Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed Projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the Project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps Project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one Project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed Project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed Project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their Project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their Projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx and select "Minnesota" from the contact Information box. Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed Project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (https://webapps11.dnr.state.mn.us/mpars/public/authentication/login). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the Project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: City of Shakopee, Kirby Templin
Mailing Address: 485 Gorman St. Shakopee, MN 55379
Phone: 952-233-9372
E-mail Address: ktemplin@shakopeemn.gov

Authorized Contact (do not complete if same as above): Barr Engineering Company Jeff Weiss
Mailing Address: 4300 MarketPointe Drive, Suite 200, Minneapolis MN 55435
Phone: 952-832-2706
E-mail Address: jweiss@barr.com

Agent Name: Rachel Walker
Mailing Address: Barr Engineering, 4300 MarketPointe Drive, Minneapolis, MN 55435
Phone: 952-832-2849
E-mail Address: rwalker@barr.com

PART TWO: Site Location Information

County: Scott County **City/Township: Shakopee**
Parcel ID and/or Address: 274580450, 274040670
Legal Description (Section, Township, Range): Section 14, Township 115N, Range 22W
Lat/Long (decimal degrees):
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear Project, length (feet): 35 acres

If you know that your proposal will require an Individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the Project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers Project number.

A wetland delineation was conducted by Kjolhaug Environmental Services Company, INC on October 8, 2015. The USACE under the authority of Section 404 of the Clean Water Act and City of Shakopee under authority of the Minnesota Wetland Conservation Act approved the October 2015 wetland delineation report on November 16, 2015. Lennar Homes developed a portion of the delineated wetland area resulting in 0.4809 acres of fill within the delineated wetlands (Appendix A). USACE regulatory file No. 2015-03935-MMJ. Barr utilized the previously approved delineation for this project, minus the Lennar impacts. In October 2019 an additional wetland delineation was completed to accommodate the expanded study area.

Describe the Project that is being proposed, the Project purpose and need, and schedule for implementation and completion. The Project description must fully describe the nature and scope of the proposed activity including a description of all Project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

Project Purpose and Need

The City of Shakopee has ownership in the Lennar development at Ridge Creek, located between State Highway 21 and Eagle Creek Boulevard in Shakopee, Minnesota (Figure 1). The City of Shakopee intends to develop the identified property into a passive public park and improve the ecological function of the unnamed stream channel and wetland area located on the property. In addition to adding recreational and educational benefits to the surrounding residential area, the Project would include the meandering of the unnamed stream, stream armoring, wildlife pond, paved multi-use trail, elevated boardwalk trail, elevated overlook, and box culvert.

The existing stream channel consists of a channelized man made ditch with limited ecological or aesthetic value. The proposed Project would re-route the stream channel through the Project area in a more natural meandering pattern. The newly constructed stream channel would be planted with a native seed mix improving the vegetative quality of the stream channel. In addition, a sediment basin would be constructed on the eastern side of the proposed stream channel. This basin would accumulate sediment that flows through the stream channel and help preserve downstream water quality and reduce sediment loading into the Minnesota River, as well as provide habitat for waterfowl species.

Two trails, a 10 foot wide multi-used paved trail, and an elevated boardwalk will be constructed through the Project area. The proposed trails will connect to an existing bike trail network and allow for foot access to the wetland area, providing both recreational and educational opportunities for the surrounding community. The trails will also connect to two overlook points which would contain educational signage about the wetland area and the ecological and wildlife benefits of the wetland and stream.

Aquatic Resources

There are three aquatic resources within the proposed work area. One unnamed stream channel and two wetlands. The stream channel is a constructed ditch that runs through the northern portion of the Project area. Water enters the Project area through a culvert located under Oakridge Trail Road where it then flows north then west and exits the Project area through a culvert under Pike Lake Road. The channel appears to be man-made and provides little to no ecological or wildlife benefits. The soil survey maps predominantly hydric Houghton muck through the site within the stream channel and wetland areas (Figure 2). The side slopes of the stream channel are dominated by reed canary grass (Phalaris arundinacea) and a mix of woody vegetation such as eastern cottonwood (*Populus deltoides*), black willow (*Salix nigra*), and common buckthorn (*Rhamnus cathartica*).

Wetland 1 is classified as a Type 2 wetland. This wetland predominantly consists of wet meadow with some shallow marsh on the far eastern side. The wetland area is dominated by reed canary grass (*Phalaris arundinacea*), an introduced grass species. This wetland was delineated on October 11, 2019 a wetland boundary and type confirmation is requested as part of this application (Appendix B).

Wetland 2 is classified as a Type 2/3 wetland (PEMBd/PEMCd). This wetland is a partially-drained wet meadow and shallow marsh wetland dominated by reed canary grass. A small pocket of shallow marsh wetland was identified in the northeast part of Wetland 2. Wetland 3 was a type 2 (PEMBd) partially-drained wet meadow wetland dominated by reed canary grass. Wetland 2 and 3 were originally delineated in the 2015 wetland delineation report. These two wetlands were previously approved by the City of Shakopee on May 16, 2019.

Construction activities

Construction limits and staging areas are displayed in the attached plan set. The construction staging area would be located with the Riverside Fields Park entirely within an upland area. The excavation of the stream channel, wildlife pond and installation of the paved trail, elevated boardwalk, overlook, and culvert installation/replacement would be located within wetland areas (Appendix C).

Excavation

The vegetation within the construction limits would be scraped from the soil surface and hauled off-site. Once the vegetation has been removed, the proposed stream channel and wildlife pond would be excavated within the wetland area. The stream would be approximately 8 feet wide and 3 feet deep with 3:1 side slopes and require the excavation of approximately 2.00 acres within Type 2 wetland area. The proposed wildlife pond would be no more than 6 feet deep with 8:1 side slopes and require the excavation of 2.19 acres.

Stream Armoring

The stream channel will be armored with approximately 0.18 acres of rip rap and granular fill along the stream corridor to prevent erosion of the adjacent soils. Rock vanes will also be utilized to slow the velocity of the water and redirect the flow towards the center of the channel, protecting the channel banks. The rock vanes will be made up of approximately 0.03 acres of rip rap and boulders

Paved Trail

A paved trail will be constructed from the southeast corner of the Project area connecting to the existing trail located in Riverside Fields Park. The trail will then run west along the southern boundary of Wetland 3 where it will then turn north and cross the narrow upland area between Wetlands 2 and 3. The paved trail then continues west along the northern boundary of Wetland 2. Approximately 0.21 acres of the paved trail will be located within Wetlands 2 and 3. Construction of the paved trail in the wetland area will include the placement of 1.5 inches of wearing course bituminous and 1.5 inches of non-wearing course bituminous underlain by approximately 6 inches of aggregate.

Elevated boardwalk and overlook

In addition to the proposed trail system for the Project would include the installation of approximately 0.40 acres of elevated boardwalk. The boardwalk will extend approximately 1590 feet within the wetland boundary and be approximately 8 feet wide and with a max elevation of 30" to the top of deck. The boardwalk will be installed along the northern edge of Wetland 3 and the southern edge of Wetland 2. An elevated overlook spanning 600 sf will be located along the western edge of the proposed wildlife pond. Similar to the elevated boardwalk, the overlook structure will be supported by posts driven into the wetland soil.

Culvert Installation

The proposed Project will include the installation of four box culverts and two reinforced concrete pipe (RCP) culverts. The locations of the culverts can be found with the attached project plans. Wetland impacts from the excavation and placement of the culverts are depicted on Figure 3. It is anticipated the proposed project would result in 0.02 acres of temporary wetland impacts.

Upon completion of the Project, the existing stream channel would be blocked with approximately 0.08 acres of earthen fill to direct flow toward the wildlife pond and meandered stream channel. Of the 0.08 acres of fill 0.02 acres will be located within wetland 1 and 0.06 acres will be located within the stream channel. This fill will be capped with rip rap in order to prevent future erosion.

Best Management Practices to protect wetlands

Best Management Practices (BMP) including silt fences, erosion control blankets, and erosion logs will be utilized at the Project site. Please refer to Appendix C page D-02 for the location and installation methods for the BMP measures.

Site Restoration Plan:

The proposed Project is designed to improve, enhance, and encourage recreation, education, and appreciation of the natural surroundings of the Project area. The site restoration plan in Appendix C provides details regarding measures to reseed immediately following final grading and soil placement to prevent erosion and compaction. In order to remove reed canary grass the Project area will be scraped of all vegetation. Then the areas located within the existing wetland will be seeded with the State Seed Mix Wet Meadow south and west mix (34-271; table 1) the adjacent upland areas will be seeded with a the mesic prairie southeast (35-641; table 2) seed mix. The seeded areas will be covered with MnDOT 3885 category 3N, wood fiber 2S Erosion control blanket immediately following final seeding.

Table 1 Wet Meadow south and west mix (34-271),

	Scientific Name	Common Name	% of Mix	PLS lbs/ac	Seeds/SF
Grasses:	*Bromus ciliatus*	Fringed Brome	9.17	1.10	4.44
	Calamagrostis canadensis	Blue-Joint Grass	0.42	0.05	5.14
	Elymus virginicus	Virginia Wild Rye	8.33	1.00	1.54
	Glyceria grandis	Reed Manna Grass	1.25	0.15	3.86
	Glyceria striata	Fowl Manna Grass	0.83	0.10	3.31
	Leersia oryzoides	Rice Cut Grass	2.08	0.25	3.12
	Poa palustris	Fowl Bluegrass	2.92	0.35	16.71
		Grasses Total:	**25.00**	**3.00**	**38.13**
Sedges/Rushes:	*Carex comosa*	Bottlebrush Sedge	1.75	0.21	2.31
	Carex scoparia	Broom Sedge	0.42	0.05	1.54
	Carex stipata	Common Fox Sedge	1.42	0.17	2.12
	Carex stricta	Tussock Sedge	0.25	0.03	0.58
	Carex vulpinoidea	Fox Sedge	1.17	0.14	4.17
	Juncus tenuis	Path Rush	0.33	0.04	14.69
	Scirpus atrovirens	Green Bulrush	1.50	0.18	30.41
	Scirpus cyperinus	Woolgrass	0.67	0.08	49.95
		Sedges/Rushes Total:	**7.50**	**0.90**	**105.79**
Forbs:	*Asclepias incarnata*	Marsh Milkweed	2.00	0.24	0.42
	Eutrochium maculatum	Joe-Pye Weed	0.17	0.02	0.70
	Eupatorium perfoliatum	Boneset	0.17	0.02	1.18
	Euthamia graminifolia	Grass-leaved Goldenrod	0.08	0.01	1.29
	Helenium autumnale	Sneezeweed	0.25	0.03	1.43
	Helianthus grosseserratus	Sawtooth Sunflower	0.33	0.04	0.22
	Lobelia siphilitica	Great Blue Lobelia	0.17	0.02	2.57
	Mimulus ringens	Monkey Flower	0.08	0.01	8.45
	Pycnanthemum virginianum	Mountain Mint	0.50	0.06	4.85
	Solidago gigantea	Giant Goldenrod	0.17	0.02	1.84
	Symphiotrichum lanceolatus	Panicled Aster	0.25	0.03	1.72
	Symphyotrichum puniceum	Swamp Aster	1.42	0.17	5.00
	Thalictrum dasycarpum	Purple Meadow Rue	0.08	0.01	0.07
	Verbena hastata	Blue Vervain	1.08	0.13	4.44
	Vernonia fasciculata	Ironweed	0.25	0.03	0.26
	Veronicastrum virginicum	Culvers's Root	0.08	0.01	2.94
	Zizia aurea	Golden Alexanders	2.08	0.25	1.01
		Forbs Total:	**9.17**	**1.10**	**38.38**
Cover Crop:	*Avena sativa*	Oats	58.33	7.00	2.06
		Cover Crop Total:	**58.33**	**7.00**	**2.06**
		Totals:	100.00	12.00	184.35

Table 2, Mesic Prairie Southeast (35-641)

	Scientific Name	Common Name	% of Mix	PLS lbs/ac	Seeds/SF
Grasses:	*Andropogon gerardii*	Big Bluestem	7.50	0.90	3.31
	Bouteloua curtipendula	Side-Oats Grama	11.42	1.37	5.01
	Elymus canadensis	Canada Wild Rye	8.75	1.05	2.01
	Elymus trachycaulus	Slender Wheat Grass	7.50	0.90	2.28
	Panicum virgatum	Switchgrass	1.75	0.21	1.08
	Schizachyrium scoparium	Little Bluestem	10.58	1.27	7.00
	Sorghastrum nutans	Indian Grass	16.67	2.00	8.82
		Toal Grasses:	**64.17**	**7.70**	**29.49**
Forbs:	*Asclepias tuberosa*	Butterfly Milkweed	0.50	0.06	0.09
	Asclepias verticillata	Whorled Milkweed	0.08	0.01	0.04
	Astragalus canadensis	Canada Milk Vetch	1.33	0.16	1.00
	Chamaecrista fasciculata	Partridge Pea	5.00	0.60	0.60
	Dalea candida	White Prairie Clover	0.08	0.01	0.07
	Dalea purpureum	Purple Prairie Clover	0.75	0.09	0.50
	Desmodium canadense	Canada Tick Trefoil	1.25	0.15	0.30
	Heliopsis helianthoides	Common Ox-Eye	0.42	0.05	0.12
	Liatris aspera	Rough Blazing Star	0.25	0.03	0.18
	Liatris pycnostachya	Prairie Blazing Star	0.25	0.03	0.12
	Monarda fistulosa	Wild Bergamot	0.08	0.01	0.26
	Ratibida pinnata	Yellow Coneflower	0.17	0.02	0.22
	Rudbeckia hirta	Black Eyed Susan	0.42	0.05	1.69
	Solidago rigida	Stiff Goldenrod	0.17	0.02	0.30
	Symphyotrichum ericoides	Heath Aster	0.08	0.01	0.73
	Symphyotrichum laevis	Smooth Blue Aster	0.42	0.05	1.01
	Tradescantia bracteata	Prairie Spiderwort	0.33	0.04	0.15
	Verbena hastata	Blue Vervain	0.33	0.04	1.37
	Verbena stricta	Hoary Vervain	0.83	0.10	1.03
	Zizia aurea	Golden Alexanders	0.58	0.07	0.28
		Total Forbs:	**13.33**	**1.60**	**10.05**
Cover Crop:	*Avena sativa*	Oats	22.50	2.70	0.79
		Total Cover Crop:	**22.50**	**2.70**	**0.79**
		Totals:	100.00	12.00	40.33

Schedule for implementation and Completion:

Work on the Project is expected to begin in the spring of 2020 and be completed in the fall of 2020.

Property Rights:

The proposed Project is located within parcels 27458045 and 274040670, which is owned by the City of Shakopee.

Other Permits and Approvals

In addition to submitting this joint application form to fulfill State of Minnesota state and federal wetland regulatory requirements, the proposed Project is also applying for a wetland boundary and type approval.

Special Considerations:

Available desktop data was evaluated to identify potential special considerations within the Project site or within the vicinity of the site.

- **The County Biological Survey does not identify any native plant or rare natural communities within the Project site. A site with high biodiversity including a northern bulrush-spikerush marsh (MRn93), dry barrens oak savanna (Ups14a2), Sedge meadow (WMn82b), and Pin oak Bur oak woodland (FDs37b) are located within a mile of the site. The Project will not affect these communities.**
- **The Minnesota Department of Natural Resources (MNDNR) Natural Heritage Database was reviewed for potential threatened or endangered species within the Project site.**

- **The U.S. Fish and Wildlife Service Information for Planning and Consultation identified one federally listed threatened species within the Project area -- the northern long-eared bat (*Myotis septentrionalis*). No designated critical habitat for any federally listed species is located within the Project area. The northern long-eared bat inhabits caves, mines, and forests. Suitable forest habitat is not located within or adjacent to the proposed Project area. According to the MNDNR, the nearest hibernacula is over 9 miles southeast of the proposed Project area, and no maternity roost trees have been identified within the vicinity of the proposed Project area.**

- **Barr Engineering Co. (Barr) has a license agreement (LA-898) with the MNDNR for access to the Natural Heritage Information System (NHIS) database, which was queried in September 2019 to determine if any rare species could potentially be affected by the proposed Project. No state-listed species have been previously recorded within the Project area. However, the NHIS database identified eight state-endangered, threatened, special concern, or watchlist species within one mile of the proposed Project area (Table 1).**

Table 3, State-Listed Threatened and Endangered Species

Common Name	Scientific Name	State Status	Habitat
Big brown bat	*Eptesicus fuscus*	Special concern	Habitat use is influenced by time of year, sex, and reproductive status. Winter roosts are located in caves and mines, though this species also regularly hibernates in buildings, cellars, and tunnels.
Plains hog-nosed snake	*Heterodon nasicus*	Special concern	The Plains hog-nosed snake is a habitat specialist, preferring open, sparsely vegetated habitat on well-drained soils. Dry prairie habitat is preferred, but it may also inhabit oak savanna habitat.
Little Brown Myotis	*Myotis lucifugus*	Special concern	This species is a cave-hibernating bat, which means during winter they seek caves, cellars, tunnels, and other underground structures. These structures typically have high humidity levels, minimal airflow, and a constant temperature. During summer, Little Brown Myotis commonly use human structures such as bridges, buildings, and attics, but are also associated with forested habitat.
Rhombic Eveneing Primrose	*Oenothera rhombipetala*	Special concern	This species prefers natural habitat of dry, sand prairies and dunes.
Tricolored bat	*Perimyotis subflavus*	Special concern	Tricolored bats hibernate in caves, mines, and tunnels. Tricolored bats generally roost singly, often in trees, but some males and non-reproductive females also roost in their winter hibernaculum.
Plains pocket mouse	*Perognathus flavescens*	Special concern	Within Minnesota, the Plains pocket mouse is restricted to open, well-drained areas, typically on sandy soils with sparse, grassy or brushy vegetation
Gopher snake	*Pituophis catenifer*	Special concern	The Gopher snake prefers areas of well-drained, loose sandy and gravel soils.
Regal fritillary	*Speyeria idalia*	Special concern	In Minnesota, the Regal fritillary is strongly associated with native prairie habitat.

***Information from this table was gathered from MNDNR Rare Species Guide. (https://www.dnr.state.mn.us/rsg/index.html)**

- **All of the listed species located within one mile of the Project area are listed as special concern. In addition, no suitable habitat for any of the species is present within the Project area. A majority of the species require either well drained dry habitat and/or native grassland, neither of which are present within the Project area. There is potential for park trees to be utilized by the Big brown bat and Little brown bat for summer roosting habitat. However, once the Project is completed, there is still potential for the Project area to be used by the bat species. No impacts to any of the designated state listed species is anticipated during the Project's construction.**

- **Cultural Resources: A database search of historic or archaeological records was requested from the Minnesota State Historic Preservation Office (SHPO). The results of this database search are provided in Appendix D. No archaeological records were identified within one mile of the Project area.**

- **Ground Water Sensitivity: The Project will not directly impact groundwater since all Project activities will be limited to the surface with excavations no deeper than 10 feet. The Project will not generate hazardous waste material.**

- **Sensitive Surface Waters: The MNDNR Public Waters Inventory (PWI) identifies basins (lakes and wetlands) and watercourses over which the MNDNR has regulatory jurisdiction. One PWI watercourse is located within the Project area. The watercourse is an unnamed tributary that enters the southern end of the Project as shown in Figure 3. No work will occur within the PWI watercourse. The unnamed tributary is connected to the drainage ditch that flows through the Project area and ultimately drains into Deans Lake located 0.75 miles west. No sensitive surface waters were identified within the Project area.**

- **Education or Research Use: The proposed Project would allow greater public access to the wetland areas and provide unique vantage points for viewing wetland features such as wetland vegetation and wildlife. Educational signage will be located near the proposed overlook location to help give the public a better understanding of the wetland area and its ecological and other habitat features.**

- **Waste Disposal Sites: The Project area was reviewed for potentially contaminated sites using the Minnesota Pollution Control Agency What's In My Neighborhood tool. The Project area was identified as a stormwater site. The sediment pond located on the west side of Pike Lake Road is designated as a silt and sediment removal site. No hazardous waste, solid waste, or previous investigations or clean ups are located within the Project area.**

- **Consistency with Other Plans: The proposed Project is consistent with the City of Shakopee's Parks, Trails & Recreation Master Plan (Plan). The Plan identifies the Ridge Creek development as a low-density residential development near Southbridge Community Park and has connections to regional trails. The Project area will be utilized to create a passive park that connects the existing trail network and incorporates the existing wetlands into the park design.**

- **Tree Removal: The majority of the existing wetland area contains few trees. Some trees and shrubs are located around the existing drainage channel and side slopes. Trees and shrubs will need to be removed for the proposed paved trail, boardwalk, and overlook location. Large trees will be avoided to the degree practical. Also, tree species will be considered when planning removal and access routes: Non-native trees and shrubs, such as common buckthorn, will be removed as practical. Tree removal will focus on undesirable trees and introduced species. Desirable native species will be preserved to the extent possible. Trees will also be planted throughout the park area in order to improve the visual aesthetic of the park.**

No other special considerations were identified within the site or the vicinity of the Project.

PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed Project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the Project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]
2, 3	Wetland	Fill (paved trails)	P	0.21 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
1, 2, 3	Wetland	Excavation (culverts)	P	0.02 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
1	Wetland	Fill (stream blocking)	P	0.02 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
stream Channel	Stream Channel	Fill (stream blocking)	P	0.06 acres	N/A	Aquatic	Scott County Watershed #33 BSA #9
stream Channel	Stream Channel	Excavation (culverts)	P	0.02 acres	N/A	Aquatic	Scott County Watershed #33 BSA #9
1, 2, 3	Wetland	Remove Vegetation (Site Restoration. And Boardwalk)	T (186)	18.12 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
2, 3	Wetland	Excavation (Pond and stream)	P	4.19 acres	N/A	Fresh wet meadow	Scott County

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a Project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a Project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd EdN. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

No Impacts have occurred.

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: _____ Date: 11-20-19

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☒ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Attachment B
Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your Project or site qualifies:

WCA:

Exemptions:

- **MN Rule 8420.0420 Subpart 9A: Wildlife Habitat**
  - **Excavation of the stream channel, wildlife pond, and placement of rip rap, rock vanes**

Activities not requiring mitigation:

- **MN Rule 8420.0111 Subpart 26: Fill**
  - **Elevated boardwalk and overlook**

USACE:

Nation Wide Permit 27, Aquatic Habitat Restoration, Establishment, and Enhancement Activities

Provide a detailed explanation of how your Project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

The proposed Project aims to improve the existing wetland area, create wildlife habitat and provide the public with a new recreational and educational experience. As described in part three above, the proposed Project includes, the meandering of the unnamed stream, stream armoring, wildlife pond, paved multi-use trail, elevated boardwalk, elevated overlook, and box culvert replacement/installation. The proposed steam meandering, stream armoring and wildlife pond will provide water quality improvements by limiting sedimentation downstream from the Project area. In addition to providing improved wildlife habitat.

Wildlife Habitat, MN Rule 8420.0420 Subpart 9A

Under MN Rule 8420.0420 Subpar 9A, Wildlife habitat, a replacement plan is not required for excavation or the associated deposition of spoil within a wetland for the primary purpose of wildlife habitat improvement.

The proposed Project would remove approximately 18.12 acres of reed canary grass, an introduced species, from the wetland areas and plant a native wet meadow seed mix. This will help restore the wetland area to a native vegetative cover. The proposed wildlife pond and stream would create wildlife habitat that would attract a variety of wildlife to the Project area. In addition, the placement of rip rap and rock vanes within the wetland area would protect the wetland soils from erosion and improve the water quality with the Project area and downstream from the Project area.

The excavation of the stream channel and wildlife pond will occur within Type 2 wetlands. The stream channel will require 2 acres of excavation in Type 2 wetlands and the wildlife pond will require 2.19 acres of excavation in a Type 2 wetland. The normal water depth after excavation will be less than 6 feet, and will not result in a conversion to non-wetland area. Once

excavated both the stream channel and wildlife pond will provide improved wildlife habitat and improve downstream wildlife habitat through water quality improvements. The wildlife pond was designed with genital 8:1 side slopes to provide wildlife with ease of access to the water and a shallow depth of less than 6 feet to facilitate the growth of aquatic vegetation.

Elevated Boardwalk and Overlook, MN Rule 8420.0111 Subpart 26

Under MN Rule 8420.0111 Subpart 26, "Fill" is defined as solid material added to or re-deposited in a wetland that would alter the wetland's cross-section or hydrological characteristics, obstruct flow patterns, change the wetland boundary, or convert the wetland to a non-wetland. Fill does not include posts and pilings for linear Projects such as bridges, elevated walkways, or power line structures, or structures traditionally built on pilings such as docks and boathouses. Fill includes posts and pilings that result in bringing the wetland into a nonaquatic use or significantly altering the wetland's function and value, such as the construction of office and industrial developments, parking structures, restaurants, stores, hotels, housing Projects and similar structures. Fill does not include slash or woody vegetation, if the slash or woody vegetation originated from vegetation growing in the wetland and does not impair the flow or circulation of water or the reach of the wetland.

The elevated boardwalk and overlook would not alter the wetlands function or value or bring the wetland into a nonaquatic use. Therefore the posts used for installing the boardwalk would not be considered fill under MN Rule 8420.0111 Subpart 26.

The site has been previously disturbed and is dominated by invasive vegetation. The site will be restored with native vegetation, which will increase the vegetative diversity and integrity of the wetland and adjacent upland buffer. The proposed improvements to the pond and adjacent park improvements will improve aesthetics of the wetland and surrounding area and encourage the adjacent residents to utilize the space for recreation and educational activities, which would result in an increased rating for aesthetics/recreation/education/and cultural value of the wetland.

For all of the reasons described above, these components of the proposed Project are allowed within the scope of the WCA and do not require wetland replacement. The proposed stream channel meander, rip rap, rock vanes, wildlife pond, elevated boardwalk, and overlook would not result in wetland impacts or diminish the quantity, quality, and biological diversity of the wetland based on MN Rule. Therefore, this application is requesting a WCA no-loss and wildlife habitat exemption approval for these components of the proposed Project.

USACE Nation Wide Permit 27

Activities in waters of the United States associated with the restoration, enhancement, and establishment of tidal and non-tidal wetlands and riparian areas, the restoration and enhancement of non-tidal streams and other non-tidal open waters, and the rehabilitation or enhancement of tidal streams, tidal wetlands, and tidal open waters, provided those activities result in net increases in aquatic resource functions and services

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your Project and need for your Project. Also include a description of any specific requirements of the Project as they relate to Project location, Project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the Project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

Please refer to Part 3 for a description of the Project purpose and need. The project requirements are to connect the trail network of Riverside Fields Park to the existing trail network located west of Pike Lake Road in addition to enhancing the existing wetland area, improve area water quality, and to provide the public with recreational and educational benefits.

A preliminary analysis was conducted to determine the impact of the sedimentation pond on water quality in the Prior Lake Outlet Channel. The proposed wildlife pond will help slow water velocities in the stream channel, causing suspended sediment to settle to the bottom of the pond and improving water quality. The total annual average sediment removal at the wildlife pond is about 91 cubic yards, or about 1000 cubic yards over 10 years. It is anticipated the proposed project would result in an improvement in downstream water quality and onsite storm water management. ,

Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two Project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the Project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

Two Project alternatives were assessed to avoid all impacts to aquatic resources on the site. Neither of these alternatives continued to meet the purpose and need for the proposed Project.

The first alternative is the no-build alternative. Under this option, the Project area would remain in its current condition with a large dominance of reed canary grass and continue to provide little to no habitat for waterfowl species and discourage public interaction with the wetland area. Providing no educational benefit to the adjacent residences on the wetland ecosystem and function. Nor would the Project address sedimentation within the existing stream channel and sediment loading in downstream waters.

The second design alternative is to utilize an elevated boardwalk throughout the entire wetland area. This alternative would have eliminated wetland fill from the paved trail. This alternative was ultimately not chosen as the elevated boardwalk would have limited the type of recreational activity used on the proposed trail in addition to extra cost. Elevated boardwalk trails are well suited for some recreational activities such as walking, running. however they do not work well for other recreational activities such as biking, skateboarding and rollerblading. The use of paved trails within the wetland area will have a broader appeal to local residents. The paved surfaces are also cheaper for the city to install and maintain.

Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed Project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

Impacts on the wetland area were avoided to the greatest extent practicable and the proposed project is the least environmentally damaging practicable alternative while ensuring the proposed Project's purpose and need were still meet. The newly proposed stream channel and pond were designed with shallow excavation areas to allow the area to remain wetland. The side slopes of the pond were designed with gradual 8:1 slopes in order to allow ease of use for waterfowl and other wildlife species.

The stream channel will cross through a narrow upland area located between Wetland 2 and Wetland 3. A box culvert will be placed in this upland area to allow the stream to pass through the upland area and to allow pedestrians to cross the stream channel. By placing the culvert in the existing upland area we avoided additional wetland impacts associated with a stream crossing.

The proposed trail was designed to access the existing trail network in the area and accommodate a variety of recreational activities. In order to avoid impacts to wetlands the trail will use two types of trail; a paved asphalt surface trail and an elevated boardwalk. The paved asphalt trail will be used primarily in the upland areas. The elevated boardwalk will be used where the trail crosses into the delineated wetland boundaries. This elevated boardwalk will limit the amount of fill that would need to be placed within the wetland boundary and will allow the wetland soil to remain largely intact. The proposed overlook will also be elevated over the wetland area to provide the public with an elevated vantage point of the wetland area.

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternative analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternative analysis is required should contact their Corps Project Manager.

Attachment D
Replacement/Compensatory Mitigation

Complete this part ***if*** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits
1453	Shakopee	33	9	2	0.21

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the Project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed Project.

