

## Riley Purgatory Bluff Creek Watershed District Permit Application Review

**Permit No:** 2023-079

**Considered at Board of Managers Meeting:** February 7, 2024

**Received complete:** January 16, 2024

**Applicant:** Grace Church, Dale Nelson

**Consultant:** HGA, Inc., Kenneth W. Horns

**Project:** Grace Church Playground - Development of a new playground for Grace Church in Eden Prairie, MN. Stormwater management includes an infiltration basin to provide volume control, water quality, and rate control.

**Location:** 9301 Eden Prairie Road, Eden Prairie, MN, 55344

**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 February 7, 2024 meeting of the managers:

Resolved that the application for Permit 2023-079 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 Permit 2023-079 to the applicant, on behalf of RPBCWD.

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

### Applicable Rule Conformance Summary

Rule	Issue	Conforms to RBPCWD Rules?	Comments	
C	Erosion Control Plan	Yes		
J	Stormwater Management	Rate	Yes	
		Volume	Yes	See stipulation #5 related to verifying the infiltration capacity of the soils
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See comment	See rule-specific permit condition J1 related to recordation of stormwater facility maintenance declaration.

Rule	Issue		Conforms to RBPCWD Rules?	Comments
		Chloride Management	See comment	See stipulation #6 related to providing an executed chloride management plan prior to permit close-out.
L	Permit Fee Deposit		Yes	\$3,000 deposit fee received January 16, 2024. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of January 31, 2024 the amount due is \$2,869
M	Financial Assurance		See Comment	The financial assurance is calculated at \$129,168

**Background**

The proposed redevelopment will include the removal of an existing play area on the south side of the Grace Church building and the construction of a new playground on the site in Eden Prairie, Minnesota. The applicant proposes to use a stormwater infiltration basin to provide water quality treatment, rate control, and volume abstraction.

The project site information is summarized in Table 1.

**Table 1. Project Site Information**

Site Information	Project Area
Total Site Area (acres)	53.6
Existing Site Impervious Area (acres)	27.9
Post Construction Site Impervious (acres)	28.46
New (increase) in Site Impervious Area (acres)	0.56
Percent Increase in Impervious Surface	2%
Disturbed Site Impervious Area (acres)	0.02
Percent Disturbance of Existing Impervious Surface	<0.1%
Total Disturbed Area (acres)	1.5

Exhibits:

1. Permit application dated December 26, 2023 (Notified applicant on January 10, 2024 that submittal was incomplete, revised materials completing the application received January 16, 2024)
2. Stormwater Management Report dated December 13, 2023 (Revised January 16, 2024)

3. Project Plan set (11 sheets) dated October 13, 2023 (revised sheets C400 and C401 dated January 11, 2024)
4. Existing and Proposed HydroCAD Models received December 26, 2023 (revised January 16, 2024)
5. Test Pit Infiltration Letter by America Engineering Testing, Inc. dated December 8, 2023
6. Report of Geotechnical Exploration by America Engineering Testing, Inc. dated January 31, 2023
7. Earthwork Specification No. 310000 received January 16, 2024
8. HydroCAD Report for 100-year, 10-day snowmelt event received January 16, 2024
9. Review Responses dated January 16, 2024 (the applicant's responses to the January 10<sup>th</sup> incomplete notice/review comments)

### **Rule Specific Permit Conditions**

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

Because the applicant proposes to alter 1.5 acres of land-surface area, the project must conform to the requirements in the RPBCWD Erosion Prevention and Sediment Control rule (Rule C, Subsection 2.1).

The erosion control plan prepared by HGA, Inc. includes installation of perimeter control (sediment control logs and silt fence), a stabilized rock construction entrance, inlet protection, daily inspection, decompaction of areas compacted during construction, placement of a minimum of 6 inches of topsoil with 5 percent organic content, and retention of native topsoil onsite to the greatest extent possible. The applicant listed Shirley Kasiano with Visioneering Studios Construction (562-335-7384, [skasiano@visioneeringstudios.com](mailto:skasiano@visioneeringstudios.com)) as the individual responsible for erosion control at the site. The proposed project conforms to the RPBCWD Rule C requirements.

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

Because the applicant proposes to disturb 1.5 acres of land-surface area, the project must meet the criteria of RPBCWD's Stormwater Management rule (Rule J, Subsection 2.1). The criteria listed in Subsection 3.1 will only apply to the disturbed areas and additional impervious surface on the project site because the proposed activity will not disturb more than 50 percent of the existing impervious surface and increases the impervious surface on the parcel by less than 50 percent (Rule J, Subsection 2.3).

The applicant is proposing construction of an infiltration basin to provide the rate control, volume abstraction, and water quality management for the disturbed and replaced impervious area. Pretreatment for runoff entering the infiltration basin is being provided by vegetated overland flow and drainage structures with 4-foot-deep sumps.

**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 a 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 24-hour nested rainfall distribution, and a 100-year frequency, 10-day snowmelt event. Because runoff from the regulated impervious area only impacts the flows at a single location, the rate control analysis was limited to the one discharge location to the southwest (i.e., SW Discharge). The existing and proposed 2-, 10-, and 100-year frequency discharges from the site are summarized in Table 2 below. The proposed project conforms to RPBCWD Rule J, Subsection 3.1.a.

**Table 2. Existing and Proposed Peak Runoff Rates**

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
SW discharge	0.3	<0.1	1.4	0.7	5.1	1.9	0.6	0.6

**Volume Abstraction**

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the regulated impervious surface of the site. An abstraction volume of 2,308 cubic feet is required from the 0.58 acres (25,171 square feet) of regulated impervious area. Pretreatment of runoff entering the facility is provided with upstream drainage structures with 4-foot-deep sumps and overland vegetated flow to conform to Rule J, Subsection 3.1.b.1.

The soil borings performed by American Engineering Testing throughout the site show that soils in the project area primarily consist of sand and silty sand. Groundwater was not observed at any of the soil borings near the proposed infiltration basin down to an elevation of approximately 845 feet. The subsurface investigation information summarized in Table 3 shows that groundwater, assumed to be at the end of the boring, is at least 3 feet below the bottom of the proposed underground stormwater management facility (Rule J, Subsection 3.1.b.2.a).

**Table 3. Groundwater Separation Analysis**

Proposed BMP	Nearest Subsurface Investigation	Boring is within footprint?	Groundwater Elevation (feet)	BMP Bottom Elevation (feet)	Separation (feet)
Infiltration Basin	I-6	Yes	No groundwater observed at boring bottom (approx. el 845 ft)	864	19

The engineer concurs with the applicant’s design infiltration rate of 0.80 inches per hour reflecting sand (SP) soils based on the guidelines provided in the Mn Stormwater Manual. Based on the design infiltration rate, the engineer concurs that the basin will draw down within 48 hours (Rule J, subsection 3.1b.3). Because of frozen ground conditions, subsurface infiltration testing was not performed at the BMP location. Per Rule J, Subsection 3.1.b.2.c, measured infiltration capacity of the soils at the bottom of the infiltration system must be provided. Due to frozen soil conditions, in-situ subsurface infiltration testing was not performed at the BMP location. 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 3.1b 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 4 summarizes the volume abstraction required and the volume abstraction achieved by the proposed stormwater management facilities on site. With the stipulation noted above regarding verification of amended soil infiltration rate, the engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.1.b.

