

Applicant: Charles Gerk; City of Edina
Consultant: Greg Brown; Kimley-Horn
Project: Pedestrian Bridge Replacements
Location: Centennial Lakes Park: Edina
Rule(s): 2, 4 and 5
Reviewer: BCO

General Background & Comments

The project proposes the reconstruction of the North and South pedestrian bridges crossing Centennial Lake between Parklawn Avenue and West 76th Street in Edina. The bridges are being replaced because of their structural condition and the desire for ADA compliance for the crossings. The new bridge access will change from a stepped approach to an ADA compliant sloped ramp. The ramps will require an approach embankment that results in 1,430 cubic feet (0.033 acre-feet) of volume reduction below the 100-year frequency flood elevation (840.8 M.S.L.) of Centennial Lake. To provide for compensatory storage as required by District Rule 2.3.2, a perforated 36-inch CMP storm sewer system within the park, constructed below the lake's flood elevation, will provide an equivalent storage volume.

The District's requirements for stormwater management and erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed, Rules 4.2.1a and 5.2.1a. The project will create 1100 square feet (0.025 acres) of new impervious area with stormwater management provided by the new 36-inch perforated CMP storm sewer system previously discussed.

Centennial Lake is a constructed stormwater basin with a hard-wall edge with a poly-liner. Centennial Lake is not a WCA or MDNR wetland therefore the District's buffer requirements (Rule 3.4) do not apply. The work proposed is outside of the lake's hard edge wall and liner. Construction is anticipated to begin in September, 2018 and be completed in late spring, 2019

Exhibits

1. Permit Application dated June 27, 2018.
2. Plans dated November 8, 2017 prepared by Kimley-Horn.
3. Geotechnical report prepared by Braun Intertec dated July 27, 2017 including an environmental screening of the soil samples for chemical testing for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), diesel range organics (DRO), gasoline range organics (GRO), and the eight Resource Conservation and Recovery Act (RCRA) metals. Soils information is also included in the report.

2.0 Floodplain Management and Drainage Alterations

District Rule 2.2.1 states that any alteration or filling of land below the 100-year flood elevation of Nine Mile Creek or another water body, or filling below the 100-year flood elevation of a constructed stormwater facility in the watershed requires a permit from the District. As previously stated, filling of 1.430 cubic feet of volume below the 100-year frequency flood elevation of Centennial Lake is proposed. To provide compensatory storage for this flood volume fill, 204 lineal feet of perforated 36-inch CMP storm sewer will be installed below elevation 840.6 M.S.L. (buried) in the South Bridge approach area. This system will become functional when the lake elevation exceeds 838.7 M.S.L. and backs-up into the 36-inch system via an 8-inch inlet. The 36-inch pipe will provide a volume of 1,441 cubic feet. Soil borings taken in the area of the 36-inch system, where infiltration provides the outlet for the system, indicates no environmental contamination was observed. In accordance with Rule 2.3.2b, the compensatory storage is at the same elevation for the fill in the floodplain of the constructed water body. The fill will not result in any change in the flood elevation of Centennial Lake which would result in a change in the freeboard being provided for existing structures riparian to Centennial Lake, Rules 2.3.1 and 4.3.3.

4.0 Storm Water Management

The District's stormwater rule, Rule 4.3, applies since the project will result in land disturbing activities that will disturb 50 cubic yards or more of earth. The project will create 1100 square feet (0.025 acres) of new impervious area with stormwater management, volume retention, rate control and water quality management, provided by the new 36-inch CMP perforated storm sewer system, as previously discussed

The existing and proposed 2, 10 and 100 year frequency discharges from the site are:

Frequency	Existing Discharge c.f.s.	Proposed Discharge c.f.s.
2 year	<1.0	<1.0
10 year	<1.0	<1.0
100 year	<1.0	<1.0

An infiltration volume of 101 cubic feet is required from the 1,100 square feet of new impervious area created by the project. The geotechnical report shows that the underlying soils are a poorly graded sand (SP) having an infiltration rate of 0.8 inches/hour using the Minnesota Stormwater Manual. An infiltration area of 32 square feet is required using this infiltration rate. At a depth of 3.2 feet required for the system to drawdown in 48 hours (4.3.1a (ii)), the system provides a volume of 1,441 cubic feet (101 cubic feet required) and 2,782 square feet of area (32 square feet required). Rule 4.3.1a is met.

The District's water quality criterion requires a 60% annual removal efficiency for phosphorus and 90% annual removal efficiency for total suspended solids. The results of the MIDS calculator show that the three stormwater facilities will provide an annual removal efficiency of

100% for total suspended solids (8.2 lbs.) and an annual removal efficiency of 100% for total phosphorus (0.05 lbs.). Rule 4.3.1c is met.

