RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

18681 Lake Drive East
Chanhassen, MN 55317
952-607-6512
www.rpbcwd.org

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2021-088
Considered at Board of Managers Meeting: December 7, 2022
Received complete: May 18, 2022 (RPBCWD extended the permit review timeline by 60 days pursuant to Minnesota Statutes section 15.99 and subsequent 90-day extension per the applicant's request on August 18, 2022 which extended the review timeline to December 14, 2022)

Applicant:	City of Eden Prairie
Representative:	HTPO – Adam Pawelk
Project:	The applicant proposes a linear project involving the reconstruction of 1,610 feet of Pioneer Trail and a bituminous trail on the north side of the roadway, stormwater management, sanitary sewer, storm sewer, and watermain improvements . Stormwater management will be provided by two infiltration pipes, a new infiltration basin, two existing infiltration basins, and one existing wet stormwater pond to provide volume control, water quality, and rate control.
Location:	Pioneer Trail between County Road 1 and Grey Wigeon Place in Eden Prairie, Minnesota
Reviewer:	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 December 7, 2022 meeting of the managers:

Resolved that the application for Permit 2021-088 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 2021-088 on behalf of RPBCWD.

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

Applicable Rule Conformance Summary

Rule	Issue		Conforms to Rule?	Comments
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	See Comment	See stipulation #5 related in infiltration testing during construction.
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See Rule Specific Permit Condition J1 related to maintenance
		Chloride Management	Yes	
		Wetland Protection	Yes	
L	**Permit Fee**		N/A	Governmental Entity
M	**Financial Assurance**		N/A	Governmental Entity

Background

The applicant proposes a linear project: reconstruction of 1,610 feet of Pioneer Trail and a bituminous trail on the north side of the roadway, stormwater management, sanitary sewer, storm sewer, and watermain improvements. Stormwater management will be provided by two infiltration pipes, a new infiltration basin, two existing infiltration basins, and one existing wet stormwater pond to provide volume control, water quality, and rate control.

While there are no on-site or adjacent Wetland Conservation Act (WCA) protected wetlands for which wetland buffers would be required, the treated runoff leaving the site from is conveyed via storm sewer directly to an off-site protected wetland.

The two existing infiltration basins and one wet stormwater pond were constructed adjacent to Pioneer Trail as part of permit 2018-041: Abra Auto Body. The permit applicant for 2018-041 and the City of Eden Prairie worked together to oversize the stormwater management facilities constructed as part of permit 2018-041 to accommodate future runoff from the Pioneer Trail reconstruction project. The two existing infiltration basins and one wet stormwater pond are located in a drainage easement held by the city. As such the site, for purposes of the permit, includes the easement area.

Relevant project site information is provided in Table 1.

Table 1 Relevant Project Information

	Total Project
Total Site Area (acres)	3.16
Existing Site Impervious (acres)	1.69
Post Construction Site Impervious (acres)	1.76
New (Increase) in Site Impervious Area (acres)	0.07
Disturbed impervious surface (acres)	1.69
Exempt Rehabilitated Impervious Surface (acres)	0.24
Regulated Impervious Surface (acres)	1.52
Total Disturbed Area (acres)	3.16

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

1. Permit application dated December 17, 2021 (Notified applicant on January 8, 2022 that submittal was incomplete, materials completing the application received May 18, 2022, permit review timeline extend initially to September 15 and subsequently until December 14, 2022)
2. Construction Drawings (37 sheets) dated December 17, 2021 (Sheets 1-21 revisions dated May 17, 2022)
3. Stormwater Narrative memo dated December 17, 2021 (revised May 17, 2022, revised November 7, 2022)
4. Report of Geotechnical Exploration and Review Pioneer Trail (City Street) Improvements by America Engineering Testing Inc. (AET) (attached to Project Permit Application Report) dated December 15, 2015
5. Proprietary BMP testing documentation received April 2017 (attached to Project Permit Application Report)
6. MnRAM Site Assessment Reports and memo by Kjolhaug Environmental Services dated May 23, 2022
7. Electronic HydroCAD models for existing and proposed conditions received December 17, 2021 (revised May 19, 2022, revised November 7, 2022)
8. Electronic P8 modeling received December 17, 2021 (revised May 19, 2022, revised November 7, 2022)
9. Response to Comments from HTPO received June 3, 2022
10. Response to Comments from HTPO received November 7, 2022

Rule Specific Permit Conditions

Rule C: Erosion Prevention and Sediment Control

Because the project will involve 3.16 acres of land-disturbing activity, the project must conform to the requirements set forth by the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1a).

The erosion control plans prepared by HTPO includes installation of silt fence, sediment control logs, stabilized construction entrances, inspection, staging areas, riprap at flared ends, placement of a minimum of 6 inches of topsoil, 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 J: Stormwater Management

Because the project will alter more than 3.16 acres of surface area, conformance with RPBCWD's Stormwater Management Rule (Rule J) is required.

The linear project entails construction and reconstruction that altogether amounts to 1.76 acres of linear impervious surface; therefore, stormwater management for this linear project must be provided in accordance with the criteria of Subsection 3.2 (Rule J, Subsection 2.4). The 1.76 acres of impervious surface includes 0.24 acres of eight foot wide trail bordered by a six foot pervious area, making it exempt from RPBCWD's stormwater management rule (Rule J, Subsection 2.2d). Therefore, the requirements of Rule J apply to 1.52 acres of proposed new and reconstructed impervious surface within the site.

Rate Control

In order to meet the rate control criteria listed in Subsection 3.1.a, the 2-, 10-, and 100-year 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 hydrologic model 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 a 100-year frequency, 10-day snowmelt event. The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in Table 2. The proposed project is in conformance with RPBCWD Rule J, Subsection 3.1.a.

Table 2.Rate control summary:

Modeled Discharge 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
East	4.9	4.5	12.2	10.9	29.0	28.9	0.9	0.9
West	1.2	<0.1	3.4	0.7	8.6	6.4	1.2	1.0

Volume Abstraction

Subsection 3.2c of Rule J requires the abstraction onsite of the larger of 0.55 inches of runoff from the new and fully reconstructed linear impervious surfaces or 1.1 inches from the net increase in linear impervious area. In this case 0.55 inches of runoff from the new and fully reconstructed impervious surfaces is the larger volume. An abstraction volume of 3,035 cubic feet is required from the 1.52 acres of new and reconstructed linear impervious surface on the site. The following two types of infiltration best management practices (BMPs) are proposed for the Pioneer Trail project. All infiltration BMPs will include pretreatment with either the existing wet stormwater pond or use of a sump manholes.

1. Three infiltration basins.
2. Two infiltration pipes consisting of a 36" perforated HDPE pipe bedded in coarse aggregate to facilitate infiltration of stormwater flows.

Soil boring information collected by AET at 4 locations along the 1,610 feet of Pioneer Trail identified for reconstruction. Below the pavement and aggregate base the borings encountered a granular subgrade consisting of clayey, and silty sand and sandy clay to depths of 2 to 4 feet, which AET classified as fill. Naturally deposited sand with silt and sand with gravel was encountered below the fill to the termination depth of the borings, 16 feet. Groundwater was not observed in the four soil borings collected for the project. The bottom of boring B-4, the boring located near the proposed infiltration basins and pipes, is 15.7 feet below the existing roadway (approximate elevation 871 feet). Because the proposed infiltration basins and one of pipes respectively extend to depths of one foot and 11 feet below the roadway, the proposed design provides adequate separation between the bottom of these three proposed stormwater facilities and the groundwater (Rule J, Subsection 3.1.b.2.a).

Because of the location of the infiltration BMPs within the boulevard or in close proximity to active roadways, the applicant was unable to excavate to the required depths to conduct on site infiltration tests prior to construction, thus subsurface investigation and infiltration testing was not performed at the BMP locations. The engineer concurs with the applicant's design infiltration rates of 0.8 inches per hour for sand with silt and sand with gravel based on the guidelines provided in the Mn Stormwater Manual. Based on the design infiltration rate, the engineer concurs that the infiltration practices will draw down within 48 hours (Rule J, subsection 3.1b.3). Per Rule J, Subsection 3.1.b.2.c measured infiltration capacity of the soils at the bottom of the infiltration systems must be provided. The applicant must submit documentation verifying the infiltration capacity of the soils and that the volume control capacity is calculated using the measured infiltration rate. If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.2 or there is inadequate separation to groundwater, design modifications to achieve compliance with RPBCWD requirements will need to be submitted (in the form of an application for a permit modification or new permit).

Table 3 below summarizes the volume abstraction for the site based on the design infiltration capacity of the infiltration facilities. The two existing infiltration basins that were oversized as part of permit 2018-041

to accommodate the reconstruction of Pioneer Trail have an available capacity of 3,199 cubic feet of storage. While the existing infiltration basins have adequate volume for the regulated impervious surface, the basins would only receive runoff from the western roughly half of the reconstructed roadway and the east portion of the reconstruction project would receive no abstraction. Because the use of the existing infiltration basins would not fully achieve the abstraction criteria, the applicant incorporated the a new infiltration basin and two perforated infiltration pipes along the eastern portion of the site to have a total abstraction capacity of 3,200 cubic feet. With the conditions noted above regarding verification of subsurface conditions, the engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.1.b.

Table 3. Volume abstraction summary

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (cubic feet)	Provided Abstraction Volume (cubic feet)
0.55	3,035	1.1	6,399

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant to provide for 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 pollutant loading from existing conditions. P8 models were developed to estimate the TP and TSS loading from the watersheds and the removal capacity of the proposed BMPs. The results of this modeling are summarized in Table 4 and Table 5 below. The results show the proposed project will remove sufficient TSS and TP to achieve an overall pollutant reduction in accordance with the required annual removals (Rule J, Subsection 3.2c).

Table 4. Annual TSS and TP removal summary:

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)[1]	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	698	628 (90%)	631 (90.4%)
Total Phosphorus (TP)	2.32	1.39 (60%)	1.66 (71.6%)

[1]Required load reduction is calculated based on the criteria in Rule J, Subsection 3.1c and the new and reconstructed impervious area site loading

Table 5. Summary of net change in TSS and TP leaving the site

Pollutant of Interest	Existing Site Loading (lbs/yr)	Proposed Site Load after Treatment (lbs/yr)[1]	Change (lbs/yr)
Total Suspended Solids (TSS)	690	67.1	-622.9
Total Phosphorus (TP)	2.0	0.66	-1.34

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 this requirement according to Rule J, Subsection 3.6b. The project does not propose to construct or reconstruct structures that have low-floor elevations. However, the project will construct stormwater management facilities in proximity to existing habitable structures. The following table demonstrates the proposed project is in conformance with Rule J, Subsection 3.6b.

Existing Structure Adjacent to Stormwater Facility	Low Floor Elevation of Building[1] (feet)	Adjacent Stormwater Facility	100-year Event Flood Elevation of Adjacent Stormwater Facility (feet)	Freeboard to 100-year Event (feet)	Emergency Overflow (feet)	Low Floor Separation Above Emergency Overflow (feet)
13075 Pioneer Trail	897.5	Existing Water Stormwater Pond	894.88	**2.62**	896	1.5
12985 Pioneer Trail	896.57	Existing Water Stormwater Pond	894.88	1.69	895.5	**1.07**
12915 Pioneer Trail	895.12	Infiltration Basin 1	893.16	1.96	893	**2.12**
12845 Pioneer Trail	887.7	Infiltration Pipe 1	875.53	**12.17**	883.5	4.2
12813 Pioneer Trail	885.89	Infiltration Pipe 1	875.53	**10.36**	883.5	2.39

[1] Taken from survey point elevations listed on the existing survey provided with the drawing set.

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. RPBCWD and Eden Prairie have entered into a programmatic maintenance agreement covering city projects subject to RPBCWD regulatory requirements. The stormwater management facilities associated with this permit (2021-088) must be incorporated into the inventory of those managed in accordance with the programmatic agreement as a condition of approval.

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. The City of Eden Prairie's Streets Division Manager, Larry Doig, is

authorized to implement the City's chloride management plan and documentation provided confirms he is certified by the Minnesota Pollution Control Agency as a certified salt applicator (Rule J, subsection 3.8).

Wetland Protection

Because the proposed activities discharge to a downstream, off-site protected wetland, the proposed activities must conform to RPBCWD wetland protection criteria (Rule J, subsection 3.10). The off-site wetland is medium value. Because the applicant's HydroCAD model results demonstrate, and the engineer concurs, that the proposed flow rate and volumes flowing towards the off-site wetland are less than the under existing conditions, the bounce and inundation will not increase, thus the project meets the Bounce and Inundation criterion.

Rule J, Subsection 3.10b requires that treatment of runoff to medium value wetlands archive 90 percent total suspended solids removal and 60 percent total phosphorus removal. P8 modeling results show the proposed stormwater management facilities provides 90% TSS and 71% TP removals, thus the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.10b.

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. On satisfaction of conditions recommended here, the proposed project will conform to Rules C and J.

Recommendation:

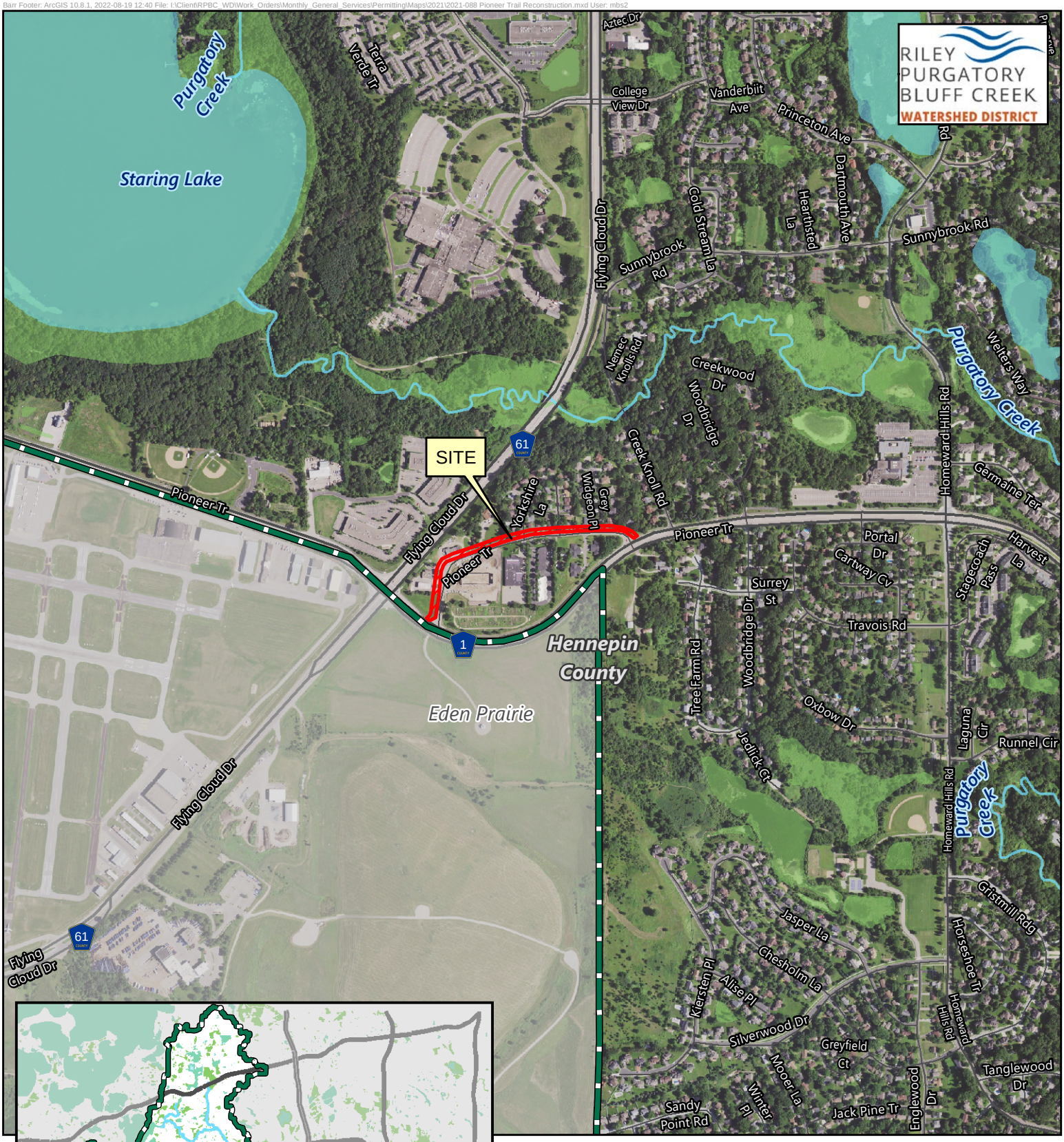
Approval of the permit contingent upon:

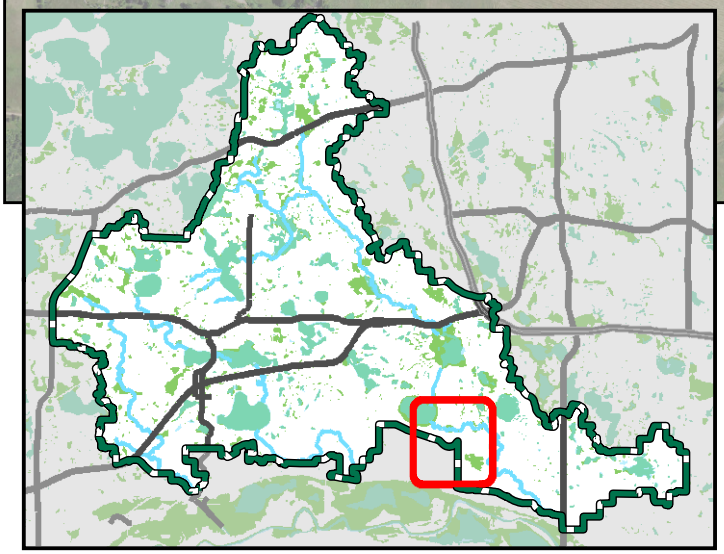
1. The applicant providing the name and contact information of the general contractor responsible for the site.
2. Because RPBCWD and Eden Prairie have entered into a programmatic maintenance agreement covering typical city projects, the stormwater management facilities associated with this permit (2021-088) must be incorporated into the inventory of those managed in accordance with the programmatic agreement.

