

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2024-027

**Considered at Board of Managers Meeting:** July 10, 2024

**Received complete:** May 20, 2024

**Applicant:** Three Rivers Park District

**Representative:** Dean Doneen, SEH Inc.

**Project:** Hyland Lake Boat Launch - The applicant proposes to reconstruct the existing boat launch on the northwest side of Hyland Lake in Bloomington. The applicant proposes to provide water quality treatment, volume abstraction and rate control for runoff prior to discharging to Hyland Lake using a stormwater filtration basin.

**Location:** Hyland Lake Park Reserve, Bloomington, MN

**Reviewer:** Heather Lau, P.E. and Scott Sobiech, P.E., Barr Engineering Co.

### Proposed Board Action

Manager \_\_\_\_\_ moved and Manager \_\_\_\_\_ seconded adoption of the following resolutions based on the permit report that follows and the presentation of the matter at the July 10, 2024 meeting of the managers:

Resolved that the application for Permit 2024-027 is approved, subject to the conditions and stipulations set forth in the Recommendations section of the attached report;

Resolved that on determination by the RPBCWD administrator that the conditions of approval of the permit have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver to the applicant, Permit 2024-027 on behalf of RPBCWD.

Upon vote, the resolutions were adopted, \_\_\_\_\_ [VOTE TALLY].

### Applicable Rule Conformance Summary

Rule	Issue	Conforms to Rule?	Comments
B	Floodplain Management and Drainage Alterations	Yes	
C	Erosion Control Plan	See comment.	See rule-specific permit condition C1 related to providing name and contact information for the individual responsible for erosion control.
J	Stormwater Management	Rate	Yes
		Volume	Yes
		Water Quality	Yes
		Low Floor Elev.	Yes
		Maintenance	See Comment

Rule	Issue	Conforms to Rule?	Comments
	Chloride Management	See Comment	See stipulation #7 related in providing a chloride management plan prior to close-out.
	Wetland Protection	N/A	
<b>L</b>	<b>Permit Fee</b>	N/A	Governmental Entity
<b>M</b>	<b>Financial Assurance</b>	N/A	Governmental Entity

**Project Background**

The Hyland Lake boat launch is located in the northwest corner of Hyland Lake in Bloomington. The project involves the reconstruction of the existing boat launch, associated trails, and stormwater filtration basin. Three Rivers Park District proposes to provide water quality treatment, volume abstraction and rate control for runoff prior to discharging to Hyland Lake using a stormwater filtration basin. Table 1 provides a summary of the Hyland Lake boat launch site in comparison to the previously approved overall site. Under previously approved Permit 2018-072 the applicant completed realignment of segments of the park entrance, construction of new parking areas as well as pervious pavement and two bioretention features for stormwater management.

**Table 1 Relevant Project Information**

	Permit 2018-072	Current Permit 2024-027	Aggregate
Total Site Area (acres)	880.3	880.3	880.3
Existing Site Impervious (acres)	27.91	27.91	27.91
Post Construction Site Impervious (acres)	28.34	28.37	28.37
New Site Impervious Area (acres)	0.43	0.12	0.55
Increase in Site Impervious Area (acres)	0.43 (1.5% increase)	0.03 (0.1% increase)	0.46 (1.6% increase)
Disturbed Impervious Surface (acres)	5.39 (19.3%)	0.43 (1.5%)	5.82 (20.9%)
Exempt Rehabilitated Impervious Surface and Exempt Sidewalk (acres)	2.37	0.12	2.49
Regulated Impervious Surface (acres)	4.96	0.43	5.39
Total Disturbed Area (acres)	11.73	0.72	12.45

The following materials were reviewed in support of the permit request:

1. Hyland Lake Boat Launch RPBC Permitting Memo dated April 23, 2024 (Notified applicant on May 14, 2024 that submittal was incomplete, revised materials completing the application received May 20, 2024)
2. Stormwater Cover Letter dated April 23, 2024 (revised May 20, 2024, May 28, 2024, and June 10, 2024)
3. Public Waters Work Permit dated April 22, 2024
4. Floodplain Exhibit dated April 23, 2024 (revised May 20, 2024)

5. Project Report No. 586 Capture of Gross Solids and Sediment by Pretreatment Practices for Bioretention dated January 2019
6. Figure 1 - Proposed BMP dated April 23, 2024
7. SWPPP and Erosion Control Plan received April 23, 2024
8. Minnesota Wetland Conservation Act Notice of Decision dated September 24, 2018
9. Construction Drawings dated May 20, 2024 (revised May 28, 2024, and June 5, 2024)
10. Drainage Overview Maps received April 23, 2024 (revised May 20, 2024)
11. Existing Drainage Map dated May 20, 2024
12. Proposed Drainage Map dated May 20, 2024
13. Figure 1 – Impervious Evaluation dated May 20, 2024
14. Electronic existing and proposed conditions HydroCAD models received May 20, 2024 (revised May 28, 2024 and June 10, 2024)
15. HydroCAD model output dated May 20, 2024 and June 10, 2024
16. Electronic existing and proposed conditions MIDS models received May 20, 2024 (revised May 28, 2024 and June 10, 2024)
17. MIDS model output dated April 22, 2024 (revised May 20, 2024, May 28, 2024, and June 10, 2024)
18. MPCA MTD Sizing Tool spreadsheet received May 28, 2024
19. Bypass Sizing tool received June 10, 2024.
20. Snowmaking and Lighted Trail Development for Cross County Skiing dated June 11, 2013
21. Geotechnical Evaluation by Northern Technologies, LLC dated June 13, 2018
22. Air, Land, and Water Pollution Specification Section 01 5719 received May 20, 2024
23. Controlling Erosion and Establishing Vegetation Specification Section 32 9212 received May 20, 2024

**Rule Specific Permit Conditions**

**Rule B: Floodplain Management and Drainage Alterations**

Because the project involves placing 17.78 cubic yards of fill below the 100-year flood elevation of a Hyland Lake (891.6 ft) and land-disturbing activities in the floodplain at several locations, the project must conform to the requirements set forth by the RPBCWD Floodplain Management and Drainage Alterations rule (Rule B, Subsection 2.1).

Because the applicant does not propose new or reconstructed structures with low floors, the low floor elevation requirements set forth by Rule B, Subsection 3.1 do not impose requirements on the project.

The summary of the changes to the floodplain storage capacity is provided in Table 2. The project plans show that compensatory flood storage will be created at or below the same elevation of areas where fill will be placed below the 100-year flood elevation of Hyland Lake. In addition, the plans indicate the prop

osed outfall to the lake will daylight at the location of proposed cut, resulting in no additional fill within the floodplain. The plans provide for a net increase in flood storage of 0.94 cubic yards in the Hyland Lake floodplain, conforming with Rule B, Subsection 3.2.

**Table 2 Fill and Cut computation below existing 100-year flood elevations.**

Waterbody	100-Year Elevation	Proposed Fill (CY)	Proposed Cut (CY)	Increase in Storage (CY)
Hyland Lake	819.6	17.78	18.74	0.94

The applicant provided pre- and post-project water quality modeling to demonstrate the project is not reasonably likely to have an adverse impact to water quality. The modeling results show the total suspended solids and total phosphorus load leaving the site after the project will be less than the existing load leaving the site (see Rule J Water Quality analysis). In addition, consistent with the rate-control requirement in Rule J, the proposed peak discharge rates leaving the disturbed areas are less than existing for the 2-, 10-, and 100-year event as presented in the Rule J rate control analysis. Because the project provides a net increase in flood storage, reduces discharge rates, and reduce pollutants leaving the site, the engineer finds that the project is not reasonably likely to adversely affect flood risk, basin, or stream baseflow, thus meeting the requirements of Rule B, subsection 3.3.

Because no watercourses exist on the site, Rule B, Subsection 3.4 does not impose requirements on the project. See Rule C analysis of the applicant’s submitted erosion control plan to demonstrate conformance with Rule B, Subsection 3.5. A note on the plans indicates that activities must be conducted to minimize the potential transfer of aquatic invasive species conforming to Rule B, Subsection 3.6.

The proposed project conforms to the floodplain management and drainage alteration requirements of Rule B.

**Rule C: Erosion Prevention and Sediment Control**

Because the project will involve 0.72 acres of land-disturbing activities (i.e., more than 5,000 square feet), the project must conform to the requirements set forth by the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plans prepared by SEH Inc. include installation of silt fence, silt curtain, inlet protection, stabilized construction entrances, erosion control blanket, inspection, riprap at flared ends, placement of a minimum of 6 inches of topsoil with a minimum 5% organic matter, decompaction of areas compacted during construction, and retention of native topsoil onsite to the greatest extent possible. To conform to RPBCWD Rule C requirements, the following revisions are needed:

- C1. The Applicant must provide the name, address and phone number of the individual who will remain liable to the District for performance under this rule and maintenance of erosion and sediment-control measures from the time the permitted activities commence until vegetative cover is established.

### **Rule G: Waterbody Crossings and Structures**

The applicant proposes construction in contact with the bank of Hyland Lake to replace the existing boat ramp, a structure in the bank of Hyland Lake. Because the applicant received a project specific permit (1984-6143) for the work in public waters from the DNR, the project is compliant with the criteria of RPBCWD's Waterbody Crossings and Structures Rule (Rule G, Subsection 2.1).

### **Rule J: Stormwater Management**

Because the project involves 0.72 acres of land-disturbing activity (i.e., more than 5,000 square feet), conformance with RPBCWD's Stormwater Management Rule J is required. Under paragraph 2.5 of Rule J, Common Scheme of Development, activities subject to Rule J on a parcel or adjacent parcels under common or related ownership will be considered in the aggregate, and the requirements applicable to the activity under this rule will be determined with respect to all redevelopment that has occurred on the site and on adjacent sites under common or related ownership since the date this rule took effect (January 1, 2015). Because one other project was permitted and constructed since the rules took effect (RPBCWD Permit 2018-072), the current activities proposed must be considered in aggregate with the activities proposed under the prior applications.

The criteria listed in Subsection 3.1 only apply to the disturbed areas on the project site because the project, in aggregate with the other permitted activities at the site, increases the imperviousness by 1.6 percent and disturbs a combined 20.9 percent of the existing impervious surface on the site (Rule J, Subsection 2.3) (see project site information table above). Because the aggregate extent of disturbance is less than 50 percent of the impervious area of the site, and the two projects, in aggregate, expand the impervious area of the site by less than 50 percent, RPBCWD's stormwater management requirements apply only to the increased and disturbed and reconstructed impervious areas of the site proposed for this project. While the project results in a total of 0.55 acres of new and disturbed impervious surface on the site, the 0.12 acres of paved trail (10 feet or less in width and bordered downgradient by a pervious area at least half the width of the trail) are exempt from RPBCWD's stormwater management rule (Rule J, Subsection 2.2d).

The applicant proposes to provide water quality treatment, volume abstraction and rate control for runoff prior to discharging to Hyland Lake using a stormwater filtration basin.

### ***Rate Control***

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year, and 100-year, 10-day snowmelt post development peak runoff rates must be equal to or less than the existing discharge rates at all locations where stormwater leaves the site.

The applicant used HydroCAD to simulate runoff rates for pre- and post-development conditions for the 2-, 10-, and 100-year frequency storm events using a nested rainfall distribution, and the 100-year frequency, 10-day snowmelt event. The existing and proposed peak discharges from the site are summarized in Table 3.

Because the project results in a reduction in peak discharges to Hyland Lake for all four events, the project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

**Table 3. Rate control summary**

Location	2-Year Discharge (cfs)		10-Year Discharge (cfs)		100-Year Discharge (cfs)		10-Day Snowmelt (cfs)	
	Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
Hyland Lake	6.0	5.3	11.9	11.1	26.2	25.0	0.6	0.6

**Volume Abstraction**

Subsection 3.2c of Rule J requires the abstraction onsite of 1.1 inches from the regulated 0.43 acres of impervious surfaces. An abstraction volume of 1,717 cubic feet is required from the 0.43 acres of new and/or reconstructed impervious surface on the site. The applicant is proposing one filtration basin to provide abstraction via evapotranspiration.

Soil information from borings collected by Northern Technologies, LLC indicate the presence of clayey soils throughout the site. While no borings were collected within the proposed basin footprint and the nearest boring located more than 400 feet west of the proposed basin did not encounter groundwater down to the boring depth of 6.2 feet, the ordinary high water level (OHWL) of Lake Hyland of 817.9 feet is a reasonable representation of the seasonally high groundwater at the proposed filtration basin location. The information summarized in Table 4 below supports a determination that groundwater is less than 3 feet below the bottom of the proposed filtration basin.

**Table 4. Separation from groundwater summary**

Nearest Subsurface Investigation	Boring is within footprint?	Groundwater Elevation (feet)	BMP Bottom Elevation (feet)	Separation (feet)
B-8	No	Seasonally high groundwater presumed to be at the OHWL of Hyland Lake of 817.9	819	1.1

Because the engineer concurs that the soil boring information showing low permeable soils, inadequate separation to groundwater, and steep site topography support that the abstraction standard in subsection 3.1.b of Rule J cannot practicably be met for runoff from all regulated impervious surface, the site is considered a restricted site and stormwater runoff volume must be managed in accordance with Subsection 3.3 of Rule J. For restricted sites, Subsection 3.3 of Rule J requires rate control in accordance with Subsection 3.1.a and that abstraction and water-quality protection be provided in accordance with the following sequence:

- (a) abstraction of 0.55 inches of runoff from site impervious surface determined in accordance with paragraph 3.2, and treatment of all runoff to the standard in paragraph 3.1c; or

(b) abstraction of runoff onsite to the maximum extent practicable and treatment of all runoff to the standard in paragraph 3.1c; or

(c) off-site abstraction and treatment in the watershed to the standards in paragraph 3.1b and 3.1c.

The Applicant is providing abstraction of runoff from the impervious surface to the maximum extent practicable with evapotranspiration in the proposed filtration basin. To maintain Hyland Park's natural integrity and vegetation patterns the applicant dismissed rainwater harvest and reuse. Table 5 summarizes the abstraction volume provided by the project and demonstrates the proposed activity conforms to Rule J, Subsection 3.3b.

**Table 5. Volume abstraction summary**

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	1,717	<0.1	22

**Water Quality Management**

Subsection 3.1.c of Rule J requires the Applicant to provide for volume abstraction in accordance with 3.1b or at least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS), as well as no net increase in TSS or TP loading leaving the site from existing conditions.

The applicant is proposing a filtration basin to achieve the required TP and TSS removals and submitted a MIDS model to estimate the TP and TSS removals. The results of this modeling are summarized in Table 6 and Table 7 below showing the annual TSS and TP removal requirements are achieved and that there is no net increase in TSS and TP leaving the site. The engineer concurs with the modeling and finds that the proposed project will be in conformance with Rule J, Subsection 3.1.c.:

**Table 6. Annual TSS and TP removal summary**

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr) <sup>1</sup>	Provided Load Reduction (lbs/yr) <sup>1</sup>
Total Suspended Solids (TSS)	162	146 (90%)	178 (>100%)
Total Phosphorus (TP)	0.89	0.53 (60%)	0.61 (68.1%)

<sup>1</sup> TSS and TP reduction by the BMP are larger than the regulated loading because the BMP treats runoff from unregulated area tributary to the BMP.

**Table 7. Summary of net change in TSS and TP leaving the site**

Pollutant of Interest	Existing Loading (lbs/yr)	Proposed Load after Treatment (lbs/yr)	Change (lbs/yr)
Total Suspended Solids (TSS)	177	105	-72
Total Phosphorus (TP)	0.98	0.95	-0.01

**Low floor Elevation**

All new buildings must be constructed such that the lowest floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a stormwater-management facility according to Rule J, Subsection 3.6a. In addition, a stormwater-management facility must be constructed at an elevation that ensures that no adjacent habitable building will be brought into noncompliance with a standard in this subsection 3.6. Because the project does not propose to construct or reconstruct structures that have low-floor elevations, subsection 3.6a does not impose requirements on the project.

The low floor elevations of the existing pump house structure as well as the 100-year high water elevation of the stormwater facilities are summarized in following table. Because the low floor elevation of the existing pump house is less than 2 feet above the 100-year high water elevation of the proposed stormwater facility, an alternative low floor analysis was conducted as outlined in Rule J, Appendix J.1 – Low-Floor Elevation Assessment. The results of the low floor analysis using Appendix J1 Plot 2: Minimum Depth to Water Table for No Further Evaluation is summarized below. The results demonstrate the provided separation is greater than the minimum required, thus meeting the habitable structure requirements in Rule J, Subsection 3.6.

**Table 8. Low Floor Evaluations**

Structure Address	Stormwater Facility	100-year Event Flood Elevation of Feature (feet)	Lowest Floor Elevation of Building (feet)	Freeboard Provided (feet)	Distance from Building to Adj. Facility (ft)	Seasonal Water Table Elevation (ft)	Minimum Allowable Depth to Water Table (ft)	Provided Depth from Low Floor Elevation to Water Table (ft)
Existing Pump House	Filtration Basin	821.89	822.26	0.37	36	817.9	4.0	4.36

**Maintenance**

Subsection 3.7 of Rule J requires the submission of 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.

- J1. Permit applicant must provide a draft maintenance and inspection plan for review and approval by RPBCWD. As a public entity, the Three Rivers Park District may comply with this requirement by entering into a maintenance agreement with the RPBCWD.

**Chloride Management**

Subsection 3.8 of Rule J requires the submission of chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan. To close out the permit, Permit applicant must provide a chloride management plan that designates the individual authorized to implement the chloride management plan.

### **Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. Construction shall be consistent with the plans and specifications approved by the District as a part of the permitting process. The date of the approved plans and specifications is listed on the permit.
3. Construction must be consistent with the plans, specifications, and models that were submitted by the applicant that were the basis of permit approval. The date(s) of the approved plans, specifications, and modeling are listed on the permit. The grant of the permit does not in any way relieve the permittee, its engineer, or other professional consultants of responsibility for the permitted work.
4. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit does not convey any rights to 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.
6. In all cases where the doing by the permittee of anything authorized by this permit involves 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, must acquire all necessary property rights and interest.
7. RPBCWD's determination to issue this permit was made in reliance on the information provided by the applicant. Any substantive change in the work affecting the nature and extent of applicability of RPBCWD regulatory requirements or substantive changes in the methods or means of compliance with RPBCWD regulatory requirements must be the subject of an application for a permit modification to the RPBCWD.
8. If the conditions herein are met and the permit is issued by RPBCWD, the applicant, by accepting the permit, grants access to the site of the work at all reasonable times during and after construction to authorized representatives of the RPBCWD for inspection of the work.

### **Findings**

1. The proposed project includes the information necessary, plan sheets and erosion control plan for review.
2. The proposed project conforms to Rule G by receiving a project specific permit for the proposed work in public waters (DNR WIPW Permit 1984-6143).
3. The proposed project conforms to Rules B.
4. The propose project will conform to Rules C and J if the Rule Specific Permit Conditions listed above are met.