**Table 4. Volume Abstraction Summary**

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	2,308	1.2	2,766

With the conditions noted above, the engineer concurs with the submitted information and finds that the proposed project will conform with Rule J, Subsection 3.3.a.

***Water Quality Management***

Subsection 3.1.c of Rule J requires the Applicant to provide volume abstraction in accordance with 3.1b or least 60 percent annual removal efficiency for total phosphorus (TP), and at least 90 percent annual removal efficiency for total suspended solids (TSS) from site runoff, and no net increase in TSS or TP loading leaving the site from existing conditions. Because the infiltration basin proposed by the applicant provides volume abstraction meeting the standard in 3.1b and the engineer concurs with the modeling, under paragraph 3.1.c.i, the engineer finds that the proposed project provides the required stormwater-quality protection.

**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. No new buildings are being constructed as part of the project. The lowest elevation of the nearest existing building and the 100-year event flood elevation in the stormwater infiltration basin is summarized below. The RPBCWD Engineer concurs that the proposed project is in conformance with Rule J, Subsection 3.6. Because the low floor elevations are more than two feet above the proposed 100-year flood elevation, the proposed project is in conformance with Rule J, Subsection 3.6.

**Table 5. Low Floor Evaluation**

Location	Low Floor Elevation of Building (feet)	100-year Event Flood Elevation (feet)	Freeboard (feet)
Infiltration Basin	872.17	869.13	3.04

**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. To conform to the RPBCWD Rule J the following revisions are needed:

- J1. Permit applicant must provide a maintenance and inspection declaration as required by Rule J, Subsection 3.7. A draft declaration must be provided for District review and approval prior to recordation as a condition of issuance of the permit.

**Wetland Protection**

Because runoff from this site is tributary to Riley Creek and is not tributary to any wetland, the proposed project does not trigger analysis under Rule J, subsection 3.10.

**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 and release the \$5,000 in financial assurance held for the purpose of chloride management, 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.

**Rule L: Permit Fee Deposit:**

The RPBCWD permit fee schedule adopted in February 2020 requires permit applicants to deposit \$3,000 to be held in escrow and applied to cover the \$10 permit-processing fee and reimburse RPBCWD for permit review and inspection-related costs and when a permit application is approved, the deposit must be replenished to the applicable deposit amount by the applicant before the permit will be issued to cover actual costs incurred to monitor compliance with permit conditions and the RPBCWD Rules. A permit fee deposit of \$3,000 was received on January 16, 2024. If the costs of review, administration, inspections and closeout-related or other regulatory activities exceed the fee deposit amount, the applicant will be required to replenish the deposit to the original amount or such lesser amount as the RPBCWD administrator deems sufficient within 30 days of receiving notice that such deposit is due. The administrator will close out the relevant application or permit and revoke prior approvals, if any, if the permit-fee deposit is not timely replenished.

- L1. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of January 31, 2024 the amount due is \$2,869.

**Rule M: Financial Assurance**

	Unit	Unit Cost	# of Units	Total
<b>Rule C: Erosion Control</b>				
Perimeter Control	LF	\$2.50	1,300	\$3,250
Inlet Protection	EA	\$100	3	\$300
Rock Entrance	EA	\$250	1	\$250
Restoration	AC	\$2,500	1.50	\$3,750
<b>Rule J: Chloride Management</b>	LS	\$5,000	1	\$5,000
<b>Rule J: Stormwater Management:</b> 125% of engineer’s opinion of cost (\$83,900)	EA	125% OPC	1	\$104,875
Contingency (10%)		10%		\$11,743
<b>Total Financial Assurance</b>				<b>\$129,168</b>

**Applicable General Requirements:**

1. The RPBCWD Administrator and Engineer must be notified at least three days prior to commencement of work.
2. Construction must 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 will not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
5. The issuance of this permit will not convey any rights to either real or personal property, or any exclusive privileges, nor will 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 approve the permit application 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 C and will conform to Rule J if the Rule Specific Permit Conditions listed above are met.

### **Recommendation:**

Approval of the permit contingent upon:

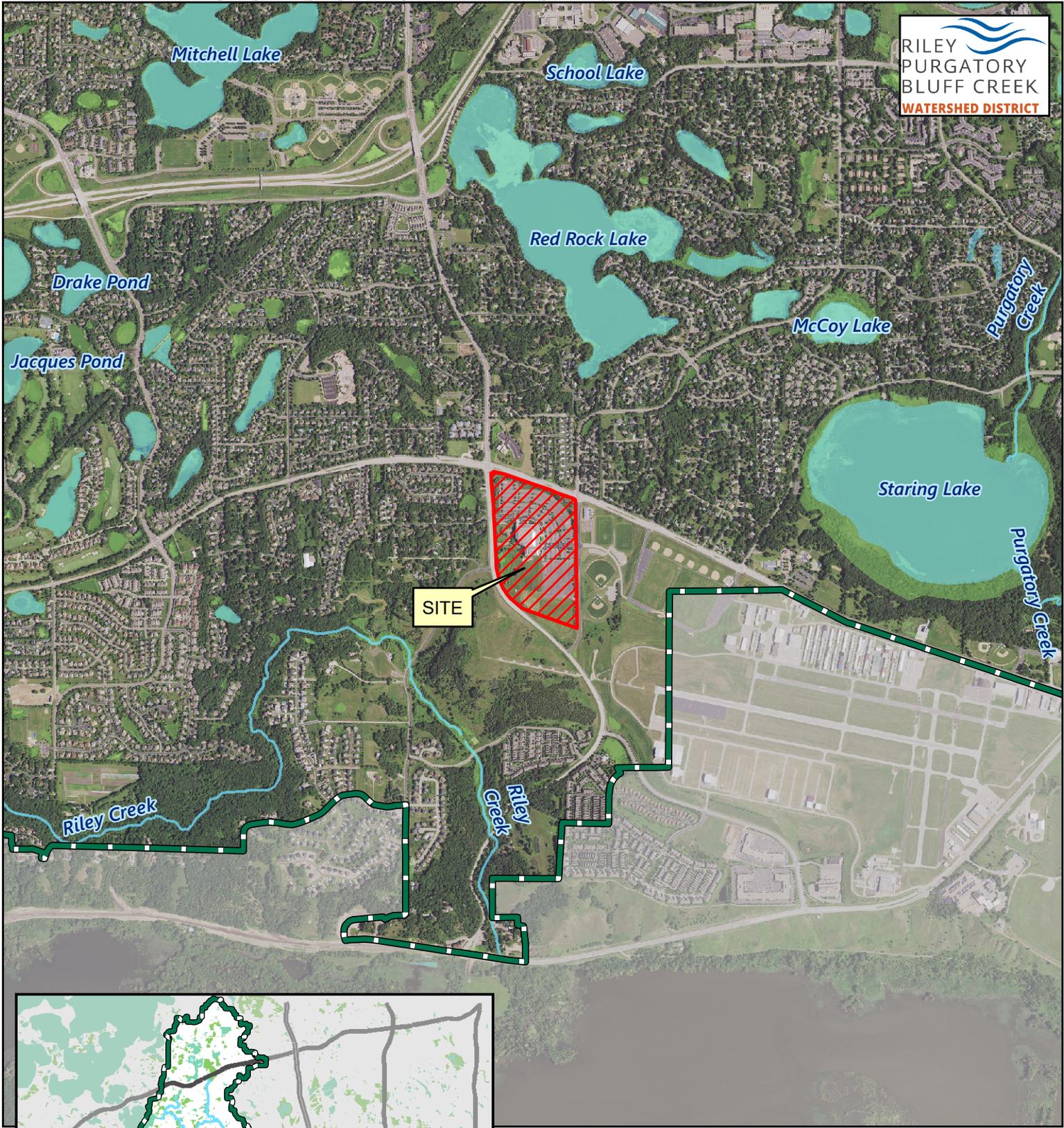
1. Financial Assurance in the amount of \$129,168
2. Receipt by RPBCWD of documentation of recordation of a maintenance declaration for the stormwater management facility. A draft of the declaration must be reviewed and approved by the District prior to recordation.
3. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of January 31, 2024 the amount due is \$2,869.