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. Per Rule J, Subsection 3.1.b.ii measured infiltration capacity of the soils at the bottom of the infiltration BMPs must be provided. The applicant must submit documentation verifying the infiltration capacity of the soils and that the volume control capacity is calculated using the measured infiltration rate. In addition, subsurface soil investigation is needed to verify adequate separation to groundwater (Rule J subsection 3.1.b.2). If infiltration capacity is less than needed to conform with the volume abstraction requirement in subsection 3.3b or there is inadequate separation to groundwater, design modifications to achieve compliance with RPBCWD requirements will need to be submitted (in the form of an application for a permit modification or new permit).





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Feet

0 1,000

Permit Location Map

PIONEER TRAIL RECONSTRUCTION

Permit 2021-088

Riley Purgatory Bluff Creek Watershed District

PROPOSED LEGEND

- CONCRETE DRIVEWAY APRON
- BITUMINOUS DRIVEWAY PATCHING / BITUMINOUS TRAIL
- LOC — LIMITS OF CONSTRUCTION
- STORM SEWER
- DRAINTILE
- STORM MANHOLE (STMH)
- CATCH BASIN (CB)
- FLARED END SECTION (FES)
- SANITARY MANHOLE
- SANITARY SEWER
- WATERMAIN
- HYDRANT
- GATE VALVE
- YARD DRAINAGE BOX
- CLEAN OUT

CONSTRUCTION PLANS FOR:
PIONEER TRAIL RECONSTRUCTION

PREPARED FOR:
CITY OF EDEN PRAIRIE
IC# 04-5632

LOCATION MAP

PROJECT LOCATION

NOT TO SCALE

SHEET INDEX

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
2. CONTRACTOR SHALL DETERMINE LOCATION OF EXISTING PUBLIC AND PRIVATE UTILITIES PRIOR TO CONSTRUCTION AND SHALL BE RESPONSIBLE FOR PRESERVING THESE. ANY REPAIRS NECESSARY DUE TO CONTRACTORS OPERATIONS SHALL BE MADE AT CONTRACTORS EXPENSE. BEFORE DIGGING CALL: GOPHER STATE ONE CALL (651) 454-0002.
3. THE SUBSURFACE UTILITY INFORMATION IN THE PLAN IS UTILITY QUALITY LEVEL "C". THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."
4. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION INCLUDING VERIFYING EXISTING SUBSURFACE UTILITY DATA.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFETY MEASURES TO SAFEGUARD VEHICLES AND PEDESTRIAN TRAFFIC.
6. CONTRACTOR SHALL KEEP ALL ROADWAYS FREE OF SEDIMENTS. STREETS SHALL BE SWEPT AS NEEDED OR AS DIRECTED BY THE ENGINEER.
7. INSTALL EROSION AND SEDIMENT CONTROL MEASURES BEFORE ANY LAND DISTURBING ACTIVITIES TAKE PLACE AS SHOWN ON THE PLANS OR AS DIRECTED.
8. RESTORE ALL DISTURBED AREAS, INCLUDING PAVEMENT, TO EXISTING CONDITIONS OR BETTER.
9. EXISTING CONCRETE, CURB AND BITUMINOUS PAVEMENT SHALL BE PRESERVED WHEREVER POSSIBLE, UNLESS OTHERWISE NOTED. CREATE SMOOTH TRANSITIONS BETWEEN EXISTING AND NEW PAVEMENT SURFACES. SAWCUT (NO JACKHAMMERING) ALONG EXISTING PAVEMENT TO CREATE SMOOTH TRANSITIONS BETWEEN EXISTING AND NEW PAVEMENT. CONCRETE AND CURB SHALL BE REMOVED/ REPLACED TO THE NEAREST EXISTING JOINT.
10. CONSTRUCTION LIMITS SHALL BE LIMITED TO RIGHT-OF-WAY OR THE AVAILABLE TEMPORARY EASEMENTS.

Engineering • Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, Inc.
7510 Market Place Drive - Eden Prairie, MN 55344
952-829-0700 - 952-829-7806 fax

PROJECT NO. 04-124.5

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Adam Pawelk

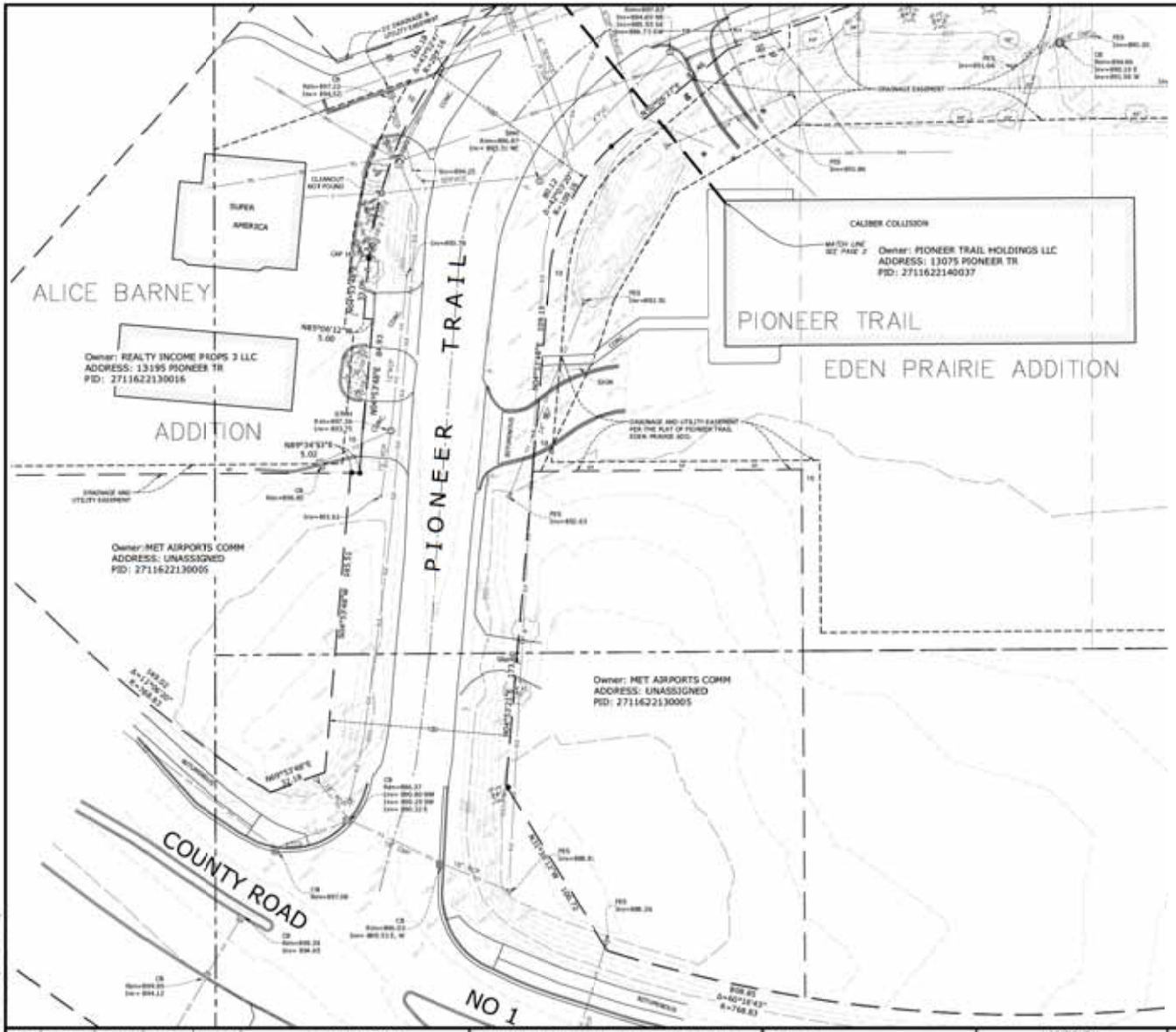
Adam Pawelk
LIC. NO. 49990 DATE: 11-07-2022

CALL BEFORE YOU DIG!
GOPHER STATE ONE CALL
1-800-252-1166

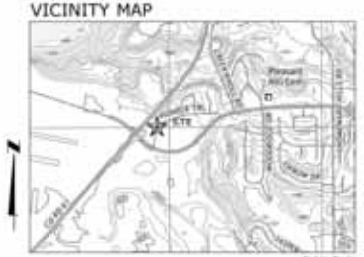
PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	ISSUES / REVISIONS
1	10-12-2021	60% PLANS
2	12-01-2021	90% PLANS
3	12-17-2021	WATERSHED APPLICATION
4	05-18-2022	WATERSHED RESUBMITTAL
5	11-07-2022	WATERSHED RESUBMITTAL

SHEET 1 OF 37



VICINITY MAP



PROPERTY DESCRIPTION

Pioneer trail in Eden Prairie Minnesota

GENERAL SURVEY NOTES

1. ALL DISTANCES ARE IN US SURVEY FEET.
2. SURVEY DATA IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM (NAD83-86 ADJ).
3. THIS SURVEY WAS PREPARED FOR THE PURPOSE OF SHOWING THE EXISTING CONDITIONS FOR SITE IMPROVEMENTS.
4. ELEVATIONS ARE BASED ON MNDOT GEODETIC STATION 27446, WHICH HAS AN ELEVATION OF 895.47 FEET (NAVD88).
4. THE SUBSURFACE UTILITY INFORMATION SHOWN HEREON IS UTILITY QUALITY LEVEL C AS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE 38-02. UTILITY LOCATIONS ARE SHOWN HEREON BASED ON OBSERVED EVIDENCE TOGETHER WITH EVIDENCE FROM THE FOLLOWING SOURCES: PLANS OBTAINED FROM UTILITY COMPANIES, PLANS PROVIDED BY CLIENT, MARKINGS BY UTILITY COMPANIES AND OTHER APPROPRIATE SOURCES FROM GOPHER ONE CALL TICKET NOS. 212430816 AND 214301793. WE HAVE USED THIS INFORMATION TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES FOR THIS SITE. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY EXPECTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. ALSO, PLEASE NOTE THAT SEASONAL CONDITIONS MAY INHIBIT OUR ABILITY TO VISIBLY OBSERVE ALL THE UTILITIES LOCATED ON THE SUBJECT PROPERTY.

BENCHMARKS

BENCHMARKS FOR THE SITE ARE THE TOP NUT OF HYDRANTS (TNH):

#1 ON THE NORTH SIDE SIDE OF PIONEER TRAIL WEST OF THE DRIVE WAY FOR 13050 PIONEER TRAIL, WHICH HAS AN ELEVATION OF 897.89 FEET;

#2 ON YORKSHIRE LANE EAST OF THE INTERSECTION WITH PIONEER TRAIL IN FRONT OF 12880 YORKSHIRE DRIVE, WHICH HAS AN ELEVATION OF 892.42.

LEGEND

NO.	DATE	DRAWN	DESIGN	CHECKED	ISSUES / REVISIONS
1	10-12-2021	JMB		PAT	60% PLANS
2	12-01-2021	JMB		PAT	90% PLANS
3	12-17-2021	JMB		PAT	WATERSHED APPLICATION
4	05-18-2022	JMB		PAT	WATERSHED RESUBMITTAL
5	11-07-2022	JMB		PAT	WATERSHED RESUBMITTAL

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Lanc Surveyor under the laws of the State of Minnesota.

Paul A. Thorp

LIC. NO. 13637 DATE: 09-30-2021

Engineering · Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, INC.
7516 Market Place Drive – Eden Prairie, MN 55346
952-829-0700 – 952-829-7999 fax

PROJECT NO. 04-124.8

HORIZONTAL
SCALE IN FEET
0 30 60 90

OWNER NAME CITY OF EDEN PRAIRIE

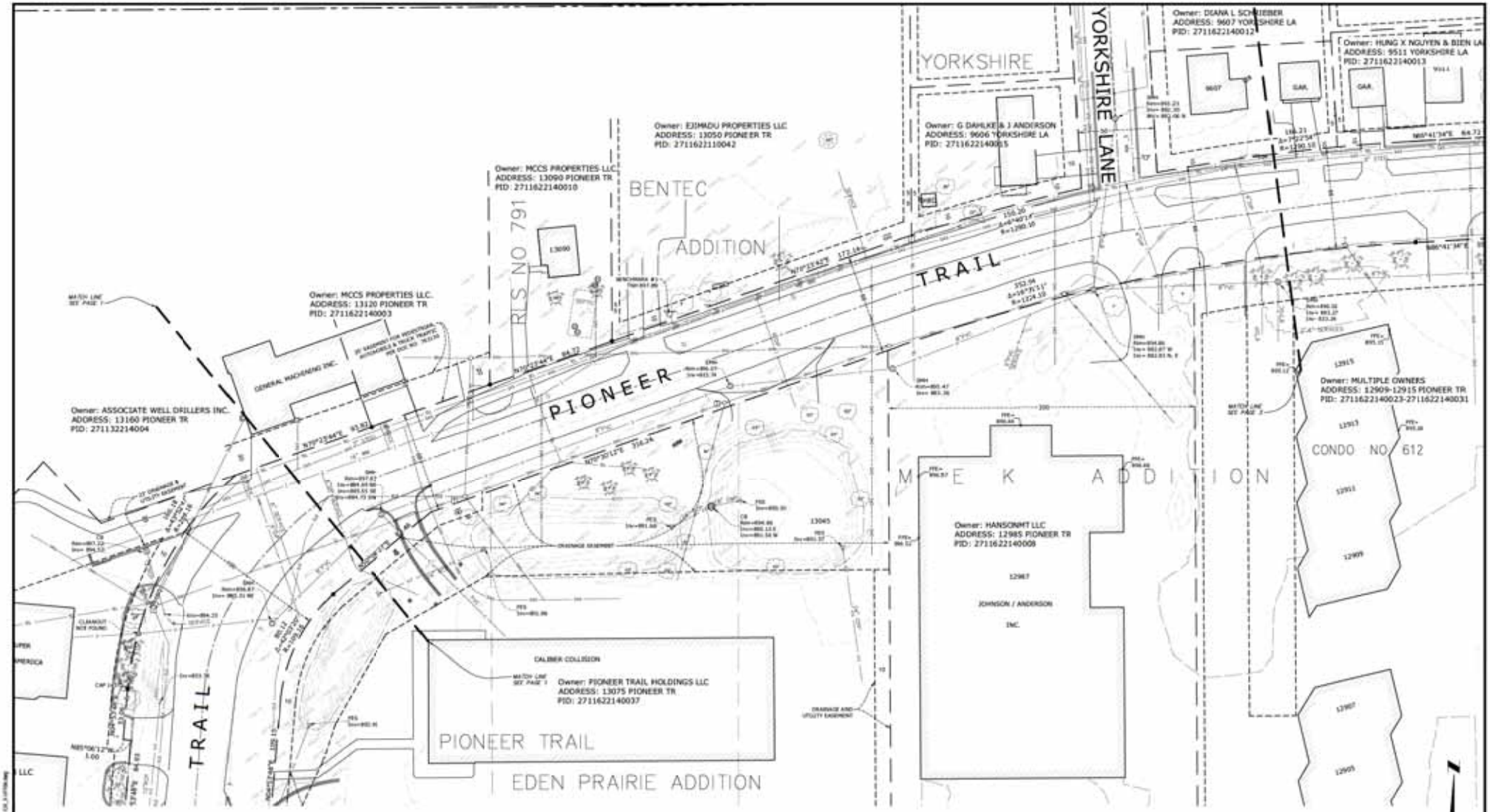
OWNER PROJ. # I.C. 04-5632

EXISTING CONDITIONS SURVEY

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 2 OF 37



NO.	DATE	DRAWN	DESIGN	CHECKED	ISSUES / REVISIONS
1	10-12-2021	JMB		PAT	60% PLANS
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3	12-17-2021	JMB		PAT	WATERSHED APPLICATION
4	05-18-2022	JMB		PAT	WATERSHED RESUBMITTAL
5	11-07-2022	JMB		PAT	WATERSHED RESUBMITTAL

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Paul A. Thorp

LIC. NO. 13637 DATE: 09-30-2021

Engineering · Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, Inc.

