides a hillshaded surface generated dynamically using a multi-directional hillshade server-side custom function on the World Elevation Terrain layer.
<https://www.arcgis.com/home>
Data Accessed: 7/7/2020

Type: Historical Aerial
Source/Agency: Illinois State Geological Survey (ISGS)
Date: Version 4, 2008
Description: Aerial imagery from 1939
<https://clearinghouse.isgs.illinois.edu/data/imagery/1937-1947-illinois-historical-aerial-photography>
Data accessed 7/7/2020

Type: Hydric Soils
Source/Agency: United State Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS) Web Soil Survey
Date: February 2006
Description: Hydric Soils Rating by map unit
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>
Data accessed 7/7/2020

Type: National Wetlands Inventory
Source/Agency: United States Fish and Wildlife Service (USFWS)
Date: 2010
Description: Areas of known wetlands
<http://www.fws.gov/wetlands/Data/Data-Download.html>
Data Accessed: 7/7/2020

Type: World Imagery
Source/Agency: ESRI
Date: December 12, 2009 (frequently updated)
Description: This layer presents low-resolution satellite imagery for the world and high-resolution satellite and aerial imagery, typically within 3-5 years of currency, for most of the world. <https://www.arcgis.com/home>
Data Accessed: 7/8/2020

Type: World Topographic Map
Source/Agency: ESRI
Date: June 13, 2013 (frequently updated)
Description: This world topographic map includes boundaries, cities, water features, physiographic features, parks, landmarks, transportation, and buildings.
<https://www.arcgis.com/home>
Data Accessed: 7/7/2020

Type: World Street Map

Source/Agency: ESRI

Date: December 12, 2009 (frequently updated)

Description: This layer presents highway-level data for the world and street-level data for North America, Europe, Africa, parts of the Middle East, Asia, and more.

<https://www.arcgis.com/home>

Data Accessed: 7/7/2020

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Appendix A

Rainfall Determination Worksheets

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/7/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	4/1/2005	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)							
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month*	March	1.19	2.50	0.87	D	1	3	3
2nd Prior Month*	February	0.67	1.85	1.61	N	2	2	4
3rd Prior Month*	January	0.78	1.65	3.73	W	3	1	3
*compared to photo/observation date								Sum 10

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions:	prior period has been normal
---------------------	--

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/7/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	9/27/2012	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)								
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns	
1st Prior Month*	August	2.88	5.22	2.75	D	1	3	3	
2nd Prior Month*	July	2.55	4.74	0.69	D	1	2	2	
3rd Prior Month*	June	2.88	5.56	1.30	D	1	1	1	
*compared to photo/observation date								Sum	6

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions:	prior period has been drier than normal
---------------------	--

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/7/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	7/7/2014	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)								
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns	
1st Prior Month*	June	2.88	5.56	8.35	W	3	3	9	
2nd Prior Month*	May	2.52	4.87	7.08	W	3	2	6	
3rd Prior Month*	April	2.26	3.93	1.55	D	1	1	1	
*compared to photo/observation date								Sum	16

*compared to
photo/observation date

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions:	prior period has been wetter than normal
---------------------	---

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/7/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	9/8/2015	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)								
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns	
1st Prior Month*	August	2.88	5.22	3.39	N	2	3	6	
2nd Prior Month*	July	2.55	4.74	3.08	N	2	2	4	
3rd Prior Month*	June	2.88	5.56	8.35	W	3	1	3	
*compared to photo/observation date								Sum	13

*compared to
photo/observation date

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions:	prior period has been normal
---------------------	-------------------------------------

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	7/7/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	8/23/2017	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)							
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
	1st Prior Month*	August	2.88	5.22	2.20	D	1	3
	2nd Prior Month*	July	2.55	4.74	10.45	W	3	2
	3rd Prior Month*	June	2.88	5.56	5.87	W	3	1
							Sum	12

*compared to
photo/observation date

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions:	prior period has been normal
---------------------	--

NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19

Date	8/24/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	8/2/2019	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)							
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns
1st Prior Month* 2nd Prior Month* 3rd Prior Month*	July	2.55	4.74	3.08	N	2	3	6
	June	2.88	5.56	4.31	N	2	2	4
	May	2.52	4.87	8.01	W	3	1	3
	*compared to photo/observation date							

Note: If sum is

6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:

Dry =1
Normal =2
Wet =3

Conclusions: prior period has been normal

**NRCS method - Rainfall Documentation Worksheet Hydrology Tools for Wetland Determination
NRCS Engineering Field Handbook Chapter 19**

Date	7/21/2020	Landowner/Project	East Loran Rd
Weather Station	Freeport WWTP	State	IL
County	Stephenson	Growing Season	Yes
Photo/obs Date	7/22/2020	Soil Name	

shaded cells are locked or calculated	Long-term rainfall statistics (from WETS table or State Climatology Office)								
	Month	30% chance <	30% chance >	Precip	Condition Dry, Wet, Normal	Condition Value	Month Weight Value	Product of Previous 2 Columns	
1st Prior Month*	July	2.55	4.74	3.92	N	2	3	6	
2nd Prior Month*	June	2.88	5.56	4.09	N	2	2	4	
3rd Prior Month*	May	2.52	4.87	6.23	W	3	1	3	
*compared to photo/observation date								Sum	13

Note: If sum is	
6 - 9	prior period has been drier than normal
10 - 14	prior period has been normal
15 - 18	prior period has been wetter than normal

Condition value:
Dry =1
Normal =2
Wet =3

Conclusions:	prior period has been normal
---------------------	--

Appendix B

Data Forms for Data Points

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: AU1
 Investigator(s): Alyssa Robinson & Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None
 Slope (%): 0-2% Lat: 42.248314 Long: -89.728775 Datum: N American 1983
 Soil Map Unit Name: 105C NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>40' by 18'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>62.5%</u> (A/B)
1. <u>Celtis occidentalis</u>	<u>15%</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Populus deltoides</u>	<u>20%</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Tilia americana</u>	<u>25%</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Prunus serotina</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>	
5. <u>Prunus virginiana...tree stratum cont. below</u>	<u>5%</u>	<u>N</u>	<u>FACU</u>	
<u>85%</u> = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: <u>10' by 18'</u>)				
1. <u>Lonicera maackii</u>	<u>2%</u>	<u>N</u>	<u>UPL</u>	
2. <u>Rhamnus cathartica</u>	<u>5%</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Prunus virginiana</u>	<u>10%</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Ribes cynosbati</u>	<u>3%</u>	<u>N</u>	<u>FAC</u>	
5. <u>Celtis occidentalis</u>	<u>5%</u>	<u>Y</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
<u>25%</u> = Total Cover				
Herb Stratum (Plot size: <u>5' radius</u>)				
1. <u>Polygonatum commutatum</u>	<u>5%</u>	<u>N</u>	<u>UPL</u>	
2. <u>Carex blanda</u>	<u>3%</u>	<u>N</u>	<u>FAC</u>	
3. <u>Viola sororia</u>	<u>3%</u>	<u>N</u>	<u>FAC</u>	
4. <u>Cryptotaenia canadensis</u>	<u>50%</u>	<u>Y</u>	<u>FAC</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u>Sanicula odorata</u>	<u>5%</u>	<u>N</u>	<u>FAC</u>	
6. <u>Elymus virginicus</u>	<u>5%</u>	<u>N</u>	<u>FACW</u>	
7. <u>Prunus virginiana</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>	
8. <u>Allium cernuum</u>	<u>3%</u>	<u>N</u>	<u>FACU</u>	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<u>94%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				

Remarks: (Include photo numbers here or on a separate sheet.)

Tree stratum continued...Juglans nigra 10% N FACU, Morus alba 5% N FAC

SOIL Sampling Point: AU1

Sampling Point: AU1

HYDROLOGY

Wetland Hydrology Indicators:

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: AU2
 Investigator(s): Alyssa Robinson & Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Backslope Local relief (concave, convex, none): Concave
 Slope (%): 5% Lat: 42.248825 Long: -89.730593 Datum: N American 1983
 Soil Map Unit Name: 105C NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Creek washouts, trickling water at higher elevation	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>5' radius</u>) 1. <u>Pilea pumila</u> 40% Y FACW 2. <u>Impatiens capensis</u> 30% Y FACW 3. <u>Ambrosia trifida</u> 4% N FAC 4. <u>Hacklia virginiana</u> 2% N FACU 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 76% = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

SOIL

Sampling Point: AU2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2	88	10YR 5/6	2	C	M	CL	mucky mineral
0-6	10YR 2/1	10					CL	
6-10	10YR 4/4	78					SiC	
6-10	10YR 4/1	20					SiC	
6-10	10YR 2/1	2					SiC	
10-11	10YR 4/2	90					C	
10-11	10YR 2/1	10					C	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock
Depth (inches): 11"

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Bottom of pit at 11 inches, then hit rock.
Seems likely to be forming wetland, but the soils have not responded yet.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input checked="" type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 0"
Water Table Present? Yes ☐ No ☒ Depth (inches): 0"
Saturation Present? Yes ☒ No ☐ Depth (inches): 0"
(includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral Test passes with 2:1
Saturation to the surface, water trickling out of ground.
No water table, but restrictive layer at 11".