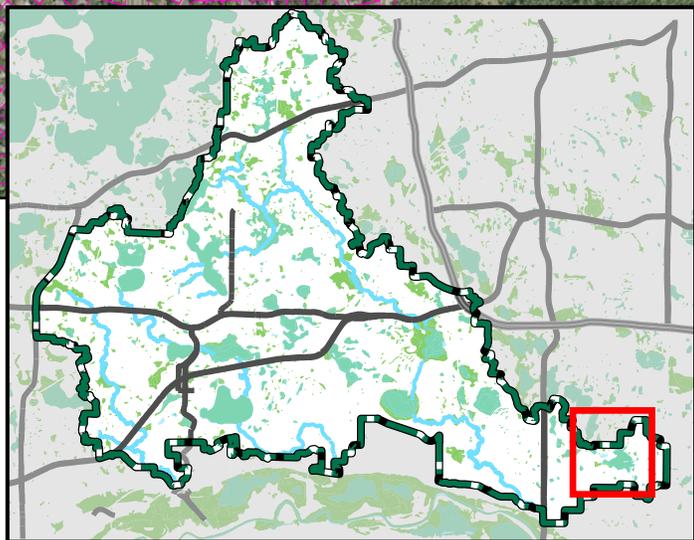
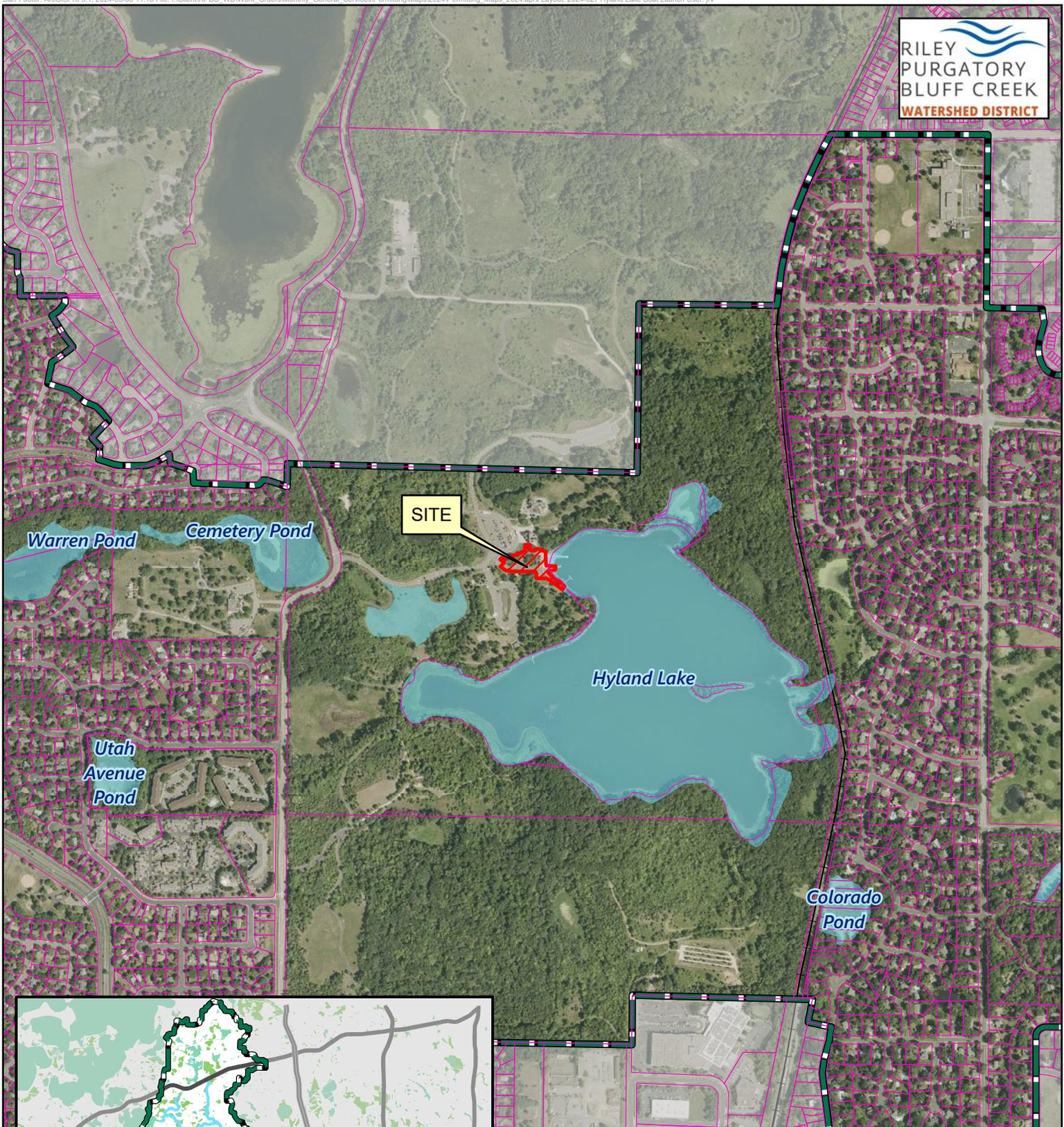
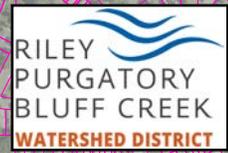
### **Recommendation:**

Approval of the permit contingent upon:

1. The applicant providing the name and contact information of the general contractor responsible for erosion control at the site.
2. Stormwater management facilities maintenance requirements must be documented in an agreement with RPBCWD. A draft of the agreement and associated exhibits must be provided for RPBCWD review and approval prior to execution.

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

1. Continued compliance with General Requirements.
2. Per Rule C, Subsection 3.3 the permit holder will be responsible for the inspection, maintenance and effectiveness of all erosion prevention and sediment control facilities, features and techniques. The permittee must inspect all erosion prevention and sediment control facilities and soil stabilization measures to ensure integrity and effectiveness until final site stabilization.
3. Per Rule J Subsection 5.6, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization the stormwater management facilities conform to design specifications and functions as intended and approved by the District. As-built/record drawings must be signed by a professional engineer licensed in Minnesota and include, but not limited to:
  - a) the surveyed bottom elevations, water levels, and general topography of all facilities;
  - b) the size, type, and surveyed invert elevations of all stormwater facility inlets and outlets;
  - c) the surveyed elevations of all emergency overflows including stormwater facility, street, and other;
  - d) other important features to show that the project was constructed as approved by the Managers and protects the public health, welfare, and safety.
4. Providing the following additional close-out materials:
  - a) Documentation that constructed stormwater facilities perform as designed. This may include infiltration testing, flood testing, or other with prior approval from RPBCWD
  - b) Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C Subsection 3.2c criteria.
5. To close out the permit, the permit applicant must provide a chloride management plan that designates the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in implementing the plan at the site.



Feet



Permit Location Map

HYLAND LAKE BOAT LAUNCH  
**Permit 2024-027**  
Riley Purgatory Bluff Creek  
Watershed District