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

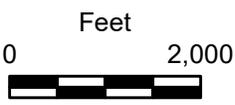
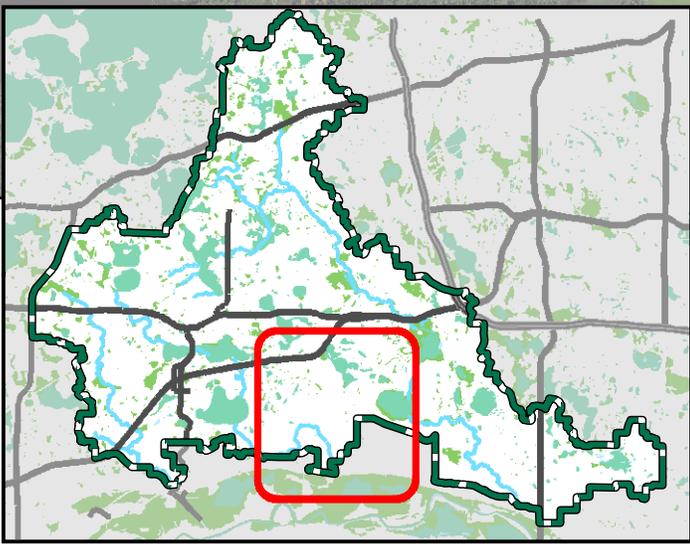
1. Continued compliance with General Requirements.
2. Per Rule J Subsection 4.5, upon completion of the site work, the permittee must submit as-built drawings demonstrating that at the time of final stabilization the stormwater management facility conforms to design specifications and functions as intended 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.
3. Providing the following additional close-out materials:
    - a. Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria.
    - b. Documentation that constructed infiltration facilities perform as designed. This may include infiltration testing, flood testing, or other with prior approval from RPBCWD.
  4. The work on the Grace Church Playground development under the terms of permit 2023-079, if issued, must have an impervious surface area and configuration materially consistent with the approved plans. Design that differs materially from the approved plans (e.g., in terms of total impervious area) will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.
  5. Per Rule J, Subsection 3.1.b.ii measured infiltration capacity of the soils at the bottom of the infiltration system 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 3.1b 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).
  6. To close out the permit and release the \$5,000 in financial assurance held for the purpose of the chloride management, 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.
  7. The Applicant must notify RPBCWD if the individual responsible for erosion control at the site changes during the permit term.



SITE



Permit Location Map

GRACE CHURCH PLAYGROUND  
**Permit 2023-079**  
Riley Purgatory Bluff Creek  
Watershed District



# STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE

## OWNER, PROJECT NAME & LOCATION:

OWNER: GRACE CHURCH  
 PROJECT NAME: PRESCHOOL TI  
 LOCATION: STREET: 9301 EDEN PRAIRIE ROAD CITY: EDEN PRAIRIE  
 COUNTY: HENNEPIN STATE: MN  
 ZIP CODE: 55347  
 LATITUDE/LONGITUDE: 44.83475, -93.47786

## MPCA CONTACT INFORMATION:

MINNESOTA POLLUTION CONTROL AGENCY  
 CONSTRUCTION STORMWATER ERMIT PROGRAM  
 520 LAFAYETTE ROAD NORTH  
 ST. PAUL, MN 55155-4194  
 651-296-6300 OR <https://www.pca.state.mn.us/water/construction-stormwater>

## PROJECT DESCRIPTION/LOCATION:

THIS PROJECT IS LOCATED IN EDEN PRAIRIE, MN, AND WILL CONSIST OF THE CONSTRUCTION OF A NEW PLAYGROUND WITH SITE GRADING, STORM SEWER, AND A STORM WATER BASIN.

## SWPPP TRAINING

THE PROJECT SWPPP WAS PREPARED BY PERSONNEL THAT ARE CERTIFIED IN THE DESIGN OF CONSTRUCTION SWPPPS. A CERTIFICATION CARD IS AVAILABLE UPON REQUEST.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A CERTIFIED EROSION CONTROL SUPERVISOR THAT IS RESPONSIBLE FOR OVERSEEING THE IMPLEMENTATION OF THE SWPPP.

## SWPPP COMPONENTS AND LOCATIONS

THE SWPPP IS A COMBINATION OF NARRATIVE, PLAN SHEETS AND STANDARD DETAIL SHEETS THAT ADDRESS THE FORESEEABLE CONDITIONS THAT MAY OCCUR DURING THE CONSTRUCTION OR POST CONSTRUCTION ACTIVITIES. THE SWPPP COMPONENTS ARE PROVIDED IN THE FOLLOWING LOCATIONS:

DESCRIPTION	LOCATION
SWPPP NARRATIVE	THIS SHEET
LOCATION AND TYPE OF BMPs	SHEETS C101
ESTIMATED QUANTITIES	THIS SHEET
IMPERVIOUS SURFACE AREA CALCULATIONS	THIS SHEET
SITE MAP	THIS SHEET - SEE ABOVE RIGHT
LOCATIONS OF AREAS NOT TO BE DISTURBED	SHEETS C101
CONSTRUCTION PHASING	CONSTRUCTION WILL NOT BE PHASED
MAPS OF SURFACE WATERS AND WETLANDS	THIS SHEET
FINAL STABILIZATION	SHEETS L200 AND SPEC SECTION 329200
BMP DETAILS	SHEET C102
SITE GRADING	SHEETS C400-C401
EROSION CONTROL	SHEETS C101

## SOIL TESTS

A REPORT OF GEOTECHNICAL EXPLORATION AND REVIEW WAS PREPARED BY AMERICAN ENGINEERING TESTING, DATED JANUARY 31, 2023. IN GENERAL, THE PROJECT SITE CONSISTS OF SEVERAL FEET OF TOPSOIL OR FILL SOILS (1' - 7'). THESE SOILS ARE GENERALLY UNDERLAIN BY ONE OR MORE LAYERS OF SAND WITH SILT (SP-SM), SILTY SAND (SM) OR SAND (SP).