WCA Action Eligible for Credit[1]	Corps Mitigation Compensation Technique[2]	Acres	Credit % Requested	Credits Anticipated[3]	County	Major Watershed #	Bank Service Area #

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Project Name and/or Number:

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict Project outcomes, identify specific Project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For Projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For Projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address Project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves Project-specific/permittee responsible replacement):

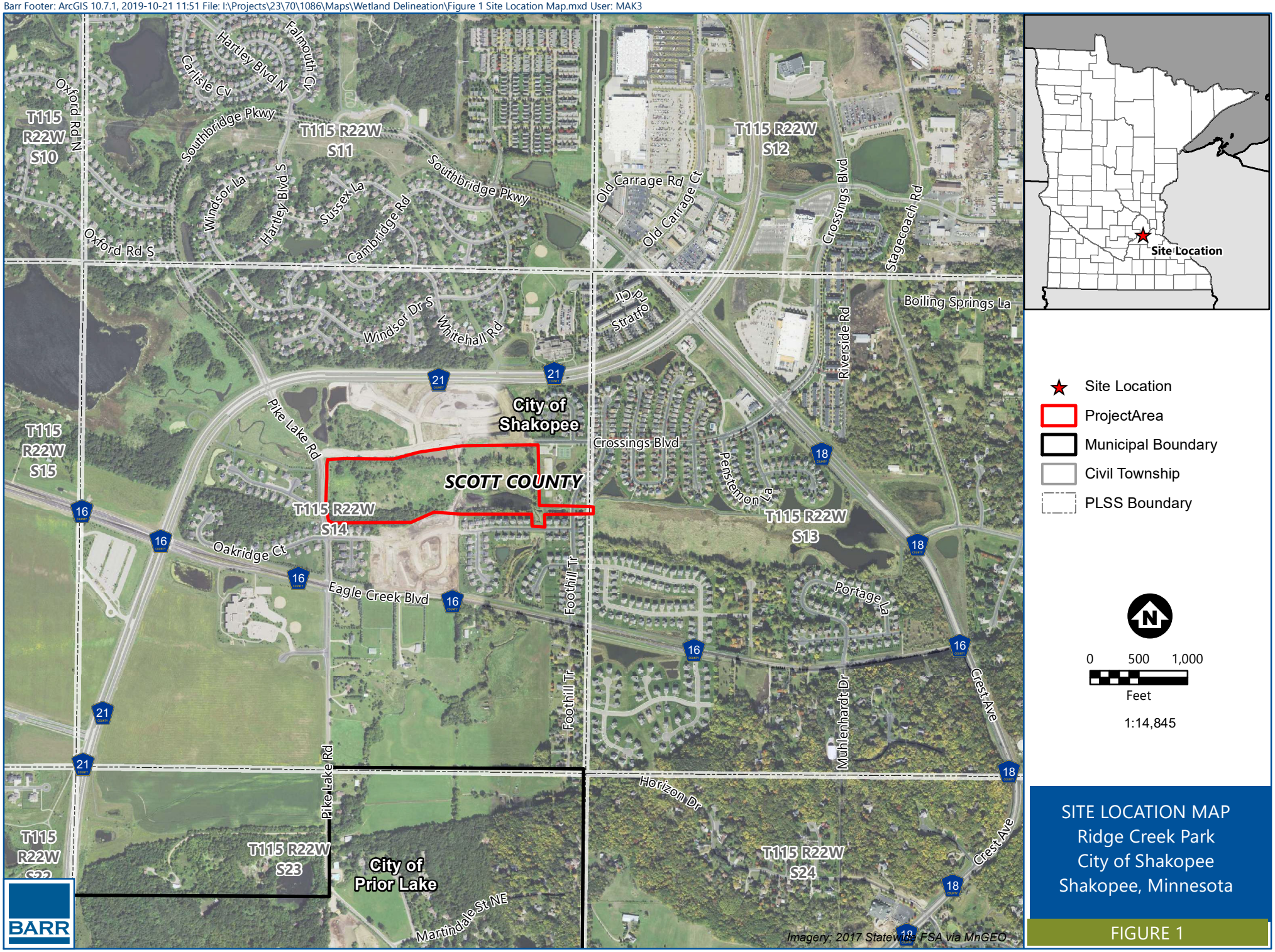
- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the Project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Title:

Signature: _____ Date:

Figures

Barr Footer: ArcGIS 10.7.1, 2019-10-21 11:51 File: I:\Projects\23\70\1086\Maps\Wetland Delineation\Figure 1 Site Location Map.mxd User: MAK3



SITE LOCATION MAP
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 1

2015 Approved Delineated Wetland Boundary (Oct. 2015)

2019 Pending Delineated Wetland Boundary

2019 Stream Channel

N

0 50 100 200

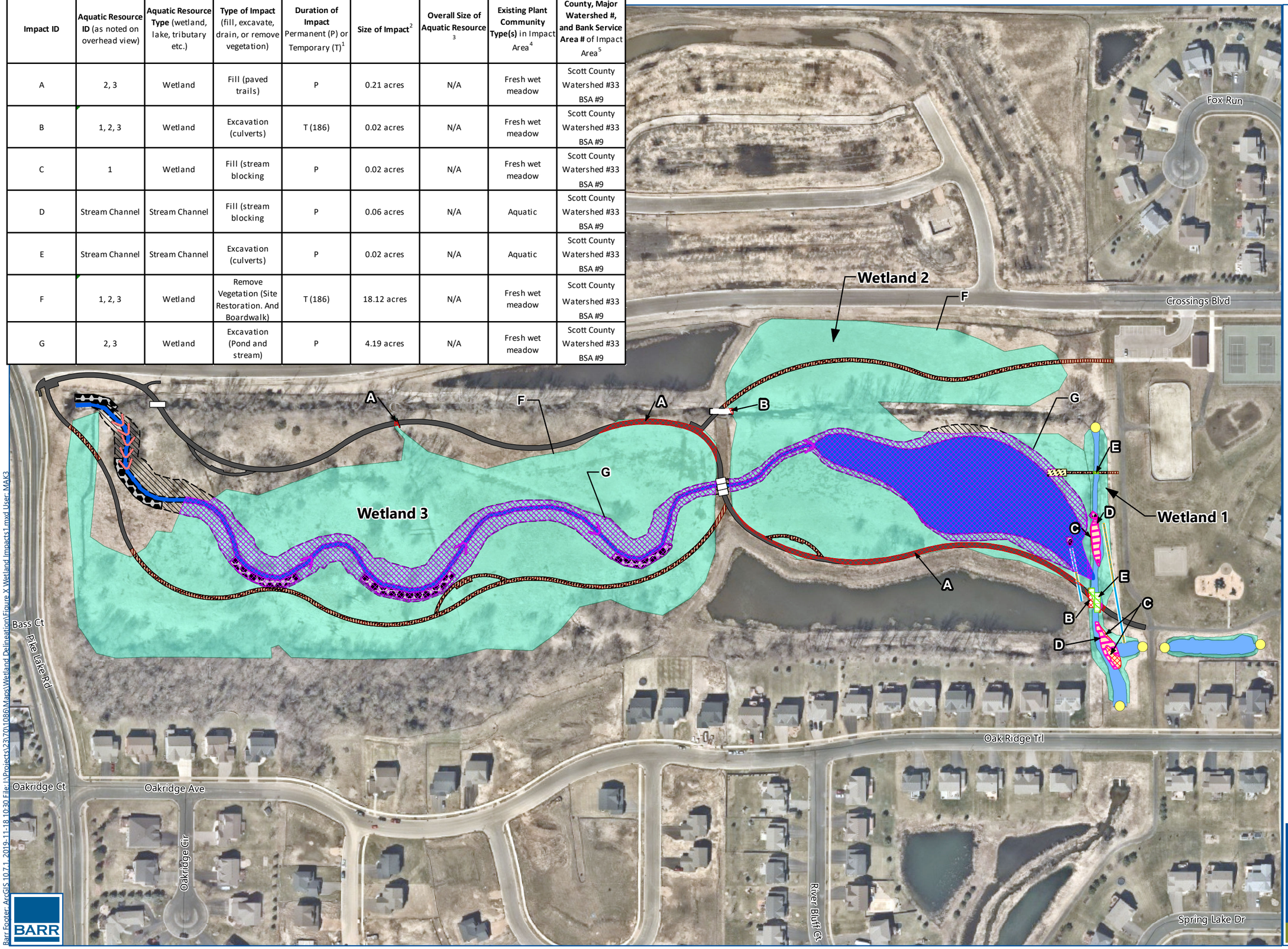
Feet

FIELD DELINEATED WETLANDS

Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

BARR

Impact ID	Aquatic Resource ID (as noted on overhead view)	Aquatic Resource Type (wetland, lake, tributary etc.)	Type of Impact (fill, excavate, drain, or remove vegetation)	Duration of Impact Permanent (P) or Temporary (T)[1]	Size of Impact[2]	Overall Size of Aquatic Resource[3]	Existing Plant Community Type(s) in Impact Area[4]	County, Major Watershed #, and Bank Service Area # of Impact Area[5]
A	2, 3	Wetland	Fill (paved trails)	P	0.21 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
B	1, 2, 3	Wetland	Excavation (culverts)	T (186)	0.02 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
C	1	Wetland	Fill (stream blocking	P	0.02 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
D	Stream Channel	Stream Channel	Fill (stream blocking	P	0.06 acres	N/A	Aquatic	Scott County Watershed #33 BSA #9
E	Stream Channel	Stream Channel	Excavation (culverts)	P	0.02 acres	N/A	Aquatic	Scott County Watershed #33 BSA #9
F	1, 2, 3	Wetland	Remove Vegetation (Site Restoration. And Boardwalk)	T (186)	18.12 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9
G	2, 3	Wetland	Excavation (Pond and stream)	P	4.19 acres	N/A	Fresh wet meadow	Scott County Watershed #33 BSA #9



- Existing Culvert Locations
- Proposed Culverts
- Field Delineated Wetlands (2015, 2019)
- Delineated Stream Channel (2019)
- Boardwalk
- Box Culvert
- Fill
- Grading Limits
- Overlook
- Pond/Stream
- Trail
- Replaced Culvert
- Rip Rap
- Rock Vein

Wetland Impact Type

- Exempt (3.85 acres)
- No Loss (0.45 acre)
- Permanent (0.26 acre)
- Temporary (0.02 acre)

Stream Impact Type

- Permanent (0.06 acre)
- Temporary (0.02 acre)

N

0 50 100 200
Feet

WETLAND IMPACTS
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

BARR

Appendix A
Prior Approvals

From:	Micah Heckman
To:	Kirby Templin
Subject:	FW: Ridge Creek Record Plans
Date:	Thursday, August 23, 2018 1:14:10 PM
Attachments:	image002.png image22f567.JPG Ridge_Creek_Wetlands_Post_Construction.DWG Ridge_Creek_Wetlands_Post_Construction.DWG.xml

Kirby,

Here is the wetland info for the Ridge Creek project.

Micah Heckman, P.E.
Project Engineer, Engineering Division
485 Gorman St., Shakopee MN 55379
952-233-9363 | 612-490-5968 cell | www.ShakopeeMN.gov

From: Alison Harwood <aharwood@wsbeng.com>
Sent: Thursday, August 23, 2018 12:19 PM
To: Micah Heckman <mheckman@shakopeemn.gov>
Subject: RE: Ridge Creek Record Plans

Hi Micah,

Here is the "new" boundary – I took the original approved boundary and deleted the filled areas. You can use this as the wetland boundary for the trail project. These will be valid until 2020.

Let me know if you need anything else or have questions!

Alison Harwood
Environmental Planning & Natural Resources Scientist
P (763) 231-4847 | M (612) 360-1320
WSB & Associates, Inc. | 540 Gateway Blvd. | Burnsville, MN 55337

From: Micah Heckman <mheckman@shakopeemn.gov>
Sent: Thursday, August 09, 2018 2:54 PM
To: Alison Harwood <aharwood@wsbeng.com>
Subject: Ridge Creek Record Plans

Alison,

Here is a CAD file for the Ridge Creek record plans. This shows the new wetland boundary.

Micah Heckman, P.E.
Project Engineer, Engineering Division
485 Gorman St., Shakopee MN 55379
952-233-9363 | 612-490-5968 cell | www.ShakopeeMN.gov

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
Shakopee	**500 Gorman Street** **Shakopee, MN 55379**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Lennar Homes **Joseph Jablonski**	**Ridge Creek**	**03/23/2017**	**2017-2**

☒ Attach site locator map.

Type of Decision:

☐ Wetland Boundary or Type Sequencing ☐ No-Loss ☐ Exemption ☐

☒ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

☐ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: 5/16/2017

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

Lennar Homes is proposing to develop an 80-acre site located in Section 14, Township 115N, Range 22W in Shakopee, Scott County, Minnesota. Development will include 104 single-family homes and associated streets, utilities, and stormwater treatment features. The project will result in 0.4809 acres of fill within three wetlands as described below:

- Wetland 1 (Wet Meadow) - 0.166 acre fill for roadway construction
- Wetland 2 (Wet Meadow) – 0.2526 acre fill for roadway construction and grading reconciliation
- Wetland 4 (Wet Meadow) – 0.2217 acre fill for roadway construction and grading reconciliation

Impact minimization was achieved by constructing roadway shoulders with the steepest slopes allowable, and by aligning the roadway along the existing buried sanitary sewer corridor.

Replacement for wetland impacts will be through the purchase of 0.9618 acres of wetland credit from Bank No. 1494, located in Blue Earth County (Watershed 32, BSA 9)

The application was noticed to the TEP on March 29, 2017 and comments were allowed until April 28, 2017. No comments were received.

For Replacement Plans using credits from the State Wetland Bank:
Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☒ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.		
Name **Bruce Loney, PE**	Title **Public Works Director**	
Signature Bruce Loney	Date 5/16/17	Phone Number and E-mail **952-233-9361** **BLoney@shakopeemn.gov**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal
1494	9	Blue Earth	(sq. ft. or nearest .01 acre) 0.9618

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☐ Appeal of an LGU staff decision. Send petition and $_____ fee (if applicable) to: **City of Prior Lake** **4646 Dakota Street** **Prior Lake, MN 55372**	☒ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

☒ SWCD TEP member: **Troy Kuphal**
☒ BWSR TEP member: **Jed Chesnut**
☒ LGU TEP member (if different than LGU Contact): **Alison Harwood, WSB & Associates, Inc.**
☒ DNR TEP member: **Becky Horton, Jennie Skancke**
☐ DNR Regional Office (if different than DNR TEP member)
☒ WD or WMO (if applicable): **Kathryn Keller-Miller, Prior Lake-Spring Lake Watershed District**
☒ Applicant and Landowner (if different): **Joseph Jablonski, Lennar Homes**
☒ Members of the public who requested notice: **Melissa Barret, Kjolhaug Environmental Services Jacob Busiahn, City of Shakopee**
☒ Corps of Engineers Project Manager: **Ryan Malterud**
☐ BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

➢ For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢ For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢ Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

For a map of DNR Administrative Regions, see: http://files.dnr.state.mn.us/aboutdnr/dnr_regions.pdf

➢ For a list of Corps of Project Managers: www.mvp.usace.army.mil/regulatory/default.asp?pageid=687 or send to:

US Army Corps of Engineers
St. Paul District, ATTN: OP-R
180 Fifth St. East, Suite 700
St. Paul, MN 55101-1678

➢ For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:
☒ **Wetland Impact Overview**
☒ **Council Resolution**

Figure 6 - Proposed Project and Wetland Impacts (2016 Metro Photo)

N 0 500 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Ridge Creek Residential P.U.D. (KES 2016-203)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

RESOLUTION 7887

A Resolution
Approving a Wetland Replacement Plan
for the Ridge Creek Project

WHEREAS, the City has received a Wetland Replacement Plan from Lennar Homes for their site; and,

WHEREAS, the applicant has demonstrated that the proposed Wetland Replacement Plan complies with Minn. Rules Parts 8420.0540 and 8420.0550; and,

WHEREAS, all interested parties on file in the office of the City Engineer or identified in Minn. Rule 8420.0230 have been sent notice of the proposed Wetland Replacement Plan; and,

WHEREAS, the Technical Evaluation Panel reviewed the proposed Replacement Plan and considered the public values, location, size, and type of wetland being altered and recommended approval of the Wetland Replacement Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SHAKOPEE, MINNESOTA:

1. Based on the replacement standards in Minn. Rules 8420.0630, and based on the recommendation of the Technical Evaluation Panel, the Wetland Replacement Plan is hereby approved.

2. Approval of the Wetland Replacement Plan shall become effective upon its adoption

3. A copy of this decision shall be sent to all interested parties and to the applicant.

Adopted in regular session of the City Council of the City of Shakopee, Minnesota held this 16th day of May, 2017.

Mayor of the City of Shakopee

ATTEST:

City Clerk

Minnesota Wetland Conservation Act
Notice of Decision

Local Government Unit (LGU)	Address
City of Shakopee	**129 Holmes Street South** **Shakopee, MN 55379**

1. PROJECT INFORMATION

Applicant Name	Project Name	Date of Application	Application Number
Western Bank (Cindy Carlson)	**Ridge Creek**	**10/14/15**	**W15-10-05**

☐ Attach site locator map.

Type of Decision:

☒ Wetland Boundary or Type ☐ No-Loss ☐ Exemption ☐ Sequencing
☐ Replacement Plan ☐ Banking Plan

Technical Evaluation Panel Findings and Recommendation (if any):

☒ Approve ☐ Approve with conditions ☐ Deny

Summary (or attach):

2. LOCAL GOVERNMENT UNIT DECISION

Date of Decision: **11/16/15**

☒ Approved ☐ Approved with conditions (include below) ☐ Denied

LGU Findings and Conclusions (attach additional sheets as necessary):

No members of the TEP expressed a desire to hold a meeting, nor did they request additional information regarding this application. City staff has visited the site and agrees with the delineation limits.

For Replacement Plans using credits from the State Wetland Bank:

Bank Account #	Bank Service Area	County	Credits Approved for Withdrawal (sq. ft. or nearest .01 acre)

Replacement Plan Approval Conditions. In addition to any conditions specified by the LGU, the approval of a Wetland Replacement Plan is conditional upon the following:

☐ **Financial Assurance:** For project-specific replacement that is not in-advance, a financial assurance specified by the LGU must be submitted to the LGU in accordance with MN Rule 8420.0522, Subp. 9 (List amount and type in LGU Findings).

☐ **Deed Recording:** For project-specific replacement, evidence must be provided to the LGU that the BWSR "Declaration of Restrictions and Covenants" and "Consent to Replacement Wetland" forms have been filed with the county recorder's office in which the replacement wetland is located.

☐ **Credit Withdrawal:** For replacement consisting of wetland bank credits, confirmation that BWSR has withdrawn the credits from the state wetland bank as specified in the approved replacement plan.

Wetlands may not be impacted until all applicable conditions have been met!

LGU Authorized Signature:

Signing and mailing of this completed form to the appropriate recipients in accordance with 8420.0255, Subp. 5 provides notice that a decision was made by the LGU under the Wetland Conservation Act as specified above. If additional details on the decision exist, they have been provided to the landowner and are available from the LGU upon request.

Name	Title	
Joe Swentek	**Project Engineer**	
Signature	Date	Phone Number and E-mail
	11/20/15	**952-233-9363** **jswentek@shakopeemn.gov**

THIS DECISION ONLY APPLIES TO THE MINNESOTA WETLAND CONSERVATION ACT. Additional approvals or permits from local, state, and federal agencies may be required. Check with all appropriate authorities before commencing work in or near wetlands.

Applicants proceed at their own risk if work authorized by this decision is started before the time period for appeal (30 days) has expired. If this decision is reversed or revised under appeal, the applicant may be responsible for restoring or replacing all wetland impacts.

This decision is valid for three years from the date of decision unless a longer period is advised by the TEP and specified in this notice of decision.

3. APPEAL OF THIS DECISION

Pursuant to MN Rule 8420.0905, any appeal of this decision can only be commenced by mailing a petition for appeal, including applicable fee, within thirty (30) calendar days of the date of the mailing of this Notice to the following as indicated:

Check one:

☒ Appeal of an LGU staff decision. Send petition and $**N/A** fee (if applicable) to: **City of Shakopee** **Attn: Joe Swentek** **129 Holmes Street South** **Shakopee, MN 55379**	☐ Appeal of LGU governing body decision. Send petition and $500 filing fee to: Executive Director Minnesota Board of Water and Soil Resources 520 Lafayette Road North St. Paul, MN 55155

4. LIST OF ADDRESSEES

- ☒ SWCD TEP member: **Troy Kuphal, Collin Schoenecker**
- ☒ BWSR TEP member: **Ben Meyer**
- ☐ LGU TEP member (if different than LGU Contact):
- ☒ DNR TEP member: **Leslie Parris**
- ☐ DNR Regional Office (if different than DNR TEP member)
- ☒ WD or WMO (if applicable): **Linda Loomis**
- ☐ Applicant and Landowner (if different)
- ☐ Members of the public who requested notice:

- ☒ Corps of Engineers Project Manager
- ☐ BWSR Wetland Bank Coordinator (wetland bank plan decisions only)

5. MAILING INFORMATION

➢ For a list of BWSR TEP representatives: www.bwsr.state.mn.us/aboutbwsr/workareas/WCA_areas.pdf

➢ For a list of DNR TEP representatives: www.bwsr.state.mn.us/wetlands/wca/DNR_TEP_contacts.pdf

➢ Department of Natural Resources Regional Offices:

NW Region:	NE Region:	Central Region:	Southern Region:
Reg. Env. Assess. Ecol. Div. Ecol. Resources 2115 Birchmont Beach Rd. NE Bemidji, MN 56601	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1201 E. Hwy. 2 Grand Rapids, MN 55744	Reg. Env. Assess. Ecol. Div. Ecol. Resources 1200 Warner Road St. Paul, MN 55106	Reg. Env. Assess. Ecol. Div. Ecol. Resources 261 Hwy. 15 South New Ulm, MN 56073

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180 Fifth St. East, Suite 700
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➢ For Wetland Bank Plan applications, also send a copy of the application to:

Minnesota Board of Water and Soil Resources
Wetland Bank Coordinator
520 Lafayette Road North
St. Paul, MN 55155

6. ATTACHMENTS

In addition to the site locator map, list any other attachments:

- ☒ **Application**
- ☒ **Wetland Delineation Report**
- ☐
- ☐
- ☐

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
180 FIFTH STREET EAST, SUITE 700
ST. PAUL, MN 55101-1678

REPLY TO ATTENTION OF
REGULATORY BRANCH

MAY 02 2016

Regulatory File No. 2015-03935-MMJ

Kjolhaug Environmental
c/o Melissa Barrett
26105 Wild Rose Land
Shorewood, Minnesota 55331

Dear Ms. Barrett:

This letter is in response to correspondence dated October 14, 2015, requesting Corps of Engineers (Corps) concurrence with the delineation of aquatic resources you completed for an 80-acre parcel owned by Western Bank. The project site is located in several Section 14, Township 115 North, Range 22 West, Scott County, Minnesota, as shown on the enclosed figures labeled MVP-2015-03935-MMJ Page 1 of 2 through Page 2 of 2.

We have reviewed the delineation report for the Ridge Creek site and determined that the limits of the aquatic resources have been accurately identified in accordance with current agency guidance including the *Corps of Engineers Wetland Delineation Manual* (1987 Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. This concurrence is only valid for the review area shown on the attached figure labeled MVP-2015-03935-MMJ Page 2 of 2. The boundaries shown on those attached figure accurately reflect the limits of the aquatic resources in the review area.

This concurrence may generally be relied upon for five years from the date of this letter. However, we reserve the right to review and revise our concurrence in response to changing site conditions, information that was not considered during our initial review, or off-site activities that could indirectly alter the extent of wetlands and other resources on-site. Our concurrence may be renewed at the end of this period provided you submit a written request and our staff are able to verify that the determination is still valid.

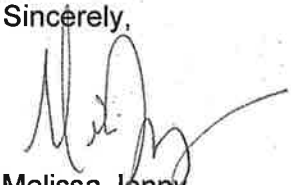
We have completed a preliminary jurisdictional determination (PJD) for the aquatic resources located on this parcel. A PJD presumes that all of the aquatic resources identified in the review area subject to Corps of Engineers' jurisdiction under the Clean Water Act. Since the determination is considered preliminary it is not appealable under our administrative appeal procedures (33 CFR 331). If you prefer an appealable approved jurisdictional determination that verifies the jurisdictional status of the aquatic resources within the review area you may request one by contacting the Corps representative identified in the final paragraph of this letter.

If this PJD is acceptable, please sign and date both copies of the Preliminary Jurisdictional Determination Form and return one copy to the letterhead address within 30 days from the date of this letter.

Please note that the discharge of dredged or fill material into waters of the United States without a Department of the Army permit could subject you to enforcement action. Receipt of a permit from a state or local agency does not obviate the requirement for obtaining a Department of the Army permit.

If you have any questions, please contact me in our St. Paul office at (651) 290-5363 or Melissa.m.jenny@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory file number shown above.

Sincerely,



Melissa Jenny
Project Manager

Enclosures

cc:
Joe Swentek (LGU)
Ben Meyer (BWSR)
Troy Kuphal (SWCD)

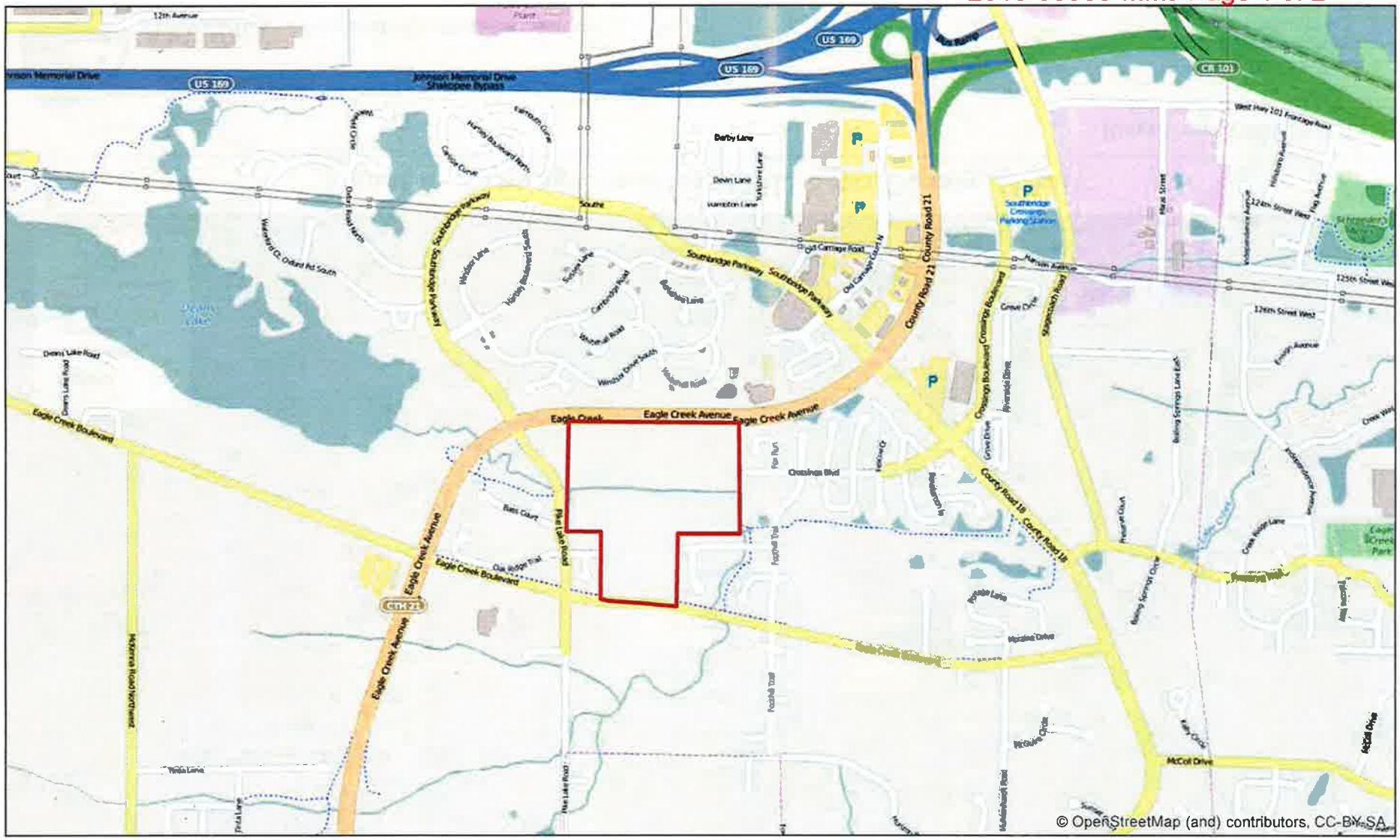


Figure 1 - Site Location

N

0 2,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

Figure 2 - Existing Conditions (2013 Scott County Aerial)

N

0 500 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MnGeo, ESRI Imagery Basemap

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office: St. Paul District | File/ORM #: 2015-03935-MMJ | PJD Date: Apr 28, 2016

State: MN | City/County: Scott County

Nearest Waterbody: Eagle Creek

Location: TRS, LatLong or UTM: Section 14, Township 115 North, Range 22 West

Name/ Address of Person Requesting PJD: Kjolhaug Environmental
c/o Melissa Barrett
26105 Wild Rose Land
Shorewood, Minnesota 55331

Identify (Estimate) Amount of Waters in the Review Area:

Non-Wetland Waters: 1500 linear ft | 10 width | 0.35 acres | Stream Flow: Perennial

Wetlands: 10+ acre(s) | Cowardin Class: Palustrine, emergent

Name of Any Water Bodies on the Site Identified as Section 10 Waters: Tidal: | Non-Tidal:

☑ Office (Desk) Determination
☐ Field Determination: Date of Field Trip:

SUPPORTING DATA: Data reviewed for preliminary JD (check all that apply - checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☑ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: KES
- ☑ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☑ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps
- ☐ Corps navigable waters' study:
- ☑ U.S. Geological Survey Hydrologic Atlas:
  - ☑ USGS NHD data.
  - ☐ USGS 8 and 12 digit HUC maps.
- ☑ U.S. Geological Survey map(s). Cite quad name: 1:24k MN - Eden Prairie
- ☑ USDA Natural Resources Conservation Service Soil Survey. Citation: Scott Co.
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation is:
- ☑ Photographs: ☑ Aerial (Name & Date): FSA 1991-2014, Google Earth
  ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

4/28/16

Signature and Date of Regulatory Project Manager (REQUIRED)

Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)

EXPLANATION OF PRELIMINARY AND APPROVED JURISDICTIONAL DETERMINATIONS:

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there *"may be"* waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

Appendix A - Sites

District Office	St. Paul District	File/ORM #	2015-03935-MMJ	PJD Date:	Apr 28, 2016
State	MN	City/County	Shakopee, Scott Co.	Person Requestinq PJD	Ms. Melissa Barrett

Site Number	Latitude	Longitude	Cowardin Class	Est. Amount of Aquatic Resource in Review Area	Class of Aquatic Resource
W1	44.77065	-93.42797	Palustrine, emergent	4.07 acres	
W2	44.76912	-93.42671	Palustrine, emergent	10.52 acres	
W3	44.76974	-93.42287	Palustrine, emergent	7.30 acres	
W4	44.77063	-93.42253	Palustrine, emergent	0.22 acre	
Ditch	44.76905	-93.42535	Riverine	1500 ft	

Notes:

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Ditch	44.76905	-93.42535	Riverine	1500 ft	

Notes:

Appendix B
2019 Wetland Delineation Report

Wetland Delineation Report

Ridge Creek Park

Prepared for
City of Shakopee

October 2019

Draft Wetland Delineation Report

Ridge Creek Park

Prepared for
City of Shakopee

October 2019

4300 MarketPointe Drive, Suite 200
Minneapolis, MN 55435
952.832.2600
www.barr.com

Wetland Delineation Report

October 2019

Contents

List of Tables

List of Figures

List of Appendices

1.0 Introduction

This wetland delineation report has been prepared by Barr Engineering Co., (Barr) on behalf of the City of Shakopee in support of a proposed Ridge Creek Park improvements project. The Project is located in Shakopee, Minnesota within Section 14 of Township 115 North, Range 22 West in Scott County (**Figure 1**). A field wetland delineation was conducted by Barr for the proposed project on October 11, 2019. This delineation identified one wetland within the Project area.

A field wetland delineation was previously conducted by Kjolhaug Environmental for the adjacent Lennar housing development on October 8, 2015. This previous wetland delineation evaluation area included Ridge Creek Park. Four wetlands and a non-wetland drainage ditch were delineated in 2015. This City of Shakopee Ridge Creek Park improvement project will utilize the wetland boundaries provided by WSB which includes the 2015 approved wetland boundaries minus the previously approved wetland fill for the Lennar development. This boundary is valid until 2020 as documented in the August 23, 2018 email from WSB (Appendix C). The City of Shakopee Ridge Creek Park improvement project will also extend into portions of Riverside Fields Park, located to the east of Ridge Creek Park. Therefore, a second wetland delineation was required to investigate the wetlands located on the western edge of Riverside Fields Park. The 2019 delineation extended the previously delineated Wetland 3 boundary.

This Wetland Delineation Report has been prepared in accordance with the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual ("1987 Manual", USACE, 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE, 2010) and the requirements of the Minnesota Wetland Conservation Act (WCA) of 1991.

This report includes general environmental information (Section 2.0), descriptions of the delineated wetlands (Section 3.0), and a discussion of regulations and the administering authorities (Section 4.0). The Tables section includes antecedent precipitation data. The Figures section includes the Project Location Map, Topography Map, National Wetland Inventory (NWI), Public Waters Inventory (PWI), Hydric Soils Map and the Wetland Boundary Map. **Appendix A** includes Wetland Data Forms **Appendix B** includes site photographs, and **Appendix C** 2015 previously approved wetland delineation report.

2.0 Project Description

The City of Shakopee has ownership in the Lennar development at Ridge Creek, located between State Highway 21 and Eagle Creek Boulevard in Shakopee, Minnesota. The city intends to develop the identified property into a passive public park and improve the ecological function of the unnamed stream channel and wetland area located on the property. In addition, the project will add recreational benefit to the surrounding residential area. The project would include meandering the unnamed stream and adding: a sediment basin, paved multi-use trail, elevated boardwalk trail, elevated overlooks, and a box culvert.

The existing stream channel consists of a channelized man-made ditch with limited ecological or recreation value. The proposed project would reroute the stream channel through the project area in a more natural meandering pattern. The newly constructed stream channel would be planted with a native seed mix improving the vegetative quality of the stream channel. In addition, a sediment basin would be constructed on the eastern side of the proposed stream channel. This basin would accumulate sediment that flows through the stream channel and help preserve downstream water quality and reduce sediment loading into the Minnesota River and provide habitat for waterfowl species.

Two trails, a 10 foot wide multi-used paved trail, and an elevated boardwalk will be constructed through the project area. The proposed trails will connect to an existing bike trail network and allow for foot access to the wetland area, providing both recreational and educational opportunities for the surrounding community. The trails will also connect to two overlook points which would contain educational signage about the wetland area and the ecological and wildlife benefits of the wetland and stream.

3.0 General Environmental Setting

3.1 Site Description

The Project area is located in an urban setting in the City of Shakopee located partially within Riverside Fields Park. The project area is located within a residential neighborhood surrounded by single family housing and consists of maintained lawns in addition to a large wetland area to the west. The 2019 Wetland Evaluation Area (Evaluation Area) is used as a drainage channel that conveys water to Deans Lake. The eastern edge of the Project area is used as a recreational use as it is too shallow for boating. The greater surrounding area consists mainly of single-family housing and transportation corridors (**Figure 1**).

3.2 Topography

The wetland evaluation area is located in a residential setting where the natural topography has been altered due to the construction of the adjacent Riverside Fields Park and from prior agricultural practices. Generally, the project area has gentle slopes that lead toward the constructed drainage channel. Elevations range from a high point of approximately 770 to a low of 754 (**Figure 2**).

3.3 Precipitation

Recent precipitation data was compared to historic precipitation data to evaluate monthly deviations from normal conditions. Precipitation data was obtained from the Minnesota Climatology Working Group, Wetland Delineation Precipitation Data Retrieval from a Gridded Database (Minnesota Climatology Office, 2019) for wetlands in Scott County, Township 115 North, Range 22 West, Section 14.

In 2019, antecedent moisture conditions were wetter than normal according to precipitation data from the three months prior to the October 11, 2019 site visit (**Table 1**). The months of July August and September received higher than average precipitation. The water year has varied between dry and wet for the past nine years but fell mostly into the wet range from 2010 through 2019 (**Table 2**).

3.4 National Wetland Inventory

The National Wetland Inventory (NWI) data was reviewed for any wetlands located within or adjacent to the Evaluation area. Four NWI wetlands were recorded within the Evaluation area (**Figure 3**). The large wetland to the west was classified as an emergent wetland with persistent vegetation that is temporarily flooded and has been ditched (PEM1Ad). Two NWIs are located within the stream channel. Both of these NWIs were classified as a palustrine wetland with an unconsolidated bottom that is permanently flooded and has previously been excavated (PUBHx), The easternmost NWI was classified a palustrine wetland with persistent emergent vegetation that is temporarily flooded (PEM1A)

3.5 Water Resources

The MnDNR Public Waters Inventory (PWI) was queried for any PWIs located within or adjacent to the Project area (**Figure 4**). One PWI watercourse is located within the Project area. The watercourse is an

unnamed tributary that enters the southern end of the Project. The unnamed tributary is connected to the drainage that flows through the Project area and drains into Deans Lake, located 0.75 miles west, and ultimately flows into the Minnesota River.