# Three Rivers PARK DISTRICT

## HYLAND LAKE PARK RESERVE BOAT RAMP ROAD AND ADA IMPROVEMENTS

PROJECT NO. HYL 2401

<b>EXISTING</b>	
---	RIGHT OF WAY
---	PERMANENT EASEMENT
---	PROPERTY LINE
△ XX	HORIZONTAL CONTROL POINT
X BM	BENCHMARK
● #	SURVEY MARKER
○	SOIL BORING
---	SANITARY SEWER AND MANHOLE
---	FORCE MAIN AND LIFT STATION
---	SANITARY SEWER SERVICE & CLEANOUT
---	WATER MAIN, HYDRANT, VALVE AND MANHOLE
---	WATER SERVICE AND CURB STOP BOX
---	STORM SEWER, MANHOLE AND CATCH BASIN
---	CULVERT AND APRON ENDWALL
---	GAS MAIN, VALVE, VENT AND METER
---	HANDHOLE
---	BURIED FIBER OPTIC CABLE AND MANHOLE
---	BURIED PHONE CABLE, PEDESTAL AND MANHOLE
---	BURIED TV CABLE, PEDESTAL AND MANHOLE
---	BURIED ELECTRIC CABLE, PEDESTAL, MANHOLE, TRANSFORMER AND METER
---	OVERHEAD WIRE, POLE AND GUY WIRE
---	LIGHT POLE
---	TRAFFIC SIGNAL
---	STREET NAME SIGN
---	SIGN (NON STREET NAME)
	RAILROAD TRACKS
○	DECIDUOUS AND CONIFEROUS TREE
✱	BUSH / SHRUB AND STUMP
~~~~~	EDGE OF WOODED AREA
WET	WETLAND
---	BUILDING
X	FENCE (UNIDENTIFIED)
X	BARBED WIRE FENCE
XC	CHAIN LINK FENCE
XE	ELECTRIC WIRE FENCE
XWD	WOOD FENCE
XWW	WOVEN WIRE FENCE
---	PLATE BEAM GUARDRAIL
---	CABLE GUARDRAIL
○ P	POST / BOLLARD
---	RETAINING WALL
<b>PROPOSED</b>	
---	STREET CENTERLINE
---	RIGHT-OF-WAY
---	PERMANENT EASEMENT
---	TEMPORARY EASEMENT
---	CONSTRUCTION LIMITS
---	SANITARY SEWER, BULKHEAD AND MANHOLE
---	FORCE MAIN
---	SANITARY SERVICE AND CLEANOUT
---	WATER MAIN, TEE, HYDRANT, BULKHEAD AND VALVE
---	WATER VALVE MANHOLE, REDUCER, BEND AND CROSS
---	WATER SERVICE AND CURB STOP BOX
---	STORM SEWER, MANHOLE AND CATCH BASIN
---	CULVERT AND APRON ENDWALL
---	DRAIN TILE
---	DITCH / SWALE
---	RIPRAP
---	STREET NAME SIGN
---	SIGN (NON STREET NAME)
---	RETAINING WALL

GOVERNING SPECIFICATIONS  
THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.

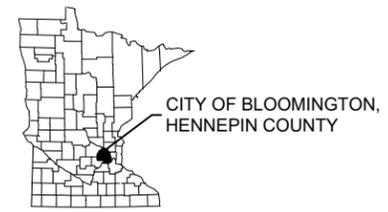
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES & CONSTRUCTION NOTES
3-8	DETAILS
<del>7-12</del>	<del>PEDESTRIAN RAMP STANDARD PLANS</del>
13	TYPICAL SECTIONS
14-15	ALIGNMENT PLANS AND TABULATIONS
16	REMOVALS
17	CONSTRUCTION PLANS / SIGNING & STRIPING PLANS
18-19	TRAIL CONSTRUCTION PLANS
20-22	STORM WATER POLLUTION PREVENTION PLAN
23	EROSION CONTROL PLANS
24	GRADING PLAN
25	BOAT RAMP ROAD INTERSECTION DETAIL
26	SPUR TRAIL 1 ADA SIDEWALK DETAIL
27	CONCESSIONS SIDEWALK DETAIL
<del>28-30</del>	<del>CROSS SECTIONS</del>



THIS PLAN CONTAINS 30 SHEETS.

**PROJECT LOCATION**



**THREE RIVERS PARK DISTRICT**

**SEH**  
PHONE: 952.912.2600  
10650 RED CIRCLE DRIVE,  
SUITE 500  
MINNETONKA, MN 55343  
www.sehinc.com



Know what's below.  
Call before you dig.

NOTE:  
THE SUBSURFACE UTILITY QUALITY INFORMATION IN THIS PLAN IS LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02 ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

THE CONTRACTOR SHALL CALL THE GOPHER STATE ONE CALL SYSTEM AT 811 BEFORE COMMENCING EXCAVATION.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.  
*Blake Hansen*  
Signature  
BLAKE HANSEN  
Date: 06-05-2024 Lic. No. 58904

PROJECT NO. 176858  
1 of 30

Save: 6/7/2024 1:32 PM kmanzke Plot: 6/7/2024 1:33 PM X:\PT\THRV\17685915-final-dsgn\51-drawings\10-Civil\caed\dwg\sheet\TH176859EQ.dwg

STATEMENT OF ESTIMATED QUANTITIES				
ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED PROJECT TOTALS	NOTES
1	MOBILIZATION	LS	1	
2	CLEARING	EACH	3	
3	GRUBBING	EACH	3	
4	CLEARING	ACRE	0.05	
5	GRUBBING	ACRE	0.05	
6	REMOVE DRAINAGE STRUCTURE	EACH	1	
7	REMOVE CURB & GUTTER	LF	896	
8	REMOVE WOOD RETAINING WALL	LF	43	
9	REMOVE BITUMINOUS PAVEMENT	SY	1457	
10	REMOVE CONCRETE WALK	SF	3397	
11	REMOVE TIMBER DECK	SF	265	
12	SALVAGE AND REINSTALL SIGN	EACH	1	
13	SALVAGE AND REINSTALL PAY BOX	EACH	1	
14	SALVAGE AND REINSTALL BENCH	EACH	1	
15	REMOVE BITUMINOUS TRAIL	SY	512	
16	SALVAGE AND REINSTALL RANDOM RIPRAP	CY	56	
17	SALVAGE AND REINSTALL SAND	CY	39	
18	EXCAVATION - COMMON (EV)	CY	1309	(P)
19	COMMON EMBANKMENT (CV)	CY	70	(P)
20	EXCAVATION - SUBGRADE (EV)	CY	187	
21	SELECT GRANULAR EMBANKMENT (CV)	CY	187	
22	GEOTEXTILE FABRIC (GEO GRID)	SY	1198	
23	GEOTEXTILE FABRIC TYPE 1	SY	334	
24	GEOTEXTILE FABRIC TYPE 5	SY	565	
25	AGGREGATE BASE, CLASS 5	TON	1182	
26	6" NON-METALLIC MACROFIBER REINFORCED CONCRETE PAVEMENT	SY	40	
27	8" CONCRETE PAVEMENT (BOAT LAUNCH)	SF	1414	
28	BITUMINOUS MATERIAL FOR TACK COAT	GAL	187	
29	TYPE SP 12.5 NON WEARING COURSE MIXTURE (2,B)	TON	258	
30	TYPE SP 12.5 WEARING COURSE MIXTURE (2,B)	TON	172	
31	CONCRETE STAIRWAY	EACH	2	
32	COARSE FILTER AGGREGATE (CV)	CY	58	
33	INSTALL METAL APRON	EACH	1	
34	TRASH GUARD FOR 12" PIPE APRON	EACH	1	
35	6" PERF PE PIPE DRAIN	LF	135	
36	12" PVC PIPE SEWER	LF	36	
37	2" POLYSTYRENE INSULATION	SY	4	
38	CONST DRAINAGE STRUCTURE DESIGN SPECIAL 1	EACH	1	
39	RANDOM RIPRAP CLASS III	CY	86	
40	4" NON-METALLIC MACROFIBER REINFORCED CONCRETE WALK	SF	4887	
41	6" NON-METALLIC MACROFIBER REINFORCED CONCRETE WALK	SF	4669	
42	4" CONCRETE WALK (COLORED)	SF	45	
43	CONCRETE CURB, DESIGN RIBBON	LF	85	
44	CONCRETE CURB AND GUTTER, DESIGN SURMOUNTABLE	LF	725	
45	TRUNCATED DOMES	SF	60	
46	DRINKING FOUNTAIN	EACH	1	
47	HANDRAIL	EACH	2	
48	HANDRAIL (REMOVABLE)	EACH	1	
49	RELOCATE BURIED POWER CABLE	LF	260	
50	TRAFFIC CONTROL	LS	1	
51	SIGN PANELS, TYPE C	SF	1	
52	INSTALL NEW SIGN AND POST	EACH	1	
53	STORM DRAIN INLET PROTECTION	EACH	1	
54	SILT FENCE, TYPE MS	LF	706	
55	FLOTATION SILT CURTAIN TYPE STILL WATER	LF	175	
56	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EACH	1.00	
57	FILTER TOPSOIL BORROW	CY	222	
58	FERTILIZER TYPE 2	LB	307	
59	IMPORT TOPSOIL	TON	100	
60	ROLLED EROSION PREVENTION CATEGORY 30	SY	5000	
61	SEEDING	ACRE	1.02	
62	SEED MIXTURE 33-261	LB	3	
63	SEED - TRPD MIXTURE	LB	179	
64	4" SOLID LINE WHITE - PAINT	LF	816	

NOTE: "(P)" SHALL INDICATE A PLAN QUANTITY ITEM. NO MEASUREMENT SHALL BE MADE.

ELECTRICAL SERVICE NOTES:

- THE ELECTRICAL WORK SHALL CONSIST OF FURNISHING ALL LABOR, EQUIPMENT, AND MATERIALS FOR THE CONSTRUCTION OF A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM.
- CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY PERMITS AND UTILITY COORDINATION.
- BIDDERS ARE ADVISED THAT THE N.E.C., THE 2020 EDITION OF MNDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. COMPLIANCE WITH PROVISIONS OF MNDOT 2545.2A, AND THE FIRST PARAGRAPH OF MNDOT 2545.3A WILL BE PARTICULARLY ENFORCED IN CONJUNCTION WITH THE CONSTRUCTION OF ANY KIND OR TYPE OF ELECTRICAL SYSTEM, CONDUIT OR CONDUIT SYSTEM FOR THE CONVEYANCE OF THE ELECTRICAL CONDUCTORS, OR THE REQUIRED PORTIONS THEREOF, AS SPECIFIED IN THE CONTRACT. THE MINNESOTA ELECTRICAL ACT REQUIRES THAT A PERMIT BE OBTAINED FOR THE PERFORMANCE OF ALL SUCH WORK, INCLUDING THE INSTALLATION OF CONDUITS. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO, AN ELECTRICAL PERMIT. WORK SHALL BE INSPECTED AND APPROVED BY THE ENGINEER, SCOTT COUNTY, AND THREE RIVERS PARK DISTRICT (TRPD).
- ALL MATERIAL SHALL MEET THE REQUIREMENTS OF THE NEC, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) SPECIFICATIONS, AND LOCAL CODES AND ORDINANCES, AND SHALL BE UNDERWRITER'S LABORATORIES LISTED, WHERE U.L. STANDARDS FOR SUCH PRODUCTS EXIST. ALL WORK SHALL BE UNDER THE DIRECT SUPERVISION OF A MASTER ELECTRICIAN.
- CONTRACTOR SHALL COORDINATE HIS ACTIVITIES WITH ALL OTHER PARTIES OCCUPYING THE SITE SO AS TO NOT IMPEDE OR DELAY CONSTRUCTION PROGRESS. CONTRACTOR SHALL ATTEND REGULARLY SCHEDULED CONSTRUCTION PROGRESS MEETINGS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AMONG SUPPLIERS AND CONTRACTORS PROVIDING EQUIPMENT FOR THE PROJECT. THE COORDINATION SHALL INCLUDE, BUT NOT BE LIMITED TO, OPERATORS, POWER REQUIREMENTS, ETC. COOPERATE WITH OTHER TRADES TO AVOID INTERFERENCES IN THE INSTALLATION OF THIS WORK. INSTALL ALL EQUIPMENT AND SYSTEMS SO AS NOT TO DELAY PROGRESS OF CONSTRUCTION, AND CORRELATE WITH OTHER TRADES TO AVOID DELAY. SHOULD DIFFERENCES OF OPINION DEVELOP, THE ENGINEER'S DECISION WILL BE FINAL. CONTRACT UNIT PRICES SHALL REFLECT ALL CONSTRUCTION COSTS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH A COMPLETE AND FULLY OPERATING SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DETAILS WHICH MAY BE NECESSARY TO PROPERLY INSTALL, ADJUST AND PLACE IN OPERATION THE COMPLETE INSTALLATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ADDITIONAL COSTS WHICH MAY RESULT FROM UNAUTHORIZED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL KEEP THE PREMISES CLEAN AND ORDERLY DURING INSTALLATION OF THIS WORK, REMOVE RUBBISH PERIODICALLY AND AS MAY BE DIRECTED BY THE ENGINEER. UPON COMPLETION OF THIS PART OF THE PROJECT, REMOVE ALL DIRT, DEBRIS, TOOLS, SCAFFOLDING, ETC. USED OR RESULTING FROM THIS WORK.
- THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF SHOP DRAWINGS FOR ALL PROPOSED EQUIPMENT TO THE OWNER AND ENGINEER FOR REVIEW. THE SUBMITTED ITEMS MUST BE APPROVED PRIOR TO COMMENCEMENT OF WORK.
- ALL CONDUIT SHALL BE NMC SCHEDULE 40. PVC AND HDPE CONDUIT SHALL BE IN ACCORDANCE WITH MNDOT 3803.
- SERVICE CONDUCTORS SHALL BEAR UL LABEL FOR TYPE USE-2.
- ALL CONDUIT SHALL BE PLACED A MINIMUM OF 24" DEEP, AND BE PLACED BY TRENCHING, PLOWING OR DIRECTIONAL BORING.
- FOLLOWING THE INSTALLATION OF CABLES AND CONDUCTORS, SEAL THE OPEN ENDS OF CONDUIT ENTERING BUILDINGS AND SERVICE PANELS USING A DUCT SEAL COMPOUND NRTL CLASSIFIED UNDER GENERAL USE TAPES.
- THE CONTRACTOR IS RESPONSIBLE TO REPLACE AND COMPACT THE SUBGRADE MATERIAL AND REPLACE THE PERMANENT SURFACE MATERIAL IN KIND (EXACTLY AS THE EXISTING).
- CONTRACTOR SHALL MAINTAIN OPERATION OF THE ELECTRICAL SYSTEM UNTIL FINAL ACCEPTANCE BY THE OWNER.
- THE CONTRACTOR SHALL GUARANTEE THE OPERATION OF THE INSTALLATION AND THAT THE MATERIALS AND WORKMANSHIP OF THE EQUIPMENT BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE, PROVIDING THE EQUIPMENT HAS BEEN OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. IF A DISPUTE EXISTS REGARDING WHETHER THE EQUIPMENT HAS BEEN MAINTAINED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, THE ENGINEER'S DECISION WILL BE FINAL. THE GUARANTEE SHALL INCLUDE ALL PARTS AND LABOR NECESSARY TO RETURN THE SYSTEM TO NORMAL OPERATION. THE GUARANTEE ON ALL EQUIPMENT SHALL START AFTER FORMAL ACCEPTANCE OF EQUIPMENT AS DEFINED BY THE GENERAL CONDITIONS AND AFTER SUCCESSFUL COMPLETION OF STARTUP PROCEDURES.
- CONTRACTOR SHALL SUPPLY ACCURATE AS-BUILT DRAWINGS OF THE PROJECT TO THE CITY. DRAWINGS SHALL INDICATE LOCATION AND SETBACK OF CONDUIT WITHIN THE SITE, MEASURED FROM A RELIABLE LOCATION. THE CONTRACTOR SHALL COLLECT, GATHER AND ASSEMBLE INTO ONE BOOK THE INSTALLATION DETAILS, INSTRUCTIONS, SCHEMATICS OF ACTUAL EQUIPMENT AND OPERATIONS DIRECTIONS SUPPLIED BY THE MANUFACTURER WITH ALL EQUIPMENT. FINAL ACCEPTANCE OF THE WORK WILL BE WITHHELD UNTIL SUCH DATA HAS BEEN PRESENTED COMPLETE TO THE OWNER. THE MANUAL SHALL BE AVAILABLE FOR INSTRUCTION OF OPERATIONS AND MAINTENANCE OF EQUIPMENT AND SYSTEMS.
- THIS WORK SHALL BE PAID ON A LINEAR FOOT BASIS OF NEW ELECTRIC SERVICE ACCEPTABLE INSTALLED AS "2550.603 ELECTRIC SERVICE". PAYMENT FOR THIS WORK INCLUDES ALL LABOR, EQUIPMENT AND MATERIALS FOR DISCONNECTIONS, REMOVAL OF THE EXISTING SERVICE SYSTEM, INSTALLATION OF NEW CONDUIT AND CONDUCTORS, AND RECONNECTIONS IN ACCORDANCE WITH THESE NOTES AND THE PLANS.

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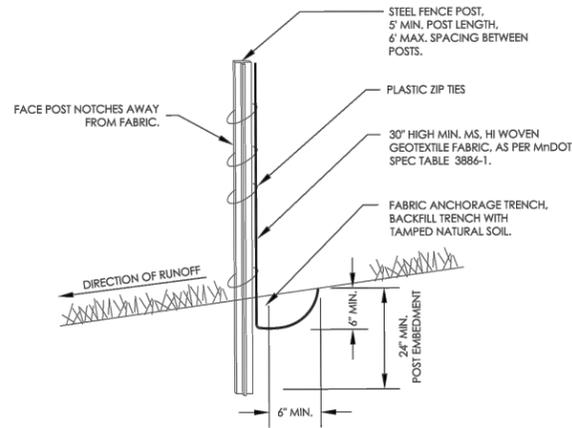


I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.  
 BLAKE HANSEN  
 DATE: 06-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
 BLOOMINGTON, MINNESOTA

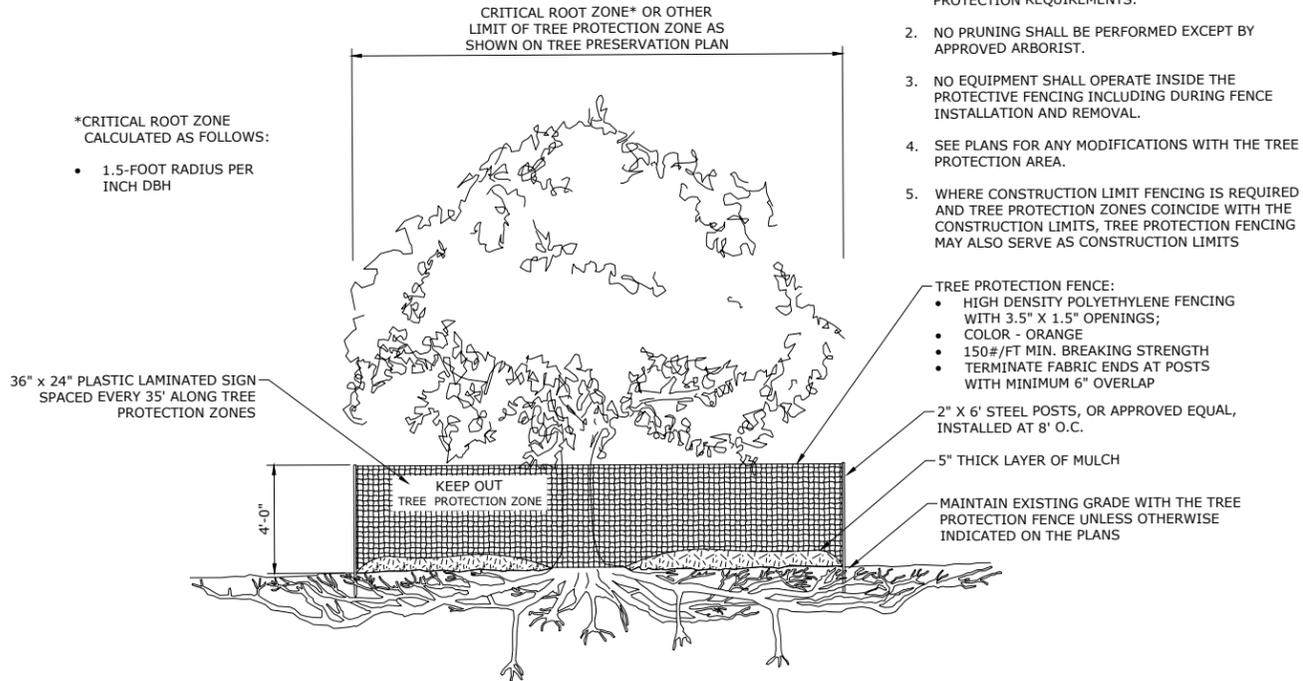
**STATEMENT OF ESTIMATED QUANTITIES & CONSTRUCTION NOTES**

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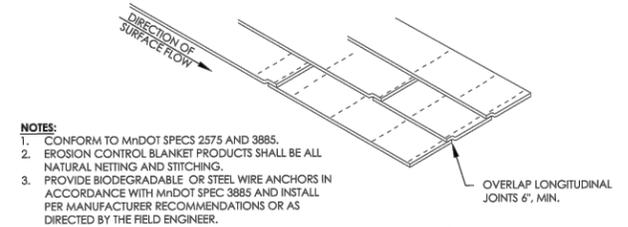
- NOTES:**
- CONFORM TO MnDOT SPECS 2573 AND 3886.
  - ATTACH FABRIC TO POSTS WITH PLASTIC ZIP TIES (50 POUND TENSILE STRENGTH, MIN.). PROVIDE A MIN. (3) TIES WITHIN THE TOP 8" OF FABRIC.
  - OVERLAP GEOTEXTILE FABRIC 6", MIN. AND FASTEN AT 2' INTERVALS, MAX.
  - FABRIC TO BE MONOFILAMENT IN BOTH DIRECTIONS, NO SUBSTITUTIONS ALLOWED.
  - MACHINE SLICED (36" WIDE) SILT FENCE (SEE DETAIL ERO-1) MAY BE SUBSTITUTED UPON APPROVAL BY THE ENGINEER.

ERO-3 HAND INSTALLED SILT FENCE  
NTS



GEN-12 TREE PROTECTION  
NTS

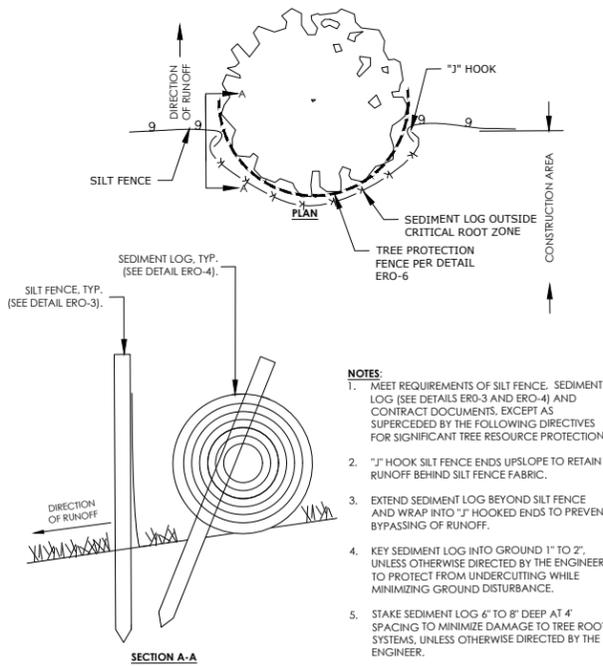
- NOTES:**
- SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
  - NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
  - NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
  - SEE PLANS FOR ANY MODIFICATIONS WITH THE TREE PROTECTION AREA.
  - WHERE CONSTRUCTION LIMIT FENCING IS REQUIRED AND TREE PROTECTION ZONES COINCIDE WITH THE CONSTRUCTION LIMITS, TREE PROTECTION FENCING MAY ALSO SERVE AS CONSTRUCTION LIMITS



- NOTES:**
- CONFORM TO MnDOT SPECS 2575 AND 3885.
  - EROSION CONTROL BLANKET PRODUCTS SHALL BE ALL NATURAL NETTING AND STITCHING.
  - PROVIDE BIODEGRADABLE OR STEEL WIRE ANCHORS IN ACCORDANCE WITH MnDOT SPEC 3885 AND INSTALL PER MANUFACTURER RECOMMENDATIONS OR AS DIRECTED BY THE FIELD ENGINEER.

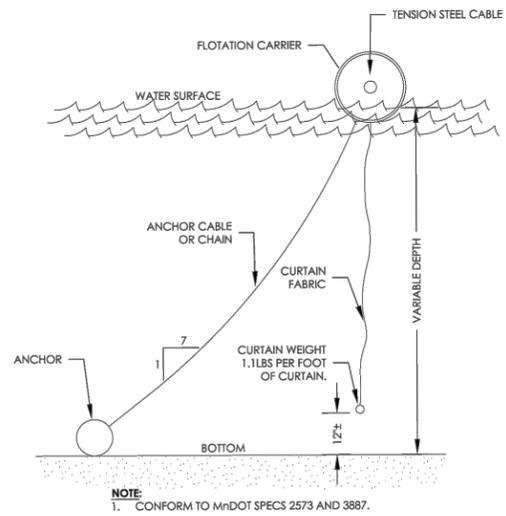
- ANCHOR TRENCH NOTES:**
- ANCHOR TRENCH SHALL BE PROVIDED WHENEVER BLANKET SEGMENT LENGTH EXCEEDS 100', AS SHOWN ON PLANS OR AT THE DIRECTION OF THE FIELD ENGINEER.
  - 6" X 6" TRENCH, MIN.
  - LAY BLANKET IN TRENCH.
  - STAPLE AT 1.5' INTERVALS, MAX. ALONG LENGTH OF TRENCH.
  - BACKFILL WITH NATURAL SOIL AND COMPACT.

ERO-9 EROSION CONTROL BLANKET  
NTS



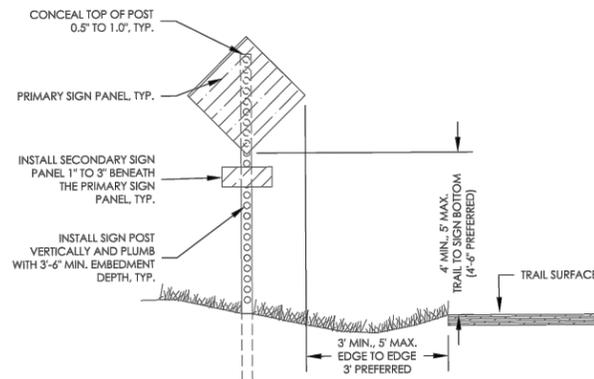
- NOTES:**
- MEET REQUIREMENTS OF SILT FENCE. SEDIMENT LOG (SEE DETAILS ERO-3 AND ERO-4) AND CONTRACT DOCUMENTS, EXCEPT AS SUPERCEDED BY THE FOLLOWING DIRECTIVES FOR SIGNIFICANT TREE RESOURCE PROTECTION.
  - "J" HOOK SILT FENCE ENDS UPSLOPE TO RETAIN RUNOFF BEHIND SILT FENCE FABRIC.
  - EXTEND SEDIMENT LOG BEYOND SILT FENCE AND WRAP INTO "J" HOOKED ENDS TO PREVENT BYPASSING OF RUNOFF.
  - KEY SEDIMENT LOG INTO GROUND 1" TO 2", UNLESS OTHERWISE DIRECTED BY THE ENGINEER, TO PROTECT FROM UNDERCUTTING WHILE MINIMIZING GROUND DISTURBANCE.
  - STAKE SEDIMENT LOG 4" TO 8" DEEP AT 4' SPACING TO MINIMIZE DAMAGE TO TREE ROOT SYSTEMS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
  - SEE DETAIL ERO-6 FOR TREE PROTECTION FENCING WHICH SHALL BE INSTALLED BETWEEN SILT FENCE AND TREE.

GEN-12 EROSION CONTROL AT SIGNIFICANT TREES  
NTS

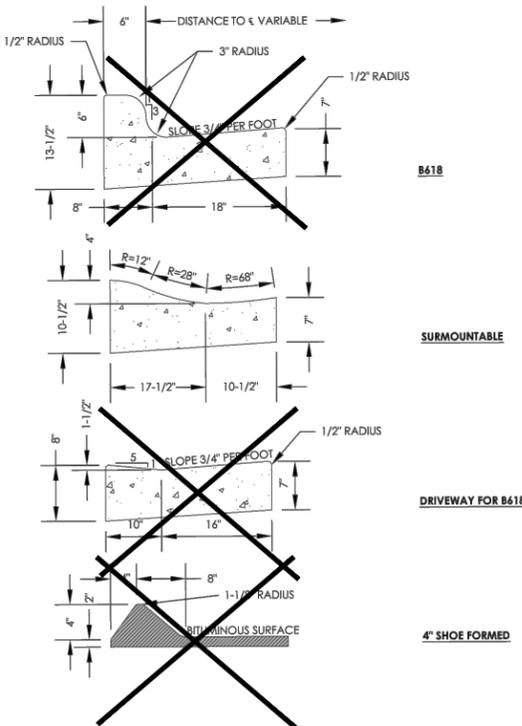


ERO-23 FLOATING SILT CURTAIN  
NTS

- NOTES:**
- CONFORM TO MnDOT SPEC 2564.
  - POST MATERIAL:
    - FLANGED CHANNEL STEEL POST PER MnDOT SPEC 3401.
    - LENGTH AS REQUIRED TO INSTALL IN ACCORDANCE WITH SPECIFIED EMBEDMENT DEPTH AND SIGN POSTING HEIGHT.
    - MAXIMUM OF ONE SPICE ALLOWED.
    - NOMINAL MASS OF 2.5 POUNDS PER FOOT.
    - 3/8" DIAMETER HOLES PUNCHED ALONG POST CENTERLINE AT 3' O.C.
    - GALVANIZED PER MnDOT SPEC REQUIREMENTS.
  - SIGN PANEL MATERIAL:
    - CONFORM TO MnDOT SPEC 2564 AND 3352.
    - REFLECTIVE SHEETING SHALL MEET MnDOT SPEC 3352.2A2 SIGN SHEETING TYPE III.
  - SIGN MOUNTING HARDWARE:
    - BOLTS SHALL BE 3/8" SIZE, A304 STAINLESS STEEL IN ACCORDANCE WITH MnDOT SPEC 3391.2E.
    - PROVIDED NYLON WASHER BETWEEN BOLT HEAD AND SIGN PANEL.
    - FASTEN BOLTS WITH NYLON INSERT LOCK NUTS OF THE SAME GRADE AND MATERIAL AS THE BOLTS.
  - DRIVE POSTS SUCH THAT SIGN FACE IS PERPENDICULAR TO TRAILWAY.
  - SUBMIT SHOP DRAWINGS AND SIGN LAYOUTS FOR ALL TRAFFIC SIGNS AND DEVICES FOR APPROVAL BY THE ENGINEER PRIOR TO FABRICATION.
  - FIELD VERIFY ALL LOCATIONS WITH THE ENGINEER PRIOR TO PLACEMENT.



TR-15 TYPICAL SIGN PLACEMENT - REGIONAL TRAIL  
NTS



STR-7 CURB AND GUTTER DETAIL  
NTS

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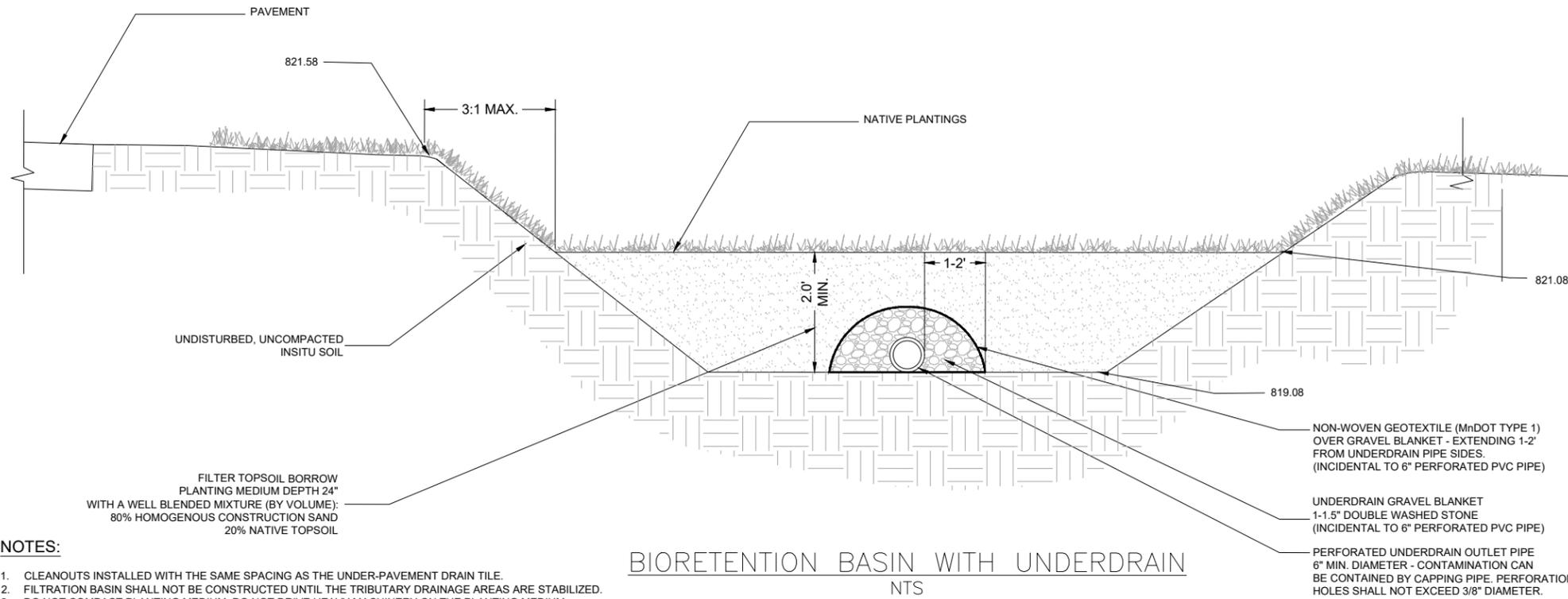
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.

*Blake Hansen*

BLAKE HANSEN  
DATE: 06-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA

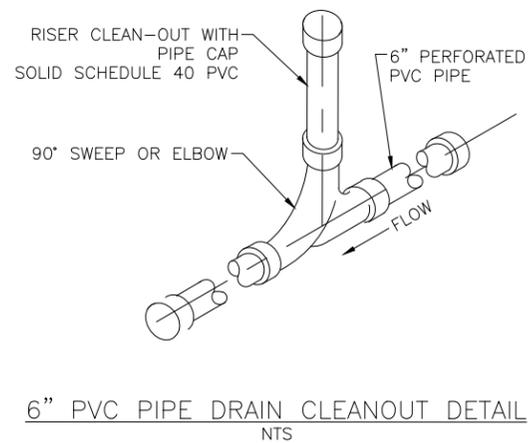
**DETAILS**



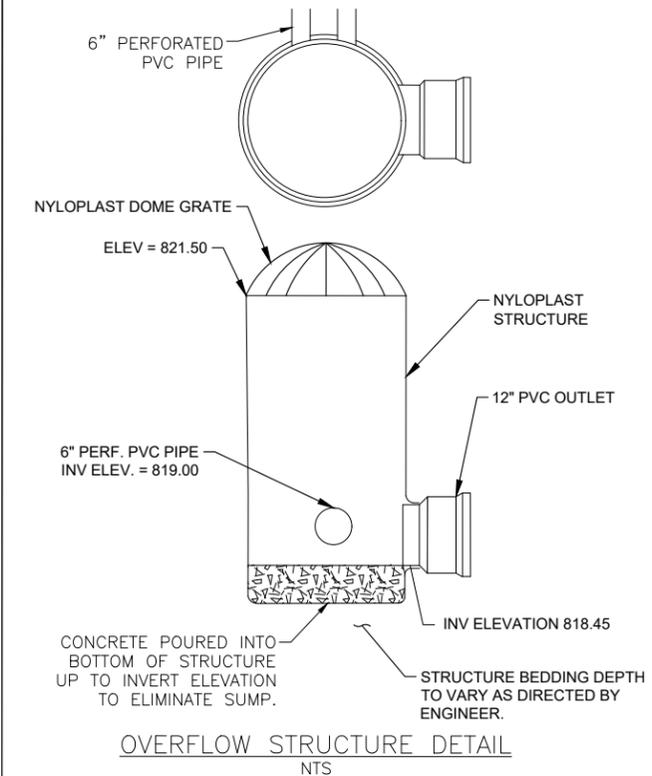
- NOTES:**
- CLEANOUTS INSTALLED WITH THE SAME SPACING AS THE UNDER-PAVEMENT DRAIN TILE.
  - FILTRATION BASIN SHALL NOT BE CONSTRUCTED UNTIL THE TRIBUTARY DRAINAGE AREAS ARE STABILIZED.
  - DO NOT COMPACT PLANTING MEDIUM. DO NOT DRIVE HEAVY MACHINERY ON THE PLANTING MEDIUM.

**BIORETENTION BASIN WITH UNDERDRAIN**  
NTS

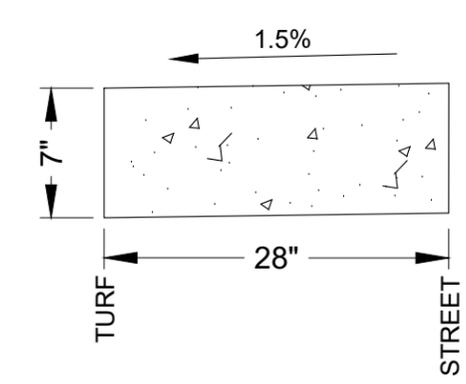
- NON-WOVEN GEOTEXTILE (MNDOT TYPE 1) OVER GRAVEL BLANKET - EXTENDING 1-2' FROM UNDERDRAIN PIPE SIDES. (INCIDENTAL TO 6\"/>



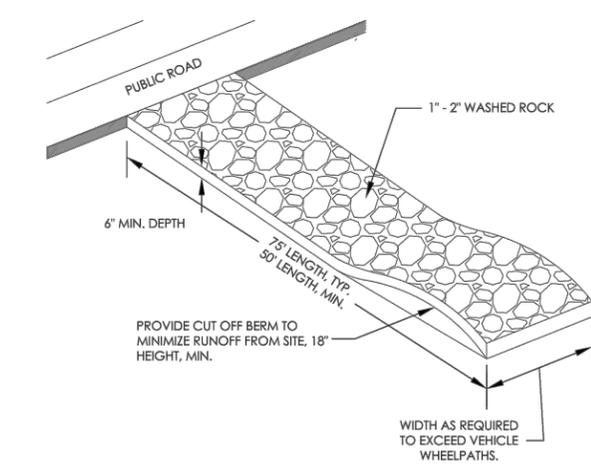
**6\"/> PVC PIPE DRAIN CLEANOUT DETAIL  
NTS**



**OVERFLOW STRUCTURE DETAIL**  
NTS



**CONCRETE CURB AND GUTTER, DESIGN RIBBON - ROAD**  
NTS