## POTENTIAL FOR RAINFALL AND SOIL PARTICLE SIZES

TEMPORARY STORMWATER BMPs MUST BE CONSTRUCTED ON SITE TO ADDRESS POTENTIAL RAINFALL. SOIL PARTICLE SIZES RANGE FROM GRANULAR MATERIAL TO CLAY AND SHOULD BE CONSIDERED WHEN PROVIDING TEMPORARY STORMWATER BMPs FOR THIS SITE. A TEMPORARY WILL BE CONSTRUCTED IN THE NORTHERN PORTION OF THE SITE TO ADDRESS STORMWATER RUNOFF DURING CONSTRUCTION.

## STORMWATER VOLUME REDUCTION REQUIREMENT

THE STATE RULES REQUIRE STORMWATER VOLUME REDUCTION EQUIVALENT TO 1.0-INCHES OF RUNOFF FROM THE IMPERVIOUS AREAS OF THE SITE. HOWEVER, THIS SITE IS PROHIBITED FROM INFILTRATION DUE TO THE NATIVE "D" SOILS.

## CALCULATIONS FOR TEMPORARY SEDIMENT BASINS AND PERMANENT STORMWATER TREATMENT SYSTEMS

THE CALCULATIONS FOR TEMPORARY AND PERMANENT STORMWATER TREATMENT SYSTEMS ARE INCLUDED IN THE PROJECT STORMWATER DRAINAGE REPORT.

## DESCRIPTION OF PERMANENT STORMWATER TREATMENT SYSTEMS

PERMANENT STORMWATER TREATMENT SYSTEMS ARE PROVIDED ON SITE INCLUDE THE CONSTRUCTION OF ONE (1) WET SEDIMENTATION BASIN. THIS BASIN COLLECTS RUNOFF FROM THE DISTURBED AREAS OF THE SITE AND PROVIDES TREATMENT REQUIRED BY THE STATE CONSTRUCTION STORMWATER PERMIT.

PRELIMINARY ESTIMATED QUANTITIES OF BMPs		
ITEM	QUANTITY	UNIT
ROCK CONSTRUCTION EXIT/ENTRANCE	1	EACH
SILT FENCE	-	LF
HEAVY-DUTY SILT FENCE	1150	LF
SEDIMENT CONTROL LOG	150	LF
INLET PROTECTION	3	EACH
EROSION CONTROL BLANKET	400	SY
TEMPORARY SEED (SEED MIX 2X-XXX @ 300 LBS/ACRE) * SEE TABLE AT RIGHT	300	LBS
MULCH (MNDOT TYPE 1 @ 2 TONS/ACRE)	4	TONS
HYDRAULIC SOIL STABILIZER (MNDOT TYPE 6 @ 2,100 LBS/ACRE)	-	LBS

## SITE IMPERVIOUS AREA CALCULATIONS

THE EXISTING SITE CONSISTS OF BUILDING, PAVING AND PLANTED AREAS.

AREA	SQUARE FEET	ACRES
TOTAL SITE AREA	-	53
TOTAL DISTURBED AREA	-	1.5
ADDED IMPERVIOUS AREA	-	0.56

## ANTICIPATED CONSTRUCTION SEQUENCING

COMPLETED BEFORE NEXT RAINFALL EVENT.

- |  |   |
|--|---|
| 1. INSTALL STABILIZED CONSTRUCTION EXIT(S)   | 16. DURING CONSTRUCTION, STORMWATER MUST BE ROUTED AROUND INFILTRATION AREAS UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETE AND TRIBUTARY SURFACES ARE CLEANED OF SEDIMENT AND DEBRIS. |
| 2. INSTALL SILT FENCE AND/OR SEDIMENT CONTROL LOGS   | 17. TOP DRESS TURF AREAS  |
| 3. INSTALL INLET PROTECTION  | 18. REMOVE ACCUMULATED SEDIMENT FROM BMPs   |
| 4. REMOVE SHED   | 19. STABILIZE SITE  |
| 5. STRIP TOPSOIL   | 20. COMPLETE SITE CONSTRUCTION  |
| 6. ROUGH GRADE SITE  | 21. REMOVE TEMPORARY EROSION & SEDIMENT CONTROLS AFTER A MINIMUM 75% OF CONTRIBUTING PERVIOUS AREA HAS ESTABLISHED VEGETATION   |
| 7. PREPARE SUBGRADE FOR PLAYGROUND SURFACING AND EQUIPMENT.                                    |   |
| 8. MAINTAIN ALL TEMPORARY EROSION & SEDIMENT CONTROLS  |   |
| 9. PREPARE SUBGRADESUB PAD FOR NEW CONSTRUCTION  |   |
| 10. COMPLETE SITE GRADING  |   |
| 11. INSTALLATION OF STORM WATER FILTRATION PRACTICES MUST BE DURING PERIODS OF DRY WEATHER AND |   |

## SPECIAL AND IMPAIRED RECEIVING WATERS

NAME OF WATER BODY	TYPE OF WATER BODY	SPECIAL WATER	IMPAIRED WATER
RILEY CREEK	RIVER	NO	YES
STARING LAKE	LAKE	[YES/NO]	[YES/NO]

### RILEY CREEK

THIS RIVER SEGMENT HAS AN EPA-APPROVED IMPAIRMENT FOR: BENTHIC MACROINVERTEBRATES BIOASSESSMENTS; ESCHERICHIA COLI (E. COLI); FISH BIOASSESSMENTS; TURBIDITY.

THESE IMPAIRMENT(S) ARE CONSIDERED TO BE CONSTRUCTION RELATED PARAMETERS AND REQUIRE THE ADDITIONAL BEST MANAGEMENT PRACTICES (BMPs) FOUND IN ITEMS 23.9 AND 23.10 OF THE PERMIT IF THE PROJECT HAS A DISCHARGE POINT ON THE PROJECT WITHIN 1 MILE (AERIAL RADIUS MEASUREMENT) OF, AND FLOWS TO THE IMPAIRED STREAM.

### 23.9:

PERMITTEES MUST IMMEDIATELY INITIATE STABILIZATION OF EXPOSED SOIL AREAS, AS DESCRIBED IN ITEM 8.4, AND COMPLETE THE STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE TEMPORARILY OR PERMANENTLY CEASES.

### 23.10:

PERMITTEES MUST PROVIDE A TEMPORARY SEDIMENT BASIN AS DESCRIBED IN SECTION 14 FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.

ALSO, A MANDATORY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REVIEW IS REQUIRED BY THE MPCA IF THE PROJECT WILL DISTURB OVER 50 ACRES AND HAS A DISCHARGE POINT ON THE PROJECT WITHIN 1 MILE (AERIAL RADIUS MEASUREMENT) OF, AND FLOWS TO THE IMPAIRED WATER. OWNERS MUST SUBMIT THE APPLICATION FOR COVERAGE AND THE STORM WATER POLLUTION PREVENTION PLAN AT LEAST 30-DAYS BEFORE THE CONSTRUCTION START DATE. THE SWPPP CAN BE ATTACHED ELECTRONICALLY WHEN USING THE ONLINE APPLICATION.

