Attachment 1

Minnesota Conservation Explorer – Natural Heritage Review and Conservation Planning Report

Conservation Planning Report: Crissy Lake Dam Modification

This document is intended for planning purposes only for the area of interest defined by the user. The report identifies ecologically significant areas documented within the defined area of interest plus any additional search distance indicated below. These ecologically significant areas can be viewed in the Explore Tab of the Minnesota Conservation Explorer. Please visit MN Geospatial Commons for downloadable GIS data.

This document does not meet the criteria for a Natural Heritage Review. If a Natural Heritage Review is needed, please define an Area of Interest in the Explore Tab and click on the Natural Heritage Review option.

This document does not include known occurrences of state-listed or federally listed species.

MBS Sites of Biodiversity Significance

Search distance = 330 feet

Minnesota Biological Survey (MBS) Sites of Biodiversity Significance are areas with varying levels of native biodiversity that may contain high quality native plant communities, rare plants, rare animals, and/or animal aggregations. A Biodiversity Significance Rank is assigned on the basis of the number of rare species, the quality of the native plant communities, size of the site, and context within the landscape. MBS Sites are ranked Outstanding, High, or Moderate. Areas ranked as Below were found to be disturbed and are retained in the layer as negative data. These areas do not meet the minimum biodiversity threshold for statewide significance but may have conservation value at the local level as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or as areas with high potential for restoration of native habitat. The DNR recommends avoidance of MBS Sites of Biodiversity Significance ranked High or Outstanding.

Wetlands within MBS Sites of Outstanding or High Biodiversity Significance may be considered Rare Natural Communities under the Wetland Conservation Act. For technical guidance on Rare Natural Communities, please visit WCA Program Guidance and Information.

For more information please visit MBS Sites of Biodiversity Significance.

The following MBS Sites of Biodiversity Significance are within the search area:

MBS Site Name	Biodiversity Significance	Status
DARNEN 1	Moderate	final

DNR Native Plant Communities

Search distance = 330 feet

A native plant community is a group of native plants that interact with each other and with their environment in ways not greatly altered by modern human activity or by introduced organisms. These groups of native plant species form recognizable units, such as oak savannas, pine forests, or marshes, that tend to repeat over space and time. Native plant communities are classified and described by considering vegetation, hydrology, landforms, soils, and natural disturbance regimes.

DNR Native Plant Community types and subtypes are given a Conservation Status Rank that reflects the relative rarity and endangerment of the community type in Minnesota. Conservation Status Ranks range from S1 (critically imperiled) to S5 (secure, common, widespread, and abundant). Native plant communities with a Conservation Status Rank of S1 through S3 are considered rare in the state. The DNR recommends avoidance of rare native plant communities.

Wetland native plant communities with a conservation status rank of S1 through S3 may also be considered Rare Natural Communities under the Wetland Conservation Act. For technical guidance on Rare Natural Communities, please visit WCA Program Guidance and Information.

DNR Native Plant Communities may be given a Condition Rank that reflects the degree of ecological integrity of a specific occurrence of a native plant community. The Condition Rank is based on species composition, vegetation structure, ecological processes and functions, level of human disturbance, presence of exotic species, and other factors. Condition Ranks range from A-rank (excellent ecological integrity) to D-rank (poor ecological integrity. A Condition Rank of NR means Not Ranked and a Condition Rank of MULTI mean multiple ranks are present because the record is a native plant community complex.

For more information please visit Minnesota's Native Plant Communities.

The following DNR Native Plant Communities are within the search area:

MBS Site Name	NPC Code	Native Plant Community Classification	Conservation Status Rank	Number of Communities
DARNEN 1	UPs23a	Mesic Prairie (Southern)	S2	1

Calcareous Fens

Search distance = 5 miles

A calcareous fen is a rare and distinctive peat-accumulating wetland that is legally protected in Minnesota under the Wetland Conservation Act (*Minnesota Statutes*, section 103G.223). Many of the unique characteristics of calcareous fens result from the upwelling of groundwater through calcareous substrates. Because of this dependence on groundwater hydrology, calcareous fens can be affected by nearby activities or even those several miles away. For more information regarding calcareous fens, please see the Calcareous Fen Fact Sheet or review the List of Known Calcareous Fens.

SEARCH RESULTS: No features were found within the search area.

DNR Old Growth Stands

Search distance = 330 feet

Old-growth forests are natural forests that have developed over a long period of time, generally at least 120 years, without experiencing severe, stand-replacing disturbances such as fires, windstorms, or logging. Old-growth forests are a unique, nearly vanished piece of Minnesota's history and ecology; less than 4% of Minnesota's old-growth forests remain. The DNR recommends avoidance of all DNR Old Growth Stands. The following DNR Old Growth Stands have been documented within the search area.

SEARCH RESULTS: No features were found within the search area.

MN Prairie Conservation Plan

Search distance = 330 feet

The Minnesota Prairie Conservation Plan, a twenty-five year strategy for accelerating prairie conservation in the state, identifies Core Areas, Corridors, and Corridor Complexes as areas to focus conservation efforts. The Plan's strategies include protection, enhancement, and restoration of grassland and wetland habitat. To meet the Plan's goals, approaches within Core Areas will need to include restoration and approaches within Corridors will need to include conservation of grassland habitat which can provide stepping stones between larger Core Areas.

SEARCH RESULTS: No features were found within the search area.

Important Bird Areas

Search distance = 1 mile

Important Bird Areas, identified by Audubon Minnesota in partnership with the DNR, are part of an international conservation effort aimed at conserving globally important bird habitats. They are voluntary and non-regulatory, but the designation demonstrates the significant ecological value of the area.

SEARCH RESULTS: No features were found within the search area.

Lakes of Biological Significance

Search distance = 330 feet

Lakes of Biological Significance are high quality lakes as determined by the aquatic plant, fish, bird, or amphibian communities present within the lake. To be included in this layer, a lake only needs to meet the criteria for one of these four community types. The lake is assigned a biological significance of Outstanding, High, or Moderate based on the community with the highest quality.

SEARCH RESULTS: No features were found within the search area.

USFWS Habitat Conservation Plans

A Habitat Conservation Plan (HCP) is a mechanism for compliance with the federal Endangered Species Act for a given set of activities and protected species. An HCP is required by the U.S. Fish and Wildlife Service (USFWS) as part of an application for an incidental take permit (ITP). The ITP allows the permit holder to proceed with activities covered in the HCP that could result in the unintentional take of federally listed species.

Lakes States Forest Management Bat Habitat Conservation Plan (Bat HCP): (search distance = 0; within area of interest only) This HCP was created to provide flexibility to the Minnesota Department of Natural Resources (DNR) to manage forests while addressing federal Endangered Species Act (ESA) regulations related to federally threatened and endangered bat species. The Bat HCP covers three bat species within Minnesota: northern long-eared bat, little brown bat, and tricolored bat. This report is intended to help non-federal, non-DNR landowners evaluate their potential eligibility for the Landowner Enrollment Program of the Bat HCP (For DNR-administered land, DNR staff should refer to the Bat HCP Implementation Policy).

Landowner Enrollment Program – DNR's incidental take permit may be extended through the Landowner Enrollment Program (LEP) to eligible non-federal landowners who conduct forest management activities. Landowners may be eligible to enroll in the LEP if they are a county land administrator, own more than 10,000 acres, or own land that overlaps a Bat HCP feature. The results below indicate if the defined area of interest overlaps a Bat HCP feature. For more information on how to enroll in the LEP, please visit the Landowner Enrollment Program (LEP).

SEARCH RESULTS: No Bat HCP features were found within the area of interest. Landowners are only eligible to apply for the Landowner Enrollment Program if they are a county land administrator or they own more than 10,000 acres.

USFWS Regulatory Layers

To ensure compliance with federal law, conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online Information for Planning and Consultation (IPaC) tool. This report is not a substitution for a Section 7 review.

For informational purposes only, this tool currently checks the following USFWS Regulatory Layers:

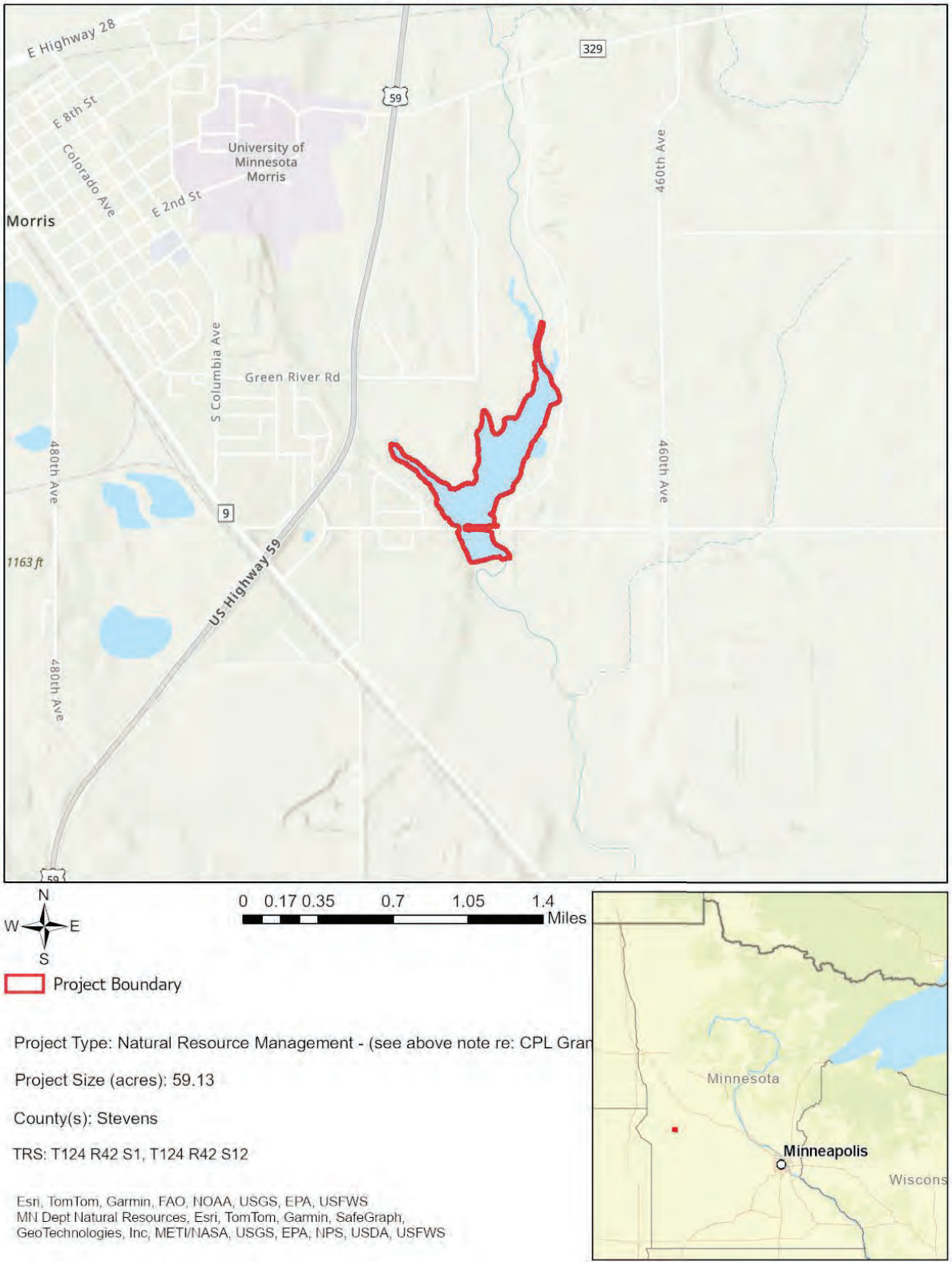
Rusty Patched Bumblebee High Potential Zones: (*search distance = 0; within area of interest only*) The rusty patched bumble bee (*Bombus affinis*), federally listed as endangered, is likely to be present in suitable habitat within the high potential zones. From April through October this species uses underground nests in upland grasslands, shrublands, and forest edges, and forages where nectar and pollen are available. From October through April the species overwinters under tree litter in upland forests and woodlands. The rusty patched bumble bee may be impacted by a variety of land management activities including, but not limited to, prescribed fire, tree-removal, haying, grazing, herbicide use, pesticide use, land-clearing, soil disturbance or compaction, or use of non-native bees. The USFWS RPBB guidance provides guidance on avoiding impacts to rusty patched bumble bee and a key for determining if actions are likely to affect the species; the determination key can be found in the appendix. Please visit the USFWS Rusty Patched Bumble Bee Map for the most current locations of High Potential Zones.

SEARCH RESULTS: No features were found within the search area.

For more project details, see the MCE-generated Final Project Report, available on the MCE project page.