- NOTES:**
- PLACE FILTER FABRIC UNDER ROCK TO RESTRICT MUD MIGRATION THROUGH ROCK.
  - ADD AND REPLACE ROCK AS NEEDED TO MAINTAIN EFFECTIVENESS OF ENTRANCE.
  - REMOVE MATERIALS AND RESTORE SITE UPON COMPLETION.

**ERO-8 ROCK CONSTRUCTION ENTRANCE**  
NTS

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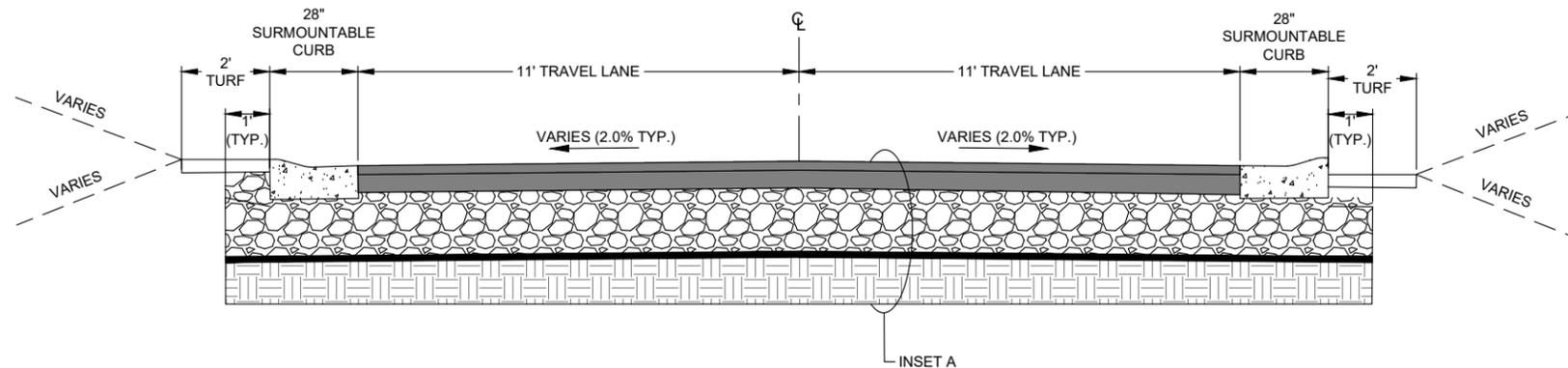
*Blake Hansen*  
 BLAKE HANSEN  
 DATE: 06-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA

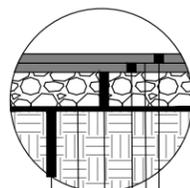
**DETAILS**

**TYPICAL STREET SECTION - WITH SIDE SLOPES**

LEFT: STA 301+00 TO STA 305+17  
RIGHT: STA 301+00 TO STA 305+17

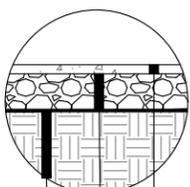


**INSET A**



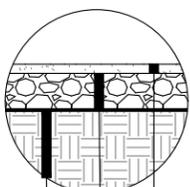
- 2" TYPE SP 12.5 WEARING COURSE (2,B) (SPWEB240B)
- BITUMINOUS TACK COAT
- 3" TYPE SP 12.5 NON-WEARING COURSE (2,B) (SPNWB230B)
- 8" AGGREGATE BASE CLASS 5
- GEOGRID - PLACED AS DIRECTED BY THE ENGINEER
- SUBGRADE PREPARATION (INCIDENTAL)

**INSET B**



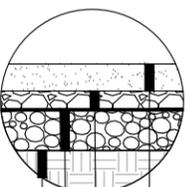
- 6" CONCRETE WITH MACROFIBERS
- 6" AGGREGATE BASE CLASS 5
- SUBGRADE PREPARATION (INCIDENTAL)

**INSET C**

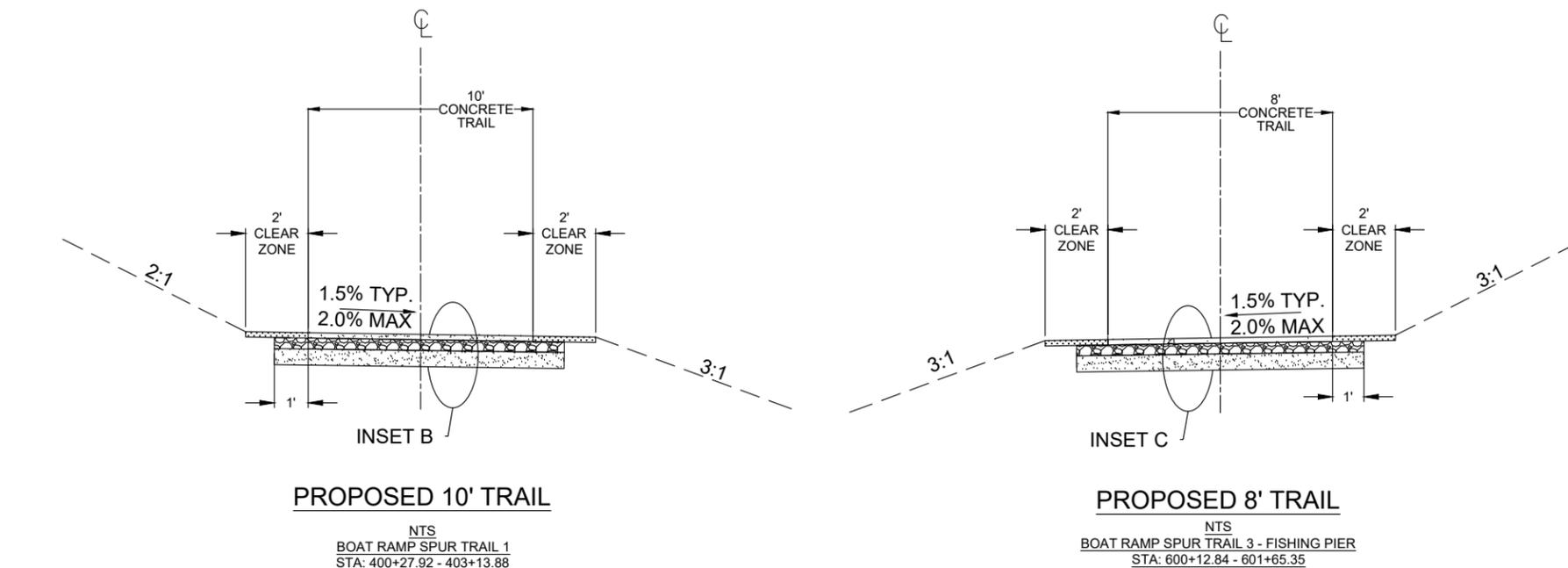
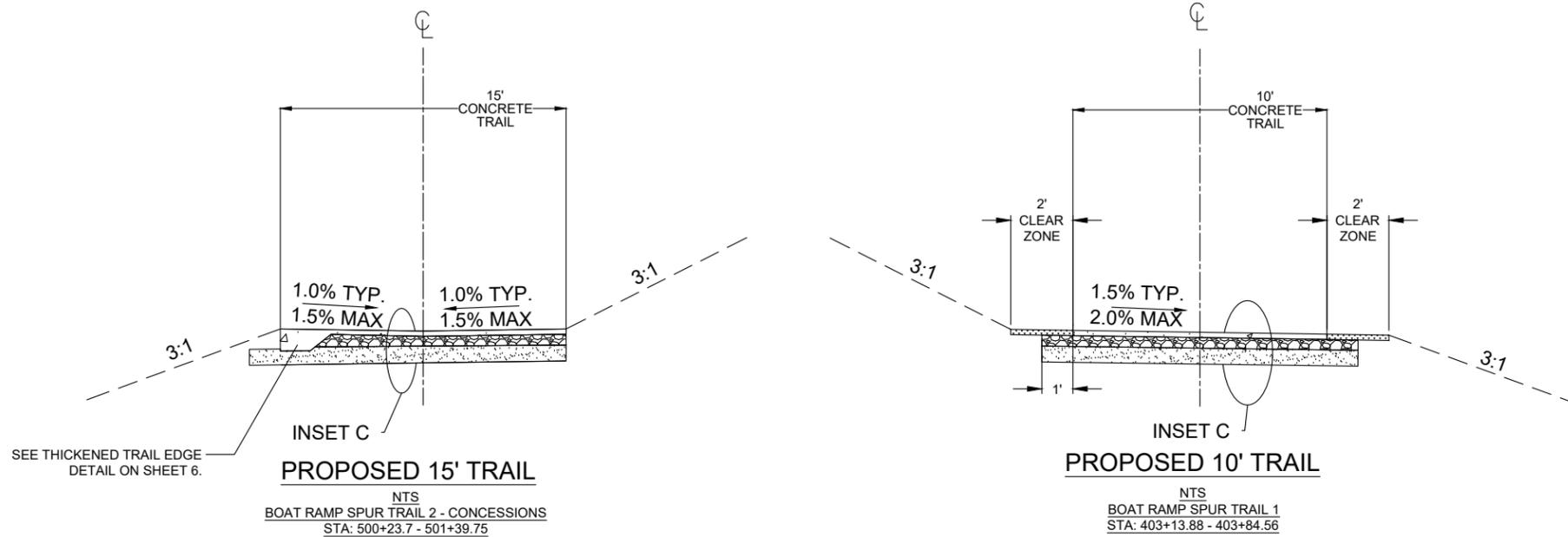


- 4" CONCRETE WITH MACROFIBERS
- 6" AGGREGATE BASE CLASS 5
- SUBGRADE PREPARATION (INCIDENTAL)

**INSET D**



- 8" CONCRETE CAST-IN-PLACE
- 6" AGGREGATE BASE CLASS 5
- 12" COURSE FILTER AGGREGATE
- SUBGRADE PREPARATION (INCIDENTAL)

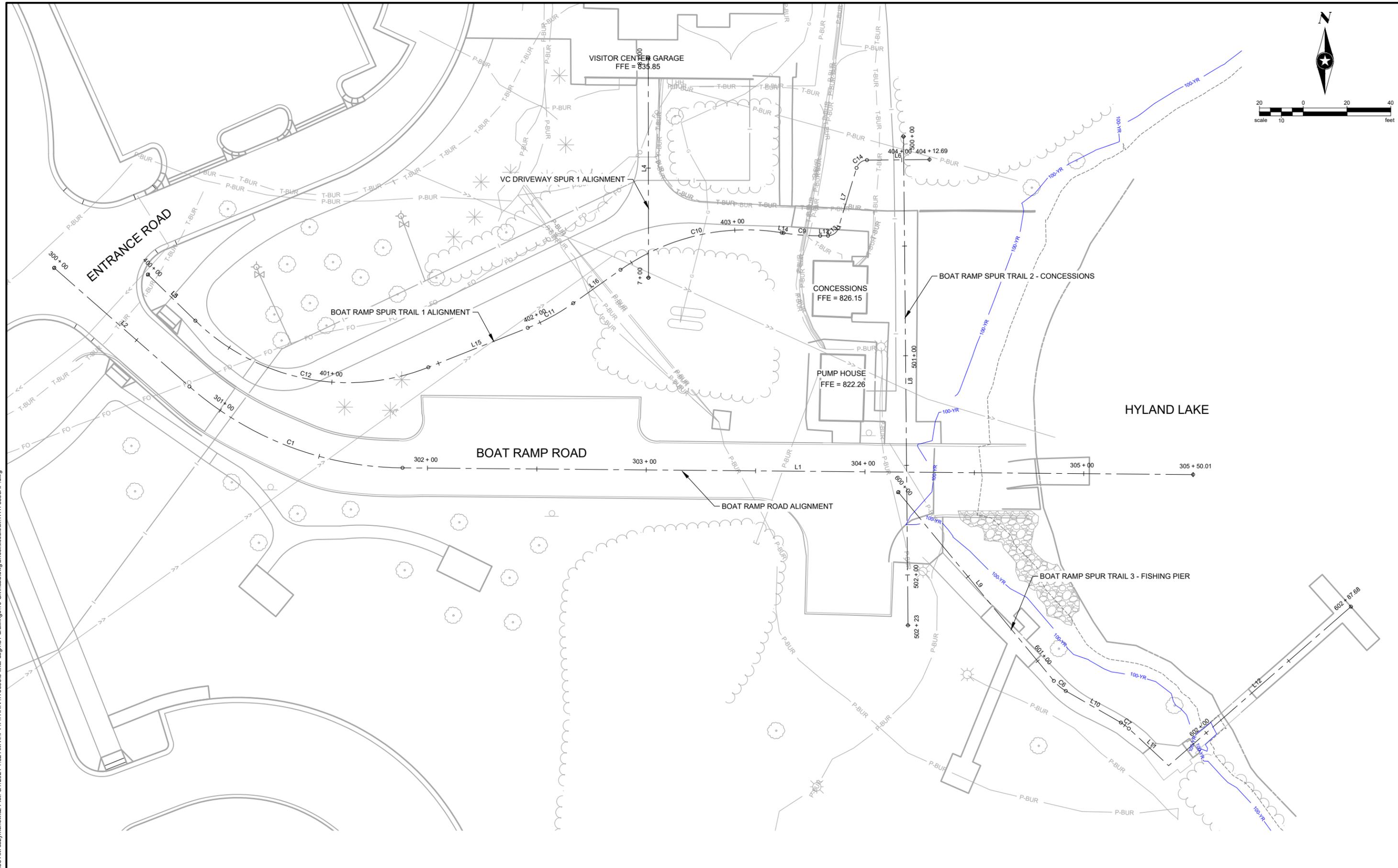
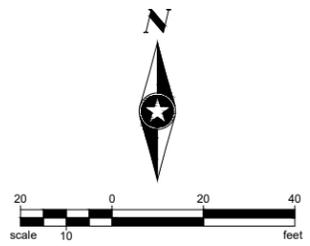


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BLAKE HANSEN  
DATE: 06-05-2024 LICENSE NO.: 58904



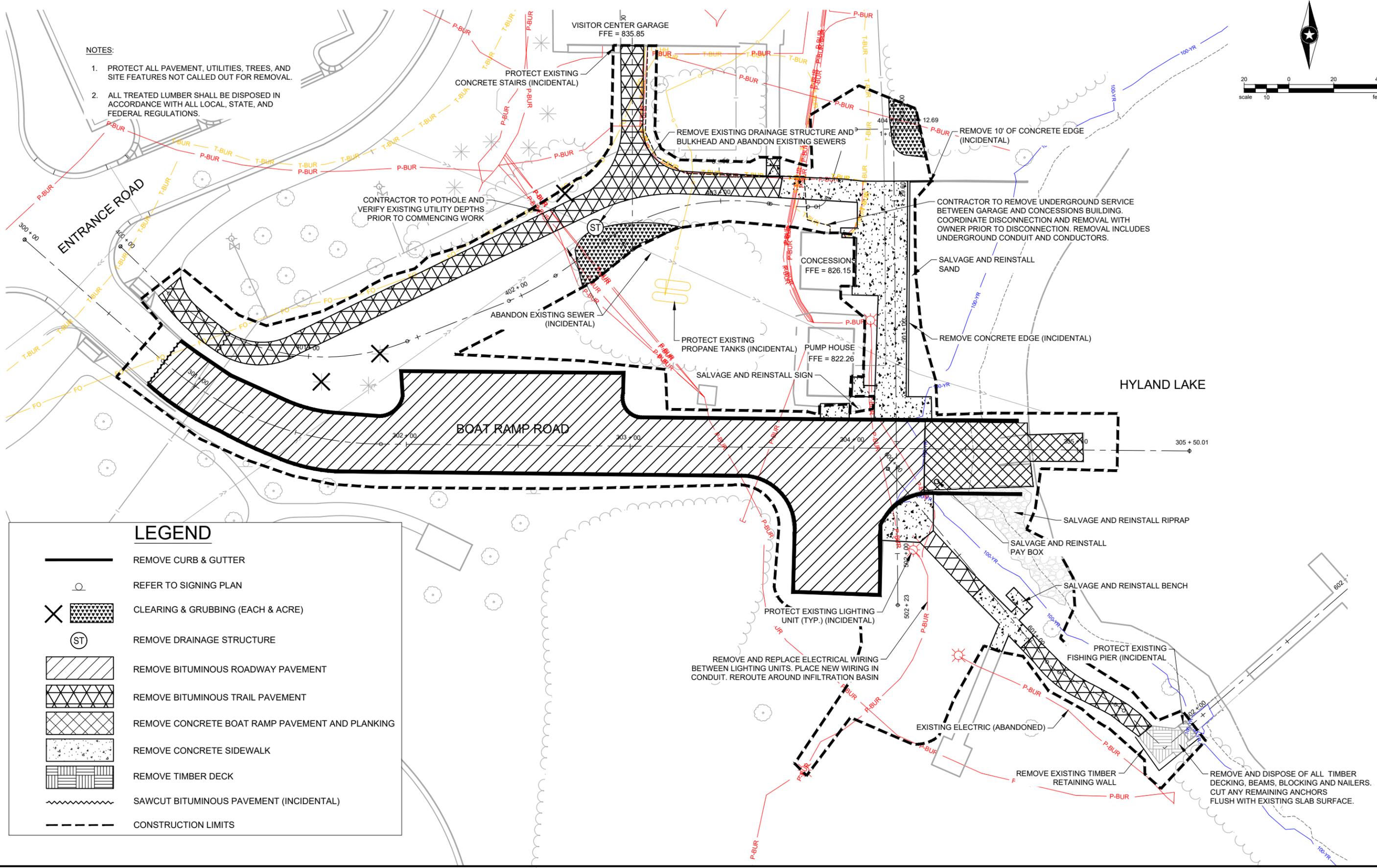
**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA

**ALIGNMENT PLAN**

14  
of 30



- NOTES:**
1. PROTECT ALL PAVEMENT, UTILITIES, TREES, AND SITE FEATURES NOT CALLED OUT FOR REMOVAL.
  2. ALL TREATED LUMBER SHALL BE DISPOSED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.



**LEGEND**

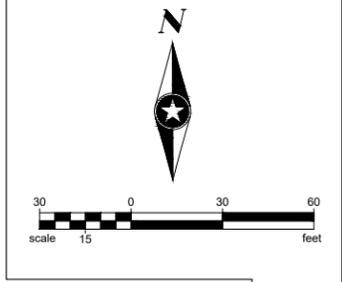
- REMOVE CURB & GUTTER
- REFER TO SIGNING PLAN
- CLEARING & GRUBBING (EACH & ACRE)
- REMOVE DRAINAGE STRUCTURE
- REMOVE BITUMINOUS ROADWAY PAVEMENT
- REMOVE BITUMINOUS TRAIL PAVEMENT
- REMOVE CONCRETE BOAT RAMP PAVEMENT AND PLANKING
- REMOVE CONCRETE SIDEWALK
- REMOVE TIMBER DECK
- SAWCUT BITUMINOUS PAVEMENT (INCIDENTAL)
- CONSTRUCTION LIMITS

Save: 6/7/2024 1:11 AM kmanzke Plot: 6/7/2024 1:33 AM X:\PT\TH\TRV\17685815-final-dsgn\51-drawings\10-Civil\cadd\dwg\sheet\TH17685815-RE.dwg

SEH Project	TH176858	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	-	.			.		
Designed By	-	.			.		
Checked By	-	.			.		

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.

*Blake Hansen*  
 BLAKE HANSEN  
 DATE: 06-05-2024 LICENSE NO. 58904



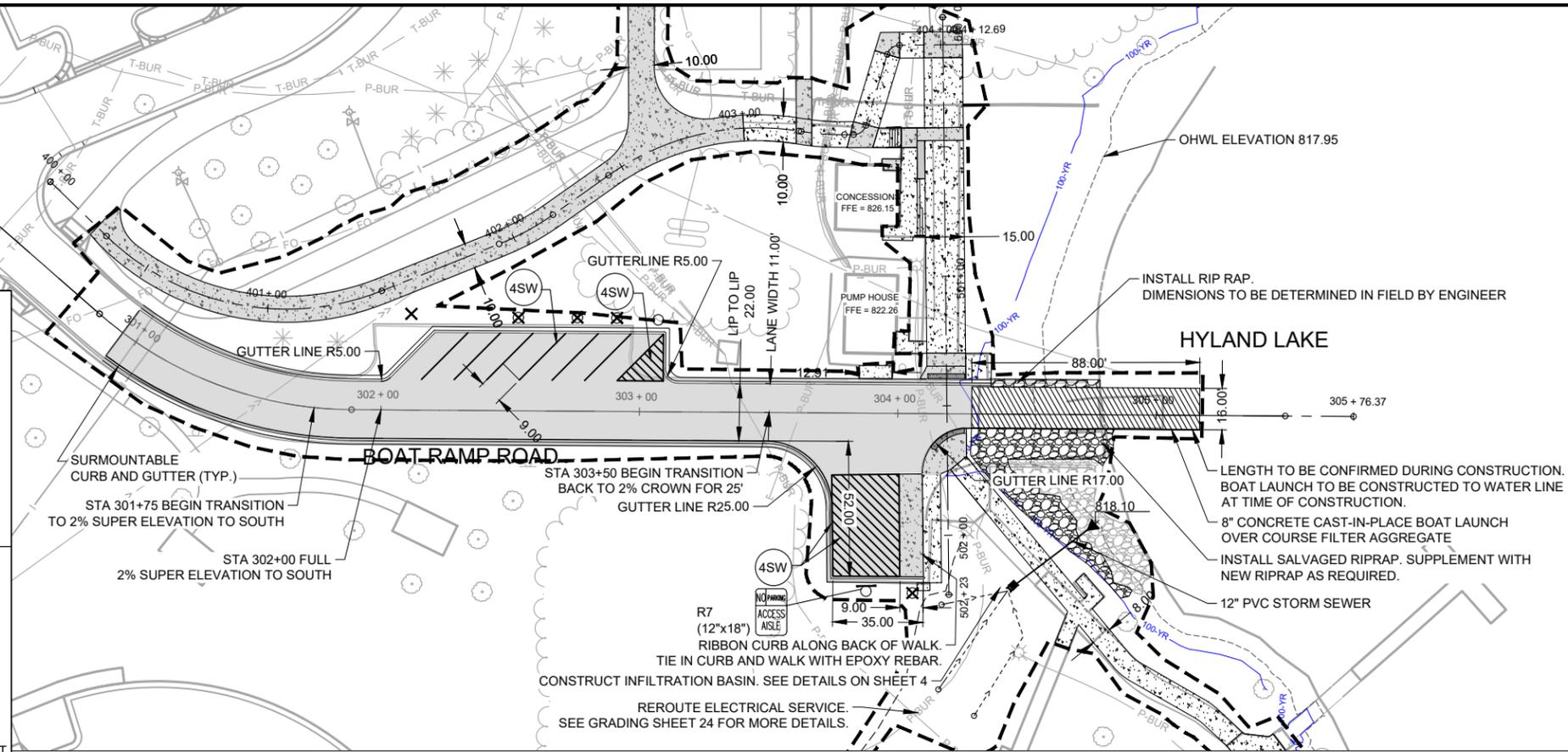
**LEGEND**

- BITUMINOUS PAVEMENT
- 6" CONCRETE WALK
- 4" CONCRETE WALK

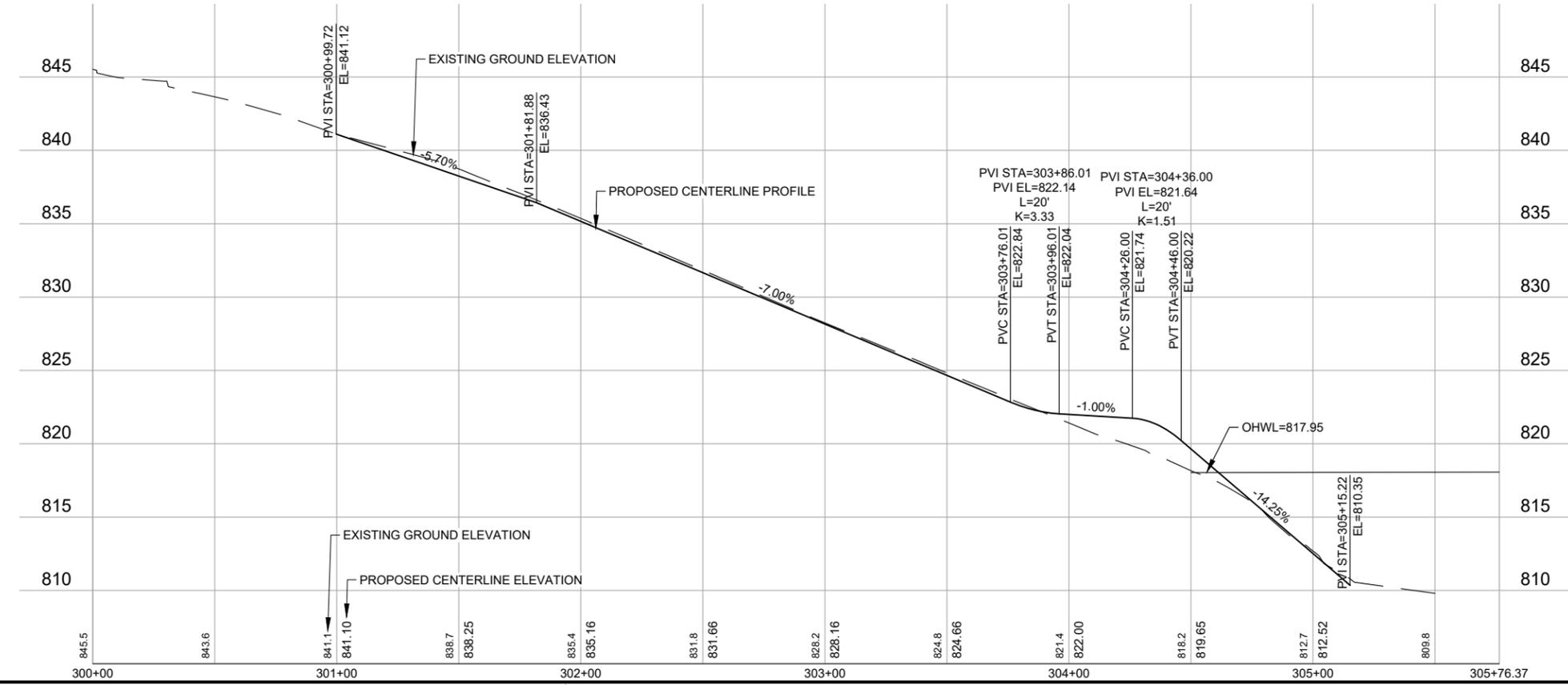
**SIGNING/STRIPING LEGEND**

- 4" SOLID LINE MULTI-COMPONENT (WHITE)
- SALVAGE SIGN
- INSTALL SALVAGED SIGN
- INSTALL NEW SIGN

**NOTE:**  
 • CONTRACTOR IS RESPONSIBLE FOR LAYING OUT ALL SIGNING, PAVEMENT MARKINGS, & PAVEMENT MESSAGES PRIOR TO INSTALLATION.



## HYLAND BOAT RAMP IMPROVEMENTS



Save: 6/5/2024 5:45 PM szymonowicz.Plot: 6/7/2024 1:35 AM X:\PT\THRV17685915-final-dsgn\51-drawings\10-Civil\caddwg\sheet\TH176859PF\_BOAT RAMP ROAD.dwg

SEH Project	TH176858	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	-	-	-	-	-	-	-
Designed By	-	-	-	-	-	-	-
Checked By	-	-	-	-	-	-	-

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.

BLAKE HANSEN  
 DATE: 06-05-2024 LICENSE NO. 58904

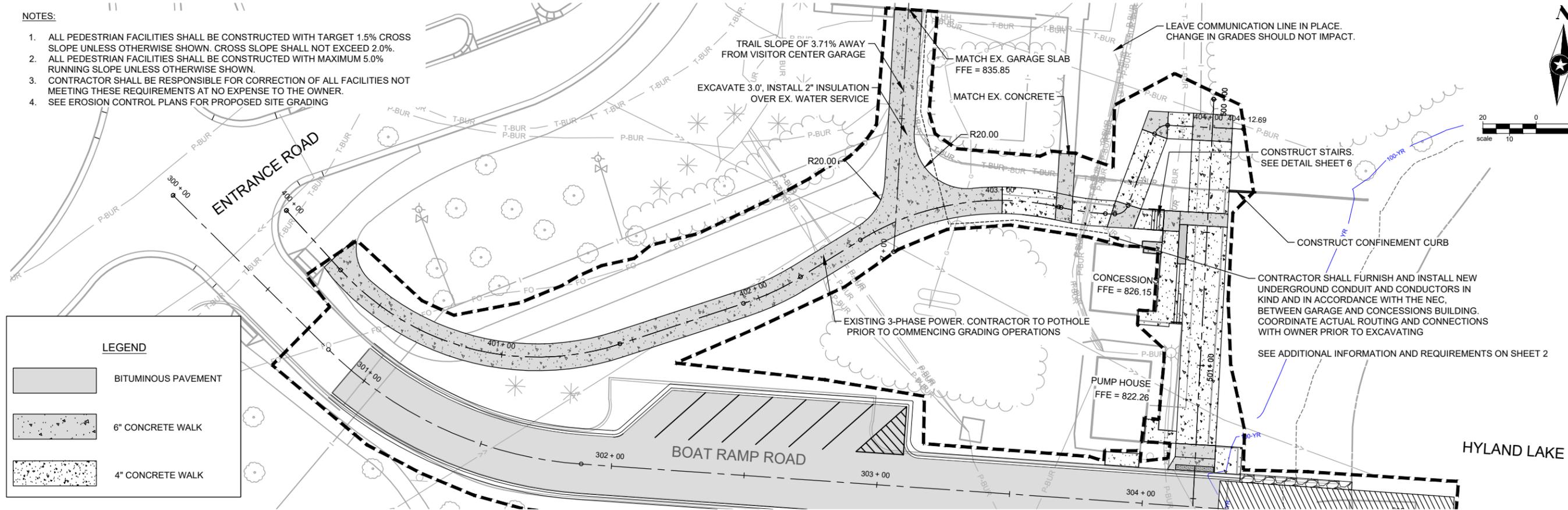
**HYLAND BOAT RAMP IMPROVEMENTS**  
 BLOOMINGTON, MINNESOTA

**NOTES:**

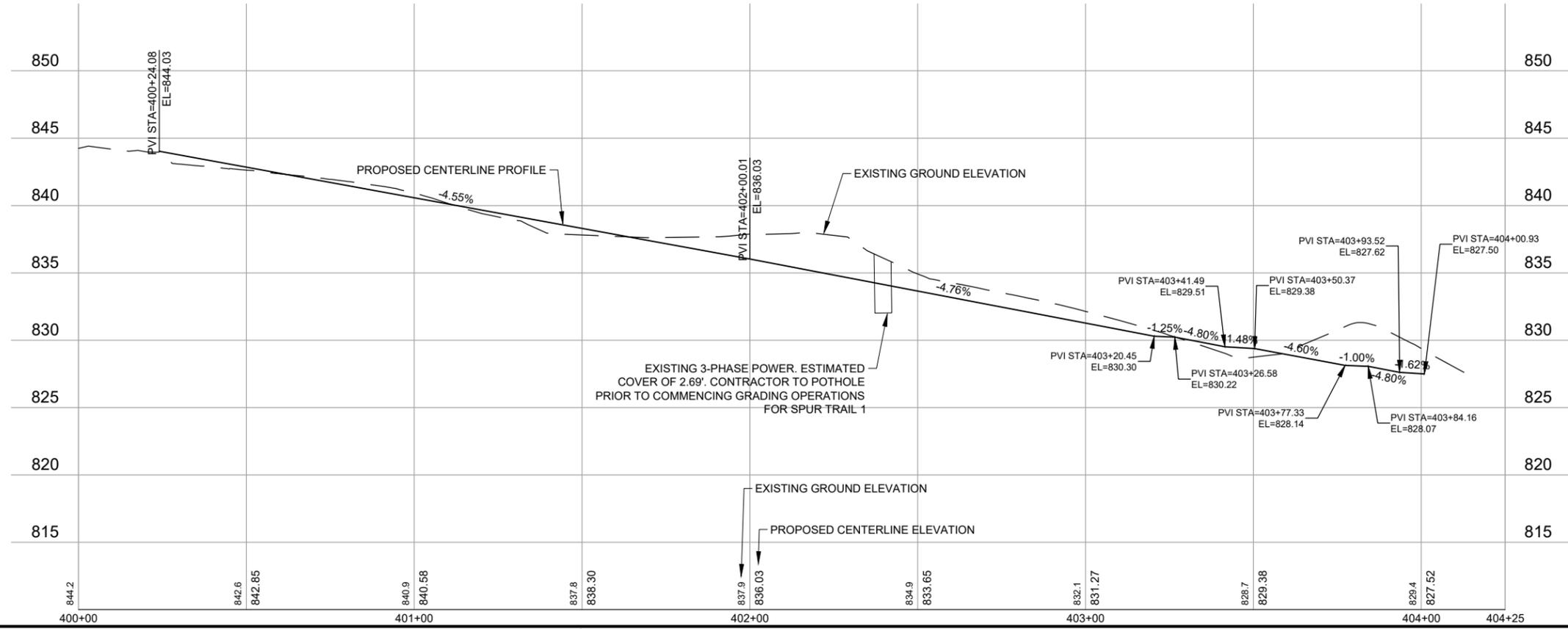
1. ALL PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED WITH TARGET 1.5% CROSS SLOPE UNLESS OTHERWISE SHOWN. CROSS SLOPE SHALL NOT EXCEED 2.0%.
2. ALL PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED WITH MAXIMUM 5.0% RUNNING SLOPE UNLESS OTHERWISE SHOWN.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ALL FACILITIES NOT MEETING THESE REQUIREMENTS AT NO EXPENSE TO THE OWNER.
4. SEE EROSION CONTROL PLANS FOR PROPOSED SITE GRADING



LEGEND	
	BITUMINOUS PAVEMENT
	6" CONCRETE WALK
	4" CONCRETE WALK



# HYLAND BOAT RAMP IMPROVEMENTS



Save: 6/6/2024 3:10 PM sszymonowicz Plot: 6/7/2024 9:37 AM X:\PT\THRV\17685915-final-dsgn\51-drawings\10-Civil\caddwg\17685915-BOAT RAMP TRAIL 1.dwg

SEH Project	TH176858	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
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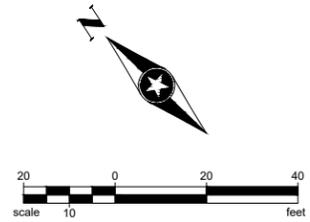
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.

**SEH**

BLAKE HANSEN  
DATE: 06-05-2024 LICENSE NO. 58904

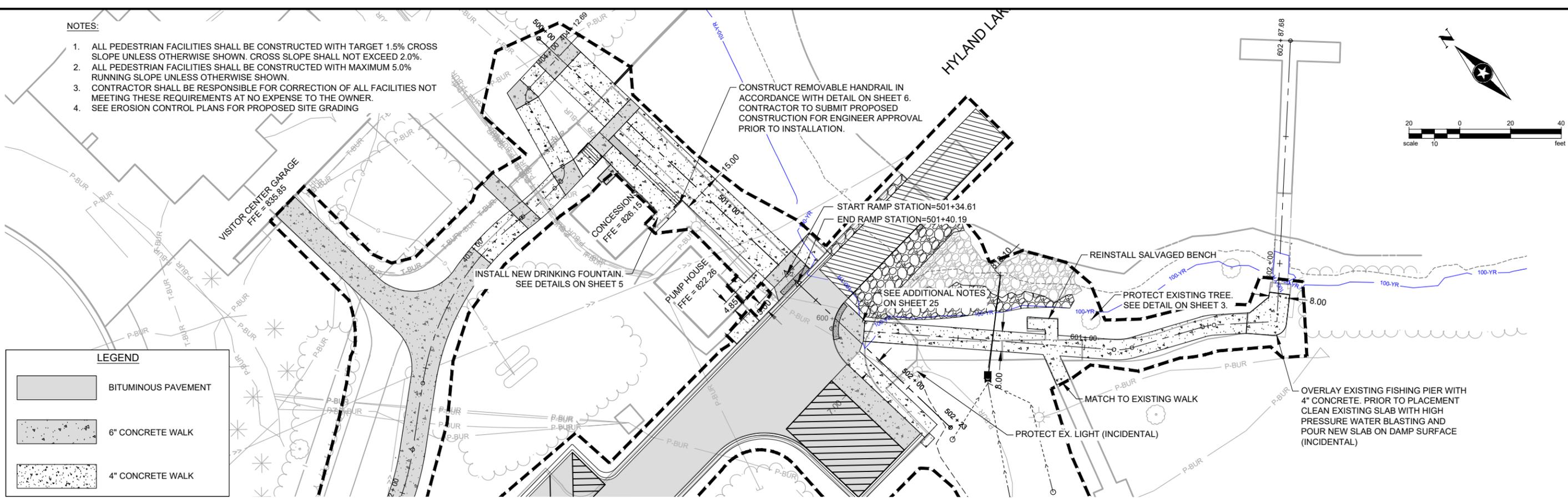
**NOTES:**

1. ALL PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED WITH TARGET 1.5% CROSS SLOPE UNLESS OTHERWISE SHOWN. CROSS SLOPE SHALL NOT EXCEED 2.0%.
2. ALL PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED WITH MAXIMUM 5.0% RUNNING SLOPE UNLESS OTHERWISE SHOWN.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTION OF ALL FACILITIES NOT MEETING THESE REQUIREMENTS AT NO EXPENSE TO THE OWNER.
4. SEE EROSION CONTROL PLANS FOR PROPOSED SITE GRADING

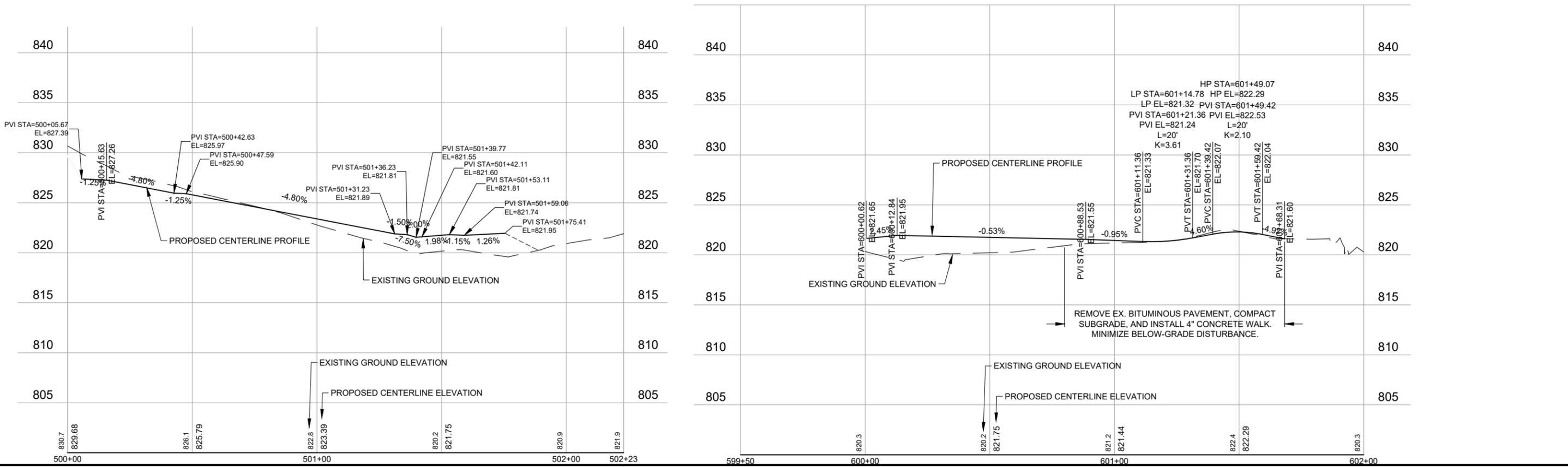


**LEGEND**

- BITUMINOUS PAVEMENT
- 6" CONCRETE WALK
- 4" CONCRETE WALK



# HYLAND BOAT RAMP IMPROVEMENTS



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SEH Project	TH176858	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	-	.			.		
Designed By	-	.			.		
Checked By	-	.			.		

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.

*Blake Hansen*  
 BLAKE HANSEN  
 DATE: 06-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
 BLOOMINGTON, MINNESOTA

**LAKE SIDE TRAILS**

19  
of 30

**SWPPP SUMMARY/OVERVIEW:**

THIS STORM WATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN DEVELOPED TO ADDRESS THE REQUIREMENTS OF NPDES PERMIT MN R100001. THIS SWPPP INCLUDES A COMBINATION OF NARRATIVE AND PLAN SHEETS THAT DESCRIBE THE TEMPORARY AND PERMANENT STORM WATER MANAGEMENT PLAN FOR THE PROJECT.

**PROJECT INFORMATION:**

LOCATION:	BLOOMINGTON, MN
LATITUDE/LONGITUDE:	44.824161, -93.371507
PROJECT DESCRIPTION:	ROADWAY & BOAT RAMP RECONSTRUCTION, PEDESTRIAN TRAIL RECONSTRUCTION
SOIL DISTURBING ACTIVITIES:	PAVEMENT RECONSTRUCTION

**CONTACTS:**

OWNER:	THREE RIVERS PARK DISTRICT
CONTACT:	JOSH BOWE
ADDRESS:	3000 XENIUM LN N, PLYMOUTH, MN 55441
PHONE:	(763) 694-2063
EMAIL:	JOSH.BOWE@THREERIVERSPARKS.ORG
ENGINEER:	SHORT ELLIOTT HENDRICKSON INC. (SEH)
CONTACT:	BLAKE HANSEN
PHONE:	(952) 912-2637
EMAIL:	BHANSEN@SEHINC.COM
PROJECT NO.:	THRIV176858

**KNOWLEDGEABLE PERSON/CHAIN OF RESPONSIBILITY**

THE CONTRACTOR SHALL IDENTIFY A PERSON KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPs WHO WILL COORDINATE WITH ALL CONTRACTORS, SUBCONTRACTORS, AND OPERATORS ON-SITE TO OVERSEE THE IMPLEMENTATION OF THE SWPPP.

CONTRACTOR	X
CONTACT	X
PHONE	X
EMAIL	X

THE CONTRACTOR SHALL ESTABLISH A CHAIN OF RESPONSIBILITY FOR ALL CONTRACTORS AND SUB-CONTRACTORS ON SITE TO ENSURE THE SWPPP IS BEING PROPERLY IMPLEMENTED AND MAINTAINED. THE CONTRACTOR SHALL PROVIDE THE CHAIN OF RESPONSIBILITY TO THE OWNER AND ATTACH TO THE SWPPP PRIOR TO ANY CONSTRUCTION ACTIVITY.

**GENERAL SWPPP RESPONSIBILITIES:**

THE CONTRACTOR SHALL KEEP THE SWPPP ON-SITE, OR ELECTRONICALLY AVAILABLE ON SITE, DURING NORMAL WORKING HOURS WITH PERSONNEL WHO HAVE OPERATIONAL CONTROL OVER THE APPLICABLE PORTION OF THE SITE, INCLUDING ALL CHANGES TO THE SWPPP, INSPECTIONS, AND MAINTENANCE RECORDS.

THE SWPPP WILL BE AMENDED AS NEEDED AND/OR AS REQUIRED BY PROVISIONS OF THE PERMIT. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPs AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER. AMENDMENTS WILL BE APPROVED BY BOTH THE OWNER AND CONTRACTOR AND WILL BE ATTACHED OR OTHERWISE INCLUDED WITH THE SWPPP DOCUMENTS. THE SWPPP AMENDMENTS SHALL BE INITIATED, FACILITATED, AND PROCESSED BY THE CONTRACTOR.

PERMITTEES MUST AMEND THE SWPPP WITHIN 7 DAYS TO INCLUDE ADDITIONAL OR MODIFIED BMPs WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.

