

Applicant: Zachary Mahlum; Xcel Energy
Consultant: Bryan Miller; Larson Engineering, Inc.
Project: Edina Xcel Energy Pavement Rehabilitation
Location: 5309 West 70th Street, Edina, MN
Applicable Rule(s): 2, 3, 4, 5, 11 and 12
Reviewer(s): Bob Obermeyer; Barr Engineering Co.

General Background & Comments

The applicant proposes the reconstruction of bituminous pavement parking areas, utility improvements, site improvements and construction of a stormwater management facility at the Edina Xcel Service Facility located at 5309 West 70th Street in Edina. The 12.9-acre site is occupied by several buildings, associated site elements, and surface parking for Xcel Energy utility trucks. The proposed work will reconstruct (disturb and replace) 66,665 square feet (1.53 acres) of existing bituminous surface with 7,393 square feet of new impervious area created.

The site is located west North Fork of Nine Mile Creek (Creek) and the floodplain of the Creek, elevation 830 M.S.L., extends onto the site. The project proposes the construction of a storm water management facility for compliance with the NMCWD stormwater requirements within the floodplain of the Creek.

The project site information is:

- Total Site Area: 12.9 acres (562,626 square feet)
- Existing Site Impervious Area: 7.75 acres (337,796 square feet)
- Proposed Site Impervious Area: 7.92 acres (345,188 square feet)
- An increase of 7,392 square feet in site impervious area (2.2% increase)
- Disturbed and Reconstructed Impervious Area: 66,665 square feet
- 19.7% of the existing site impervious area is to be disturbed and reconstructed

Approximately 169,200 square feet of existing bituminous (in addition to the disturbed and reconstructed impervious area listed above) is to be milled and overlaid. In accordance with district rule 4.2.2c, the requirements of the district's storm water do not apply to rehabilitation, including mill and overlay, of paved surfaces.

The District's Wetland Management Rule 3.0 applies to the project because two onsite wetlands have been identified with one downgradient from the project's land-disturbing activities and a permit under District Rule 4.0 is required (Rule 3.4).

The district's requirements for both stormwater management and erosion and sediment control apply to both project sites because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b and 5.2.1a and b.

Exhibits

1. Permit Application dated December 22, 2021. Email correspondence dated January 3, 2022, outlining five items, including a determination of existing wetland areas on the site, during the growing season, required to complete the application.
2. Plans dated March 17, 2022, with the most recent revision dated **July 13, 2022**, prepared by Larson Engineering, Inc.
3. Stormwater Management Report/Narrative dated December 21, 2021, revised January 28, 2022, April 1, 2022, June 7, 2022, **October 5, 2022, and November 4, 2022**, prepared by Larson Engineering, Inc.
4. MIDS Calculator model files received December 21, 2021, and revised June 7, 2022, prepared by Larson Engineering, Inc.
5. HydroCAD model files received January 28, 2022, **latest revision October 4, 2022**, prepared by Larson Engineering, Inc.
6. Geotechnical report dated July 20, 2021, prepared by American Engineering Testing, Inc. **Dual ring infiltration testing and hand augers completed by Braun Intertec on October 11, 2022.**
7. Minnesota Routine Assessment Method (MnRAM) wetland data dated June 7, 2022, prepared by Bopray Environmental Services.
8. Wetland Report dated June 7, 2022, prepared by Bopray Environmental Services.
9. Wetland Conservation Act (WCA) Notice of Decision dated July 7, 2022.

The application with the submittal items above is complete.

2.0 Floodplain Management and Drainage Alterations

Proposed earth work and grading for the construction of the proposed on-site storm water management basin will take place below elevation 830 M.S.L., the 100-year frequency flood elevation of the North Fork of Nine Mile Creek. Because the project will involve land-altering activities below the 100-year frequency flood elevation of the Creek, the project must conform to the requirements of the District's Floodplain Management and Drainage Alterations Rule 2.0 in accordance with Rule 2.2.1.

The Creek is located approximately 820 feet east of the site with the limits of the floodplain extending onto the site.

Rule 2 criteria for floodplain and drainage alterations includes the following:

2.3.1: The low floor elevation of all new and reconstructed structures must be constructed in accordance with the NMCWD Stormwater Rule, subsection 4.3.3

The floodplain of the Creek inundates a portion of the site during the 100-year, 24-hour frequency storm event at elevation 830 M.S.L. Subsection 2.3.1 criteria requires at least two feet of separation between all new and reconstructed structures and the 100-year

frequency flood elevation of any open stormwater conveyance system. The plans identify the low floor elevation and the low opening of the existing on-site buildings at elevation 834 M.S.L. The 100-year frequency flood elevation of the proposed stormwater basin is 828 M.S.L. A **minimum** separation of 6.0 feet is provided between the low floor elevation/low opening elevation of the existing on-site buildings and the 100-year flood elevation of the Creek. **The relocated stormwater basin has a 100-year high water elevation of 836.99 M.S.L. (837 M.S.L. for management purposes). The structure on the north side of the site to the west of the basin has a low floor elevation/low opening elevation of 838.9 M.S.L. A physical separation or lowering of the flood elevation of the basin must be provided for compliance with the required two feet of separation.** No new structures are proposed on the site.

2.3.2: Placement of fill below the 100-year flood elevation is prohibited unless fully compensatory flood storage is provided within the floodplain and:

- a. at the same elevation +/- 1 foot for fill in the floodplain; or*
- b. at or below the same elevation for fill in the floodplain of a water basin or constructed stormwater facility.*

The HydroCAD model provided shows the project will result in an increase of approximately **241** cubic yards of floodplain volume elevation 830 M.S.L. The project is in conformance with subsection 2.3.2 criteria.

2.3.3. The District will issue a permit to alter surface flows only if it finds that the alteration is not reasonably likely to have a significant adverse impact on any upstream or downstream landowner and is not reasonably likely to have a significant adverse effect on flood risk, basin or channel stability, groundwater hydrology, stream base-flow, water quality or aquatic or riparian habitat.

The project will result in an increase in the on-site flood storage volume of the Creek, thereby not adversely affecting flood risk or transferring flood risk to upstream or downstream landowners, meeting subsection 4.3.3 criteria.