Crissy Lake Outlet Dam Modification

USA Topo Basemap With Locator Map



Project Type: Natural Resource Management - (see above note re: CPL Gran

Project Size (acres): 59.13

County(s): Stevens

TRS: T124 R42 S1, T124 R42 S12

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
MN Dept Natural Resources, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

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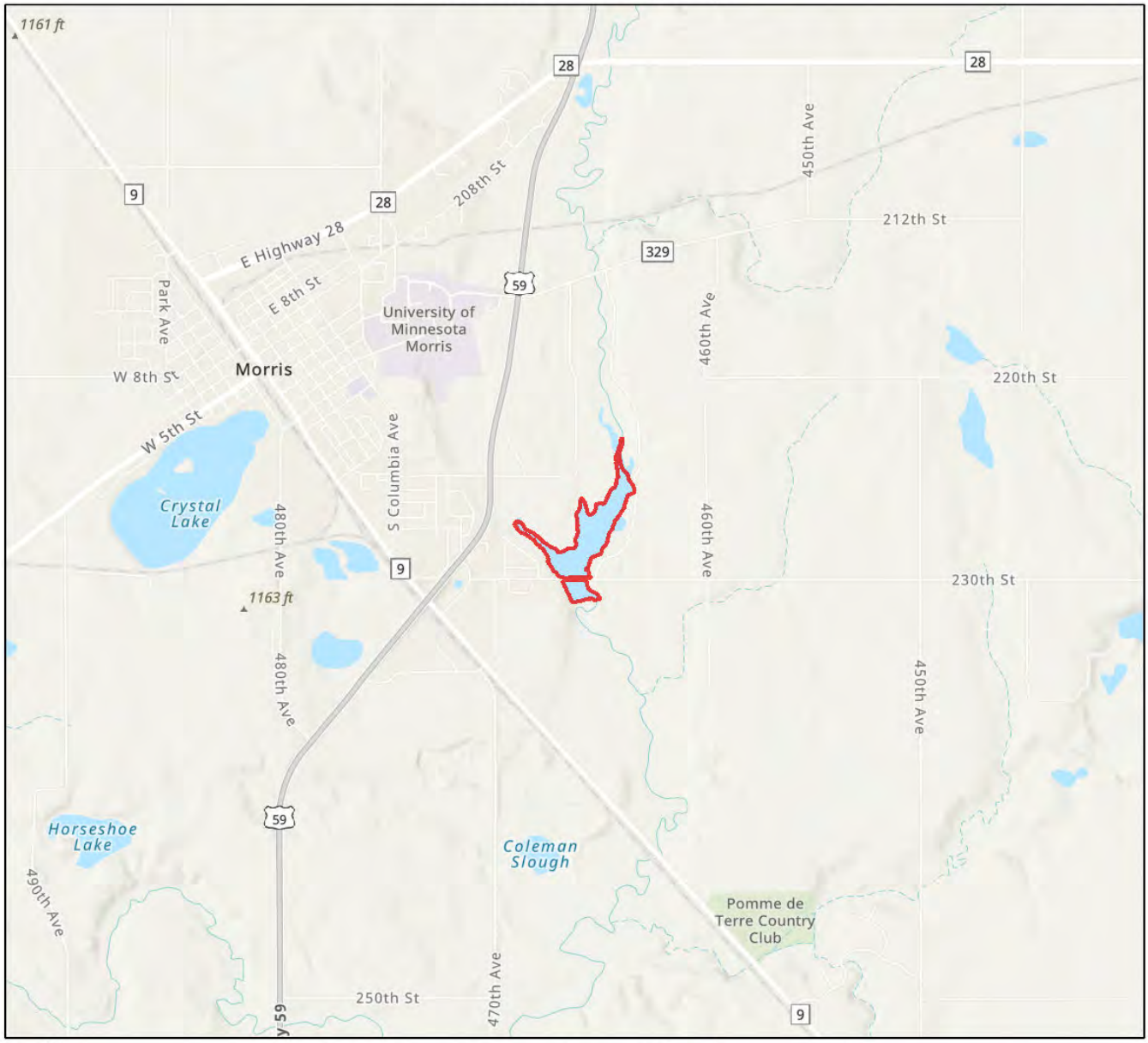
SEARCH RESULTS: No features were found within the search area.

Crissy Lake Dam Modification

Conservation Planning Map



Size (acres): 59.40

County(s): Stevens

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
MN Dept Natural Resources, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Attachment 2

U.S. FWS Threatened and Endangered Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793

In Reply Refer To: 10/09/2025 15:20:36 UTC
Project Code: 2026-0003141
Project Name: Crissy Lake Outlet Dam Modification

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:

This response has been generated by the Information, Planning, and Conservation (IPaC) system to provide information on natural resources that could be affected by your project. The U.S. Fish and Wildlife Service (Service) provides this response under the authority of the Endangered Species Act of 1973 (16 U.S.C. 1531-1543), the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d), the Migratory Bird Treaty Act (16 U.S.C. 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. 661 *et seq*.).

Threatened and Endangered Species
The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirement for obtaining a Technical Assistance Letter from the U.S. Fish and Wildlife Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq*.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Consultation Technical Assistance
Please refer to refer to our Section 7 website for guidance and technical assistance, including step-by-step instructions for making effects determinations for each species that might be present and for specific guidance on the following types of projects: projects in developed areas, HUD, CDBG, EDA, USDA Rural Development projects, pipelines, buried utilities, telecommunications, and requests for a Conditional Letter of Map Revision (CLOMR) from FEMA.

We recommend running the project (if it qualifies) through our **Minnesota-Wisconsin Federal Endangered Species Determination Key (Minnesota-Wisconsin ("D-key"))**. A demonstration video showing how-to access and use the determination key is available. Please note that the Minnesota-Wisconsin D-key is the third option of 3 available d-keys. D-keys are tools to help Federal agencies and other project proponents determine if their proposed action has the potential to adversely affect federally listed species and designated critical habitat. The Minnesota-Wisconsin D-key includes a structured set of questions that assists a project proponent in determining whether a proposed project qualifies for a certain predetermined consultation outcome for all federally listed species found in Minnesota and Wisconsin (except for the northern long-eared bat- see below), which includes determinations of "no effect" or "may affect, not likely to adversely affect." In each case, the Service has compiled and analyzed the best available information on the species' biology and the impacts of certain activities to support these determinations.

If your completed d-key output letter shows a "No Effect" (NE) determination for all listed species, print your IPaC output letter for your files to document your compliance with the Endangered Species Act.

For Federal projects with a "Not Likely to Adversely Affect" (NLAA) determination, our concurrence becomes valid if you do not hear otherwise from us after a 30-day review period, as indicated in your letter.

If your d-key output letter indicates additional coordination with the Minnesota-Wisconsin Ecological Services Field Office is necessary (i.e., you get a "May Affect" determination), you will be provided additional guidance on contacting the Service to continue ESA coordination outside of the key; ESA compliance cannot be concluded using the key for "May Affect" determinations unless otherwise indicated in your output letter.

Note: Once you obtain your official species list, you are not required to continue in IPaC with d-keys, although in most cases these tools should expedite your review. If you choose to make an effects determination on your own, you may do so. If the project is a Federal Action, you may want to review our section 7 step-by-step instructions before making your determinations.

Using the IPaC Official Species List to Make No Effect and May Affect Determinations for Listed Species

1. If IPaC returns a result of "There are no listed species found within the vicinity of the project," then project proponents can conclude the proposed activities will have **no effect** on any federally listed species under Service jurisdiction. Concurrence from the Service is not required for **no effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.
2. If IPaC returns one or more federally listed, proposed, or candidate species as potentially present in the action area of the proposed project – other than bats (see below) – then project proponents must determine if proposed activities will have **no effect** on or **may affect** those species. For assistance in determining if suitable habitat for listed, candidate, or proposed species occurs within your project area or if species may be affected by project activities, you can obtain Life History Information for Listed and Candidate Species on our office website. If no impacts will occur to a species on the IPaC species list (e.g., there is no habitat present in the project area), the appropriate determination is **no effect**. No further consultation or coordination is required. Attach this letter to the dated IPaC species list report for your records.

3. Should you determine that project activities **may affect** any federally listed, please contact our office for further coordination. Letters with requests for consultation or correspondence about your project should include the Consultation Tracking Number in the header. Electronic submission is preferred.

Northern Long-Eared Bats
Northern long-eared bats occur throughout Minnesota and Wisconsin and the information below may help in determining if your project may affect these species.

Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh for northern long-eared bat that have exfoliating bark, cracks, crevices, and/or hollows), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) of forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat and evaluated for use by bats. If your project will impact caves or mines or will involve clearing forest or woodland habitat containing suitable roosting habitat, northern long-eared bats could be affected. For bat activity dates, please review Appendix L in the Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines.

Examples of unsuitable habitat include:
- Individual trees that are greater than 1,000 feet from forested or wooded areas,
- Trees found in highly developed urban areas (e.g., street trees, downtown areas),
- A pure stand of less than 3-inch dbh trees that are not mixed with larger trees, and
- A monoculture stand of shrubby vegetation with no potential roost trees.

If IPaC returns a result that northern long-eared bats are potentially present in the action area of the proposed project, project proponents can conclude the proposed activities **may affect** this species **IF** one or more of the following activities are proposed:
- Clearing or disturbing suitable roosting habitat, as defined above, at any time of year,
- Any activity in or near the entrance to a cave or mine,
- Mining, deep excavation, or underground work within 0.25 miles of a cave or mine,
- Construction of one or more wind turbines, or
- Demolition or reconstruction of human-made structures that are known to be used by bats based on observations of roosting bats, bats emerging at dusk, or guano deposits or stains.

If none of the above activities are proposed, project proponents can conclude the proposed activities will have **no effect** on the northern long-eared bat. Concurrence from the Service is not required for **No Effect** determinations. No further consultation or coordination is required. Attach this letter to the dated IPaC

species list report for your records.

If any of the above activities are proposed, and the northern long-eared bat appears on the user's species list, the federal project user will be directed to either the northern long-eared bat and tricolored bat range-wide D-key or the Federal Highways Administration, Federal Railways Administration, and Federal Transit Administration Indiana bat/Northern long-eared bat D-key, depending on the type of project and federal agency involvement. Similar to the Minnesota-Wisconsin D-key, these d-keys helps to determine if prohibited take might occur and, if not, will generate an automated verification letter. Additional information about available tools can be found on the Service's northern long-eared bat website.

Whooping Crane
Whooping crane is designated as a non-essential experimental population in Wisconsin and consultation under Section 7(a)(2) of the Endangered Species Act is only required if project activities will occur within a National Wildlife Refuge or National Park. If project activities are proposed on lands outside of a National Wildlife Refuge or National Park, then you are not required to consult. For additional information on this designation and consultation requirements, please review "Establishment of a Nonessential Experimental Population of Whooping Cranes in the Eastern United States."

Other Trust Resources and Activities
Bald and Golden Eagles - Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. It is the responsibility of the project proponent to survey the area for any migratory bird nests. If there is an eagle nest on-site while work is on-going, eagles may be disturbed. We recommend avoiding and minimizing disturbance to eagles whenever practicable. If you cannot avoid eagle disturbance, you may seek a permit. A nest take permit is always required for removal, relocation, or obstruction of an eagle nest. For communication and wind energy projects, please refer to additional guidelines below.

Migratory Birds - The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.

Communication Towers - Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed voluntary guidelines for minimizing impacts.

Transmission Lines - Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please refer to guidelines developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.

Wind Energy - To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's Wind Energy Guidelines. In addition, please refer to the Service's Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

State Department of Natural Resources Coordination
While it is not required for your Federal section 7 consultation, please note that additional state endangered or threatened species may also have the potential to be impacted. **Please contact the Minnesota or Wisconsin Department of Natural Resources for information on state listed species that may be present in your proposed project area.**

Minnesota
Minnesota Department of Natural Resources - Endangered Resources Review Homepage
Email: Review.NHIS@state.mn.us

Wisconsin
Wisconsin Department of Natural Resources - Endangered Resources Review Homepage
Email: DNRERReview@wi.gov

We appreciate your concern for threatened and endangered species. Please feel free to contact our office with questions or for additional information.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- 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:

Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
(952) 858-0793

PROJECT SUMMARY

Project Code: 2026-0003141
Project Name: Crissy Lake Outlet Dam Modification
Project Type: Modification Stream or Waterbody
Project Description: The project includes the construction of two rock arch rapids along the Pomme de Terre River at the downstream side of Crissy Lake. This will modify the Crissy Lake Dam. Additionally, the project will restore Crissy Lake back to its "normal Pool elevation" and complete some channel restoration.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@45.5755461,-95.88199642742424,14z

Counties: Stevens County, Minnesota

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 Fisheries[1], 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.

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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.

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10885	Proposed Endangered
Western Regal Fritillary *Argynnis idalia occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/12017	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

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.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

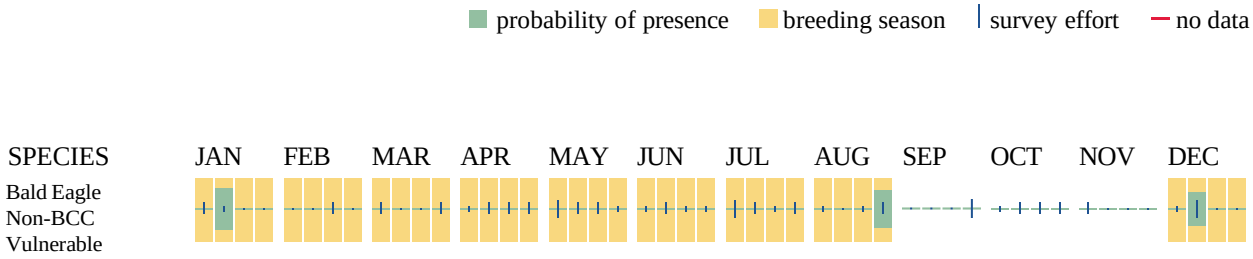
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



Additional information can be found using the following links:

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

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Golden-plover *Pluvialis dominica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10561	Breeds elsewhere
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Tern *Chlidonias niger surinamenisis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Franklin's Gull *Leucophaeus pipixcan* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567	Breeds May 1 to Jul 31
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15

NAME	BREEDING SEASON
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Short-billed Dowitcher *Limnodromus griseus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

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

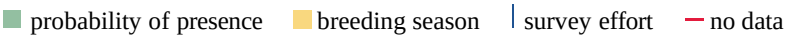
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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.

FRESHWATER EMERGENT WETLAND

- PEM1F
- PEM1C

LAKE

- L2UBH

RIVERINE

- R2UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1C
- PFO1C
- PFO1D

IPAC USER CONTACT INFORMATION

Agency: Houston Engineering
Name: Benjamin Hengel
Address: 1401 21st. Ave. N
City: Fargo
State: ND
Zip: 58102
Email bhengel@houstoneng.com
Phone: 7014999468

Attachment 3

U.S. FWS Effect Determinations Verification Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Minnesota-Wisconsin Ecological Services Field Office
3815 American Blvd East
Bloomington, MN 55425-1659
Phone: (952) 858-0793

In Reply Refer To: 10/09/2025 15:53:16 UTC
Project code: 2026-0003141
Project Name: Crissy Lake Outlet Dam Modification

Subject: Technical Assistance letter for 'Crissy Lake Outlet Dam Modification' for specified threatened and endangered species that may occur in your proposed project location consistent with the Minnesota-Wisconsin Endangered Species Determination Key (Minnesota-Wisconsin DKey).