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: AW
 Investigator(s): Alyssa Robinson & Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave
 Slope (%): 58 Lat: 42.248291 Long: -89.728746 Datum: N American 1983
 Soil Map Unit Name: 105C NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>2' by 10'</u>) 1. <u>Bidens frondosa</u> 3% N FACW 2. <u>Impatiens capensis</u> 7% Y FACW 3. <u>Viola sororia</u> 5% Y FAC 4. <u>Cryptotaenia canadensis</u> 3% N FAC 5. <u>Pilea pumila</u> 1% N FACW 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 18% = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

SOIL

Sampling Point: AW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	7.5YR 3/1	93	5YR 5/8	7	C	M	SiCL	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Bottom of pit at 12 inches.
Water table at 12 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input checked="" type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input checked="" type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9) |
| <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- ☒ Surface Soil Cracks (B6)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☒ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): _____
 Water Table Present? Yes ☒ No ☐ Depth (inches): 12"
 Saturation Present? Yes ☒ No ☐ Depth (inches): 10"
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral Test passes with 1:0

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: BU
 Investigator(s): Alyssa Robinson & Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None
 Slope (%): 0-2% Lat: 42.249191 Long: -89.731099 Datum: N American 1983
 Soil Map Unit Name: 8239A NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☒, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Vegetated is significantly disturbed as this area was on the edge of a soybean agricultural field.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>70' by 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
1. <u>Juglans nigra</u>	<u>10%</u>	<u>Y</u>	<u>FACU</u>															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Sapling/Shrub Stratum (Plot size: <u>18' by 10'</u>) 1. <u>Sambucus canadensis</u> <u>10%</u> <u>Y</u> <u>UPL</u> 2. _____ 3. _____ 4. _____ 5. _____ <u>10%</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>190</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.7</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>70</u> (A)	<u>190</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>50</u>	x 2 = <u>100</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>10</u>	x 4 = <u>40</u>																	
UPL species <u>10</u>	x 5 = <u>50</u>																	
Column Totals: <u>70</u> (A)	<u>190</u> (B)																	
Herb Stratum (Plot size: <u>5' radius</u>) 1. <u>Pilea pumila</u> <u>40%</u> <u>Y</u> <u>FACW</u> 2. <u>Urtica diocea</u> <u>10%</u> <u>Y</u> <u>FACW</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ <u>50%</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) Planted soybean field reference site. Soybean vegetation had 15% absolute cover.																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		

SOIL

Sampling Point: BU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

Bottom of pit at 16 inches.
Very dry and lightly colored soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____
Water Table Present? Yes _____ No ☒ Depth (inches): _____
Saturation Present? Yes _____ No ☒ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral Test fails with 2:2

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: CU
 Investigator(s): Alyssa Robinson & Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None
 Slope (%): 20% Lat: 42.248051 Long: -89.72876 Datum: N American 1983
 Soil Map Unit Name: 105C NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sampled in small area with a lower depression than the rest of the upland, but even this depression did not qualify for wetland.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
Sapling/Shrub Stratum (Plot size: <u>5' radius</u>) 1. <u>Sambucus canadensis</u> <u>10%</u> <u>Y</u> <u>UPL</u> 2. _____ 3. _____ 4. _____ 5. _____ <u>10%</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>25</u></td> <td>x 2 = <u>50</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>26</u></td> <td>x 4 = <u>104</u></td> </tr> <tr> <td>UPL species <u>107</u></td> <td>x 5 = <u>535</u></td> </tr> <tr> <td>Column Totals: <u>168</u> (A)</td> <td><u>719</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.28</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>26</u>	x 4 = <u>104</u>	UPL species <u>107</u>	x 5 = <u>535</u>	Column Totals: <u>168</u> (A)	<u>719</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>25</u>	x 2 = <u>50</u>																	
FAC species <u>10</u>	x 3 = <u>30</u>																	
FACU species <u>26</u>	x 4 = <u>104</u>																	
UPL species <u>107</u>	x 5 = <u>535</u>																	
Column Totals: <u>168</u> (A)	<u>719</u> (B)																	
Herb Stratum (Plot size: <u>5' radius</u>) 1. <u>Urtica diocea</u> <u>5%</u> <u>N</u> <u>FACW</u> 2. <u>Bromus catharticus</u> <u>30%</u> <u>Y</u> <u>UPL</u> 3. <u>Daucus carota</u> <u>60%</u> <u>Y</u> <u>UPL</u> 4. <u>Phalaris arundinacea</u> <u>10%</u> <u>N</u> <u>FACW</u> 5. <u>Stellaria media</u> <u>10%</u> <u>N</u> <u>FACU</u> 6. <u>Pastinaca sativa</u> <u>5%</u> <u>N</u> <u>UPL</u> 7. <u>Echinocystus lobata</u> <u>2%</u> <u>N</u> <u>FACW</u> 8. <u>Lactuca serriola</u> <u>8%</u> <u>N</u> <u>FACU</u> 9. <u>Viola sororia</u> <u>7%</u> <u>N</u> <u>FAC</u> 10. <u>Melilotus officinale...herb cont. below</u> <u>3%</u> <u>N</u> <u>FACU</u> <u>168%</u> = Total Cover				Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ <u>0%</u> = Total Cover					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>													
Remarks: (Include photo numbers here or on a separate sheet.) Herb stratum continued...Plantago major 3% N FAC, Taraxacum officinale 5% N FACU, Polygonatum commutatum 2% N UPL, Impatiens capensis 8% N FACW, Unknown grass 10% N. Sapling stratum smaller than normal in order to stay in plant community																		

SOIL

Sampling Point: CU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No _____
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Remarks:
No pit.

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary Indicators (minimum of two required) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
FAC Neutral Test fails with 0:3
No pit.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: CW
 Investigator(s): Alyssa Robinson & Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Toe slope/drainage Local relief (concave, convex, none): Concave
 Slope (%): 0-2% Lat: 42.248047 Long: -89.72877 Datum: N American 1983
 Soil Map Unit Name: 105C NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Vegetated is significantly disturbed as this area was on the edge of a soybean agricultural field.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>3' by 10'</u>) 1. <u>Phalaris arundinacea</u> <u>5%</u> <u>Y</u> <u>FACW</u> 2. <u>Echinochloa crus-galli</u> <u>5%</u> <u>Y</u> <u>FACW</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: CW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	2.5Y 3/1	100					Muck	
2-13	2.5Y 3/1	93	10YR 6/8	2	C	M	SiC	mucky, with sand particles
			10YR 5/1	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1) ☐ Sandy Gleyed Matrix (S4)
☐ Histic Epipedon (A2) ☐ Sandy Redox (S5)
☐ Black Histic (A3) ☐ Stripped Matrix (S6)
☐ Hydrogen Sulfide (A4) ☐ Loamy Mucky Mineral (F1)
☐ Stratified Layers (A5) ☐ Loamy Gleyed Matrix (F2)
☒ 2 cm Muck (A10) ☐ Depleted Matrix (F3)
☐ Depleted Below Dark Surface (A11) ☒ Redox Dark Surface (F6)
☐ Thick Dark Surface (A12) ☐ Depleted Dark Surface (F7)
☐ Sandy Mucky Mineral (S1) ☐ Redox Depressions (F8)
☐ 5 cm Mucky Peat or Peat (S3)

Indicators for Problematic Hydric Soils³:

- ☐ Coast Prairie Redox (A16)
☐ Dark Surface (S7)
☐ Iron-Manganese Masses (F12)
☐ Very Shallow Dark Surface (TF12)
☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Bottom of pit at 13 inches (below surface water).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☒ Surface Water (A1) ☐ Water-Stained Leaves (B9)
☒ High Water Table (A2) ☐ Aquatic Fauna (B13)
☒ Saturation (A3) ☐ True Aquatic Plants (B14)
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3)
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7)
☐ Inundation Visible on Aerial Imagery (B7) ☐ Gauge or Well Data (D9)
☐ Sparsely Vegetated Concave Surface (B8) ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
☒ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Stunted or Stressed Plants (D1)
☐ Geomorphic Position (D2)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 0"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? Yes ☒ No ☐ Depth (inches): 0"
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

FAC Neutral Test passes with 2:0

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: DU
 Investigator(s): Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None
 Slope (%): 10% Lat: 42.24791 Long: -89.728747 Datum: N American 1983
 Soil Map Unit Name: 51B NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sampled in a small runoff area not typical for majority of upland, but even runoff area did not qualify for wetland. Sampled within the grassed waterway.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>3</u></td> <td>x 2 = <u>6</u></td> </tr> <tr> <td>FAC species <u>6</u></td> <td>x 3 = <u>18</u></td> </tr> <tr> <td>FACU species <u>52</u></td> <td>x 4 = <u>208</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>76</u> (A)</td> <td><u>307</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.04</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>3</u>	x 2 = <u>6</u>	FAC species <u>6</u>	x 3 = <u>18</u>	FACU species <u>52</u>	x 4 = <u>208</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>76</u> (A)	<u>307</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>3</u>	x 2 = <u>6</u>																	
FAC species <u>6</u>	x 3 = <u>18</u>																	
FACU species <u>52</u>	x 4 = <u>208</u>																	
UPL species <u>15</u>	x 5 = <u>75</u>																	
Column Totals: <u>76</u> (A)	<u>307</u> (B)																	
= Total Cover																		
Sapling/Shrub Stratum (Plot size: _____)																		
1. _____																		
2. _____																		
3. _____																		
4. _____																		
5. _____																		
= Total Cover																		
Herb Stratum (Plot size: <u>5' radius</u>)																		
1. <u>Phleum pratense</u>	<u>40%</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Setaria faberi</u>	<u>2%</u>	<u>N</u>	<u>FACU</u>															
3. <u>Unknown Grass</u>	<u>5%</u>	<u>N</u>																
4. <u>Calystegia sepium</u>	<u>1%</u>	<u>N</u>	<u>FAC</u>															
5. <u>Ambrosia trifida</u>	<u>5%</u>	<u>N</u>	<u>FAC</u>															
6. <u>Setaria helvola</u>	<u>15%</u>	<u>Y</u>	<u>UPL</u>															
7. <u>Echinochloa crus-galli</u>	<u>3%</u>	<u>N</u>	<u>FACW</u>															
8. <u>Bromus inermis</u>	<u>10%</u>	<u>N</u>	<u>FACU</u>															
9. _____																		
10. _____																		
= Total Cover																		
Woody Vine Stratum (Plot size: _____)																		
1. _____																		
2. _____																		
= Total Cover																		
Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0 ¹ ___ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: DU

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 4/3	80	10YR 5/8	5	C	M	C	
	10YR 6/3	10						
	10YR 2/1	5						
8-13	10YR 3/1	90	10YR 6/8	5	C	M	C	
			10YR 6/2	5	D	M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks:
Bottom of pit at 13 inches.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
FAC Neutral Test fails with 0:2

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Loran Rd Location 1 City/County: Freeport/Stephenson Co. Sampling Date: 7/22/2020
 Applicant/Owner: Chastain State: IL Sampling Point: DW
 Investigator(s): Rebecca Olson Section, Township, Range: 18,26N,7E
 Landform (hillslope, terrace, etc.): Grassed waterway/drainage Local relief (concave, convex, none): None
 Slope (%): 0-2% Lat: 42.247911 Long: -89.728875 Datum: N American 1983
 Soil Map Unit Name: 51B NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Sampled in a small runoff area not typical for majority of upland, but even runoff area did not qualify for wetland. Sampled within the grassed waterway.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: <u>5' radius</u>) 1. <u>Echinochloa crus-galli</u> <u>70%</u> <u>Y</u> <u>FACW</u> 2. <u>Setaria parviflora</u> <u>2%</u> <u>N</u> <u>FAC</u> 3. <u>Persicaria maculosa</u> <u>2%</u> <u>N</u> <u>FACW</u> 4. <u>Populus deltoides</u> <u>1%</u> <u>N</u> <u>FAC</u> 5. <u>Cyperis strigosus</u> <u>5%</u> <u>N</u> <u>FACW</u> 6. <u>Carex vulpinoidea</u> <u>10%</u> <u>N</u> <u>FACW</u> 7. _____ 8. _____ 9. _____ 10. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
Remarks: (Include photo numbers here or on a separate sheet.)				