Stormwater runoff from the site is and will continue to be conveyed via surface overland flow paths to the Creek. Channel stability, stream base-flow, water quality and aquatic or riparian habitat within the Creek will not be changed and/or altered because stream baseflow conditions will not be increased as a result of the project. Post-project discharge rates from the site will be less than the existing discharge rates for all collection points where stormwater leaves the site (see Rule 4.3.1b analysis in **Section 4.0** of this report), drainage patterns will not be altered on-site, and flood storage volumes on-site will be maintained, avoiding increased flood risk to downstream landowners. The applicant provided pre- and post-project water quality modeling to demonstrate no adverse impact to water quality. The water quality modeling results demonstrate that the post-project total suspended solids (TSS) and total phosphorus (TP) pollutant loads leaving the site will be less than the existing load leaving the site (see Rule 4.3.1c analysis in **Section 4.0** of this report). Groundwater hydrology will not be changed and/or altered as part of the project. The engineer finds that the project is not likely to have significant offsite adverse impacts in conformance with Rule 2.3.3 criteria.

2.3.4 *No structure may be placed, constructed, or reconstructed and no surface may be paved within 50 feet of the centerline of any water course, except that this provision does not apply to:*

a. Bridges, culverts, and other structures and associated impervious surface regulated under Rule 6.0;

b. Trails 10 feet wide or less, designed primarily for nonmotorized use.

No structure is to be placed within 50 feet from the centerline of the creek. The site and all project work are approximately 820 feet west of the creek.

3.0 Wetlands Management

The District's Wetland Management Rule 3.0 applies to the project because onsite wetland(s) are downgradient or disturbed by the project's land-disturbing activities and a permit under District Rule 4.0 is required (Rule 3.4). The district is the Local Governmental Unit (LGU) responsible for administering the requirements of WCA in Edina.

A wetland boundary and type determination completed by Bopray Environmental Services identified the two wetlands (Wetland A and Wetland X) on the site and within the project area. As identified by the Wetland Permit Application Report dated June 7, 2022, prepared by Bopray Environmental Services, the project is proposing permanent impacts to Wetland A (report identification). Documentation was submitted to the district, the LGU, requesting a no-loss determination for Wetland X be determined since the wetland has been determined to be an incidental wetland. A WCA Notice of Decision approving the no-loss determination for the incidental wetland (Wetland X) was issued on July 7, 2022. Subsection 3.2.2a states that sections 3.4 and 3.5 do not apply to incidental wetlands therefore a wetland buffer riparian to Wetland X is not provided in accordance with Rule 3.2.2a criteria. The engineer agrees with the assessment.

A buffer is required for Wetland A because of wetland impacts from the construction of the proposed stormwater management basin. Bopray Environmental Services has submitted a MnRAM Assessment dated June 7, 2022, for Wetland A. The 450 square feet of proposed wetland impacts are determined to be de minimus, Mn 8420.0420 Subpart 8. Based on the comparison of the function and values presented in Appendix 3b of the district's Rules, the NMCWD wetland rating for the wetland has been classified as a medium value wetland.

The district agrees with the MnRAM results with the medium value determination for Wetland A. A medium value wetland requires a 20-foot minimum and 40-foot average buffer width. With an average 40-foot buffer, 35,517 square feet of buffer area is required - 35,524 square feet of buffer are shown to be provided. The required minimum and average buffer areas are shown to be met.

In accordance with Rule 3.4.5, buffer markers at the edges of the buffer area are required. Subsection 3.4.7 requires the maintenance of the wetland buffer by the applicant. A maintenance agreement is required.

4.0 Stormwater Management

The district's requirements for stormwater management apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b.

The NMCWD's Rule for Redevelopment, Rule 4.2.3, states, if a proposed activity will disturb more than 50% of the existing impervious surface on the site or will increase the imperviousness of the site by more than 50%, stormwater management will apply to the entire project site. Otherwise, the stormwater requirements will apply only to the disturbed and replaced and the net additional impervious surface on the project site (74,057 square feet). As previously stated, approximately 169,200 square feet of the existing bituminous parking is to be milled and overlaid. In accordance with district rule 4.2.2c, the requirements of the district's storm water do not apply to rehabilitation, including mill and overlay, of paved surfaces.

Stormwater management for compliance with subsection 4.3.1 will be provided by a surface storm water basin to be constructed to provide rate control, volume retention and water quality management for the disturbed areas of the current project. **The basin location shown of the original submittal and approved by the district has been moved because of poor soil and high water conditions encountered during construction. The basin has been relocated from the east side of the site to adjacent to the driveway access from West 70th Street.**

Rule 4.3.1b requires the 2-, 10-, and 100-year post development peak runoff rates be equal to or less than the existing discharge rates for all collection points where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates. The existing and proposed 2-, 10- and 100-year frequency discharge rates from the site are summarized in the tables below.

Existing Conditions			
Drainage Area	2- year (c.f.s.)	10- year (c.f.s.)	100- year (c.f.s.)
To the East	33.8	62.8	116.7
To the West	3.2	5.1	9.4

Proposed Conditions			
Drainage Area	2- year (c.f.s.)	10- year (c.f.s.)	100- year (c.f.s.)
To the East	37.2	59.6	116.2
To the West	3.2	5.1	9.4

The proposed stormwater management plan provides rate control in compliance with the NMCWD requirements for the 2-, 10-, and 100-year events. Rule 4.3.1b is met.

As previously stated, during construction in addition to the poor soil conditions high ground water was encountered prohibiting the removal of the material above the poorly graded and layer. The basin has been relocated from the east side of the site to adjacent to the driveway access from West 70th Street. Braun Intertec performed a dual ring infiltrometer test and took

hand augers in the relocated basin. The infiltrometer test indicated an infiltration rate of 0.6 inches/hour for the native soils at elevation 835 M.S.L. – 6-inches below the bottom of the proposed basin. The hand augers indicated that groundwater was not encountered to an elevation of 831.5 M.S.L. – 4 feet below the bottom of the proposed basin. The applicant has requested that the site be considered restricted and submitted information in support of a finding that the site qualifies as restricted under subsection 4.3.2 of the NMCWD Rules. Given the subsurface conditions for areas on the site where storm water management could be provided and existing land use constraints, the NMCWD engineer concurs that infiltration would require a significant portion of the lot to comply with the requirements of Section 4.3.1a of the district rules (1.1-inches of runoff from the regulated site impervious area) and qualifies as restricted (Rule 4.3.2).