### STARING LAKE

THIS LAKE HAS AN EPA-APPROVED IMPAIRMENT FOR: MERCURY IN FISH TISSUE; NUTRIENTS.

THESE IMPAIRMENT(S) ARE CONSIDERED TO BE CONSTRUCTION RELATED PARAMETERS AND REQUIRE THE ADDITIONAL BEST MANAGEMENT PRACTICES (BMPs) FOUND IN ITEMS 23.9 AND 23.10 OF THE PERMIT IF THE PROJECT HAS A DISCHARGE POINT ON THE PROJECT WITHIN 1 MILE (AERIAL RADIUS MEASUREMENT) OF, AND FLOWS TO THE IMPAIRED WATER.

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### 23.10:

PERMITTEES MUST PROVIDE A TEMPORARY SEDIMENT BASIN AS DESCRIBED IN SECTION 14 FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME.

ALSO, A MANDATORY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REVIEW IS REQUIRED BY THE MPCA IF THE PROJECT WILL DISTURB OVER 50 ACRES AND HAS A DISCHARGE POINT ON THE PROJECT WITHIN 1 MILE (AERIAL RADIUS MEASUREMENT) OF, AND FLOWS TO THE IMPAIRED WATER. OWNERS MUST SUBMIT THE APPLICATION FOR COVERAGE AND THE SWPPP AT LEAST 30-DAYS BEFORE THE CONSTRUCTION START DATE. THE SWPPP CAN BE ATTACHED ELECTRONICALLY WHEN USING THE ONLINE APPLICATION.

## GENERAL SWPPP NOTES FOR CONSTRUCTION ACTIVITY

- THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL ASPECTS OF THE NPDES STORMWATER CONSTRUCTION PERMIT AT ALL TIMES UNTIL THE NOTICE OF TERMINATION HAS BEEN SUBMITTED TO THE MPCA. THE CONTRACTOR WILL DEVELOP A CHAIN OF COMMAND WITH ALL OPERATORS ON THE SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE, HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.
- THE CONTRACTOR MUST PREPARE WEEKLY AND EVENT-DRIVEN EROSION INSPECTION REPORTS AS NOTED IN THE PERMIT. THE REPORTS MUST BE WRITTEN AND FILED ON SITE.
- THE CONTRACTOR MUST COMPLY WITH THE REQUIREMENTS OF THE PERMIT REGARDING POLLUTION PREVENTION MANAGEMENT DURING CONSTRUCTION, WHICH INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:
  - CONCRETE WASHOUT AREAS. THE LOCATION OF WASHOUT AREAS MUST BE IDENTIFIED BY SIGNS AND MUST UTILIZE A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER THAT PREVENTS RUNOFF FROM DISCHARGING ON TO ADJACENT SOILS. AN ENGINEERED COLLECTION SYSTEM MAY BE USED IF APPROVED BY THE PERMITTING AUTHORITY.
  - SOLID WASTE COLLECTION AND REMOVAL
  - SECONDARY CONTAINMENT
  - SECURED HAZARDOUS WASTE STORAGE CONTAINERS
  - CHEMICAL SPILL KITS
  - PORTABLE RESTROOM FACILITIES THAT ARE ANCHORED TO PREVENT TIPPING

## POLLUTION AND SPILL PREVENTION AND MANAGEMENT

- CHEMICALS MUST BE KEPT IN A SECURE STORAGE AREA WHEN NOT IN USE. CHEMICAL STORAGE CONTAINERS MUST HAVE SECONDARY CONTAINMENT WHEN BEING USED OR STORED ON THE PROJECT SITE. CHEMICAL SPILLS OF ANY KIND (OIL, FUEL, FERTILIZER, ETC.) MUST BE CLEANED UP AND REMOVED FROM THE SITE IMMEDIATELY. THE CONTRACTOR MUST HAVE A SPILL KIT ON SITE AT ALL TIMES. THE FOLLOWING GOOD HOUSEKEEPING SPILL PREVENTION PRACTICES MUST BE FOLLOWED ONSITE THROUGH THE DURATION OF THE CONSTRUCTION PROJECT.
  - AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH MATERIAL ONSITE TO COMPLETE THE PROJECT.
  - ALL MATERIALS STORED ONSITE MUST BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE WITH SECONDARY CONTAINMENT.
  - PRODUCTS MUST BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THEIR ORIGINAL MANUFACTURER'S LABEL.
  - SUBSTANCES MUST NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
  - THE ENTIRE PRODUCT MUST BE USED UP, WHENEVER POSSIBLE, BEFORE DISPOSING OF THE CONTAINER.
  - THE MANUFACTURER'S RECOMMENDATIONS FOR USE AND PROPER DISPOSAL MUST BE FOLLOWED.
  - THE CONTRACTOR'S SUPERINTENDENT MUST INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.
- THE FOLLOWING PRACTICES MUST BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS STORED ONSITE:
  - PRODUCTS MUST BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY CANNOT BE RESEALED.
  - ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS MUST BE RETAINED ON SITE AND ACCESSIBLE AT ALL TIMES.
  - THE MANUFACTURER'S RECOMMENDED METHODS FOR PROPER DISPOSAL OF SURPLUS PRODUCT MUST BE FOLLOWED.
- IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES FOR SPILL PREVENTION AND CLEANUP MUST BE FOLLOWED.
  - IF A SPILL OCCURS, OBSERVE THE MANUFACTURERS' SAFETY PRECAUTIONS ASSOCIATED WITH THE SPILLED MATERIAL. THE MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP MUST BE CLEARLY POSTED AND SITE PERSONNEL MUST BE MADE AWARE OF THE PROCEDURES AND LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
  - STOP THE SOURCE OF THE SPILL, IF POSSIBLE. CALL THE LOCAL FIRE AND/OR POLICE DEPARTMENTS IF FIRE OR PUBLIC SAFETY HAZARDS ARE CREATED.
  - CONTAIN THE SPILLED MATERIAL. TOPSOIL, SAND OR ANY SEMI-IMPERMEABLE MATERIAL MAY BE USED TO CREATE A TEMPORARY CONTAINMENT STRUCTURE TO PREVENT THE SPILLED MATERIAL FROM FLOWING.
  - SPILLS OF TOXIC OR HAZARDOUS MATERIALS MUST BE REPORTED TO THE APPROPRIATE STATE AND/OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF DISCHARGE. IN ADDITION TO REPORTING TO LOCAL AUTHORITIES, REPORT THE SPILL TO THE MINNESOTA POLLUTION CONTROL AGENCY (MPCA) THROUGH THE STATE DUTY OFFICER.
- 24 HOUR TELEPHONE NUMBERS ARE: 651-649-5451 OR 800-422-0798.
  - CLEAN UP THE SPILLED MATERIAL IMMEDIATELY AFTER DISCOVERY AND DISPOSE OF THE WASTES PROPERLY. WITH THE EXCEPTION OF USED OIL, WASTES GENERATED FROM PETROLEUM SPILLS THAT HAVE BEEN REPORTED AND CLEANED UP IMMEDIATELY ARE EXEMPT FROM MINNESOTA'S HAZARDOUS WASTE RULES. WASTE GENERATED FROM USED OIL SPILLS MUST BE SENT TO A FACILITY FOR ENERGY RECOVERY.
  - THE SPILL AREA MUST BE KEPT WELL VENTILATED AND PERSONNEL MUST WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
  - SPILLS MUST BE STUDIED TO DETERMINE WHY THEY OCCURRED AND PREVENTATIVE METHODS MUST BE IMPLEMENTED TO ENSURE SIMILAR SPILLS DO NOT OCCUR IN THE FUTURE.
- IF CONTAMINATED SOILS ARE DISCOVERED DURING THE COURSE OF THE PROJECT, THE STATE DUTY OFFICER SHALL IMMEDIATELY BE CALLED, AT THE NUMBERS NOTED ABOVE, AND EMERGENCY CONTAINMENT ACTIONS SHALL BE TAKEN.
- TRASH AND CONSTRUCTION DEBRIS MUST BE DISPOSED OF PROPERLY. PROPER MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO KEEP DEBRIS FROM SURFACE WATERS.