Dear Benjamin Hengel:

The U.S. Fish and Wildlife Service (Service) received on **October 09, 2025** your effect determination(s) for the 'Crissy Lake Outlet Dam Modification' (Action) using the Minnesota-Wisconsin DKey within the Service's Information for Planning and Consultation (IPaC) system. The Service developed this system in accordance with the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.).

Based on your responses to the Service's Minnesota-Wisconsin DKey, you made the following effect determination(s) for the proposed Action:

Species	Listing Status	Determination
Monarch Butterfly (*Danaus plexippus*)	Proposed Threatened	No effect

Determination Information

Thank you for informing the Service of your "No Effect" determination(s).

Additional Information

Sufficient project details: Please provide sufficient project details on your project homepage in IPaC (Define Project, Project Description) to support your conclusions. Failure to disclose important aspects of your project that would influence the outcome of your effects determinations may negate your determinations and invalidate this letter. If you have site-specific information that leads you to believe a different determination is more appropriate for your project than what the Dkey concludes, you can and should proceed based on the best available information.

Future project changes: The Service recommends that you contact the Minnesota-Wisconsin Ecological Services Field Office or re-evaluate the project in IPaC if: 1) the scope or location of the proposed Action is changed; 2) new information reveals that the action may affect federally listed species or federally designated critical habitat in a manner or to an extent not previously considered; 3) the Action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project changes are final or resources committed.

For non-Federal representatives: Please note that when a project requires consultation under section 7 of the Act, the Service must consult directly with the Federal action agency unless that agency formally designates a non-Federal representative (50 CFR 402.08). Non-Federal representatives may prepare analyses or conduct informal consultations; however, the ultimate responsibility for section 7 compliance under the Act remains with the Federal agency. Please include the Federal action agency in additional correspondence regarding this project.

For projects that intersect with or are adjacent to Tribal lands: The Service has federal Trust responsibilities and a strong commitment to working with Tribal governments to help sustain fish and wildlife resources for future generations. Tribal governments should be provided with sufficient opportunity to express their perspectives and/or concerns for proposed projects. If your project intersects with Tribal lands or impacts culturally sensitive resources, please engage with the federally recognized Tribe to ensure they have an opportunity to provide input on this project.

Species-specific information

Bald and Golden Eagles: Bald eagles, golden eagles, and their nests are protected under the Bald and Golden Eagle Protection Act (54 Stat. 250, as amended, 16 U.S.C. 668a-d) (Eagle Act). The Eagle Act prohibits, except when authorized by an Eagle Act permit, the "taking" of bald and golden eagles and defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." The Eagle Act's implementing regulations define disturb as "… to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Additional Species Requiring Review

In addition to the species described above, the following species or critical habitats may also occur in your project area and are not covered by this conclusion:

- Suckley's Cuckoo Bumble Bee *Bombus suckleyi* Proposed Endangered
- Western Regal Fritillary *Argynnis idalia occidentalis* Proposed Threatened

Coordination with the Service is not complete if additional coordination is advised above for any species.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

Crissy Lake Outlet Dam Modification

2. Description

The following description was provided for the project 'Crissy Lake Outlet Dam Modification':

> The project includes the construction of two rock arch rapids along the Pomme de Terre River at the downstream side of Crissy Lake. This will modify the Crissy Lake Dam. Additionally, the project will restore Crissy Lake back to its "normal Pool elevation" and complete some channel restoration.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@45.5755461,-95.88199642742424,14z

QUALIFICATION INTERVIEW

1. This determination key is intended to assist the user in evaluating the effects of their actions on Federally listed species in Minnesota and Wisconsin. It does not cover other prohibited activities under the Endangered Species Act (e.g., for wildlife: import/export, Interstate or foreign commerce, possession of illegally taken wildlife, etc.; for plants: import/export, reduce to possession, malicious destruction on Federal lands, commercial sale, etc.) or other statutes. Additionally, this key DOES NOT cover wind development, purposeful take (e.g., for research or surveys), communication towers that have guy wires or are over 450 feet in height, aerial or other large-scale application of any chemical (such as insecticide or herbicide), and approval of long-term permits or plans (e.g., FERC licenses, HCP's).

   Click **YES** to acknowledge that you must consider other prohibitions of the ESA or other statutes outside of this determination key.

   Yes
2. Is the action being funded, authorized, or carried out by a Federal agency?

   Yes
3. Are you the Federal agency or designated non-federal representative?

   No
4. Does the action involve the installation or operation of wind turbines?

   No
5. Does the action involve purposeful take of a listed animal?

   No
6. Does the action involve a new communications tower?

   No
7. Does the activity involve aerial or other large-scale application of ANY chemical, including pesticides (insecticide, herbicide, fungicide, rodenticide, etc)?

   No
8. Will your action permanently affect local hydrology?

   Yes

9. Does your project have the potential to impact the riparian zone or indirectly impact a stream/river (e.g., cut and fill; horizontal directional drilling; construction; vegetation removal; pesticide or fertilizer application; discharge; runoff of sediment or pollutants; increase in erosion, etc.)?

   Note: Consider all potential effects of the action, including those that may happen later in time and outside and downstream of the immediate area involved in the action.

   Endangered Species Act regulation defines "effects of the action" to include all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (50 CFR 402.02).

   Yes

10. Will your action disturb the ground or existing vegetation?

    Note: This includes any off-road vehicle access, soil compaction (enough to collapse a rodent burrow), digging, seismic survey, directional drilling, heavy equipment, grading, trenching, placement of fill, pesticide application (herbicide, fungicide), vegetation management (including removal or maintenance using equipment or prescribed fire), cultivation, development, etc.

    Yes

11. Will your action include spraying insecticides?

    No

12. Does your action area occur entirely within an already developed area?

    Note: Already developed areas are already paved, covered by existing structures, manicured lawns, industrial sites, or cultivated cropland, AND do not contain trees that could be roosting habitat. Be aware that listed species may occur in areas with natural, or semi-natural, vegetation immediately adjacent to existing utilities (e.g. roadways, railways) or within utility rights-of-way such as overhead transmission line corridors, and can utilize suitable trees, bridges, or culverts for roosting even in urban dominated landscapes (so these are not considered "already developed areas" for the purposes of this question). If unsure, select NO..

    Yes

13. Does the action have potential indirect effects to listed species or the habitats they depend on (e.g., water discharge into adjacent habitat or waterbody, changes in groundwater elevation, introduction of an exotic plant species)?

    Yes

14. [Hidden Semantic] Does the action area intersect the monarch butterfly species list area?

    Automatically answered

    Yes

15. Under the ESA, monarchs remain warranted but precluded by listing actions of higher priority. The monarch is a candidate for listing at this time. The Endangered Species Act does not establish protections or consultation requirements for candidate species. Some Federal and State agencies may have policy requirements to consider candidate species in planning. We encourage implementing measures that will remove or reduce threats to these species and possibly make listing unnecessary.

    If your project will have no effect on monarch butterflies (for example, if your project won't affect their habitat or individuals), then you can make a "no effect" determination for this project.

    Are you making a "no effect" determination for monarch?

    Yes

IPAC USER CONTACT INFORMATION

Agency: Houston Engineering
Name: Benjamin Hengel
Address: 1401 21st. Ave. N
City: Fargo
State: ND
Zip: 58102
Email bhengel@houstoneng.com
Phone: 7014999468

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers

Attachment 4

Preliminary Construction Plans

No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

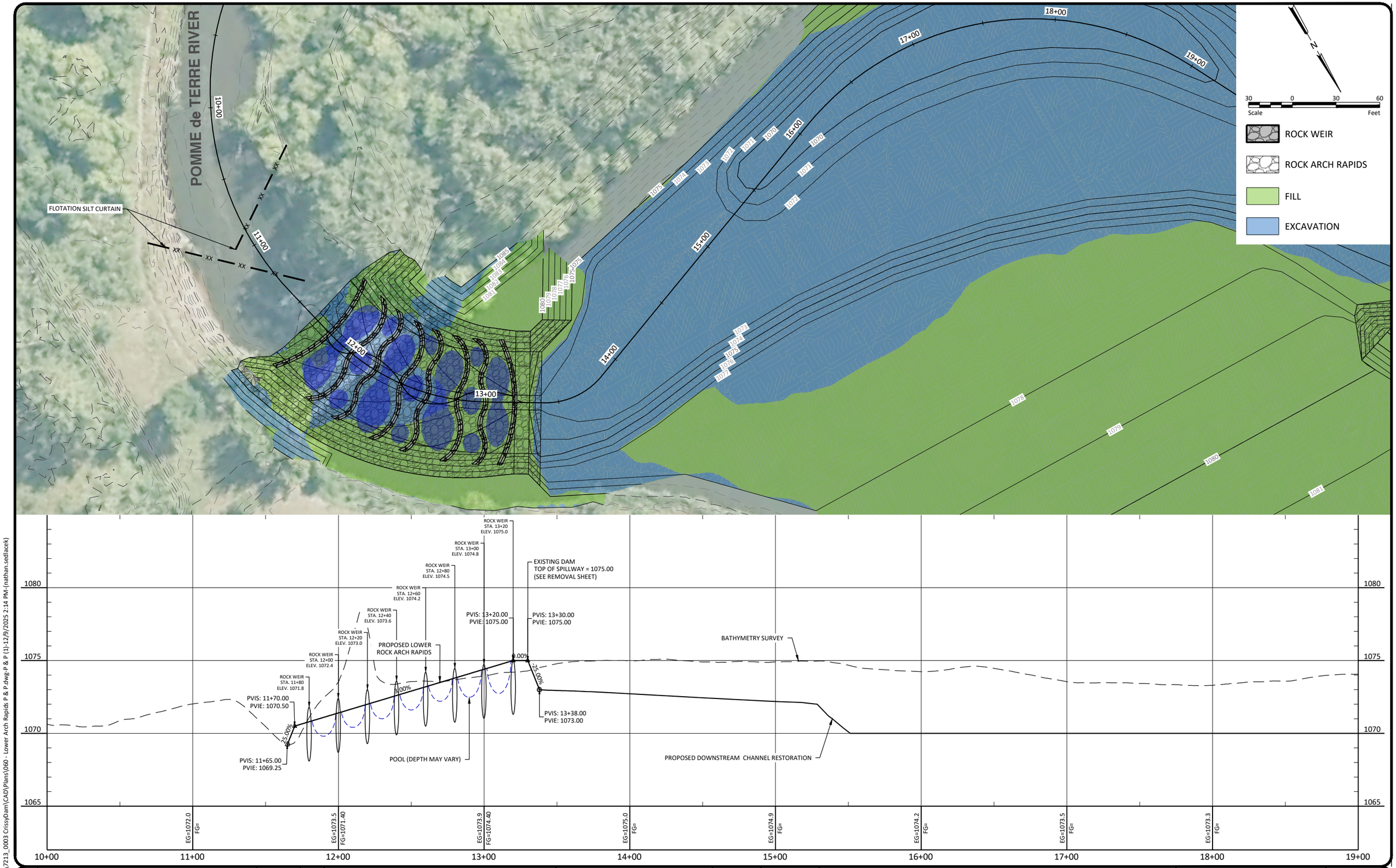
CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

SCOPE OF WORK
PROJECT NO. 7213-0003

SHEET 1

HEI NO. PPPP-PPP

H:\JBN\7200\7213\7213_0003 CrissyDam\CAD\Plans\004 - Scope of Work.dwg-P & P (1)-12/9/2025 2:12 PM-(nathan.sedlacek)



H:\JBN\7200\7213\7213_0003 CrissyDam\CAD\Plans\060 - Lower Arch Rapids P & P.dwg-P & P (1)-12/9/2025 2:14 PM-(nathan.sedlacek)

No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

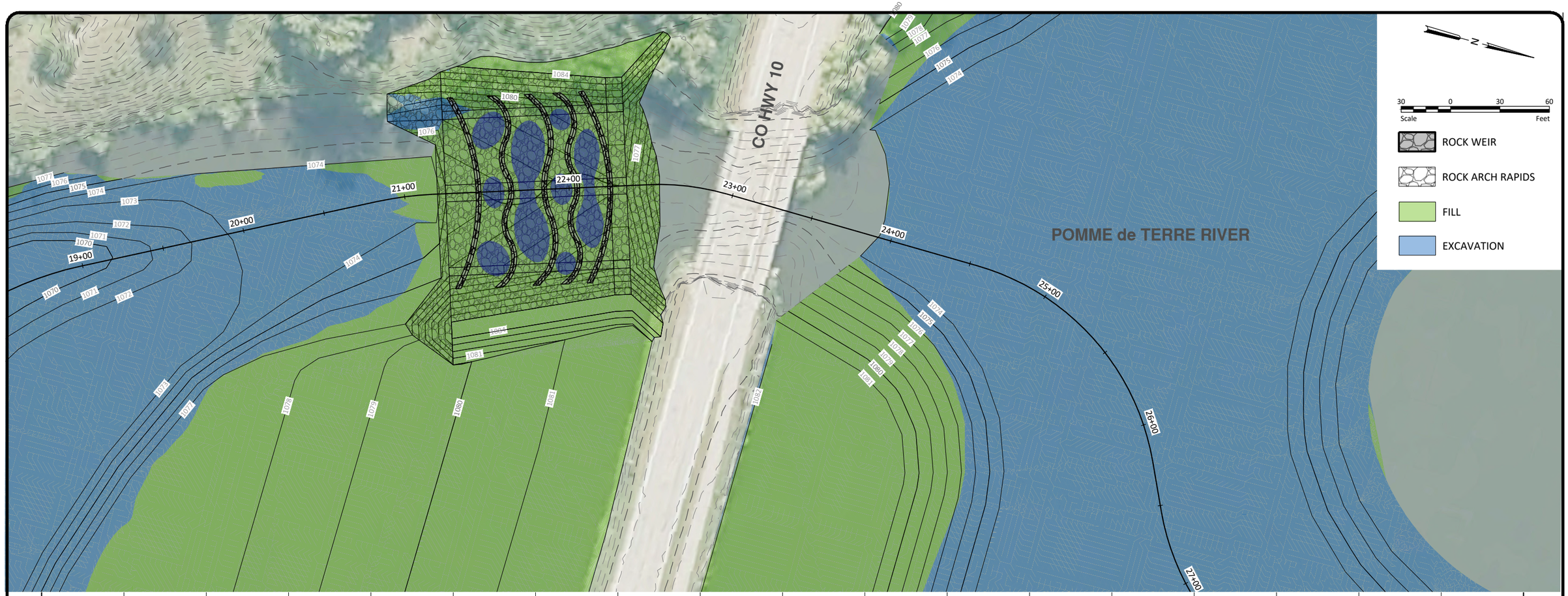
CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