3.6 Soil Resources

Soil information for the wetland delineation area was obtained from the Soil Survey for Scott County, Minnesota (NRCS, 2019). Please refer to **Table 3** for a list of all mapped soils located within the Evaluation area (**Figure 5)**. The majority of the Evaluation area contains Houghton Muck, 0 to 1 percent slopes which is classified as a hydric soil.

Table 3, Soil Resources

Map Unit	Map Unit Name	Percent of Project Area	Hydric Rating
HdB	Sparta fine sand 2 to 6 percent slopes	6.7%	0% -Not Hydric
PbA	Houghton muck, 0 to 1 percent slopes	93.3%	100% - Hydric

4.0 Wetland Delineation

4.1 Wetland Delineation and Classification Methods

The wetland delineation was completed according to the Routine On-Site Determination Method specified in the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987 Edition) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE, 2010) and the requirements of the Minnesota Wetland Conservation Act (WCA) of 1991.

The delineated wetland boundaries and associated sample points were surveyed using a Global Positioning System (GPS) with sub-meter accuracy. Wetlands were classified using the U.S. Fish and Wildlife Service (USFWS) Cowardin System (Cowardin et al., 1979), the USFWS Circular 39 system (Shaw and Fredine, 1956), and the Eggers and Reed Wetland Classification System (Eggers and Reed, 1977).

Representative soil samples were examined for the presence of hydric soil indicators using the Natural Resources Conservation Service (NRCS) hydric soil indicators (Version 8.2). Hydrologic conditions were evaluated at each soil boring. Additionally, the dominant plant species were identified, and the corresponding wetland indicator status of each plant species was determined. The soil colors, hydrologic conditions, and dominant plant species and indicator species were noted on the Wetland Data Forms (**Appendix A**). Photographs taken at the time of the site visits are provided in **Appendix B**.

4.2 Wetland Delineation

One wetland totaling 0.50 acres was delineated within the Evaluation area (**Table 4**). In addition to the stream channel. The wetland area is hydrologically connected to the stream channel and the previously delineated Wetland 3 as described in the 2015 wetland delineation report. Descriptions and assessments of the wetland areas are provided below, with representative photographs in **Appendix B**.

Table 4: Delineated Wetlands

Wetland Number	Sample Point Number	Circular 39	Cowardin Classification	Eggers and Reed	Wetland Size (Acres)
Wetland 1	SP 1 and 3	Type 2/3	PEMBd/PEMFd/PEMBr	Fresh (wet) meadow and Shallow Marsh	0.55
Total:					0.55

4.2.1 Wetland 1

Wetland 1 is segmented into three areas that are connected hydrologically through culverts located under trails and roadways. In total, the wetland area encompasses approximately 0.55 acres within the Evaluation area. The wetland extends outside of the Evaluation area but was not delineated to its full extent as the adjacent area to the west was previously delineated as Wetland 3 in the attached 2015 Wetland Delineation Report (**Appendix C**). The wetland consisted of two community types, Type 2 (fresh (wet) meadow) and Type 3 (shallow marsh; **Figure 6**). Using the Cowardin classification method the center wetland areas located on the east and west ends of the wetland evaluation area were classified as a palustrine wetland with emergent vegetation that is partially saturated and semipermanently flooded and has been ditched (PEMBd/Fd). The southcenteral wetland area was classified as a palustrine wetland with emergent vegetation that is saturated and artifical permanently flooded and has been excavated (PEMBr). This wetland area was previously upland area but was excavated to improve drainage in the area. The wetland area receives hydrology from the adjacent upland areas and from the adjacent stream.

Vegetation along the wetland boundary was significantly disturbed from previous human activity as the site was historically farmed. The hydrology has been altered from channelization of the stream. The majority of the wetland area was dominated by reed canary grass (*Phararis arundinacea*; FACW). Other species such as cocklebur (*Xanthium strumarium*; FAC), smartweed (*Persicaria sp.*), stinging nettle (*Urtica diocia*; FACW), black willow (*Salix nigra*: OBL), eastern cottonwood (*Populous deltoides*; FAC), and green ash (*Fraxinus pennsylvanica*; FACW), were observed.

At the time of the field survey, water was flowing through the stream channel. At sample point 1 and 3, one primary hydrology indicator was observed; saturation (A3). Secondary indicators of hydrology included drainage patterns (B10), saturation visible on aerial imagery (C9), geomorphic position (D2), and FAC-neutral test (D5).

According to NRCS data, Wetland 1 is located within the mapped Houghton muck soils, a hydric soil. Hydric soil indicators were found at both sample point 1 and sample point 3. The soils at sample point 1 met the depleted below dark surface (A11) hydric soil indicator and sample point 3 met the Histosol (A1) and Redox dark surface (F6) hydric soil indicators.

The transition to upland was defined by a gradual change in topography. The vegetation in the upland area consisted of maintained lawns with ornamental tree species.

4.2.2 Unnamed Stream

The Unnamed Stream is a permanently flooded unvegetated stream channel (RSBH). The stream channel is located in the center of the Evaluation area and contains fringe wetlands on both sides. The channel varies in width from about 10 feet to 21 feet wide and 4 to 6 feet deep. Water within the stream flows from south to north. The area receives hydrology directed through a culvert on the south end of the Project area. The channel appears to have been man-made as it has been straightened and runs directly north where it then flows through two culverts and turns directly west.

5.0 Regulatory Overview

The U.S. Army Corps of Engineers (USACE) regulates the dredge or placement of fill materials into wetlands that are located adjacent to or are hydrologically connected to interstate or navigable waters under the authority of Section 404 of the Clean Water Act. If the USACE has jurisdiction over any portion of a project, they may also review impacts to wetlands under the authority of the National Environmental Policy Act (NEPA).

Filling, excavating, and draining wetlands are also regulated by the Minnesota Wetland Conservation Act (WCA), and the Minnesota Public Waters Inventory Program, which are administered by the City of Shakopee and the MnDNR. The City of Shakopee, MnDNR, and the USACE, should be contacted before altering any wetlands in the Project area. Delineated wetland boundaries may be reviewed by a Technical Evaluation Panel (TEP) consisting of representatives from the Minnesota Board of Water and Soil Resources (BWSR), the City of Shakopee, and the Scott County Soil and Water Conservation Distirct along with the USACE.

6.0 References

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U.S. Fish and Wildlife Service. 1956. *Wetlands of the United States Circular 39*. U.S. Government Printing Office, Washington, D.C.

Tables

Table 1
Antecedent Moisture Conditions Prior to October 11, 2019 Site Visit
Ridge Creek Park Wetland Delineation
Scott County, MN

Precipitation Worksheet Using Gridded Database

Precipitation data for target wetland location:
County: Scott **Township Number**: 115N
Township Name: Unnamed **Range Number**: 22W
Nearest Community: Barden **Section Number**: 14

Aerial photograph or site visit date:
Friday, October 11, 2019

Score using 1981-2010 normal period

(value are in inches)	first prior month: **September 2019**	second prior month: **August 2019**	third prior month: **July 2019**
estimated precipitation total for this location:	**4.35R**	**6.13R**	**6.79R**
there is a 30% chance this location will have less than:	2.17	3.35	2.91
there is a 30% chance this location will have more than:	4.29	5.41	4.4
type of month: **dry** **normal** **wet**	**wet**	**wet**	**wet**
monthly score	3 * **3** = 9	2 * **3** = 6	1 ***** **3** **=** 3
multi-month score: 6 to 9 (**dry**) 10 to 14 (**normal**) 15 to 18 (**wet**)	**18 (Wet)**		

Table 2
Precipitation in Comparison to WETS Data
Ridge Creek Park Wetland Delineation
Scott County, MN

Precipitation data for target wetland location:

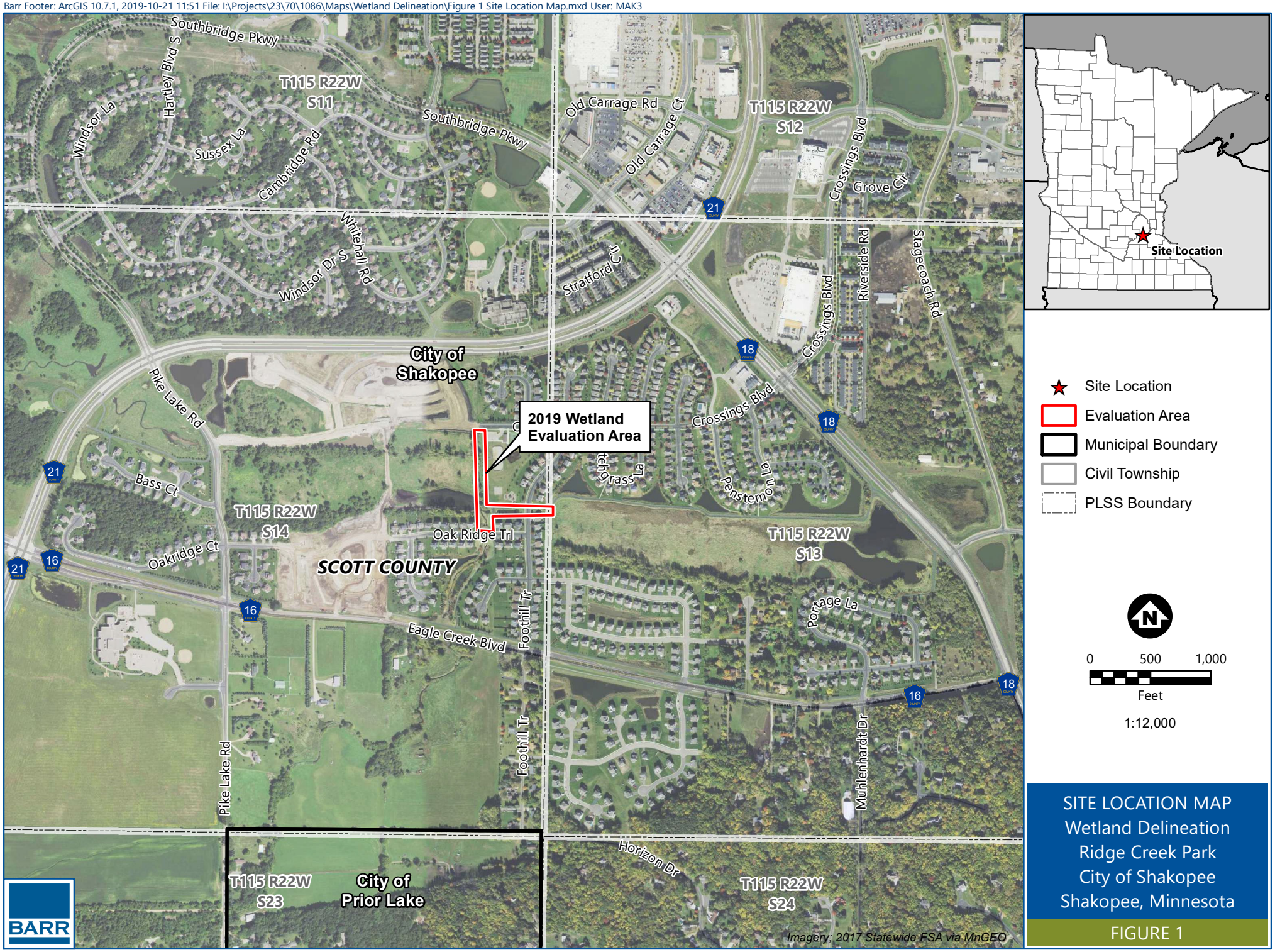
County: Scott
Township Number: 115N
Township Name: Unnamed
Range Number: 22W
Nearest Community: Barden
Section Number: 14

Precipitation Totals are in Inches	
Color Key	**Multi-month Totals**:
total is in lowest 30th percentile of the period-of-record distribution	**WARM** = warm season (May thru September)
total is => 30th and <= 70th percentile	**ANN** = calendar year (January thru December)
total is in highest 30th percentile of the period-of-record distribution	**WAT** = water year (Oct. previous year thru Sep. present year)

Period-of-Record Summary Statistics															
	Jan	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*WARM*	*ANN*	*WAT*
30%	0.53	0.50	1.10	1.58	2.51	3.20	2.47	2.55	1.87	1.15	0.64	0.52	16.15	25.46	25.68
70%	0.98	1.06	1.95	2.74	4.32	5.44	4.48	4.83	4.01	2.73	1.70	1.21	21.66	32.44	31.68
mean	0.85	0.86	1.59	2.34	3.71	4.44	3.77	3.81	3.06	2.20	1.44	0.98	18.79	28.96	29.09
1981-2010 Summary Statistics															
	Jan	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*WARM*	*ANN*	*WAT*
30%	0.56	0.42	1.28	1.99	2.73	3.40	2.91	3.35	2.17	1.44	1.18	0.58	17.49	28.81	27.62
70%	1.05	0.99	2.17	2.82	4.31	5.28	4.40	5.41	4.29	3.28	1.90	1.30	22.78	34.41	33.96
mean	0.88	0.75	1.81	2.64	3.70	4.42	4.04	4.64	3.41	2.50	1.74	1.13	20.22	31.66	31.48
Year-to-Year Data															
Year	*Jan*	*Feb*	*Mar*	*Apr*	*May*	*Jun*	*Jul*	*Aug*	*Sep*	*Oct*	*Nov*	*Dec*	*WARM*	*ANN*	*WAT*
2019	0.55	2.13	2.25	3.12	7.42	3.27R	6.79R	6.13R	4.35R				27.96		42.10
2018	1.52	1.19	1.27	2.07	3.88	5.37	3.49	2.06	6.45	3.17	1.32	1.60	21.25	33.39	33.25
2017	0.76	0.63	0.54	4.14	6.27	3.93	4.75	6.88	1.29	5.16	0.15	0.64	23.12	35.14	37.37
2016	0.21	0.76	1.76	2.34	2.23	3.84	5.10	9.29	5.53	4.00	2.30	1.88	25.99	39.24	39.55
2015	0.29	0.30	0.83	2.24	4.28	4.46	7.39	4.52	3.08	2.53	3.80	2.16	23.73	35.88	30.50
2014	1.16	1.34	0.74	6.37	3.84	12.86	3.24	3.37	1.78	1.41	0.71	0.99	25.09	37.81	39.72
2013	0.81	1.37	2.01	4.73	6.38	6.01	6.22	1.67	1.46	3.06	0.60	1.36	21.74	35.68	34.07
2012	0.63	1.99	1.58	3.03	10.28	5.36	3.28	1.85	0.61	1.34	0.70	1.37	21.38	32.02	30.50
2011	0.85	1.29	2.10	3.03	4.60	4.01	5.16	2.35	0.50	0.84	0.21	0.84	16.62	25.78	30.99
2010	0.64	0.95	1.00	2.54	3.04	6.10	4.07	6.52	5.74	1.99	2.04	3.07	25.47	37.70	39.14
2009	0.54	1.14	1.68	1.87	0.84	3.21	1.37	8.12	0.73	5.65	0.52	2.37	14.27	28.04	24.14
2008	0.16	0.48	2.29	3.39	2.84	3.46	3.22	2.86	2.13	1.68	1.51	1.45	14.51	25.47	27.68
2007	0.77	1.25	3.78	2.00	2.08	1.67	1.12	8.75	4.19	4.81	0.13	1.91	17.81	32.46	29.37
2006	0.77	0.37	1.69	3.55	2.32	3.63	1.47	5.77	4.09	0.55	1.03	2.18	17.28	27.42	31.68
2005	0.98	1.15	1.36	2.23	4.26	6.00	1.79	3.77	9.82	4.99	1.77	1.26	25.64	39.38	35.05
2004	0.57	1.29	2.18	2.30	7.09	4.39	4.06	1.97	4.67	2.00	1.17	0.52	22.18	32.21	31.70
2003	0.35	0.96	1.68	2.52	5.89	3.86	3.44	1.04	2.01	0.81	1.20	1.17	16.24	24.93	26.61
2002	0.45	0.55	1.85	3.00	3.44	7.94	5.23	8.83	5.07	4.37	0.14	0.35	30.51	41.22	41.14
2001	1.27	1.39	0.87	6.94	4.81	5.69	1.43	2.81	3.32	1.04	3.14	0.60	18.06	33.31	34.21
2000	1.20	1.05	1.16	1.03	4.34	4.16	4.82	3.40	1.21	1.10	3.18	1.40	17.93	28.05	24.76

Figures

Barr Footer: ArcGIS 10.7.1, 2019-10-21 11:51 File: I:\Projects\23\70\1086\Maps\Wetland Delineation\Figure 1 Site Location Map.mxd User: MAK3



Site Location
Evaluation Area
Municipal Boundary
Civil Township
PLSS Boundary

N

0 500 1,000
Feet

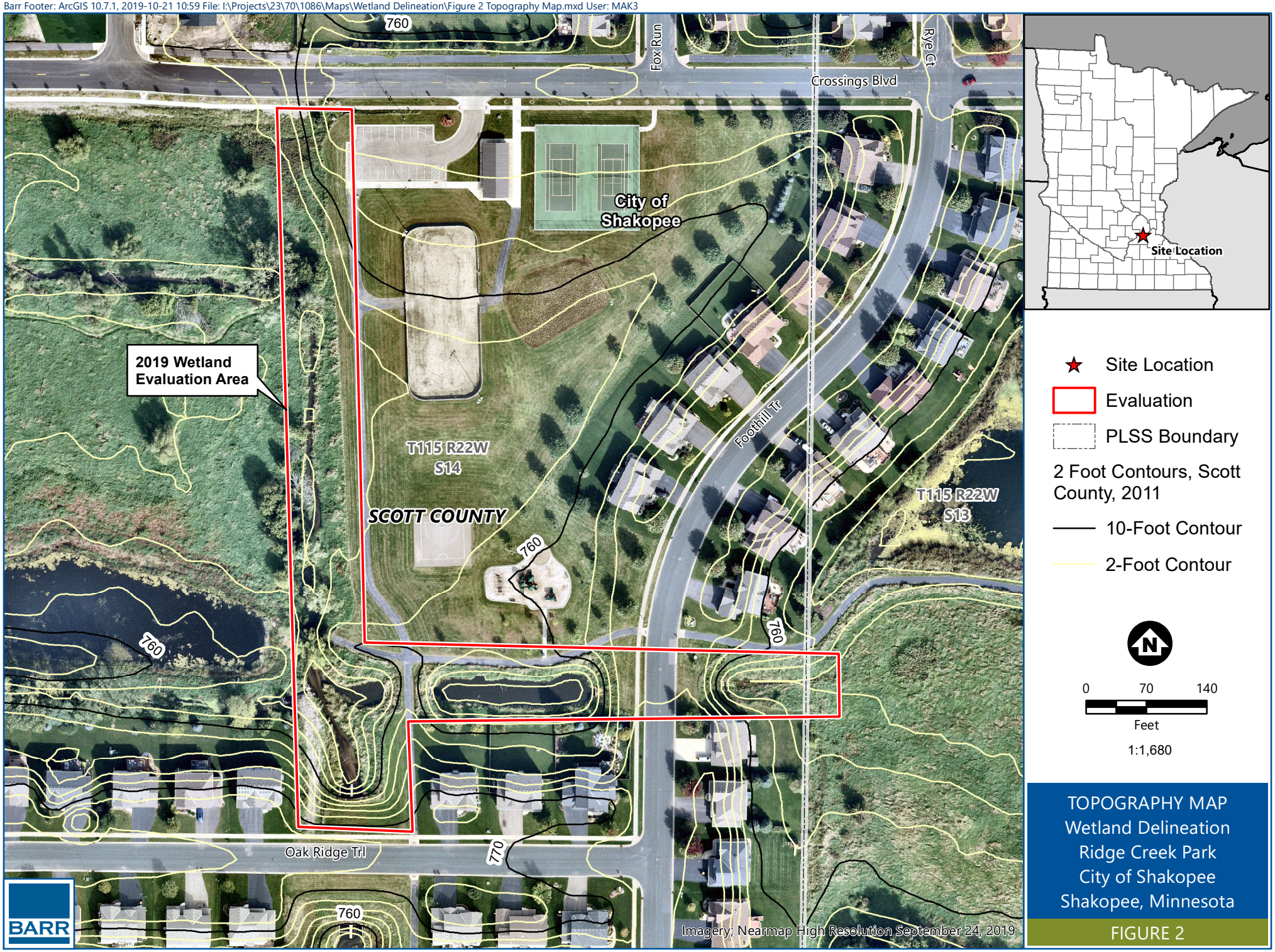
1:12,000

BARR

SITE LOCATION MAP
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 1

Barr Footer: ArcGIS 10.7.1, 2019-10-21 10:59 File: I:\Projects\23\70\1086\Maps\Wetland Delineation\Figure 2 Topography Map.mxd User: MAK3

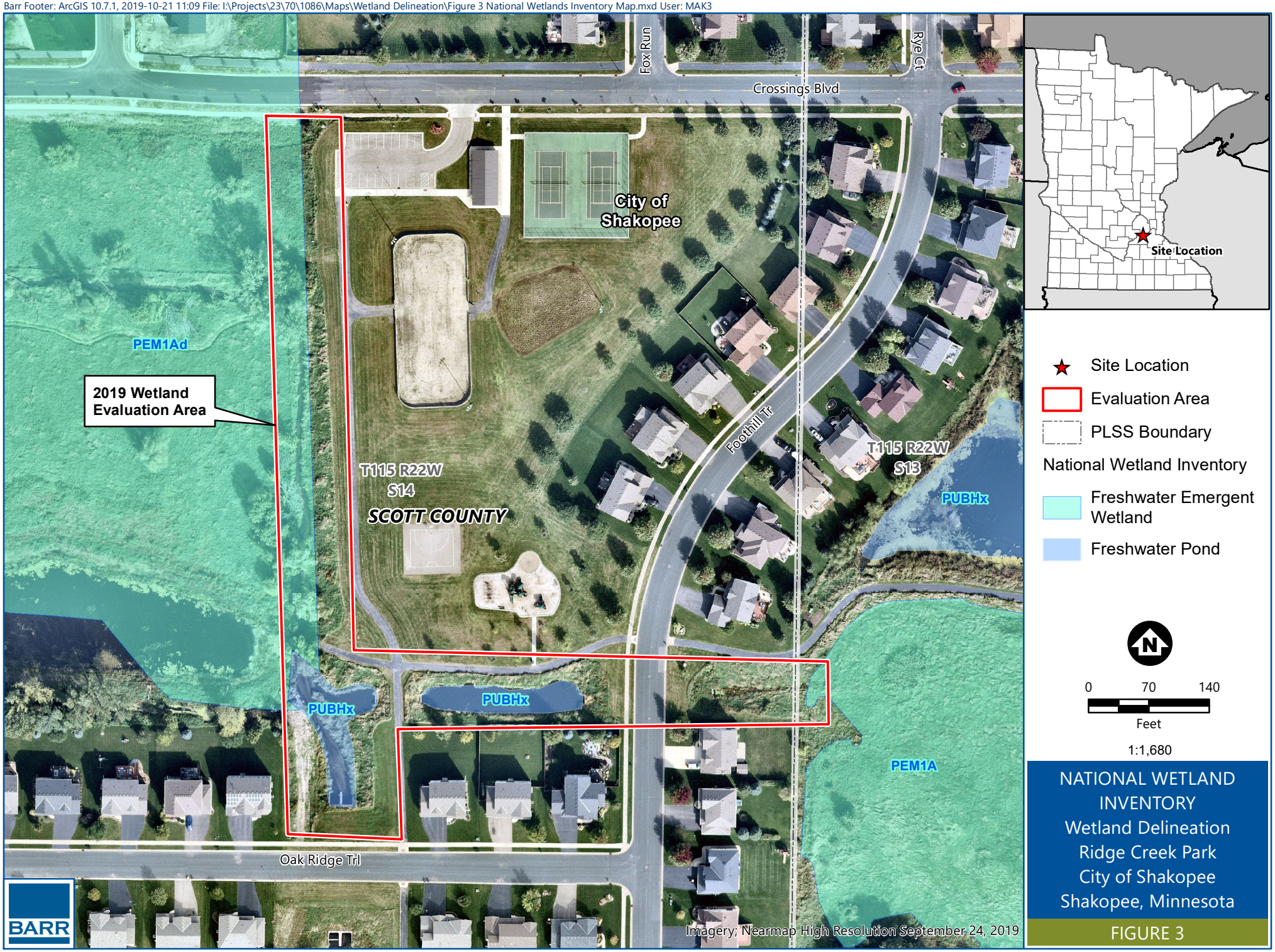


BARR

TOPOGRAPHY MAP
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 2

Barr Footer: ArcGIS 10.7.1, 2019-10-21 11:09 File: I:\Projects\23\70\1086\Maps\Wetland Delineation\Figure 3 National Wetlands Inventory Map.mxd User: MAK3



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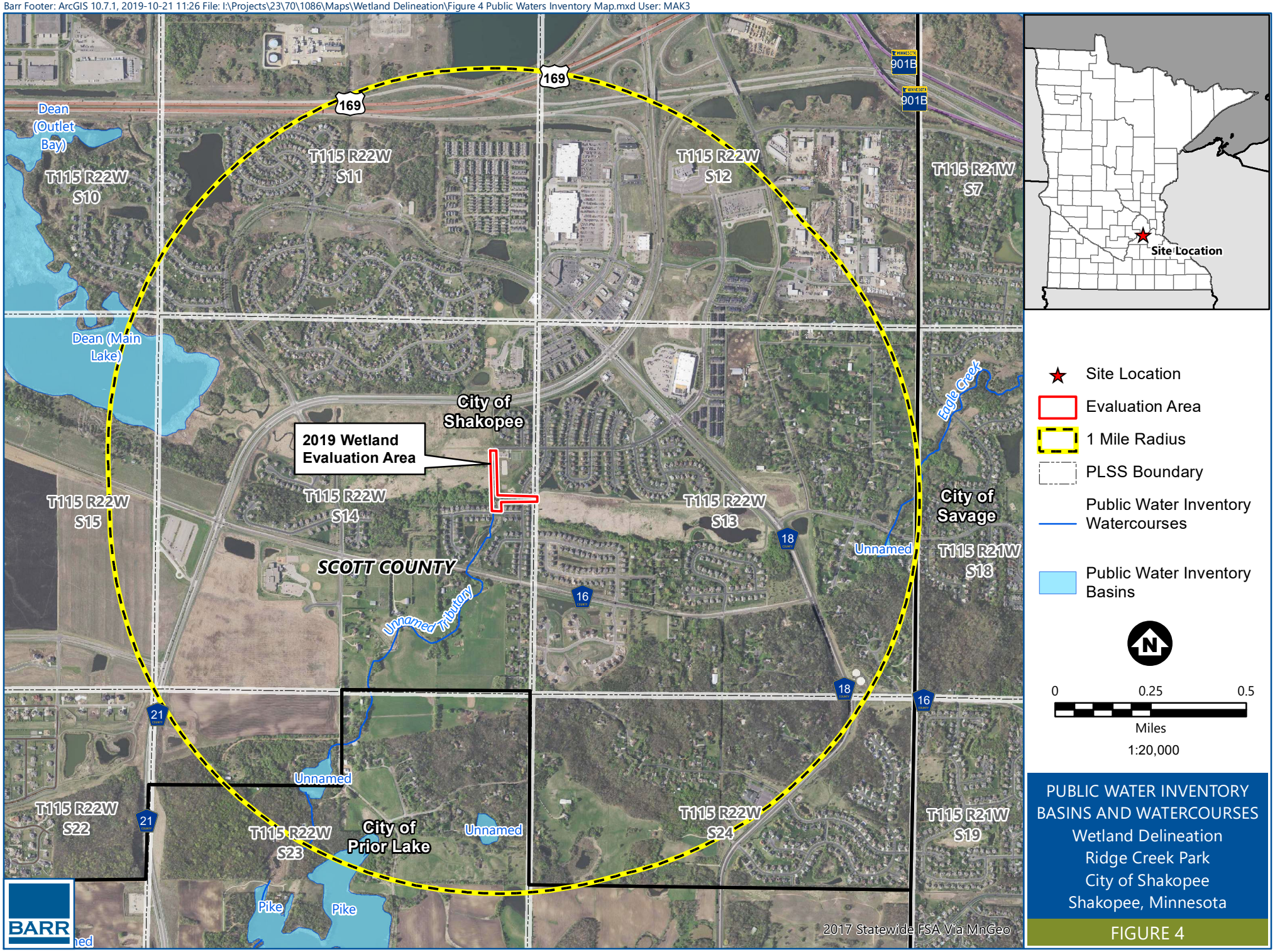
NATIONAL WETLAND INVENTORY
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 3

Barr Footer: ArcGIS 10.7.1, 2019-10-21 11:26 File: I:\Projects\23\70\1086\Maps\Wetland Delineation\Figure 4 Public Waters Inventory Map.mxd User: MAK3



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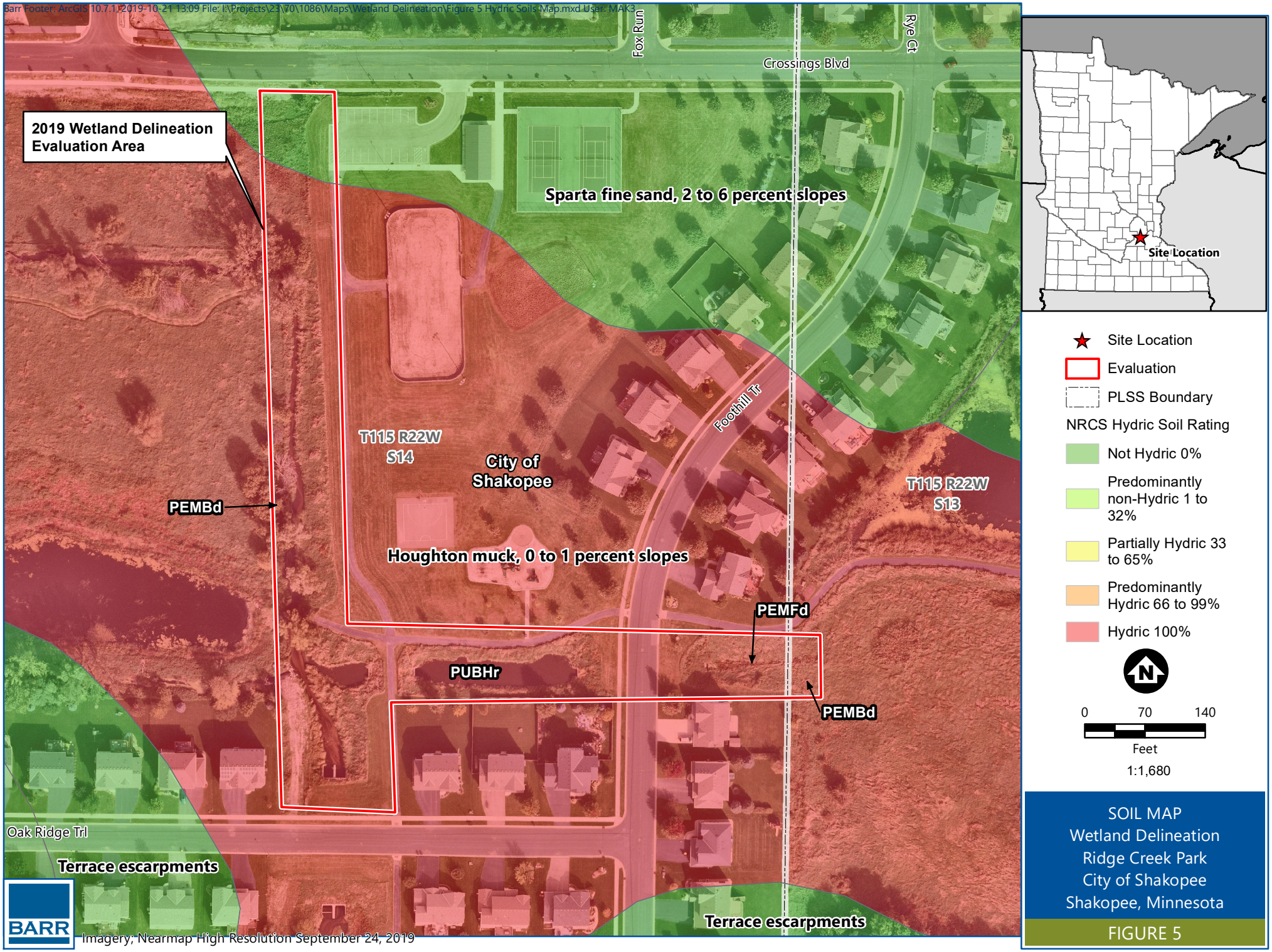
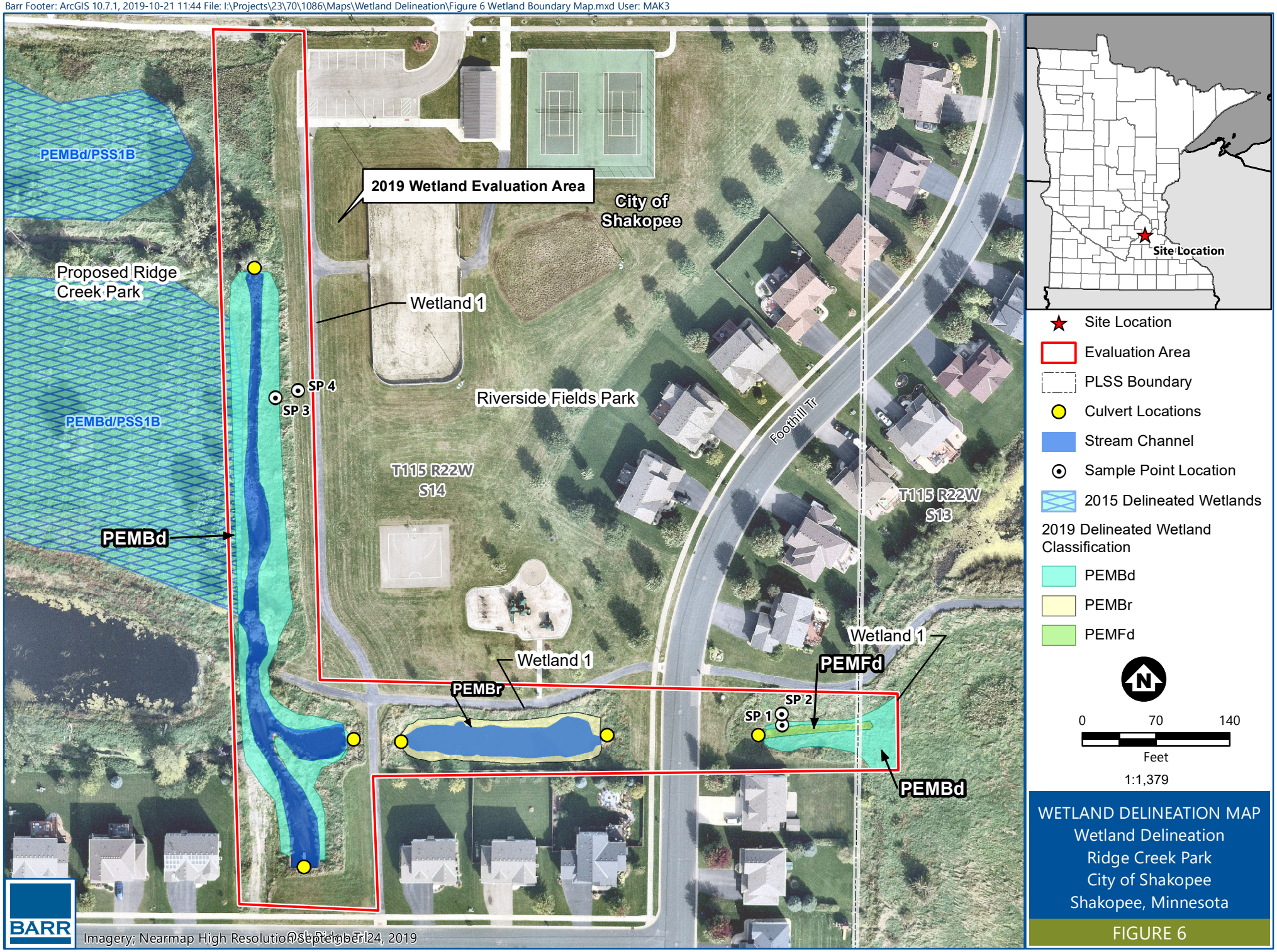
PUBLIC WATER INVENTORY BASINS AND WATERCOURSES
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 4



SOIL MAP
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 5



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WETLAND DELINEATION MAP
Wetland Delineation
Ridge Creek Park
City of Shakopee
Shakopee, Minnesota

FIGURE 6

Appendix A
Wetland Delineation Datasheets

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | Applicant/Owner: City of Shakopee | City/County: Shakopee | State: MN | Sampling Date: 10/11/19

Investigator(s): TAC | Section: 14 | Township: 115N | Range: 22W | Sampling Point: 1

Land Form: Hillslope | Local Relief: Concave | Slope %: 10 | Soil Map Unit Name: Houghton muck

Subregion (LRR): M | Latitude: 44.768523 | Longitude: -93.419392 | Datum: NAD 1983

Cowardin Classification: PEMBd/Fd | Circular 39 Classification: Type 2 | Mapped NWI Classification: PEM1A

Are climatic/hydrologic conditions on the site typical for this time of year? No (If no, explain in remarks) | Eggers & Reed (primary): Fresh (Wet) Meadow

Are vegetation No | Soil No | Hydrology No | significantly disturbed? | Are "normal circumstances" present? Yes | Eggers & Reed (secondary): Shallow Marsh

Are vegetation No | Soil No | Hydrology No | naturally problematic? | Eggers & Reed (tertiary):

Eggers & Reed (quaternary):

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? Yes
Hydric soil present? Yes
Indicators of wetland hydrology present? Yes
Is the sampled area within a wetland? Yes

General Remarks (explain any answers if needed): Plot is located in an wetland area, adjacent upland plot 2. Per the NRCS analysis method, the antecedent precipitation for the three months prior to the October field survey was rated 18 out of 18, indicating that the prior period has been wetter than normal.