Rule 4.3.2 requires retention of a minimum 0.55 inches of runoff from the regulated impervious surface. A retention volume of 3,394 cubic feet is required from the runoff depth of 0.55-inches from the 74,057 square feet of regulated impervious surface, Rule 4.3.2a.

The HydroCAD hydrologic model identified a total retention volume of 3,471 cubic feet (3,394 cubic feet required) with an area of 3,236 square feet (1,414 square feet required) will be provided below the outlet elevation of the infiltration facility. The retention volume will be drawdown in approximately 21 hours complying with Rule 4.3.1a (ii).

The table below summarizes the volume retention required and volume retention achieved. The proposed project is in conformance with subsection 4.3.2a.

Required Volume Retention Depth (inches)	Required Volume (cubic feet)	Provided Volume Retention Depth (feet)	Provided Volume (cubic feet)
0.55	3,394	2.2	3,471

Rule 4.5.4d (i) requires three feet of separation between the bottom of an infiltration facility and groundwater. The following table provides a comparison of the bottom elevation of the infiltration facility in relation to groundwater table identified near the location of the proposed Basin (as identified by Boring B-11).

Stormwater Management Facility	Bottom Elevation of the Basin M.S.L.	Groundwater Elevation (Not Encountered) M.S.L.	Separation Provided (feet)
Surface Basin	835.5	831.5	4.0

The required three (3) feet of separation is provided between the bottom of the infiltration area and groundwater.

The district’s water quality criterion requires 60% annual removal efficiency for TP and 90% annual removal efficiency for TSS from site runoff. A MIDS model was used to evaluate the BMP’s annual removal efficiencies. The results of this modeling are summarized in table below

showing the annual TSS and TP removal requirements are achieved. We agree with the modeling results and the project is in conformance with Rule 4.3.1c criteria.

Annual TSS and TP Removal Summary

Pollutant of Interest	Regulated Site Loading (lbs./year)	Required Load Removal (lbs./year)	Provided Load Reduction (lbs./year)
Total Suspended Solids (TSS)	752	677 (90%)	690 (92%)
Total Phosphorus (TP)	4.1	2.5 (60%)	2.5 (60%)

Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that the low floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a constructed facility. Additionally, Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that no opening where surface flow can enter the structure is less than two feet above the 100-year high-water elevation of an adjacent facility. Rule 4.3.3 also states, a stormwater management facility must be constructed at an elevation that ensures no adjacent habitable building will be brought into noncompliance with a standard in subsection 4.3.3. The low floor elevation of the existing habitable building in relation to the proposed stormwater management facilities' 100-year high-water elevations and the 100-year frequency flood elevation of the Creek is summarized in the table below. The proposed stormwater management facility is in conformance with Rule 4.3.3 criteria.

Stormwater Management Facility	100-year Frequency Flood Elevation (M.S.L.)	Low Floor/Low Opening Elevation of Habitable Building (M.S.L.)	Low Floor/Low Opening Separation (feet)
Stormwater Basin	837	838.9	1.9
North Fork of Nine Mile Creek	830	834	4.0

As stated in the paragraph for rule 2.3.1, the relocated stormwater basin has a 100-year high water elevation of 836.99 M.S.L. (837 M.S.L. for management purposes). The structure on the north side of the site to the west of the basin has a low floor elevation/low opening elevation of 838.9 M.S.L. A physical separation or lowering of the flood elevation of the basin must be provided for compliance with the required two feet of separation, Rule 4.3.3.

In accordance with Rule 4.3.1a (i), where infiltration or filtration facilities, practices or systems are proposed, pre-treatment of runoff must be provided. Runoff from the bituminous surfaces sheet flow towards the east to the proposed storm water basin. A pervious strip, a minimum width of 10-feet, is provided between the edge of the existing parking area or driveway and the storm water basin to provide the required pretreatment of runoff, complying with Rule 4.3.1a (i).

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.

Subsection 4.3.5 requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. The applicant must provide a receipt showing recordation of a maintenance declaration for the operation and maintenance of the stormwater management facilities.

5.0 Erosion and Sediment Control

The district's requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion control plan prepared by Larson Engineering, Inc. includes installation of perimeter control (silt fence), a stabilized rock construction entrance and storm sewer inlet protection.

The contractor for the project will need to designate a contact who will remain liable to the district for performance under the District's Erosion and Sediment Control Rule 5.0 from the time the permitted activities commence until vegetative cover is established, in accordance with subsection 5.4.1e. NMCWD must be notified if the responsible individual changes during the permit term.

11.0 Fees

Fees for the project are:

Rules 2.0, 3.0, 4.0 and 5.0	\$4,500
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12.0 Financial Assurances

Financial Assurances for the project are:

Rule 3: Wetlands Management:	\$5000
Rule 4: Stormwater Management Facilities: 3,772 S.F. X \$12/S.F. = \$45,264	\$45,264
Rules 5: Perimeter Control: 1,450 L.F. x \$2.50/L.F. = \$3,625	\$3,625
Inlet Protection: 4 x \$100 = \$400	\$400
Site Restoration: 1.7 acres x \$2,500/acre = \$4,250	\$4,250
Chloride Management Plan:	\$5,000
Contingency and Administration	\$25,161

Note: The required financial assurance \$88,700 as required with the previous permit approval must remain in effect until the conditions/stipulations of the revised permit modification are met.

Findings

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project will conform to Rules 2, 3, 4 and 5 with the fulfillment of the conditions identified below.