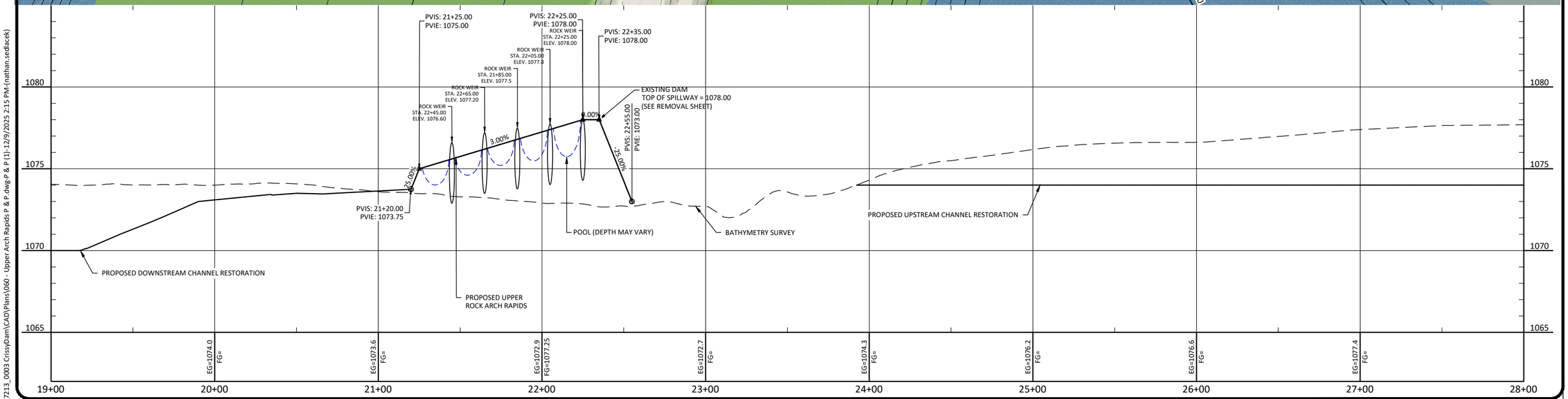
LOWER ROCK ARCH RAPIDS PLAN & PROFILE

PROJECT NO. 7213-0003

SHEET 1

HEI NO. PPPP-PPP





H:\JBN\Y200\Y213\Y213_0003 CrissyDam\CAD\Plans\OKO - Upper Arch Rapids P & P dwg-P & P (1)-12/9/2025 2:15 PM-(nathan.sedlacek)

No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

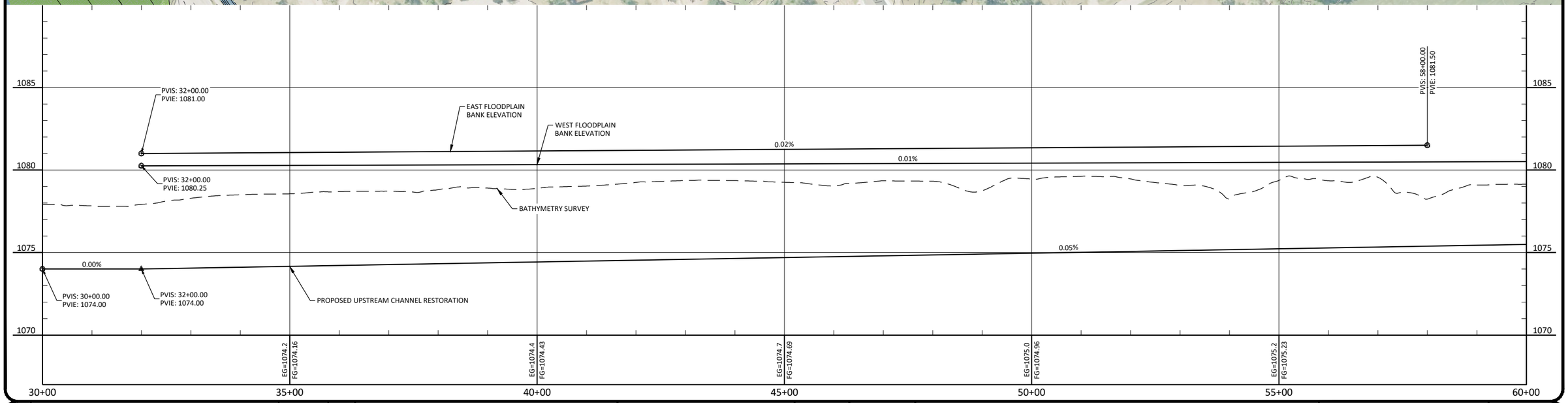
CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

UPPER ROCK ARCH RAPIDS PLAN & PROFILE

PROJECT NO. 7213-0003

SHEET 2

HEI NO. PPPP-PPP



No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

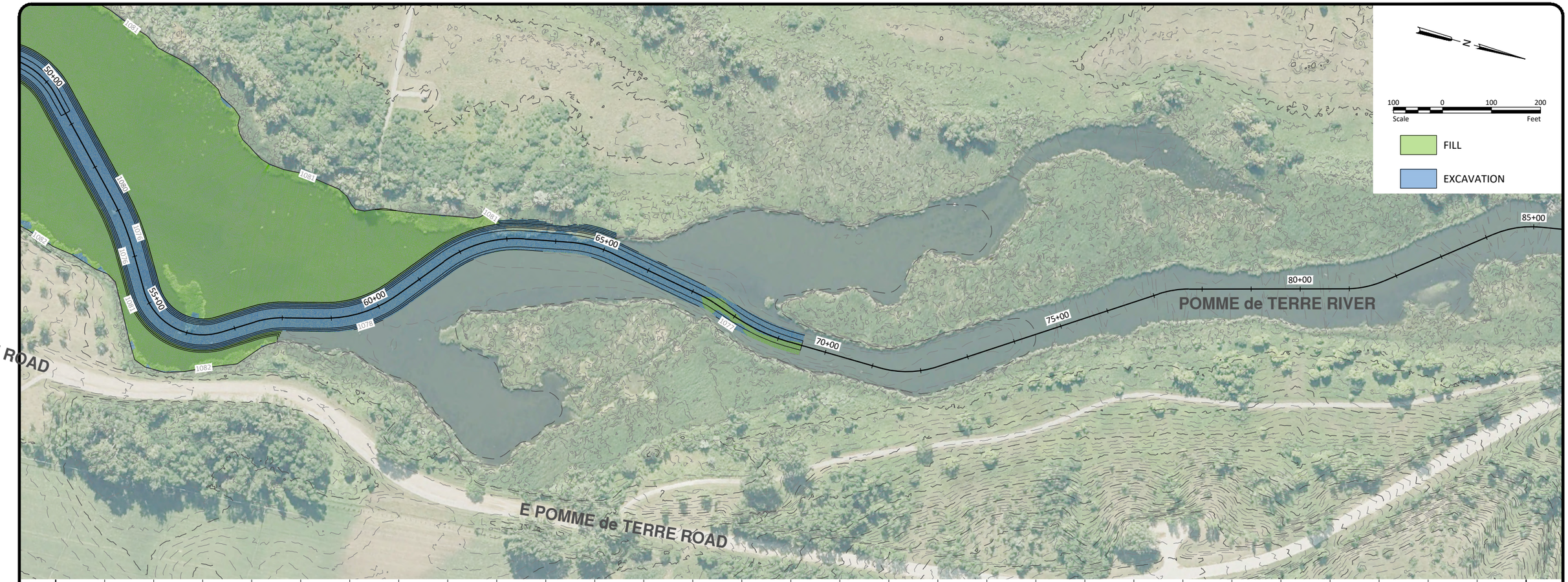
CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

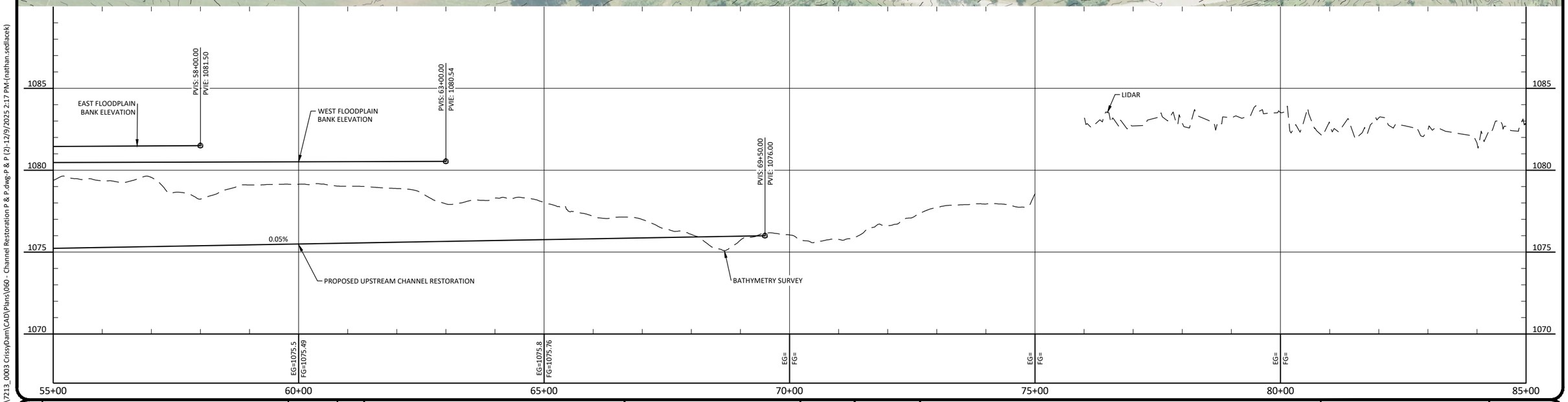
CHANNEL RESTORATION
PLAN & PROFILE

PROJECT NO. 7213-0003

SHEET 3

H:\JBN\7200\7213\7213_0003 CrissyDam\CAD\Plans\060 - Channel Restoration P & P.dwg-P & P (1)-12/9/2025 2:17 PM-(nathan.sedlacek)





No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

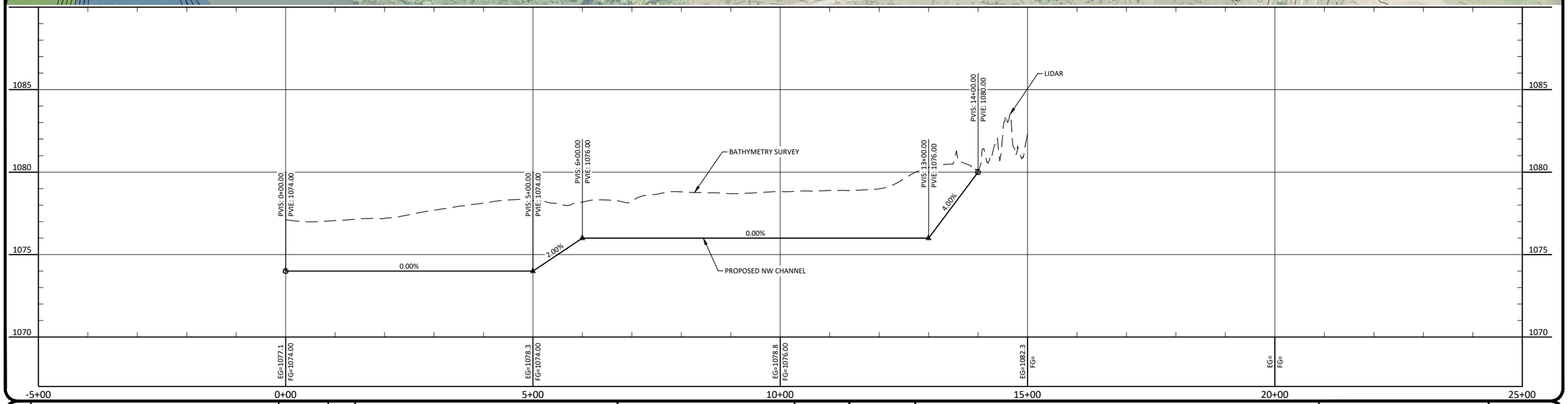
CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

CHANNEL RESTORATION
PLAN & PROFILE
PROJECT NO. 7213-0003

SHEET 4

HEI NO. PPPP-PPP

H:\JBN\Y200\Y213\Y213_0003 CrissyDam\CAD\Plans\060 - Channel Restoration P & P.dwg-P & P (2)-12/9/2025 2:17 PM-(nathan.sedlacek)