PERMITTEES MUST AMEND THE SWPPP WITHIN 7 DAYS TO INCLUDE ADDITIONAL OR MODIFIED BMPs AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP.2) OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL.

**PROJECT LOCATION MAP, INCLUDING ALL RECEIVING WATERS, WETLANDS, AND EXISTING STORMWATER PONDS OR BASINS WITHIN ONE MILE OF PROJECT SITE AND ARROWS SHOWING OVERLAND FLOW.**



ALL SWPPP CHANGES MUST BE DONE BY AN INDIVIDUAL TRAINED IN ACCORDANCE WITH SECTION 21.2. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.

BOTH THE OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER TERMINATION AND/OR TRANSFER OF THE PERMIT.

**LONG TERM OPERATION AND MAINTENANCE**

THE OWNER WILL BE RESPONSIBLE OR WILL OTHERWISE IDENTIFY WHO WILL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM(S).

THE OWNER WILL PREPARE AND IMPLEMENT A PERMANENT STORMWATER TREATMENT SYSTEM(S) MAINTENANCE PLAN.

**TRAINING DOCUMENTATION:**

PREPARER/DESIGNER OF SWPPP:	DEAN DONEEN
EMPLOYER:	SHORT ELLIOTT HENDRICKSON, INC.
DATE OBTAINED / REFRESHED	6/1/2022
INSTRUCTOR(S)/ENTITY PROVIDING TRAINING:	UNIVERSITY OF MINNESOTA

CONTENT OF TRAINING AVAILABLE UPON REQUEST.

THE CONTRACTOR (OPERATOR) SHALL ADD TO THE SWPPP TRAINING RECORDS FOR THE FOLLOWING PERSONNEL:

- INDIVIDUALS OVERSEEING THE IMPLEMENTATION OF, REVISING, AND AMENDING THE SWPPP
- INDIVIDUALS PERFORMING INSPECTIONS
- INDIVIDUALS PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPs

TRAINING MUST RELATE TO THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES AND SHALL INCLUDE:

- 1) DATES OF TRAINING
- 2) NAME OF INSTRUCTORS
- 3) CONTENT AND ENTITY PROVIDING TRAINING

THE CONTRACTOR SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT.

**PROJECT SUMMARY:**

TOTAL DISTURBED AREA:	1.01 AC
PRE-CONSTRUCTION IMPERVIOUS AREA:	0.34 AC
POST-CONSTRUCTION IMPERVIOUS AREA:	0.34 AC
IMPERVIOUS AREA ADDED:	0 AC

**RECEIVING WATER(S) WITHIN ONE MILE FROM PROJECT BOUNDARIES:**  
(<http://pca-gis02.pca.state.mn.us/CSW/index.html>)

ID	NAME	TYPE	SPECIAL WATER?	IMPAIRED WATER?	CONSTRUCTION RELATED IMPAIRMENT OR SPECIAL WATER CLASSIFICATION	TMDL
1	HYLAND	LAKE	N	Y	NUTRIENTS	NONE

ADDITIONAL BMPs AND/OR ACTIONS REQUIRED: IMMEDIATELY INITIATE AND COMPLETE STABILIZATION WITHIN 7 DAYS  
SEE SECTION 23 OF THE PERMIT AND APPLICABLE TMDL WLA'S

WATERBODY	NO WORK DURING
LAKES	APRIL 1 - JUNE 30
NON-TROUT STREAMS	MARCH 15 - JUNE 15
TROUT STREAMS	SEPTEMBER 1 - APRIL 1

**SITE SOIL INFORMATION:** (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)  
(SOIL INFORMATION PROVIDED IS FOR NPDES PERMIT INFORMATION ONLY. SOIL INFORMATION WAS OBTAINED FROM THE USGS WEBSITE. THE CONTRACTOR SHALL NOT RELY ON THIS SOIL INFORMATION FOR CONSTRUCTION PURPOSES.)

SOIL NAME:	HYDROLOGIC CLASSIFICATION:
LESTER LOAM	C
LE SUEUR LOAM	C/D
ANGUS LOAM	C

**RELATED REVIEWS & PERMITS:**  
ENVIRONMENTAL, WETLAND, ENDANGERED OR THREATENED SPECIES, ARCHEOLOGICAL, LOCAL, STATE, AND/OR FEDERAL REVIEWS/PERMITS:  
COVERAGE UNDER THIS PERMIT CANNOT BE ISSUED UNTIL THE REQUIREMENTS FOR WETLAND PERMITS, DECISIONS, OTHER DETERMINATIONS, OR THE MITIGATIVE SEQUENCE REQUIRED IN SECTION 22 OF THE NPDES PERMIT MNR100001 HAVE BEEN FINALIZED AND DOCUMENTED.

AGENCY:	TYPE OF PERMIT:
RPBCWD	WATERSHED DISTRICT PERMIT
MPCA	CONSTRUCTION STORMWATER PERMIT

**IMPLEMENTATION SEQUENCE:**

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING SEQUENCE. THE ENGINEER MAY APPROVE ADJUSTMENTS TO THE SEQUENCE AS NEEDED.

1.	INSTALL ROCK CONSTRUCTION ENTRANCE(S)
2.	INSTALL PERIMETER CONTROL AND STABILIZE DOWN GRADIENT BOUNDARIES
3.	INSTALL INLET PROTECTION ON EXISTING CATCH BASINS
4.	COMPLETE SITE GRADING
5.	INSTALL UTILITIES, STORM SEWER, INLET PROTECTION, CURB & GUTTER, PAVING
6.	COMPLETE FINAL GRADING AND STABILIZE DISTURBED AREAS
7.	AFTER CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ACCUMULATED SEDIMENT, REMOVE BMPs, AND RE-STABILIZE ANY AREAS DISTURBED BY THEIR REMOVAL.
8.	INSTALL FILTRATION MEDIA

**PROJECT SPECIFIC NOTES:**

NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL AND AVOIDANCE OF COMPACTION TO THE GREATEST EXTENT PRACTICABLE.

ADDITIONAL MEASURES, SUCH AS HYDRAULIC MULCHING AND OTHER PRACTICES AS SPECIFIED BY THE DISTRICT MUST BE USED ON SLOPES OF 3:1 (H:V) OR STEEPER TO PROVIDE ADEQUATE STABILIZATION.

FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT AT LEAST SIX INCHES OF TOPSOIL WITH A MINIMUM OF 5% ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED.

CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION

SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION

STAGING ONLY ALLOWED WITHIN CONSTRUCTION LIMITS IDENTIFIED IN PLANS

CLEAN ALL CONSTRUCTION EQUIPMENT AFTER CONTACT WITH WATER TO PREVENT TRANSFER OF AQUATIC INVASIVE SPECIES.

INSTALLATION AND MAINTENANCE OF BMP IS TO FOLLOW OWNER'S MANUAL PROVIDED BY CONTECH

**THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE SWPPP:**

- PLAN AND PROFILE PLAN SHEETS:
- EROSION AND SEDIMENT CONTROL PLAN SHEETS:
- TURF ESTABLISHMENT PLAN SHEETS:
- STORM SEWER PLAN & PROFILE PLAN SHEETS:
- GRADING PLAN SHEETS:
- DETAIL PLAN SHEETS:
- SWPPP NOTE AND DETAIL SHEETS:
- PROJECT SPECIFICATIONS:
- PROJECT BID FORM:
- TEMPORARY BMP DESIGN FACTORS:
- EROSION PREVENTION AND SEDIMENT CONTROL BMP'S MUST BE DESIGNED TO ACCOUNT FOR:

THE EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION OF PRECIPITATION

THE NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE, INCLUDING FACTORS SUCH AS EXPECTED FLOW FROM IMPERVIOUS SURFACES, SLOPES, AND SITE DRAINAGE FEATURES

THE 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

THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT.

**PERMANENT STORMWATER MANAGEMENT SYSTEM**

NO PERMANENT STORMWATER MANAGEMENT SYSTEM IS REQUIRED BY THE MN CONSTRUCTION STORMWATER PERMIT.

SYSTEM IS DESIGNED INSTEAD TO MEET THE REQUIREMENTS OF RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT.

SEH Project	TH176858	Rev.#	Revision Issue Description	Date	Rev.#	Revision Issue Description	Date
Drawn By	--						
Designed By	--						
Checked By	--						



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.  
BLAKE HANSEN  
DATE: 08-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA

**STORM WATER POLLUTION PREVENTION PLAN**

DRAINAGE PATHS, DITCHES, AND/OR SWALES SHALL HAVE TEMPORARY OR PERMANENT STABILIZATION WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER OR 24 HOURS AFTER CONSTRUCTION ACTIVITY IN THE DITCH/SWALE HAS TEMPORARILY OR PERMANENTLY CEASED.

THE CONTRACTOR SHALL COMPLETE THE STABILIZATION OF ALL EXPOSED SOILS WITHIN 24 HOURS THAT LIE WITHIN 200 FEET OF PUBLIC WATERS PROMULGATED "WORK IN WATER RESTRICTIONS" BY THE MN DNR DURING SPECIFIED FISH SPAWNING TIMES.

THE CONTRACTOR SHALL IMPLEMENT EROSION CONTROL BMPS AND VELOCITY DISSIPATION DEVICES ALONG CONSTRUCTED STORMWATER CONVEYANCE CHANNELS AND OUTLETS.

PERMITTEES MUST STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALES THAT DRAIN WATER FROM THE SITE WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. PERMITTEES MUST COMPLETE STABILIZATION OF REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS (7 DAYS FOR SITES DISCHARGING TO SPECIAL OR IMPAIRED WATERS, SEE SECTION 24) AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES.

THE CONTRACTOR SHALL NOT UTILIZE HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES AS A FORM OF STABILIZATION FOR TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.

THE CONTRACTOR SHALL ENSURE PIPE OUTLETS HAVE TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER.

THE CONTRACTOR SHALL DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS TO INCREASE SEDIMENT REMOVAL AND MAXIMIZE STORMWATER INFILTRATION. VELOCITY DISSIPATION DEVICES MUST BE USED TO PREVENT EROSION WHEN DIRECTING STORMWATER TO VEGETATED AREAS.

**SEDIMENT CONTROL MEASURES AND TIMING:**  
THE CONTRACTOR IS RESPONSIBLE FOR ALL SEDIMENT CONTROL MEASURES FOR THE PROJECT.

SEDIMENT CONTROL MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL MEASURES ARE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE. IMMEDIATELY AFTER THE CONSTRUCTION ACTIVITY IS COMPLETE, PERMITTEE(S) MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL PRACTICES REMOVED OR ADJUSTED FOR SHORT-TERM ACTIVITIES BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE REINSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.