PROJECT NO. 04-124.5

HORIZONTAL SCALE IN FEET
0 30 60 90

OWNER NAME: CITY OF EDEN PRAIRIE

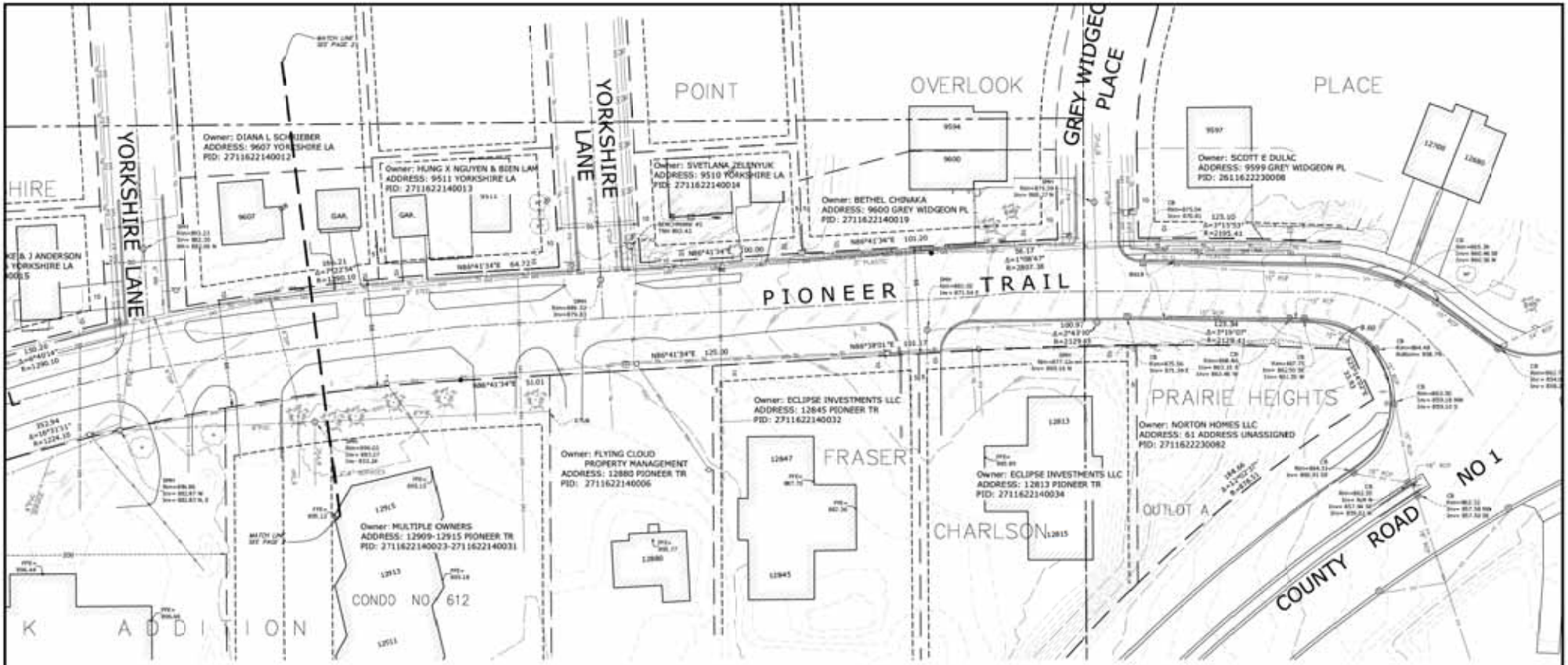
OWNER PROJ. # I.C. 04-5632

EXISTING CONDITIONS SURVEY

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 3 OF 37



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Paul A. Thorp

LIC. NO. 13637 DATE: 09-30-2021

Engineering · Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, Inc.

PROJECT NO. 04-124.8

HORIZONTAL SCALE IN FEET
0 30 60 90

OWNER NAME: CITY OF EDEN PRAIRIE

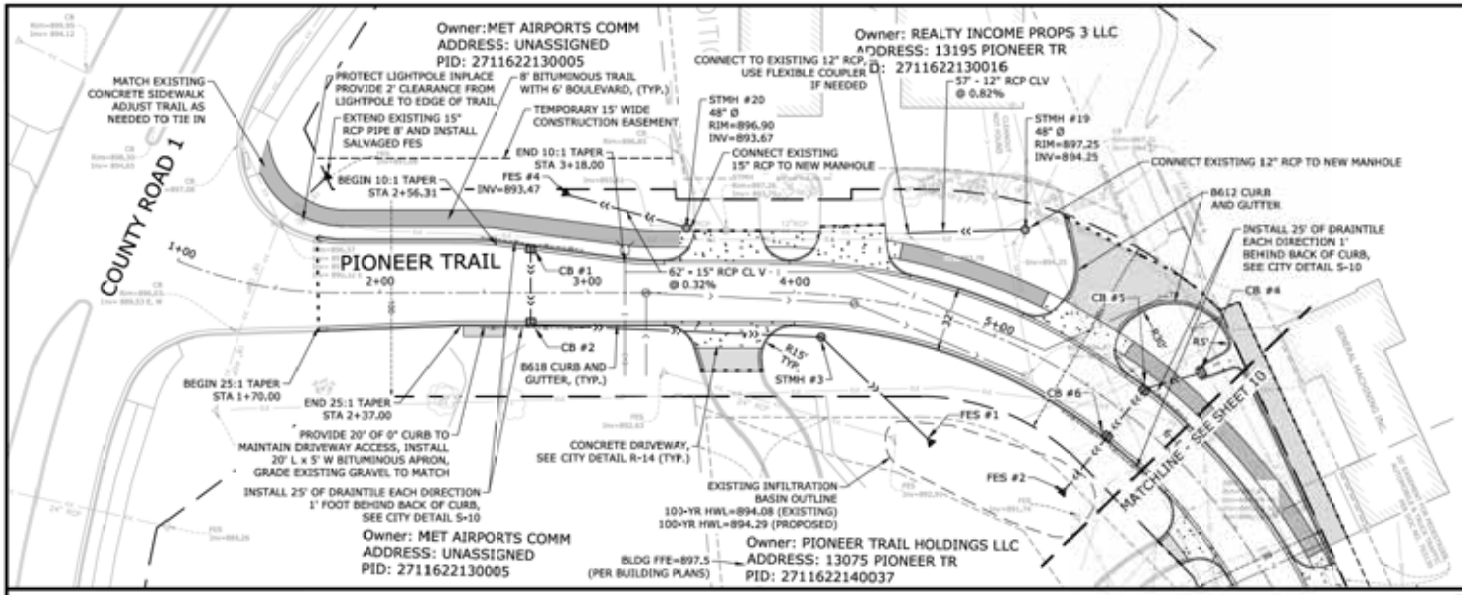
OWNER PROJ. # I.C. 04-5632

EXISTING CONDITIONS SURVEY

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 4 OF 37



NOTES

1. ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO SIGNS AND LIGHTS, AND VEGETATION SHALL MAINTAIN 2 FEET OF HORIZONTAL CLEARANCE TO THE TRAIL AND 7 FEET OF VERTICAL CLEARANCE TO THE TRAIL SURFACE. COORDINATE TREE PRUNING WITH CITY FORESTER AND ENGINEER.
2. REFER TO CITY DETAILS S-1 AND S-5 FOR CASTING INFORMATION.
3. CURB RADIUS AT COMMERCIAL DRIVEWAYS AND AT THE GREY WIDGEON PLACE INTERSECTION SHALL BE 15' MEASURED TO BACK OF CURB UNLESS OTHERWISE NOTED.
4. CURB RADIUS AT THE YORKSHIRE LANE INTERSECTION SHALL BE 20' MEASURED TO BACK OF CURB.
5. ADJUST CURB HEIGHT AND GUTTER WIDTH TO MATCH EXISTING CURB AT ALL TIE-IN POINTS, UNLESS OTHERWISE DIRECTED.

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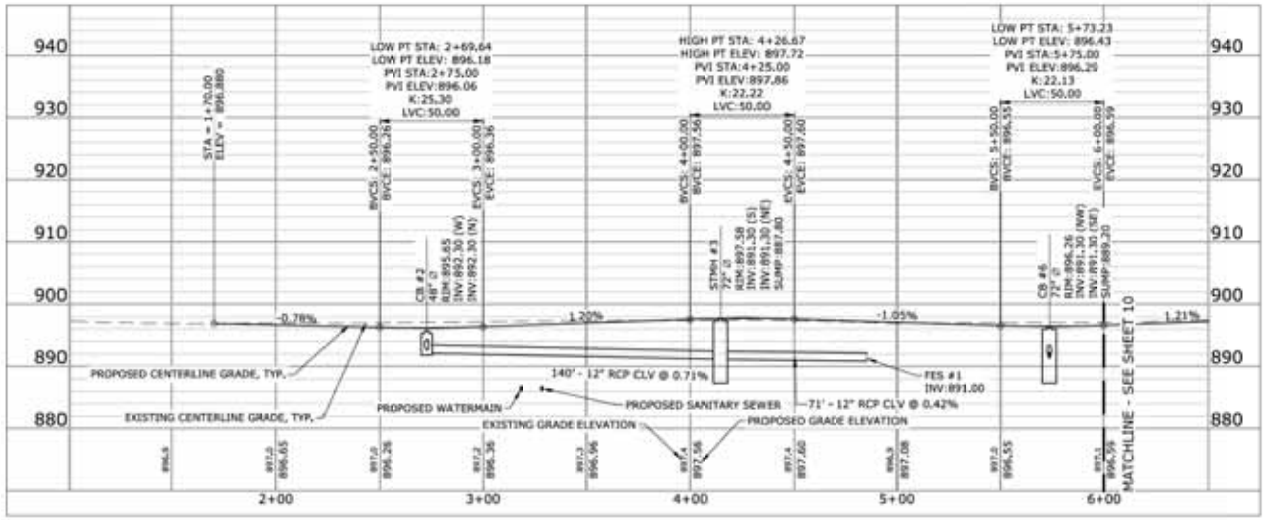
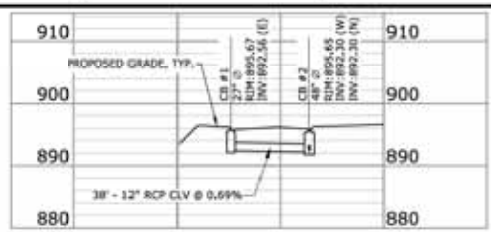
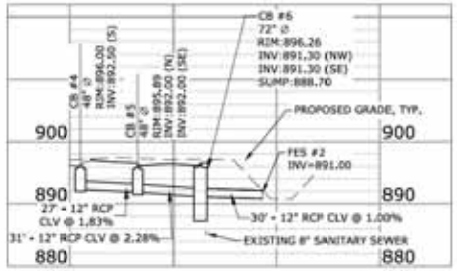
PRELIMINARY - NOT FOR CONSTRUCTION







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Adam Pawelk

ADAM PAWELK

LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, INC.

PROJECT NO. 04-124.6

HORIZONTAL SCALE IN FEET
0 30 60 90

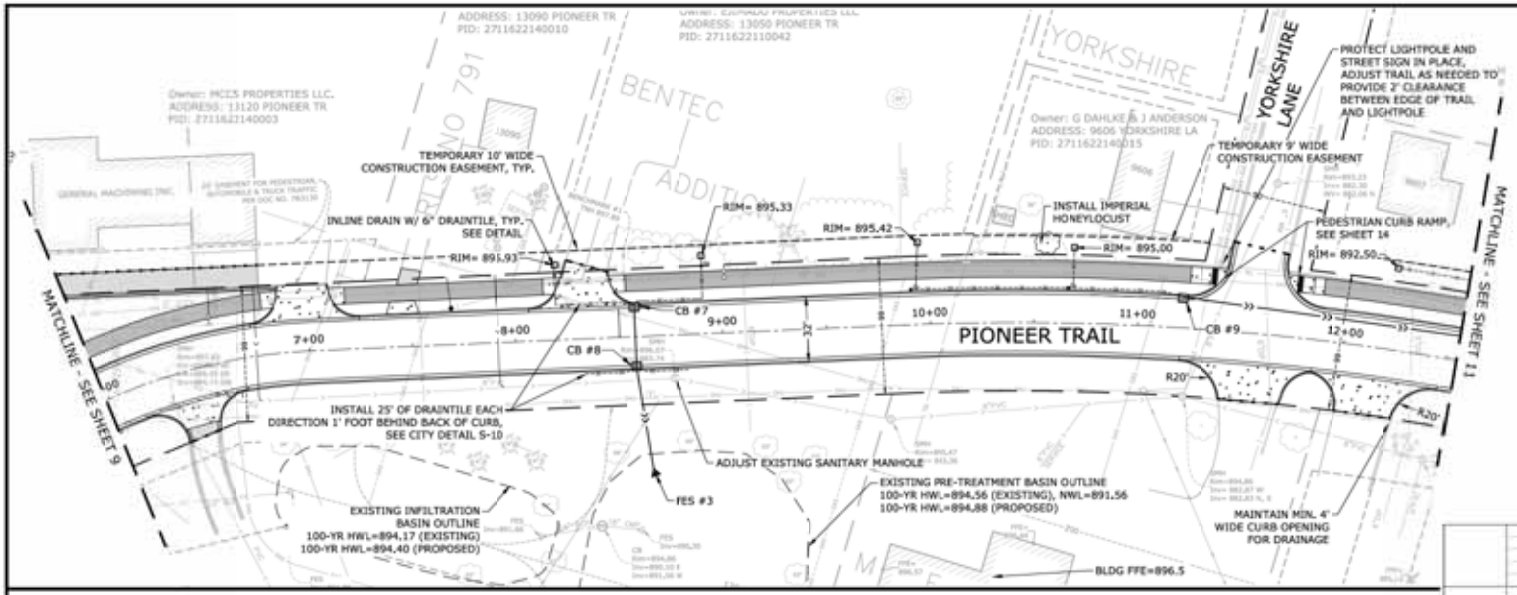
VERTICAL SCALE IN FEET
0 10 20 30

STREET AND STORM SEWER PLAN AND PROFILE

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 9 OF 37



NOTES

1. REFER TO CITY DETAILS S-1 AND S-5 FOR CASTING INFORMATION. CASTING FOR CB #9 SHALL BE R-3067-V.
2. CURB RADIUS AT COMMERCIAL DRIVEWAYS AND AT THE GREY WIDGEON PLACE INTERSECTION SHALL BE 15' MEASURED TO BACK OF CURB UNLESS OTHERWISE NOTED.
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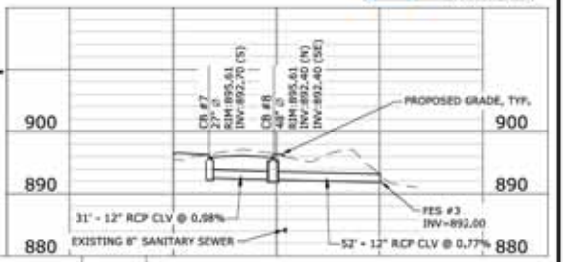