3. The proposed stormwater management facility will provide rate control and water quality management in accordance with subsections 4.3.1b and 4.3.1c criteria, and volume retention in accordance with subsection 4.3.2a criteria.
4. In accordance with NMCWD Rule 4.3.5, the applicant must provide a maintenance and inspection plan that identifies and protects the design, capacity, and functionality of the stormwater management facility, and record the plan in a declaration on the property title.
5. In accordance with NMCWD Rule 3.4.7, the wetland buffer must be documented by an agreement or other document approved by the district and recorded in a declaration on the property title.
6. The applicant has indicated the basin location shown of the original submittal and approved by the district has been moved because of poor soil and high-water conditions encountered during construction. The basin has been relocated from the east side of the site to adjacent to the driveway access from West 70th Street. Given the subsurface conditions for areas on the site where storm water management could be provided and existing land use site constraints, the NMCWD engineer concurs that infiltration would require a significant portion of the lot to comply with the requirements of Section 4.3.1a of the district rules (1.1-inches of runoff from the regulated site impervious area) and qualifies as restricted (Rule 4.3.2).

Recommendation

Approval, contingent upon:

Continued compliance with the General Provisions (attached).

The financial Assurance in the amount of \$88,700, \$83,700 for stormwater management, erosion control, and site restoration, and \$5,000 for compliance with the chloride management requirements required as a condition of the previous approval of the permit for the project must remain effective until the stipulations below are met.

The relocated stormwater basin has a 100-year high water elevation of 836.99 M.S.L. (837 M.S.L. for management purposes). The structure on the north side of the site to the west of the basin has a low floor elevation/low opening elevation of 838.9 M.S.L. A physical separation between the building and the basin, a lowering of the flood elevation of the basin or some other method for providing the two feet of separation as required by rule 4.3.3 must be provided and approved by the district.

By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit and release of the financial assurance after the project:

Per Rule 4.5.6, an as-built drawing of the floodplain mitigation areas conforming to the design specifications as approved by the district.

Per Rule 4.5.8, an as-built drawing of the stormwater management facility conforming to the design specifications is required to be provided, including stage volume relationships in tabular form.

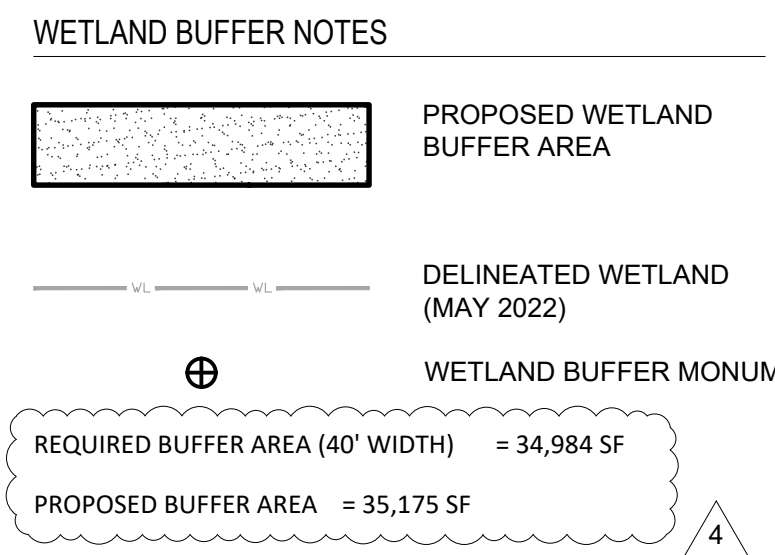
The recorded maintenance agreement will require revision based on the permit modification.

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. The release of the \$5,000 of the financial assurance required for the chloride-management plan requires that chloride-management plan has been provided and approved by the District's Administrator.

Installation of wetland buffer markers in accordance with 3.4.5.

Per Rule 12.4.1b, demonstration and confirmation that the underground stormwater management facility for volume retention has been constructed or installed and is functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the stormwater management facility used for volume retention has drawn down within 48 hours from the completion of two 0.55-inch (approximate) separate rainfall events.



PARKING STALL COUNT

EXISTING:

MAIN LOT	=	40 STALLS±
FLEET LOT	=	18 STALLS±
TOTAL	=	58 STALLS± (2 ADA)

PROPOSED:

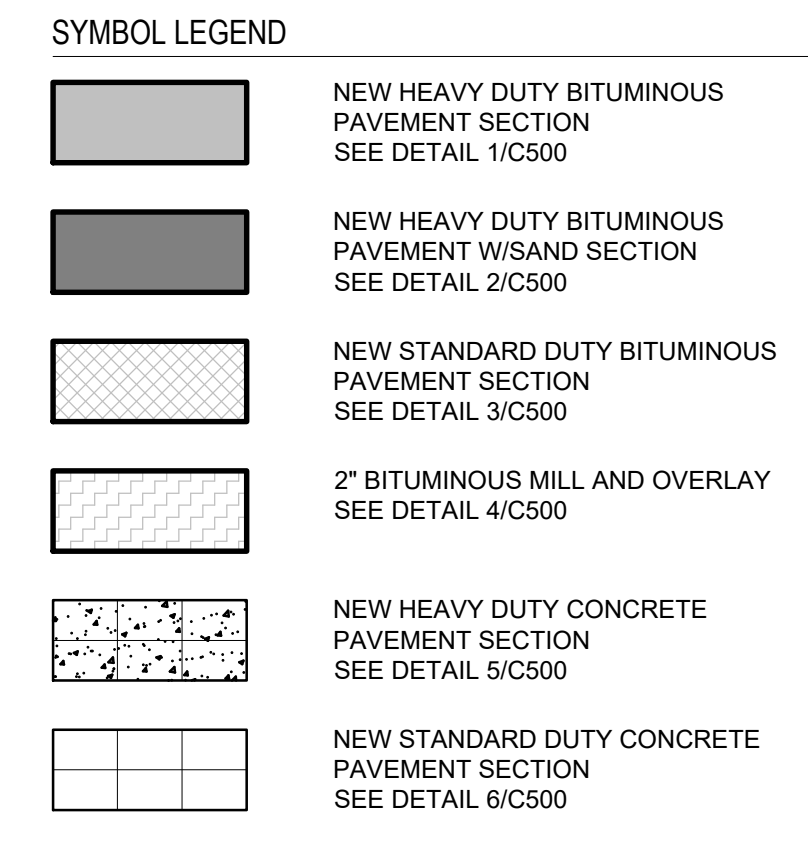
MAIN LOT	=	65 STALLS
FLEET LOT	=	26 STALLS
TOTAL	=	91 STALLS (4 ADA)