No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

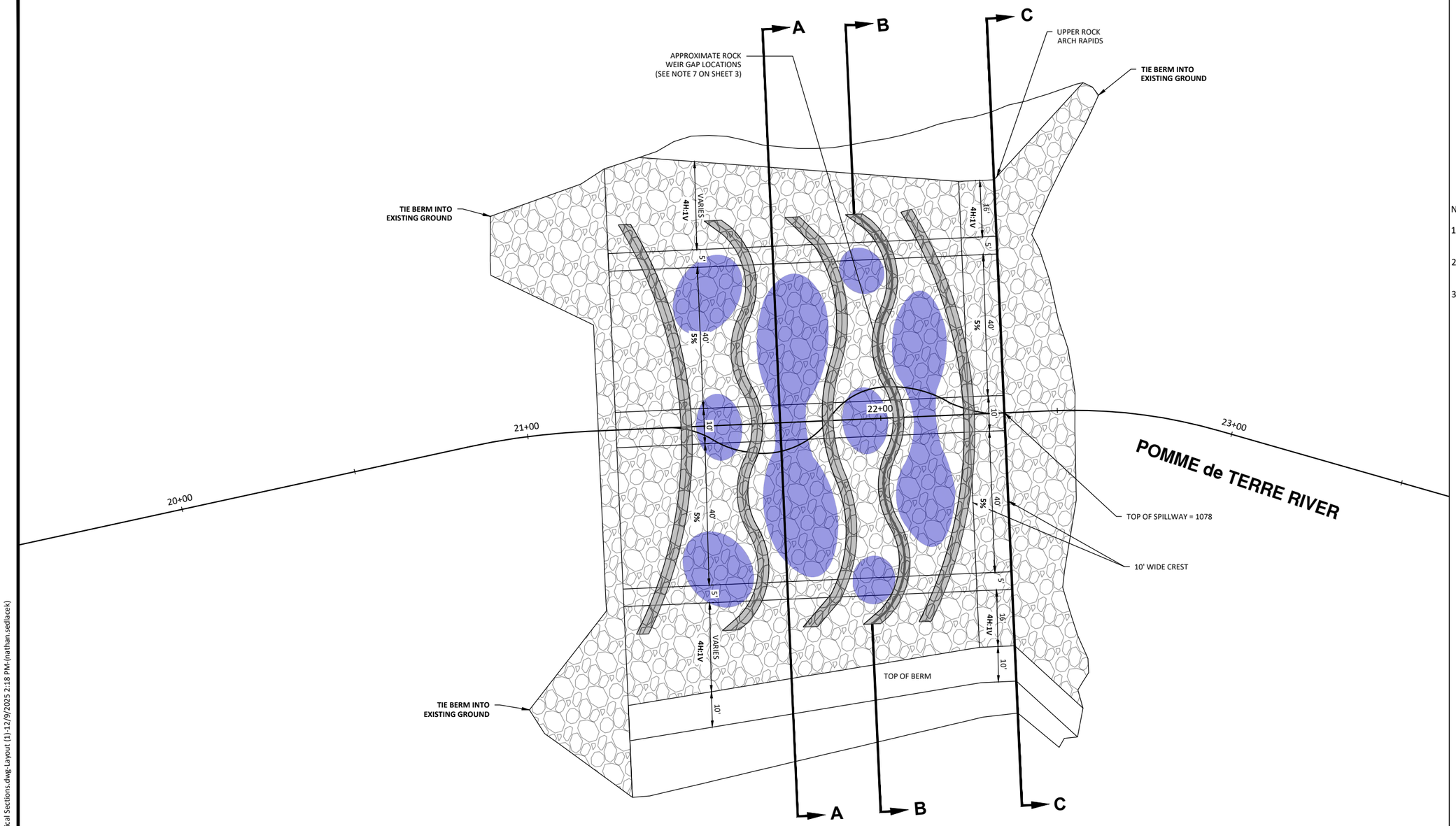
NW CHANNEL
PLAN & PROFILE

PROJECT NO. 7213-0003

SHEET 5

HEI NO. PPPP-PPP

H:\JBN\7200\7213\7213_0003 CrissyDam\CAD\Plans\060 - NW Pool Arm P & P.dwg-P & P (1)-12/9/2025 2:18 PM-(nathan.sedlacek)



N

20 0 20 40
Scale Feet

ROCK WEIR

ROCK ARCH RAPIDS

POOL

NOTES:

1. EXCAVATE RESTING POOLS 2FT BELOW NEXT DOWNSTREAM WEIR INVERT.
2. POOLS SHALL BE CONSTRUCTED WITH 2H:1V SIDE SLOPES, OR AS DIRECTED BY THE ENGINEER.
3. TOP OF BOULDERS WILL GENERALLY BE 3+ INCHES ABOVE THE WEIR ELEVATION TO TAKE INTO ACCOUNT THE ROUNDED SHAPE OF THE BOULDERS.

ROCK WEIR STATION	LOW FLOW BOULDER ELEVATION
22+25	1078.0
22+05	1077.8
21+85	1077.5
21+65	1077.2
21+45	1076.6

No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

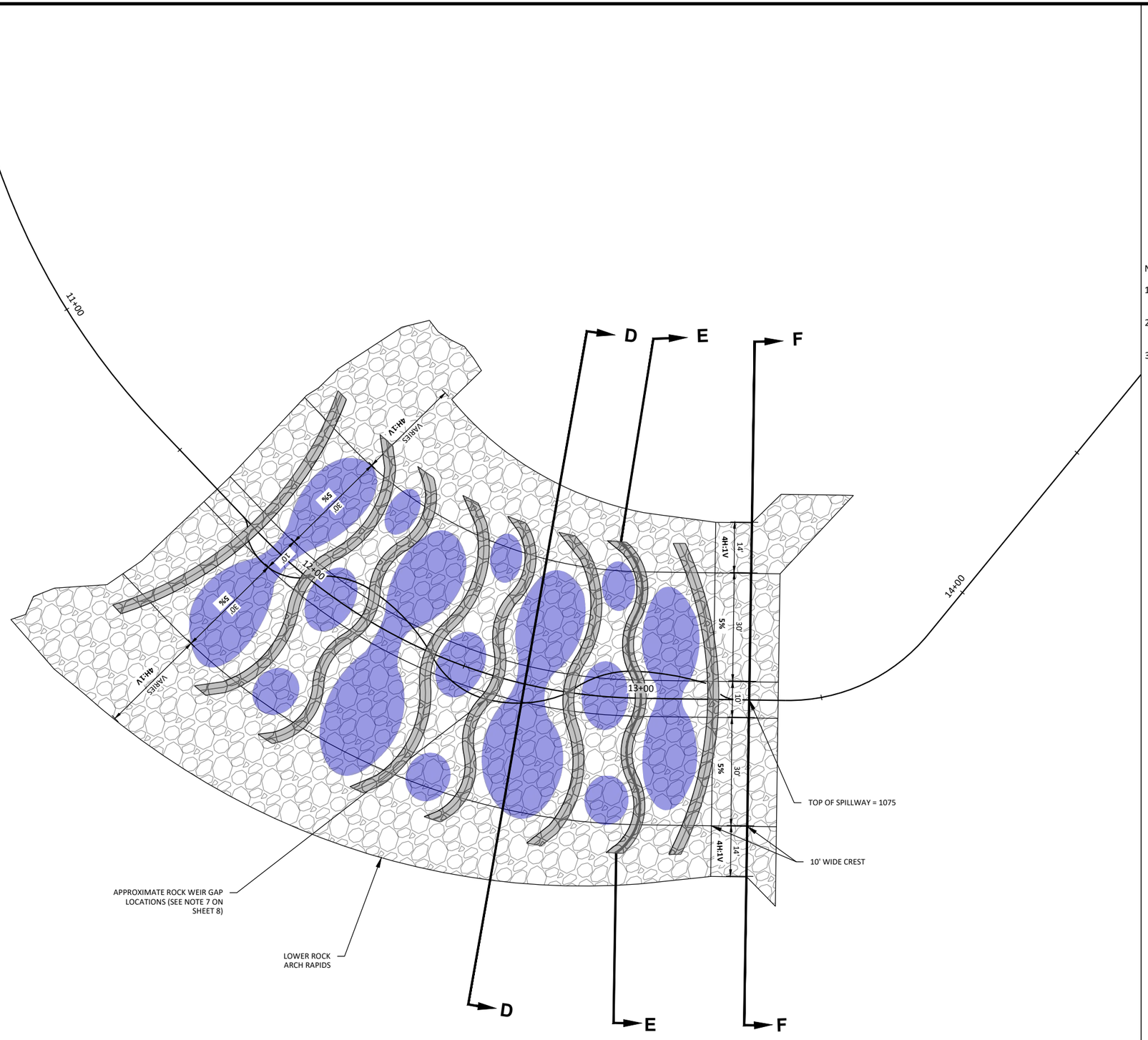
UPPER ROCK ARCH RAPIDS LAYOUT

PROJECT NO. 7213-0003

SHEET 1

HEI NO. PPPP-PPP

H:\JBN\7200\7213\7213_0003 CrissyDam\CAD\Plans\030 - Typical Sections.dwg-Layout (1)-12/9/2025 2:18 PM-(nathan.sedlacek)



N

20 0 20 40
Scale Feet

ROCK WEIR

ROCK ARCH RAPIDS

POOL

NOTES:

1. EXCAVATE RESTING POOLS 2FT BELOW NEXT DOWNSTREAM WEIR INVERT.
2. POOLS SHALL BE CONSTRUCTED WITH 2H:1V SIDE SLOPES, OR AS DIRECTED BY THE ENGINEER.
3. TOP OF BOULDERS WILL GENERALLY BE 3+ INCHES ABOVE THE WEIR ELEVATION TO TAKE INTO ACCOUNT THE ROUNDED SHAPE OF THE BOULDERS.

ROCK WEIR STATION	LOW FLOW BOULDER ELEVATION
13+20	1075.0
13+00	1074.8
12+80	1074.5
12+60	1074.2
12+40	1073.6
12+20	1073.0
12+00	1072.4
11+80	1071.8

H:\JBN\7200\7213\7213_0003 CrissyDam\CAD\Plans\030 - Typical Sections.dwg-Layout (2)-12/9/2025 2:18 PM-(nathan.sedlacek)

No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

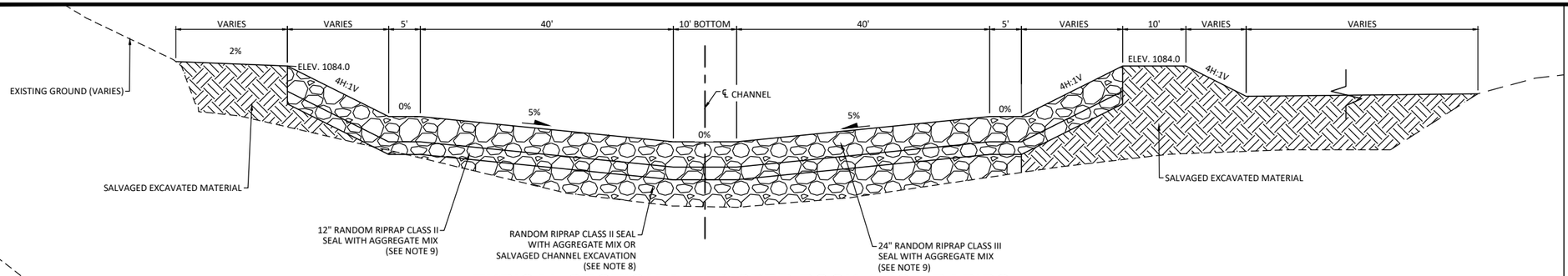
CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

LOWER ROCK ARCH RAPIDS LAYOUT

PROJECT NO. 7213-0003

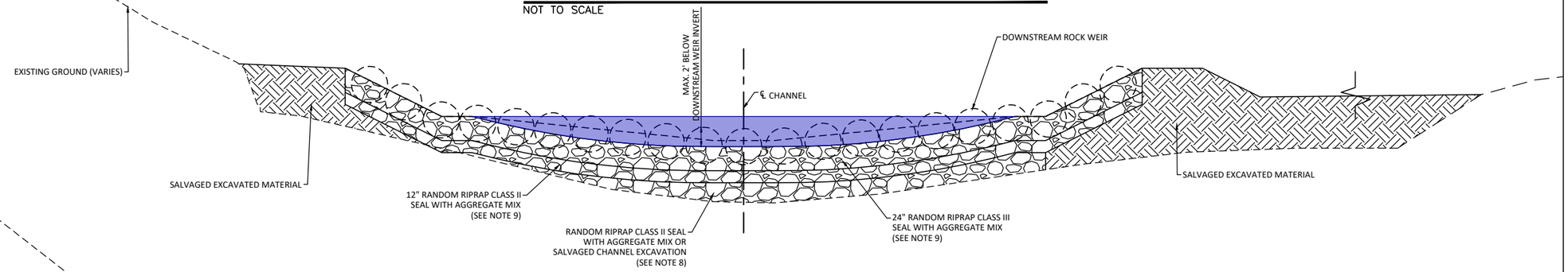
SHEET 2

HEI NO. PPPP-PPP



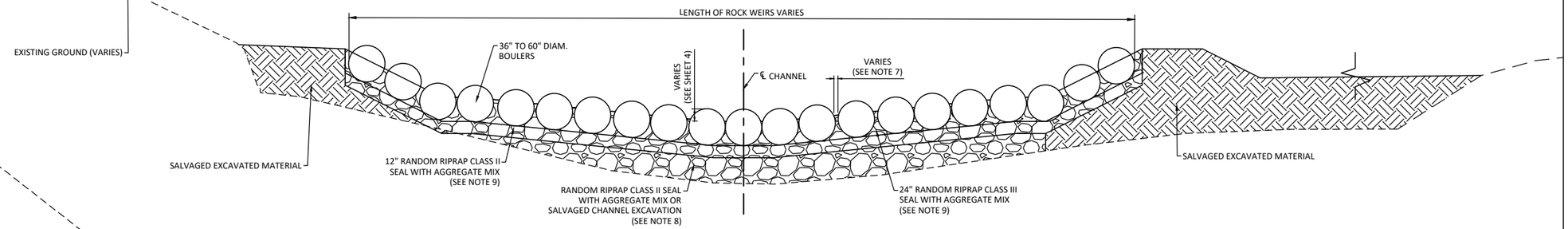
TYPICAL SECTION A - A UPPER ROCK ARCH RAPIDS