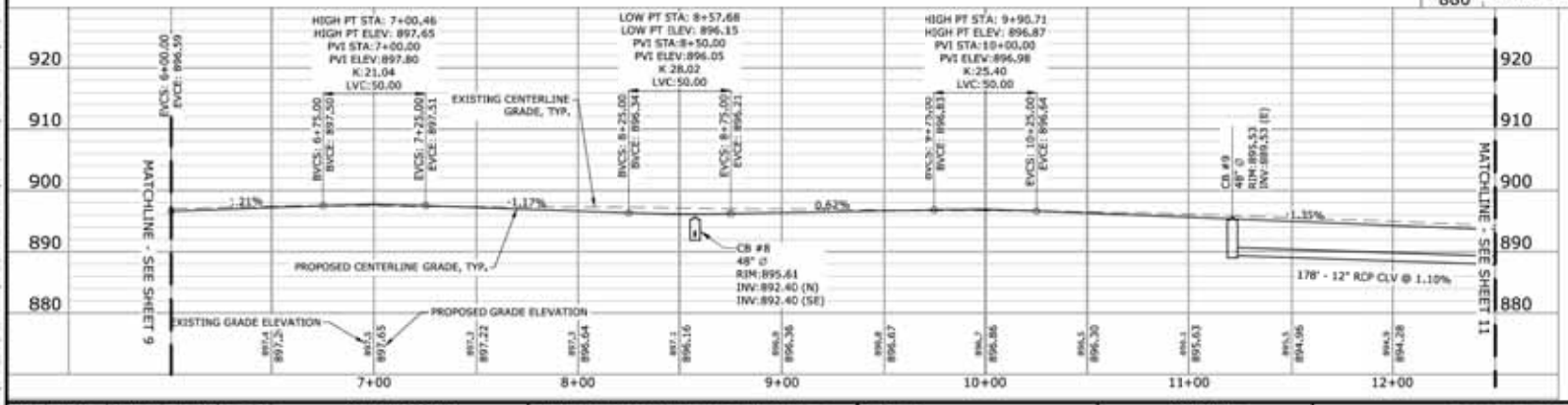

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ADAM PAWELK
LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture
HANSEN THORP PELLINEN OLSON, INC.
PROJECT NO. 04-124.6

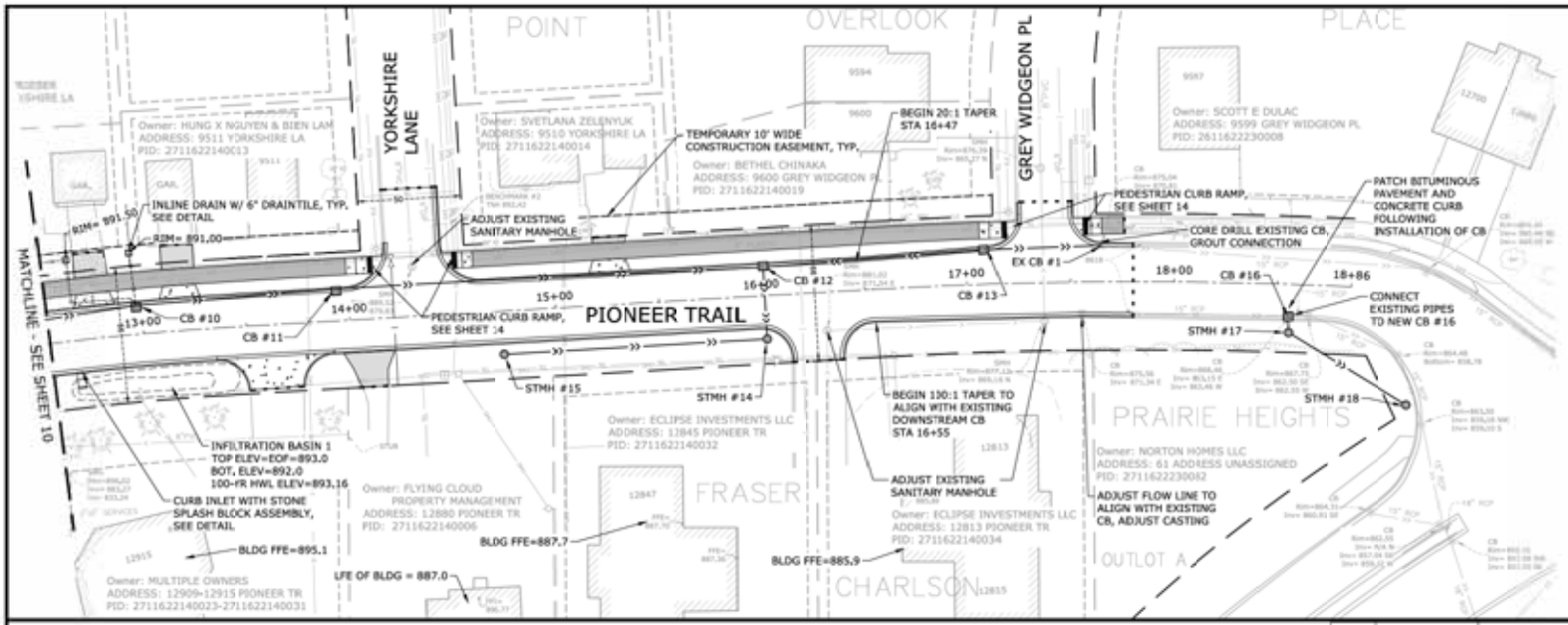
HORIZONTAL SCALE IN FEET
0 30 60 90
VERTICAL SCALE IN FEET
0 10 20 30

STREET AND STORM SEWER PLAN AND PROFILE

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 10 OF 37



NOTES

1. REFER TO CITY DETAILS S-1 AND S-5 FOR CASTING INFORMATION. CASTING FOR CB #10, #11, #12, #13, #14 SHALL BE R-3067-V.
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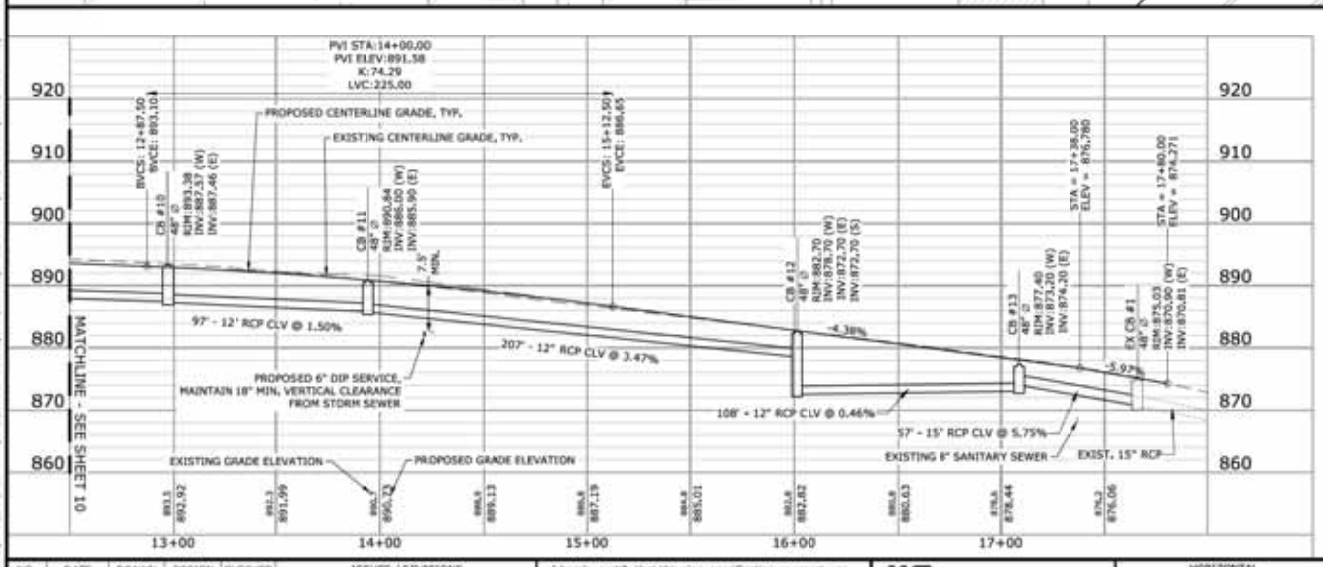

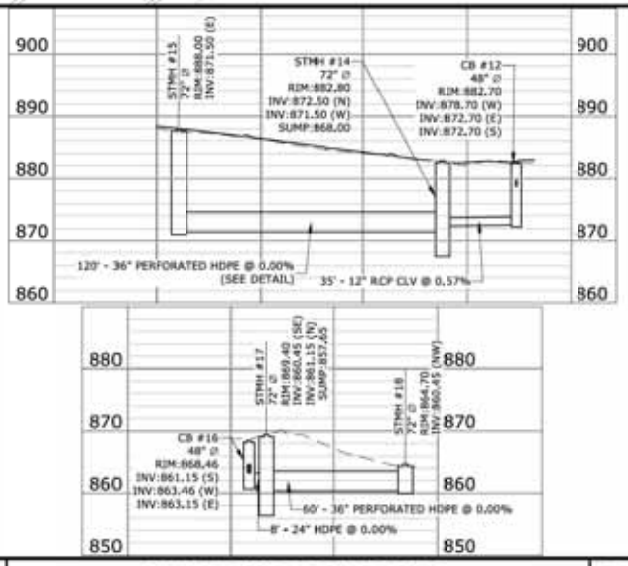

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Landscape Architecture

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PROJECT NO. 04-124.6

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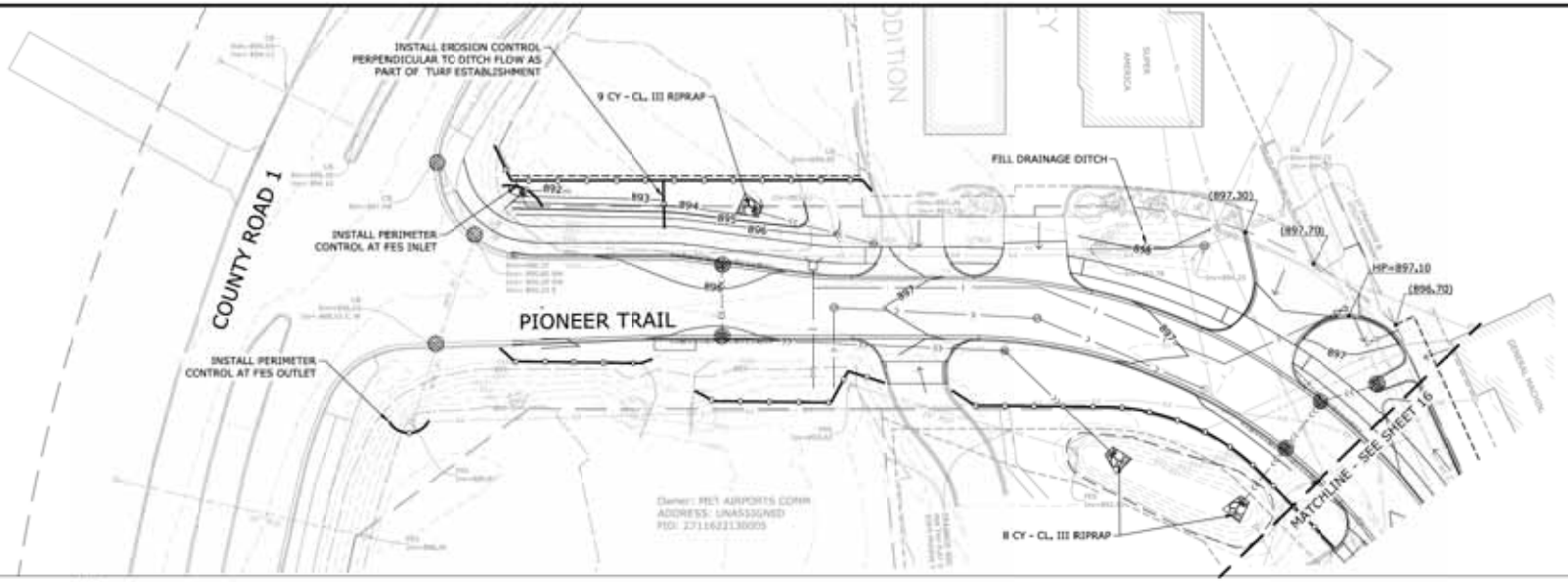
STREET AND STORM SEWER PLAN AND PROFILE

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 11 OF 37



NOTES

1. SPOT ELEVATIONS ALONG CURB ARE FLOW LINE ELEVATIONS, UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS AND TOPOGRAPHY PRIOR TO COMMENCING GRADING OPERATIONS. IF DISCREPANCIES OCCUR BETWEEN PLANS AND ACTUAL SITE CONDITIONS, NOTIFY ENGINEER IMMEDIATELY.
3. PRIOR TO GRADING ACTIVITIES, TOPSOIL, ROOTS, AND OTHER ORGANIC MATERIAL SHALL BE COMPLETELY STRIPPED IN NEW PAVEMENT AREAS AND ONLY STRIPPED AS NEEDED IN GREENSPACE AREAS. EXISTING TOPSOIL SHALL BE STOCKPILED FOR REUSE.
4. PRIOR TO GRADING ACTIVITIES, LOCATIONS OF PROPOSED INFILTRATION FACILITIES ARE TO BE STAKED OFF AND MARKED TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT, STOCKPILING OF MATERIALS, AND CONSTRUCTION TRAFFIC. INSTALL ESC MEASURES AS SHOWN ON THE PLANS TO PREVENT SEDIMENT AND OTHER MATERIAL FROM ENTERING THE PROPOSED FACILITIES. ANY ACCUMULATED SEDIMENT IN THE INFILTRATION FACILITIES SHALL BE REMOVED IN A MANNER THAT PREVENTS COMPACTION OF THE FACILITY BOTTOM.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING SURFACE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
6. INSTALL ROCK CONSTRUCTION ENTRANCES AT ALL LOCATIONS WHERE CONSTRUCTION VEHICLES WILL LEAVE THE PROJECT AREA, FIELD VERIFY LOCATION(S) PRIOR TO INSTALLATION.
7. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
8. 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.
9. FINAL SITE STABILIZATION MEASURES REQUIRE AT LEAST SIX INCHES OF TOPSOIL OR ORGANIC MATTER BE SPREAD AND INCORPORATED INTO THE UNDERLYING SOIL DURING FINAL SITE TREATMENT WHEREVER TOPSOIL HAS BEEN REMOVED
10. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
11. 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.
12. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPS MUST BE REMOVED UPON FINAL STABILIZATION.
13. 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 THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
14. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN 7 CALENDAR DAYS AFTER LAND-DISTURBING WORK HAS TEMPORARILY OR PERMANENTLY CEASED ON A PROPERTY THAT DRAINS TO AN IMPAIRED WATER, WITHIN 14 DAYS ELSEWHERE.
15. THE PERMITTEE MUST, AT A MINIMUM, INSPECT, MAINTAIN AND REPAIR ALL DISTURBED SURFACES AND ALL EROSION AND SEDIMENT CONTROL FACILITIES AND SOIL STABILIZATION MEASURES EVERY DAY WORK IS PERFORMED ON THE SITE AND AT LEAST WEEKLY UNTIL LAND-DISTURBING ACTIVITY HAS CEASED. THEREAFTER, THE PERMITTEE MUST PERFORM THESE RESPONSIBILITIES AT LEAST WEEKLY UNTIL VEGETATIVE COVER IS ESTABLISHED. THE PERMITTEE WILL MAINTAIN A LOG OF ACTIVITIES UNDER THIS SECTION FOR INSPECTION BY THE DISTRICT ON REQUEST.
16. INSTALL STORM SEWER INLET PROTECTION DEVICES AT DOWNSTREAM CATCH BASINS PRIOR TO COMMENCING CONSTRUCTION. INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER. ALL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
17. INSTALL PERIMETER SEDIMENT CONTROL AROUND INFILTRATION BASINS IMMEDIATELY FOLLOWING EXCAVATION OF BASINS.
18. CONTRACTOR SHALL KEEP ALL ROADWAYS FREE OF SEDIMENT. STREETS SHALL BE SWEPT AS NEEDED OR AS DIRECTED BY THE ENGINEER.
19. RESTORE ALL GREENSPACE AREAS WITH 6" TOPSOIL AND SEED/SOD, SEE SHEET 6.
20. ALL TIE IN SLOPES ARE 1V:3H OR FLATTER UNLESS NOTED OTHERWISE.
21. INSTALL RIPRAP IMMEDIATELY FOLLOWING INSTALLATION OF FLARED END SECTIONS.