SOIL

Sampling Point: DW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/3	55	5YR 5/8	10	C	M/PL	C	
	10YR 6/4	30						
	10YR 2/1	5						
6-15	7.5YR 2.5/1	70	7.5YR 6/8	5	C	M	C	
	7.5YR 5/3	25						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input checked="" type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____
---	---

Remarks:
Bottom of pit at 15 inches.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)

Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
FAC Neutral Test passes with 1:0

Appendix C

Site Photos

Wetland 1 Photos:



Wetland 1: Yellow Creek and streambanks



Wetland 1: A closer look at the rocky streambank.



Drainage swale located on the southeast side of Wetland 1.



Drainage swale located on the west side of Wetland 1.



Wetland 1 hydrology indicator: Aquatic Fauna (B13)



Wetland 1 Sediment Deposits (B2)



Concrete debris washout collected near data point AU2.



Debris collected in upland area outside Wetland 1 near data point AU2.



Upland area south of data point AU2:
Loran Road erosion.



AW Hydrology: High Water Table (A2), Saturation (A3), Sparsely Vegetated Concave Surface (B8)



AU1 Vegetation



AU2 Vegetation



AU2 Water trickling out of ground.



AU2 Soils



AU2 Hydrology



BU Vegetation



BU Hydrology/Soils



BU Overall

Wetland 2 Photos:



CW Vegetation & Hydrology: Surface Water (A3) and Drainage Pattern (B10)



CW Boundary

Wetland 3 Photos:



DW Soils



DW Vegetation & Hydrology: Geomorphic Position (D2) and Fac-Neutral Test (D5)



DU Vegetation



DU Soils



DU Hydrology

Results of a Phase I Archaeological Reconnaissance Survey of Approximately
1 Acre of Land for Roadway Relocation/Reconstruction,
Florence Township, Stephenson County, Illinois



Prepared by:
Jay Martinez
Midwest Archaeological Research Services
PO Box 2533
Crystal Lake, IL 60039

Submitted to:

Tom Okite, P.E
Project Manager
Chastain & Associates LLC
6832 Stalter Dr., Ste. 100
Rockford, IL 61108

08 December 2020

ARCHAEOLOGICAL SURVEY SHORT REPORT

Illinois State Historic Preservation Office
Illinois Department of Natural Resources
Review & Compliance-Archaeology Division
One Natural Resources Way
Springfield, Illinois 62702

Reviewer _____

Date _____

_____ Accepted _____ Rejected _____

Locational Information and Survey Conditions

SHPO Log # 020102620

MARS Project # 1897

County: Stephenson

Quadrangle: Shannon 7.5' Min

Project Type/Title: Roadway relocation/reconstruction, Loran Rd.

Funding/Permitting Agency: DHS and FEMA

Section: SE ¼ of Section 18 of Township 26 North, Range 7 East, Florence Township (Figure 1).

Natural Division (No.): 2a

U.T.M.: To center of the project area: 16T 274746E, 4680961N (WGS84)

Project Description: Phase I archaeological reconnaissance survey

Topography: Other Uplands

Soils: 51B Muscatune silt loam (2-5% slopes), 61B Atterberry silt loam (2-5% slopes), 105B Batavia silt loam (2-5% slopes), 105C Batavia silt loam (5-10% slopes), 675B Greenbush silt loam (2-5% slopes) (Figure 2).

Drainage: Yellow Creek (Pecatonica).

Land Use/Ground Cover (Include % Visibility): Land use is an agricultural field. Ground cover consists of harvested corn with 80%-90% surface visibility (Figure 3).

Survey Limitations: None

Archaeological and Historical Information:

Historic Plats/Atlases/Sources: 1843 Government Land Office plat; 1859, 1871, 1894, 1903, and 1913 historic plats (Appendix A: Figures 1-6), Illinois Inventory of Archaeological Sites and survey files.

Previously Reported Sites: There are no previously recorded archaeological sites present within the project area or within 1.6 km (1 mile) of the project area.

Previous Surveys: There are no previous surveys present within the project area or within 1.6 km (1 mile) of the project area.

Regional Archaeologist Contacted: Jay J. Martinez, M.A., RPA

Investigation Techniques: Pedestrian survey.

Time Expended: 1-person day

Sites/Find Spots Located: None

Cultural Material: None

Curated At: N/A

Collection Techniques: N/A

Area Surveyed (Acres & Square Meters): 1-acre/4,046.8 square meters

Results of Investigation and Recommendations:

xxPhase I Archaeological Reconnaissance located no archaeological material; Project clearance Recommended.

 Phase I Archaeological Reconnaissance located archaeological material; Project clearance Recommended.

 Phase I Archaeological Reconnaissance located archaeological material; Phase II Testing Recommended.

Comments:

Field methods employed during the survey were in accordance with the Illinois State Historic Preservation Office *Guidelines for Archaeological Reconnaissance Surveys and Reports*.

The survey was completed because a portion the roadway and embankment for Loran Rd. collapsed into Yellow Creek (Appendix B: Plate 1). The project involves the reconstruction of approximately 327 meters (1,075 ft.) of the road along a new alignment (Appendix C).

The project parcel was originally purchased by Shelden Scouill on August 17th, 1844 (ISOS 2020b). Plat maps of Florence Township from 1859, 1871, 1984, 1903, and 1913 do not show any structures within the project area. The historic aerial from 1939 does not show any buildings within the project area (Figure 4 [Illinois Geospatial Data Clearinghouse 2020]).

The phase 1 survey boundary is located within an active agriculture field south of Loran Road (Figure 1). Yellow Creek is directly north and adjacent to the existing Loran Rd. (Figure 3 [Appendix B: Plate 2]). MARS archaeologists walked the project area at 5 meter intervals looking for cultural material (Appendix B: Plates 3-4). The ground surface visibility was 80-90%. There is a very narrow strip of ground on the north side of Loran Rd. between the road and Yellow Creek (Appendix B: Plate 5). This road verge area contained gravels and was too narrow and not amenable to survey.

MARS did not identify any cultural material during the Phase I survey. **MARS recommends project clearance.**

Archaeological Contractor Information:

Archaeological Contractor: Midwest Archaeological Research Services

Address/Phone: PO Box 2533, Crystal Lake, Illinois 60039/ (815) 568-0680

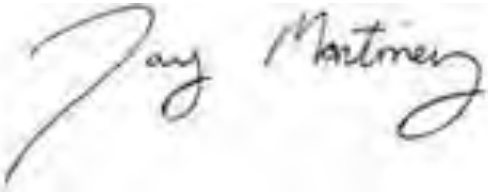
Surveyed by: Jay Martinez

Date: 11-29-2020

Report Completed by: Jay Martinez

Date: 12-8-20-2020

Submitted by (Signature and Title):



Jay Martinez, President

Attachment Check List: (#1 through #4 are MANDATORY)

- xx** 1) Portion of USGS 7.5' Topographic Map(s) Showing Project Location and Any Recorded Sites.
- xx** 2) Project Maps(s) Depicting Survey Limits, Site Limits and Isolated Finds.
- 3) Site Form(s): Two Copies of Each Form.
- xx** 4) All Relevant Project Correspondence
- xx** 5) Additional Sheets as Necessary.

Address of Owner/Agent to Whom SHPO Comment Should Be Mailed:

Address: Chastain & Associates LLC

6832 Stalter Dr., Ste. 100

Rockford, IL 61108

Contact Person: Tom Okite Phone Number: (815) 519-1629

Reviewers Comments:

References Cited

Google Earth

2020 Map downloaded of project area. PDF online at <Google earth> Accessed 12/7/20.

Illinois Geospatial Data Clearinghouse

2020 1937-1947 Illinois Historical Aerial Photography. Online at
<<http://clearinghouse.isgs.illinois.edu>> Accessed 12/7/20.

Illinois Secretary of State (ISOS)

2020a Federal Townships of Illinois (1804-1891). Federal Land Plat Florence Township. Stephenson County, Illinois. <http://landplats.ilsos.net/> Accessed. Accessed 12/7/2020
2020b Illinois Public Domain Land Tract Sales <http://www.ilsos.gov/isa/pubdomsrch.jsp>. Accessed. Accessed 12/7/2020.

Illinois Inventory of Archaeological Sites

2020 Site and Survey files. Online at <<http://geoserver.dnr.illinois.gov>> Accessed 12/7/20.

United States Department of Agriculture (USDA)

2020 *Soil Survey of Stephenson County, Illinois*. PDF online at <soildatamart.nrcs.usda.gov>
Accessed 12/7/20.