NOT TO SCALE



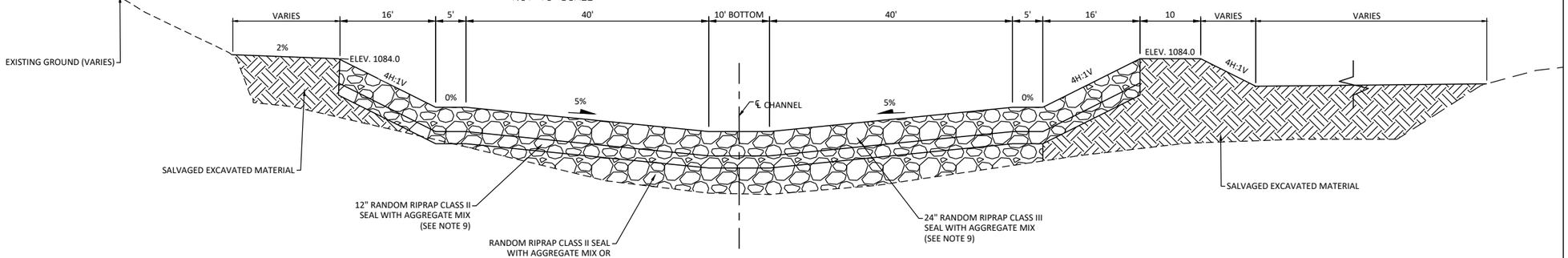
TYPICAL SECTION A - A UPPER ROCK ARCH RAPIDS WITH POOLS

NOT TO SCALE



TYPICAL SECTION B - B UPPER ROCK ARCH RAPIDS

NOT TO SCALE



TYPICAL SECTION C - C

NOT TO SCALE

NOTES:

1. NUMBER OF BOULDERS FOR EACH ROCK-ARCH IS DEPENDENT ON SIZE AND SPACING OF BOULDERS.
2. ROCK WEIRS SHALL CONSIST OF 36" TO 60" BOULDERS. TOP OF BOULDERS SHALL BE SET ABOVE RANDOM RIPRAP CLASS III AS SHOWN ON THE PROFILE TO RESULT IN WEIRS SPACED AT APPROXIMATELY 20' CREST TO CREST.
3. BOULDER WEIRS ARE TO BE FILLED WITH RANDOM RIPRAP CLASS II AND THE AGGREGATE MIX DESCRIBED IN NOTE #9, APPLIED AS A SINGLE, WELL-MIXED MATERIAL TO REDUCE LEAKAGE AND CREATE POOLS.
4. ADDITIONAL BOULDERS WILL BE ADDED RANDOMLY TO ADD TO AESTHETICS AS DIRECTED BY THE ENGINEER OR REPRESENTATIVE IN THE FIELD (ESTIMATED AT XX TOTAL ADDITIONAL BOULDERS). THE NUMBER OF ADDITIONAL BOULDERS SHALL BE MEASURED AS EACH AND PAID FOR UNDER THE BID ITEM "ROCK BOULDERS (36" TO 60" DIAMETER BOULDERS)".
5. ADDITIONAL FLAT ROCK BOULDERS WILL BE ADDED AS DIRECTED BY THE ENGINEER. FLAT ROCK BOULDERS SHALL BE GENERALLY FLAT ON ONE SIDE AND PLACED WITH THE FLAT SIDE FACING UP (ESTIMATED AT X ADDITIONAL BOULDERS). FLAT ROCK BOULDERS SHALL BE MEASURED AS EACH AND PAID FOR UNDER THE BID ITEM "FLAT ROCK BOULDERS (48" TO 72" DIAMETER BOULDERS)".
6. THE WEIRS FUNCTION TO PROVIDE ADDED STABILITY TO THE RAPIDS, RESTING AREA FOR THE MIGRATION OF FISH, DIRECTING FLOW TOWARDS MID-CHANNEL (REDUCING STRESS ON BANKS) AND INCREASING SAFETY BY CREATING LOW VELOCITIES NEAR BANKS.
7. WEIRS ARE TO BE INTEGRATED INTO THE CONSTRUCTED BANKS. THE SPACING BETWEEN BOULDERS, AS SHOWN, IS APPROXIMATE AND SHALL BE COORDINATED WITH ON-SITE DNR PERSONNEL AND THE RESIDENT PROJECT REPRESENTATIVE. THE GAPS TYPICALLY RANGE FROM 0" TO 12", WITH ONE OR TWO LARGER OPENINGS MEASURING APPROXIMATELY 2.5' TO 3'.
8. ALL FILL MATERIAL UNDER RIPRAP RAMP CHANNEL TO BE RANDOM RIPRAP CLASS II SEAL WITH AGGREGATE MIX OR SALVAGED EXCAVATED MATERIAL WITH ENGINEERS APPROVAL. SALVAGED CHANNEL EXCAVATION WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO RIPRAP. THERE IS AN ESTIMATED XX CY OF SALVAGED CHANNEL EXCAVATION TO BE USED AS FILL MATERIAL UNDER RIPRAP RAMP CHANNEL.
9. RIPRAP TO BE MIXED WITH A WELL GRADED MIX OF AGGREGATE VARYING FROM THE NO. 40 SIEVE UP TO 3 INCH STONES AND APPLIED AS A SINGLE, WELL-MIXED BUILDING MATERIAL TO FORM A SOLID, NO-VOID RAMP. THE WELL GRADED MIX OF AGGREGATE SHALL BE APPROVED BY THE ENGINEER OR ON-SITE REPRESENTATIVE PRIOR TO INSTALLATION. THE MIX OF AGGREGATE SHOULD BE SUCH THAT IT IS NOT BLOWN OUT OF THE RIPRAP BY THE RIVERS CURRENT BUT INSTEAD FORCES FLOW OVER THE RIPRAP. EXCESS CHANNEL EXCAVATION CAN BE USED FOR FILLING VOIDS WITH ENGINEERS APPROVAL. SOME CONTRACTORS HAVE ESTIMATED THE QTY TO BE NEAR 1 CY OF WELL GRADED MIX OF AGGREGATE TO 1 CY OF RIPRAP. ENGINEER MAY REQUIRE ADDITIONAL AGGREGATE MIX TO BE INSTALLED. THE WELL GRADED MIX OF AGGREGATE IS CONSIDERED INCIDENTAL TO RIPRAP.

No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

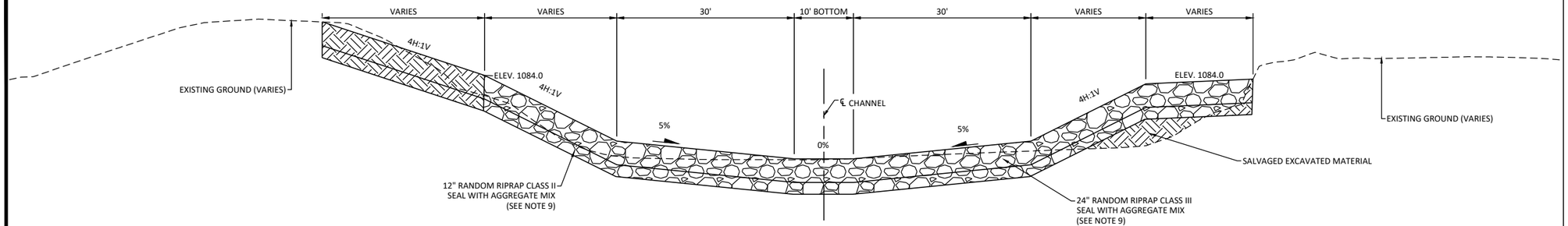
UPPER ROCK ARCH RAPIDS DETAILS

PROJECT NO. 7213-0003

SHEET 3

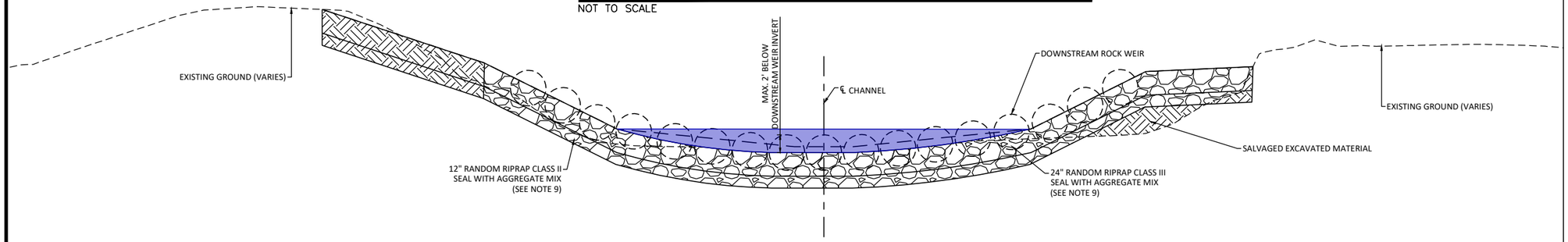
HEI NO. PPPP-PPP

H:\BN\7200\7213\7213_0003 CrissyDam\CAD\Plans\030 - Typical Sections.dwg-Layout (3)-12/9/2025 2:18 PM-(nathan.sedlacek)



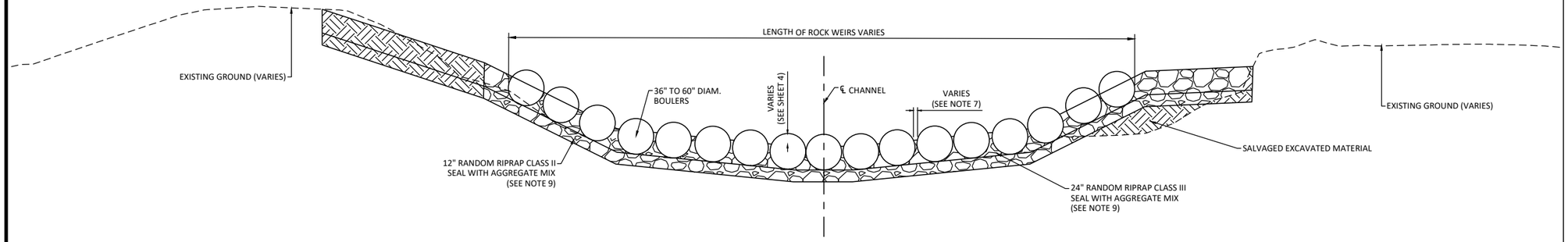
TYPICAL SECTION D -D LOWER ROCK ARCH RAPIDS

NOT TO SCALE



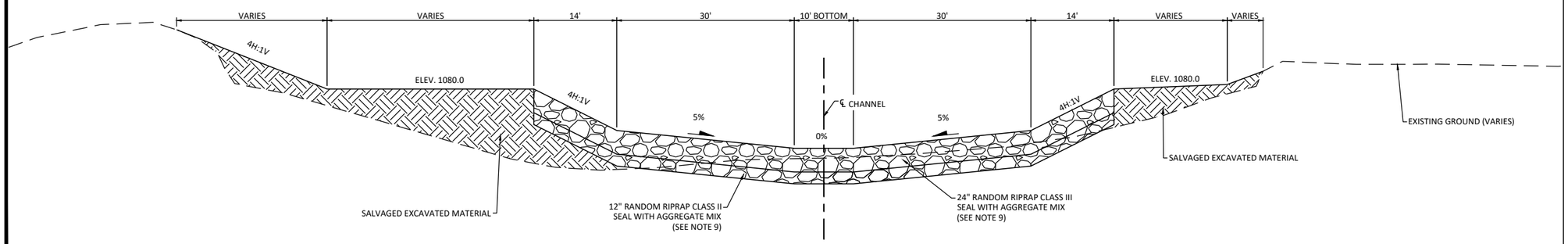
TYPICAL SECTION D -D LOWER ROCK ARCH RAPIDS WITH POOLS

NOT TO SCALE



TYPICAL SECTION E - E LOWER ROCK ARCH RAPIDS

NOT TO SCALE



TYPICAL SECTION F - F

NOT TO SCALE

NOTES:

1. NUMBER OF BOULDERS FOR EACH ROCK-ARCH IS DEPENDENT ON SIZE AND SPACING OF BOULDERS.
2. ROCK WEIRS SHALL CONSIST OF 36" TO 60" BOULDERS. TOP OF BOULDERS SHALL BE SET ABOVE RANDOM RIPRAP CLASS III AS SHOWN ON THE PROFILE TO RESULT IN WEIRS SPACED AT APPROXIMATELY 20' CREST TO CREST.
3. BOULDER WEIRS ARE TO BE FILLED WITH RANDOM RIPRAP CLASS II AND THE AGGREGATE MIX DESCRIBED IN NOTE #9, APPLIED AS A SINGLE, WELL-MIXED MATERIAL TO REDUCE LEAKAGE AND CREATE POOLS.
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No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

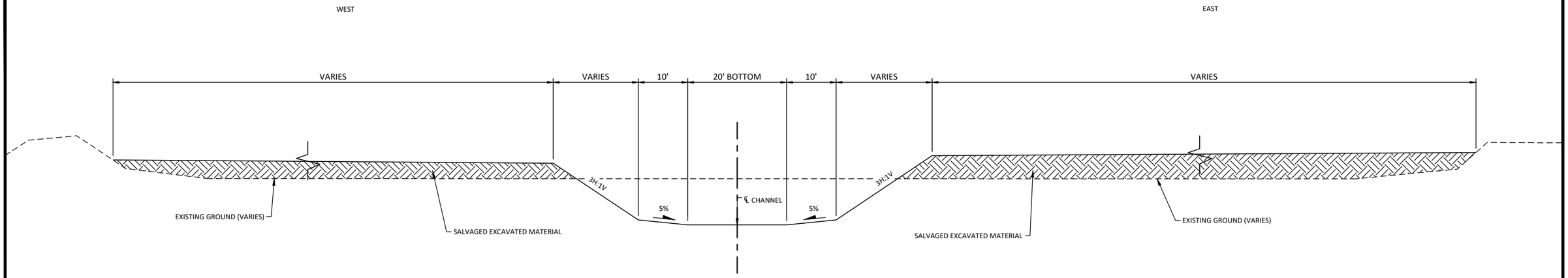
LOWER ROCK ARCH RAPIDS DETAILS

PROJECT NO. 7213-0003

SHEET 4

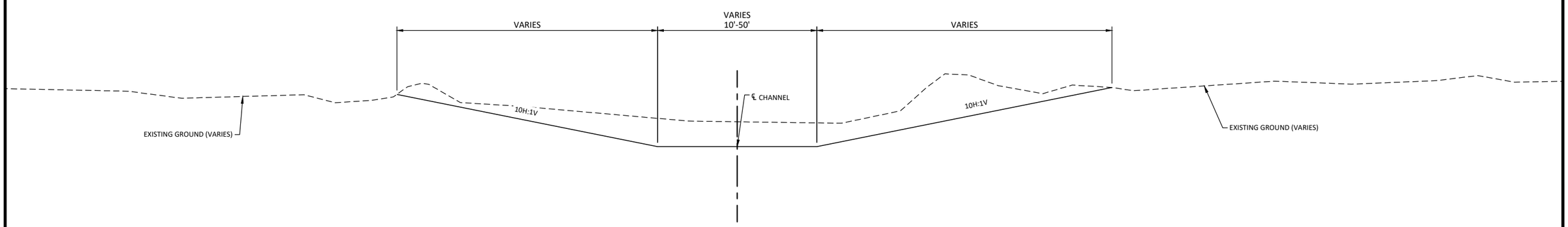
HEI NO. PPPP-PPP

H:\BN\7200\7213\7213_0003 CrissyDam\CAD\Plans\030 - Typical Sections.dwg-Layout (4)-12/9/2025 2:18 PM-(nathan.sedlacek)



TYPICAL SECTION UPSTREAM CHANNEL RESTORATION

NOT TO SCALE



TYPICAL SECTION NW CHANNEL

NOT TO SCALE

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No.	Revision	Date	By

PRELIMINARY

HOUSTON engineering, inc.