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ADAM PAWELK
LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture
HANSEN THORP PELLINEN OLSON, Inc.
PROJECT NO. 04-124.6

HORIZONTAL SCALE IN FEET
0 30 60 90

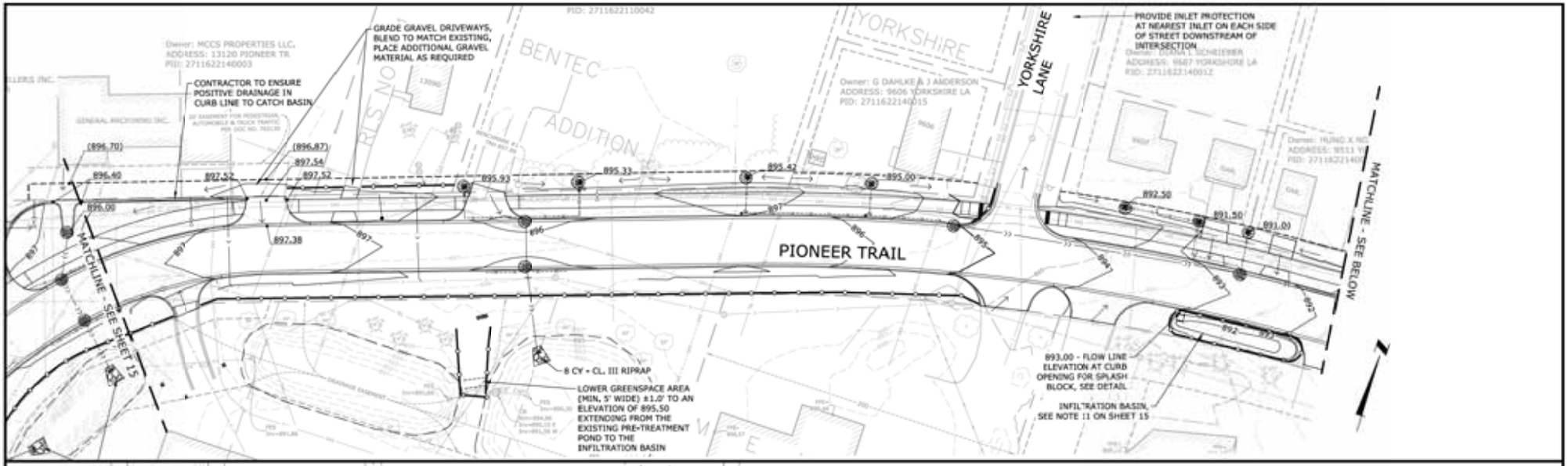
OWNER NAME CITY OF EDEN PRAIRIE
OWNER PROJ. # I.C. 04-5632

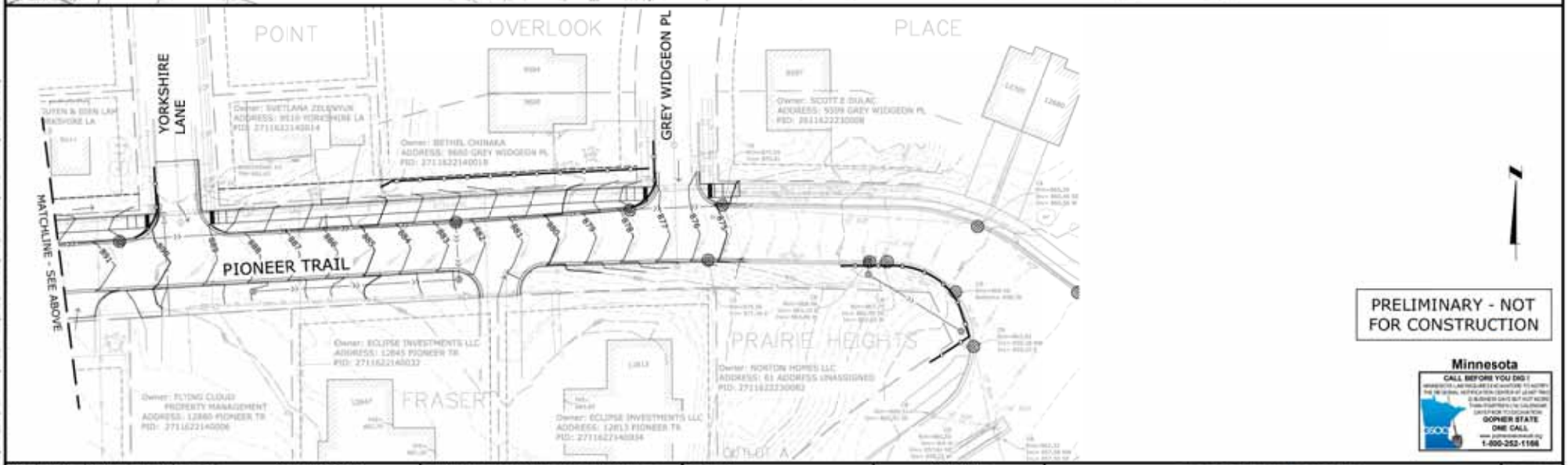
EROSION & SEDIMENT CONTROL & GRADING PLAN

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 15 OF 37





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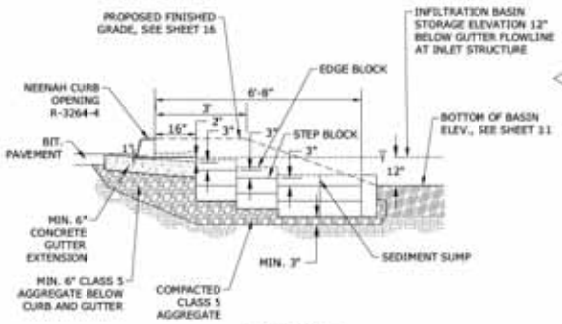
EROSION & SEDIMENT CONTROL & GRADING PLAN

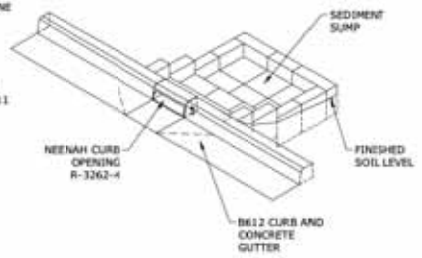
PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

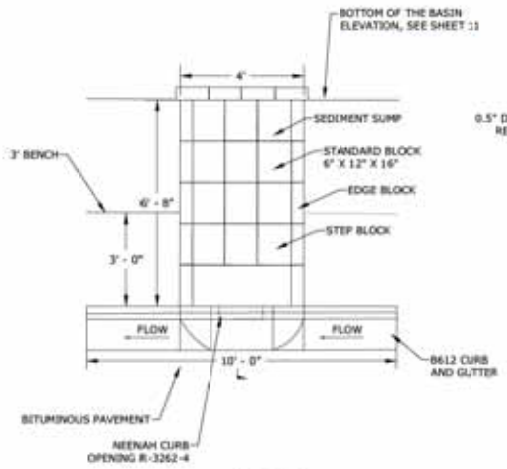
SHEET 16 OF 37



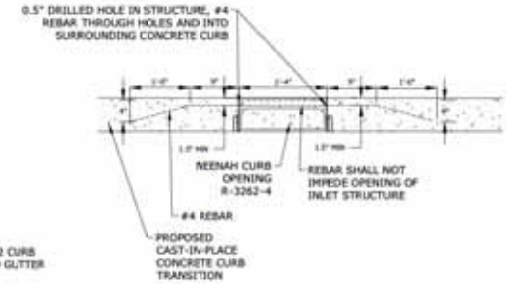
SECTION VIEW



ISOMETRIC VIEW

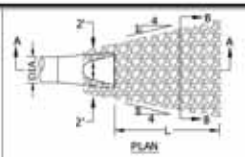


PLAN VIEW

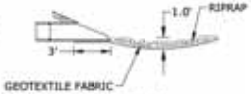


REBAR DETAIL

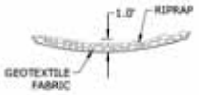
CURB OPENING INLET WITH STONE SPLASH BLOCK ASSEMBLY



PLAN



SECT. A-A

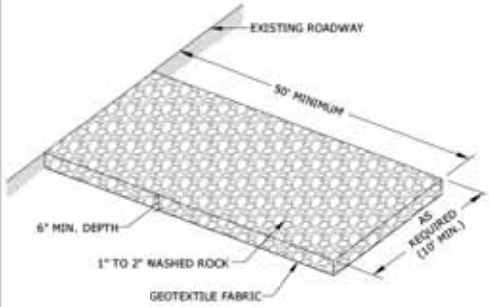


SECT. B-B

DIA. OF PIPE (IN.)	L (FT)	RIPRAP CL III (C.Y.)
12	8	6
15	8	9
18	10	12
21	10	13
24	12	17
27	12	18
30	14	22
36	16	28
42	18	33
48	20	39

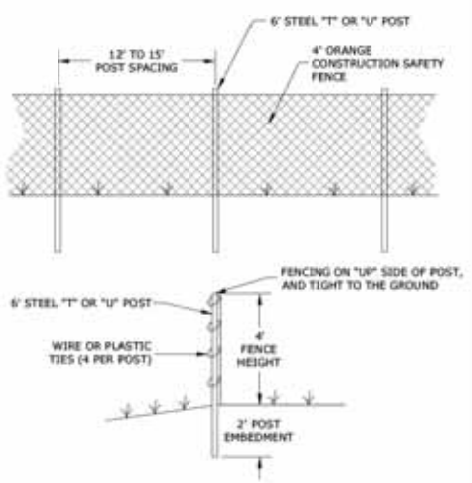
NOTE:
1. GEOTEXTILE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FEET.
2. GEOTEXTILE FABRIC (Mn/DOT 3733)- TYPE III.
3. CLASS III RIPRAP (Mn/DOT 3601) SHALL BE PLACED AT A DEPTH OF 18".
4. RIPRAP INSTALLATION SHALL CONFORM TO Mn/DOT 2511.

RIPRAP AT OUTLET

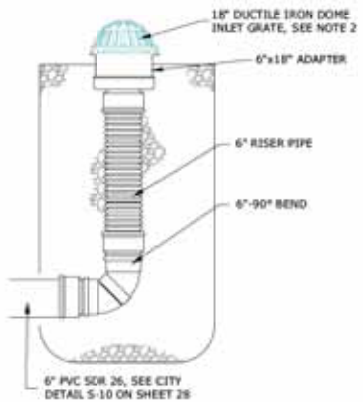


NOTES:
1. GEOTEXTILE FABRIC, TYPE V (Mn/DOT 3733) SHALL BE USED UNDER THE ROCK TO PREVENT MIGRATION OF THE UNDERLYING SOIL INTO THE STONE.
2. CONTRACTOR SHALL DETERMINE THE LOCATIONS OF ALL ROCK CONSTRUCTION ENTRANCES, UNLESS SPECIFIED ON PLANS.

ROCK CONSTRUCTION ENTRANCE



TREE PROTECTION FENCE



NOTE:
1. ALL INLINE DRAIN COMPONENTS SHALL BE MANUFACTURED BY NYLOPLAST OR APPROVED EQUAL.
2. CASTING MANUFACTURED BY NYLOPLAST OR APPROVED EQUAL.

INLINE DRAIN

NO.	DATE	DRAWN	DESIGN	CHECKED	ISSUES / REVISIONS
1	10-12-2021	ANO	ANO	AMP	60% PLANS
2	12-01-2021	ANO	ANO	AMP	90% PLANS
3	12-17-2021	ANO	ANO	AMP	WATERSHED APPLICATION
4	05-18-2022	ANO	ANO	AMP	WATERSHED RESUBMITTAL
5	11-07-2022	ANO	ANO	AMP	WATERSHED RESUBMITTAL

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

ADAM PAWELK
LIC. NO. 49990 DATE: 11-07-2022

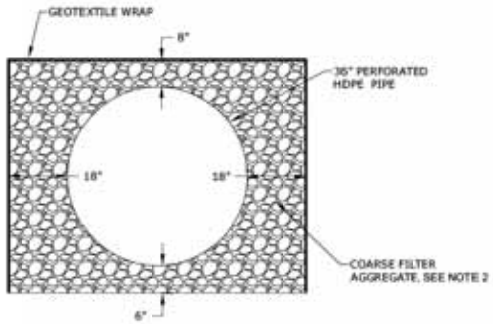
HT PO Engineering · Surveying Landscape Architecture
HANSEN THORP PELLINEN OLSON, INC.
PROJECT NO. 04-124.5

OWNER NAME: CITY OF EDEN PRAIRIE
OWNER PROJ. # I.C. 04-5632

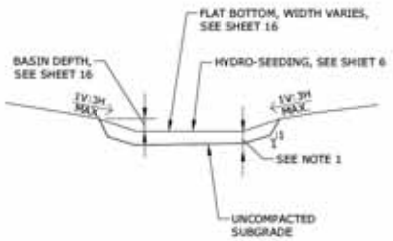
DETAILS

PIONEER TRAIL RECONSTRUCTION
EDEN PRAIRIE, MN

SHEET 30 OF 37



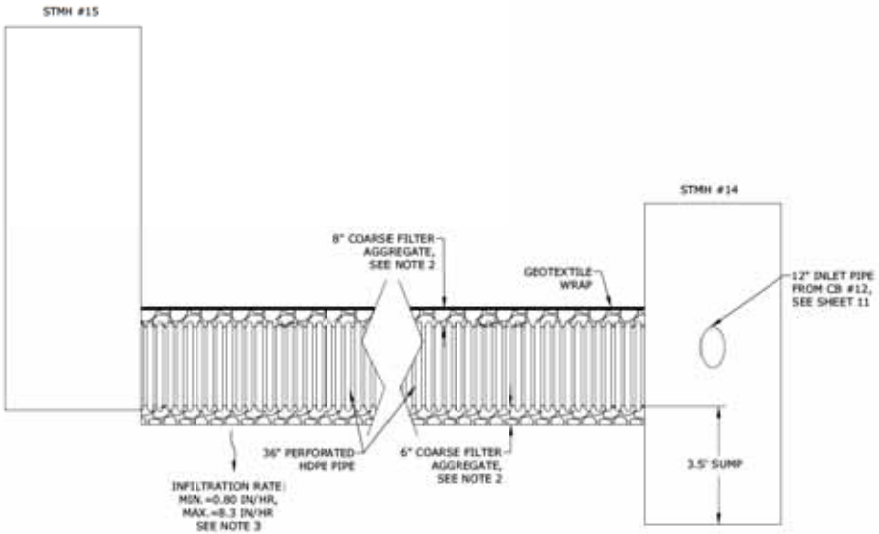
TYPICAL SECTION FOR PERFORATED PIPE

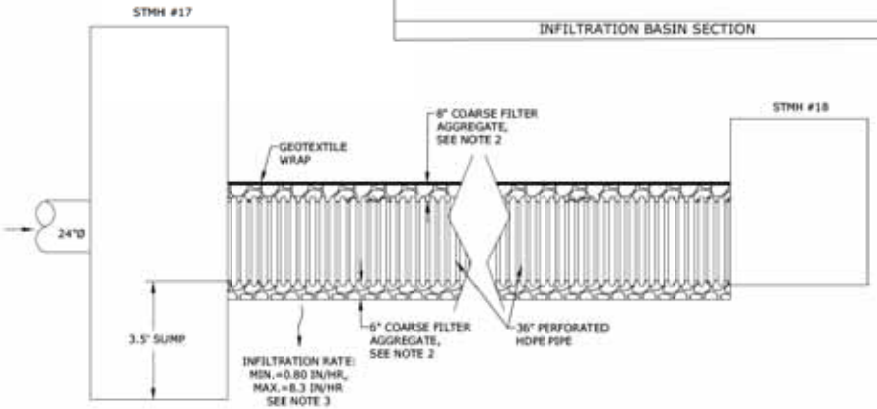


NOTES:

1. PLACE 3" OF GRADE 2 COMPOST (MnDOT 3890) IN BASINS. ROTOTILL COMPOST INTO THE IN-SITU SOIL TO A MIN. DEPTH OF 12".
2. SCARIFY TOP 18" OF SUBGRADE SOIL PRIOR TO PLACEMENT OF COMPOST.
3. INSTALLATION OF COMPOST SHALL NOT OCCUR UNTIL TRIBUTARY AREAS TO THE BASINS HAVE BEEN STABILIZED.
4. CONTRACTOR SHALL TAKE SPECIAL CARE TO MINIMIZE COMPACTION IN INFILTRATION BASIN AREAS.
5. INSTALL PERIMETER SEDIMENT CONTROL AROUND INFILTRATION BASINS IMMEDIATELY FOLLOWING EXCAVATION OF BASINS.
6. EXCAVATION OF INFILTRATION AREAS SHALL BE COMPLETED USING A BACKHOE WITH A TOOTHED BUCKET.