- KEY NOTES**
- 1 NEW ADA PARKING SIGN W/BOLLARD, SEE DETAIL 14/C500
 - 2 NEW NO PARKING - ACCESS AISLE SIGN, SEE DETAIL 15/C500
 - 3 NEW 6" STEEL BOLLARD, SEE DETAIL 13/C500. ALL LOCATIONS NEAR THE ENTRANCE GATE SHALL BE REVIEWED & COORD. WITH THE GATE SUPPLIER, INSTALLER, AND ELECTRICAL.
 - 4 RECONSTRUCT TRENCH DRAIN, SEE UTILITY PLAN, SALVAGE AND/OR REPLACE GRATES AS NEEDED, SEE DETAIL 12/C500.
 - 5 NEW CONCRETE PAD FOR PICNIC AREA, SEE DETAIL 6/C500 TABLES TO BE FURNISHED & INSTALLED BY OWNER.
 - 6 NEW E.V. CHARGING STATION - SEE ELECTRICAL.
 - 7 TRANSITION CURB TYPE, SEE GRADING PLAN & DETAILS.
 - 8 NEW STD. HWY GUARDRAIL SECTION, SEE DETAIL 5/C501 POSTS & RAILS TO BE SUPPLIED BY OWNER.
 - 9 NEW CONCRETE PAD FOR BICYCLE RACKING, SEE DETAIL 6/C500
 - 10 NEW CONCRETE PAD FOR BICYCLE RACK - SEE DETAIL 6/C500 F&I NEW BIKE RACK - MADRAX WINDER PLUS, 7 BIKE, POWDER COATED RED, SURFACE MOUNT W/STAINLESS ANCHORS

WORK BY OTHERS - NOT IN CONTRACT

ALL WORK IDENTIFIED BELOW IS PROVIDED FOR REFERENCE ONLY AND MAY BE COMPLETED BY OTHERS PRIOR TO OR DURING THE COURSE OF THIS PROJECT. THE PAVING CONTRACTOR SHALL COORDINATE ALL EFFORTS WITH OWNER AND OWNER'S VENDORS TO AID IN SCHEDULING AND COMPLETION OF WORK BY OTHERS.

A	NEW CHAIN LINK FENCE, SEE DETAIL 6/C501
B	PROVIDE ISOLATION CONNECTION TO SUBSTATION FENCE. COORDINATE W/SUBSTATION GROUP FOR ISOLATION REQS.
C	NEW VERTICAL PIVOT GATE - 30' WIDE. GATE TO BE FURNISHED & INSTALLED BY OWNER. PAVING CONTRACTOR SHALL ASSIST WITH ESTABLISHING GATE LOCATIONS AND PROPER ELEVATIONS DURING INSTALLATION.
D	NEW GATE CARD READER, SEE ELECTRICAL.
E	NEW PEDESTRIAN ACCESS GATE - CONFIRM LOCATION, SIZE, AND DETAILS W/OWNER.
F	NEW 30' x 40' CONCRETE APRON W/GATE LOOP DETECTORS, BY OWNER.
G	NEW FLAG POLE - FIELD VERIFY LOCATION W/OWNER.



Xcel Energy

Larson Engineering, Inc.

3535 Larson Road
White Bear Lake, MN 55110
651 481 9720 (F) 651 481 8001
www.larsoneng.com

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CONSULTANT PROJECT NUMBER: 12216031

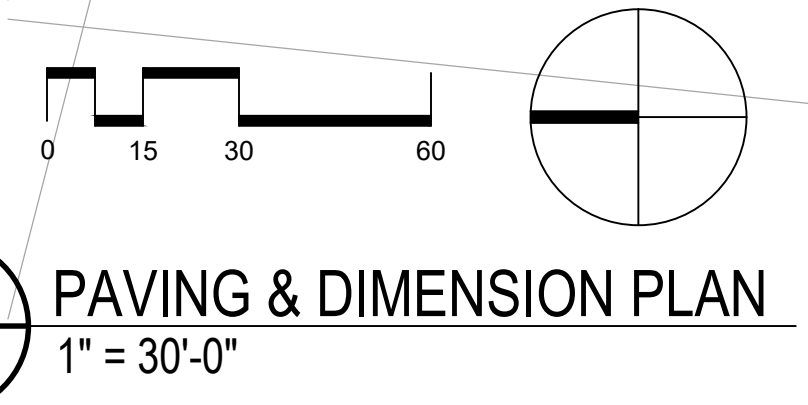
CONSULTANT PROJECT NUMBER: 12216031

Larson Mills

Date: 03.17.22 Reg. No.: 54950



**EDINA SERVICE CENTER
2022 PAVEMENT & SITE IMPROVEMENTS**
XCEL EDINA SERVICE CENTER
5309 WEST 70TH STREET
EDINA MN 55439



REVISIONS

REV	DATE ISSUED	DESCRIPTION	BY
04	04.15.22	ADDENDUM #1	BM
06	06.07.22	WATERSHED & CITY RESUBMITTAL	BM
07	07.13.22	CONSTRUCTION SET	BM
01	01.31.23	BASIN RELOCATION & ADDED CONCRETE	BM

SHEET TITLE: SITE PAVING AND DIMENSION PLAN

SHEET NUMBER: C120

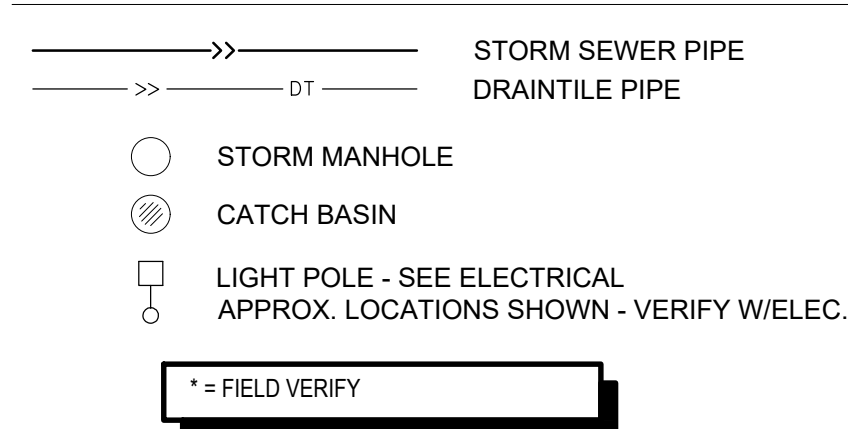
C PAVING & DIMENSION PLAN
C120 1" = 30'-0"