If yes, optional Wetland Site ID: Wetland 1

VEGETATION

Tree Stratum (Plot Size: 30 ft)

		Absolute % Cover	Dominant Species?	Indicator Status
1.		0		
2.		0		
3.		0		
4.		0		
	Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: 15 ft)

1.		0		
2.		0		
3.		0		
4.		0		
5.		0		
	Total Cover:	0		

Herb Stratum (Plot Size: 5 ft)

1.	Phalaris arundinacea	100	Yes	FACW
2.		0		
3.		0		
4.		0		
5.		0		
6.		0		
7.		0		
8.		0		
	Total Cover:	100		

Woody Vine Stratum (Plot Size: 30 ft)

1.		0		
2.		0		
	Total Cover:	0		

% Bare Ground in Herb Stratum: | % Sphagnum Moss Cover:

Vegetation Remarks: (include photo numbers here or on a separate sheet)

50/20 Thresholds:	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW or FAC: 100.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	X 1	0
FACW Species	100	X 2	200
FAC Species	0	X 3	0
FACU Species	0	X 4	0
UPL Species	0	X 5	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- No — Rapid Test for Hydrophytic Vegetation
- Yes — Dominance Test is >50%
- Yes — Prevalence Index ≤ 3.0 [1]
- No — Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)
- No — Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic vegetation present? Yes

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the abscence of indicators).

	Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type [1]	Redox Features Loc [2]	Texture	Remarks
1.	0 - 10	10YR 2/1	100					Sandy loam	
2.	10 - 16	5GY 5/1	100					Sand	
3.	-								
4.	-								
5.	-								
6.	-								

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☑ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): *Type:* Rock *Depth (inches):* 16 - **Hydric soil present?** Yes

Soil Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☑ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (explain in remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☑ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☑ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☑ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ **Surface Water Depth (inches):**

Water table present? ☐ **Water Table Depth (inches):**

Saturation present? (includes capillary fringe) ☑ **Saturation Depth (inches):** 3

Indicators of wetland hydrology present? Yes

Describe Recorded Data:

Recorded Data: ☐ Aerial Photo ☐ Monitoring Well ☐ Stream Gauge ☐ Previous Inspections

Hydrology Remarks:

10/24/2019 11:30:58 AM

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | Applicant/Owner: City of Shakopee | City/County: Shakopee | State: MN | Sampling Date: 10/11/19

Investigator(s): TAC | Section: 14 | Township: 115N | Range: 22W | Sampling Point: 2

Land Form: Hillslope | Local Relief: Concave | Slope %: 25 | Soil Map Unit Name: Houghton muck, 0 to 1 percent slopes

Subregion (LRR): M | Latitude: 44.768551 | Longitude: -93.419394 | Datum: NAD 1983

Cowardin Classification: Upland | Circular 39 Classification: Upland | Mapped NWI Classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? Yes (If no, explain in remarks) | Eggers & Reed (primary): Upland

Are vegetation No | Soil No | Hydrology No | significantly disturbed? | Are "normal circumstances" present? Yes | Eggers & Reed (secondary):

Are vegetation No | Soil No | Hydrology No | naturally problematic? | Eggers & Reed (tertiary):

Eggers & Reed (quaternary):

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present?	Yes	General Remarks (explain any answers if needed): Plot is located in an upland area, adjacent wetland plot 1. Per the NRCS analysis method, the antecedent precipitation for the three months prior to the October field survey was rated 18 out of 18, indicating that the prior period has been wetter than normal. Sample point was taken on the slope of the existing trail. Phalaris arundinaceae was observed growing up through the hillslope. No hydrology or hydric soil indicators were
Hydric soil present?	No	
Indicators of wetland hydrology present?	No	
Is the sampled area within a wetland?	No	If yes, optional Wetland Site ID:

VEGETATION

Tree Stratum (Plot Size: 30 ft)		Absolute % Cover	Dominant Species?	Indicator Status
1.		0		
2.		0		
3.		0		
4.		0		
	Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: 15 ft)				
1.		0		
2.		0		
3.		0		
4.		0		
5.		0		
	Total Cover:	0		

Herb Stratum (Plot Size: 5 ft)				
1.	Phalaris arundinacea	100	Yes	FACW
2.		0		
3.		0		
4.		0		
5.		0		
6.		0		
7.		0		
8.		0		
	Total Cover:	100		

Woody Vine Stratum (Plot Size: 30 ft)				
1.		0		
2.		0		
	Total Cover:	0		

% Bare Ground in Herb Stratum: | % Sphagnum Moss Cover:

Vegetation Remarks: (include photo numbers here or on a separate sheet)

50/20 Thresholds:	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	1	(B)
Percent of Dominant Species That Are OBL, FACW or FAC:	100.00%	(A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	X 1	0
FACW Species	100	X 2	200
FAC Species	0	X 3	0
FACU Species	0	X 4	0
UPL Species	0	X 5	0
Column Totals:	100 (A)		200 (B)
Prevalence Index = B/A =			2.00

Hydrophytic Vegetation Indicators:

No	Rapid Test for Hydrophytic Vegetation
Yes	Dominance Test is >50%
Yes	Prevalence Index ≤ 3.0 [1]
No	Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)
No	Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic vegetation present? Yes

Phalaris arundinacea was obsereved growing up the hillslope of the walking trail.

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the abscence of indicators).

	Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type [1]	Redox Features Loc [2]	Texture	Remarks
1.	0 - 6	10YR 2/1	100					Loamy sand	
2.	6 - 20	10YR 2/1	90					Loamy sand	
3.	-	10YR 4/3	10					Sand	
4.	-								
5.	-								
6.	-								

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): *Type:* _____ *Depth (inches):* _____ **Hydric soil present?** No

Soil Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (explain in remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ **Surface Water Depth (inches):** _____

Water table present? ☐ **Water Table Depth (inches):** _____

Saturation present? (includes capillary fringe) ☐ **Saturation Depth (inches):** _____

Indicators of wetland hydrology present? No

Describe Recorded Data:

Recorded Data: ☐ Aerial Photo ☐ Monitoring Well ☐ Stream Gauge ☐ Previous Inspections

Hydrology Remarks:

10/24/2019 11:30:58 AM

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | Applicant/Owner: City of Shakopee | City/County: Shakopee | State: MN | Sampling Date: 10/11/19

Investigator(s): TAC | Section: 14 | Township: 115N | Range: 22W | Sampling Point: 3

Land Form: Hillslope | Local Relief: Concave | Slope %: 10 | Soil Map Unit Name: Houghton muck, 0 to 1 percent slopes

Subregion (LRR): M | Latitude: 44.769371 | Longitude: -93.421254 | Datum: NAD 1983

Cowardin Classification: PEMBd/Fd | Circular 39 Classification: Type 2, 3 | Mapped NWI Classification: PEM1Ad

Are climatic/hydrologic conditions on the site typical for this time of year? No (If no, explain in remarks) | Eggers & Reed (primary): Fresh (Wet) Meadow

Are vegetation No | Soil No | Hydrology No | significantly disturbed? | Are "normal circumstances" present? Yes | Eggers & Reed (secondary): Shallow Marsh

Are vegetation No | Soil No | Hydrology No | naturally problematic? | Eggers & Reed (tertiary):

Eggers & Reed (quaternary):

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? Yes
Hydric soil present? Yes
Indicators of wetland hydrology present? Yes
Is the sampled area within a wetland? Yes

General Remarks (explain any answers if needed): Plot is located in an wetland area, adjacent upland plot 4. Per the NRCS analysis method, the antecedent precipitation for the three months prior to the October field survey was rated 18 out of 18, indicating that the prior period has been wetter than normal.

If yes, optional Wetland Site ID: 1

VEGETATION

Tree Stratum (Plot Size: 30 ft)

		Absolute % Cover	Dominant Species?	Indicator Status
1.		0		
2.		0		
3.		0		
4.		0		
	Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: 15 ft)

1.		0		
2.		0		
3.		0		
4.		0		
5.		0		
	Total Cover:	0		

Herb Stratum (Plot Size: 5 ft)

1.	Phalaris arundinacea	100	Yes	FACW
2.		0		
3.		0		
4.		0		
5.		0		
6.		0		
7.		0		
8.		0		
	Total Cover:	100		

Woody Vine Stratum (Plot Size: 30 ft)

1.		0		
2.		0		
	Total Cover:	0		

% Bare Ground in Herb Stratum: | % Sphagnum Moss Cover:

Vegetation Remarks: (include photo numbers here or on a separate sheet)

50/20 Thresholds:

	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	20	50
Woody Vine Stratum	0	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW or FAC: 100.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	X 1	0
FACW Species	100	X 2	200
FAC Species	0	X 3	0
FACU Species	0	X 4	0
UPL Species	0	X 5	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- No — Rapid Test for Hydrophytic Vegetation
- Yes — Dominance Test is >50%
- Yes — Prevalence Index ≤ 3.0 [1]
- No — Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)
- No — Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic vegetation present? Yes

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the abscence of indicators).

	Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type [1]	Redox Features Loc [2]	Texture	Remarks
1.	0 - 4	10YR 2/1	100					Peat	
2.	4 - 20	10YR 2/1	98	7.5YR 3/4	2	C	M	Peat	
3.	-								
4.	-								
5.	-								
6.	-								

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (applicable to all LRRs, unless otherwise noted)

- [x] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [ ] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5)
- [ ] 2 cm Muck (A10)
- [ ] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Sandy Mucky Mineral (S1)
- [ ] 5 cm Mucky Peat or Peat (S3)
- [ ] Sandy Gleyed Matrix (S4)
- [ ] Sandy Redox (S5)
- [ ] Stripped Matrix (S6)
- [ ] Loamy Mucky Mineral (F1)
- [ ] Loamy Gleyed Matrix (F2)
- [ ] Depleted Matrix (F3)
- [x] Redox Dark Surface (F6)
- [ ] Depleted Dark Surface (F7)
- [ ] Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- [ ] Coast Prairie Redox (A16)
- [ ] Dark Surface (S7)
- [ ] Iron-Manganese Masses (F12)
- [ ] Very Shallow Dark Surface (TF12)
- [ ] Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): Type: _____ Depth (inches): _____ **Hydric soil present?** Yes

Soil Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- [ ] Surface Water (A1)
- [ ] High Water Table (A2)
- [x] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] True Aquatic Plants (B14)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Gauge or Well Data (D9)
- [ ] Other (explain in remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [x] Drainage Patterns (B10)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [x] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [x] Geomorphic Position (D2)
- [x] FAC-Neutral Test (D5)

Field Observations:

Surface water present? [ ] **Surface Water Depth (inches):**

Water table present? [ ] **Water Table Depth (inches):**

Saturation present? (includes capillary fringe) [x] **Saturation Depth (inches):** 4

Indicators of wetland hydrology present? Yes

Describe Recorded Data:

Recorded Data: [ ] Aerial Photo [ ] Monitoring Well [ ] Stream Gauge [ ] Previous Inspections

Hydrology Remarks:

10/24/2019 11:30:58 AM

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | Applicant/Owner: City of Shakopee | City/County: Shakopee | State: MN | Sampling Date: 10/11/19

Investigator(s): TAC | Section: 14 | Township: 115N | Range: 22W | Sampling Point: 4

Land Form: Hillslope | Local Relief: Concave | Slope %: 5 | Soil Map Unit Name: Houghton muck, 0 to 1 percent slopes

Subregion (LRR): M | Latitude: 44.769390 | Longitude: -93.421172 | Datum: NAD 1983

Cowardin Classification: Upland | Circular 39 Classification: Upland | Mapped NWI Classification: Upland

Are climatic/hydrologic conditions on the site typical for this time of year? No (If no, explain in remarks) | Eggers & Reed (primary): Upland

Are vegetation No | Soil No | Hydrology No | significantly disturbed? | Are "normal circumstances" present? Yes | Eggers & Reed (secondary):

Are vegetation No | Soil No | Hydrology No | naturally problematic? | Eggers & Reed (tertiary):

Eggers & Reed (quaternary):

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic vegetation present? No
Hydric soil present? No
Indicators of wetland hydrology present? No
Is the sampled area within a wetland? No

General Remarks (explain any answers if needed): Plot is located in an upland area, adjacent wetland plot 3. Per the NRCS analysis method, the antecedent precipitation for the three months prior to the October field survey was rated 18 out of 18, indicating that the prior period has been wetter than normal.

If yes, optional Wetland Site ID:

VEGETATION

Tree Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.	0		
3.	0		
4.	0		
Total Cover:	0		

Sapling/Shrub Stratum (Plot Size: 15 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.	0		
3.	0		
4.	0		
5.	0		
Total Cover:	0		

Herb Stratum (Plot Size: 5 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Festuca rubra	75	Yes	FACU
2. Taraxacum officinale	5	No	FACU
3.	0		
4.	0		
5.	0		
6.	0		
7.	0		
8.	0		
Total Cover:	80		

Woody Vine Stratum (Plot Size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1.	0		
2.	0		
Total Cover:	0		

% Bare Ground in Herb Stratum: | % Sphagnum Moss Cover:

Vegetation Remarks: (include photo numbers here or on a separate sheet)

Vegetation at the sample point was mowed and maintained by the park.

50/20 Thresholds:	20%	50%
Tree Stratum	0	0
Sapling/Shrub Stratum	0	0
Herb Stratum	16	40
Woody Vine Stratum	0	0

Dominance Test Worksheet:

Number of Dominant Species That Are OBL, FACW or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW or FAC: 0.00% (A/B)

Prevalence Index Worksheet:

Total % Cover of:		Multiply by:	
OBL Species	0	X 1	0
FACW Species	0	X 2	0
FAC Species	0	X 3	0
FACU Species	80	X 4	320
UPL Species	0	X 5	0
Column Totals:	80 (A)		320 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

- No — Rapid Test for Hydrophytic Vegetation
- No — Dominance Test is >50%
- No — Prevalence Index ≤ 3.0 [1]
- No — Morphological Adaptations [1] (provide supporting data in vegetation remarks or on a separate sheet)
- No — Problematic Hydrophytic Vegetation [1] (Explain)

[1] Indicators of hydric soil & wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic vegetation present? No

10/24/2019 11:30:58 AM

WETLAND DETERMINATION DATA FORM - Midwest Region

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the abscence of indicators).

	Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type [1]	Redox Features Loc [2]	Texture	Remarks
1.	0 - 6	10YR 2/1	98	101YR 6/3	2	D	M	Loam	
2.	6 - 14	10YR 5/3	95					Loam	
3.	-	10YR 2/1	5						
4.	-								
5.	-								
6.	-								

[1] Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2] Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (applicable to all LRRs, unless otherwise noted)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils [3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (explain in soil remarks)

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): *Type:* Rock *Depth (inches):* 14 - **Hydric soil present?** No

Soil Remarks: Soil was heavily compacted and appear to have been prevously disturbed from the park trail construction.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (explain in remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface water present? ☐ **Surface Water Depth (inches):**

Water table present? ☐ **Water Table Depth (inches):**

Saturation present? (includes capillary fringe) ☐ **Saturation Depth (inches):**

Indicators of wetland hydrology present? No

Describe Recorded Data:

Recorded Data: ☐ Aerial Photo ☐ Monitoring Well ☐ Stream Gauge ☐ Previous Inspections

Hydrology Remarks:

10/24/2019 11:30:58 AM

Appendix B
Site Photographs

Appendix B
Wetland Delineation Site Photos
Ridge Creek Park Wetland Delineation
October 11, 2019

Photo 1: Southern end of wetland area, view north

Photo 2: Southern end of project area, view east.

Photo 3: Stream channel, view northeast.

Photo 4: adjacent wetland area dominated by reed canary grass, view west.

Photo 5: excavated detention pond, view east.

Photo 6: Eastern wetland area, view east.

Appendix C
2015 Wetland Delineation Report and Notice of Decision

Tyler A. Conley

From: Micah Heckman
Sent: Thursday, August 23, 2018 1:14 PM
To: Kirby Templin
Subject: FW: Ridge Creek Record Plans
Attachments: Ridge_Creek_Wetlands_Post_Construction.DWG; Ridge_Creek_Wetlands_Post_Construction.DWG.xml

Follow Up Flag: Follow up
Flag Status: Completed

Kirby,

Here is the wetland info for the Ridge Creek project.

Micah Heckman, P.E.
Project Engineer, Engineering Division
485 Gorman St., Shakopee MN 55379
952-233-9363 | 612-490-5968 cell | www.ShakopeeMN.gov

From: Alison Harwood <aharwood@wsbeng.com>
Sent: Thursday, August 23, 2018 12:19 PM
To: Micah Heckman <mheckman@shakopeemn.gov>
Subject: RE: Ridge Creek Record Plans

Hi Micah,

Here is the "new" boundary – I took the original approved boundary and deleted the filled areas. You can use this as the wetland boundary for the trail project. These will be valid until 2020.

Let me know if you need anything else or have questions!

Alison Harwood
Environmental Planning & Natural Resources Scientist
P (763) 231-4847 | M (612) 360-1320
WSB & Associates, Inc. | 540 Gateway Blvd. | Burnsville, MN 55337

From: Micah Heckman <mheckman@shakopeemn.gov>
Sent: Thursday, August 09, 2018 2:54 PM
To: Alison Harwood <aharwood@wsbeng.com>
Subject: Ridge Creek Record Plans

Alison,

Here is a CAD file for the Ridge Creek record plans. This shows the new wetland boundary.

Micah Heckman, P.E.
Project Engineer, Engineering Division
485 Gorman St., Shakopee MN 55379
952-233-9363 | 612-490-5968 cell | www.ShakopeeMN.gov

Ridge Creek

Shakopee, Minnesota

Wetland Delineation Report

Prepared for
Western Bank, a Division of American National Bank

by
Kjolhaug Environmental Services Company, Inc.
(KES Project No. 2015-171)

October 14, 2015

WETLAND DELINEATION SUMMARY

- The Ridge Creek site was inspected on October 8, 2015 for the presence and extent of wetland.
- The NWI map showed one PEM1Ad/PEM1C wetland complex in the north half of the site.
- The soil survey showed Isanti, Marsh, and Houghton muck as the hydric soils present within site boundaries.
- The DNR Public Waters map showed an unnamed DNR Public Watercourse (tributary) just short of the southeast site corner.
- Four (4) wetland were delineated within site boundaries as summarized below.

Wetland ID	Wetland Type			Dominant Vegetation
	Circular 39	Cowardin	Eggers and Reed	
1	2	PEMBd/PSS1B	Partially-drained wet meadow and scrub-shrub wetland	Reed canary grass, willow shrubs
2	2	PEMBd/PEMCd	Partially-drained wet meadow and shallow marsh wetland	Reed canary grass, cattail
3	2	PEMBd	Partially-drained wet meadow wetland	Reed canary grass
4	1	PEMAd	Partially-drained wet meadow wetland	Reed canary grass

Ridge Creek

Shakopee, Minnesota

Wetland Delineation Report

I. INTRODUCTION

The Ridge Creek site was examined on October 8, 2015 for the presence and extent of wetland. The approximately 80-acre site was located in Section 14, Township 115N, Range 22W, City of Shakopee, Scott County, Minnesota. Generally the site was located south of Eagle Creek Avenue, north of Eagle Creek Boulevard, east of Pike Lake Road, and west of Foothill Trail South (**Figure 1**). Site limits were comprised of three separate parcels detailed below.

Scott PID	Address	Acres
279140100	No address	62.06
279140011	No address	12.5
279140012	7301 Eagle Creek Boulevard	5.0

The site was formerly (Pre-2006) used for horse boarding and associated activities. A large barn with horse pens was formerly located in the southeast part of the site. Sometime after 2006, all structures were removed. To the west of the former stable area is woodland comprised of boxelder, green ash, cottonwood, Siberian elm, American elm, mulberry, red cedar, and common buckthorn. The remainder of the site (generally north half of site) was formally used as horse pasture and riding area. Now that the property has been left fallow and secondary ditches have not been maintained, a large portion of the sites has reverted back to wetland (i.e. partially-drained wetland) or meadow.

Topography is highest in the south part of the site. From that plateau, topography slopes steeply downhill (bluff slope). At the base of the bluff slope is fairly flat, lowland/peatland that is now partially drained by a network of ditches. Topography rises slightly in the north/northwest part of the site with a change in parent material (transition from lowland/peatland to upland).

A 15-foot wide by 4 to 6-feet deep, well-maintained ditch bisects the north half of the site (**Figure 2**). This ditch flows from east to west. One ditch crossing (double metal corrugated pipe) is located in the east half of the site. A large concrete box culvert is located at the west end of the ditch. Two additional ditches (one draining east and one draining west) are located at the base of the bluff slope. These ditches capture bluff seepage and direct flow to the main ditch (bypassing former peatland). Two more shallow ditches (generally non-functioning) that drain to the north were observed southwest of the main ditch.

An existing sewer and water corridor also bisects the site, generally paralleling the main ditch.

The site is generally bordered by residential developments in all directions, except for large-lot rural properties to the immediate south.

II. METHODS

Wetlands were identified using Routine Determination methodology described in the Corps of Engineers Wetland Delineation Manual (Waterways Experiment Station, 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) as required under Section 404 of the Clean Water Act and the Minnesota Wetland Conservation Act.

Wetland boundaries were identified as the upper-most extent of wetland that met criteria for hydric soils, hydrophytic vegetation, and wetland hydrology. Wetland-upland boundaries were marked with pink pin flags and were located with a Trimble T41 GPS unit.

Soils, vegetation, and hydrology were documented at a representative location along the wetland-upland boundary. Plant species dominance was estimated based on the percent aerial or basal coverage visually estimated within a 30-foot radius for trees and vines, a 15-foot radius for the shrub layer, and a 5-foot radius for the herbaceous layer within the community type sampled.

Soils were characterized to a minimum depth of 18-24 inches (unless otherwise noted) utilizing Munsell Soil Color Charts and standard soil texturing methodology. Hydric soil indicators used in reporting are from Field Indicators of Hydric Soils in the United States (USDA Natural Resources Conservation Service in cooperation with the National Technical Committee for Hydric Soils, Version 7, 2010).

Plants were identified using standard regional plant keys. Taxonomy and indicator status of plant species was taken from the 2014 National Wetland Plant List (U.S. Army Corps of Engineers 2014. National Wetland Plant List, version 3.2, **https://wetland_plants.usace.army.mil** Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH).

III. RESULTS

Review of NWI, Soils, DNR, and NHD Information

The ***National Wetlands Inventory (NWI)*** (Minnesota Geospatial Commons 2009-2014, **https://gisdata.mn.gov/dataset/water-nat-wetlands-inv-2009-2014**) one PEM1Ad/PEM1C wetland complex in the north half of the site (**Figure 3**).

The ***Soil Survey of Scott County, Minnesota*** (**http://soils.usda.gov/survey/geography/ssurgo/**) showed Isanti, Marsh, and Houghton muck as the hydric soils present within site boundaries. A map indicating the soil types present within and near the site is included as **Figure 4.** Soils types on the map are listed in the table on the following page.

Soil Survey Summary – Ridge Creek, Shakopee

EaA	Estherville loam and sandy loam, 0 to 2 percent slopes	0	2.5	3.00%
EaB	Estherville loam and sandy loam, 2 to 6 percent slopes	0	5.6	6.70%
HdA	Sparta fine sand, 0 to 2 percent slopes	0	0.1	0.20%
HdB	Sparta fine sand, 2 to 6 percent slopes	0	4.2	5.00%
Ia	Isanti fine sandy loam	92	11.1	13.40%
Ma	Marsh	100	0.3	0.40%
PbA	Houghton muck, 0 to 2 percent slopes	100	37.4	44.90%
Ta	Terrace escarpments	0	3.7	4.50%
WaB2	Waukegan silt loam, 2 to 6 percent slopes, moderately eroded	0	8	9.70%
ZaA	Sartell fine sand, 0 to 2 percent slopes	5	0.9	1.00%
ZaB	Sartell fine sand, 2 to 6 percent slopes	5	9.3	11.20%

The Minnesota ***DNR Public Waters Map, Scott County*** (**https://gisdata.mn.gov/dataset/water-mn-public-waters**) showed an unnamed DNR Public Watercourse (tributary) just short of the southeast site corner (**Figure 5**). DNR Public Water 70-74P (Dean Lake) was shown to be located more than 1000 feet west of the site.

The **National Hydrography Dataset** (U.S. Geological Survey, **http://nhd.usgs.gov/**) showed a Stream/River bisecting the center of the site (**Figure 6**). This feature corresponds to the main ditch located on the site, which flows from east to west.

Wetland Determinations and Delineations

Potential wetlands were evaluated in greater detail during field observations on October 8, 2015. Four (4) wetlands were identified and delineated on the subject site (**Figure 2**). Corresponding data forms are included in **Appendix A**. The following description of the wetlands and their adjacent upland reflects conditions observed at the time of the field visit. At that time, some herbaceous vegetation had begun to senesce, and leaves were still present on trees and shrubs. Hydrologic conditions were assumed to be typical for that date based on the gridded database method (3-month antecedent conditions) (**Appendix B**).

Wetland 1 was a Type 1 (PEMBd/PSS1B) partially-drained wet meadow and scrub-shrub wetland dominated by reed canary grass and willow shrubs. Wetland soils were black muck and met hydric soil indicator A1 (Histosol). No inundation or saturated surface soils were observed. No free water or saturated soils were observed within 34 inches of the soil surface in the sample borehole. Secondary indicators of wetland hydrology included geomorphic position and FAC-Neutral Test.

Adjacent upland was dominated by reed canary grass with lesser amounts of leafy spurge, stinging nettle, pigweed, white campion, and common plantain. Wooded upland surrounding the wetland was comprised of quaking aspen, boxelder, and black willow trees and an understory of motherwort, chickweed, catnip, garlic mustard, Kentucky bluegrass, white clover, common burdock, and common milkweed. Upland soil did not meet any indicators for hydric soil, and no primary or secondary indicators of wetland hydrology were observed.

Wetland 1 corresponded to a portion of a PEM1Ad wetland on the NWI map, and was located in areas mapped with hydric soil (Isanti and Houghton muck) on the soil survey. An existing sewer and water corridor is located along the south wetland boundary. To the south of the utility corridor is the main ditch on the site.

Wetland 2 was a Type 2 (PEMBd/PEMCd) partially-drained wetland meadow and shallow marsh wetland dominated by reed canary grass. A small pocket of shallow marsh wetland in the northeast part of the wetland was dominated by cattail. Wetland soils were black muck and met hydric soil indicator A1 (Histosol). No inundation or saturated surface soils were observed. No free water or saturated soils were observed within 34 inches of the soil surface in the sample borehole. Secondary indicators of wetland hydrology included geomorphic position and FAC-Neutral Test.

Adjacent upland was dominated by smooth brome and Kentucky bluegrass with lesser amounts of stinging nettle, garlic mustard, common burdock, chickweed, horseweed, reed canary grass and Canada goldenrod. Upland soil did not meet any indicators for hydric soil, and no primary or secondary indicators of wetland hydrology were observed.

Wetland 2 corresponded to portions of a PEM1Ad/PEM1C wetland on the NWI map, and was located in an area mapped with hydric soil (Houghton muck) on the soil survey. An east to west flowing ditch along the south wetland boundary (located at the base of the wooded hillslope to the south), along with three additional south to north flowing ditch segments connect Wetland 2 to the main ditch on the site, and partially drain the wetland.

Wetland 3 was a Type 2 (PEMBd) partially-drained wet meadow wetland dominated by reed canary grass. Wetland soils were black muck and met hydric soil indicator A1 (Histosol). No inundation or saturated surface soils were observed, and no free water or saturated soils were observed within 34 inches of the soil surface in the sample borehole.

Adjacent upland to the south of the wetland was dominated by a canopy of boxelder with a sparsely vegetated understory. Upland to the north of the wetland was dominated by smooth brome, reed canary grass, and Canada goldenrod. Upland soils were also Histosols (formed under previous/historic hydrologic conditions), but no primary or secondary indicators of wetland hydrology were observed.

Wetland 3 corresponded to portions of a PEM1Ad wetland on the NWI map, and was located in an area mapped with hydric soil (Houghton muck) on the soil survey. An existing sewer and water corridor is located along the northeast wetland boundary. This utility corridor is also

present within the northwest portion of Wetland 3. The main ditch on the site runs along the east wetland boundary, and is also included as wetland in the west central portion of the wetland.

Wetland 4 was a Type 1 (PEMAd) partially-drained wet meadow wetland dominated by reed canary grass. Wetland soils were shallow black muck and met hydric soil indicator A1 (Histosol). No inundation or saturated surface soils were observed, and no free water or saturated soils were observed within 26 inches of the soil surface in the sample borehole.

Adjacent upland was dominated by reed canary grass and Canada goldenrod with lesser amounts of stinging nettle. Upland soils were also Histosols (formed under previous/historic hydrologic conditions), but no primary or secondary indicators of wetland hydrology were observed.

Wetland 4 corresponded to a portion of a PEM1Ad wetland on the NWI map, and was located in an area mapped with hydric soil (Houghton muck) on the soil survey. An existing sewer and water corridor is located along the south wetland boundary.

Other Areas

The majority of the main ditch that flows through the site from east to west was not delineated as wetland. Ditch segments that were not delineated as wetland had a defined bed and bank, and did not have a vegetated bed or hydric soils. Areas identified as ditch (and outside of wetland boundaries) are Waters of the U.S. regulated by the U.S. Army Corps of Engineers under the Clean Water Act.