Drawn by	Date
VPG	10/23/25
Checked by	Scale
TDR	AS SHOWN

CRISSY LAKE DAM MODIFICATIONS
POMME DE TERRE RIVER ASSOCIATION
STEVENS COUNTY, MN

TYPICAL CHANNEL SECTIONS
PROJECT NO. 7213-0003

SHEET 5

HEI NO. PPPP-PPP

Attachment 5

Well Logs

Minnesota Unique Well Number

117442

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 04/17/1988
Update Date 12/03/2021
Received Date 01/09/1987

Well Name	Township	Range	Dir	Section	Subsection
ERSTED, PAUL	124	42	W	12	BBABCD

Elevation 1113 **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W MORRIS MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
TOPSOIL	0	2	DARK	SOFT
SAND & GRAVEL	2	45	YELLOW	HARD
SANDY CLAY W/ROCKS	45	55	BLUE	HARD
SAND & GRAVEL VERY	55	65	DARK	HARD

Remarks

Well Depth 65 ft. **Depth Completed** 65 ft. **Date Well Completed** 10/08/1986

Drill Method Non-specified Rotary **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter		Weight
5	in. To 57 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** **Make** JOHNSON V-SLOT

Diameter	Slot/Gauze	Length	Set	
5 in.	30	8 ft.	57 ft.	65 ft.

Static Water Level

38 ft. land surface Measure 11/12/1986

Pumping Level (below land surface)

39 ft. 5 hrs. Pumping at 15 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
neat cement	0.5 Cubic yards	7 ft.	30 ft.
bentonite		30 ft.	57 ft.

Nearest Known Source of Contamination

120 feet Southeas Direction Septic tank/drain field Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 11/15/1986

Manufacturer's name GOULDS

Model Number 25EL610422 HP 1 Volt 230

Length of drop pipe 40 ft Capacity 30 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat sand +larger Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or

System UTM - NAD83, Zone 15, Meters X 274597 Y 5050407

Unique Number Verification Information from Input Date 10/09/2000

Angled Drill Hole

Well Contractor

Lee Well Co.	92389	LEE, Q. JR.
Licensee Business	Lic. or Reg. No.	Name of Driller

Minnesota Well Index Report | **117442** | Printed on 02/05/2026

HE-01205-15

Minnesota Unique Well Number

174905

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 04/17/1988
Update Date 08/18/2016
Received Date

Well Name	Township	Range	Dir	Section	Subsection
VALNES,	124	42	W	1	DACCCC

Elevation 1091 **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SOIL	0	1	BLACK	
CLAY-GRAVEL	1	6	YELLOW	M.HARD
COARSE GRAVEL	6	16	YELLOW	HARD
GRAVEL CLAY	16	35	BLUE	SFT-HRD
WATER BEARING	35	53	BLUE	SOFT

Remarks

Well Depth 53 ft. **Depth Completed** 53 ft. **Date Well Completed** 12/15/1981

Drill Method **Drill Fluid**

Use irrigation **Status** Active

Well Hydrofractured? **Yes** ☐ **No** ☐ **From** **To**

Casing Type Single casing **Joint** Welded
Drive Shoe? **Yes** ☐ **No** ☐ **Above/Below** 1 ft.

Casing Diameter	Weight	Hole Diameter
24 in. To 29 ft.	lbs./ft.	24 in. To 53 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** **Make** DOERR

Diameter	Slot/Gauze	Length	Set	
24 in.	188	20 ft.	29 ft.	49 ft.
24 in.	125	4 ft.	49 ft.	53 ft.

Static Water Level
13 ft. land surface Measure 12/03/1981

Pumping Level (below land surface)
23 ft. 6 hrs. Pumping at 400 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☐ Not Specified

Nearest Known Source of Contamination
3000 feet Northeas Direction Barnyard Type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name
Model Number HP Volt
Length of drop pipe ft Capacity g.p. Typ Centrifugal

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous
First Bedrock Aquifer Quat. buried
Last Strat sand +larger-gray Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or
System UTM - NAD83, Zone 15, Meters X 275585 Y 5050856
Unique Number Verification Information from Input Date 10/05/2000

Angled Drill Hole

Well Contractor
Sanford Irrigation 26095
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

190732

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 11/20/2000
Update Date 12/03/2021
Received Date 03/02/1989

Well Name	Township	Range	Dir	Section	Subsection
VALNES,	124	42	W	1	DACCCB

Elevation 1091 **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W RR MORRIS MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
TOPSOIL	0	1	BLACK	SOFT
COARSE GRAVEL	1	15	BROWN	SOFT
COARSE GRAVEL	15	28	GRAY	SOFT
COARSE GRAVEL	28	52		
CLAY	52	52	GRAY	HARD

Remarks

Well Depth 52 ft. **Depth Completed** 52 ft. **Date Well Completed** 12/21/1988

Drill Method Power Auger **Drill Fluid**

Use irrigation **Status** Active

Well Hydrofractured? **Yes** ☐ **No** ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? **Yes** ☐ **No** ☐ **Above/Below** 1 ft.

Casing Diameter	Weight	Hole Diameter
16 in. To 37 ft.	lbs./ft.	32 in. To 15 ft.
		24 in. To 52 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set
16 in.	100	15 ft.	37 ft. 52 ft.

Static Water Level

14.6 ft. land surface Measure 12/21/1988

Pumping Level (below land surface)

16 ft. 20 hrs. Pumping at 100 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
cuttings		0 ft.	15 ft.

Nearest Known Source of Contamination

1000 feet West Direction Septic tank/drain field Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. Water

Last Strat clay-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or

System UTM - NAD83, Zone 15, Meters X 275578 Y 5050873

Unique Number Verification Information from Input Date 10/05/2000

Angled Drill Hole

Well Contractor

Licensee Business	Lic. or Reg. No.	Name of Driller
Sanford Irrigation	26095	SANFORD, P.

Minnesota Unique Well Number

194355

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 04/17/1988
Update Date 07/21/2022
Received Date 09/12/1986

Well Name	Township	Range	Dir	Section	Subsection
BROWN, JACK	124	42	W	12	ABABBC

Elevation 1085 **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W RR 1 MORRIS MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SOIL	0	2	BLACK	
COARSE GRAVEL	2	12	YELLOW	
WATER BEARING	12	16	GRAY	

Remarks

Well Depth 16 ft. **Depth Completed** 16 ft. **Date Well Completed** 03/11/1985

Drill Method Driven **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight
1.2 in. To 12 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** **Make** CORMON

Diameter	Slot/Gauze	Length	Set	
1.3 in.		4 ft.	12 ft.	16 ft.

Static Water Level

6 ft. land surface Measure 03/11/1985

Pumping Level (below land surface)

6.5 ft. 2 hrs. Pumping at 8 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☐ Not Specified

Nearest Known Source of Contamination

60 feet Northwes Direction Septic tank/drain field Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. Water

Last Strat gravel (+larger)-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or

System UTM - NAD83, Zone 15, Meters X 275393 Y 5050430

Unique Number Verification Information from Input Date 10/09/2000

Angled Drill Hole

Well Contractor

Valnes Well Co.	75330	VALNES, R.
Licensee Business	Lic. or Reg. No.	Name of Driller

Minnesota Unique Well Number

232287

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 04/17/1988
Update Date 07/05/2023
Received Date

Well Name	Township	Range	Dir	Section	Subsection
STAHLER, TOM	124	42	W	12	BDABAA

Elevation 1076 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Contact 1 WEST SIDE

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
TOP SOIL	0	1	BLACK	SOFT
SAND	1	21	BROWN	
SAND	21	37	GRAY	

Remarks

SEALED 07-15-2021 BY 1551

Well Depth 37 ft. **Depth Completed** 37 ft. **Date Well Completed** 09/16/1980

Drill Method Non-specified Rotary **Drill Fluid**

Use irrigation **Status** Sealed

Well Hydrofractured? Yes ☐ No ☐ **From** **To**

Casing Type Single casing **Joint** Welded

Drive Shoe? Yes ☐ No ☒ **Above/Below** 2 ft.

Casing Diameter			Weight		Hole Diameter		
12 in. To	22 ft.		50 lbs./ft.		17 in. To	37 ft.	

Open Hole From ft. To ft.

Screen? ☒ **Type** galvanized **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
12 in.	120	15 ft.	22 ft.	34 ft.

Static Water Level

4 ft. land surface Measure 09/16/1980

Pumping Level (below land surface)

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☐ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☐ Yes ☐ No ☐ Not Specified

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☒ Not Installed Date Installed

Manufacturer's name

Model Number HP Volt

Length of drop pipe ft Capacity g.p. Typ

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. Water

Last Strat sand-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or

System UTM - NAD83, Zone 15, Meters X 275022 Y 5050055

Unique Number Verification Info/GPS from data Input Date 09/20/2021

Angled Drill Hole

Well Contractor

Traut Alexandria Wel 21456

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

523788

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/14/1994
Update Date 12/03/2021
Received Date 12/23/1993

Well Name	Township	Range	Dir	Section	Subsection
LOHER, TIM	124	42	W	12	ABBAAD

Elevation 1089 **Elev. Method** 7.5 minute topographic map (+/- 5 feet)

Address

C/W RR 1 BOX 960 MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
SAND & GRAVEL	0	5	YELLOW	
SAND	5	25	GRAY	

Remarks

Well Depth 25 ft. **Depth Completed** 25 ft. **Date Well Completed** 05/06/1993

Drill Method Auger (non-specified) **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? **Yes** ☐ **No** ☐ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? **Yes** ☐ **No** ☐ **Above/Below**

Casing Diameter		Weight
2	in. To 20 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** plastic **Make** HORIZON

Diameter	Slot/Gauze	Length	Set	
2 in.	10	5 ft.	20 ft.	25 ft.

Static Water Level

3 ft. land surface Measure 05/06/1993

Pumping Level (below land surface)

3 ft. 1 hrs. Pumping at 15 g.p.m.

Wellhead Completion

Pitless adapter manufacturer Model

☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		0 ft.	15 ft.

Nearest Known Source of Contamination

feet Direction Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed

Manufacturer's name MEYERS

Model Number HP 0.5 Volt

Length of drop pipe ft Capacity g.p. Typ Jet

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Miscellaneous

First Bedrock Aquifer Quat. Water

Last Strat sand-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or

System UTM - NAD83, Zone 15, Meters X 275372 Y 5050430

Unique Number Verification Plat Book Input Date 10/09/2000

Angled Drill Hole

Well Contractor

Valnes Well Co.	75330	VALNES, R.
Licensee Business	Lic. or Reg. No.	Name of Driller

Minnesota Unique Well Number

745494

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/15/2011
Update Date 07/03/2023
Received Date 11/06/2009

Well Name	Township	Range	Dir	Section	Subsection
VALNES,	124	42	W	1	CCCAAD

Elevation 1103 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 14 RIVERVIEW DR MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
TOPSOIL	0	1	BLACK	MEDIUM
SANDY CLAY	1	14	YEL/BLU	MEDIUM
CLAY	14	40	BLUE	MEDIUM
COARSE SAND	40	57	GRAY	
CLAY	57	65	BLUE	MEDIUM

Remarks

NAMES OF DRILLER: MILO FISHER AND TODD VALNES

Well Depth 65 ft. **Depth Completed** 56 ft. **Date Well Completed** 10/01/2009

Drill Method Non-specified Rotary **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 52 ft.	lbs./ft.	6.5 in. To 60 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
4 in.	18	4 ft.	52 ft.	56 ft.

Static Water Level

6 ft. land surface Measure 10/01/2009

Pumping Level (below land surface)

12 ft. 2 hrs. Pumping at 75 g.p.m.

Wellhead Completion

Pitless adapter manufacturer WELLSEAL Model

☐ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		ft.	50 ft.

Nearest Known Source of Contamination

75 feet North Direction Sewer Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 10/01/2009

Manufacturer's name JACUZZI

Model Number HP 0.75 Volt 230

Length of drop pipe 40 ft Capacity 25 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat clay-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 274559 Y 5050655

Unique Number Verification Site Plan Input Date 05/12/2021

Angled Drill Hole

Well Contractor

Valnes Well Drilling, Inc. 1741 SEE REMARKS

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

747468

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 01/07/2008
Update Date 07/05/2023
Received Date 01/08/2008

Well Name	Township	Range	Dir	Section	Subsection
AMBORN, LOUIS	124	42	W	12	BBAACA

Elevation 1111 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 23205 469TH AV MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	15	YELLOW	MEDIUM
COARSE GRAVEL	15	35	BROWN	
SAND	35	67	GRAY	MEDIUM

Remarks

Well Depth 67 ft. **Depth Completed** 60 ft. **Date Well Completed** 08/31/2007

Drill Method Non-specified Rotary **Drill Fluid**

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 56 ft.	lbs./ft.	6.5 in. To 67 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set
4 in.	20	4 ft.	56 ft. 60 ft.