THE CONTRACTOR SHALL ENSURE STORM DRAIN INLETS ARE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED.

THE CONTRACTOR MUST PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROL AT THE BASE OF THE STOCKPILES ON THE DOWNGRADIENT PERIMETER PRIOR TO THE INITIATION OF STOCKPILING. SEDIMENT CONTROLS MUST BE MANAGED IN ACCORDANCE WITH SECTION 9.6 OF THE NPDES PERMIT MNR100001. CONTRACTOR SHALL INITIATE TEMPORARY OR PERMANENT STABILIZATION OF SEDIMENT CONTROL BMPS MADE OF SOIL WITHIN 24 HOURS.

THE CONTRACTOR SHALL INSTALL PERIMETER CONTROL AROUND ALL STAGING AREAS, BORROW PITS, AND AREAS CONSIDERED ENVIRONMENTALLY SENSITIVE.

THE CONTRACTOR SHALL ENSURE VEHICLE TRACKING BE MINIMIZED WITH EFFECTIVE BMPS. WHERE THE BMPS FAIL TO PREVENT SEDIMENT FROM TRACKING ONTO STREETS THE CONTRACTOR SHALL CONDUCT STREET SWEEPING, IN ADDITION TO VEHICLE TRACKING BMPS, TO REMOVE ALL TRACKED SEDIMENT.

THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION PRACTICES TO MINIMIZE SOIL COMPACTION.

THE CONTRACTOR SHALL ENSURE ALL CONSTRUCTION ACTIVITY REMAIN WITHIN PROJECT LIMITS AND THAT ALL IDENTIFIED RECEIVING WATER BUFFERS ARE MAINTAINED.

RECEIVING WATER	NATURAL BUFFER	IS THE BUFFER BEING ENCLOSED ON?	REASON FOR BUFFER ENCROACHMENT
HYLAND LAKE	50 FT	YES	BOAT LAUNCH RECONSTRUCTION

A 50 FOOT NATURAL BUFFER MUST BE PRESERVED OR PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS IF NATURAL BUFFER IS INFEASIBLE.

THE CONTRACTOR SHALL NOT UTILIZE SEDIMENT CONTROL CHEMICALS ON SITE.

**INSPECTION AND MAINTENANCE:**  
ALL INSPECTIONS, MAINTENANCE, REPAIRS, REPLACEMENTS, AND REMOVAL OF BMPS IS TO BE CONSIDERED INCIDENTAL TO THE BMP BID ITEMS.

THE PERMITTEE(S) IS RESPONSIBLE FOR COMPLETING SITE INSPECTIONS, AND BMP MAINTENANCE TO ENSURE COMPLIANCE WITH THE PERMIT REQUIREMENTS.

THE PERMITTEE(S) SHALL INSPECT THE CONSTRUCTION SITE ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.

PERMITTEE MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED AS FOLLOWS:

- A. INSPECTIONS OF AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE PER MONTH, EVEN IF CONSTRUCTION ACTIVITY CONTINUES ON OTHER PORTIONS OF THE SITE; OR
- B. WHERE SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES. THE MPCA MAY REQUIRE INSPECTIONS TO RESUME IF CONDITIONS WARRANT; OR
- C. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.
- D. FOR PROJECTS WHERE A POLLINATOR HABITAT OR NATIVE PRAIRIE TYPE VEGETATED COVER IS BEING ESTABLISHED, INSPECTIONS MAY BE REDUCED TO ONCE PER MONTH IF THE SITE HAS TEMPORARY VEGETATION WITH A DENSITY OF 70% TEMPORARY UNIFORM COVER. IF AFTER 24 MONTHS NO SIGNIFICANT EROSION PROBLEMS ARE OBSERVED, INSPECTIONS MAY BE SUSPENDED COMPLETELY UNTIL THE TERMINATION REQUIREMENTS IN SECTION 13 OF THE NPDES PERMIT MNR100001 HAVE BEEN MET.

THE PERMITTEE(S) SHALL DOCUMENT A WRITTEN SUMMARY OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES CONDUCTED WITHIN 24 HOURS OF OCCURRENCE. RECORDS OF EACH ACTIVITY SHALL INCLUDE THE FOLLOWING:

- DATE AND TIME OF INSPECTIONS;
- NAME OF PERSON(S) CONDUCTING INSPECTION;
- FINDINGS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS IF NECESSARY;
- CORRECTIVE ACTIONS TAKEN;
- DATE AND AMOUNT OF RAINFALL EVENTS;
- IF PERMITTEES OBSERVE A DISCHARGE DURING THE INSPECTION, THEY MUST RECORD AND SHOULD PHOTOGRAPH AND DESCRIBE THE LOCATION OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLES OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS); AND
- ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 OF THE NPDES PERMIT MNR100001 WITHIN SEVEN (7) CALENDAR DAYS; AND
- ALL PHOTOGRAPHS OF DEWATERING ACTIVITIES AND DOCUMENTATION OF NUISANCE CONDITIONS RESULTING FROM DEWATERING ACTIVITIES AS DESCRIBED IN SECTION 10 OF THE NPDES PERMIT MNR100001.

THE PERMITTEE(S) SHALL SUBMIT A COPY OF THE WRITTEN INSPECTIONS TO THE ENGINEER AND OWNER ON A MONTHLY BASIS. IF MONTHLY INSPECTION REPORTS ARE NOT SUBMITTED, MONTHLY PAYMENTS MAY BE HELD.

THE CONTRACTOR SHALL DOCUMENT AMENDMENTS TO THE SWPPP AS A RESULT OF INSPECTION(S) WITHIN 7 DAYS.

THE CONTRACTOR SHALL KEEP THE SWPPP, ALL INSPECTION REPORTS, AND AMENDMENTS ONSITE. THE CONTRACTOR SHALL DESIGNATE A SPECIFIC ONSITE LOCATION TO KEEP THE RECORDS

THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY BMP'S, AS WELL AS EROSION AND SEDIMENT CONTROL BMP'S.

THE CONTRACTOR SHALL INSPECT EROSION PREVENTION AND SEDIMENTATION CONTROL BMPS TO ENSURE INTEGRITY AND EFFECTIVENESS. ALL NONFUNCTIONAL BMPS SHALL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS WITHIN 24 HOURS OF FINDING. THE CONTRACTOR SHALL INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:

PERIMETER CONTROL DEVICES, INCLUDING SILT FENCE SHALL BE REPAIRED, OR REPLACED, WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE DEVICE HEIGHT. THESE REPAIRS SHALL BE MADE WITHIN 24 HOURS OF DISCOVERY.

TEMPORARY AND PERMANENT SEDIMENT BASINS SHALL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY.

DURING EACH INSPECTION, CONTRACTOR MUST INSPECT AREAS ADJACENT TO THE PROJECT, SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN AREAS ADJACENT TO THE PROJECT, SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. CONTRACTOR MUST COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR MUST USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.

CONSTRUCTION SITE VEHICLE EXIT LOCATIONS SHALL BE INSPECTED DAILY FOR EVIDENCE OF SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY.

IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANOR AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS.

**EROSION PREVENTION BMP SUMMARY:**  
SEE EROSION AND SEDIMENT CONTROL PLAN SHEET AND BID FORM FOR TYPE, LOCATION, AND QUANTITY OF EROSION PREVENTION BMPS.

**SEDIMENT CONTROL BMP SUMMARY:**  
SEE EROSION AND SEDIMENT CONTROL PLAN SHEETS AND BID FORM FOR TYPE, LOCATION, AND QUANTITY OF SEDIMENT CONTROL BMPS.

**EROSION PREVENTION MEASURES AND TIMING:**  
THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION PREVENTION MEASURES FOR THE PROJECT.

EROSION PREVENTION MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL EROSION PREVENTION MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA AND TO MINIMIZE THE DISCHARGE OF POLLUTANTS IN STORMWATER FROM CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL PLAN AND IMPLEMENT APPROPRIATE CONSTRUCTION PRACTICES AND CONSTRUCTION PHASING TO MINIMIZE EROSION AND RETAIN VEGETATION WHENEVER POSSIBLE.

THE PERMITTEE SHALL DELINEATE AREAS NOT TO BE DISTURBED. PERMITTEE(S) MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES.

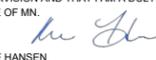
CONTRACTOR MUST PHASE AND INCORPORATE STORMWATER MANAGEMENT PRINCIPLES AS THE CONSTRUCTION PROGRESSES. UNLESS INFEASIBLE, TEMPORARY OR PERMANENT WET SEDIMENTATION BASINS (WHEN REQUIRED, SEE SECTION 14 AND 15) SHOULD BE CONSTRUCTED AS A FIRST STEP IN THE PROCESS AND STORMWATER ROUTED TO THESE.

CONTRACTOR MUST NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN THREE (3) FEET OF FINAL GRADE, UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULL STABILIZED UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. CONTRACTOR MUST NOT INSTALL FOLTER MEDIA UNTIL THEY CONSTRUCT AND FULLY STABILIZE THE CONTRIBUTING DRAINAGE AREA UNLESS THEY PROVIDE REGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS(E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE FILTRATION AREA.

THE CONTRACTOR SHALL STABILIZE OF ALL EXPOSED SOILS IMMEDIATELY TO LIMIT SOIL EROSION. IN NO CASE SHALL ANY EXPOSED AREAS, INCLUDING STOCK PILES, HAVE EXPOSED SOILS FOR MORE THAN 7 DAYS WITHOUT PROVIDING TEMPORARY OR PERMANENT STABILIZATION. STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITY HAS CEASED. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT CLAY, SILT, OR ORGANIC COMPONENTS DO NOT REQUIRE STABILIZATION.

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Designed By	--						
Checked By	--						

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.



BLAKE HANSEN  
DATE: 08-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA

**STORM WATER POLLUTION PREVENTION PLAN**

21  
of 30

**DEWATERING AND BASIN DRAINING ACTIVITIES:**

THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL DEWATERING AND SURFACE DRAINAGE REGULATIONS.