INFILTRATION BASIN SECTION





NOTES:

1. SEE SHEET 11 FOR RIM AND INVERT ELEVATIONS AND PIPE LENGTHS.
2. COARSE FILTER AGGREGATE SHALL BE WASHED, ANGULAR, NON-CARBONATE ROCK.
3. FOLLOWING EXCAVATION FOR PERFORATED PIPE AND PRIOR TO INSTALLATION OF COARSE FILTER AGGREGATE, OWNER'S GEOTECHNICINAL ENGINEER IS REQUIRED TO CONDUCT AN INFILTRATION TEST OF THE SUBGRADE SOIL. COORDINATE WITH ENGINEER. NOTIFY ENGINEER IMMEDIATELY IF THE MEASURED INFILTRATION RATE DOES NOT MEET THE MINIMUM OR EXCEEDS THE MAXIMUM.

PERFORATED PIPE BMP DETAILS

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LIC. NO. 49990 DATE: 11-07-2022

HT PO Engineering · Surveying Landscape Architecture

HANSEN THORP PELLINEN OLSON, INC.

PROJECT NO. 04-124.5

OWNER NAME: CITY OF EDEN PRAIRIE

OWNER PROJ. # I.C. 04-5632

DETAILS

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 31 OF 37

1.0 GENERAL

IN COMPLIANCE WITH THE FEDERAL CLEAN WATER ACT, A GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NPDES MUST BE GRANTED BY THE MPCA PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY FOR THIS PROJECT. THE MPCA DEFINES THE PERMITTEE AS THE OWNER AND OPERATOR (GENERAL CONTRACTOR) WHO SIGN THE APPLICATION FOR PERMIT COVERAGE AND WHOM ARE RESPONSIBLE FOR COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT. A COMPLETED APPLICATION AND PERMIT FEE SHALL BE ELECTRONICALLY SUBMITTED AND PERMIT AUTHORIZED PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES. PROJECTS DISTURBING 50 ACRES OR MORE AND SOME OTHER PROJECTS REQUIRE A 30-DAY REVIEW PERIOD PRIOR TO ANY LAND DISTURBANCE ACTIVITIES. SEE GENERAL PERMIT ITEM 3.3 AND 3.4.

THIS SWPPP WAS PREPARED IN ACCORDANCE WITH THE MPCA GENERAL PERMET MNR100001 ISSUED AUGUST 1, 2018. THE GENERAL PERMIT EXPIRES ON JULY 31, 2023.

1.1 GENERAL CONSTRUCTION ACTIVITY

PROJECT NAME: PIONEER TRAIL RECONSTRUCTION

THE PROPOSED PROJECT IS LOCATED AT 12813-13195 PIONEER TRAIL

LAT: 44° 49' 44" N
LONG: -93° 26' 35" W

COUNTY: HENNEPIN COUNTY

METHOD FOR DETERMINING LATITUDE/LONGITUDE:
USGS TOPOGRAPHIC MAP (SPECIFY SCALE: INSERT SCALE) _____ EPA WEB SITE ___X__ GPS _____ OTHER (PLEASE SPECIFY): _____

REFERENCE HORIZONTAL DATUM:
_____ NAD 27 __X__ NAD 83 OR WGS 84 _____ UNKNOWN

PROJECT TYPE:
_____ RESIDENTIAL __X__ COMMERCIAL/INDUSTRIAL _____ LINEAR CONSTRUCTION

_____ RESIDENTIAL AND ROAD CONSTRUCTION _____ OTHER (DESCRIBE)

EXISTING		PROPOSED	
GROSS PROJECT AREA	137,650 SF (3.16 AC)	TOTAL DISTURBED AREA	137,650 SF (3.16 AC)
IMPERVIOUS AREA	73,616 SF (1.69 AC)	IMPERVIOUS AREA	76,665 SF (1.76 AC)
TOTAL CURVE NUMBER	71	TOTAL CURVE NUMBER	72

ADDITIONAL IMPERVIOUS = 3,049 SF

NOTE: NPDES PERMIT COVERAGE FROM THE MPCA IS REQUIRED FOR LAND DISTURBANCE AREAS ≥ 1.0 AC
PERMANENT STORMWATER MANAGEMENT IS REQUIRED AS PART OF THE PERMIT FOR CREATING NEW IMPERVIOUS AREAS ≥ 1.0 AC

1.2 CONSTRUCTION ACTIVITIES

THE FOLLOWING ACTIVITIES POSE A POTENTIAL FOR DISCHARGE OF SEDIMENT AND/OR POLLUTANTS TO THE WATERS OF THE STATE.

SCOPE AND SEQUENCE OF CONSTRUCTION ACTIVITIES:

1. REMOVALS
2. INSTALLATION OF UTILITIES
3. PAVING OPERATIONS
4. FINAL BMP CONSTRUCTION
5. RESTORATION

THIS SWPPP PROPOSES PREVENTION PLANS AND CONTROLS TO MANAGE SUCH DISCHARGES THROUGH THE USE OF BMPS. SEE SECTION 4 AND 5 FOR BMP DESCRIPTIONS.

2.0 SPECIAL WATERS AND IMPAIRED RECEIVING WATERS

WATER BODY ID	RECEIVING SURFACE WATER	TYPE	SPECIAL WATER (SECTION 23)	IMPAIRMENT (SECTION 23)	TMDL
NA	PURGATORY CREEK	CREEK	YES	ESCHERICHIA COLI	NO

2.1 MINNESOTA DEPARTMENT OF NATURAL RESOURCES (MNDNR) FISH SPAWNING RESTRICTIONS

THERE ARE NO ADJACENT PUBLIC WATERS WHERE THE MNDNR HAS DECLARED "WORK IN WATER RESTRICTIONS" DURING FISH SPAWNING TIME FRAMES.

2.2 RECEIVING WATERS MAP

2.4 ENVIRONMENTALLY SENSITIVE AREAS

TO THE BEST OF OUR KNOWLEDGE, NO ENVIRONMENTAL REVIEW HAS BEEN PERFORMED FOR THIS SITE, AND THEREFORE NO SPECIAL STORMWATER MITIGATION MEASURES HAVE BEEN IDENTIFIED FOR THOSE PURPOSES (ENDANGERED SPECIES, HISTORICAL/ARCHEOLOGICAL SITES, OR OTHER ENVIRONMENTALLY SENSITIVE AREAS).

3.0 PROJECT PLANS AND SPECIFICATIONS

REFER TO GRADING, EROSION AND SEDIMENT CONTROL PLAN SHEET(S), AND/OR REMOVALS AND/OR SITE PLANS FOR THE FOLLOWING:

1. CONSTRUCTION LIMITS
2. EXISTING AND FINAL GRADES INCLUDING DIRECTION OF FLOW FOR ALL PRE AND POST-CONSTRUCTION STORMWATER RUNOFF DRAINAGE AREAS LOCATED WITHIN THE PROJECT LIMITS.
3. LOCATIONS OF IMPERVIOUS SURFACES.
4. STEEP SLOPE LOCATIONS.
5. LOCATIONS OF AREAS WHERE CONSTRUCTION WILL BE PHASED TO MINIMIZE DURATION OF EXPOSED SOILS.
6. PORTIONS OF THE SITE THAT DRAIN TO A PUBLIC WATER WITH DNR WORK IN WATER RESTRICTIONS FOR FISH SPAWNING TIME FRAMES.
7. LOCATIONS OF ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS).
8. BUFFER ZONES AS REQUIRED IN ITEM 9.17 AND 23.11 OF THE PERMIT.
9. LOCATIONS OF POTENTIAL POLLUTION-GENERATING ACTIVITIES IDENTIFIED IN SECTION 12 OF THE PERMIT.
10. MINNESOTA DEPARTMENT OF HEALTH HORIZONTAL AND VERTICAL SEPARATION REQUIREMENTS FOR INFILTRATION BASINS/FILTRATION FROM WELLS, SEPTIC TANKS/LEACH FIELDS, GROUND WATER, UTILITIES AND BUILDINGS.

REFER TO EXISTING AND PROPOSED DRAINAGE AREA MAPS FOR THE FOLLOWING:

1. DIVIDING DRAINAGE AREA POLYGONS.
2. DRAINAGE FLOW ARROWS.
3. STORMWATER RUN-ON AND RUN-OFF FLOW DIRECTION AND DISTANCE TO RECEIVING WATER BODY IF IT IS OFF OF THE DRAINAGE AREA MAPS. [SEE SECTION 3.2 AND 3.3].

REFER TO DETAILS FOR THE FOLLOWING:

1. STANDARD DETAILS FOR EROSION AND SEDIMENT CONTROL BMPS TO BE INSTALLED AT THE SITE.

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ADAM PAWELK
LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture
HANSEN THORP PELLINEN OLSON, INC.
PROJECT NO. 04-124.6

HORIZONTAL

OWNER NAME CITY OF EDEN PRAIRIE
OWNER PROJ. # I.C. 04-5632

SWPPP

PIONEER TRAIL RECONSTRUCTION
EDEN PRAIRIE, MN

SHEET 32 OF 37

3.1 SOIL TYPES

SOIL TYPES TYPICALLY FOUND IN THE UPPER 10 FEET ON THIS PROJECT SITE ARE FILL AND SP-SM RANGING FROM CLAYEY SAND TO SAND WITH SILT.

USDA PARTICLE SIZES

CLASSIFICATION SIZE (MM)

CLASSIFICATION	SIZE (mm)
GRAVEL	2 TO 75
SAND	0.05 TO 2
SILT	0.002 TO 0.05
CLAY	LESS THAN 0.002

WORKS CITED:

3.2 RUN-ON

SOURCES OF RUN-ON

1. NEIGHBORING RESIDENTIAL AND COMMERCIAL PROPERTIES ADJACENT TO PIONEER TRAIL

SEE SECTION(S) 4 AND 5 FOR BMPS TO CONTROL RUN-ON.

3.3 RUN-OFF

RUN-OFF LOCATIONS AND RECEIVING WATER BODIES

1. STORM SEWER IN PIONEER TRAIL, ULTIMATELY DISCHARGING TO PURGATORY CREEK.

SEE SECTION(S) 4 AND 5 FOR BMPS TO CONTROL RUN-OFF.

3.3 RAINFALL

RAINFALL:

ANTICIPATED RAINFALL BASED ON HISTORICAL DATA

MONTH	AVG. RAINFALL (IN)	FREQUENCY	24-HR AMOUNT (IN)*
JANUARY	0.74	1-YR	2.49
FEBRUARY	0.53	2-YR	2.85
MARCH	1.77	5-YR	3.56
APRIL	2.89	10-YR	4.25
MAY	3.60	25-YR	5.36
JUNE	4.33	50-YR	6.35
JULY	4.20	100-YR	7.44
AUGUST	4.36		
SEPTEMBER	3.54	*DATA FROM NOAA ATLAS 14	
OCTOBER	2.35		
NOVEMBER	1.74		
DECEMBER	0.8		
TOTAL	27.25		

3.4 ESTIMATED EROSION AND SEDIMENT CONTROL QUANTITIES

TEMPORARY	ESTIMATED QUANTITIES
SILT FENCE	1940 LF
INLET PROTECTION	30 EA
STREET SWEEPING	AS NEEDED
ROCK CONSTRUCTION ENTRANCE	2 EA
PERMANENT	
RIPRAP (CL. III)	32 CY
SEED/SOD	1.4 AC
STONE SPLASH BLOCK ASSEMBLY	2 EA
SUMP STRUCTURES	5 EA

4.0 GENERAL NOTES

1. AMEND THE SWPPP AND DOCUMENT ANY AND ALL CHANGES TO THE SWPPP AND ASSOCIATED PLAN SHEETS IN A TIMELY MANNER, STORE THE SWPPP AND ALL AMENDMENTS ON SITE AT ALL TIMES.
2. PREPARE AND SUBMIT A SITE MANAGEMENT PLAN FOR THE ENGINEER'S ACCEPTANCE FOR CONCRETE MANAGEMENT, CONCRETE SLURRY APPLICATION AREAS, WORK IN AND NEAR AREAS OF ENVIRONMENTAL SENSITIVITY, AREAS IDENTIFIED IN THE PLANS AS "SITE MANAGEMENT PLAN AREA", ANY WORK THAT WILL REQUIRE DEWATERING, AND AS REQUESTED BY THE ENGINEER. SUBMIT ALL SITE MANAGEMENT PLANS TO THE ENGINEER IN WRITING. ALLOW A MINIMUM OF 7 DAYS FOR THE OWNER TO REVIEW AND ACCEPT SITE MANAGEMENT PLAN SUBMITTALS. WORK WILL NOT BE ALLOWED TO COMMENCE IF A SITE MANAGEMENT PLAN IS REQUIRED UNTIL ACCEPTANCE HAS BEEN GRANTED BY THE ENGINEER. THERE WILL BE NO EXTRA TIME ADDED TO THE CONTRACT DUE TO AN UNTIMELY SUBMITTAL.
3. IT IS THE DESIGNER'S INTENT THAT THE CONTRACTOR BUILD PONDS AND PLACE EROSION CONTROL BMPS BEFORE PUTTING THEM INTO ACTIVE SERVICE TO THE MAXIMUM EXTENT PRACTICABLE.
4. BURNING OF ANY MATERIAL IS NOT ALLOWED WITHIN PROJECT BOUNDARY.
5. DO NOT DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS. DELINEATE AREAS NOT TO BE DISTURBED PRIOR TO STARTING GROUND DISTURBING ACTIVITIES. IF IT BECOMES NECESSARY TO DISTURB AREAS OUTSIDE OF THE CONSTRUCTION LIMITS OPERATIONS SHOULD CEASE AND DETERMINATION MADE IF ADDITIONAL PERMITS ARE NEEDED OR EXISTING PERMITS NEED TO BE MODIFIED. OBTAIN WRITTEN PERMISSION FROM THE PROJECT ENGINEER PRIOR TO PROCEEDING. PRESERVE ALL NATURAL BUFFERS SHOWN ON THE PLANS.
6. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS WHENEVER FEASIBLE. PROVIDE VELOCITY DISSIPATION DEVICES AS NEEDED TO PREVENT EROSION.
7. ROUTE STORMWATER AROUND UNSTABILIZED AREAS OF THE SITE WHENEVER FEASIBLE. PROVIDE EROSION CONTROL AND VELOCITY DISSIPATION DEVICES AS NEEDED TO KEEP CHANNELS FROM ERODING AND TO PREVENT NUISANCE CONDITIONS AT THE OUTLET.
8. THE EROSION PREVENTION AND SEDIMENT CONTROL BMPS SHALL BE PLACED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND TO CAPTURE SEDIMENT ON SITE. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES.
9. ESTABLISH SEDIMENT CONTROL DEVICES ON ALL DOWN GRADIENT PERIMETERS AND UPGRADIENT OF ANY BUFFER ZONES BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITIES BEGIN. MAINTAIN SEDIMENT CONTROL DEVICES UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
10. LOCATE PERIMETER CONTROL ON THE CONTOUR TO CAPTURE OVERLAND, LOW- VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS. PLACE J-HOOKS AT A MAXIMUM OF 100-FOOT INTERVALS.
11. **STOCKPILES:** PROVIDE PERIMETER CONTROL AROUND ALL STOCKPILES. PLACE BMP A MINIMUM OF 5 FEET FROM THE TOE OF SLOPE WHERE FEASIBLE. DO NOT PLACE STOCKPILES IN NATURAL BUFFER AREAS, SURFACE WATERS, OR STORMWATER CONVEYANCES. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS.
12. **DITCH CHECKS:** DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
13. **INLET PROTECTION:** PROTECT STORM SEWER INLETS AT ALL TIMES WITH THE APPROPRIATE INLET PROTECTION FOR EACH SPECIFIC PHASE OF CONSTRUCTION. PROVIDE INLET PROTECTION DEVICES WITH EMERGENCY OVERFLOW CAPABILITIES. SILT FENCE PLACED IN THE INLET GRATE IS NOT AN ACCEPTABLE INLET PROTECTION BMP FOR GRADING OPERATIONS. SILT FENCE PLACED IN THE GRATE IS ONLY ALLOWED FOR SHORT INTERVALS DURING MILLING OR PACING OPERATIONS. INLET PROTECTION DEVICES MAY NEED TO BE PLACED MULTIPLE TIMES IN THE SAME LOCATION OVER THE LIFE OF THE CONTRACT. INLET PROTECTION DEVICES WILL BE PAID FOR ONCE PER INLET REGARDLESS OF THE NUMBER OF TIMES THE BMP IS PLACED. KEEP ALL STORM SEWER INLET PROTECTION DEVICES IN GOOD FUNCTIONAL CONDITION AT ALL TIMES. REPLACE INLET PROTECTION DEVICE WITH A SUITABLE ALTERNATIVE IF THE PROJECT ENGINEER DEEMS AN INLET PROTECTION DEVICE TO BE NONFUNCTIONAL, IN POOR CONDITION, INEFFECTIVE, OR NOT APPROPRIATE FOR THE CURRENT CONSTRUCTION ACTIVITIES. THERE WILL BE NO COST TO THE OWNER FOR REPLACEMENT OF INLET PROTECTION DEVICES.
14. **CONSTRUCTION EXITS:** PLACE CONSTRUCTION EXITS, AS NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES BOTH ON AND OFF THE PROJECT SITE. PROVIDE CONSTRUCTION EXITS OF SUFFICIENT SIZE TO PREVENT TRACK OUT. MAINTAIN CONSTRUCTION EXITS WHEN EVIDENCE OF TRACKING IS DISCOVERED. REGULAR STREET SWEEPING MIGHT BE NEEDED, BUT IS NOT AN ACCEPTABLE ALTERNATIVE TO PROPER CONSTRUCTION EXIT INSTALLATION AND MAINTENANCE.
15. **SEDIMENT BASINS:** DISCHARGE TURBID OR SEDIMENT LADEN WATER TO TEMPORARY SEDIMENT BASINS WHENEVER FEASIBLE (REQUIRED IF DRAINAGE AREA IS 10 ACRES OR LARGER OR 5 ACRES OR LARGER AND WITHIN 1 MILE OF IMPAIRED WATER). IN THE EVENT THAT IT IS NOT FEASIBLE TO DISCHARGE THE SEDIMENT LADEN WATER TO A TEMPORARY SEDIMENT BASIN, THE WATER MUST BE TREATED SO THAT IT DOES NOT CAUSE A NUISANCE CONDITION IN THE RECEIVING WATERS OR TO DOWNSTREAM LANDOWNERS. DOCUMENT WHY SEDIMENT BASIN IS NOT FEASIBLE. CLEAN OUT ALL PERMANENT STORMWATER BASINS REGARDLESS OF WHETHER USED AS TEMPORARY SEDIMENT BASINS OR TEMPORARY SEDIMENT TRAPS TO THE DESIGN CAPACITY AFTER ALL UPGRADIENT LAND DISTURBING ACTIVITY IS COMPLETED.
16. PROVIDE SCOUR PROTECTION AT ANY OUTFALL OF DEWATERING ACTIVITIES.
17. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER. ANY WORK STILL BEING PERFORMED SHALL BE SNOW MULCHED OR BLANKETED WITHIN THE TIME FRAMES IN THE GENERAL PERMIT.
18. PROVIDE STABILIZATION IN ANY TRENCHES CUT FOR DEWATERING OR SITE DRAINING PURPOSES.
19. PRIOR TO STABILIZATION, ALL SOIL SHALL BE ROUGHENED BY TRACKED EQUIPMENT. TRACKS SHALL BE PERPENDICULAR TO GRADIENT.
20. REMOVE SEDIMENT FROM STORMWATER SYSTEM AT THE END OF PROJECT.
21. PRESERVE A 50-FOOT NATURAL BUFFER OR (IF BUFFER IS INFEASIBLE) PROVIDE REDUNDANT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF LAND DISTURBANCE AND STORMWATER FLOWS TO THE SURFACE WATER.
22. CONSTRUCTION PROJECT SHOULD BE PHASED TO MINIMIZE THE DURATION OF EXPOSED SOILS.
23. MINIMIZE COMPACTION OF SOILS AND PRESERVE TOPSOIL IN AREAS WHERE VEGETATION WILL BE ESTABLISHED.
24. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON ESTABLISHMENT OF PERMANENT VEGETATION.
25. STAKING OFF AND MAKING OF PROPOSED INFILTRATION FACILITIES TO PREVENT SOIL COMPACTION BY HEAVY EQUIPMENT, STOCKPILING OF MATERIALS, AND TRAFFIC. BEST MANAGEMENT PRACTICES MUST BE DEPLOYED TO PREVENT SEDIMENT AND OTHER MATERIAL FROM ENTERING THE PRACTICE. ANY ACCUMULATED SEDIMENT IN AN INFILTRATION FACILITY MUST BE REMOVED IN A MANNER THAT PREVENTS COMPACTION OF THE FACILITY BOTTOM.