Rule 4.3.3c states, all new and reconstructed buildings must be constructed such that the low floor elevation is at least two feet above the 100-year high water elevation or one foot above the emergency overflow of a constructed facility. Centennial Lake flood elevation, 840.6 M.S.L., will not be changed as a result of the project therefore the freeboard for existing structures riparian to the lake will not change as a result of the project. Rule 4.3.3 is met.

In accordance with Rule 4.3.1a (i), the pre-treatment of runoff prior to reaching the section of 36-inch CMP perforated pipe will be provided by the grass swale between the hard edge of the lake wall and the inlet to the storm sewer system.

Rule 4.5.4d (i), requires a minimum separation of 3 feet between the bottom of an infiltration facility, practice or system. The lake is lined therefore does not have an effect on the ground water. The geotechnical report shows groundwater was encountered at a depth of 15 feet, elevation 824.6 M.S.L. The invert of the 36-inch pipe system is shown to be constructed at elevation 836 M.S.L. a separation of 11.4 feet. Rule 4.5.4d (i) is met.

In accordance with Rule 4.3.4, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site.

5.0 Erosion and Sediment Control

The requirements of Rule 5 are applicable since land-disturbing activities will involve excavation of more than 50 cubic yards of material, Rules 5.2.1a. Erosion control measures include silt fence and sediment control logs. The project contact is Charles Gerk, city of Edina.

Because the property owner is a public entity, no fees are charged.

Rules 2.0-6.0\$0

12.0 Sureties

Because the property owner is a public entity, the District’s financial assurance requirements do not apply.

Sureties for the project are: \$0

Findings

- 1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
- 2. Rules 2, 4 and 5 are met.

Recommendation

Approval, contingent upon:

- 1. General Conditions of the District.

By accepting the permit, when issued, the applicant agrees to the following stipulations:

1. Per Rule 4.5.6, an as-built drawing of the storm water facilities conforming to the design specifications as approved by the District must be submitted.
2. Submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt applicator engaged in the implementation of the chloride-use plan for the site.

Board Action

It was moved by Manager _____, seconded by Manager _____ to approve permit application No. 2018-85 with the conditions recommended by staff.

Permit #: 2018-85
Project Name: Centennial Lakes Park Pedestrian Bridge Replacements – Centennial Lakes Park: Edina
Approval Date: July 18, 2018

General Provisions

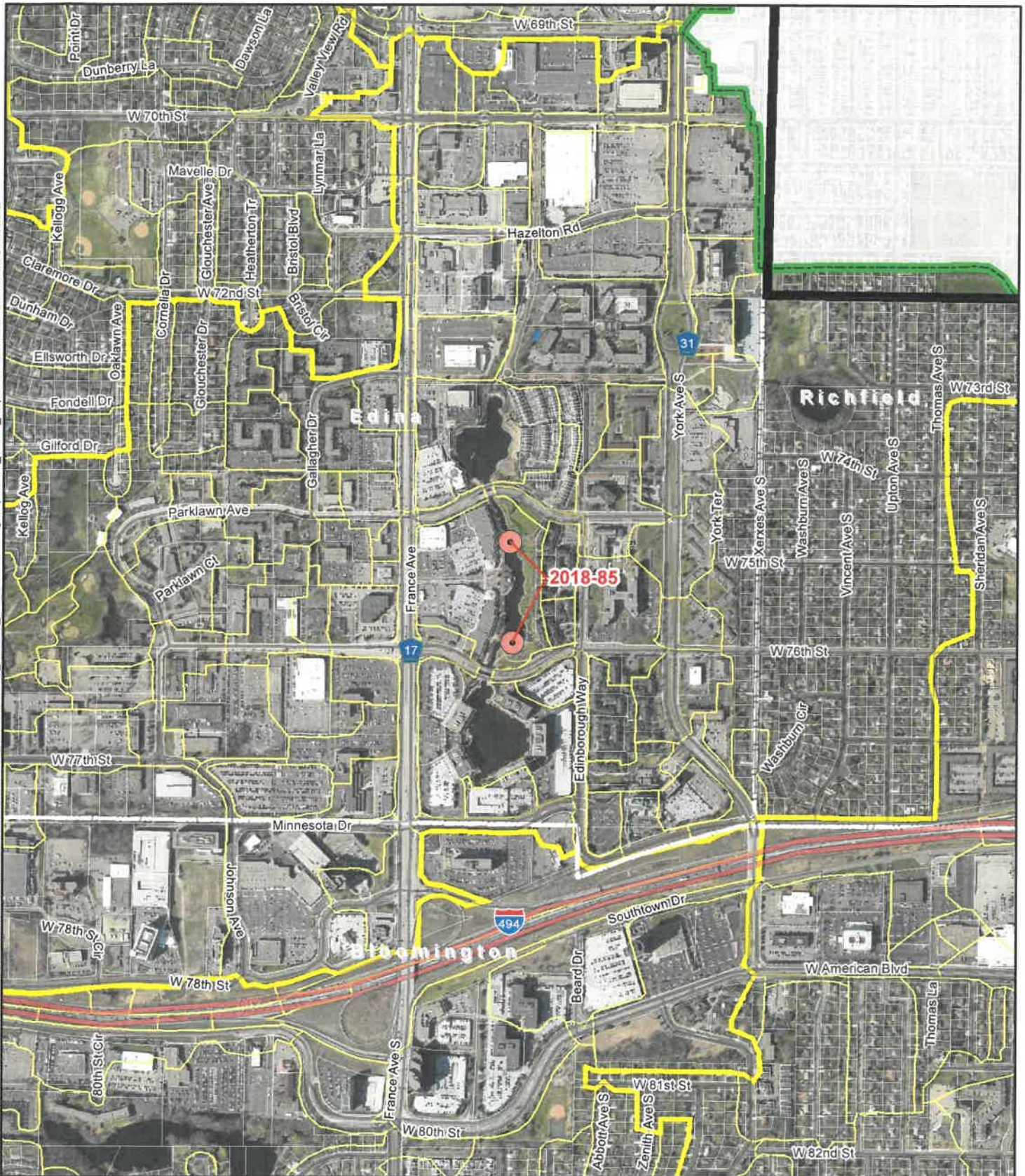
1. All temporary erosion control measures shown on the erosion and sedimentation control plans must be installed prior to commencement of surface or vegetation alteration and be maintained until completion of construction and vegetation is established as determined by NMCWD.