U.S. Geological Survey (USGS)

2019 Map Locator & Downloader. <store.usgs.gov> Accessed 12/7/20.

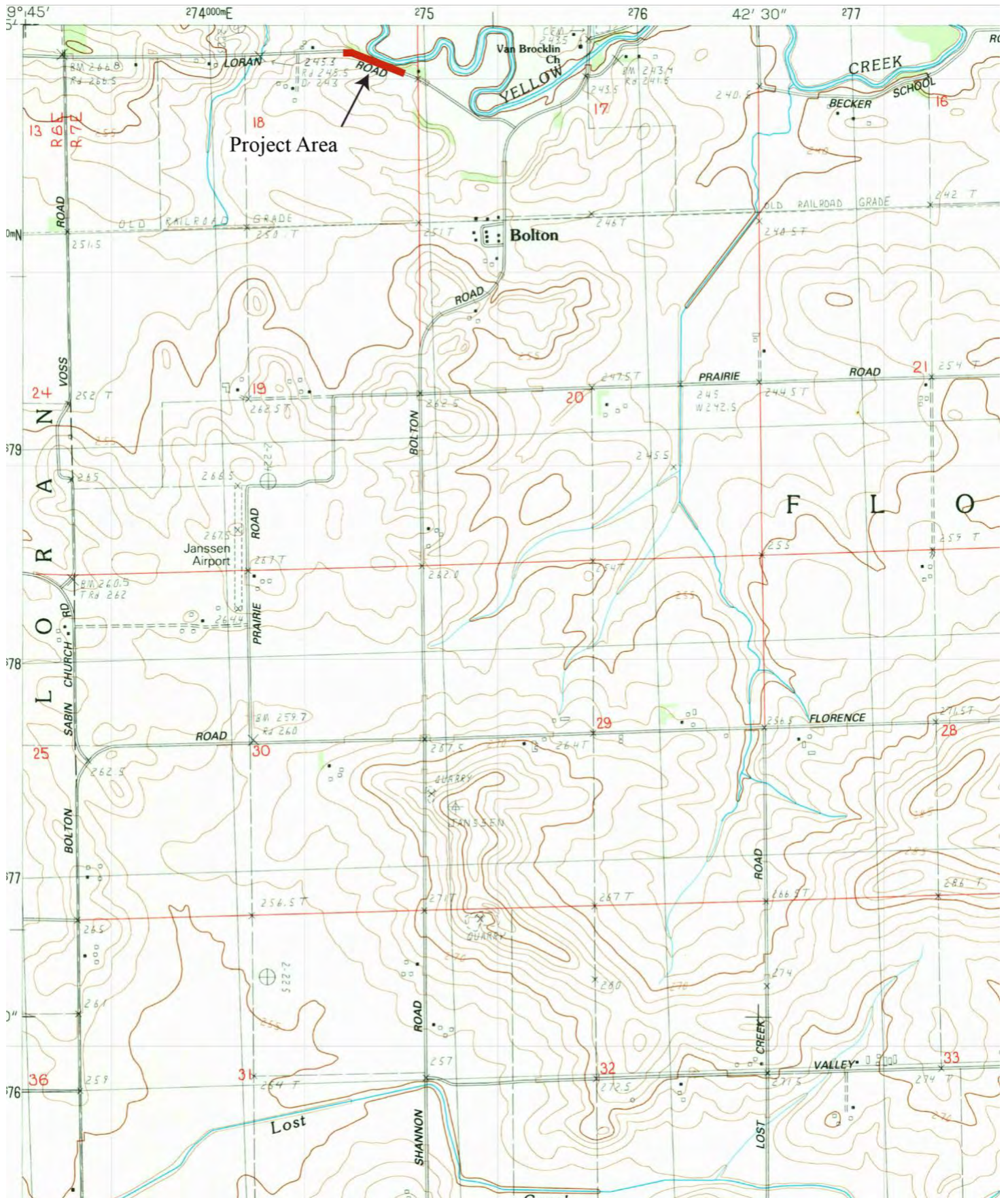


Figure 1. Portions of the U.S.G.S. 7.5' Shannon showing the project area in red (U.S.G.S. 2020).



Figure 2. Soil map of the project area (USDA 2020).



Figure 3. Sketch map of project area, black line indicates the proposed route of W. Loran Rd., the yellow represents the phase I survey boundary (Google Earth 2020).

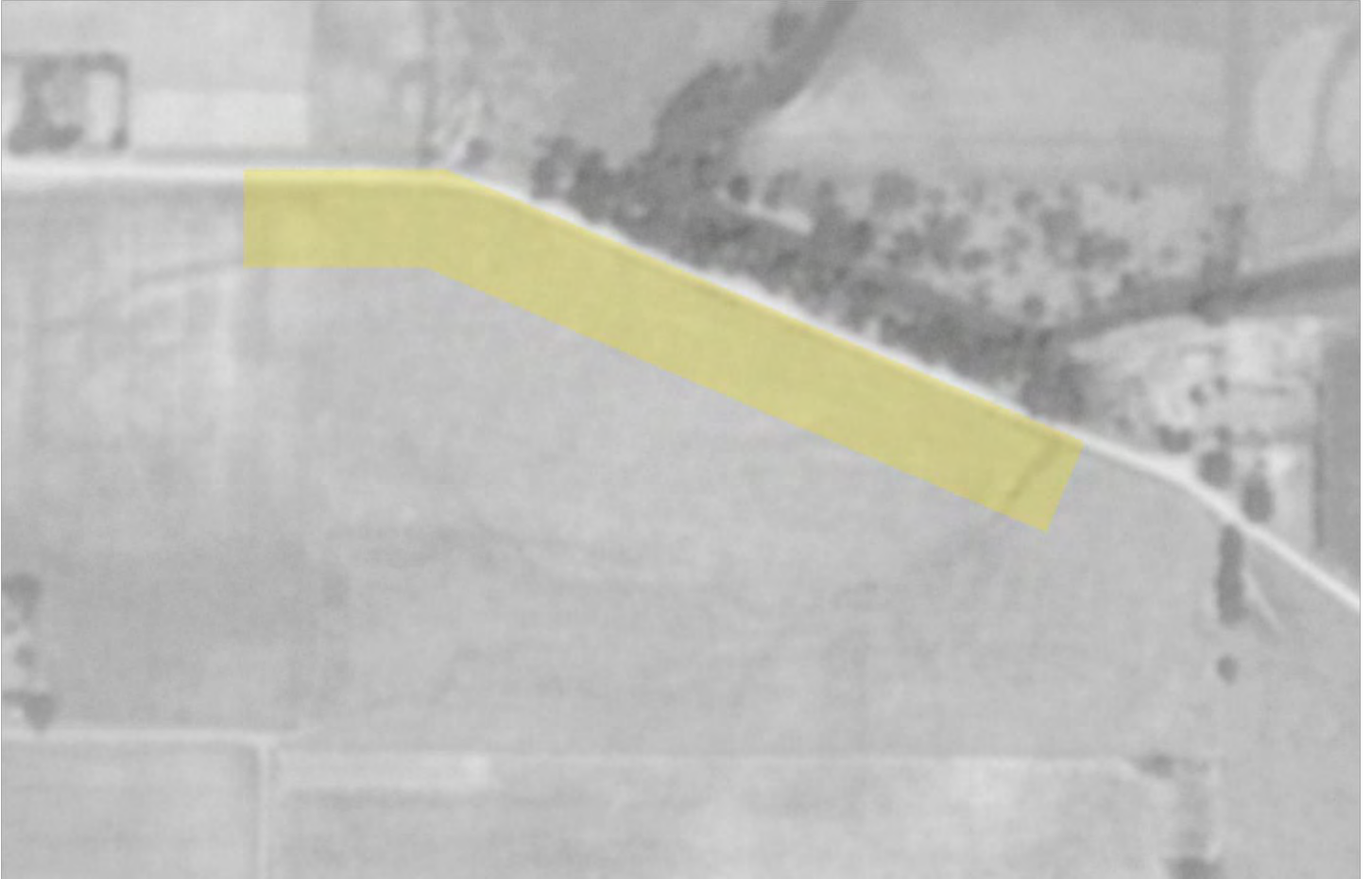


Figure 4. 1939 aerial image of the project area (Illinois Geospatial Data Clearinghouse 2020).

Appendix A

Historic Plats

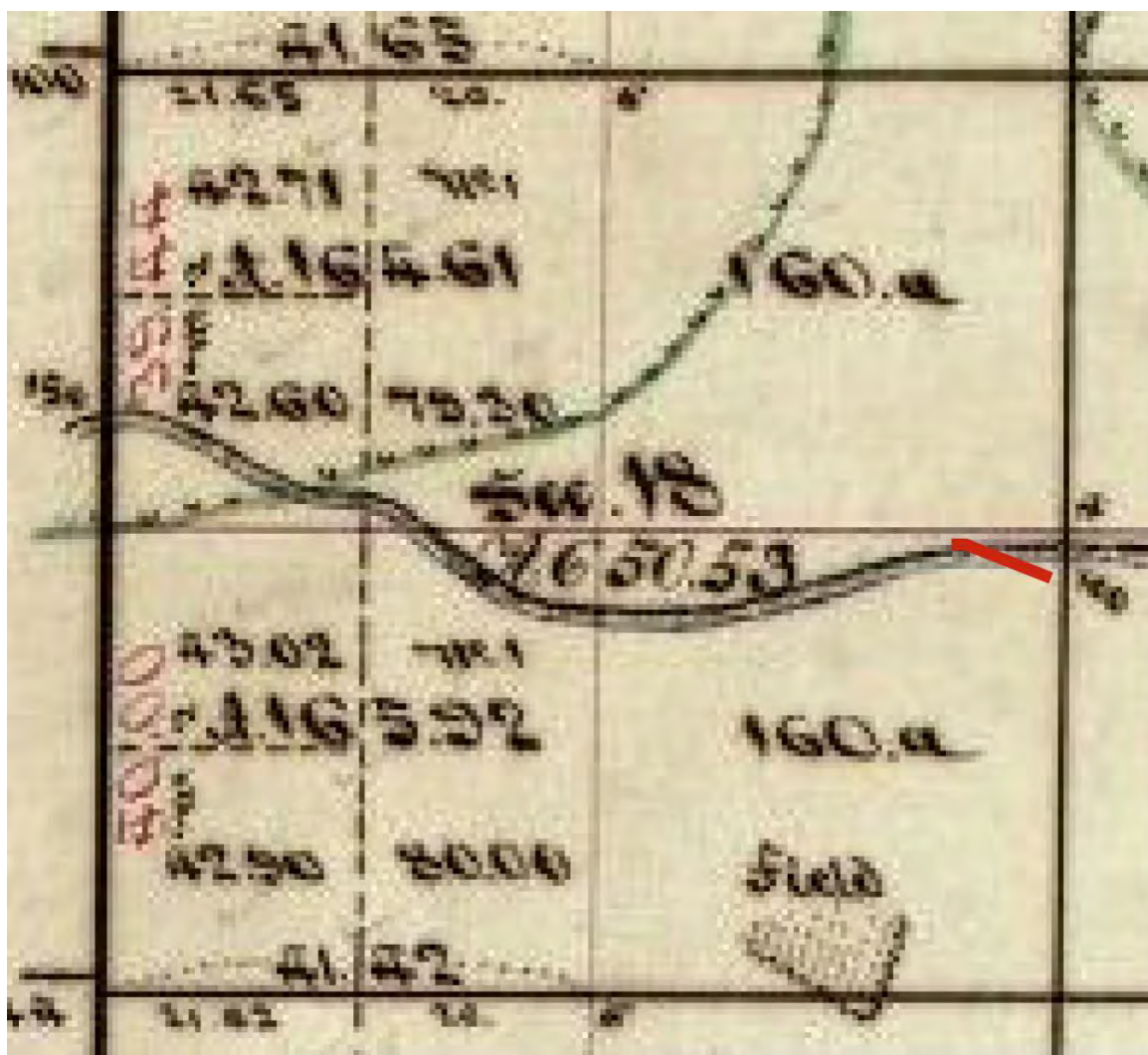


Figure 1. Portion of the 1843 Florence Township (Stephenson County) General Land Office plat showing the project area in red (Illinois Secretary of State 2020).