No other areas dominated by wetland vegetation or with hydrology were observed on the site. No other areas were shown with hydric soil on the soil survey map, or as wetland on the NWI map.

V. CERTIFICATION OF DELINEATION

The procedures utilized in the described delineation are based on the COE 1987 Wetland Delineation Manual as required by Section 404 of the Clean Water Act and the Minnesota Wetland Conservation Act. Both the delineation and report were conducted in compliance with regulatory standards in place at the time the work was completed.

All site boundaries indicated on figures within this report are approximate and do not constitute an official survey product.

Report Completed by: Melissa Lauterbach-Barrett, Soil Scientist
Certified Wetland Delineator No. 1085
Professional Soil Scientist No. 45067

Report reviewed by: _____ Date: October 14, 2015

Mark Kjolhaug, Professional Wetland Scientist No. 000845

Ridge Creek, Shakopee, MN

Wetland Delineation Report

Figures:

- Figure 1 – Site Location Map
- Figure 2 – Existing Conditions
- Figure 3 – NWI Map
- Figure 4 – Soil Survey Map
- Figure 5 – DNR Protected Waters Map
- Figure 6 – NHD Map

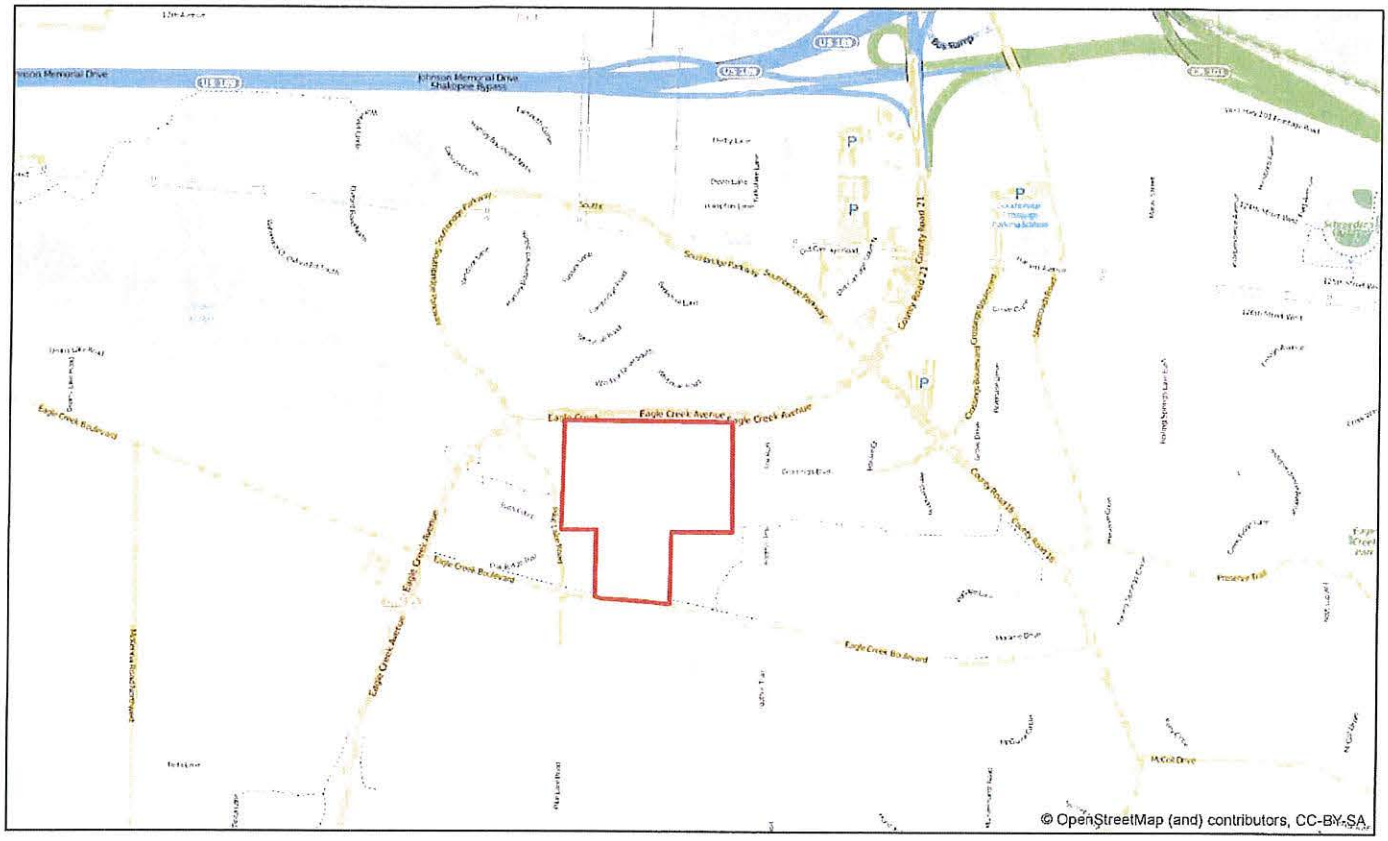


Figure 1 - Site Location

N

0 2,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

Figure 2 - Existing Conditions (2013 Scott County Aerial)

N

0 500 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MnGeo, ESRI Imagery Basemap

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figurcare approximate and do not constitute an official survey product.

Figure 3 - National Wetland Inventory Map (MN DNR 2013)

N

0 1,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figurecare approximate and do not constitute an official survey product.

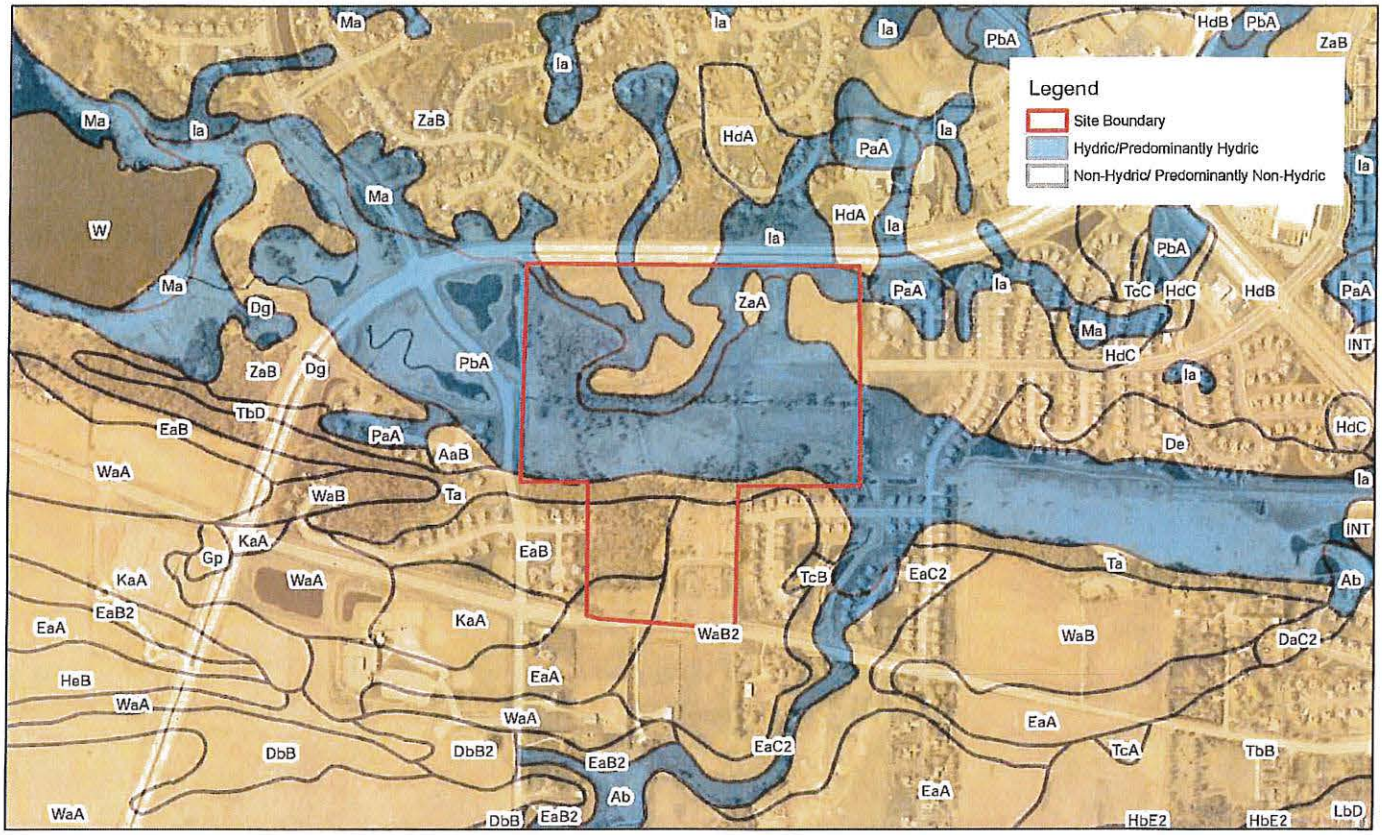


Figure 4 - Soil Survey Map (2013 Scott County Aerial)

N

0 1,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

Figure 5 - DNR Public Waters Inventory

N

0 2,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: Minnesota DNR

Site Boundary

Public Watercourse

Public Water

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

Figure 6 - National Hydrography Dataset (2013 Scott County Aerial)

N

0 1,000 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Ridge Creek (KES 2015-171)
Shakopee, Minnesota

Note: Boundaries indicated on this figureare approximate and do not constitute an official survey product.

Ridge Creek, Shakopee, MN

Wetland Delineation Report

Appendix A: Data Forms

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015
Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP1-1U
Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear
Slope (%): 2 | Lat: | Long: | Datum:
Soil Map Unit Name: Sartell (Predominantly Non-Hydric) | NWI Classification: PEM1Ad
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y
Hydric soil present?	N
Indicators of wetland hydrology present?	N
Is the sampled area within a wetland?	N
If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Climatic conditions typical based on gridded database method (3-month antecedent conditions).

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1 *Populus tremuloides*	20	Y	FAC
2 *Salix nigra*	20	Y	OBL
3 *Acer negundo*	15	Y	FAC
4			
5			
	55	= Total Cover	

Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	50	Y	FACW
2 *Euphorbia esula*	15	Y	UPL
3 *Urtica dioica*	10	N	FACW
4 *Amaranthus retroflexus*	10	N	FACU
5 *Plantago major*	10	N	FAC
6 *Silene latifolia*	10	N	UPL
7			
8			
9			
10			
	105	= Total Cover	

Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across all Strata: 5 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 80.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	20	x 1 =	20
FACW species	60	x 2 =	120
FAC species	45	x 3 =	135
FACU species	10	x 4 =	40
UPL species	25	x 5 =	125
Column totals	160 (A)		440 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP1-1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-14	10YR 2/1	100					Loamy Sand	
14-24	10YR 4/3	100					Sand	
24-32	10YR 3/1	100					Sand	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP1-1W

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): slight concave to flat

Slope (%): 0 - 1 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric), Isanti (Predominantly Hydric) | NWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology ____ significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	Y
Indicators of wetland hydrology present?	Y	If yes, optional wetland site ID:	Wetland 1

Remarks: (Explain alternative procedures here or in a separate report.)

Climatic conditions typical based on gridded database method (3-month antecedent conditions).

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1 *Salix nigra*	50	Y	OBL
2			
3			
4			
5			
	50	= Total Cover	

Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	60	Y	FACW
2 *Stellaria media*	20	Y	FACU
3 *Persicaria pensylvanica*	20	Y	FACW
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	

Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	50	x 1 =	50	
FACW species	80	x 2 =	160	
FAC species	0	x 3 =	0	
FACU species	20	x 4 =	80	
UPL species	0	x 5 =	0	
Column totals	150	(A)	290	(B)

Prevalence Index = B/A = 1.93

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP1-1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-12	N 2.5/	100					Peat	
12-30	10YR 2/1	80	10YR 4/6	10	C	M	Peat	
			10YR 5/2	10	D	M	Peat	
30-34	10YR 4/1	100					Peat	Sedimentary Peat

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ Dark Surface (S7) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP2-1U

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear

Slope (%): 2 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	Is the sampled area within a wetland?	N
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed by multiple drainage ditches.

VEGETATION -- Use scientific names of plants.

	Absolute % Cover	Dominant Species	Indicator Status
Tree Stratum (Plot size: 30)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	50	Y	FACW
2 *Alliaria petiolata*	30	Y	FAC
3 *Solidago canadensis*	20	N	FACU
4 *Cirsium arvense*	20	N	FACU
5 *Stellaria media*	15	N	FACU
6			
7			
8			
9			
10			
	135 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	50	x 2 =	100
FAC species	30	x 3 =	90
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column totals	135 (A)		410 (B)

Prevalence Index = B/A = 3.04

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP2-1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-40	N 2.5/	100					Peat	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ Dark Surface (S7) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP2-1W

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Extensive Lowland | Local relief (concave, convex, none): Flat

Slope (%): 0 - 1 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad/PEM1C

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	f yes, optional wetland site ID:	Wetland 2
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed by multiple drainage ditches.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	70	Y	FACW
2 *Stellaria media*	30	Y	FACU
3 *Urtica dioica*	20	N	FACW
4			
5			
6			
7			
8			
9			
10			
	120	= Total Cover	
Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column totals	120 (A)		300 (B)

Prevalence Index = B/A = 2.50

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP2-1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-36	N 2.5/	100					Peat	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP2-2U

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear

Slope (%): 2 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic? (If needed, explain any answers in remarks.)

SUMMARY OF FINDINGS

Hydrophytic vegetation present?	N	**Is the sampled area within a wetland?**	N
Hydric soil present?	N	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)

Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed by multiple drainage ditches.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5)			
1 *Bromus inermis*	40	Y	FACU
2 *Poa pratensis*	30	Y	FAC
3 *Phalaris arundinacea*	20	N	FACW
4 *Solidago canadensis*	20	N	FACU
5			
6			
7			
8			
9			
10			
	110	= Total Cover	
Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 2 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	30	x 3 =	90
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column totals	110 (A)		370 (B)

Prevalence Index = B/A = 3.36

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- ___ Dominance test is >50%
- ___ Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? N

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP2-2U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-24	10YR 4/3	60					Sandy Clay Loam	Fill soil, gravel present
	10YR 3/1	20						
	10YR 4/1	20						

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? N

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP2-2W

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Extensive Lowland | Local relief (concave, convex, none): Flat

Slope (%): 0 - 1 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad/PEM1C

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	If yes, optional wetland site ID:	Wetland 2
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed by multiple drainage ditches.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	100	x 2 =	200	
FAC species	0	x 3 =	0	
FACU species	0	x 4 =	0	
UPL species	0	x 5 =	0	
Column totals	100	(A)	200	(B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP2-2W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-34	N 2.5/	100					Peat	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ Dark Surface (S7) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP3-1U

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear

Slope (%): 2 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y		
Hydric soil present?	Y	**Is the sampled area within a wetland?**	N
Indicators of wetland hydrology present?	N	If yes, optional wetland site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)
Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed by multiple drainage ditches.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1 *Acer negundo*	50	Y	FAC
2			
3			
4			
5			
	50 = Total Cover		
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Urtica dioica*	30	Y	FACW
2 *Alliaria petiolata*	30	Y	FAC
3 *Stellaria media*	20	Y	FACU
4			
5			
6			
7			
8			
9			
10			
	80 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	80	x 3 =	240
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column totals	130 (A)		380 (B)

Prevalence Index = B/A = 2.92

Hydrophytic Vegetation Indicators:

- ___ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ___ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ___ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP3-1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-36	N 2.5/0	100					Peat	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (LRR K, L, R)
- ___ Dark Surface (S7) (LRR K, L)
- ___ Iron-Manganese Masses (F12) (LRR K, L, R)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP3-1W

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Extensive lowland | Local relief (concave, convex, none): Flat

Slope (%): 0 - 1 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	If yes, optional wetland site ID:	Wetland 3
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)

Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed by multiple drainage ditches.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1 *Acer negundo*	70	Y	FAC
2 *Thuja occidentalis*	30	Y	FACW
3			
4			
5			
	100	= Total Cover	
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	
Herb stratum (Plot size: 5)			
1 *Stellaria media*	60	Y	FACU
2 *Urtica dioica*	15	Y	FACW
3			
4			
5			
6			
7			
8			
9			
10			
	75	= Total Cover	
Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across all Strata: 4 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 75.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0	
FACW species	45	x 2 =	90	
FAC species	70	x 3 =	210	
FACU species	60	x 4 =	240	
UPL species	0	x 5 =	0	
Column totals	175	(A)	540	(B)

Prevalence Index = B/A = 3.09

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- ____ Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP3-1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-46	N 2.5/	100					Peat	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes	___	No	X	Depth (inches): ___
Water table present?	Yes	___	No	X	Depth (inches): ___
Saturation present? (includes capillary fringe)	Yes	___	No	X	Depth (inches): ___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015
Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP4-1U
Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22
Landform (hillslope, terrace, etc.): Hillslope | Local relief (concave, convex, none): Linear
Slope (%): 2 | Lat: | Long: | Datum:
Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad
Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)
Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes
Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	N
Hydric soil present?	Y	If yes, optional wetland site ID:	
Indicators of wetland hydrology present?	N		

Remarks: (Explain alternative procedures here or in a separate report.)
Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed (cut off) by utility easement fill.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0 = Total Cover		
Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0 = Total Cover		
Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	60	Y	FACW
2 *Solidago canadensis*	30	Y	FACU
3 *Urtica dioica*	10	N	FACW
4			
5			
6			
7			
8			
9			
10			
	100 = Total Cover		
Woody vine stratum (Plot size: 30)			
1			
2			
	0 = Total Cover		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across all Strata: 2 (B)
Percent of Dominant Species that are OBL, FACW, or FAC: 50.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column totals	100 (A)		260 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- ____ Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP4-1U

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type*	Loc**	Texture	Remarks
0-16	N 2.5/	100					Peat	
16-28	10YR 4/1	100					Sand	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Ridge Creek | City/County: Shakopee/Scott | Sampling Date: 10/8/2015

Applicant/Owner: Western Bank | State: Mn | Sampling Point: SP4-1W

Investigator(s): A. Cameron | Section, Township, Range: Sec 14, T115, R22

Landform (hillslope, terrace, etc.): Depression | Local relief (concave, convex, none): Concave

Slope (%): 0 - 1 | Lat: | Long: | Datum:

Soil Map Unit Name: Houghton (Hydric) | NWI Classification: PEM1Ad

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation ____, soil ____, or hydrology X significantly disturbed? Are "normal circumstances" present? Yes

Are vegetation ____, soil ____, or hydrology ____ naturally problematic?

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	Y	**Is the sampled area within a wetland?**	Y
Hydric soil present?	Y	f yes, optional wetland site ID:	Wetland 4
Indicators of wetland hydrology present?	Y		

Remarks: (Explain alternative procedures here or in a separate report.)
Climatic conditions typical based on gridded database method (3-month antecedent conditions). Hydrology disturbed (cut off) by utility easement fill.

VEGETATION -- Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species	Indicator Status
1			
2			
3			
4			
5			
	0	= Total Cover	

Sapling/Shrub stratur (Plot size: 15)			
1			
2			
3			
4			
5			
	0	= Total Cover	

Herb stratum (Plot size: 5)			
1 *Phalaris arundinacea*	100	Y	FACW
2			
3			
4			
5			
6			
7			
8			
9			
10			
	100	= Total Cover	

Woody vine stratum (Plot size: 30)			
1			
2			
	0	= Total Cover	

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across all Strata: 1 (B)

Percent of Dominant Species that are OBL, FACW, or FAC: 100.00% (A/B)

Prevalence Index Worksheet

Total % Cover of:

OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column totals	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ____ Rapid test for hydrophytic vegetation
- X Dominance test is >50%
- X Prevalence index is ≤3.0*
- ____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet)
- ____ Problematic hydrophytic vegetation* (explain)

*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic vegetation present? Y

Remarks: (Include photo numbers here or on a separate sheet)

SOIL

Sampling Point: SP4-1W

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type*	Redox Features Loc**	Texture	Remarks
0-18	N 2.5/	100					Peat	
18-26	10YR 4/1	100					Sand	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- X Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils:

- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (explain in remarks)

*Indicators of hydrophytic vegetation and weltand hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric soil present? Y

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface water present?	Yes ___	No	X	Depth (inches):	___
Water table present?	Yes ___	No	X	Depth (inches):	___
Saturation present? (includes capillary fringe)	Yes ___	No	X	Depth (inches):	___

Indicators of wetland hydrology present? Y

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Ridge Creek, Shakopee, MN

Wetland Delineation Report

Appendix B: Precipitation Data

Ridge Creek, Shakopee: Precipitation Summary
Source: Minnesota Climatology Working Group

Monthly Totals: 2015

Target: T115N R22W S14 (latitude: 44.76850 longitude: 93.42920)

mon	year	cc	tttN	rrW	ss	nnnn		pre
Jan	2015	70	114N	22W	3	SWCD		.36
Feb	2015	70	114N	22W	3	SWCD		.35
Mar	2015	70	114N	22W	3	SWCD		1.12
Apr	2015	70	114N	22W	3	SWCD		1.60
May	2015	70	114N	22W	3	SWCD		3.69
Jun	2015	70	114N	22W	3	SWCD		5.27
Jul	2015	70	114N	22W	3	SWCD		8.27
Aug	2015	27	116N	22W	28	NWS	FLYING C	4.00
Sep	2015	27	116N	22W	28	NWS	FLYING C	3.08
Oct	2015							No Data to date 10/8/2015

Aug/Sept/Oct Daily Records

Date	Precip.
Aug 1, 2015	0
Aug 2, 2015	0
Aug 3, 2015	0
Aug 4, 2015	0
Aug 5, 2015	0
Aug 6, 2015	.80
Aug 7, 2015	.03
Aug 8, 2015	T
Aug 9, 2015	.04
Aug 10, 2015	0
Aug 11, 2015	0
Aug 12, 2015	0
Aug 13, 2015	.04
Aug 14, 2015	0
Aug 15, 2015	0
Aug 16, 2015	1.25
Aug 17, 2015	.17
Aug 18, 2015	1.21
Aug 19, 2015	.04
Aug 20, 2015	0
Aug 21, 2015	0
Aug 22, 2015	.42
Aug 23, 2015	0
Aug 24, 2015	0
Aug 25, 2015	0
Aug 26, 2015	0
Aug 27, 2015	0
Aug 28, 2015	T
Aug 29, 2015	0
Aug 30, 2015	0
Aug 31, 2015	0

Date	Precip.
Sep 1, 2015	T
Sep 2, 2015	.27
Sep 3, 2015	0
Sep 4, 2015	0
Sep 5, 2015	.02
Sep 6, 2015	.35
Sep 7, 2015	T
Sep 8, 2015	.14
Sep 9, 2015	.50
Sep 10, 2015	.03
Sep 11, 2015	0
Sep 12, 2015	0
Sep 13, 2015	0
Sep 14, 2015	.02
Sep 15, 2015	T
Sep 16, 2015	.01
Sep 17, 2015	.91
Sep 18, 2015	.28
Sep 19, 2015	0
Sep 20, 2015	.16
Sep 21, 2015	0
Sep 22, 2015	0
Sep 23, 2015	.09
Sep 24, 2015	.30
Sep 25, 2015	0
Sep 26, 2015	0
Sep 27, 2015	0
Sep 28, 2015	T
Sep 29, 2015	0
Sep 30, 2015	0

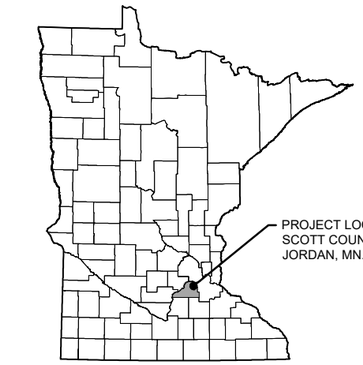
Date	Precip.
Oct 1, 2015	No data to date for Oct

1981-2010 Summary Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	WARM	ANN	WAT
30%	0.56	0.42	1.28	1.99	2.73	3.40	2.91	3.35	2.17	1.44	1.18	0.58	17.49	28.81	27.62
70%	1.05	0.99	2.17	2.82	4.31	5.28	4.40	5.41	4.29	3.28	1.90	1.30	22.78	34.41	33.96
mean	0.88	0.75	1.81	2.64	3.70	4.42	4.04	4.64	3.41	2.50	1.74	1.13	20.22	31.66	31.48

Appendix C
Plan Set

RIDGE CREEK PARK



MINNESOTA COUNTY MAP

1 - PLAN: PROJECT LOCATION

0 500 1000

SCALE IN FEET

INDEX OF SHEETS

CONTACTS:

ENGINEER CONTACT:
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Barr Engineering Co.
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Minneapolis, MN 55435
952-832-2706
jweiss@barr.com

OWNER'S REPRESENTATIVE CONTACT:
Kirby Templin
City of Shakopee
485 Gorman St.
Shakopee, MN. 55379
952-233-9372
ktemplin@shakopeemn.gov

GOPHER STATE ONE CALL

GOPHER STATE ONE CALL:
CALL BEFORE YOU DIG.
1-800-252-1166

GENERAL NOTES:

1. TOPOGRAPHIC SURVEY INFORMATION SHOWN IN THIS PLAN SET IS DATA FROM: SURVEY CONDUCTED BY PIONEER ENGINEERING CO. IN SEPTEMBER 2017.
2. IMAGERY; COPYRIGHT PICTOMETRY INTERNATIONAL CORP AND SCOTT COUNTY, MINNESOTA, 2015.
3. HORIZONTAL DATUM AND COORDINATE SYSTEM: SCOTT COUNTY COORDINATES, NAD83 HARN, US SURVEY FEET.
4. VERTICAL DATUM: _____.

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME JEFFERY D. WEISS

SIGNATURE _____

DATE 10/04/2019 LICENSE # 48031

RELEASED TO/FOR	A	B	C	0	1	2	3
CLIENT	10/04/19						
BID							
CONSTRUCTION							
DATE RELEASED							

BARR

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www.barr.com

Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

TITLE SHEET, PROJECT LOCATION, AND SHEET INDEX

BARR PROJECT No. 23/70-1086.00
CLIENT PROJECT No. -
DWG. No. G-01
REV. No. A

1.0 GENERAL CONSTRUCTION ACTIVITY INFORMATION:

THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN PREPARED IN COMPLIANCE WITH THE MINNESOTA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY NO. MNR100001 (GENERAL PERMIT), AS REQUIRED BY THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) PROGRAM.

THE PROJECT IS LOCATED IN THE CITY OF CHANHASSEN, CARVER COUNTY, MINNESOTA. PROPOSED CONSTRUCTION ACTIVITIES WILL TAKE PLACE ALONG AND JUST SOUTH OF THE MINNESOTA BLUFFS REGIONAL TRAIL BETWEEN FLYING CLOUD ROAD AND LAKOTA LANE. THE APPROXIMATE CENTROID OF THE PROJECT HAS A LATITUDE OF 44.819492 AND A LONGITUDE OF -93.526089.

THIS PROJECT INVOLVES EROSION CONTROL, REPAIR AND REGRADING OF LANDSLIDE DAMAGED SLOPES, REPAIR OF DAMAGED CULVERTS, INSTALLATION OF STORM SEWER AND MANHOLES AND SITE RESTORATION . THE PROJECT AS PROPOSED HAS A TOTAL DISTURBANCE AREA OF 23.19 ACRES. EROSION PREVENTION AND SEDIMENT CONTROL MEASURES ARE REQUIRED TO MINIMIZE SEDIMENT FROM BEING TRANSPORTED INTO BLUFF CREEK, WHICH IS AN IMPAIRED WATER. REFER TO PROJECT DRAWINGS FOR FURTHER DETAILS. (CSW PERMIT PART III.A.1)

1.1 PROJECT SIZE AND CUMULATIVE IMPERVIOUS SURFACE:

- THE ANTICIPATED AREA OF DISTURBANCE IS APPROXIMATELY 23.19 ACRES.
- THE TOTAL AREA OF PRE-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0 ACRES.
- THE TOTAL AREA OF POST-CONSTRUCTION IMPERVIOUS AREA IS APPROXIMATELY 0 ACRES.
- THE TOTAL NEW IMPERVIOUS AREA IS APPROXIMATELY 0 ACRES.

1.2 DATES OF CONSTRUCTION:

- ANTICIPATED START DATE: TBD — ANTICIPATED END DATE: TBD

1.3 CONTACT INFORMATION:

OWNER: HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
MAILING ADDRESS: 701 4TH AVE. S. #400
CONTACT PERSON: JESSICA GALATZ — TITLE: PROJECT MANAGER
PHONE NUMBER: (612) 348-2691 — EMAIL ADDRESS: JESSICA.GALATZ@HENNEPIN.US
ALTERNATE CONTACT PERSON: KRISTINE STEHLY — TITLE: PROJECT ENGINEER
PHONE NUMBER: (612) 348-6370 — EMAIL ADDRESS: KRISTINE.STEHLY@HENNEPIN.US

OPERATOR / GENERAL CONTRACTOR (WILL OVERSEE IMPLEMENTATION OF THE SWPPP): TBD
MAILING ADDRESS:
CONTACT PERSON: — TITLE:
PHONE NUMBER: — EMAIL ADDRESS:

PARTY RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM:
HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
MAILING ADDRESS: 701 4TH AVE. S. #400
CONTACT PERSON: JESSICA GALATZ — TITLE: PROJECT MANAGER
PHONE NUMBER: (612) 348-2691 — EMAIL ADDRESS: JESSICA.GALATZ@HENNEPIS.US

2.0 RECEIVING WATERS:

WATERS WITHIN ONE MILE (NEAREST STRAIGHT LINE DISTANCE) THAT ARE LIKELY TO RECEIVE STORMWATER RUNOFF FROM THE PROJECT SITE (CSW PERMIT ITEM 5.10) INCLUDE:

NAME OF WATER BODY	TYPE [1]	WATER BODY ID [2]	SPECIAL WATER? [3]	IMPAIRED WATER? [3]	PUBLIC WATER WITH WORK IN WATER RESTRICTIONS?
BLUFF CREEK	CREEK	07020012-710	NO	YES	NO
RICE LAKE	LAKE	27-0132-00	NO	NO	NO

(1) TYPE EXAMPLES: DITCH, POND, WETLAND, CALCAREOUS FEN, LAKE, STREAM, RIVER
(2) WATER BODY IDENTIFICATION (ID) MIGHT NOT BE AVAILABLE FOR ALL WATER BODIES. USE THE SPECIAL AND IMPAIRED WATERS SEARCH TOOL AT: HTTPS://WWW.PCA.STATE.MN.US/WATER/STORMWATER-SPECIAL-AND-IMPAIRED-WATERS-SEARCH
(3) REFER TO CSW PERMIT SECTION 23. IMPAIRED WATER FOR THE FOLLOWING POLLUTANT(S) OR STRESSOR(S): PHOSPHORUS (NUTRIENT EUTROPHICATION BIOLOGICAL INDICATORS), TURBIDITY, TOTAL SUSPENDED SOLIDS (TSS), DISSOLVED OXYGEN, OR AQUATIC BIOTA (FISH BIOASSESSMENT, AQUATIC PLANT BIOASSESSMENT, AND AQUATIC MACROINVERTEBRATE BIOASSESSMENT)

2.1 SPECIAL AND IMPAIRED WATERS: THE MPCA'S SPECIAL AND IMPAIRED WATERS SEARCH TOOL WAS USED TO LOCATE SPECIAL AND IMPAIRED WATERS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF THE PROJECT SITE.BLUFF CREEK HAS AN EPA-APPROVED IMPAIRMENT FOR TURBIDITY AND FISH BIOTA. THESE IMPAIRMENTS ARE CONSIDERED CONSTRUCTION RELATED AND REQUIRE ADDITIONAL BEST MANAGEMENT PRACTICES (BMPS) OR PLAN REVIEW FOR COMPLIANCE WITH THE GENERAL PERMIT. (CSW PERMIT ITEM 2.7 AND SECTION 23)

ADDITIONAL BMPS OR OTHER SPECIFIC CONSTRUCTION RELATED IMPLEMENTATION ACTIVITIES IDENTIFIED IN AN APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL) INCLUDE IMMEDIATE STABILIZATION OF EXPOSED SOIL AREAS AND CONSTRUCTION OF A TEMPORARY SEDIMENTATION BASIN FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 5 OR MORE ACRES . (CSW PERMIT ITEM 5.19)

2.2 PUBLIC WATERS WITH WORK IN WATER RESTRICTIONS: THIS PROJECT DOES NOT INCLUDE WORK IN PUBLIC WATERS. (CSW PERMIT ITEM 5.11)

2.3 WETLAND IMPACTS: THIS PROJECT DOES NOT INCLUDE WETLAND IMPACTS. (CSW PERMIT ITEMS 2.4 AND 2.10, AND SECTION 22)

2.4 ENVIRONMENTAL REVIEW AND OTHER REQUIRED REVIEWS: STORMWATER MITIGATION MEASURES ARE NOT REQUIRED AS A RESULT OF AN ENVIRONMENTAL REVIEW (E.G., EAW OR EIS), ENDANGERED OR THREATENED SPECIES REVIEW, ARCHEOLOGICAL SITE REVIEW, OR OTHER LOCAL, STATE, OR FEDERAL REVIEW CONDUCTED FOR THE PROJECT. (CSW PERMIT ITEMS 2.8, 2.9, AND 5.16)

2.5 KARST AREAS OR DRINKING WATER SUPPLY MANAGEMENT AREAS: THIS PROJECT DOES NOT INCLUDE ANY KARST OR DRINKING WATER SUPPLY MANAGEMENT AREAS. (CSW PERMIT ITEMS 16.19, 16.20, AND 18.10)