4.1 IMPLEMENTATION TIMELINES

AREA	TIME FRAME	NOTES
LAST 200 LINEAL FEET OF DRAINAGE DITCH OR SWALE	WITHIN 24 HOURS OF CONNECTION TO STORM SEWER, SURFACE WATER, OR PROPERTY EDGE	SECTIONS 4.2, 4.3
REMAINING PORTIONS OF DRAINAGE DITCH OR SWALE	7 DAYS	SECTIONS 4.2, 4.3
PIPE AND CULVERT OUTLETS	24 HOURS	SECTION 4.3
EXPOSED SOILS AND STOCKPILES	7 DAYS - STEEPER THAN 3:1 14 DAYS - 3:1 OR FLATTER	SECTIONS 4.2, 4.5
ONSET OF WINTER	7 DAYS (SEE MNDOT 2575.3)	SECTION 4.5
TOPSOIL BERMS	7 DAYS	SECTION 4.5
TEMP. SEDIMENT CONTAINMENT	24 HOURS AFTER TEMP. USE CEASES	SECTION 4.5

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LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture
HANSEN THORP PELLINEN OLSON, Inc.
7516 Market Place Drive · Eden Prairie, MN 55344
952-829-0700 · 952-829-1899 fax

PROJECT NO. 04-124.6

HORIZONTAL

OWNER NAME CITY OF EDEN PRAIRIE

OWNER PROJ. # I.C. 04-5632

SWPPP

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

SHEET 33 OF 37

1. CROSS REFERENCE 7.3 INSPECTIONS AND MAINTENANCE

4.2 METHODS OF STABILIZING SOILS AND SOIL STOCKPILES

STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. COMPLETE STABILIZATION WITHIN THE TIME FRAME LISTED, IN MANY INSTANCES THIS WILL REQUIRE STABILIZATION TO OCCUR MORE THAN ONCE DURING THE COURSE OF THE PROJECT. STABILIZATION MUST MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION IS NOT REQUIRED ON CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES. STABILIZATION IS NOT REQUIRED ON TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) BUT PERMITTEES MUST PROVIDE SEDIMENT CONTROLS AT THE BASE OF THE STOCKPILE.

4.3 METHODS TO BE USED FOR STABILIZATION OF DITCH AND SWALE WETTED PERIMETERS

1. FOR PUBLIC WATERS THAT THE MNDNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, PERMITTEES MUST COMPLETE STABILIZATION OF ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF THE WATER'S EDGE, AND THAT DRAIN TO THESE WATERS, WITHIN 24 HOURS DURING THE RESTRICTION PERIOD.
2. 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. COMPLETE STABILIZATION OF THE REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES.
3. TEMPORARY OR PERMANENT DITCHES OR SWALES BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK-DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED. PERMITTEES MUST STABILIZE THESE AREAS WITHIN 24 HOURS AFTER THEIR USE AS A SEDIMENT CONTAINMENT SYSTEM CEASES.
4. APPLICATION OF MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES SHALL NOT BE USED WITHIN ANY PORTION OF THE NORMAL WETTED PERIMETER OF A TEMPORARY OR PERMANENT DRAINAGE DITCH.
5. PROVIDE TEMPORARY OR PERMANENT ENERGY DISSIPATION AT ALL PIPE OUTLETS WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER OR PERMANENT STORMWATER TREATMENT SYSTEM.

4.4 METHODS USED TO PROMOTE INFILTRATION AND SEDIMENT REMOVAL ON THE SITE PRIOR TO OFF SITE DISCHARGE

1. ALL PORTIONS OF DEVELOPMENT AREA MUST HAVE POSITIVE DRAINAGE TO THE DESIGNATED TREATMENT AREAS. CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY DITCHES, PIPING OR OTHER MEANS TO ENSURE PROPER DRAINAGE DURING CONSTRUCTION.
2. DIRECT STORMWATER FLOW TO VEGETATED AREAS UNLESS INFEASIBLE.
3. USE ENTRANCE/EGRESS BMPS (E.G. ROCK CONSTRUCTION ENTRANCE, TRIANGULAR SILT DIKE, RUMBLE TYPE BMP)

4.5 ADDITIONAL EROSION PREVENTION MEASURES

1. STABILIZE ALL AREAS OF THE SITE PRIOR TO THE ONSET OF WINTER. ANY WORK STILL BEING PERFORMED WILL BE SNOW MULCHED, SEEDED, AND/OR BLANKETED WITH THE TIME FRAMES IN THE MNDOT SPECIFICATIONS 2575.3.
2. TOPSOIL BERMS MUST BE STABILIZED IN ORDER TO BE CONSIDERED PERIMETER CONTROL BMPS. USE RAPID STABILIZATION METHOD 2, 3, OR 4 AS DIRECTED BY THE ENGINEER. THE SEED MIX USED IN THE RAPID STABILIZATION MAY BE SUBSTITUTED AS FOLLOWS:
   A. SINGLE YEAR CONSTRUCTION BETWEEN MAY 1 - AUGUST 1, SEED WITH SEED MIXTURE 21-111
   B. SINGLE YEAR CONSTRUCTION BETWEEN AUGUST 1 AND OCTOBER 31, SEED WITH SEED MIXTURE 21-112
3. KEEP DITCH AREAS (NOT INSIDE THE WETTED PERIMETER) AND EXPOSED SOILS IN AN EVEN, ROUGH-GRADED CONDITION IN ORDER TO BEST PREPARE THE AREA FOR APPLICATION OF EROSION CONTROL MULCHES, HYDROMULCHES AND BLANKETS.
4. ALL EXPOSED SOIL AREAS MUST HAVE TEMPORARY EROSION PROTECTION OR PERMANENT COVER FOR THE EXPOSED SOIL AREAS, IF UNWORKED FOR A PERIOD LONGER THAN:

TOP OF SLOPE	TIME
STEEPER THAN 3:1	7 DAYS
3:1 OR FLATTER	14 DAYS

5.0 TEMPORARY SEDIMENT CONTROL PRACTICES

1. SEDIMENT CONTROL DEVICES MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS OF THE SITE AND DOWNGRADIENT AREAS OF THE SITE THAT DRAIN TO ANY SURFACE WATER, INCLUDING CURB AND GUTTER SYSTEMS. LOCATE SEDIMENT CONTROL PRACTICES UPGRADIENT OF ANY BUFFER ZONES. INSTALL SEDIMENT CONTROL PRACTICES BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND KEEP THE SEDIMENT CONTROL PRACTICES IN PLACE AND FUNCTIONAL UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.
2. IF DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED, BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENTS, PERMITTEES MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN ITEM 6.3.
3. TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK-CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS.
4. A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP TO SATISFY CGP ITEM 9.2 EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE. IMMEDIATELY AFTER THE SHORT TERM CONSTRUCTION ACTIVITY (E.G., INSTALLATION OF RIP RAP ALONG THE SHORELINE) IN THAT AREA IS COMPLETE, INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER.
5. RE-INSTALL ALL SEDIMENT CONTROL PRACTICES ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES, IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY IS COMPLETED. RE-INSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
6. PROTECT ALL STORM DRAIN INLETS USING APPROPRIATE BMPS DURING CONSTRUCTION UNTIL THEY ESTABLISH PERMANENT COVER ON ALL AREAS WITH POTENTIAL FOR DISCHARGING TO THE INLET.
7. INLET PROTECTION FOR A PARTICULAR INLET MAY BE REMOVED IF A SPECIFIC SAFETY CONCERN (E.G. STREET FLOODING/FREEZING) IS IDENTIFIED BY THE PERMITTEES OR THE JURISDICTIONAL AUTHORITY (E.G., CITY/COUNTY/TOWNSHIP/MNDOT ENGINEER). DOCUMENT THE NEED FOR REMOVAL IN THE SWPPP.
8. PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AT THE BASE OF STOCKPILES ON THE DOWNGRADIENT PERIMETER.
9. LOCATE STOCKPILES OUTSIDE OF NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.
10. INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE OR ONTO PAVED ROADS WITHIN THE SITE.
11. USE STREET SWEEPING IF VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT TRACKING ONTO THE STREET. [CGP 9.12]
12. INSTALL TEMPORARY SEDIMENT BASINS AS REQUIRED BY GENERAL PERMIT.
13. IN ANY AREAS OF THE SITE WHERE FINAL VEGETATIVE STABILIZATION WILL OCCUR, RESTRICT VEHICLE AND EQUIPMENT USE TO MINIMIZE SOIL COMPACTION. [CGP 9.14]
14. PRESERVE TOPSOIL ON THE SITE, UNLESS INFEASIBLE.
15. DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS UNLESS INFEASIBLE.
16. PRESERVE A 50 FOOT NATURAL BUFFER OR, IF A BUFFER IS INFEASIBLE ON THE SITE, PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. PERMITTEES MUST INSTALL PERIMETER SEDIMENT CONTROLS AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE. NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. IF PRESERVING THE BUFFER IS INFEASIBLE, DOCUMENT THE REASONS IN THE SWPPP. SHEET PILING IS A REDUNDANT PERIMETER CONTROL IF INSTALLED IN A MANNER THAT RETAINS ALL STORMWATER. [CGP 9.17]
17. USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER. USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION AND DIRECT TREATED STORMWATER TO A SEDIMENT CONTROL SYSTEM FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE. [CGP 9.18]

SEDIMENT CONTROL DEVICES INCLUDE, BUT ARE NOT LIMITED TO:

1. PERIMETER CONTROL SHALL BE LOCATED ON THE CONTOUR TO CAPTURE OVERLAND, LOW-VELOCITY SHEET FLOWS DOWN GRADIENT OF ALL EXPOSED SOILS AND PRIOR TO DISCHARGING TO SURFACE WATERS WITH THE BMP J-HOOKED AT A MAXIMUM OF 100 FOOT INTERVALS AND SHALL CONTAIN NO MORE THAN ½ ACRE OF DRAINAGE AREA.
2. DITCH CHECKS WILL BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
   A. TEMPORARY DITCH CHECKS WILL CONSIST OF USING ROCK DITCH CHECKS, BIOLOGS AND ROCK WEEPERS IN FRONT OF CULVERT INLETS. IN LIEU OF REMOVING TEMPORARY DITCH CHECKS, THE ROCK MAY BE PUSHED INTO THE GROUND.
   B. FILTER LOGS WILL BE PLACED DURING PERMANENT TURF ESTABLISHMENT AT THE INTERVALS IDENTIFIED IN THE PLAN.
3. SEDIMENT DAMAGE FROM STOCKPILES WILL BE MINIMIZED BY PLACING A ROW OF SILT FENCE A MINIMUM 5 FEET FROM THE TOE AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORM WATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS OR DITCHES.
4. WHEN TEN (10) OR MORE ACRES DRAINS TO A COMMON LOCATION, A TEMPORARY OR PERMANENT SEDIMENT BASIN MUST BE PROVIDED PRIOR TO RUNOFF LEAVING THE CONSTRUCTION SITE OR ENTERING SURFACE WATERS. THE PERMITTEE IS ENCOURAGED TO INSTALL TEMPORARY SEDIMENT BASINS WHERE APPROPRIATE IN AREAS WITH STEEP SLOPES OR HIGHLY ERODIBLE SOILS EVEN IF THERE IS LESS THAN TEN (10) ACRES OF DRAINAGE AREA. IF INFEASIBLE, DOCUMENT ACCORDING TO GENERAL PERMIT.

5.1 DEWATERING AND BASIN DRAINING

THIS PROJECT DOES NOT INCLUDE DEWATERING OR BASIN DRAINING.

6.0 PERMANENT STORMWATER TREATMENT SYSTEM

THIS PROJECT DOES NOT RESULT IN ONE ACRE OR MORE OF ADDED IMPERVIOUS SURFACES. EXISTING INFILTRATION BASINS WILL PROVIDE RATE, VOLUME CONTROL, AND QUALITY CONTROL. TWO ADDITIONAL INFILTRATION BASINS ALONG WITH TWO SEPARATE SEGMENTS OF 36" PERFORATED PIPE ARE PROPOSED TO PROVIDE ADDITIONAL WATER QUALITY TREATMENT.