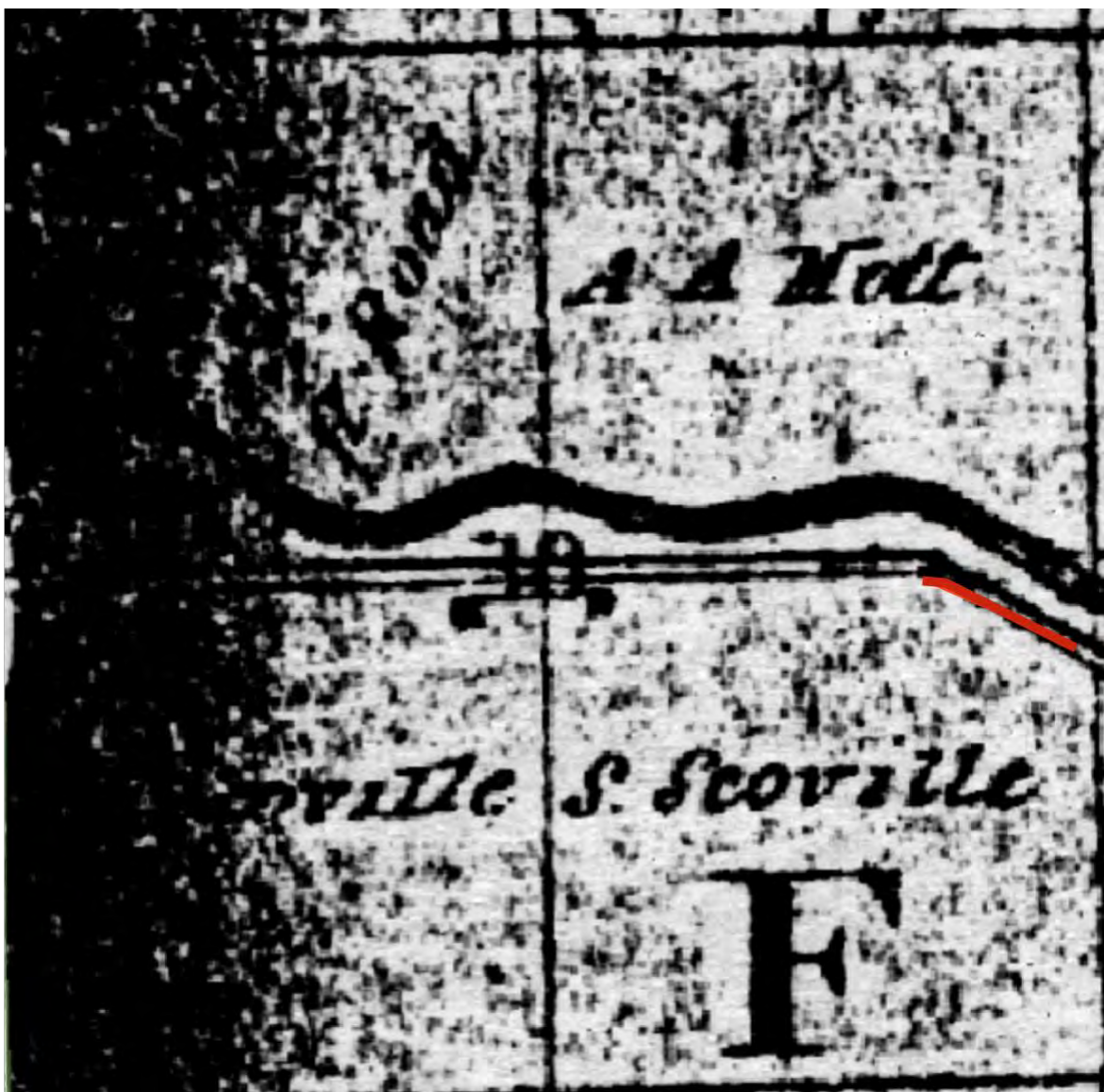


Figure 2. Portion of the 1859 Florence Township (Stephenson County) plat showing the project area in red (Illinois Inventory of Archaeological Sites 2020).

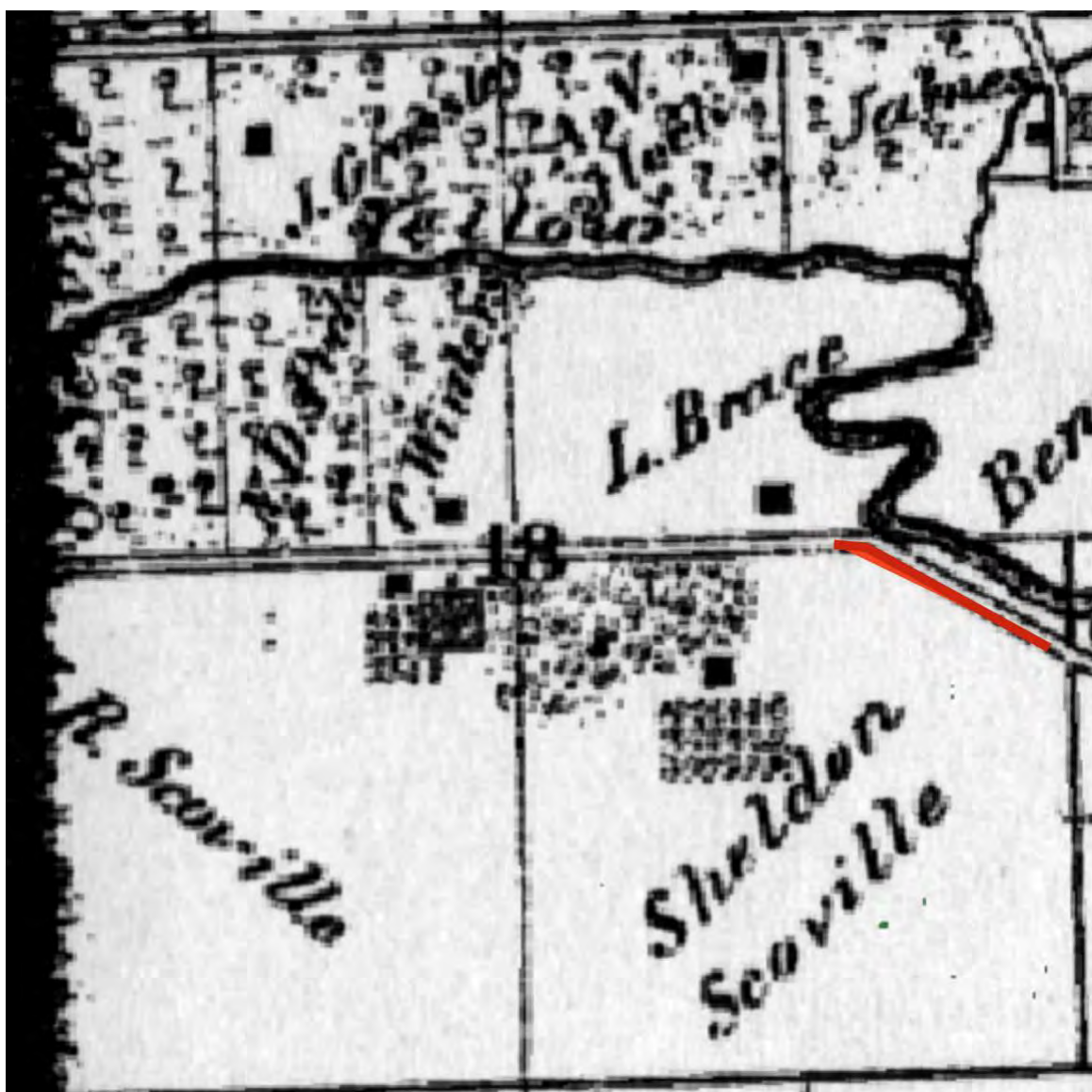


Figure 3. Portion of the 1871 Florence Township (Stephenson County) plat showing the project area in red (Illinois Inventory of Archaeological Sites 2020).