Static Water Level

35 ft. land surface Measure 08/31/2007

Pumping Level (below land surface)

45 ft. 2 hrs. Pumping at 30 g.p.m.

Wellhead Completion

Pitless adapter manufacturer BULLDOG Model BRASS
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		ft.	40 ft.

Nearest Known Source of Contamination

100 feet Northwes Direction Septic tank/drain field Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 10/10/2007
Manufacturer's name SCHAEFER
Model Number 2-WIRE HP 0.75 Volt 230
Length of drop pipe 40 ft Capacity g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. buried
Last Strat sand-gray Depth to Bedrock ft
Located by Minnesota Department of Health
Locate Method GPS SA Off (averaged) (15 meters)
System UTM - NAD83, Zone 15, Meters X 274685 Y 5050436
Unique Number Verification Info/GPS from data Input Date 12/28/2007

Angled Drill Hole

Well Contractor

Valnes Well Drilling, Inc. 1741 FISHER, M.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

747492

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 06/15/2011
Update Date 07/03/2023
Received Date 11/14/2008

Well Name	Township	Range	Dir	Section	Subsection
SOS SKYVIEW	124	42	W	2	DADDDC

Elevation 1111 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 1100 COURT DR MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	30	YELLOW	MEDIUM
CLAY	30	65	BLUE	MEDIUM
SAND	65	72	GRAY	MEDIUM
CLAY	72	80		

Remarks

DRILLING FLUID: NATURAL

Well Depth 80 ft. **Depth Completed** 72 ft. **Date Well Completed** 08/30/2008

Drill Method Non-specified Rotary **Drill Fluid** Other

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**

Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 68 ft.	lbs./ft.	6.5 in. To 80 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
4 in.	12	4 ft.	68 ft.	72 ft.

Static Water Level

35 ft. land surface Measure 08/30/2008

Pumping Level (below land surface)

60 ft. 2 hrs. Pumping at 40 g.p.m.

Wellhead Completion

Pitless adapter manufacturer WELLSEAL Model

☐ Casing Protection ☒ 12 in. above grade

☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		ft.	50 ft.

Nearest Known Source of Contamination

75 feet Southwes Direction Sewer Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 09/10/2008

Manufacturer's name SCHAEFER

Model Number HP 0.75 Volt 230

Length of drop pipe 60 ft Capacity 18 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat clay Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 274331 Y 5050897

Unique Number Verification Site Plan Input Date 09/20/2021

Angled Drill Hole

Well Contractor

Valnes Well Drilling, Inc. 1741 FISHER, M.

Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

810579

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 07/05/2023
Received Date 07/13/2016

Well Name	Township	Range	Dir	Section	Subsection
SEALES,	124	42	W	12	BBABCB

Elevation 1109 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 23132 469TH AV MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
TOP SOIL	0	1	BLACK	MEDIUM
GRAVEL	1	18	YELLOW	MEDIUM
CLAY	18	68	BLUE	SOFT
SAND	68	80	GRAY	MEDIUM
CLAY	80	80		

Remarks

LOCATION FROM OWNER, ADDRESS AND SKETCH

Well Depth	Depth Completed	Date Well Completed
80 ft.	80 ft.	06/30/2016

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use domestic **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 76 ft.	lbs./ft.	6.5 in. To 80 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** telescoping **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set
4 in.	12	4 ft.	76 ft. 80 ft.

Static Water Level

32 ft. top of casing Measure 06/30/2016

Pumping Level (below land surface)

40 ft. 2 hrs. Pumping at 75 g.p.m.

Wellhead Completion

Pitless adapter manufacturer BAKER Model BULLDOG

☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
high solids bentonite		55 ft.	76 ft.
bentonite	3 Sacks	ft.	55 ft.

Nearest Known Source of Contamination

90 feet Northwes Direction Septic tank/drain field Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 06/31/2016

Manufacturer's name GRUNDFOS
Model Number HP 0.5 Volt 230
Length of drop pipe 40 ft Capacity 12 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. buried
Last Strat clay Depth to Bedrock ft
Located by Minnesota Department of Health
Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or
System UTM - NAD83, Zone 15, Meters X 274572 Y 5050420
Unique Number Verification Address with parcel Input Date 05/31/2019

Angled Drill Hole

Well Contractor

Valnes Well Drilling, Inc. 1741 FISHER, M
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

816885

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 03/30/2020
Update Date 07/03/2023
Received Date 11/15/2019

Well Name	Township	Range	Dir	Section	Subsection
CARR, DARRON	124	42	W	2	DADCDA

Elevation 1101 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 47 BROOK AV E MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	35	YELLOW	MEDIUM
CLAY	35	40	BLUE	MEDIUM
SAND	40	64	GRAY	MEDIUM

Remarks

Well Depth 64 ft. **Depth Completed** 64 ft. **Date Well Completed** 06/30/2019

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 60 ft.	lbs./ft.	6.5 in. To 67 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set
4 in.	12	4 ft.	60 ft. 64 ft.

Static Water Level

35 ft. top of casing Measure 06/30/2019

Pumping Level (below land surface)

38 ft. 2 hrs. Pumping at 55 g.p.m.

Wellhead Completion

Pitless adapter manufacturer MERRILL Model SPK

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite	2 Sacks	0 ft.	55 ft.

Nearest Known Source of Contamination

200 feet Northeas Direction Sewer Type

Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 11/19/2019

Manufacturer's name GRUNDFOS

Model Number 10SQ07 HP 0.75 Volt 230

Length of drop pipe 127 ft Capacity 12 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat sand-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 274272 Y 5050941

Unique Number Verification Site Plan Input Date 05/12/2021

Angled Drill Hole

Well Contractor

Valnes Well Drilling, Inc. 1741 CONROY, J.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

816886

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 03/30/2020
Update Date 07/03/2023
Received Date 11/15/2019

Well Name	Township	Range	Dir	Section	Subsection
ANDERSON,	124	42	W	2	DDABAB

Elevation 1104 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 53 BROOK AV E MORRIS MN 56267

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	30	YELLOW	MEDIUM
CLAY	30	43	BLUE	MEDIUM
GRAVEL COARSE	43	60	GRAY	

Remarks

Well Depth 60 ft. **Depth Completed** 56 ft. **Date Well Completed** 06/30/2019

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
4 in. To 52 ft.	lbs./ft.	6.5 in. To 60 ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** telescoping **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
4 in.	12	4 ft.	52 ft.	56 ft.

Static Water Level

34 ft. land surface Measure 06/01/2019

Pumping Level (below land surface)

36 ft. 2 hrs. Pumping at 50 g.p.m.

Wellhead Completion

Pitless adapter manufacturer MERRILL Model SPK

☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite	2 Sacks	0 ft.	50 ft.

Nearest Known Source of Contamination

200 feet Northeas Direction Sewer Type

Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed 07/27/2019

Manufacturer's name GRUNDFOS

Model Number 7SQ HP 0.75 Volt 230

Length of drop pipe 80 ft Capacity 10 g.p. Typ Submersible

Abandoned

Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance

Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous

First Bedrock Aquifer Quat. buried

Last Strat gravel (+larger)-gray Depth to Bedrock ft

Located by Minnesota Geological Survey

Locate Method GPS SA Off (averaged) (15 meters)

System UTM - NAD83, Zone 15, Meters X 274239 Y 5050882

Unique Number Verification Site Plan Input Date 05/12/2021

Angled Drill Hole

Well Contractor

Valnes Well Drilling, Inc. 1741 CONROY, J.
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

840057

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING REPORT
Minnesota Statutes Chapter 1031

Entry Date 01/25/2022
Update Date 07/03/2023
Received Date 12/13/2021

Well Name	Township	Range	Dir	Section	Subsection
MEACHMAN,	124	42	W	1	CCCBDD

Elevation 1102 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 2 POMME DE TERRE LA MORRIS MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	15	YELLOW	MEDIUM
GRAVEL	15	28	BROWN	MEDIUM
SAND	28	45	YELLOW	SOFT
SAND	45	64	GRAY	MEDIUM

Remarks

Well Depth 64 ft. **Depth Completed** 64 ft. **Date Well Completed** 08/20/2021

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter		Weight
4	in. To 60 ft.	lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** telescoping **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
4 in.	12	4 ft.	60 ft.	64 ft.

Static Water Level
26 ft. land surface Measure 09/20/2021

Pumping Level (below land surface)
30 ft. 1.5 hrs. Pumping at 50 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		ft. 40	ft.

Nearest Known Source of Contamination
75 feet Southeas Direction Sewer Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 09/10/2021
Manufacturer's name STA-RITE
Model Number HP 0.75 Volt 230
Length of drop pipe 40 ft Capacity 18 g.p. Typ Submersible

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock Aquifer Quat. buried
Last Strat sand-gray Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or
System UTM - NAD83, Zone 15, Meters X 274455 Y 5050607
Unique Number Verification Site Plan Input Date 02/04/2022

Angled Drill Hole

Well Contractor
Valnes Well Drilling, Inc. 1741 FISHER, M
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

840058

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date
Update Date 07/03/2023
Received Date 12/13/2021

Well Name	Township	Range	Dir	Section	Subsection
MINNIEK,	124	42	W	1	CCCACD

Elevation 1102 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

C/W 4 POMME DE TERRE LA MORRIS MN

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
CLAY	0	15	YELLOW	MEDIUM
GRAVEL	15	28	BROWN	MEDIUM
SAND	28	45	YELLOW	SOFT
SAND	45	64	GRAY	MEDIUM

Remarks

Well Depth 64 ft. **Depth Completed** 64 ft. **Date Well Completed** 08/20/2021

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☒ **From** **To**

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☐ **Above/Below**

Casing Diameter **Weight**
4 in. To 60 ft. lbs./ft.

Open Hole From ft. To ft.

Screen? ☒ **Type** telescoping **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set
4 in.	12	4 ft.	60 ft. 64 ft.

Static Water Level
26 ft. land surface Measure 09/20/2021

Pumping Level (below land surface)
30 ft. 1.5 hrs. Pumping at 50 g.p.m.

Wellhead Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☒ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount	From	To
bentonite		ft. 40	ft.

Nearest Known Source of Contamination
75 feet Southeas Direction Sewer Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 09/10/2021
Manufacturer's name STA-RITE
Model Number HP 0.75 Volt 230
Length of drop pipe 40 ft Capacity 18 g.p. Typ Submersible

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock Aquifer Quat. buried
Last Strat sand-gray Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or
System UTM - NAD83, Zone 15, Meters X 274511 Y 5050605
Unique Number Verification Site Plan Input Date 02/04/2022

Angled Drill Hole

Well Contractor
Valnes Well Drilling, Inc. 1741 FISHER, M
Licensee Business Lic. or Reg. No. Name of Driller

Minnesota Unique Well Number

856990

County Stevens
Quad Morris
Quad ID 163C

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING REPORT

Minnesota Statutes Chapter 1031

Entry Date 01/04/2023
Update Date 04/16/2024
Received Date 08/16/2021

Well Name	Township	Range	Dir	Section	Subsection
DUPAY, SUSAN,	124	42	W	12	BDABAC

Elevation 1076 **Elev. Method** LiDAR 1m DEM (MNDNR)

Address

Well 230TH ST MORRIS MN 56267
Contact 26406 470TH AV MORRIS MN 56267
Strategra Information WILLMAR MN 56296

Stratigraphy Information

Geological Material	From	To (ft.)	Color	Hardness
TOP SOIL	0	2	BLACK	SOFT
SAND/GRAVEL	2	36	BROWN	MEDIUM
SHALE	36	40	BLACK	MEDIUM
GRANITE	40	50	RED	HARD

Remarks

Well Depth 50 ft. **Depth Completed** 50 ft. **Date Well Completed** 07/14/2021

Drill Method Non-specified Rotary **Drill Fluid** Bentonite

Use irrigation **Status** Active

Well Hydrofractured? Yes ☐ No ☒ From To

Casing Type Single casing **Joint**
Drive Shoe? Yes ☐ No ☒ **Above/Below**

Casing Diameter	Weight	Hole Diameter
12 in. To 19 ft.	lbs./ft.	17. in. To 50 ft.
12 in. To 49 ft. 49	lbs./ft.	

Open Hole From ft. To ft.

Screen? ☒ **Type** stainless **Make** JOHNSON

Diameter	Slot/Gauze	Length	Set	
12 in.	10	20 ft.	19 ft.	39 ft.

Static Water Level
5 ft. land surface Measure 07/14/2021

Pumping Level (below land surface)

Wellhead Completion
Pitless adapter manufacturer SAN SEAL Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

Grouting Information Well Grouted? ☒ Yes ☐ No ☐ Not Specified

Material	Amount		From	To
pearock	4	Cubic yards	9 ft.	49 ft.
bentonite	7	Sacks	ft. 9	ft.

Nearest Known Source of Contamination
15 feet South Direction Body of water Type
Well disinfected upon completion? ☒ Yes ☐ No

Pump ☐ Not Installed Date Installed 07/21/2021
Manufacturer's name WOLF
Model Number 800GPM HP 30 Volt 460
Length of drop pipe 30 ft Capacity 800 g.p. Typ Submersible

Abandoned
Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance
Was a variance granted from the MDH for this well? ☐ Yes ☒ No

Miscellaneous
First Bedrock Aquifer Quat. Water
Last Strat boulder or boulders-red Depth to Bedrock ft
Located by Minnesota Geological Survey
Locate Method Digitization (Screen) - Map (1:24,000) (15 meters or
System UTM - NAD83, Zone 15, Meters X 275019 Y 5050046
Unique Number Verification Info/GPS from data Input Date 01/10/2023

Angled Drill Hole

Well Contractor
Steffl Drilling and Pump, Inc. 1551 BLOCK, J
Licensee Business Lic. or Reg. No. Name of Driller