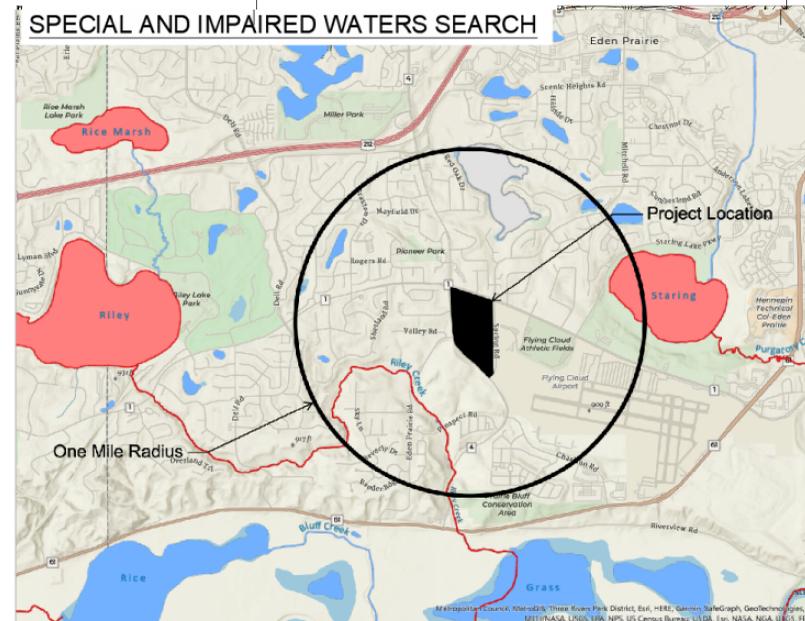
## EROSION PREVENTION PRACTICES

- ALL EXPOSED SOIL AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED NO MORE THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. IN MANY INSTANCES THIS WILL REQUIRE STABILIZATION TO OCCUR MORE THAN ONCE DURING ROUGH GRADING. RAPID STABILIZATION METHOD 3, OR OTHER APPROVED METHOD, MUST BE USED TO PROVIDE TEMPORARY COVER IN THESE AREAS AS APPROPRIATE.
- THE EROSION PREVENTION AND SEDIMENT CONTROL BMPs MUST BE INSTALLED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ON SITE. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES AND SHALL BE MAINTAINED UNTIL THE POTENTIAL FOR EROSION HAS BEEN ELIMINATED.

## SEDIMENT CONTROL PRACTICES

- SEDIMENT CONTROL DEVICES MUST BE ESTABLISHED ON ALL DOWN-GRADIENT PERIMETERS BEFORE ANY UP-GRADIENT LAND DISTURBING ACTIVITIES BEGIN. SEDIMENT CONTROL DEVICES INCLUDE, BUT ARE NOT LIMITED TO:
  - 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.
  - DITCH CHECKS MUST BE PLACED AS INDICATED ON THE PLANS DURING ALL PHASES OF CONSTRUCTION.
  - SEDIMENT DAMAGE FROM STOCKPILES MUST BE MINIMIZED BY PLACING A ROW OF SILT FENCE A MAXIMUM OF 5-FEET FROM THE TOE OF THE SLOPE OF THE STOCKPILE.
- STORM SEWER INLETS MUST BE PROTECTED AT ALL TIMES WITH THE APPROPRIATE INLET PROTECTION DEVICE FOR EACH SPECIFIC PHASE OF CONSTRUCTION. INLET PROTECTION DEVICES MAY NEED TO BE REPLACED MULTIPLE TIMES IN THE SAME LOCATION OVER THE LIFE OF THE PROJECT BUT WILL BE PAID FOR ONLY ONCE PER INLET LOCATION REGARDLESS OF THE NUMBER OF TIMES THE BMP IS REPLACED. ALL STORM SEWER INLET PROTECTION DEVICES WILL BE KEPT IN GOOD FUNCTIONAL CONDITION AT ALL TIMES. IF THE PROJECT ENGINEER, CITY OR WATERSHED PERSONNEL DEEM AN INLET PROTECTION DEVICE TO BE NONFUNCTIONAL, IN POOR CONDITION, INEFFECTIVE, OR NOT APPROPRIATE FOR THE CURRENT CONSTRUCTION ACTIVITIES IT WILL BE REPLACED AT NO COST TO THE OWNER.
- THE CONTRACTOR MUST PLACE CONSTRUCTION EXITS, AS NECESSARY, TO PREVENT TRACKING OF SEDIMENT ONTO PAVED SURFACES AND IN COMPLIANCE WITH PART IV OF THE NPDES PERMIT. CONSTRUCTION EXITS MUST BE SUFFICIENTLY SIZED AND MAINTAINED TO PREVENT TRACK OUT.
- THE CONTRACTOR SHALL CLEAN ALL TRACKED MATERIALS ON ADJACENT ROADWAYS ON A DAILY BASIS, OR MORE OFTEN IF REQUIRED BY THE PROJECT ENGINEER, CITY AND/OR WATERSHED DISTRICT. PAVEMENT SHALL BE LIGHTLY WETTED PRIOR TO SWEEPING OR AS DIRECTED BY THE PROJECT ENGINEER.
- THE CONTRACTOR MUST 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 ALL WATER CONVEYANCE SYSTEMS, INCLUDING INLETS.
- THE CONTRACTOR MUST USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, PARTICLES, SAW-CUT SLURRY, AND PLANT WASTE FROM ENTERING STORMWATER CONVEYANCE SYSTEMS, INCLUDING INLETS AND CURB FLOW LINES.
- DITCHES AND EXPOSED SOILS MUST BE KEPT IN AN EVEN ROUGH GRADED CONDITION IN ORDER TO APPLY EROSION CONTROL MULCHES AND BLANKETS.
- OUTLETS INTO SURFACE WATERS SHALL BE STABILIZED WITH ENERGY DISSIPATION WITHIN 24 HOURS OF BEING CONSTRUCTED.
- ALL EXPOSED SOIL AREAS MUST BE STABILIZED PRIOR TO THE ONSET OF WINTER, ANY WORK STILL BEING PERFORMED MUST BE SNOW MULCHED, SEEDED OR BLANKETED WITHIN THE TIME FRAMES IN THE NPDES PERMIT.
- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:
  - SILT FENCE MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WHEN IT BECOMES NON-FUNCTIONAL OR SEDIMENT REACHES 1/3 THE HEIGHT OF THE SILT FENCE. REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY.
  - INLET PROTECTION DEVICES SHOULD BE REPAIRED WHEN THEY BECOME NON-FUNCTIONAL OR SEDIMENT REACHES 1/3 THE HEIGHT OR DEPTH OF THE DEVICE.
  - ALL OTHER NON-FUNCTIONAL BMPs MUST BE REPAIRED, REPLACED OR SUPPLEMENTED WITHIN 24 HOURS OF DISCOVERY.
  - THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL BMPs UNTIL WORK HAS BEEN COMPLETED. THE SITE HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA IN ACCORDANCE WITH THE CONDITIONS OF THE NPDES PERMIT.