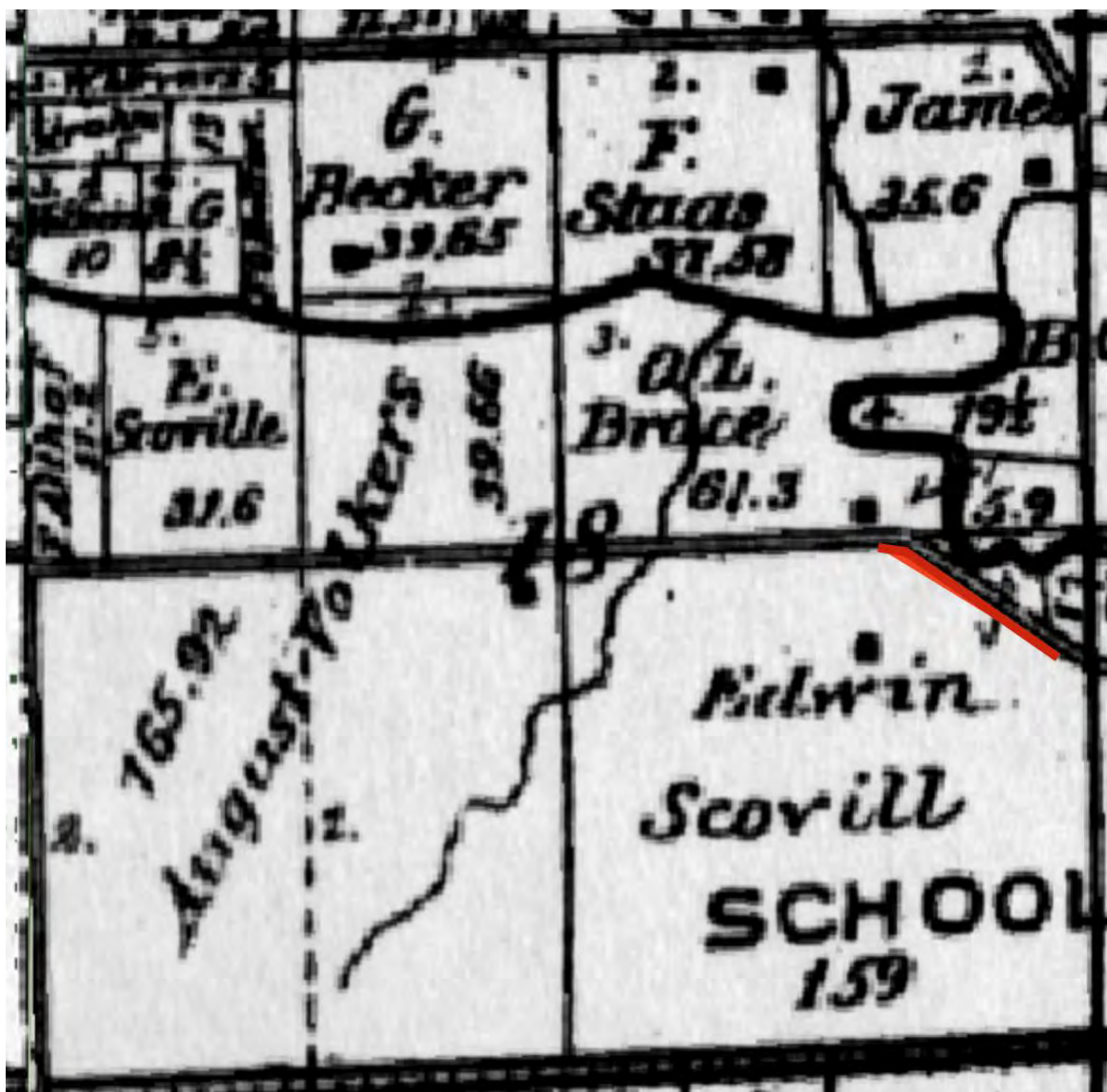


Figure 4. Portion of the 1894 Florence Township (Stephenson County) plat showing the project area in red (Illinois Inventory of Archaeological Sites 2020).

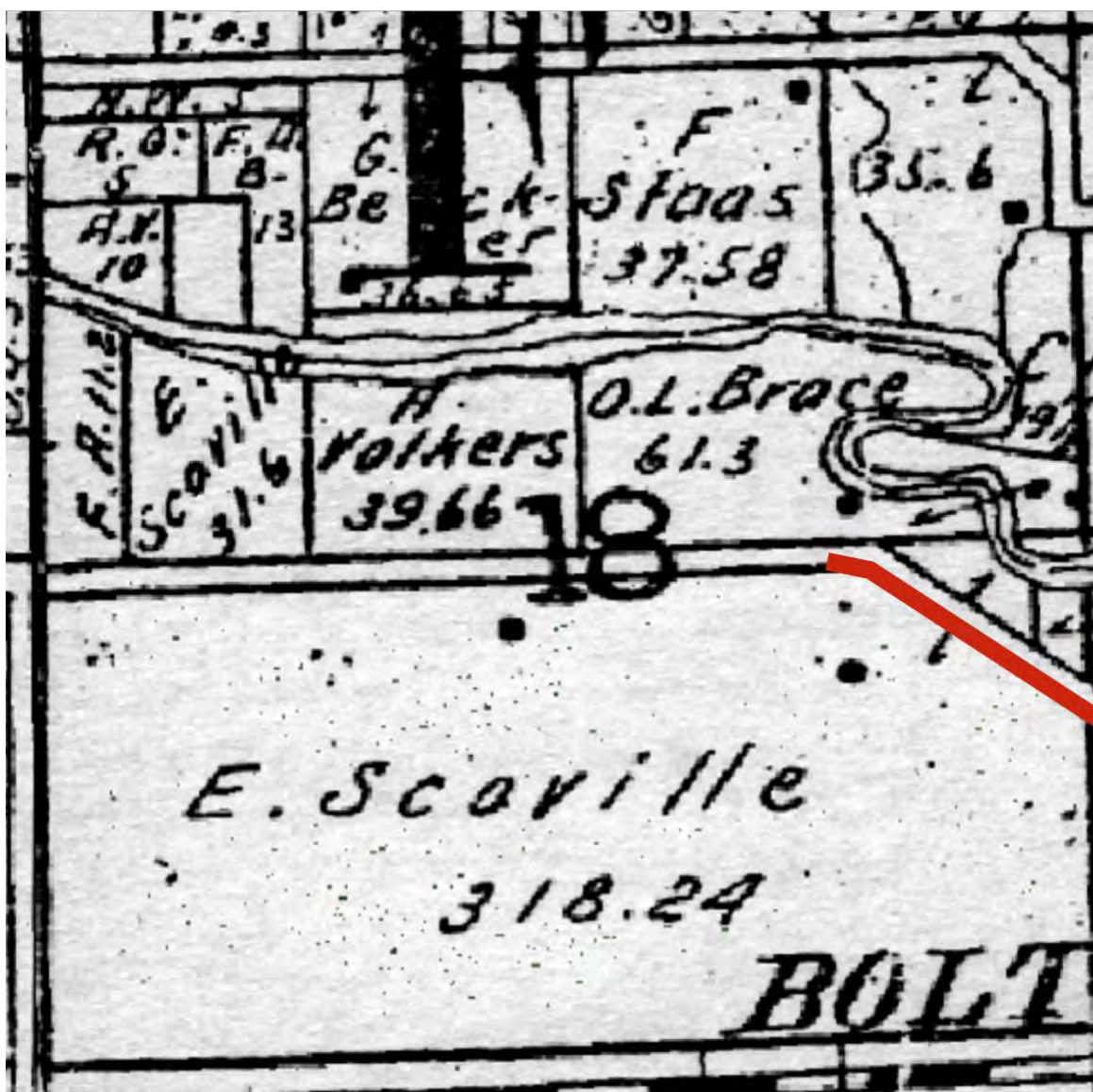


Figure 5. Portion of the 1903 Florence Township (Stephenson County) plat showing the project area in red (Illinois Inventory of Archaeological Sites 2020).

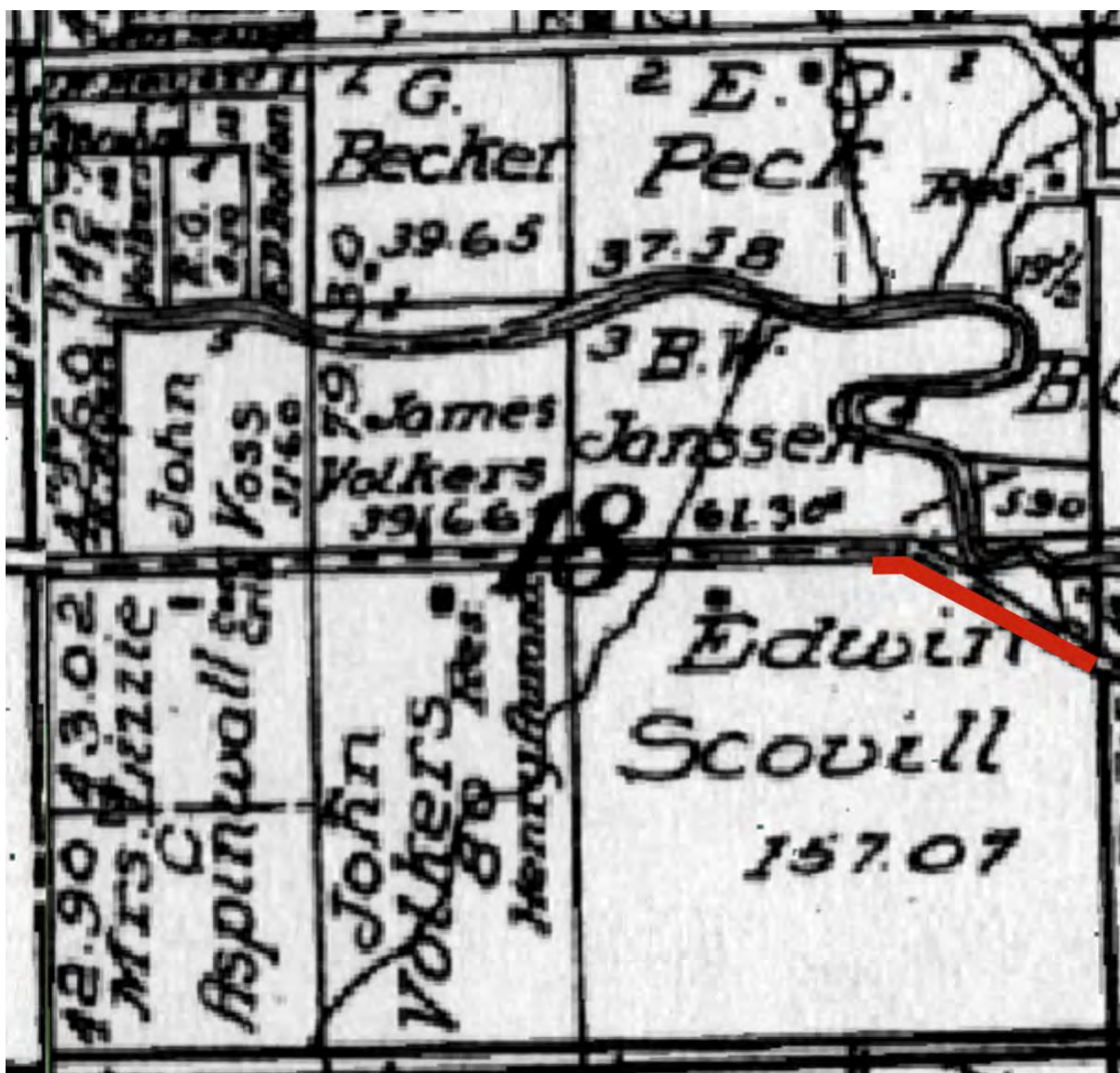


Figure 6. Portion of the 1913 Florence Township (Stephenson County) plat showing the project area in red (Illinois Inventory of Archaeological Sites 2020).