CONTRACTOR MUST NOT CAUSE NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) IN SURFACE WATERS FROM DEWATERING AND BASIN DRAINING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) DISCHARGES. CONTRACTOR MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING TO A SEDIMENT CONTROL (E.G., GRASSY OR WOODED), UPLAND AREAS OF THE SITE TO INFILTRATE DEWATERING WATER BEFORE DISCHARGE. CONTRACTOR ARE PROHIBITED FROM USING RECEIVING WATERS AS PART OF THE TREATMENT AREA. CONTRACTOR MUST VISUALLY CHECK AND PHOTOGRAPH THE DISCHARGE AT THE BEGINNING AND AT LEAST ONCE EVERY 24 HOURS OF OPERATION TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE.

IF NUISANCE CONDITIONS RESULT FROM THE DISCHARGE, CONTRACTOR MUST CEASE DEWATERING IMMEDIATELY AND CORRECTIVE ACTIONS MUST OCCUR BEFORE DEWATERING IS RESUMED. NUISANCE CONDITIONS INCLUDES, BUT IS NOT LIMITED TO, A SEDIMENT PLUME IN THE DISCHARGE OR THE DISCHARGE APPEARS CLOUDY, OR OPAQUE, OR HAS A VISIBLE OIL FILM, OR HAS AQUATIC HABITAT DEGRADATION THAT CAN BE IDENTIFIED BY AN OBSERVER.

CONTRACTOR MUST INSPECT AND PHOTOGRAPH DEWATERING DISCHARGES AT THE BEGINNING AND AT LEAST ONCE EVERY 24 HOURS DURING OPERATION. DEWATERING DISCHARGES THAT ONLY LAST FOR MINUTES, AS OPPOSED TO HOURS AND DO NOT REACH A SURFACE WATER, DO NOT REQUIRE PHOTOGRAPHS OR DOCUMENTATION.

DISCHARGE THAT CONTAINS OIL OR GREASE MUST BE TREATED WITH AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE PRIOR TO DISCHARGE.

BACKWASH WATER USED FOR FILTERING SHALL BE HAULED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF TREATMENT PROCESS, OR INCORPORATED INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION. THE CONTRACTOR SHALL REPLACE AND CLEAN FILTER MEDIAS USED IN DEWATERING DEVICES WHEN REQUIRED TO MAINTAIN ADEQUATE FUNCTION.

**POLLUTION PREVENTION MANAGEMENT MEASURES:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POLLUTION PREVENTION MANAGEMENT MEASURES.

ALL POLLUTION PREVENTION MEASURES ARE CONSIDERED INCIDENTAL TO THE MOBILIZATION BID ITEM, UNLESS OTHERWISE NOTED.

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL, IN COMPLIANCE WITH MPCA DISPOSAL REQUIREMENTS, OF ALL HAZARDOUS MATERIALS, SOLID WASTE, AND PRODUCTS ON-SITE.

THE CONTRACTOR SHALL ENSURE CONSTRUCTION MATERIALS THAT HAVE THE POTENTIAL TO LEAK POLLUTANTS ARE KEPT UNDER COVER TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS ARE COVERED TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE HAZARDOUS MATERIALS AND TOXIC WASTE IS PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE OR HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.

THE CONTRACTOR SHALL ENSURE ASPHALT SUBSTANCES USED ON-SITE SHALL ARE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

THE CONTRACTOR SHALL ENSURE PAINT CONTAINERS AND CURING COMPOUNDS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT AND/OR CURING COMPOUNDS SHALL NOT BE DISCHARGED INTO THE STORM SEWER SYSTEM AND SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURE'S INSTRUCTION.

THE CONTRACTOR SHALL ENSURE SOLID WASTE BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. CH. 7035.

THE CONTRACTOR SHALL ENSURE POTABLE TOILETS ARE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH. 7041.

THE CONTRACTOR SHALL MONITOR ALL VEHICLES ON-SITE FOR LEAKS AND RECEIVE REGULAR PREVENTION MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.

THE CONTRACTOR SHALL ENSURE WASHOUT WASTE MUST CONTACT THE GROUND AND BE PROPERLY DISPOSED OF IN COMPLIANCE WITH MPCA RULES.

THE CONTRACTOR SHALL INCLUDE SPILL KITS WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES. SECONDARY CONTAINMENT MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

THE CONTRACTOR SHALL ENSURE SPILLS ARE CONTAINED AND CLEANED UP IMMEDIATELY UPON DISCOVERY. SPILLS LARGE ENOUGH TO REACH THE STORM WATER CONVEYANCE SYSTEM SHALL BE REPORTED TO THE MINNESOTA DUTY OFFICER AT 1.800.422.0798.

**PERMIT TERMINATION CONDITIONS:**

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING FINAL STABILIZATION OF THE ENTIRE SITE. PERMIT TERMINATION CONDITIONS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED.

ALL EXPOSED SOILS HAVE BEEN UNIFORMLY STABILIZED WITH AT LEAST 70% VEGETATION COVERAGE.

PERMANENT STORM WATER MANAGEMENT SYSTEM(S) ARE CONSTRUCTED AND ARE OPERATING AS DESIGNED.

ALL DRAINAGE DITCHES, PONDS, AND ALL STORM WATER CONVEYANCE SYSTEMS HAVE BEEN CLEARED OF SEDIMENT AND STABILIZED WITH PERMANENT COVER TO PRECLUDE EROSION.

ALL TEMPORARY SYNTHETIC BMPS HAVE BEEN REMOVED AND PROPERLY DISPOSED OF.

THIS PERMIT COVERS ONGOING PROJECTS COVERED UNDER ANY PREVIOUS CONSTRUCTION STORMWATER PERMIT THAT ARE NOT COMPLETE ON THE ISSUANCE DATE OF THIS PERMIT. PERMITTEES MUST EITHER REMAIN IN COMPLIANCE WITH THE PREVIOUS PERMIT AND TERMINATE COVERAGE WITHIN 18 MONTHS OF THE ISSUANCE DATE OF THIS PERMIT OR COMPLY WITH THIS PERMIT, INCLUDING UPDATING THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), WITHIN THE 18-MONTH PERIOD. PERMITTEES OF PREVIOUSLY PERMITTED PROJECTS ARE NOT REQUIRED TO INCORPORATE ANY ADDITIONAL REQUIREMENTS REGARDING THE PERMANENT STORMWATER TREATMENT SYSTEM INCLUDED THIS REISSUED PERMIT.

COVERAGE FOR PROJECTS THAT EXTEND BEYOND THE EXPIRATION DATE OF THIS PERMIT REMAINS EFFECTIVE FOR A GRACE PERIOD OF 18 MONTHS COVERING PROJECT COMPLETION AND NOTICE OF TERMINATION (NOT) SUBMITTAL. IF PERMITTEES CANNOT COMPLETE PROJECTS DURING THE GRACE PERIOD, THE MPCA WILL EXTEND COVERAGE UNDER THE NEXT PERMIT AND PERMITTEES MUST COMPLY WITH THE REQUIREMENTS OF THE NEW PERMIT INCLUDING UPDATING THE SWPPP. PERMITTEES ARE NOT REQUIRED TO FOLLOW CHANGES TO THE PERMANENT STORMWATER TREATMENT SECTION OF THE NEXT PERMIT.

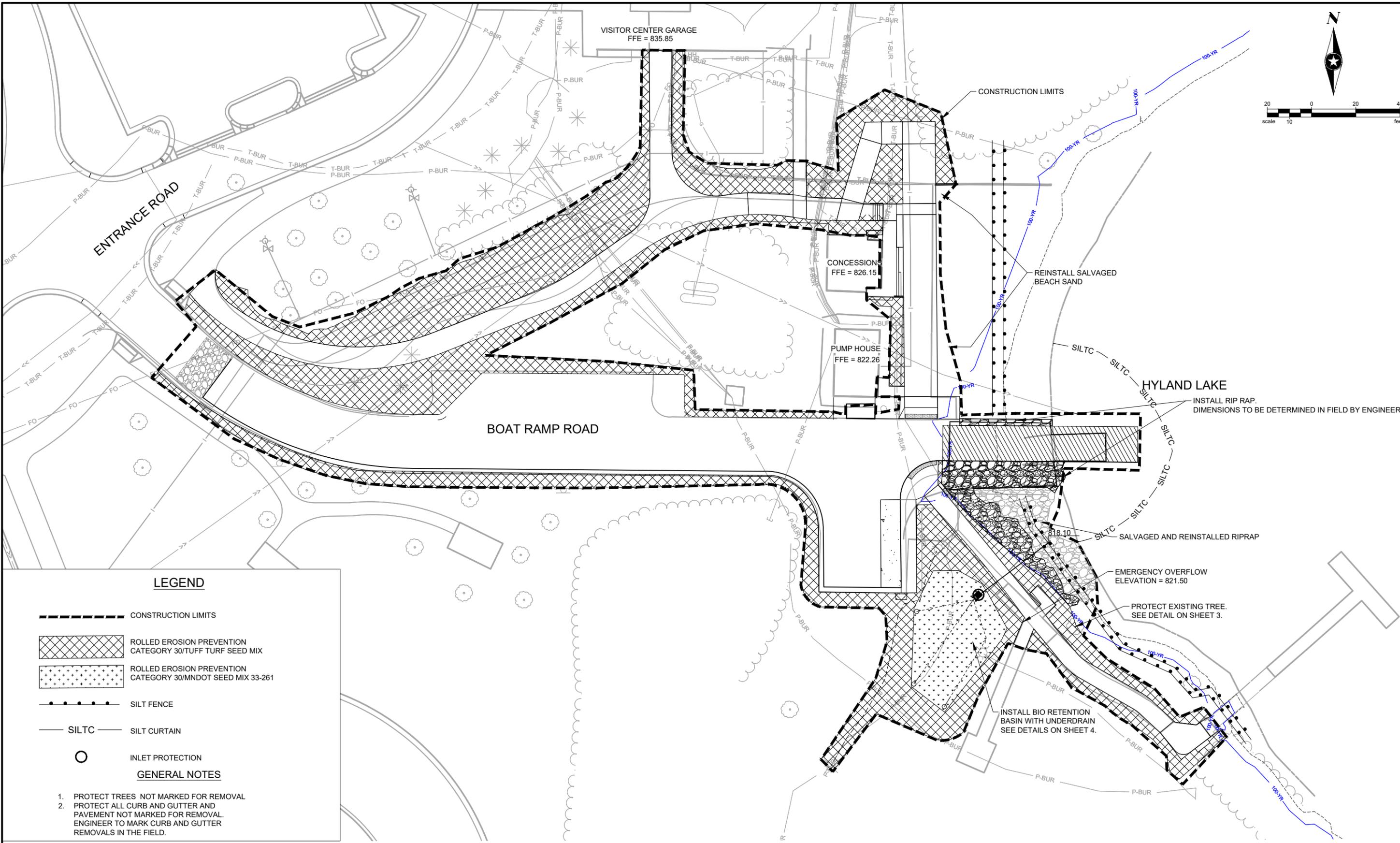
WHEN SUBMITTING THE NOT PERMITTEES MUST INCLUDE EITHER GROUND OR AERIAL PHOTOGRAPHS SHOWING THE REQUIREMENTS OF 13.2 HAVE BEEN MET. PERMITTEES ARE NOT REQUIRED TO TAKE PHOTOGRAPHS OF EVERY DISTINCT PART OF THE SITE, HOWEVER THE CONDITIONS PORTRAYED MUST BE SUBSTANTIALLY SIMILAR TO THOSE AREAS THAT ARE NOT PHOTOGRAPHED. PHOTOGRAPHS MUST BE CLEAR AND IN FOCUS AND MUST INCLUDE THE DATE THE PHOTO WAS TAKEN. [MINN. R. 7090]

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I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PE UNDER THE LAWS OF THE STATE OF MN.  
BLAKE HANSEN  
DATE 08-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA



**LEGEND**

- CONSTRUCTION LIMITS
- ROLLED EROSION PREVENTION  
CATEGORY 30/TUFF TURF SEED MIX
- ROLLED EROSION PREVENTION  
CATEGORY 30/MNDOT SEED MIX 33-261
- SILT FENCE
- SILTC SILT CURTAIN
- INLET PROTECTION

**GENERAL NOTES**

1. PROTECT TREES NOT MARKED FOR REMOVAL
2. PROTECT ALL CURB AND GUTTER AND PAVEMENT NOT MARKED FOR REMOVAL. ENGINEER TO MARK CURB AND GUTTER REMOVALS IN THE FIELD.

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*Blake Hansen*  
 BLAKE HANSEN  
 DATE: 06-05-2024 LICENSE NO. 58904

**HYLAND BOAT RAMP IMPROVEMENTS**  
 BLOOMINGTON, MINNESOTA

**EROSION CONTROL**

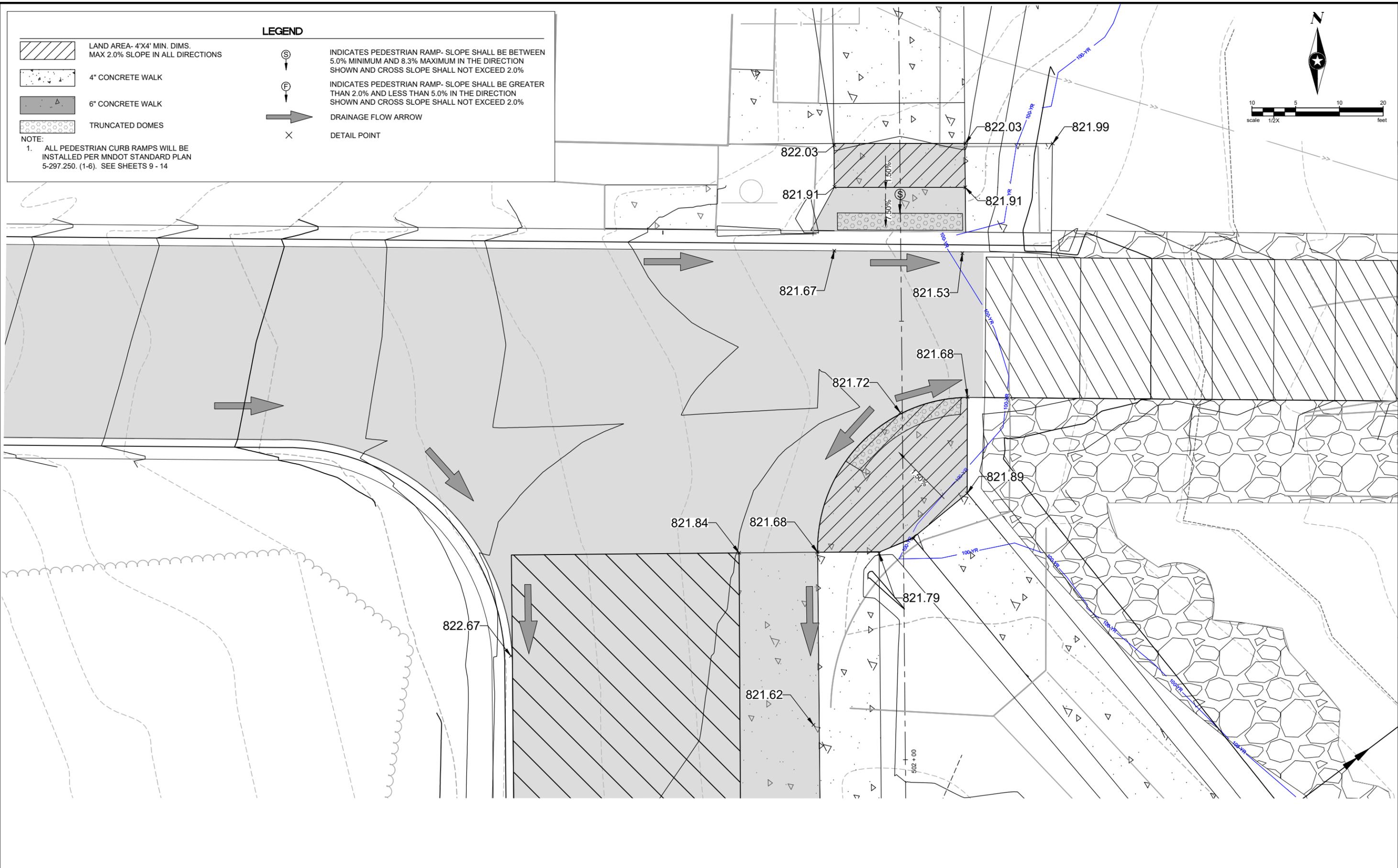
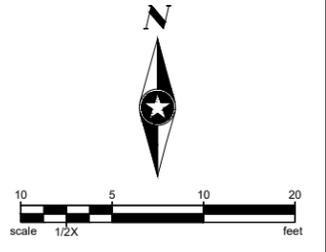


-  LAND AREA- 4'X4' MIN. DIMS. MAX 2.0% SLOPE IN ALL DIRECTIONS
-  4" CONCRETE WALK
-  6" CONCRETE WALK
-  TRUNCATED DOMES

**LEGEND**

-  INDICATES PEDESTRIAN RAMP- SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
-  INDICATES PEDESTRIAN RAMP- SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
-  DRAINAGE FLOW ARROW
-  DETAIL POINT

NOTE:  
1. ALL PEDESTRIAN CURB RAMPS WILL BE INSTALLED PER MNDOT STANDARD PLAN 5-297.250. (1-6). SEE SHEETS 9 - 14



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**HYLAND BOAT RAMP IMPROVEMENTS**  
BLOOMINGTON, MINNESOTA

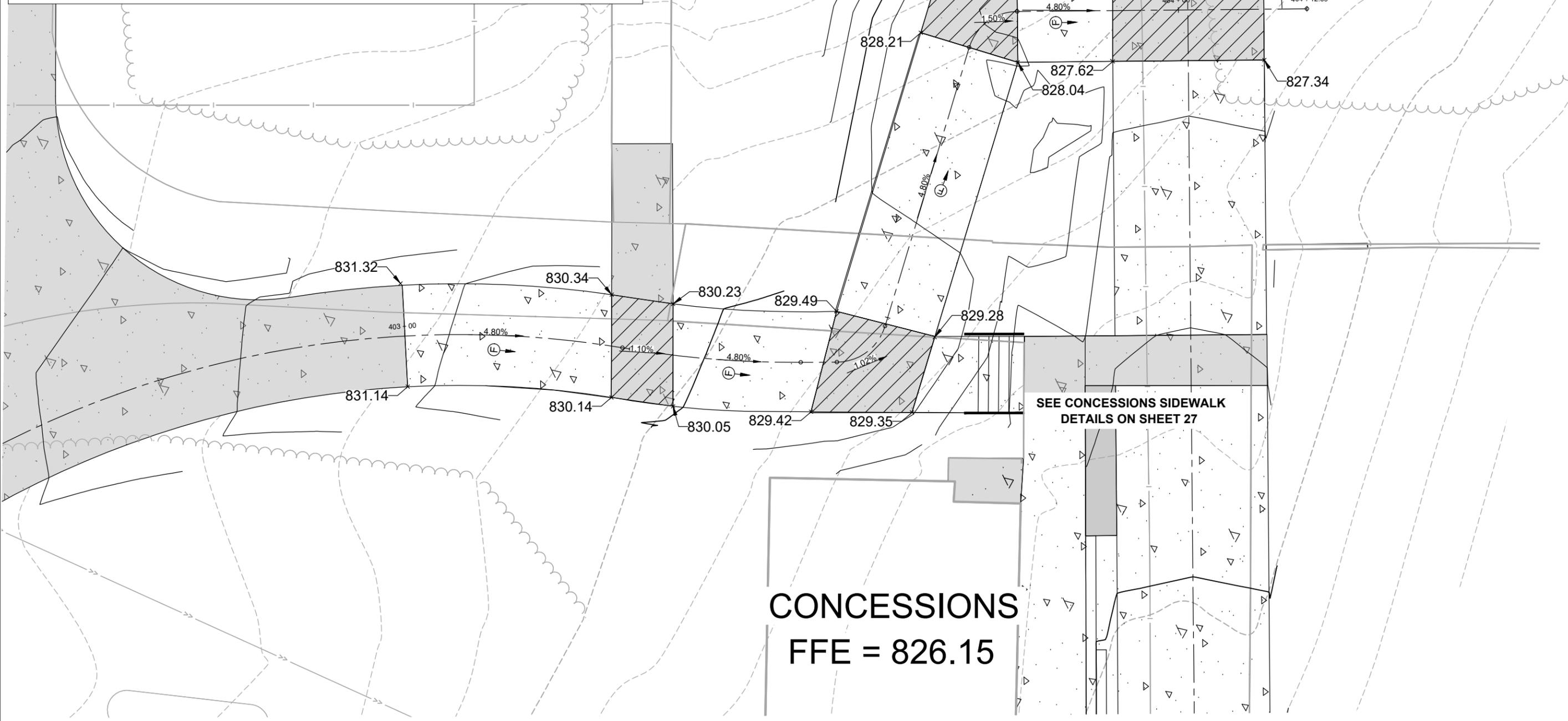
**INTERSECTION DETAIL**



**LEGEND**

- LAND AREA- 4'X4' MIN. DIMS. MAX 2.0% SLOPE IN ALL DIRECTIONS
- 4" CONCRETE WALK
- 6" CONCRETE WALK
- TRUNCATED DOMES
- INDICATES PEDESTRIAN RAMP- SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- INDICATES PEDESTRIAN RAMP- SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%
- DRAINAGE FLOW ARROW
- DETAIL POINT

NOTE:  
 1. ALL PEDESTRIAN CURB RAMPS WILL BE INSTALLED PER MNDOT STANDARD PLAN 5-297.250. (1-6). SEE SHEETS 9 - 14



**CONCESSIONS**  
 FFE = 826.15

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**HYLAND BOAT RAMP IMPROVEMENTS**  
 BLOOMINGTON, MINNESOTA

**SPUR TRAIL 1 ADA WALK DETAIL**