## SPECIAL AND IMPAIRED WATERS SEARCH



- IF SEDIMENT DEPOSITS WITHIN WATERS OF THE STATE THE MATERIAL MUST BE REMOVED WITHIN 7 DAYS.
- CONTRACTOR MUST OBTAIN LGU AND MNDNR APPROVALS AS REQUIRED

## DEWATERING AND BASIN DRAINING

- DEWATERING MAY BE REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT. IN ADDITION, DEWATERING OF TEMPORARY SEDIMENT BASINS WILL BE REQUIRED. THE CONTRACTOR SHALL SUBMIT A DEWATERING PLAN, FOR ANY TEMPORARY SEDIMENT BASINS AND UTILITY CONSTRUCTION, TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF THESE ACTIVITIES. THE DEWATERING PLAN MUST INCLUDE BMPs TO PREVENT SEDIMENT TRANSPORT, EROSION, AND ADVERSE IMPACTS TO DOWNSTREAM RECEIVING WATERS.
- IT IS POSSIBLE THAT A PERMIT FOR TEMPORARY APPROPRIATION OF WATERS OF THE STATE, NON-IRRIGATION FROM THE DNR WILL BE REQUIRED FOR THIS PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THIS PERMIT. ALL TEMPORARY DEWATERING SHALL BE DISCHARGED TO AN APPROVED LOCATION FOR TREATMENT PRIOR TO DISCHARGE TO THE RECEIVING WATER.
- ALL STORM SEWER PIPE, MANHOLES AND CATCH BASINS MUST BE CLEANED OF ANY ACCUMULATED SEDIMENT UPON THE COMPLETION OF ALL LAND DISTURBING ACTIVITIES.

## RECORD RETENTION

- ALL OWNERS MUST KEEP THE SWPPP, ALONG WITH THE FOLLOWING RECORDS, ON FILE FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOT (THIS DOES NOT INCLUDE RECORDS OF OTHER PERMITS FOR THE PROJECT AFTER SUBMITTAL OF THE NOT).
  - RECORDS OF ALL INSPECTIONS AND MAINTENANCE CONDUCTED DURING CONSTRUCTION.
  - ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL:
    - RIGHT-OF-WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE
    - ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEM.
- THE PERMITTEE(S) MUST IMPLEMENT THE ENTIRE SWPPP AND THE REQUIREMENTS OF THE NPDES PERMIT (PART IV A) THE BMPs IDENTIFIED IN THE SWPPP AND IN THIS PERMIT MUST BE SELECTED, INSTALLED AND MAINTAINED IN AN APPROPRIATE AND FUNCTIONAL MANNER THAT IS IN ACCORDANCE WITH RELEVANT MANUFACTURER SPECIFICATIONS AND ACCEPTED ENGINEERING PRACTICES.

## BUFFER ZONES AND AREAS NOT TO BE DISTURBED

- NATURAL BUFFER ZONES (50') ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS AND SEDIMENT BASINS AND THEREFORE NOT APPLICABLE TO THIS PROJECT.
- PERMANENT BUFFER ZONES (100') ARE REQUIRED ADJACENT TO SPECIAL WATERS. THIS SITE IS NOT LOCATED WITHIN 100 FEET OF A SPECIAL WATER AND THEREFORE PERMANENT BUFFER ZONES NOT APPLICABLE TO THIS PROJECT.
- DELINEATE THE LOCATION OF ALL AREAS NOT TO BE DISTURBED BEFORE CONSTRUCTION BEGINS. GRADING AND CONSTRUCTION LIMITS ARE SHOWN ON THE PLANS. SEE SHEET C101 & C102 FOR CONSTRUCTION AND GRADING LIMITS.

## PERMITTING, INSPECTION & MAINTENANCE FOR STORM WATER FACILITIES:

- CITY OF EDEN PRAIRIE AND RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT ([WWW.RPBCWD.ORG](http://WWW.RPBCWD.ORG)) STORM WATER MANAGEMENT PERMITS ARE REQUIRED FOR THIS PROJECT.
- PREPARE, EXECUTE AND RECORD THE "INSPECTION AND MAINTENANCE AGREEMENT FOR PRIVATE STORMWATER FACILITIES."

## STANDARD EROSION CONTROL NOTES FOR RPBCWD DEVELOPMENT REVIEWS:

- THE EROSION CONTROL PLAN MUST INCLUDE THE FOLLOWING NOTES:
  - NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ONSITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
  - 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 OR 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 THE SOIL PROFILE WHILE TAKING CARE TO PROTECT UTILITIES, TREE ROOTS, AND OTHER EXISTING VEGETATION.
  - 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.
  - 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.

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## DESIGN TEAM

Drawn By **TEAM**

Checked By **CHECKER**

## REVISIONS

NO.	DATE	COMMENT
	2023-12-26	RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