P:\Projects\Projects - 2021\12216031 - Xcel Energy Edina Pavement Rehabilitation\C120\C120-C122.dwg ALL EXISTING ITEMS AND CONDITIONS SHOULD BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION

UTILITY NOTES

- It is the responsibility of the contractor to perform or coordinate all necessary utility connections and/or relocations from existing locations to proposed buildings and onsite amenities. These connections may include, but are not limited to, water, sanitary sewer, cable TV, telephone, gas, electric, site lighting, etc.
- All service connections shall be performed in accordance with state and local standard specifications for construction. Utility connections (sanitary sewer, watermain, and storm sewer) may require a permit from the City.
- The contractor shall verify the elevations at proposed connections to existing utilities prior to any demolition or excavation. Notify the Engineer immediately if conditions differ from the plans.
- The contractor shall notify all appropriate engineering departments and utility companies 72 hours prior to construction. All necessary precautions shall be made to avoid damaging existing utilities.
- Storm sewer requires testing in accordance with MN plumbing code 4714.1109 where located within 10 feet of waterlines or buildings.
- The Contractor shall locate all existing waterlines throughout the project site. Where new drain tile crosses waterlines, Schedule 40 PVC piping shall be used for a minimum of 10 feet on either side of the waterline.
- All storm sewer piping and fittings must meet materials and installation standards per local plumbing code and standard specifications for construction.
- All RCP pipe shown on the plans shall be MN/DOT class 5.
- All PVC pipe shown on the plans shall be Schedule 40 PVC, unless otherwise noted.
- Maintain a minimum of 7 1/2' of cover over all water lines and sanitary sewer lines. Where 7 1/2' of cover is not provided, install 2" rigid polystyrene insulation (MN DOT 3760) with thermal resistance of at least 5 and a compressive strength of at least 25 psi. Insulation shall be 8" wide, centered over the pipe with 6" sand cushion between pipe and insulation. Where depth is less than 5', use 4" of insulation.
- Where noted, a structure adjustment shall include salvaging and re-installing existing casting with new adjustment rings and external chimney seals (Inf-Shield Uni-Band or equal) to proposed grades.

UTILITY LEGEND



Xcel Energy
 CORPORATION HQ 414 MIDCOURT MALL, MPLS MN
 XCEL ENERGY COMPANY: THIS DOCUMENT IS THE PROPERTY OF XCEL ENERGY CORPORATION. ALL RIGHTS RESERVED. 2022

Larson Engineering, Inc.
 3524 Larson Road
 White Bear Lake, MN 55110
 651 481 9120 (F) 651 481 8001
 www.larsoneng.com

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CONSULTANT PROJECT NUMBER: 12216031

CONSULTANT NAME/LOGO:

CONSULTANT PROJECT NUMBER:

STAMP

I hereby certify that this plan, specifications 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.

Larson Mills

Date: 03.17.22 Reg. No.: 54950

10/06/22 WATERSHED RESUBMITTAL - NOT FOR CONSTRUCTION

**EDINA SERVICE CENTER
 2022 PAVEMENT & SITE IMPROVEMENTS**
 XCEL EDINA SERVICE CENTER
 5309 WEST 70TH STREET
 EDINA MN, 55439

KEY PLAN

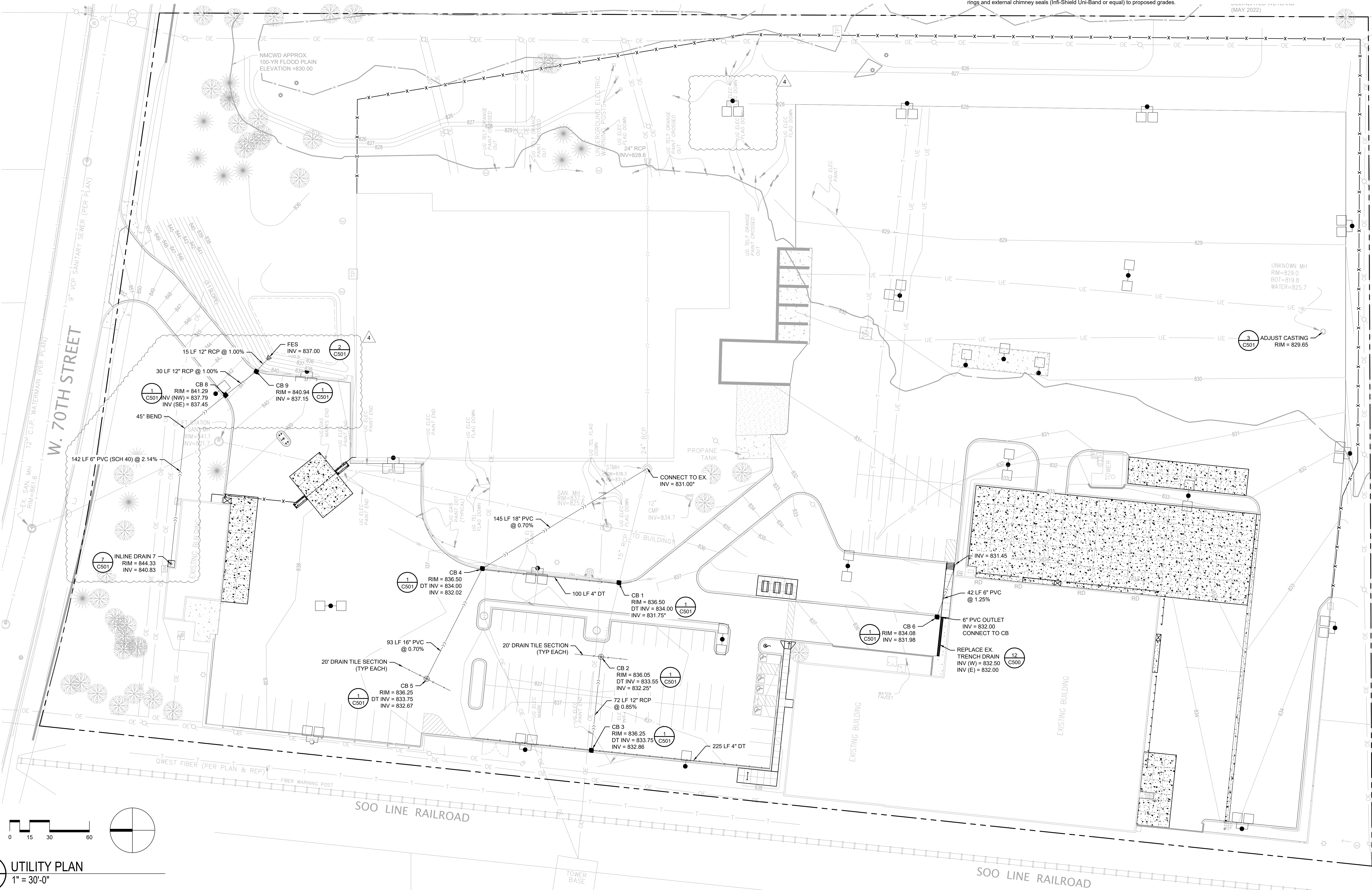
REV	DATE ISSUED	DESCRIPTION	DRWN
04.15.22		ADDENDUM #1	BM
06.07.22		WATERSHED & CITY RESUBMITTAL	BM
07.13.22		CONSTRUCTION SET	BM