3.0 PROJECT PLANS AND SPECIFICATIONS:

REQUIRED FEATURE	SHEET NUMBER
• PROJECT LOCATION AND CONSTRUCTION LIMITS	G-01
• EXISTING AND FINAL GRADES, INCLUDING DRAINAGE AREA BOUNDARIES, DIRECTIONS OF FLOW AND ALL DISCHARGE POINTS WHERE STORMWATER IS LEAVING THE SITE OR ENTERING A SURFACE WATER	C-06,C-14,C-16
• SOIL TYPES AT THE SITE	C-05A
• LOCATIONS OF IMPERVIOUS SURFACES	C-06,C-14,C-16
• LOCATIONS OF AREAS NOT BE BE DISTURBED (E.G., BUFFER ZONES, WETLANDS, ETC.)	C-06,C-14,C-16
• LOCATIONS OF AREAS OF STEEP SLOPES	C-06,C-14,C-16
• LOCATIONS OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOILS	NA
• PORTIONS OF THE SITE THAT DRAIN TO A PUBLIC WATER WITH DNR WORK IN WATER RESTRICTIONS FOR FISH SPAWNING TIMEFRAMES	NA
• LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BMPS AS REQUIRED IN PERMIT SECTIONS 8 THROUGH 10 AND 14 THROUGH 19	C-03,G-05,G-06
• BUFFER ZONES AS REQUIRED IN PERMIT ITEMS 9.17 AND 23.11	C-06,C-14,C-16
• LOCATIONS OF POTENTIAL POLLUTION-GENERATING ACTIVITIES IDENTIFIED IN PERMIT SECTION 12	C-06,C-14,C-16
• STANDARD DETAILS FOR EROSION AND SEDIMENT CONTROL BMPS TO BE INSTALLED AT THE SITE	C-04

4.0 BEST MANAGEMENT PRACTICES (BMPS):

4.1 EROSION PREVENTION PRACTICES:

1. BEFORE LAND DISTURBING ACTIVITIES BEGIN, THE LIMITS OF THE AREAS TO BE DISTURBED DURING CONSTRUCTION WILL BE DELINEATED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.
2. TEMPORARY STABILIZATION OF SOILS AND SOIL STOCKPILES: (CSW PERMIT ITEMS 8.4, 8.5, AND 23.9)
   a. AREAS OF EXPOSED SOIL WILL BE STABILIZED WITH EROSION CONTROL BLANKET, PRESERVATION OF MATURE VEGETATION, MULCH OR EQUIVALENT MEASURES.
   b. IF PRESENT, SOIL STOCKPILES WILL BE STABILIZED WITH MULCH (SUCH AS STRAW MULCH, EROSION CONTROL BLANKETS OR EQUIVALENT MEASURES.
   c. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY, OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) AND THE CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS, AND SIMILAR SURFACES ARE EXEMPT FROM THESE STABILIZATION REQUIREMENTS.
2. STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS: (CSW PERMIT ITEMS 8.6 THROUGH 8.8)
   a. IF SOILS WITHIN EXISTING STORMWATER DITCHES OR SWALES ARE DISTURBED, THEY WILL BE STABILIZED WITH CHANNEL EROSION CONTROL BLANKET, RIPRAP, TURF REINFORCEMENT MAT OR EQUIVALENT MEASURES.
   b. MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES WILL NOT BE USED TO STABILIZE ANY PART OF AN EXISTING STORMWATER DITCH OR SWALE WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.
   c. THE LAST 200 LINEAL FEET OF LENGTH OF THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DITCH OR SWALE THAT DRAINS WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER WILL BE STABILIZED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE.
   d. STABILIZATION OF THE REMAINING PORTIONS OF ANY TEMPORARY OR PERMANENT DITCHES OR SWALES WILL BE COMPLETED WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH HAS TEMPORARILY OR PERMANENTLY CEASED.
3. ENERGY DISSIPATION AT PIPE OUTLETS: ENERGY DISSIPATION AT PIPE OUTLETS WILL BE PROVIDED WITH ONE OR MORE OF THE FOLLOW METHODS: RIP RAP, SPLASH PADS, GABIONS, OR EQUIVALENT MEASURES. (CSW PERMIT ITEM 8.9)
4. EROSION PREVENTION IMPLEMENTATION TIMELINES: (CSW PERMIT ITEMS 5.4, 8.4 THROUGH 8.6, AND 23.9)
   a. STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) WILL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
   b. IF THE EXPOSED SOIL AREAS DRAIN TO A DISCHARGE POINT THAT IS WITHIN ONE MILE (AERIAL RADIUS MEASUREMENT) OF A SPECIAL OR IMPAIRED WATER (SEE SECTION 2.0), STABILIZATION OF EXPOSED SOIL AREAS (INCLUDING STOCKPILES) WILL BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHENEVER ANY CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 7 CALENDAR DAYS.
   c. THE FOLLOWING ACTIVITIES CAN BE TAKEN TO INITIATE STABILIZATION: PREPPING THE SOIL FOR VEGETATIVE OR NON-VEGETATIVE STABILIZATION, APPLYING MULCH OR OTHER NON-VEGETATIVE PRODUCT TO THE EXPOSED SOIL AREA, OR SEEDING OR PLANTING THE EXPOSED AREA.
5. ADDITIONAL EROSION PREVENTION MEASURES: THE FOLLOWING ADDITIONAL EROSION PREVENTION METHODS WILL BE IMPLEMENTED AT THE SITE DURING CONSTRUCTION: (CSW PERMIT ITEMS 8.2, 8.3, AND 8.10)
   a. SOIL DISTURBANCE WILL BE MINIMIZED WHEREVER POSSIBLE TO AID IN EROSION PREVENTION.
   b. EXISTING VEGETATION WILL BE PRESERVED WHEREVER POSSIBLE TO LIMIT EXPOSED SOIL AND THUS WILL SERVE AS NATURAL VEGETATIVE BUFFERS.
   c. EXPOSED SOIL ON STEEP SLOPES (≤3H:1V) WILL BE STABILIZED USING EROSION CONTROL BLANKETS AND SEEDING.
   d. HORIZONTAL SLOPE GRADING WILL BE UTILIZED TO MINIMIZE EROSION POTENTIAL.
   e. TERRACING WILL BE USED TO MINIMIZED EROSION POTENTIAL.

4.2 SEDIMENT CONTROL PRACTICES:

1. DOWNGRADIENT PERIMETER CONTROLS: (CSW PERMIT ITEMS 9.2 THROUGH 9.6)
   a. SEDIMENT CONTROL PRACTICES WILL BE ESTABLISHED ON ALL DOWNGRADIENT PERIMETERS AND LOCATED UPGRADIENT OF ANY BUFFER ZONES. PERIMETER SEDIMENT CONTROLS WILL INCLUDE: SILT FENCE, SEDIMENT CONTROL LOGS / BIOROLLS (FILLED WITH COMPOST, WOOD CHIPS, ROCK, ETC.), VEGETATIVE BUFFERS (RETAIN EXISTING VEGETATION WHERE POSSIBLE), OR EQUIVALENT MEASURES.
   b. PERIMETER SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND REMAIN IN PLACE UNTIL PERMANENT COVER HAS BEEN ESTABLISHED.
   c. IF SEDIMENT CONTROL PRACTICES HAVE BEEN ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES (SUCH AS CLEARING, GRUBBING, OR PASSAGE OF VEHICLES), THE CONTROLS MUST BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE RE-INSTALLED BEFORE THE NEXT PRECIPITATION EVENT, EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
   d. IF THE DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED (BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENT), INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES.
2. SOIL STOCKPILE PERIMETER CONTROLS: TEMPORARY SOIL STOCKPILES WILL BE SURROUNDED BY: DOUBLE ROWS OF SILT FENCE, SEDIMENT CONTROL LOGS OR EQUIVALENT MEASURES, AND SHALL NOT BE PLACED IN ANY NATURAL BUFFERS OR SURFACE WATERS.(CSW PERMIT ITEMS 9.9 AND 9.10)
3. STORM DRAIN INLET PROTECTION: (CSW PERMIT ITEMS 9.7 AND 9.8)
   a. INLET PROTECTION BMPS WILL BE INSTALLED AROUND ALL STORM DRAIN INLETS DOWNGRADIENT OF CONSTRUCTION ACTIVITIES.
   b. STORM DRAIN INLETS WILL BE PROTECTED UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.
   c. INLET PROTECTION BMPS WILL BE: SEDIMENT CONTROL LOG, FILTER SACKS, OR EQUIVALENT MEASURES.
4. VEHICLE TRACKING BMPS: (CSW PERMIT ITEMS 9.11 AND 9.12)
   a. VEHICLE TRACKING BMPS WILL BE INSTALLED TO MINIMIZE THE TRACKING OUT OF SEDIMENT FROM THE CONSTRUCTION AREA AND WILL INCLUDE: ROCK PADS AND MUD MATS OR AN EQUIVALENT SYSTEM.
   b. IF SUCH VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT FROM BEING TRACKED ONTO THE PAVED ROAD, STREET SWEEPING WILL ALSO BE EMPLOYED. SEDIMENT WILL BE REMOVED BY SWEEPING WITHIN 24 HOURS.
5. PROTECTION OF INFILTRATION AREAS: IF NECESSARY, ADDITIONAL SEDIMENT CONTROLS (E.G., DIVERSION BERMS) WILL BE INSTALLED TO KEEP RUNOFF AWAY FROM PLANNED INFILTRATION AREAS WHEN EXCAVATED PRIOR TO ESTABLISHING PERMANENT COVER WITHIN THE CONTRIBUTING DRAINAGE AREA. (CSW PERMIT ITEMS 16.4 AND 16.5)
6. MINIMIZATION OF SOIL COMPACTION AND PRESERVATION OF TOPSOIL: SOIL COMPACTION WILL BE MINIMIZED AND TOPSOIL WILL BE PRESERVED WHERE POSSIBLE. (CSW PERMIT ITEMS 5.24, 9.14, AND 9.15)
7. PRIORITIZATION OF ONSITE INFILTRATION AND SEDIMENT REMOVAL: (CSW PERMIT ITEM 9.16)
   a. PRIOR TO OFFSITE DISCHARGE, INFILTRATION AND SEDIMENT REMOVAL WILL BE IMPLEMENTED ONSITE WHERE POSSIBLE.
   b. DISCHARGES FROM BMPS WILL BE DIRECTED TO VEGETATED AREAS OF THE SITE (INCLUDING ANY NATURAL BUFFERS) IN ORDER TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. IF EROSION IS NOTED TO OCCUR AS THE RESULT OF SUCH A DISCHARGE, VELOCITY DISSIPATION BMPS WILL BE CONSIDERED AND INSTALLED AS NECESSARY TO PREVENT EROSION.
8. BUFFER ZONE OR REDUNDANT SEDIMENT CONTROLS TO PROTECT SURFACE WATERS: (CSW PERMIT ITEM 9.17)
   a. A 50-FOOT NATURAL BUFFER WILL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO A NON-SPECIAL/NON-IMPAIRED SURFACE WATER OR WETLAND. IF A NON-SPECIAL/NON-IMPAIRED SURFACE WATER OR WETLAND IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS WILL BE PROVIDED.
   b. A 100-FOOT NATURAL BUFFER WILL BE PRESERVED IN CONSTRUCTION AREAS DISCHARGING TO A SPECIAL OR IMPAIRED SURFACE WATER. IF A SPECIAL OR IMPAIRED SURFACE WATER IS LOCATED WITHIN 100 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER, OR WHEN A BUFFER IS INFEASIBLE, REDUNDANT SEDIMENT CONTROLS WILL BE PROVIDED.
   c. REDUNDANT PERIMETER CONTROLS WILL BE INSTALLED AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE.
9. USE OF SEDIMENTATION TREATMENT CHEMICALS (E.G., POLYMERS, FLOCCULANTS, ETC.) IS NOT ANTICIPATED AS PART OF THE PROJECT. (CSW PERMIT ITEMS 5.22 AND 9.18)
10. THE PROJECT WILL NOT INCLUDE 10 OR MORE ACRES OF DISTURBED SOIL DRAINING TO A COMMON LOCATION OR 5 OR MORE ACRES DRAINING TO A COMMONLOCATION WITHIN 1 MILE OR A SPECIAL OR IMPAIRED WATER THEREFORE TEMPORARY SEDIMENT BASINS ARE NOT REQUIRED. (CSW PERMIT ITEMS 5.6, 9.13, AND 23.10 AND SECTION 14)

4.3 DEWATERING AND BASIN DRAINING: NO DEWATERING OR BASIN DRAINING WILL OCCUR AS PART OF THIS PROJECT. (CSW PERMIT SECTION 10 AND ITEM 10.5)

4.4 BMP DESIGN FACTORS: THE FOLLOWING BMP DESIGN FACTORS HAVE BEEN CONSIDERED IN DESIGNING THE TEMPORARY EROSION PREVENTION AND SEDIMENT CONTROL BMPS:

1. EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION.
2. NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES.
3. STORMWATER VOLUME, VELOCITY, AND PEAK FLOW RATES TO MINIMIZE DISCHARGE OF POLLUTANTS IN STORMWATER AND TO MINIMIZE CHANNEL AND STREAMBANK EROSION AND SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS.
4. RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

(SEE PAGE 2 OF 2)

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINTED NAME JEFFERY D. WEISS
SIGNATURE
DATE 10/04/2019 LICENSE # 48031

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Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

BARR PROJECT No.	
23/70-1086.00	
CLIENT PROJECT No.	
-	
DWG. No.	REV. No.
G-02	A

5.0 PERMANENT STORMWATER MANAGEMENT SYSTEM:

A PERMANENT STORMWATER MANAGEMENT SYSTEM IS REQUIRED IF THE PROJECT RESULTS IN ONE ACRE OR MORE OF NEW IMPERVIOUS SURFACES OR RESULTS IN A NET INCREASE OF ONE OR MORE ACRES OF CUMMULATIVE NEW IMPERVIOUS SURFACES IN TOTAL OR IF THE PROJECT IS PART OF A LARGER PLAN OF DEVELOPMENT. (CSW PERMIT ITEM 15.3)

5.1 A PERMANENT STORMWATER TREATMENT SYSTEM IS NOT REQUIRED. (CSW PERMIT ITEMS 5.15, 15.4-15.9, AND 23.14)

5.2 THIS IS NOT A LINEAR PROJECT WITH LACK OF RIGHT OR WAY. (CSW PERMIT ITEM 15.9)

5.3 THIS PROJECT DOES NOT DISCHARGE TO A TROUT STREAM (OR A TRIBUTARY TO A TROUT STREAM). (CSW PERMIT ITEM 23.12)

6.0 INSPECTION AND MAINTENANCE ACTIVITIES:

6.1 PERSONS WITH REQUIRED TRAINING: TRAINED INDIVIDUALS INCLUDE THOSE PARTIES RESPONSIBLE FOR INSTALLING, SUPERVISING, REPAIRING, INSPECTING, AND MAINTAINING EROSION PREVENTION AND SEDIMENT CONTROL BMPS AT THE SITE. TRAINED INDIVIDUALS ARE ALSO RESPONSIBLE FOR IMPLEMENTATION OF THE SWPPP AND COMPLIANCE WITH THE GENERAL PERMIT UNTIL THE CONSTRUCTION ACTIVITIES ARE COMPLETE, PERMANENT COVER HAS BEEN ESTABLISHED, AND A NOTICE OF TERMINATION (NOT) HAS BEEN SUBMITTED. (CSW PERMIT ITEMS 5.20, 5.21, AND 11.9 AND SECTION 21)

THESE INDIVIDUALS WILL BE TRAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL PERMIT, INCLUDING THE REQUIREMENT THAT THE CONTENT AND EXTENT OF TRAINING WILL BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES.

BELOW IS A LIST OF PEOPLE RESPONSIBLE FOR THIS PROJECT WHO ARE KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS.

TRAINED INDIVIDUAL	RESPONSIBILITY	TRAINING ENTITY*	TRAINING DATE
ERIC FITZGERALD	PREPARATION OF THE SWPPP	UNIVERSITY OF MINNESOTA	SEPTEMBER 2017
TBD	OVERSIGHT OF SWPPP IMPLEMENTATION, REVISION, AND AMMENDMENT	TBD	TBD
TBD	PERFORMANCE OF SWPPP INSPECTIONS	TBD	TBD
TBD	PERFORMANCE OR SUPERVISION OF INSTALLATION, MAINTENANCE, AND REPAIR OF BMPS	TBD	TBD

*TRAINING DOCUMENTATION AVAILABLE UPON REQUEST.

6.2 FREQUENCY OF INSPECTIONS: A TRAINED PERSON WILL ROUTINELY INSPECT THE ENTIRE CONSTRUCTION SITE. (CSW PERMIT ITEMS 11.2, 11.10, AND 23.13)

- AT LEAST ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION
- WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS

INSPECTION FREQUENCY MAY BE ADJUSTED UNDER THE FOLLOWING CIRCUMSTANCES:

- WHERE PARTS OF THE CONSTRUCTION AREAS HAVE PERMANENT COVER, BUT WORK REMAINS ON OTHER PARTS OF THE SITE, INSPECTIONS OF THE AREAS WITH PERMANENT COVER MAY BE REDUCED TO ONCE PER MONTH.
- WHERE CONSTRUCTION AREAS HAVE PERMANENT COVER AND NO CONSTRUCTION ACTIVITY IS OCCURRING ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES.
- WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, THE INSPECTIONS MAY BE SUSPENDED. THE REQUIRED INSPECTIONS AND MAINTENANCE SCHEDULE MUST BEGIN WITHIN 24 HOURS AFTER RUNOFF OCCURS AT THE SITE OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.

6.3 INSPECTION REQUIREMENTS: EACH CONSTRUCTION STORMWATER SITE INSPECTION WILL INCLUDE INSPECTION OF THE FOLLOWING AREAS: (CSW PERMIT ITEMS 11.3 THROUGH 11.8)

- ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES
- SURFACE WATERS FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION
- CONSTRUCTION SITE VEHICLE EXIT LOCATIONS FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING
- STREETS AND OTHER AREAS ADJACENT TO THE PROJECT FOR EVIDENCE OF OFF SITE ACCUMULATIONS OF SEDIMENT

6.4 MAINTENANCE REQUIREMENTS: MAINTENANCE OF THE FOLLOWING AREAS AND BMPS WILL BE PERFORMED AS FOLLOWS: (CSW PERMIT ITEMS 11.3 THROUGH 11.8)

- NONFUNCTIONAL BMPS WILL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
- PERIMETER CONTROL DEVICES WILL BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE.
- TEMPORARY AND PERMANENT SEDIMENTATION BASINS WILL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME.
- DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS WILL BE REMOVED, AND THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL WILL BE RE-STABILIZED. THE REMOVAL AND STABILIZATION WILL BE COMPLETED WITHIN 7 CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. IF PRECLUDED DUE TO ACCESS CONSTRAINTS, REASONABLE EFFORTS TO OBTAIN ACCESS WILL BE USED. REMOVAL AND STABILIZATION WILL TAKE PLACE WITHIN 7 CALENDAR DAYS OF OBTAINING ACCESS.
- TRACKED SEDIMENT ON PAVED SURFACES WILL BE REMOVED WITHIN 1 CALENDAR DAY OF DISCOVERY.
- AREAS UNDERGOING STABILIZATION WILL BE RESTABILIZED AS NECESSARY TO ACHIEVE REQUIRED COVER.

6.5 RECORDKEEPING REQUIREMENTS: (CSW PERMIT ITEMS 11.11 AND 24.5 AND SECTIONS 6 AND 20)

1. ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WILL BE RECORDED IN WRITING WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS WILL BE RETAINED WITH THE SWPPP. RECORDS OF EACH INSPECTION AND MAINTENANCE ACTIVITY WILL INCLUDE THE DATE AND TIME; NAME OF INSPECTOR(S); FINDINGS OF INSPECTIONS; CORRECTIVE ACTIONS (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND DATE OF ALL RAINFALL EVENTS GREATER THAN 0.5 INCHES IN 24 HOURS AND THE AMOUNT OF RAINFALL FOR EACH EVENT.
   a. IF ANY DISCHARGE IS OBSERVED DURING THE INSPECTION, THE LOCATION AND APPEARANCE OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS) WILL BE DOCUMENTED AND A PHOTOGRAPH WILL BE TAKEN.
2. THE SWPPP WILL BE AMENDED TO INCLUDE ADDITIONAL OR MODIFIED BMPS TO CORRECT PROBLEMS OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER, OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.
   a. THE SWPPP WILL BE AMENDED WHEN INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER, OPERATOR, OR CONTRACTORS OR BY USEPA/MPCA OFFICIALS INDICATE THAT THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER; THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES; OR THE SWPPP IS NOT CONSISTENT WITH A USEPA APPROVED TMDL.
   b. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION WILL BE DOCUMENTED AS REQUIRED WITHIN 7 CALENDAR DAYS.
   c. AMENDMENTS WILL BE COMPLETED BY AN APPROPRIATELY TRAINED INDIVIDUAL. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP WILL INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.
3. RECORDS RETENTION: THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTION AND MAINTENANCE RECORDS WILL BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITTEE WHO HAS OPERATIONAL CONTROL OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER A FIELD OFFICE OR IN AN ON SITE VEHICLE DURING NORMAL WORKING HOURS.
4. RECORD AVAILABILITY: THE PERMITTEES WILL MAKE THE SWPPP, INCLUDING INSPECTION REPORTS, MAINTENANCE RECORDS, AND TRAINING RECORDS, AVAILABLE TO FEDERAL, STATE, AND LOCAL OFFICIALS WITHIN THREE DAYS UPON REQUEST FOR THE DURATION OF THE PERMIT COVERAGE AND FOR THREE YEARS FOLLOWING THE NOTICE OF TERMINATION.

7.0 POLLUTION PREVENTION MEASURES:

1. ANY CONSTRUCTION PRODUCTS AND LANDSCAPE MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS WILL BE STORED UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) TO PREVENT DISCHARGE OF POLLUTANTS THROUGH MINIMIZATION OF CONTACT WITH STORMWATER. STORAGE OF SUCH MATERIALS WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.2)
2. PESTICIDES, FERTILIZERS, AND TREATMENT CHEMICALS WILL BE STORED UNDER COVER (E.G., PLASTIC SHEETING, TEMPORARY ROOFS, WITHIN A BUILDING, OR IN WEATHER-PROOF CONTAINERS) TO PREVENT DISCHARGE OF POLLUTANTS THROUGH MINIMIZATION OF CONTACT WITH STORMWATER. STORAGE OF SUCH MATERIALS WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.3)
3. HAZARDOUS MATERIALS AND TOXIC WASTE (E.G., OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) WILL BE STORED AND DISPOSED OF IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7045, INCLUDING SECONDARY CONTAINMENT (AS APPLICABLE). HAZARDOUS MATERIALS WILL BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGES AND PREVENT PRECIPITATION FROM FALLING ONTO THE CONTAINERS OR STORED HAZARDOUS MATERIALS. (CSW PERMIT ITEMS 2.3 AND 12.4)
4. SOLID WASTE WILL BE COLLECTED, STORED, AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINNESOTA RULES CHAPTER 7035. THIS INCLUDES STORAGE WITHIN COVERED TRASH CONTAINERS AND DAILY REMOVAL OF LITTER AND DEBRIS. STORAGE OF SOLID WASTE WITHIN THE PROJECT AREA WILL BE MINIMIZED TO THE EXTENT POSSIBLE. (CSW PERMIT ITEM 12.5)
5. PORTABLE TOILETS WILL BE LOCATED AWAY FROM SURFACE WATERS AND POSITIONED AND SECURED TO THE GROUND SO THEY WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE WILL BE DISPOSED OF IN ACCORDANCE WITH MINNESOTA RULES, CHAPTER 7041. PORTABLE TOILETS WILL BE PERIODICALLY EMPTIED AND THE WASTE HAULED OFF-SITE BY A LICENSED HAULER. (CSW PERMIT ITEM 12.6)
6. VEHICLE FUELING WILL ONLY OCCUR IN DESIGNATED AREAS. SPILL KITS SIZED APPROPRIATELY FOR THE AMOUNT OF REFUELING TAKING PLACE WILL BE LOCATED. SPILL KITS WILL BE CLEARLY LABELED AND CONTAIN MATERIALS TO ASSIST IN SPILL CLEANUP INCLUDING ABSORBENT PADS, BOOMS FOR CONTAINING SPILLS, AND HEAVY-DUTY PROTECTIVE GLOVES. SPILLS WILL BE REPORTED TO THE MINNESOTA DUTY OFFICER AS REQUIRED BY MINNESOTA STATUTES, SECTION 115.061. (CSW PERMIT ITEMS 2.3 AND 12.7)
   a. ANY FUEL TANKS BROUGHT ON-SITE WILL HAVE PROPERLY SIZED CONTAINMENT AND WILL NOT BE TOPPED OFF TO AVOID SPILLS FROM OVERFILLING. FUEL TANKS WILL MEET INDUSTRY STANDARDS (DESIGNED TO HOLD FUEL TYPE, PROPERLY MAINTAINED, NOT ILLEGALLY MODIFIED, NOT MISSING LEAK INDICATOR FLOATS FOR DOUBLE WALLED TANKS, SIGHT GAUGES NOT USED, ETC.) OR BE REMOVED FROM THE WORK AREA.
   b. GUIDELINES FOR SPILL PREVENTION AND RESPONSE INCLUDE:
      - TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED, INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE;
      - PERFORM REGULAR PREVENTATIVE MAINTENANCE ON TANKS AND FUEL LINES;
      - INSPECT PUMPS, CYLINDERS, HOSES, VALVES, AND OTHER MECHANICAL EQUIPMENT ON-SITE FOR DAMAGE OR DETERIORATION;
      - DO NOT WASH OR RINSE FUELING AREAS WITH WATER;
      - MAINTAIN ADEQUATE SUPPLIES TO CLEAN UP DISCHARGED MATERIALS AND PROVIDE AN APPROPRIATE DISPOSAL METHOD FOR RECOVERED SPILLED MATERIALS;
      - REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINNESOTA STATUTES, SECTION 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE; AND
      - MAINTAIN COPIES OF SAFETY DATA SHEETS (SDSS) FOR HAZARDOUS MATERIALS ON-SITE IN LOCATIONS READILY AVAILABLE TO EMERGENCY RESPONDERS.
7. IF VEHICLE AND EQUIPMENT WASHING IS NECESSARY, A VEHICLE WASH STATION WILL BE LOCATED IN A DESIGNATED AREA. RUNOFF FROM THE WASHING AREA WILL BE CONTAINED IN A SEDIMENT BASIN AND WASTE FROM THE WASHING ACTIVITY WILL BE PROPERLY DISPOSED OF. ANY SOAPS, DETERGENTS, OR SOLVENTS WILL BE PROPERLY USED AND STORED. ANY DETERGENTS AND OTHER CLEANERS NOT PERMITTED FOR DISCHARGE WILL NOT BE USED. (CSW PERMIT ITEMS 2.3 AND 12.8)
8. THE PROJECT WILL NOT RESULT IN CONCRETE OR OTHER WASHOUT ACTIVITIES. IF NECESSARY, A DESCRIPTION OF THE STORAGE AND DISPOSAL OF CONCRETE AND OTHER WASHOUT WASTES SO THAT WASTES DO NOT CONTACT THE GROUND WILL BE ADDED. (CSW PERMIT ITEMS 2.3 AND 12.9)

8.0 PERMANENT COVER AND PERMIT TERMINATION CONDITIONS:

1. THE AREAS DISTURBED DURING CONSTRUCTION WILL BE STABILIZED WITH PERMANENT COVER UPON COMPLETION OF WORK. PERMANENT COVER MAY BE VEGETATIVE OR NON-VEGETATIVE, AS APPROPRIATE. ESTABLISHMENT OF PERMANENT COVER MAY INCLUDE THE FOLLOWING ACTIVITIES: SEEDING, MULCHING, AND EROSION CONTROL BLANKETS. (CSW PERMIT ITEM 5.17)
2. FOR A CONSTRUCTION-SITE TO ACHIEVE "PERMANENT COVER", THE FOLLOWING REQUIREMENTS MUST BE COMPLETED PRIOR TO TERMINATION OF PERMIT COVERAGE: (CSW PERMIT SECTIONS 4 AND 13)
   a. ALL SOIL DISTURBING CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND PERMANENT COVER HAS BEEN INSTALLED OVER ALL AREAS. VEGETATIVE COVER CONSISTS OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70% OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION (SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER).
   b. ALL SEDIMENT HAS BEEN REMOVED FROM CONVEYANCE SYSTEMS, INCLUDING CULVERTS.
   c. ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS HAVE BEEN REMOVED. BMPS DESIGNED TO DECOMPOSE ON-SITE MAY BE LEFT IN PLACE.

WITHIN 30 DAYS AFTER THE TERMINATION CONDITIONS ARE COMPLETE, A NOTICE OF TERMINATION (NOT) FORM WILL BE SUBMITTED TO THE MPCA.

Figure 1

TOPOGRAPHIC MAP WITH SURFACE WATERS AND SOIL TYPES
Stormwater Pollution Prevention Plan
Scott County, Minnesota

GOPHER STATE ONE CALL

GOPHER STATE ONE CALL:
CALL BEFORE YOU DIG.
1-800-252-1166

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME JEFFERY D. WEISS

SIGNATURE

DATE 10/04/2019 LICENSE # 48031

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Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

BARR PROJECT No.	
23/70-1086.00	
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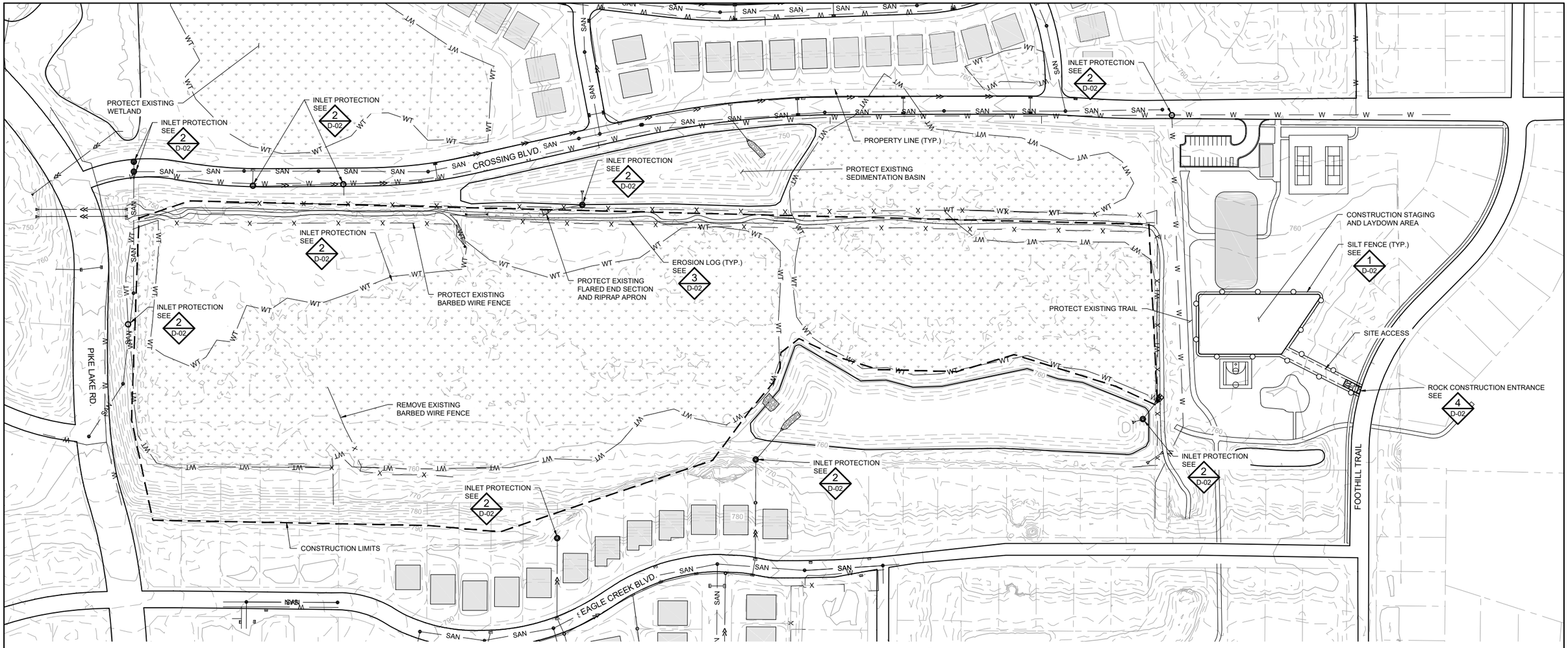

1 PLAN: EROSION CONTROL
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EROSION & SEDIMENT CONTROL NOTES:

1. INSTALL PERIMETER EROSION CONTROL AT THE LOCATIONS SHOWN ON THE PLANS PRIOR TO THE COMMENCEMENT OF ANY LAND DISTURBANCE OR CONSTRUCTION ACTIVITIES.
2. BEFORE BEGINNING CONSTRUCTION, INSTALL A TEMPORARY ROCK CONSTRUCTION ENTRANCE AT EACH POINT WHERE VEHICLES EXIT THE CONSTRUCTION SITE PRIOR TO COMMENCING ANY CLEARING/GRUBBING, REMOVAL, OR EARTHWORK ACTIVITIES. USE 2 INCH OR GREATER DIAMETER ROCK IN A LAYER AT LEAST 6 INCHES THICK ACROSS THE ENTIRE WIDTH OF THE ENTRANCE. EXTEND THE ROCK ENTRANCE AT LEAST 50 FEET INTO THE CONSTRUCTION ZONE USING A GEO-TEXTILE FABRIC BENEATH THE AGGREGATE TO PREVENT MIGRATION OF SOIL INTO THE ROCK FROM BELOW.
3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS AND MAY BE ORDERED BY INSPECTORS AT ANY TIME IF CONDITIONS WARRANT. SWEEPING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONSTRUCTION AND DONE IN A MANNER TO PREVENT DUST BEING BLOWN TO ADJACENT PROPERTIES.
4. INSTALL INLET PROTECTION AT ALL PUBLIC AND PRIVATE CATCH BASIN INLETS WHICH RECEIVE RUNOFF FROM THE DISTURBED AREAS. CONTRACTOR SHALL CLEAN, REMOVE SEDIMENT, OR REPLACE STORM DRAIN INLET PROTECTION DEVICES ON A ROUTINE BASIS SUCH THAT THE DEVICES ARE FULLY FUNCTIONAL FOR THE NEXT RAIN EVENT. SEDIMENT DEPOSITED IN AND/OR PLUGGING DRAINAGE SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR. HAY BALES OR FILTER FABRIC WRAPPED GRATES ARE NOT ALLOWED FOR INLET PROTECTION.
5. LOCATE SOIL OR DIRT STOCKPILES NO LESS THAIN 25 FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES.
6. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
7. TEMPORARILY OR PERMANENTLY STABILIZE ALL CONSTRUCTION AREAS WHICH HAVE UNDERGONE FINAL GRADING, AND ALL AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER. STABILIZATION TO BEGIN IMMEDIATELY AND BE COMPLETED WITHIN 14 DAYS. USE SEED AND MULCH, EROSION CONTROL MATTIING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS. REMOVE ALL TEMPORARY SYNTHETIC, STRUCTURAL, NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROL DEVICES AFTER THE SITE HAS UNDERGONE FINAL STABILIZATION WITH PERMANENT VEGETATION ESTABLISHMENT. FINAL STABILIZATION FOR PURPOSES OF THIS REMOVAL IS 70% ESTABLISHED COVER OVER DENUDED AREA.
8. CHANGES TO APPROVED EROSION CONTROL PLAN MUST BE APPROVED BY THE EROSION CONTROL INSPECTOR PRIOR TO IMPLEMENTATION. CONTRACTOR TO PROVIDE INSTALLATION AND DETAILS FOR ALL PROPOSED ALTERNATE TYPE DEVICES.
9. IF DEWATERING OR PUMPING OF WATER IS NECESSARY, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND/OR APPROVALS PRIOR TO DISCHARGE OF ANY WATER FROM THE SITE. IF THE DISCHARGE FROM THE DEWATERING OR PUMPING PROCESS IS TURBID OR CONTAINS SEDIMENT LADEN WATER, IT MUST BE TREATED THROUGH THE USE OF SEDIMENT TRAPS, VEGETATIVE FILTER STRIPS, OR OTHER SEDIMENT REDUCING MEASURES SUCH THAT THE DISCHARGE IS NOT VISIBLY DIFFERENT FROM THE RECEIVING WATER. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AT THE DISCHARGE POINT TO PREVENT SCOUR EROSION.
10. INSTALL SEED AND EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 3H:1V.
11. INSTALL SEED AND MULCH ON ALL OTHER DISTURBED AREAS AND ACCESS ROUTES.