If silt fence is used, the bottom flap must be buried and the maximum allowable spacing between posts is 4-foot on center. All posts must be either 2-inch x 2-inch pine, hardwood, or steel fence posts. If hay bales are used, all bales must be staked in place and reinforced on the downstream side with snow fence.

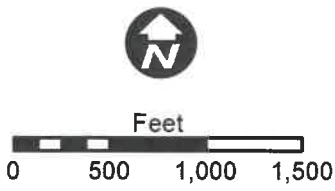
2. All areas altered because of construction must be restored with seed and disced mulch, sod, wood fiber blanket, or be hard surfaced within two weeks after completion of land alteration and no later than the end of the permit period.
3. Upon final stabilization, the permit applicant is responsible for the removal of all erosion control measures installed throughout the project site.
4. At the entryway onto the site, a rock filter dike being a minimum of two feet in height and having maximum side slopes of 4:1 must be constructed. This rock filter dike will enable construction traffic to enter the site and also provide an erosion control facility.
5. If dewatering is required and sump pumps are used, all pumped water must be discharged through an erosion control facility prior to leaving the construction site. Proper energy dissipation must be provided at the outlet of the pump system.
6. The NMCWD must be notified a minimum of 48 hours prior to commencement of construction.
7. The NMCWD, its officers, employees and agents review, comment upon, and approve plans and specifications prepared by permit applicants and their consultants for the limited administrative purpose of determining whether there is reasonable assurance that the proposed project will comply with the regulations and criteria of the NMCWD. The determination of the NMCWD that issuance of this permit is appropriate was made in reliance on the information provided by the applicant.
8. The grant of this permit shall not in any way relieve the permittee, its engineer, or other professional consultants of responsibility, nor shall it make the NMCWD responsible for the technical adequacy of the engineer's or consultant's work. The grant of this permit shall not relieve the permittee from complying with all conditions and requirements of the permit which shall be retained by the permittee with the permit.
9. The issue of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
10. This permit is permissive only. No liability shall be imposed upon the NMCWD or any of its officers, agents or employees, officially or personally, on account of the granting of this permit or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors.

11. In all cases where the doing by the permittee of anything authorized by this permit shall involve the taking, using, or damaging of any property, rights or interests of any other person or persons, or of any publicly-owned lands or improvements or interests, the permittee, before proceeding therewith, shall obtain the written consent of all persons, agencies, or authorities concerned, and shall acquire all necessary property, rights, and interest.
12. The permit is transferable only with the approval of the NMCWD (see NMCWD Rule 1.0). The permittee shall make no changes, without written permission previously obtained from the NMCWD, in the dimensions, capacity, or location of any items of work authorized by this permit.
13. The permittee shall grant access to the site at all reasonable times during and after construction to authorized representatives of the NMCWD for inspection of the work authorized by this permit.
14. This permit may be terminated by the NMCWD at any time deemed necessary in the interest of public health and welfare, or for violation of any of the provisions of this permit.
15. Construction work authorized under this permit shall be completed on or before date specified above. The permittee may, in writing, request that the NMCWD extend the time to complete the project in accordance with NMCWD Rule 1.0.

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-  Permit Location
-  District Legal Boundary
-  Nine Mile Creek Watershed
-  Municipalities
-  Major Watersheds
-  Small Watersheds
-  Parcels



**PERMIT LOCATION MAP
PERMIT 2018-85
Nine Mile Creek
Watershed District**

Imagery Source: Met Council Spring 2016 (MnGeo WMS)