SHEET TITLE:

UTILITY PLAN

SHEET NUMBER:

C160



C UTILITY PLAN
 C160 1" = 30'-0"



IMPACT LEGEND

EXISTING FLOODPLAIN VOLUME WITHIN PROPERTY LIMITS (BELOW ELEVATION 830.00) = 319,875 CF±

100-YEAR EXISTING FLOODPLAIN

SCALE: 1" = 40'

EXISTING 100-YR FLOODPLAIN ELEVATION = 830.00 (PER NMCWD - SUBWATERSHED NMS_28)



IMPACT LEGEND

PROPOSED FLOODPLAIN VOLUME WITHIN PROPERTY LIMITS (BELOW ELEVATION 830.00) = 319,916 CF±

100-YEAR PROPOSED FLOODPLAIN

SCALE: 1" = 40'

PROPOSED 100-YR FLOODPLAIN ELEVATION = 830.00

C FLOOD PLAIN MITIGATION PLAN
C131 1" = 40'-0"

OWNER:
Xcel Energy
CORPORATE HQ: 414 MIDCITY SQUARE, MINNEAPOLIS, MN 55402
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CONSULTANT NAME LOGO:
Larson Engineering, Inc.
3524 LARSON ROAD
WYOMING, MINN. 55510
651.481.9120 (F) 651.481.8201
www.larsoneng.com

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Rayan Mills
Date: 03.17.22 Reg. No.: 54950

10/06/22 WATERSHED RESUBMITTAL - NOT FOR CONSTRUCTION

**EDINA SERVICE CENTER
2022 PAVEMENT & SITE IMPROVEMENTS**
XCEL EDINA SERVICE CENTER
5309 WEST 70TH STREET
EDINA, MN 55439

KEY PLAN

XCEL ENERGY PROJECT #			
100035602237			
SUBMISSION:			
BID SET			
SUBMISSION DATE:			
03.17.22			
CADDING FILE NAME: 12216031-C131.dwg			
REV	DATE ISSUED	DESCRIPTION	BY
▲	04.15.22	ADDENDUM #1	BM
▲	06.07.22	WATERSHED & CITY RESUBMITTAL	BM
▲	07.13.22	CONSTRUCTION SET	BM