EROSION CONTOL LEGEND

- CONSTRUCTION LIMITS
- WT — EXISTING WETLANDS
- SEDIMENT LOGS
- SILT FENCE
- CONSTRUCTION ENTRANCE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINTED NAME JEFFERY D. WEISS

SIGNATURE

DATE 10/04/2019 LICENSE # 48031

	10/04/19						
CLIENT							
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
	DATE RELEASED						

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Corporate Headquarters:
Minneapolis, Minnesota
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Fax: (952) 832-2601
www.barr.com

Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

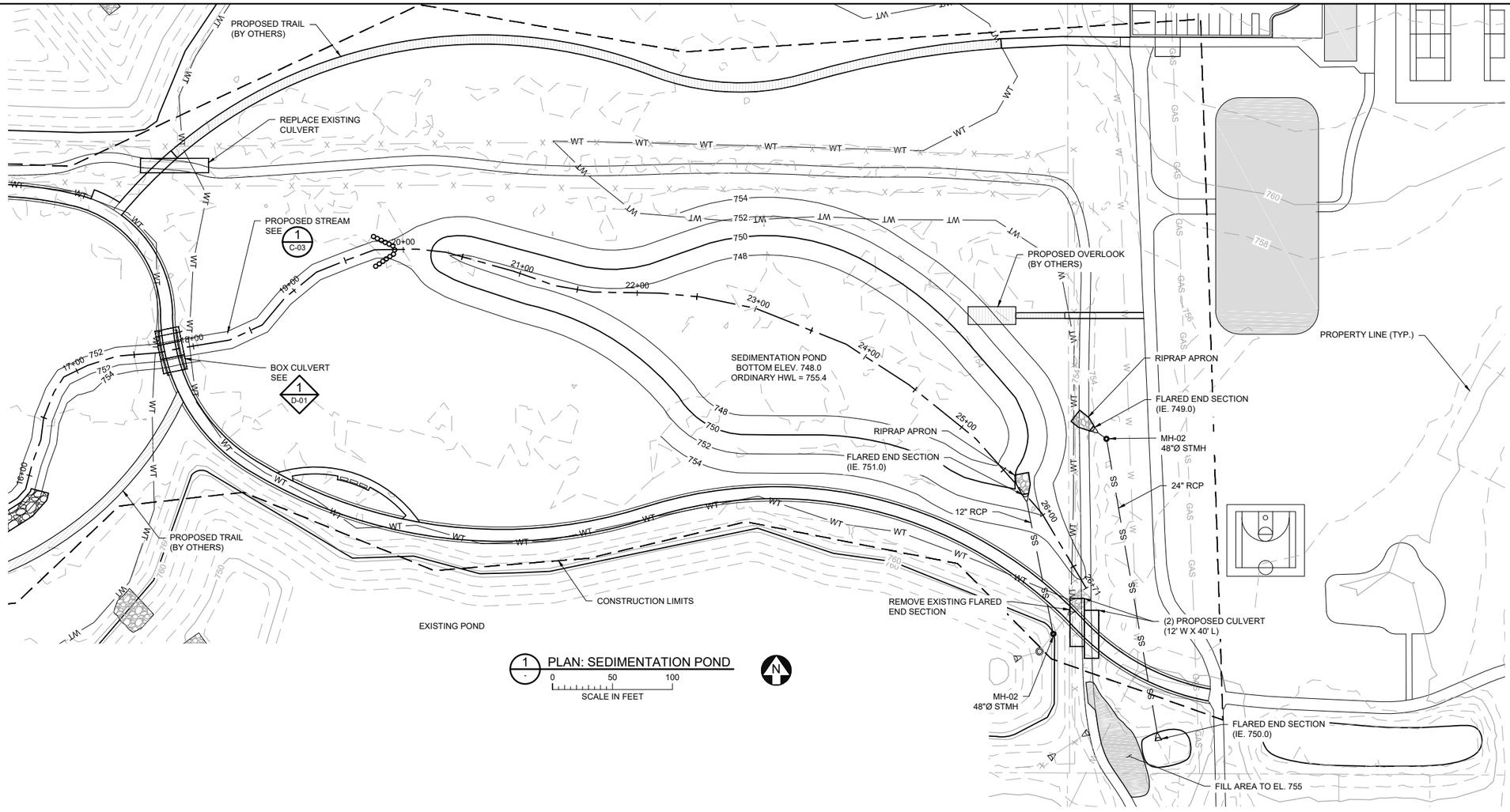
CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

EXISTING CONDITIONS, REMOVALS, AND EROSION CONTROL PLAN

BARR PROJECT No.	
23/70-1086.00	
CLIENT PROJECT No.	
-	
DWG. No.	REV. No.
C-01	A

CADD USER: Eric P. Fitzgerald FILE: M:\DESIGN\23701086.00\23701086_C-01_EROSION CONTROL PLAN.DWG PLOT SCALE: 1:2 PLOT DATE: 10/4/2019 12:46 PM



1 - PLAN: SEDIMENTATION POND

0 50 100

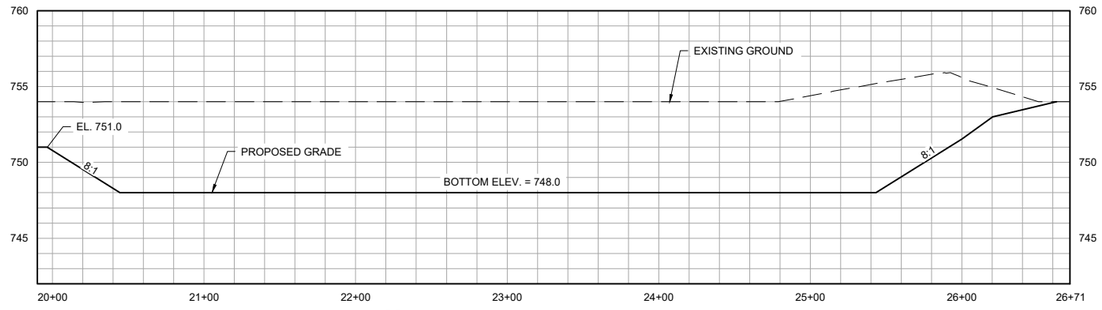
SCALE IN FEET

SYMBOL AND PATTERN LEGEND

750	EXISTING 10' CONTOUR
752	EXISTING 2' CONTOUR
>>	EXISTING STORM SEWER
SAN	EXISTING SANITARY SEWER
GAS	EXISTING GAS LINE
W	EXISTING WATER LINE
WT	EXISTING WETLAND
X	EXISTING FENCE
	CONSTRUCTION LIMITS
750	PROPOSED 10' CONTOUR
752	PROPOSED 2' CONTOUR

NOTES:

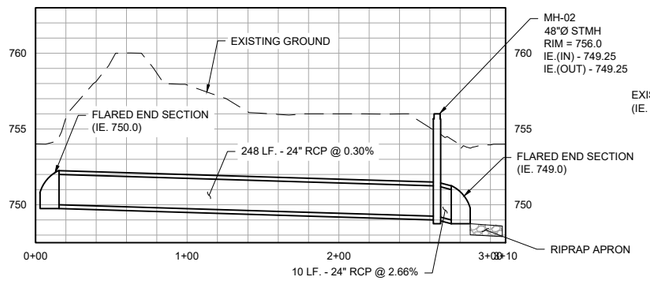
1. CONTRACTOR IS RESPONSIBLE TO LOCATE AND FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO WORK.
2. ALL EXISTING ROADS, PARKING LOTS, TRAILS, FENCES, SIGNS, OR SIMILAR SHALL BE PROTECTED DURING CONSTRUCTION. CONTRACTOR RESPONSIBLE TO COORDINATE SURVEYS WITH THE CITY AND/OR OWNER TO DOCUMENT PRE-CONSTRUCTION EXISTING CONDITION ISSUES.
3. CONSTRUCTION LIMITS AS SHOWN ARE APPROXIMATE FINAL CONSTRUCTION LIMITS TO BE COORDINATED WITH THE CITY OF EDEN PRAIRIE AND STAKED IN THE FIELD.
4. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE THE TRANSFER OF AQUATIC AND TERRESTRIAL INVASIVE SPECIES TO THE MAXIMUM EXTENT POSSIBLE.
5. COMPACTED SOIL MUST BE DECOMPACTED TO A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCHE IN THE UPPER 12 INCHES OF SOIL.



2 - PROFILE: SEDIMENTATION POND

0 50 100 (HORIZ. SCALE IN FEET)

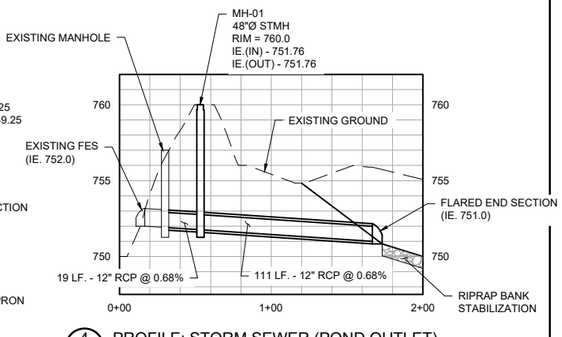
0 5 10 (VERT. SCALE IN FEET)



3 - PROFILE: STORM SEWER (STREAM OUTLET)

0 50 100 (HORIZ. SCALE IN FEET)

0 5 10 (VERT. SCALE IN FEET)



4 - PROFILE: STORM SEWER (POND OUTLET)

0 50 100 (HORIZ. SCALE IN FEET)

0 5 10 (VERT. SCALE IN FEET)

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME JEFFERY D. WEISS

SIGNATURE

DATE 10/04/2019 LICENSE # 48031

	10/04/19						
CLIENT							
BID							
CONSTRUCTION							
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	DATE RELEASED						

BARR

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www.barr.com

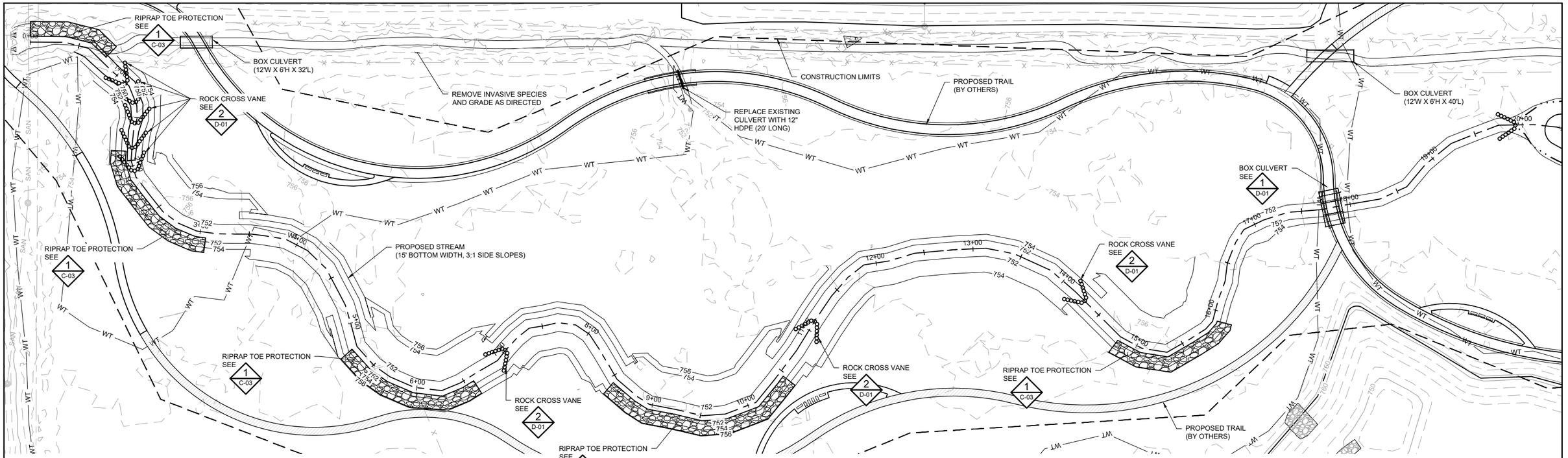
Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

SEDIMENTATION BASIN PLAN & PROFILE

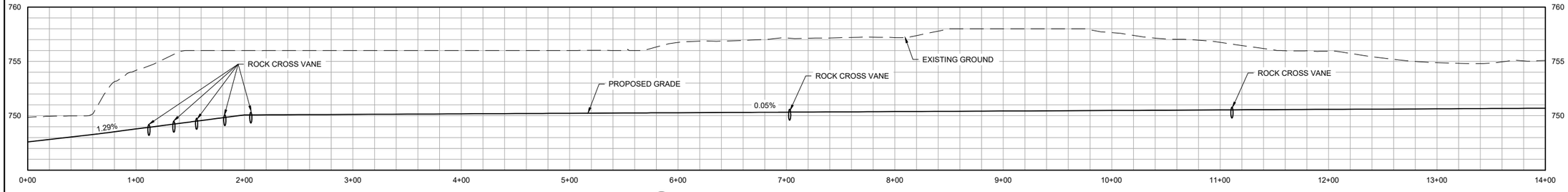
BARR PROJECT No.	
23/70-1086.00	
CLIENT PROJECT No.	
-	
DWG. No.	REV. No.
C-02	A



1 - PLAN: PROPOSED STREAM

0 50 100

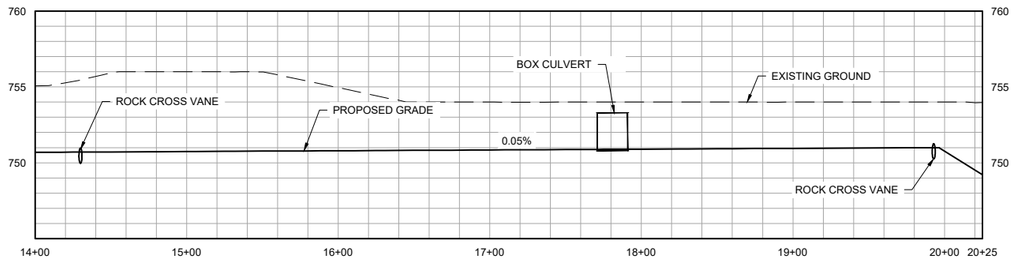
SCALE IN FEET



2 - PROFILE: PROPOSED STREAM (STA. 0+00 TO 14+00)

0 50 100 HORIZ. SCALE IN FEET

0 5 10 VERT. SCALE IN FEET



3 - PROFILE: PROPOSED STREAM (STA. 14+00 TO 20+00)

0 50 100 HORIZ. SCALE IN FEET

0 5 10 VERT. SCALE IN FEET

NOTES:

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SYMBOL AND PATTERN LEGEND

750	EXISTING 10' CONTOUR
752	EXISTING 2' CONTOUR
>>	EXISTING STORM SEWER
SAN	EXISTING SANITARY SEWER
GAS	EXISTING GAS LINE
W	EXISTING WATER LINE
WT	EXISTING WETLAND
X	EXISTING FENCE
	CONSTRUCTION LIMITS
750	PROPOSED 10' CONTOUR
752	PROPOSED 2' CONTOUR

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME JEFFERY D. WEISS

SIGNATURE

DATE 10/04/2019 LICENSE # 48031

CLIENT	10/04/19							
BID								
CONSTRUCTION								
RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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www.barr.com
Corporate Headquarters:
Minneapolis, Minnesota
Ph: 1-800-632-2277

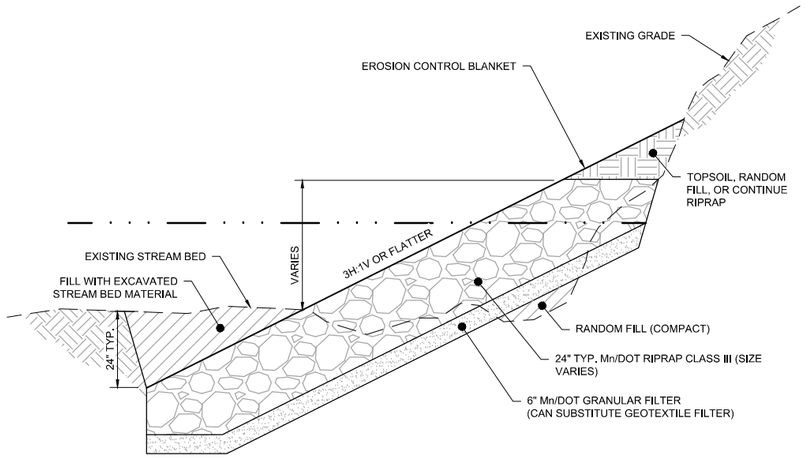
Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

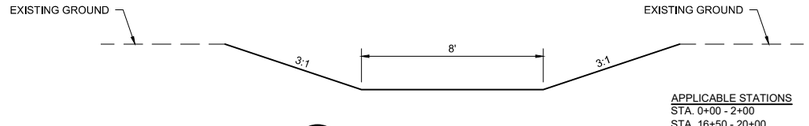
RIDGE CREEK PARK
SHAKOPEE, MN

PROPOSED STREAM
PLAN & PROFILE

BARR PROJECT No. 23/70-1086.00
CLIENT PROJECT No. -
DWG. No. C-03
REV. No. A

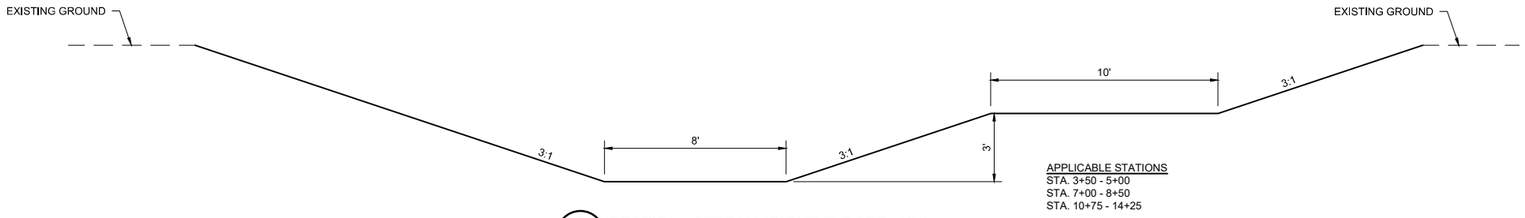


1 - DETAIL: RIPRAP TOE PROTECTION
NOT TO SCALE



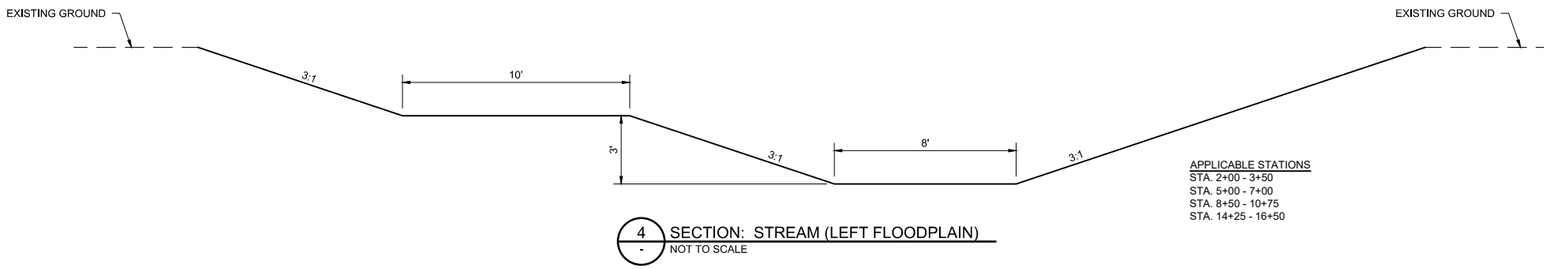
APPLICABLE STATIONS
STA. 0+00 - 2+00
STA. 16+50 - 20+00

2 - SECTION: STREAM (TYPICAL)
NOT TO SCALE



APPLICABLE STATIONS
STA. 3+50 - 5+00
STA. 7+00 - 8+50
STA. 10+75 - 14+25

3 - SECTION: STREAM (RIGHT FLOODPLAIN)
NOT TO SCALE



APPLICABLE STATIONS
STA. 2+00 - 3+50
STA. 5+00 - 7+00
STA. 8+50 - 10+75
STA. 14+25 - 16+50

4 - SECTION: STREAM (LEFT FLOODPLAIN)
NOT TO SCALE

60% DESIGN
NOT FOR CONSTRUCTION

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SIGNATURE

DATE 10/04/2019 LICENSE # 48031

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CONSTRUCTION								
RELEASED TO/FOR	A	B	C	0	1	2	3	
	DATE RELEASED							

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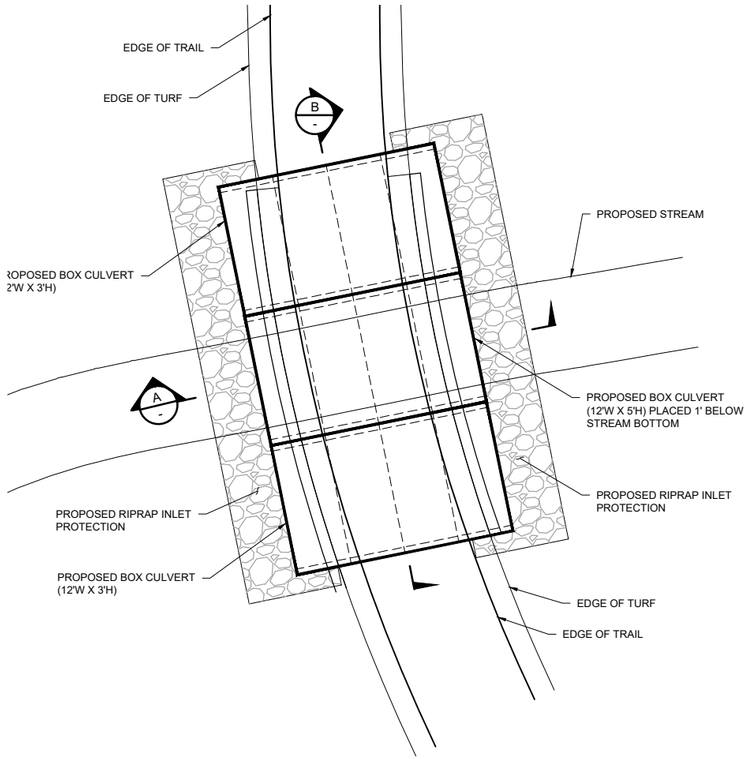
Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

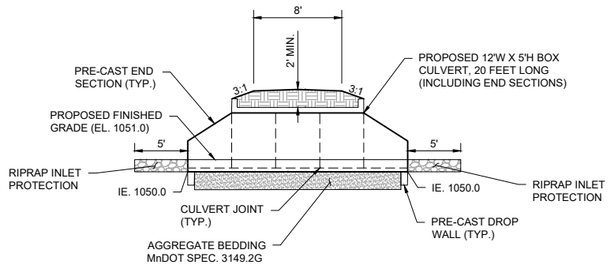
RIDGE CREEK PARK
SHAKOPEE, MN

PROPOSED STREAM CROSS SECTIONS

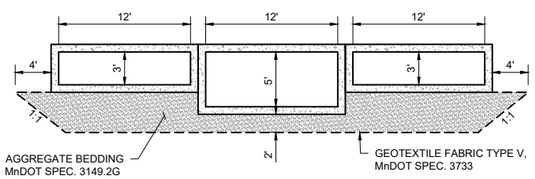
BARR PROJECT No.	
23/70-1086.00	
CLIENT PROJECT No.	
-	
DWG. No.	REV. No.
C-04	A



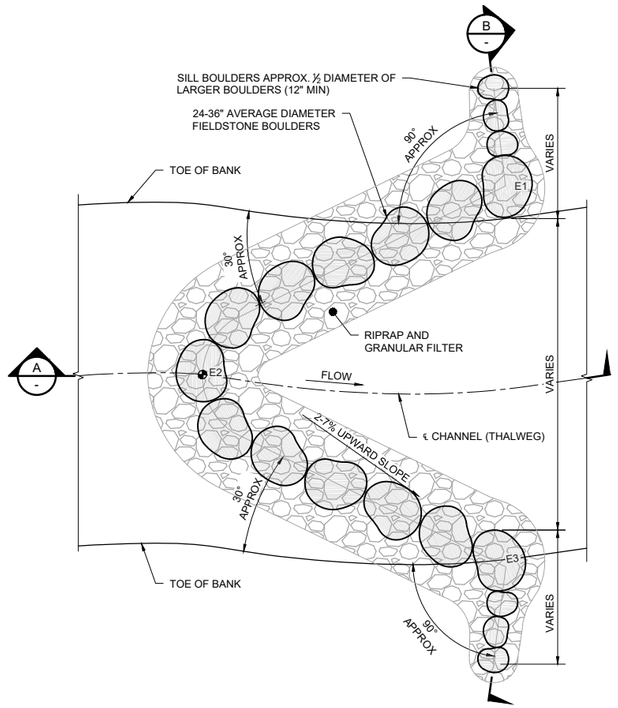
1 - DETAIL: BOX CULVERT
NOT TO SCALE



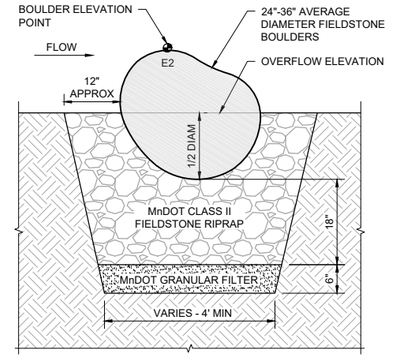
A - PROFILE: BOX CULVERT
NOT TO SCALE



B - SECTION: BOX CULVERT
NOT TO SCALE



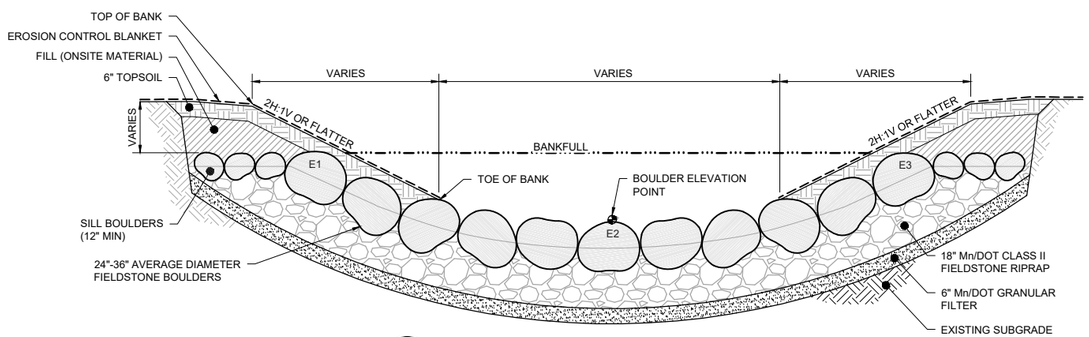
2 - DETAIL: CROSS VANE - SINGLE BOULDER
NOT TO SCALE



A - SECTION: CROSS VANE - SINGLE BOULDER
NOT TO SCALE

NOTES:

1. CROSS VANE LOCATIONS AND ELEVATIONS ARE APPROXIMATE AND MAY BE MODIFIED IN THE FIELD BY THE ENGINEER.
2. FINAL BOULDER PLACEMENT TO BE APPROVED BY THE ENGINEER IN THE FIELD. CONTRACTOR MAY BE REQUIRED TO ADJUST BOULDER ELEVATIONS AND ROTATION.
3. THERE SHALL BE NO SIGNIFICANT GAPS BETWEEN BOULDERS. RIPRAP BEDDING SHALL BE PLACED ON THE UPSTREAM SIDE OF THE BOULDERS TO PLUG SMALL GAPS (MAY REQUIRE HAND PLACEMENT).
4. BOULDERS OF AN UNSUITABLE SHAPE MAY BE RE-LOCATED OR REJECTED.
5. INSTALL EROSION CONTROL BLANKET ON DISTURBED BANKS.



B - SECTION: CROSS VANE - SINGLE BOULDER
NOT TO SCALE

60% DESIGN
NOT FOR CONSTRUCTION

NO.	BY	CHK.	APP.	DATE	REVISION DESCRIPTION

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PRINTED NAME JEFFERY D. WEISS

SIGNATURE

DATE 07/08/2019 LICENSE # 48031

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BID							
CONSTRUCTION							
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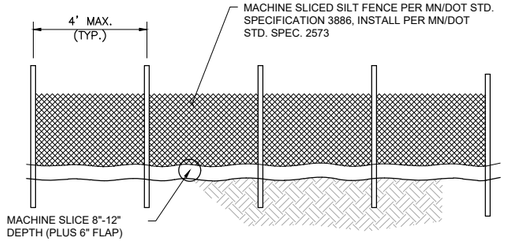
Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

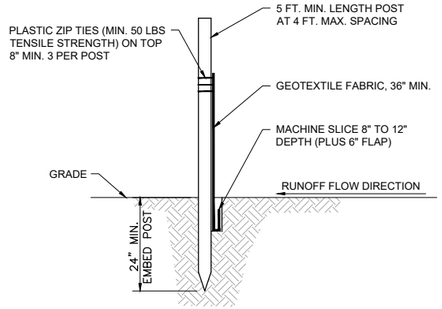
RIDGE CREEK PARK
SHAKOPEE, MN

DETAILS

BARR PROJECT No.	
23/70-1086.00	
CLIENT PROJECT No.	
-	
DWG. No.	REV. No.
D-01	A



DOWNSTREAM VIEW

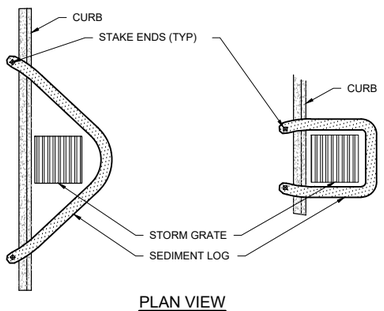


SECTION VIEW

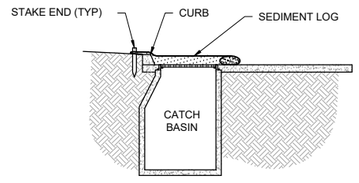
NOTES:

1. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SILT FENCE AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.
2. SILT FENCE INSTALLATION AND MATERIALS SHALL MEET THE REQUIREMENTS OF MN/DOT SPECIFICATIONS 2573 AND 3886.
3. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SILT FENCE. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
4. WHEN SEDIMENT BUILD UP REACHES 1/3 OF FENCE HEIGHT, THE SILT FENCE SHOULD BE REMOVED OR A SECOND SILT FENCE INSTALLED UPSTREAM OF THE EXISTING FENCE AT A SUITABLE DISTANCE.
5. WHEN SPLICES ARE NECESSARY MAKE SPLICE AT POST ACCORDING TO SPLICE DETAIL. PLACE THE END POST OF THE SECOND FENCE INSIDE THE END POST OF THE FIRST FENCE. ROTATE BOTH POSTS TOGETHER AT LEAST 180 DEGREES TO CREATE A TIGHT SEAL WITH THE FABRIC MATERIAL. CUT THE FABRIC NEAR THE BOTTOM OF THE POSTS TO ACCOMMODATE THE 6 INCH FLAP. THEN DRIVE BOTH POSTS AND BURY THE FLAP. COMPACT BACKFILL.