7.0 SWPPP AVAILABILITY AND RECORD RETENTION

1. THIS SWPPP MUST REMAIN ONSITE AT ALL TIMES AND BE READILY AVAILABLE FOR INSPECTION BY THE ENGINEER, MUNICIPALITY, MPCA OR OTHER GOVERNING EROSION CONTROL REPRESENTATIVE. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP FOR A MINIMUM OF THREE (3) YEARS AFTER THE NOT HAS BEEN FILED.
2. PERMITTEES SHALL NOT ASSIGN OR TRANSFER THIS PERMIT EXCEPT WHEN THE TRANSFER OCCURS IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ITEM 3.7 AND 3.8.
3. NOTHING IN THE PERMIT MUST BE CONSTRUED TO RELIEVE THE PERMITTEES FROM CIVIL OR CRIMINAL PENALTIES FOR NONCOMPLIANCE WITH THE TERMS AND CONDITIONS PROVIDED HEREIN. NOTHING IN THIS PERMIT MUST BE CONSTRUED TO PRECLUDE THE INITIATION OF ANY LEGAL ACTION OR RELIEVE THE PERMITTEES FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITTEES IS/ARE OR MAY BE SUBJECT TO UNDER SECTION 311 OF THE CLEAN WATER ACT AND MINN. STAT. SECT. 115 AND 116, AS AMENDED. PERMITTEES ARE NOT LIABLE FOR PERMIT REQUIREMENTS FOR ACTIVITIES OCCURRING ON THOSE PORTIONS OF A SITE WHERE THE PERMIT HAS BEEN TRANSFERRED TO ANOTHER PARTY AS REQUIRED IN ITEM 3.7 OR THE PERMITTEES HAVE SUBMITTED THE NOT AS REQUIRED IN SECTION 4.
4. THE PROVISIONS OF THIS PERMIT ARE SEVERABLE. IF ANY PROVISION OF THIS PERMIT OR THE APPLICATION OF ANY PROVISION OF THIS PERMIT TO ANY CIRCUMSTANCES IS HELD INVALID, THE APPLICATION OF SUCH PROVISION TO OTHER CIRCUMSTANCES, AND THE REMAINDER OF THIS PERMIT MUST NOT BE AFFECTED THEREBY.
5. THE PERMITTEES SHALL COMPLY WITH THE PROVISIONS OF MINN. R. 7001.0150, SUBP. 3 AND MINN. R. 7001.1090, SUBP. 1(A), 1(B), 1(C), 1(M), 1(I), 1(J), 1(K), AND 1(L).
6. PERMITTEES SHALL ALLOW ACCESS AS PROVIDED IN 40 CFR 122.41(I) AND MINN. STAT. SECTION. 115.04. THE PERMITTEES MUST ALLOW REPRESENTATIVES OF THE

NO.	DATE	DRAWN	DESIGN	CHECKED	ISSUES / REVISIONS
1	10-12-2021	ANO	ANO	AMP	60% PLANS
2	12-01-2021	ANO	ANO	AMP	90% PLANS
3	12-17-2021	ANO	ANO	AMP	WATERSHED APPLICATION
4	05-18-2022	ANO	ANO	AMP	WATERSHED RESUBMITTAL
5	11-07-2022	ANO	ANO	AMP	WATERSHED RESUBMITTAL

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

ADAM PAWELK

LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, Inc.
7516 Market Place Drive · Eden Prairie, MN 55344
952-829-0700 · 952-829-1899 fax

PROJECT NO. 04-124.6

HORIZONTAL

OWNER NAME CITY OF EDEN PRAIRIE

OWNER PROJ. # I.C. 04-5632

SWPPP

PIONEER TRAIL RECONSTRUCTION
EDEN PRAIRIE, MN

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MPCA OR ANY MEMBER, EMPLOYEE OR AGENT THEREOF, WHEN AUTHORIZED BY IT, UPON PRESENTATION OF CREDENTIALS, TO ENTER UPON ANY PROPERTY, PUBLIC OR PRIVATE, FOR THE PURPOSE OF OBTAINING INFORMATION OR EXAMINATION OF RECORDS OR CONDUCTING SURVEYS OR INVESTIGATIONS.

7. FOR THE PURPOSES OF MINN. R. 7090 AND OTHER DOCUMENTS THAT REFERENCE SPECIFIC SECTIONS OF THIS PERMIT, "STORMWATER DISCHARGE DESIGN REQUIREMENTS" CORRESPONDS TO SECTIONS 5,6 AND 14 THROUGH 21; "CONSTRUCTION ACTIVITY REQUIREMENTS" CORRESPONDS TO SECTION 7 THROUGH 13; AND "APPENDIX A" CORRESPONDS TO SECTIONS 22 AND 23.
8. CROSS REFERENCE SECTION 7.3 INSPECTIONS AND MAINTENANCE FOR ADDITIONAL RECORD KEEPING REQUIREMENTS.
9. CROSS REFERENCE SECTION 7.4 AMENDMENTS.

7.1 CONTACTS

	ORGANIZATION	CONTACT NAME	PHONE
OWNER	CITY OF EDEN PRAIRIE	ROD RUE	952-949-8314
CONTRACTOR			
SWPPP DESIGNER	HTPO	ADAM PAWELK	952-829-0700
LOCAL GOVERNMENT UNIT	CITY OF EDEN PRAIRIE	PATRICK SEIKORA	952-949-8360
WATERSHED DISTRICT	RILEY PURGATORY BLUFF CREEK	TERRY JEFFERY	952-807-6885
REGULATORY	MPCA	JOSH NORMAN	651-757-2389
OTHER			

7.2 TRAINING REQUIREMENTS

1. PERMITTEES SHALL ENSURE ALL OF THE FOLLOWING INDIVIDUALS RECEIVE TRAINING AND THE CONTENT AND EXTENT OF THE TRAINING IS COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT:

1.1. INDIVIDUALS PREPARING THE SWPPP FOR THE PROJECT.

THIS SWPPP WAS PREPARED BY OR UNDER THE SUPERVISION OF PERSONNEL THAT ARE QUALIFIED FOR THE DESIGN OF CONSTRUCTION SWPPP AND EROSION/SEDIMENT CONTROL.

NAME	CERTIFICATION
ADAM PAWELK	DESIGN OF CONSTRUCTION SWPPP CERTIFIED 6/1/2021, EXPIRES 2025

EROSION CONTROL SUPERVISOR:

_____

PHONE #:

CONTRACTOR TO INSERT TRAINING DOCUMENTATION

2.0 PERMITTEES SHALL ENSURE INDIVIDUALS IDENTIFIED IN SECTION 21 RECEIVE TRAINING FROM LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL ORGANIZATIONS, OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER TREATMENT AND THE MINNESOTA NPDES/SDS CONSTRUCTION STORMWATER PERMIT. PERMITTEES MUST ENSURE THESE INDIVIDUALS ATTEND A REFRESHER-TRAINING COURSE EVERY THREE (3) YEARS.

7.3 INSPECTIONS AND MAINTENANCE

1. CROSS REFERENCE SECTION 4.1 IMPLEMENTATION TIMELINES.
2. PERMITTEES SHALL ENSURE A TRAINED PERSON, AS IDENTIFIED IN ITEM 21.2.B, WILL INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN ½ INCH IN 24 HOURS.
3. PERMITTEES SHALL INSPECT AND MAINTAIN ALL PERMANENT STORMWATER TREATMENT BMPS.
4. PERMITTEES SHALL INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL NONFUNCTIONAL BMPS WITH FUNCTION BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY UNLESS ANOTHER TIME FRAME IS SPECIFIED IN ITEM 11.5 OR 11.6. PERMITTEES MAY TAKE ADDITIONAL TIME IF FIELD CONDITIONS PREVENT ACCESS TO THE AREA.
5. DURING EACH INSPECTION, PERMITTEES SHALL INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. PERMITTEES SHALL REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. PERMITTEES SHALL COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. PERMITTEES MUST USE ALL (7) DAYS OF OBTAINING ACCESS. PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.
6. PERMITTEES SHALL INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS, STREETS AND CURB AND GUTTER SYSTEMS WITHIN AND ADJACENT TO THE PROJECT FOR SEDIMENTATION FROM EROSION OR TRACKED SEDIMENT FROM VEHICLES. PERMITTEES MUST REMOVE SEDIMENT FROM ALL PAVED SURFACES WITHIN ONE (1) CALENDAR DAY OF DISCOVERY OR, IF APPLICABLE, WITHIN A SHORTER TIME TO AVOID A SAFETY HAZARD TO USERS OF PUBLIC STREETS.
7. PERMITTEES SHALL REPAIR, REPLACE OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES ½ OF THE HEIGHT OF THE DEVICE.
8. PERMITTEES SHALL DRAIN TEMPORARY AND PERMANENT SEDIMENTATION BASINS AND REMOVE THE SEDIMENT WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES ½ THE STORAGE VOLUME.
9. PERMITTEES MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED IN ITEM 11.2 AS FOLLOWS:
   - 9.1. 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
   - 9.2. 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
   - 9.3. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INPSECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.
11. PERMITTEES SHALL RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP. THESE RECORDS MUST INCLUDE:
   - 11.1. DATE AND TIME OF INSPECTIONS; AND
   - 11.2. NAME OF PERSONS CONDUCTING INSPECTIONS; AND
   - 11.3. ACCURATE FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED; AND
   - 11.4. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND
   - 11.5. DATE OF ALL RAINFALL EVENTS GREATER THAN ½ INCHES IN 24 HOURS, AND THE AMOUNT OF RAINFALL FOR EACH EVENT. PERMITTEES MUST OBTAIN RAINFALL AMOUNTS BY EITHER A PROPERTY MAINTAINED RAIN GAUGE INSTALL ONSITE, A WEATHER STATION THAT IS WITHIN ONE (1) MILE OF YOUR LOCATION, OR A WEATHER REPORTING SYSTEM THAT PROVIDES SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES; AND
   - 11.6. 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, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS); AND
   - 11.7. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 WITHIN SEVEN (7) CALENDAR DAYS.

7.4 AMENDMENTS

THE CONTRACTOR'S EROSION CONTROL SUPERVISOR IS RESPONSIBLE FOR ANY FIELD AMENDMENTS OF THE SWPPP AND SHALL DOCUMENT SUCH AMENDMENTS IN THE TABLE BELOW.

SWPPP AMENDMENTS		
DESCRIPTION	DATE	COMPLETED BY
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

ADAM PAWELK

LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture
HANSEN THORP PELLINEN OLSON, INC.
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PROJECT NO. 04-124.8

HORIZONTAL

OWNER NAME CITY OF EDEN PRAIRIE

OWNER PROJ. # I.C. 04-5632

SWPPP

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

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8.0 POLLUTION PREVENTION MANAGEMENT MEASURES

1. PROVIDE A SPILL KIT AT EACH WORK LOCATION ON THE SITE. ENSURE ALL SPILLS ARE CLEANED UP IMMEDIATELY.
2. STORE ALL MATERIALS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS, PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS UNDER COVER AND WITH SECONDARY CONTAINMENT.
3. PROVIDE A SECURE STORAGE AREA WITH RESTRICTED ACCESS FOR ALL HAZARDOUS MATERIALS AND TOXIC WASTE. RETURN ALL HAZARDOUS MATERIALS AND TOXIC WASTE TO THE DESIGNATED STORAGE AREA AT THE END OF THE BUSINESS DAY UNLESS INFEASIBLE. STORE ALL HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING BUT NOT LIMITED TO OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT, PETROLEUM BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES. CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS WITH SECONDARY CONTAINMENT. CLEAN UP SPILLS IMMEDIATELY.
4. STORE, COLLECT AND DISPOSE OF ALL SOLID WASTE.
5. POSITION ALL PORTABLE TOILETS SO THAT THEY ARE SECURE AND CANNOT BE TIPPED OR KNOCKED OVER. PROPERLY DISPOSE OF ALL SANITARY WASTE.
6. FUEL AND MAINTAIN VEHICLES IN A DESIGNATED CONTAINED AREA WHENEVER FEASIBLE. USE DRIP PANS OR ABSORBENT MATERIALS TO PREVENT SPILLS OR LEAKED CHEMICALS FROM DISCHARGING TO SURFACE WATER OR STORMWATER CONVEYANCES. PROVIDE A SPILL KIT AT EACH LOCATION THAT VEHICLES AND EQUIPMENT ARE FUELED OR MAINTAINED AT.
7. LIMIT VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA OF THE SITE. CONTAIN RUNOFF FROM THE WASHING AREA TO A TEMPORARY SEDIMENT BASIN OR OTHER EFFECTIVE CONTROL. PROPERLY DISPOSE OF ALL WASTE GENERATED BY VEHICLE AND EQUIPMENT WASHING. ENGINE DEGREASING IS NOT ALLOWED ON THE SITE.
8. PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS. LIQUID AND SOLID WASHOUT WASTES MUST NOT CONTACT THE GROUND. DESIGN THE CONTAINMENT SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR CONTAINMENT AREA.
9. CREATE AND FOLLOW A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. INCLUDE IN THE PLAN HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT PLAN TO THE ENGINEER.
10. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT DISCHARGE OR PLACEMENT OF BITUMINOUS GRINDINGS, CUTTINGS, MILLINGS, AND OTHER BITUMINOUS WASTES FROM AREAS OF EXISTING OR FUTURE VEGETATED SOILS AND FROM ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES.
11. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, STREET SWEEPING DUST, PARTICLES, CONCRETE WASH OUT, AND OTHER CONCRETE WASTES FROM LEAVING PUBLIC RIGHT OF WAY, DEPOSITING IN EXISTING OR FUTURE VEGETATED AREAS, AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS, DITCHES AND CURB FLOW LINES. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT SAW CUT SLURRY AND PLANING WASTE FROM LEAVING PUBLIC RIGHT OF WAY AND FROM ENTERING STORMWATER CONVEYANCE SYSTEMS INCLUDING DITCHES AND CULVERTS.

9.0 PERMIT TERMINATION CONDITIONS

1. PERMITTEES SHALL COMPLETE ALL CONSTRUCTION ACTIVITY AND SHALL INSTALL PERMANENT COVER (SEED/SOD, SEE CONSTRUCTION PLANS) OVER ALL AREAS PRIOR TO SUBMITTING THE NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION, SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER.
2. PERMITTEES SHALL CLEAN THE PERMANENT STORMWATER TREATMENT SYSTEM OF ANY ACCUMULATED SEDIMENT AND SHALL ENSURE THE SYSTEM MEETS ALL APPLICABLE REQUIREMENTS IN SECTION 15 THROUGH SECTION 19 AND IS OPERATING AS DESIGNED.
3. PERMITTEES SHALL REMOVE ALL SEDIMENT FROM CONVEYANCE SYSTEMS PRIOR TO SUBMITTING THE NOT.
4. PERMITTEES SHALL REMOVE ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS PRIOR TO SUBMITTING THE NOT. PERMITTEES MAY LEAVE BMPS DESIGNED TO DECOMPOSE ON-SITE IN PLACE.
5. FOR RESIDENTIAL CONSTRUCTION ONLY, PERMIT COVERAGE TERMINATES ON INDIVIDUAL LOTS IF THE STRUCTURES ARE FINISHED AND TEMPORARY EROSION PREVENTION AND DOWNGRADIENT PERIMETER CONTROL IS COMPLETE, THE RESIDENCE SELLS TO THE HOMEOWNER, AND THE PERMITTEE DISTRIBUTES THE MPCA'S "HOMEOWNER FACT SHEET" TO THE HOMEOWNER.
6. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., PIPELINES ACROSS CROPLAND), PERMITTEES MUST RETURN THE DISTURBED LAND TO ITS PRECONSTRUCTION AGRICULTURAL USE PRIOR TO SUBMITTING THE NOT.

NO.	DATE	DRAWN	DESIGN	CHECKED	ISSUES / REVISIONS
1	10-12-2021	ANO	ANO	AMP	60% PLANS
2	12-01-2021	ANO	ANO	AMP	90% PLANS
3	12-17-2021	ANO	ANO	AMP	WATERSHED APPLICATION
4	05-18-2022	ANO	ANO	AMP	WATERSHED RESUBMITTAL
5	11-07-2022	ANO	ANO	AMP	WATERSHED RESUBMITTAL

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

ADAM PAWELK

LIC. NO. 49990 DATE: 11-07-2022

Engineering · Surveying
Landscape Architecture

HANSEN THORP PELLINEN OLSON, Inc.

PROJECT NO. 04-124.8

HORIZONTAL

OWNER NAME CITY OF EDEN PRAIRIE

OWNER PROJ. # I.C. 04-5632

SWPPP

PIONEER TRAIL RECONSTRUCTION

EDEN PRAIRIE, MN

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