Appendix B

Selected Project Photographs



Plate 1. Looking west down the portion of Loran Rd. that collapsed.



Plate 2. Looking north towards Yellow Creek from Loran Rd.



Plate 3. Looking west over project area that was surveyed from the eastern edge of the project boundary.



Plate 4. Looking east over project area that was surveyed from the western edge of the project boundary.



Plate 5. Steep slope and road verge not amenable to survey between Loran Rd. and Yellow Creek.



Illinois Department of Natural Resources

www.dnr.illinois.gov

SURVEY REQUEST

JB Pritzker, Governor
Colleen Callahan, Director

Mailing address: State Historic Preservation Office, 1 Old State Capitol Plaza, Springfield, IL 62701

Stephenson County
Freeport
Loran Road/Route 261, NW of SR 17
FEMA
Roadway relocation/reconstruction - Florence Township

PLEASE REFER TO: SHPO LOG #020102620

November 16, 2020

Thomas Okite
Chastain and Associates, LLC
6832 Stalter Drive, Suite 100
Rockford, IL 61108

Dear Mr. Okite:

Thank you for requesting comments from our office concerning the possible effects of the project referenced above on cultural resources. Our comments are required by Section 106 of the National Historic Preservation Act of 1966 (16 USC 470), as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties".

The project area has not been surveyed and may contain prehistoric/historic archaeological resources. Accordingly, a Phase I archaeological reconnaissance survey to locate, identify, and record all archaeological resources within the project area will be required. This decision is based upon our understanding that there has not been any large scale disturbance of the ground surface (excluding agricultural activities) such as major construction activity within the project area which would have destroyed existing cultural resources prior to your project. If the area has been heavily disturbed prior to your project, please contact our office with the appropriate written and/or photographic evidence.

The area(s) that need(s) to be surveyed include(s) all area(s) that will be developed as a result of the issuance of the federal agency permit(s) or the granting of the federal grants, funds, or loan guarantees that have prompted this review. In addition to the archaeological survey please provide clear photographs of all structures in, or adjacent to, the current project area as part of the archaeological survey report.

Enclosed you will find an attachment briefly describing Phase I surveys and a list of archaeological contracting services. THE SHPO LOG NUMBER OR A COPY OF THIS LETTER SHOULD BE PROVIDED TO THE SELECTED PROFESSIONAL ARCHAEOLOGICAL CONTRACTOR TO ENSURE THAT THE SURVEY RESULTS ARE CONNECTED TO YOUR PROJECT PAPERWORK.

If you have further questions, please contact Jeff Kruchten, Chief Archaeologist at 217/785-1279 or jeffery.kruchten@illinois.gov.

Sincerely,

Robert F. Appleman
Deputy State Historic
Preservation Officer

Enclosure



October 16, 2020

Illinois Department of Natural Resources
Illinois State Historic Preservation Office
1 Old State Capital Plaza
Springfield, IL 62701

**Re: Initial Documentation for SHPO Review
Loran Road Relocation
Florence Township, Stephenson County**

Attn: Review and Compliance

This correspondence is in reference to the compliance review required for the project captioned above. We are providing this information as follows:

1. Project description:
 - a. This project is necessary because the roadway and embankment for Florence Township Route 261 (Loran Road) collapsed into the Yellow Creek. The project involves the reconstruction of approximately 1,075 feet of Loran Road along a new alignment, the obliteration of the remainder of Loran Road along the old alignment, and the protection of the embankment between the new alignment and Yellow Creek. This project is being constructed by Florence Township.
2. Project funding, licensing, and permits.
 - a. This project is being funded by the Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA) with funds made available under the Disaster Declaration for Stephenson County declared on September 19, 2019.
 - b. This project will be reviewed by the Stephenson County Highway Department.
 - c. This project will require a permit from the US Army Corps of Engineers (USACE), Rock Island District. The work will be permitted under Regional Permit 16, which includes Clean Water Act (CWA) Section 401 water quality clearance and certification, and therefore the project does not require a submission to the Illinois Environmental Protection Agency (IEPA) for CWA clearance.
 - d. This work is permitted under the Illinois Department of Natural Resources (IDNR) Office of Water Resources (OWR) Statewide Permit #9, which does not require a submission to the IDNR.
 - e. This work will require a IEPA National Pollution Discharge Elimination System (NPDES) permit for construction sites, which permit will be secured at the time of construction.
3. There are no previous IHPA log number associated with this work.
4. Find attached Project Location Maps, included as attachments to this letter.

6832 Stalter Drive | Suite 100 | Rockford, IL 61108

P: 815.489.0050 | F: 815.489.0055 | www.chastainengineers.com

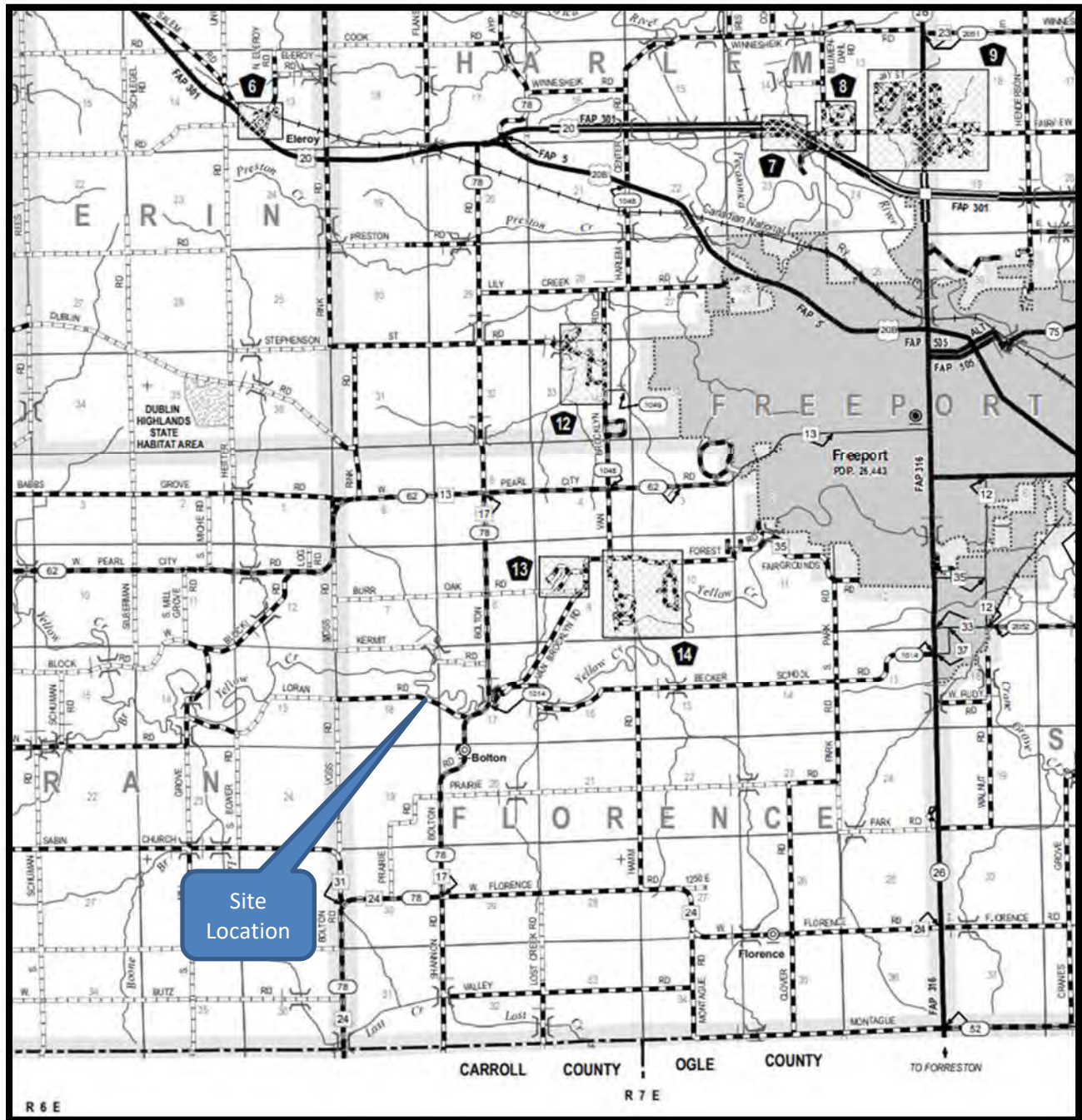
5. Find attached current plans and specifications, considered 90% complete.
6. This project will be affect the following properties in Florence Township, Stephenson County:
 - a. PIN 18-18-400-001 in Florence Township, Stephenson County, Illinois
 - b. PIN 18-18-400-006 in Florence Township, Stephenson County, Illinois
7. This project will affect vacant land, including construction of the relocated roadway on approximately 0.83 acres of straight-row tilled cropland to the south of the existing Loran Road, and the stabilization of approximately 1.9 acres of vacant scrubland to the north of existing Loran Road.
8. There is no documented non-agricultral disturbance of the site other than the existing roadway.
9. The attached project location maps include aerial photos.

Thank you again for your attention to this submittal. Should you have any questions or require any more information, please do not hesitate to contact me at tokite@chastainengineers.com or by phone at (815) 519-1629.