1 - DETAIL: SILT FENCE - MACHINE SLICED
NOT TO SCALE



PLAN VIEW

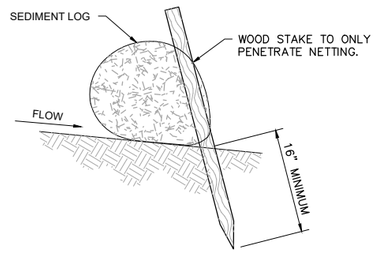


SECTION VIEW

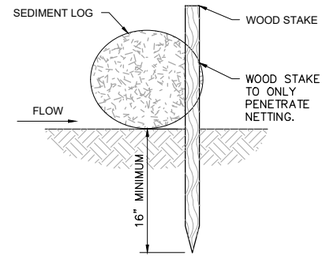
NOTES:

1. INLET PROTECTION SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED OR IMMEDIATELY FOLLOWING CATCHBASIN INSTALLATION, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. MATERIALS SHALL BE SUFFICIENT TO ALLOW FLOW WHILE BLOCKING SEDIMENT. NO HOLES OR GAPS SHALL BE PRESENT IN/UNDER SEDIMENT LOG.
3. INLET PROTECTION SHALL BE CLEANED AS REQUIRED.
4. MATERIALS AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN CONJUNCTION WITH THE FINAL GRADING AND SITE STABILIZATION.

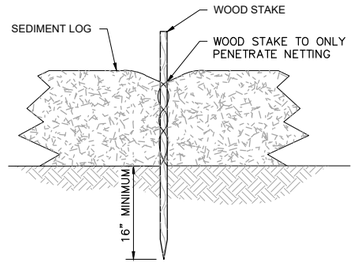
2 - DETAIL: INLET PROTECTION - SEDIMENT LOG
NOT TO SCALE



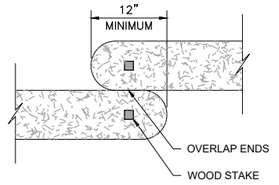
SIDE VIEW ON SLOPE



SIDE VIEW FLAT



FRONT VIEW

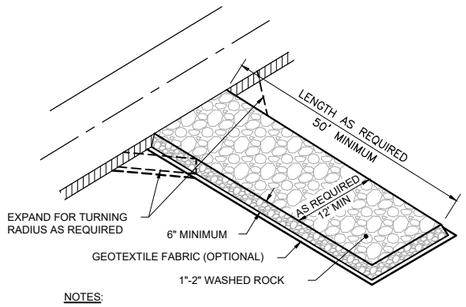


TOP VIEW

NOTES:

1. INSTALL SEDIMENT LOG ALONG CONTOURS (CONSTANT ELEVATION).
2. NO GAPS SHALL BE PRESENT UNDER SEDIMENT LOG. PREPARE AREA AS NEEDED TO SMOOTH SURFACE OR REMOVE DEBRIS.
3. REMOVE ACCUMULATED SEDIMENT WHEN REACHING 1/3 OF LOG HEIGHT.
4. MAINTAIN SEDIMENT LOG THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACED AS REQUIRED.

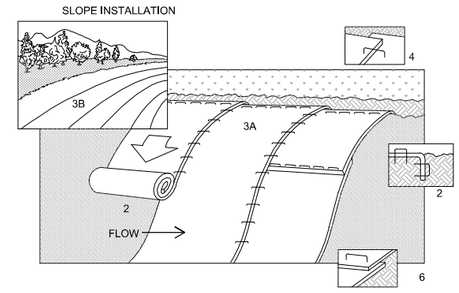
3 - DETAIL: EROSION LOG - STAKING
NOT TO SCALE



NOTES:

1. MAINTAIN ENTRANCE THROUGHOUT THE CONSTRUCTION PERIOD AND REPAIR OR REPLACE AS REQUIRED TO PREVENT TRACKING OFFSITE.
2. REMOVE ENTRANCE IN CONJUNCTION WITH FINAL GRADING AND SITE STABILIZATION.

4 - DETAIL: CONSTRUCTION ENTRANCE - ROCK
NOT TO SCALE



NOTES:

1. REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
2. PREPARE SOIL BY LOOSENING TOP 1-2 INCHES AND APPLY SEED (AND FERTILIZER WHERE REQUIRED) PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
3. BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. BLANKET MATERIALS SHALL BE AS SPECIFIED OR AS APPROVED BY ENGINEER.

5 - DETAIL: EROSION CONTROL BLANKET - INSTALLATION
NOT TO SCALE

TEMPORARY EROSION CONTROL SEEDING NOTES:

NOTES:

1. CONTRACTOR SHALL PERFORM TEMPORARY SEEDING IN ADDITION TO TEMPORARY MULCHING ON GRADED/DISTURBED AREAS WHEN THE SITE IS TO BE LEFT IDLE FOR LONGER THAN 21 DAYS - IN ACCORDANCE WITH MnDOT STANDARD SPECIFICATIONS SECTION 2575.3 B.1, USE COVER CROP AND MID-TERM STABILIZATION SEED MIXTURES AS SHOWN IN 3876, "SEED", TABLE 3876-1 FOR TEMPORARY SEEDING
2. PERFORM TEMPORARY MULCHING TO PROTECT THE SITE FROM EROSION WHEN LEFT IDLE FOR MORE THAN ONE WEEK AND DURING NON-SEEDING PERIODS AND WHEN OUTSIDE THE SEEDING AND SODDING DATES. FOR AREAS LESS THAN TWO ACRES, MULCH IN ACCORDANCE WITH MnDOT STANDARD SPECIFICATIONS SECTION 2575.3.M, "RAPID STABILIZATION"

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PRINTED NAME JEFFERY D. WEISS

SIGNATURE

DATE 10/04/2019 LICENSE # 48031

	10/04/19						
CLIENT							
BID							
CONSTRUCTION							
RELEASED TO/FOR	A	B	C	0	1	2	3
DATE RELEASED							

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www.barr.com

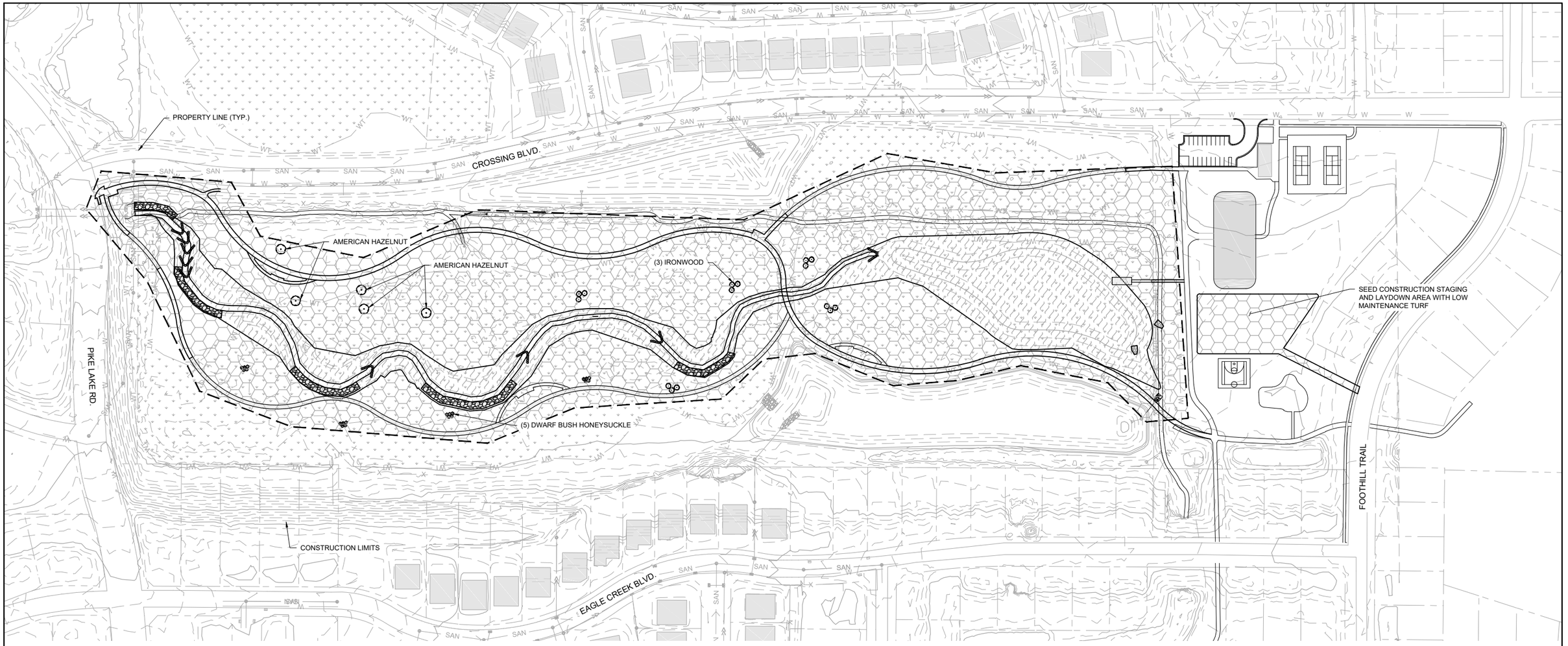
Scale	AS SHOWN
Date	10/04/2019
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

TEMPORARY EROSION CONTROL DETAILS

BARR PROJECT No.	23/70-1086.00
CLIENT PROJECT No.	-
DWG. No.	D-02
REV. No.	A



1 PLAN: SITE RESTORATION

0 100 200

SCALE IN FEET

SYMBOL AND PATTERN LEGEND

580 FINAL 10' CONTOUR

578 FINAL 2' CONTOUR

CONSTRUCTION LIMITS

SEED WITH MNDOT WET MEADOW SOUTH AND WEST MIX 34-371

SEED WITH SAINT PAUL LOW MAINTENANCE TURF MIX

COVER CROP (MnDOT 21-111)			
Common Name	**Scientific Name**	**PLS Rate (lb/ac)**	**% of Mix (by weight)**
Oats	*Avena sativa*	150.00	100.00
	Total	**150.00**	**100.00**

RESTORATION NOTES:

1. SEED ANY DISTURBED AREAS OUTSIDE THE CONSTRUCTION LIMITS WITH THE SPECIFIED SEED MIX.
2. INCLUDE A COVER CROP IN ALL AREAS TO BE SEEDED. COVER CROP OF OATS TO BE SEEDED AT 40LBS. PER AC.
3. ANY EXOTIC INVASIVE PLANTS AND WEEDS WITHIN THE SEEDING AREAS SHALL BE SPRAYED WITH HERBICIDE 14 DAYS PRIOR TO SEEDING. SIGNAGE INDICATING THE USE OF HERBICIDES MUST BE POSTED ON SITE.
4. ALL HERBICIDE APPLICATION SHALL BE APPLIED BY A LICENSED APPLICATOR WITHIN THE STATE OF MISSOURI.
5. SEED IN ACCORDANCE WITH THE SPECIFICATIONS. SEEDING IS TO TAKE PLACE IMMEDIATELY FOLLOWING FINAL GRADING AND SOIL PLACEMENT TO PREVENT EROSION AND COMPACTION.
6. ALL SEEDED AREAS TO BE COVERED WITH MnDOT 3885 CATEGORY 3N, WOOD FIGER 2S EROSION CONTROL BLANKET IMMEDIATELY FOLLOWING FINAL SEEDING.
7. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN THE CASE OF ANY DISCREPANCIES BETWEEN THIS DETAIL, PLANS, OR SPECIFICATIONS, THE SPECIFICATIONS SHALL GOVERN.

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PRINTED NAME JEFFERY D. WEISS

SIGNATURE

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	DATE RELEASED								

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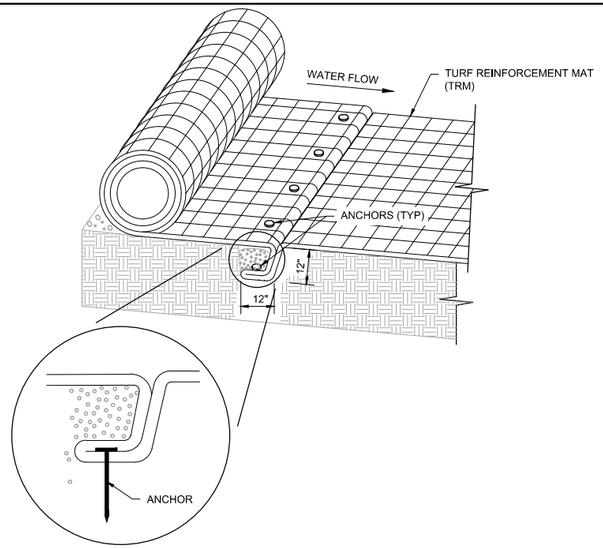
Drawn	EPF
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

RIDGE CREEK PARK
SHAKOPEE, MN

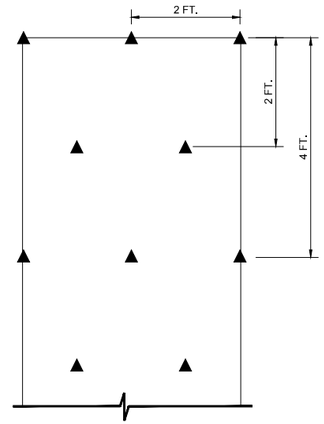
RESTORATION PLAN

BARR PROJECT No.	
23/70-1086.00	
CLIENT PROJECT No.	
-	
DWG. No.	REV. No.
R-01	A



CHECK SLOT NOTES:
1. SECURE AT 12 IN. INTERVALS, BACKFILL AND COMPACT SOIL.
2. CHECK SLOTS TO BE PLACE EVERY 25' ALONG FLOW LINE.

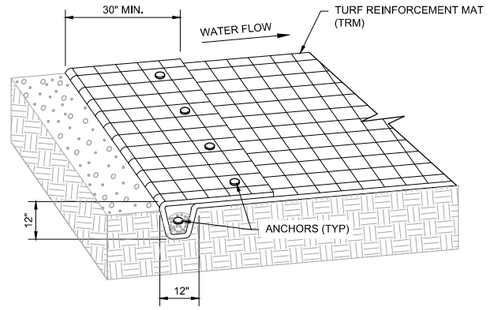
INTERMITTENT CHECK SLOT



ANCHOR NOTES:
1. PLACE ANCHORS ACCORDING TO THE ABOVE PATTERN.
2. OVERLAP BETWEEN ROLLS IS 6 IN. MINIMUM.
3. SPLICE BETWEEN ROLLS IS 18 IN. MINIMUM
4. ALWAYS INSTALL DOUBLE ROW OF PINS SPACED 12" APART AT ALL ROLL SPLICES.
5. INSTALL PINS DOWN THE CENTER OF EACH MAT STAGGERING THE OUTSIDE PINS.
6. ANCHORS SHALL BE AT MINIMUM 12 IN. STEEL NAILS WITH 1-1/2 IN. WASHERS OR 12 IN. U-SHAPED WIRE STAPLES, LONGER ANCHORS MAY BE REQUIRED FOR LOOSE SOILS. ANCHORS MUST PROVIDE SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT.

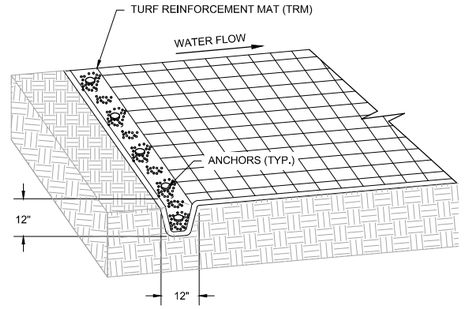
TRM ANCHOR PATTERN

TRM INSTALLATION NOTES:
1. PLACE A MINIMUM OF 4 IN. OF TOPSOIL ON EMERGENCY OVERFLOW CHANNEL.
2. PLACE APPROXIMATELY 50% OF THE SPECIFIED SEED AND RAKE SEED INTO SOIL PRIOR TO PLACEMENT OF TRM.
3. INSTALL AND ANCHOR TRM AS SHOWN AND AS SPECIFIED.
4. PLACE ADDITIONAL TOPSOIL (PULVERIZED, DRY, LOOSE) OVER TRM ROUGHLY 1 IN. THICK OR UNTIL THE TRM IS BARELY VISIBLE.
5. APPLY REMAINING 50% OF SEEDING ON TOP OF SOIL FILLED TRM AND LIGHTLY RAKE INTO SOIL USING THE FLAT SIDE OF A RAKE.
6. HYDROMULCH MAY BE SUBSTITUTED FOR THE APPROACH IN STEP 5.



ANCHOR TRENCH NOTES:
1. SECURE AT 12 IN. INTERVALS, BACKFILL AND COMPACT SOIL.
2. FOR SLOPES, CONSTRUCT TOP ANCHOR TRENCH 2 FT. BEYOND CREST OF SLOPE.

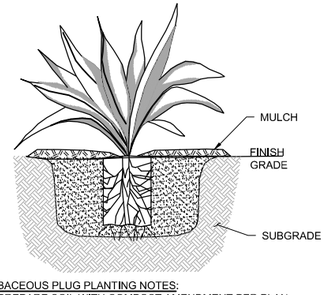
TOP ANCHOR TRENCH



NOTE:
1. SECURE AT 12 IN. INTERVALS, BACKFILL AND COMPACT SOIL

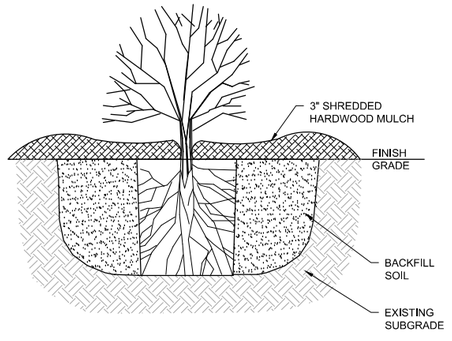
EDGE TERMINATION ANCHOR TRENCH

1 - DETAIL: TURF REINFORCEMENT MAT
NOT TO SCALE



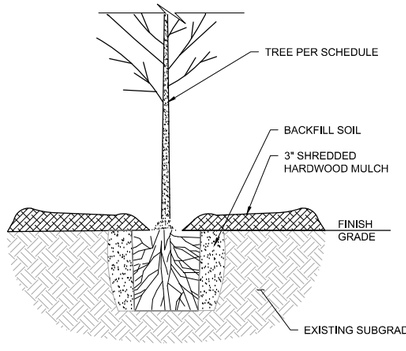
HERBACEOUS PLUG PLANTING NOTES:
1. PREPARE SOIL WITH COMPOST AMENDMENT PER PLAN
2. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
3. EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
4. BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
5. PLANT THROUGH MULCH ALIGNING ROOTBALL TOP EVEN WITH SOIL - DO NOT PLANT TOO DEEP OR TOO SHALLOW. FIRM SOIL TO ENSURE GOOD CONTACT WITH ROOTS.
6. APPLY 3" DEPTH SHREDDED HARDWOOD MULCH TO ENTIRE PLANTING AREA (SOIL PREPARED AS PER SPECIFICATIONS).
7. NO MULCH TO BE IN CONTACT WITH PLANT.
8. WATER THOROUGHLY AFTER PLANTING.
9. HERBACEOUS PLANTS SHALL BE GUARANTEED FOR 60 DAYS FROM TIME OF OWNER ACCEPTANCE. CONTRACTOR TO WATER AS NECESSARY TO MAINTAIN IN A HEALTHY CONDITION. AT THE END OF THIS PERIOD ANY DEAD PLANTS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.

2 - DETAIL: HERBACEOUS PLUG
NOT TO SCALE



SHRUB PLANTING NOTES:
1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT.
3. IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
4. DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
5. SET SHRUB ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
6. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882,2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD,) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND PLANT.
7. NO MULCH TO BE IN CONTACT WITH PLANT.

3 - DETAIL: SHRUB AND VINE PLANTING
NOT TO SCALE



TREE PLANTING NOTES:
1. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT. DO NOT CUT THE LEADER
3. IF ROOT FLARE IS NOT EXPOSED WITHIN THE CONTAINER EXCAVATE SURFACE SOIL TO BASE OF ROOT FLARE.
4. DIG PLANT HOLES 6" MIN. LARGER THAN ROOT MASS, ALL SIDES.
5. SCARIFY BOTTOM AND SIDES OF HOLE PRIOR TO PLANTING
6. SET TREE ON LIGHTLY FIRMED BACKFILL SOIL SO ROOT FLARE IS EVEN WITH FINISH GRADE.
7. REMOVE BURLAP AND ROPES FROM TOP 1/3 OF ROOT BALLS, CUT WIRE BASKET DOWN TO SECIND HORIZONTAL WIRE FROM BOTTOM, AND DISPOSE OF OFF-SITE.
8. BACKFILL WITH PLANTING SOIL AND FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
9. CONSTRUCT 3" WATERING BASIN. THOROUGHLY WATER WITHIN 3 HOURS OF INSTALLATION.
10. PLACE SHREDDED HARDWOOD MULCH (MN/DOT SPEC 3882,2 TYPE 6 - WEED SEED FREE SHREDDED HARDWOOD.) TO A RADIUS OF 24" AND TO A DEPTH OF 3" AROUND TREE (SOIL PREPARED AS PER PLAN).
11. NO MULCH TO BE IN CONTACT WITH BASE OF PLANT.
12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TREES IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD.

4 - DETAIL: TREE PLANTING
NOT TO SCALE

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SIGNATURE
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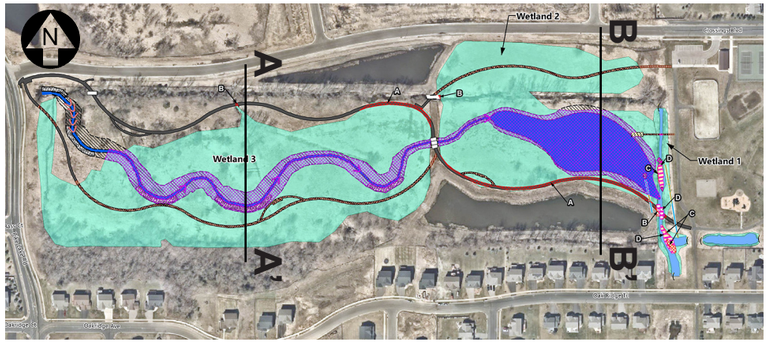
Checked	JDW
Designed	BARR
Approved	JDW

CITY OF SHAKOPEE
SHAKOPEE, MN

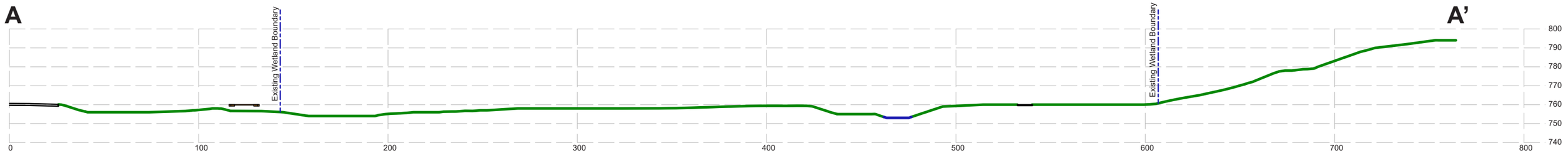
RIDGE CREEK PARK
SHAKOPEE, MN

RESTORATION DETAILS

BARR PROJECT No.	23/70-1086.00
CLIENT PROJECT No.	-
DWG. No.	R-02
REV. No.	A

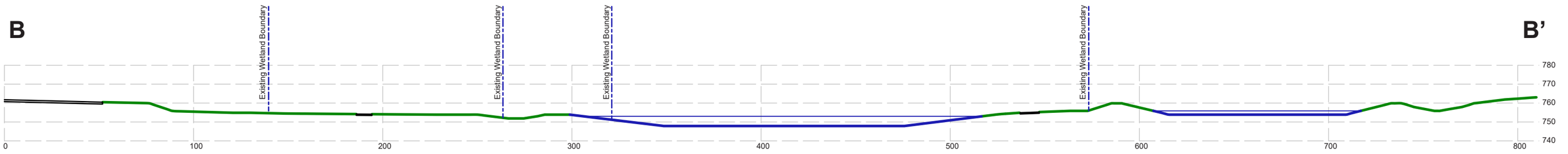


Section Locations
(No Scale)



Section A-A'

0 50 100
Scale in Feet



Section B-B'

0 50 100
Scale in Feet

BARR

11/6/2019

Appendix D
SHPO Memo

resourceful. naturally.
engineering and environmental consultants

BARR

Technical Memorandum

To: Jeff Weiss, Barr Engineering Company
From: Kailin Hatlestad, Barr Engineering Company
Subject: Phase Ia Cultural Resource Review
Date: October 28, 2019
Project: Ridge Creek Park Improvements Project
cc: Rachel Walker, Barr Engineering Co.

Barr Engineering completed a Phase Ia cultural resource literature review for the proposed Ridge Creek Park Improvements project area utilizing information received from a Minnesota State Historic Preservation Office (SHPO) data request for cultural resources located within one mile of the proposed project area. SHPO maintains a comprehensive database of all prehistoric and historic archaeological sites as well as historic architectural resources (individual buildings and structures as well as historic districts) and cultural landscapes for the entire state.

The area of potential effect (APE) for this project includes an approximately 22.8 acre area surrounding the improvement area.

This technical memo presents the background research, summary, and recommendations for the cultural resource literature review for the Ridge Creek Park Improvements Project located in Section 14, Township 115N, Range 22W, Scott County, Minnesota.

1.0 Project Description

The project consists of constructing a passive public park and improvement of the ecological function of the unnamed stream channel and wetland area located on the property. In addition to adding recreational and educational benefits to the surrounding residents.

Construction will include the installation of the following: meandering stream, wildlife pond, culvert installation and replacement, new bituminous at-grade trail and an elevated trail comprised of a lightweight structural boardwalk, overlook locations, landscaping, erosion control, and turf establishment.

Any disturbed areas will be replanted and stabilized with light soil amendments and a 10’ wide native seed application on either side of the path where appropriate. Trees will also be planted in key locations throughout the site to mitigate for any removed trees, to provide wildlife habitat, to stabilize slopes, and to frame views into the wetland.

2.0 Environmental and Cultural Overview

The Ridge Creek Park Improvements is located within the Central Lakes Deciduous archaeological region (Region 4) includes Scott County, in which the proposed project is located, and covers most of central to east central Minnesota.

The Central Lakes Deciduous archaeological region is defined mostly by undulating ground moraine, till, and outwash plain topography. Major topographic features include the Mississippi River, flowing through the eastern and central parts of the region, and the St. Croix River defines the eastern boundary (Gibbon 2002). The rivers of the west drain into the Red River. There are many lakes in the area, averaging 30 meters (100 feet) deep. Soils consist of medium to coarse textured prairie and forest soils rarely dominated the Central Lake Deciduous region with many large inclusions of prairie and oak woods. Oak forest was still dominant in the east following European arrival. The northern part of the region was a mixed deciduous-coniferous forest dominated by pine. The numerous water features in the region provided fish, waterfowl and extensive Wild rice beds. Faunal subsistence resources once included bison, white-tailed deer, elk, beaver, bear, and even moose in the north and east (Gibbon 2002).

Regionally, archaeological sites are focused around lakes and major rivers. Yet, early to middle Prehistoric period settlement patterns are poorly known in the Central Lakes Deciduous region, due to limited lithic surface collections. A change in subsistence-settlement pattern and technology occurred in the region during the late Middle Prehistoric period which saw the adoption of ceramics and mound burial, the use of the bow and arrow, and the intensification of wild rice harvesting (Gibbon 2002). This resulted in a dramatic increase in human population leading to larger and more sedentary habitation sites. Large areas of the Central Lakes Deciduous Region were probably now used only for periodic resource procurement forays. In wild rice harvesting areas, villages are located near wild rice beds, such as stream inlets/outlets to lakes (Gibbon 2002).

At European contact, Santee Dakota groups controlled the eastern part of the Central Lakes Deciduous Region. During this period much of the southern portion of the region remained unoccupied. In general, however, historic Indian village locations followed the Late Prehistoric period pattern and are often located near wild rice beds (Gibbon 2002). By the late 1600s, French traders had entered the region and established posts on some major lakes and rivers, a pattern generally followed by later Anglo-American traders. The contact period as defined in this review ends with the establishment of the American settlement at Fort Snelling in 1821.

3.0 Data Summary

A file search at the Minnesota State Historic Preservation Office (SHPO) and the Office of the State Archaeologist WebPortal (OSA) identified five known archaeological sites located over one mile from the APE; none have been evaluated for inclusion on the National Register of Historic Places (NRHP) (Table 1). Additionally, the file search discovered numerous historical surveys of the area have occurred over the years which identified six within one mile of the APE (Table 2).

The Trygg map (Minnesota Map 7) for this area was reviewed and one cultural features is shown southeast of the evaluation area, the Kingman house. Additionally, the Trygg map indicates that historic roads ran west of Dean's Lake and east of the project area. General Land Office plat maps, and aerial photographs, depicting the evaluation area were also reviewed, utilizing the Office of the State Archaeologist Portal (OSA Portal) and the Minnesota Department of Natural Resources (DNR) GIS-based Landview system, to assess if the evaluation area has the potential to contain cultural resources that could be considered eligible for the National Register of Historic Places (NRHP).

3.1 Archaeological Resources

No known archaeological resources were identified within the project area from the database search. Several sites are located over a mile from the evaluation area and will not be affected by the project (Table 1). Sites 21CSa and 21Scar are alpha sites, a designation meaning the site has been recorded based on information reported by a local collector or historical anecdotes but has never been professionally field verified. None of the three sites have been evaluated for inclusion on the NRHP. Preliminary research indicates that the Project spans a *low site potential/well surveyed to high site potential/well surveyed* area of the Minnesota Department of Transportation MnModel Phase 4 survey implementation model (MM4) (OSA Portal).

Table 1. SHPO and OSA Archaeological Resource Results

Site ID	Site Name	Description	NRHP Status
21SC0039	Van Zee	Pre-Contact Lithic Scatter	Not evaluated
21SC0051	Unnamed	Pre-Contact Earthwork Burial Mound	Not evaluated
21SC0096	Unnamed	Euro-American Artifact Scatter	Not evaluated
21SCa	Barden	Euro-American Ghost Town	Not evaluated
21SCar	World War II Internment Camp	Historic Structural Ruin	Not evaluated

3.2 Historical Resources

The SHPO data request identified six historic architectural resources within one-mile of the Project. Of these resources, none have been evaluated for inclusion on the NRHP. Indirect, visual impacts to historic

structures that could potentially occur as a result of the proposed project are unlikely due to the similar current use of the Ridge Creek Park area.

Table 2. SHPO Historic Resource Results within one-mile of Project Area

Site ID	Site Name	Description	NRHP Status
SC-PLC-066	O'Connor House	Residence	Not evaluated
SC-PLC-073	Unnamed	Farmstead	Not evaluated
SC-PLC-074	Unnamed	Barn	Not evaluated
SC-PLC-075	Unnamed	Farmstead	Not evaluated
SC-PLC-076	Unnamed	Farmstead	Not evaluated
SC-PLC-077	Unnamed	Farmstead	Not evaluated

4.0 Summary and Recommendations

The Phase Ia cultural resource literature review for the proposed Project resulted in the identification of no archaeological or historical sites within the APE. No known archaeological sites occur within one-mile of the project area. Of the six historic resources identified within one-mile of the project area, none have been evaluated for inclusion on the NRHP.

The results of the literature review, the scope the project, and the MM4 survey implementation model, suggests the proposed Project has a generally low to no potential for intact pre-European contact archaeological resources to be present. Additional investigation is recommended if project boundaries are changed. Additional evaluation may be required under 36 CFR 800.4 to determine project's potential to have direct or indirect effects to Historic Properties.

References

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1983 *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.* Current version available online at http://www.cr.nps.gov/local-law/arch_stnds_0.htm. National Park Service, Department of the Interior, Washington, D.C.

Historical Aerial Photos

Available on Minnesota Department of Natural Resources *Landview* at:
https://www.dnr.state.mn.us/maps/landview/index.html

Project: dv, Photo Year: 1947, Photo ID: dv06133

General Land Office Plat Map

Available on U.S. Department of the Interior Bureau of Land Management General Land Office Records at:
https://glorecords.blm.gov/results/default.aspx?searchCriteria=type=survey|st=MN|cty=139|twp_nr=115|twp_dir=N|rng_nr=22|rng_dir=W|styp=01

Original Survey 1855 MN 115.0N – 022.0W Subdivisional, Meanders, Scott County

OSA WebPortal, Minnesota Office of the State Archaeologist

Available on Minnesota Department of Administration Office of the State Archaeologist at: https://osa.gisdata.mn.gov/OSAportal/

Trygg Historical Map

Minnesota Series Sheet number 7, 1964