SHEET TITLE:
FLOOD PLAIN MITIGATION PLAN

SHEET NUMBER:
C131

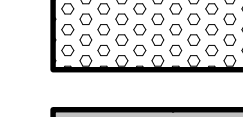

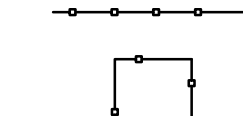

EROSION CONTROL NOTES

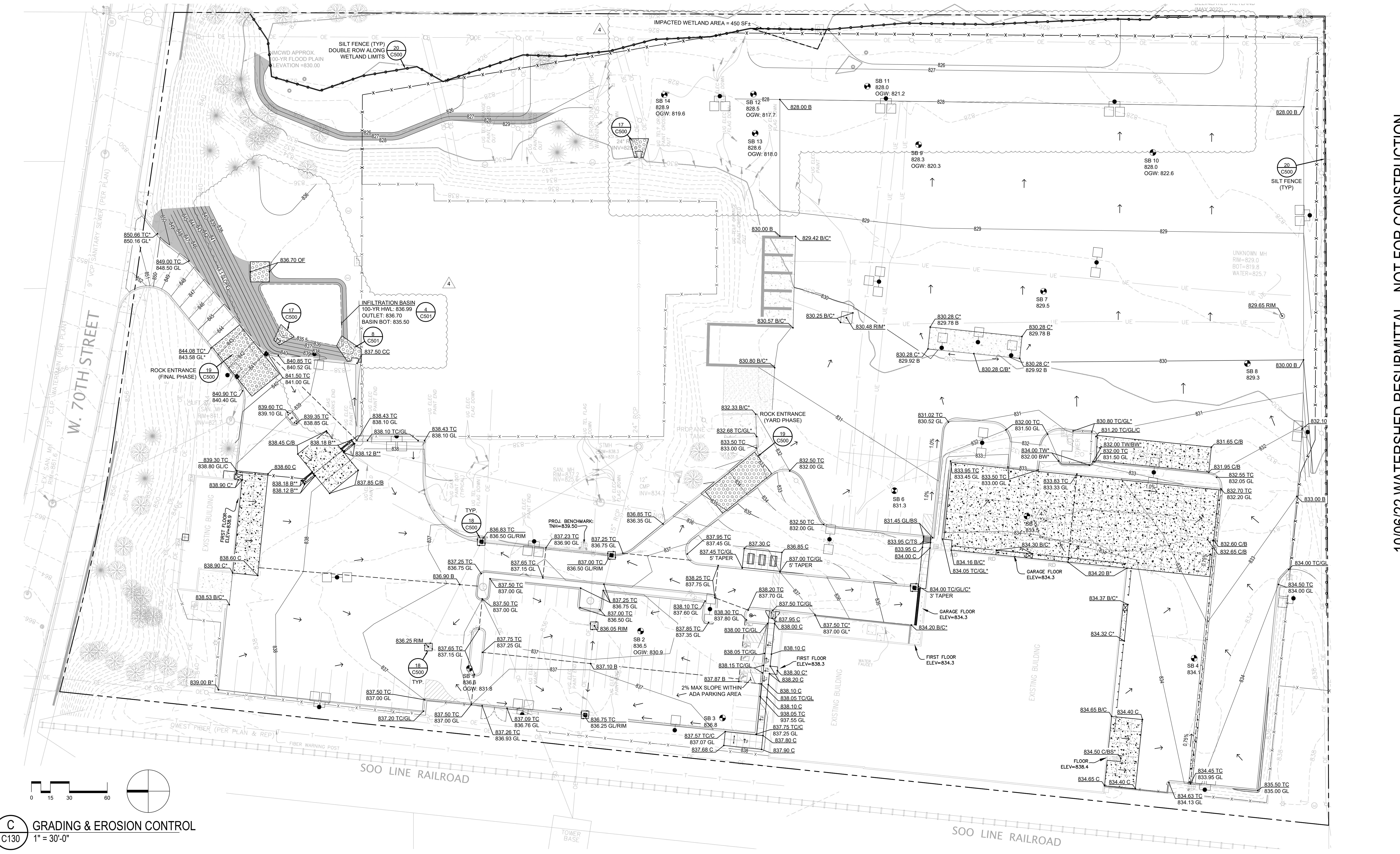
- Owner and Contractor shall obtain necessary MPCA-NPDES and Nine Mile Creek Watershed District permits. The SWPPP shall be kept onsite at all times.
- Install temporary erosion control measures (inlet protection, silt fence, rock construction entrances, etc.) prior to beginning any excavation or demolition work at the site.
- Erosion control measures shown on the erosion control plan are the absolute minimum. The contractor shall install temporary earth dikes, sediment traps or basins, and/or additional siltation fencing as deemed necessary to further control erosion.
- All construction site entrances shall be surfaced with crushed rock across the entire width of the entrance and from the entrance to a point 50' into the construction zone.
- All grading operations shall be conducted in a manner to minimize the potential for site erosion. Sediment control practices must be established on all down gradient perimeters before any up gradient land disturbing activities begin.
- All exposed soil areas must be stabilized as soon as possible to limit soil erosion but in no case later than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased. 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 this requirement.
- All storm sewer catch basins not needed for site drainage during construction shall be covered to prevent runoff from entering the storm sewer system. Catch basins necessary for site drainage during construction shall be provided with inlet protection.
- All rip-rap shall be installed with a filter material or soil separation fabric and comply with MN DOT standard specifications, latest edition.
- In areas where concentrated flows occur (such as swales and areas in front of storm catch basins and inlets) the erosion control facilities shall be backed by stabilization structure to protect those facilities from the concentrated flows.
- Inspect the construction site once every seven days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. All inspections shall be recorded in the SWPPP.
- All BMPs must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches 1/3 of the height of the BMP. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.
- If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts.
- All soils tracked onto pavement shall be removed daily.
- Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.
- Collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with local disposal requirements.
- Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with all local regulations.
- External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed onsite.
- All liquid and solid wastes generated by concrete washout operations must be contained in a leak-proof containment facility or impermeable liner. A compacted clay liner that does not allow washout liquids to enter ground water is considered an impermeable liner. The liquid and solid wastes must not contact the ground, and there must not be runoff from the concrete washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with local regulations. A sign must be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities.
- Upon completion of the project and stabilization of all graded areas, all temporary erosion control facilities (silt fences, hay bales, etc.) shall be removed from the site.
- Contractor shall submit Notice of Termination for MPCA-NPDES permit within 30 days of Final Stabilization.

GRADING NOTES

- Grades shown represent finish elevation unless noted otherwise.
- All construction shall be performed in accordance with state and local standard specifications for construction.
- The Contractor shall be responsible for construction testing to verify fill materials and compaction requirements per project specifications.
- Restore all areas of disturbed landscaping to original conditions or better. See landscape plans for further direction.

SYMBOL LEGEND

 RIP-RAP / ROCK CONST. ENTRANCE
 EROSION CONTROL BLANKET (TYP ALL SLOPES 4:1 OR GREATER) SEE LANDSCAPE FOR FURTHER REQ'S.
 SILT FENCE
 INLET PROTECTION
SPOT GRADES
 B = BITUMINOUS
 C = CONCRETE
 TC = TOP OF CURB
 GL = GUTTER LINE
 G = GROUND
 RM = TOP OF RIM
 * = FIELD VERIFY
 ** = GRADES TO BE VERIFIED & COORD. W/ GATE SUPPLIER AND INSTALLER



10/06/22 WATERSHED RESUBMITTAL - NOT FOR CONSTRUCTION

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EDINA, MN 55439

C130

GRADING AND EROSION CONTROL PLAN

SHEET NUMBER

100035602237

BID SET

SUBMISSION DATE: 03/17/22

CADDING FILE NAME: 12216031-C130.dwg

REV	DATE	ISSUED	DESCRIPTION	BY
04.15.22			ADDENDUM #1	BM
06.07.22			WATERSHED & CITY RESUBMITTAL	BM
07.13.22			CONSTRUCTION SET	BM

SHEET TITLE

GRADING AND EROSION CONTROL PLAN

SHEET NUMBER

C130

ALL EXISTING ITEMS AND CONDITIONS SHOULD BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION

Xcel Energy

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Larson Engineering, Inc.
 3024 Larson Road
 White Bear Lake, MN 55110
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 CONSULTANT PROJECT NUMBER: 12216031

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Larson Mills

Date: 03/17/22 Reg. No.: 54950

C GRADING & EROSION CONTROL

C130

1" = 30'-0"