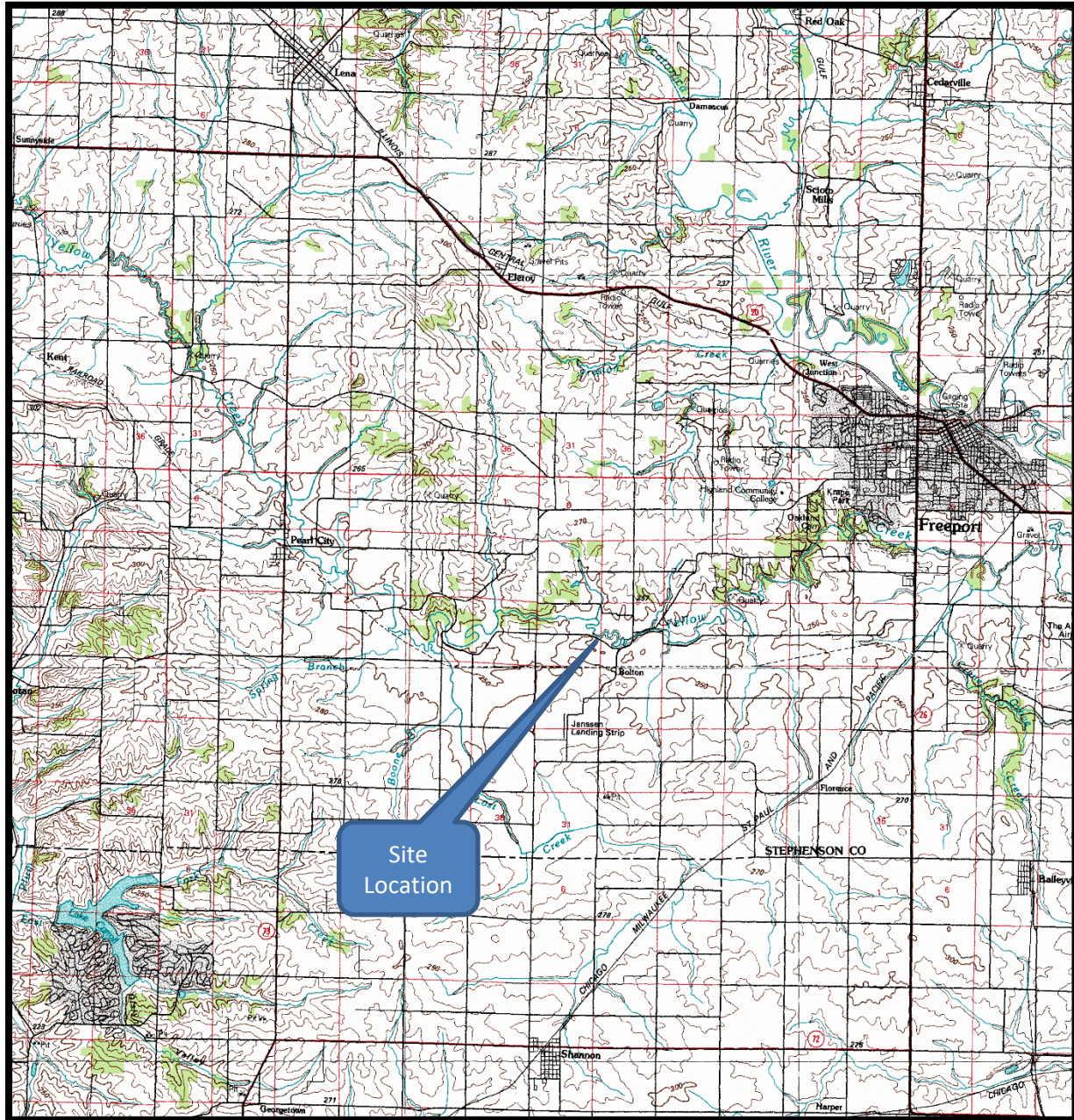
Respectfully,

TWOKITE

Thomas Okite, PE
Project Manager
Chastain and Associates, LLC



Attachment 1: Project Location Map



Attachment 2: Project Location Map
100k Topographic Series, Rockford topoquad



Attachment 2: Project Location Map
24k Topographic Series, Shannon Topoquad



STEPHENSON COUNTY
HIGHWAY DEPARTMENT

LORAN ROAD RELOCATION

CHASTAIN & ASSOCIATES LLC
CONSULTING ENGINEERS
DECATUR (217) 422-8544
SCHAUMBURG (773) 714-0050
ROCKFORD (815) 489-0050
184-001397

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/26/2020 at 5:39:29 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

42°15'7.25"N



USGS The National Map: Orthoimagery. Data refreshed April, 2019.

0 250 500 1,000 1,500 2,000 Feet 1:6,000

42°14'40.62"N

89°43'32.08"W

loran road, florence township, il
prepared for:
Ref:

January 7, 2021

Environmental Radius Report



2055 E. Rio Salado Pkwy
Tempe, AZ 85381
480-967-6752

Summary

	< 1/4	1/4 - 1/2	1/2 - 1
National Priorities List (NPL)			
CERCLIS List			
CERCLIS NFRAP			
RCRA CORRACTS Facilities			
RCRA non-CORRACTS TSD Facilities			
Federal Institutional Control / Engineering Control Registry			
Emergency Response Notification System (ERNS)			
US Toxic Release Inventory			
US RCRA Generators (CESQG, SQG, LQG)			
US ACRES (Brownfields)			
US NPDES			
US Air Facility System (AIRS / AFS)			
IL Underground Storage Tanks			
IL Leaking Underground Storage Tanks			
IL Redevelopment Assessment Database			
IL Site Remediation Program			

National Priorities List (NPL)

This database includes Proposed Sites, Final Sites and Deleted NPL Sites. The Superfund Program, administered under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is an EPA Program to locate, investigate, and clean up the worst hazardous waste sites throughout the United States. The NPL (National Priorities List) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.

The boundaries of an NPL site are not tied to the boundaries of the property on which a facility is located. The release may be contained within a single property's boundaries or may extend across property boundaries onto other properties. The boundaries can, and often do change as further information on the extent and degree of contamination is obtained.

This database returned no results for your area

CERCLIS List

The United States Environmental Protection Agency (EPA) investigates known or suspected uncontrolled or abandoned hazardous substance facilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA maintains a comprehensive list of these facilities in a database known as the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). These sites have either been investigated or are currently under investigation by the EPA for release or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation and ultimately placed on the National Priority List (NPL).

CERCLIS sites designated as "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund Action or NPL consideration.

This database returned no results for your area

CERCLIS NFRAP

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" NFRAP have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the site being placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.

EPA has removed these NFRAP sites from CERCLIS to lift unintended barriers to the redevelopment of these properties. This policy change is part of EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens promote economic redevelopment of unproductive urban sites.

This database returned no results for your area

RCRA CORRACTS Facilities

The United States Environmental Protection Agency (EPA) regulates hazardous waste under the Resource Conservation and Recovery Act (RCRA). The EPA maintains the Corrective Action Report (CORRACTS) database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing "corrective action." A "corrective action order" is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predated RCRA.

This database returned no results for your area

RCRA non-CORRACTS TSD Facilities

The United States Environmental Protection Agency (EPA) regulates hazardous waste under the Resource Conservation and Recovery Act (RCRA). The EPA's RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities that report generation, storage, transportation, treatment, or disposal of hazardous waste. RCRA Permitted Treatment, Storage, Disposal Facilities (RCRA-TSD) are facilities which treat, store and/or dispose of hazardous waste.

This database returned no results for your area

Federal Institutional Control / Engineering Control Registry

Federal Institutional Control / Engineering Control Registry

This database returned no results for your area

Emergency Response Notification System (ERNS)

The Emergency Response Notification System (ERNS) is a national computer database used to store information on unauthorized releases of oil and hazardous substances. The program is a cooperative effort of the Environmental Protection Agency, the Department of Transportation Research and Special Program Administration's John Volpe National Transportation System Center and the National Response Center. There are primarily five Federal statutes that require release reporting: the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) section 103; the Superfund Amendments and Reauthorization Act(SARA) Title III Section 304; the Clean Water Act of 1972(CWA) section 311(b)(3); and the Hazardous Material Transportation Act of 1974(HMTA section 1808(b).

This database returned no results for your area

US Toxic Release Inventory

The Toxics Release Inventory (TRI) is a publicly available EPA database that contains information on toxic chemical releases and other waste management activities reported annually by certain covered industry groups as well as federal facilities. TRI reporters for all reporting years are provided in the file.

This database returned no results for your area

US RCRA Generators (CESQG, SQG, LQG)

The United States Environmental Protection Agency (EPA) regulates hazardous waste under the Resource Conservation and Recovery Act (RCRA). EPA maintains a database of facilities, which generate hazardous waste or treat, store, and/or dispose of hazardous wastes.

Conditionally Exempt Small Quantity Generators (CESQG) generate 100 kilograms or less per month of hazardous waste, or 1 kilogram or less per month of acutely hazardous waste.

Small Quantity Generators (SQG) generate more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste per month.

Large Quantity Generators (LQG) generate 1,000 kilograms per month or more of hazardous waste, or more than 1 kilogram per month of acutely hazardous waste.

This database returned no results for your area

US ACRES (Brownfields)

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands. The Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an online database for Brownfields Grantees to electronically submit data directly to The United States Environmental Protection Agency (EPA)

This database returned no results for your area

US NPDES

The NPDES module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

This database returned no results for your area

US Air Facility System (AIRS / AFS)

The Air Facility System (AIRS / AFS) contains compliance and permit data for stationary sources of air pollution (such as electric power plants, steel mills, factories, and universities) regulated by EPA, state and local air pollution agencies. The information in AFS is used by the states to prepare State Implementation Plans (SIPs) and to track the compliance status of point sources with various regulatory programs under Clean Air Act.

This database returned no results for your area

IL Underground Storage Tanks

Underground Storage Tanks (UST) containing hazardous or petroleum substances are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The Illinois State Fire Marshal (OSFM) maintains a registration of Underground Storage Tanks (UST).

This database returned no results for your area

IL Leaking Underground Storage Tanks

The Illinois Environmental Protection Agency maintains a Leaking Underground Storage Tank Incident Tracking ("LIT") database. The listing identifies the status of all Illinois LUST incidents reported to the Illinois Emergency Management Agency ("IEMA") and to the Illinois Environmental Protection Agency.

This database returned no results for your area

IL Redevelopment Assessment Database

The Office of Site Evaluations Redevelopment Assessment database identifies the status of all properties within the State in which the Illinois EPA's Office of Site Evaluation has conducted a municipal Brownfield Redevelopment Assessment.

This database returned no results for your area

IL Site Remediation Program

The Site Remediation Program ("SRP") database identifies the status of all voluntary remediation projects administered through the Pre-Notice Site Cleanup Program (1989 to 1995) and the Site Remediation Program (1996 to the present).

This database returned no results for your area