9301 Eden Prairie Road, Eden Prairie, MN 55347

Grace Church

RPBCWD REVIEW

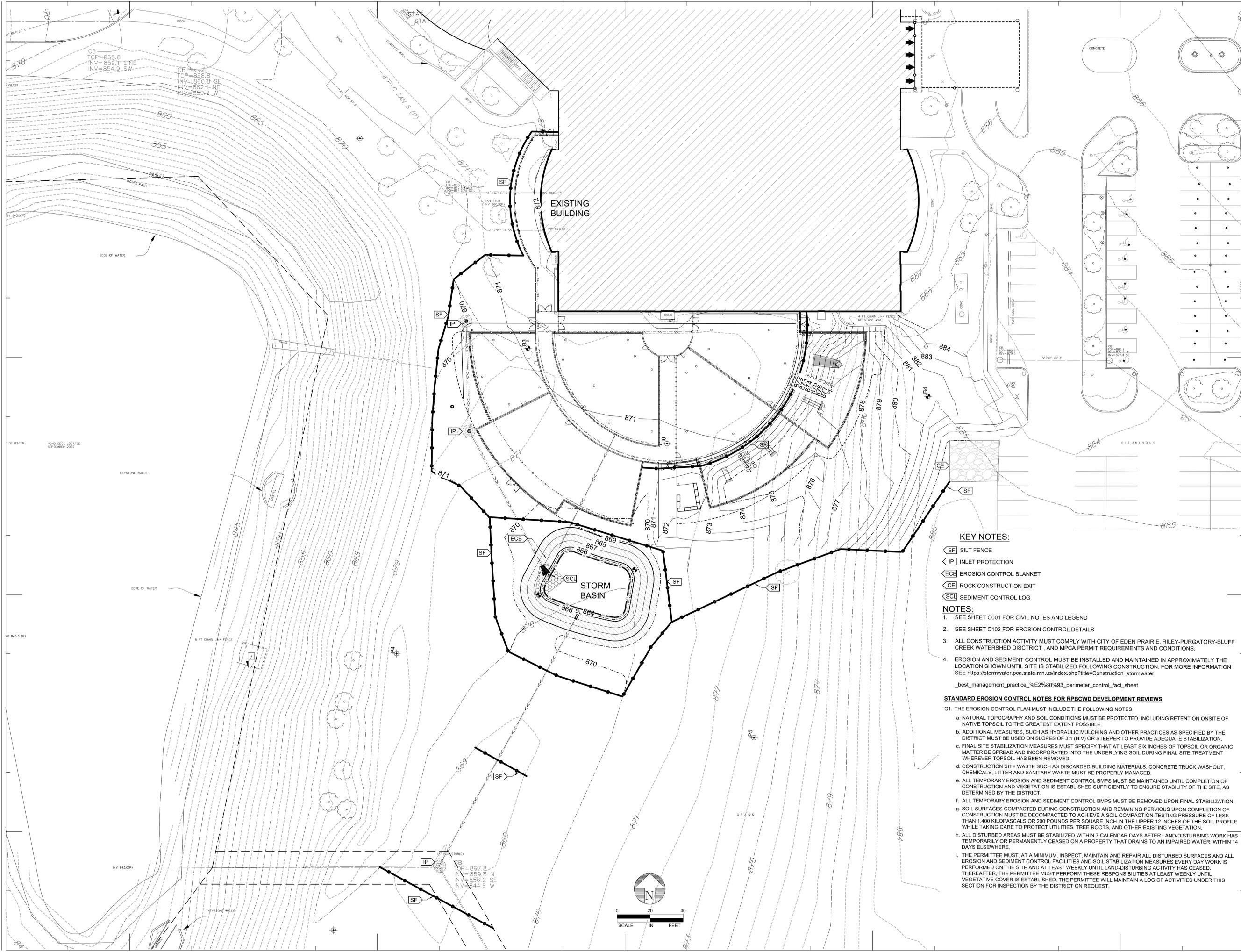
DATE  
**10/13/2023**

PROJECT CODE  
**22641**

Preschool TI  
STORMWATER POLLUTION  
PREVENTION PLAN (SWPPP)  
NARRATIVE

Sheet No.

**C100**



**KEY NOTES:**

- [SF] SILT FENCE
- [IP] INLET PROTECTION
- [ECB] EROSION CONTROL BLANKET
- [CE] ROCK CONSTRUCTION EXIT
- [SCL] SEDIMENT CONTROL LOG

**NOTES:**

1. SEE SHEET C001 FOR CIVIL NOTES AND LEGEND
2. SEE SHEET C102 FOR EROSION CONTROL DETAILS
3. ALL CONSTRUCTION ACTIVITY MUST COMPLY WITH CITY OF EDEN PRAIRIE, RILEY-PURGATORY-BLUFF CREEK WATERSHED DISTRICT, AND MPCA PERMIT REQUIREMENTS AND CONDITIONS.
4. EROSION AND SEDIMENT CONTROL MUST BE INSTALLED AND MAINTAINED IN APPROXIMATELY THE LOCATION SHOWN UNTIL SITE IS STABILIZED FOLLOWING CONSTRUCTION. FOR MORE INFORMATION SEE [https://stormwater.pca.state.mn.us/index.php?title=Construction\\_stormwater\\_best\\_management\\_practice\\_%E2%80%93\\_perimeter\\_control\\_fact\\_sheet](https://stormwater.pca.state.mn.us/index.php?title=Construction_stormwater_best_management_practice_%E2%80%93_perimeter_control_fact_sheet).

**STANDARD EROSION CONTROL NOTES FOR RPBCWD DEVELOPMENT REVIEWS**

- C1. THE EROSION CONTROL PLAN MUST INCLUDE THE FOLLOWING NOTES:
- a. NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON-SITE OF NATIVE TOPSOIL TO THE GREATEST EXTENT POSSIBLE.
  - b. 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.
  - c. FINAL SITE STABILIZATION MEASURES MUST SPECIFY THAT 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.
  - d. CONSTRUCTION SITE WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE MUST BE PROPERLY MANAGED.
  - e. 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.
  - f. ALL TEMPORARY EROSION AND SEDIMENT CONTROL BMPs MUST BE REMOVED UPON FINAL STABILIZATION.
  - g. SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PVIOUS 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.
  - h. 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.
  - i. 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.

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**DESIGN TEAM**

Drawn By **TEAM**  
Checked By **CHECKER**

**REVISIONS**

NO.	DATE	COMMENT
1	2023-12-26	RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

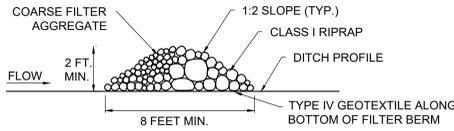
**9301 Eden Prairie Road, Eden Prairie, MN 55347**

**RPBCWD REVIEW**

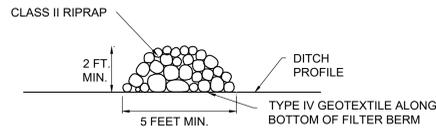
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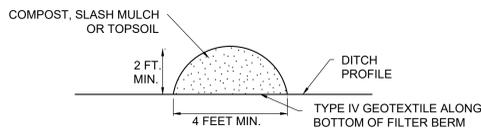
**Grace Church**  
Preschool TI  
**EROSION & SEDIMENT CONTROL PLAN**  
Sheet No.  
**C101**



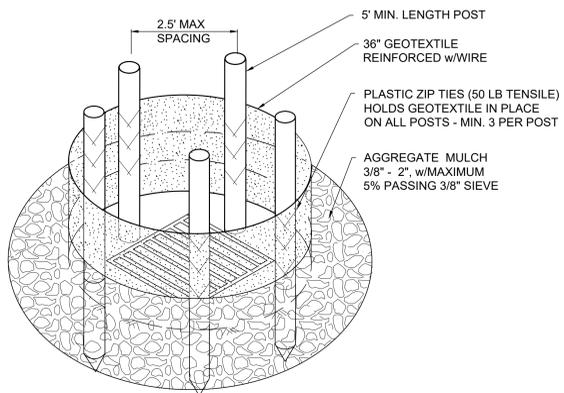
11 FILTER BERM-TYPE 3 (ROCK WEEPER)



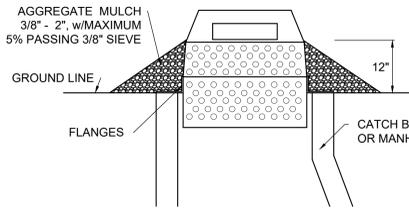
11 FILTER BERM-TYPE 5 (ROCK)



10 FILTER BERM-TYPE 1 (COMPOST), TYPE 2 (SLASH MULCH), OR TYPE 4 (TOPSOIL)

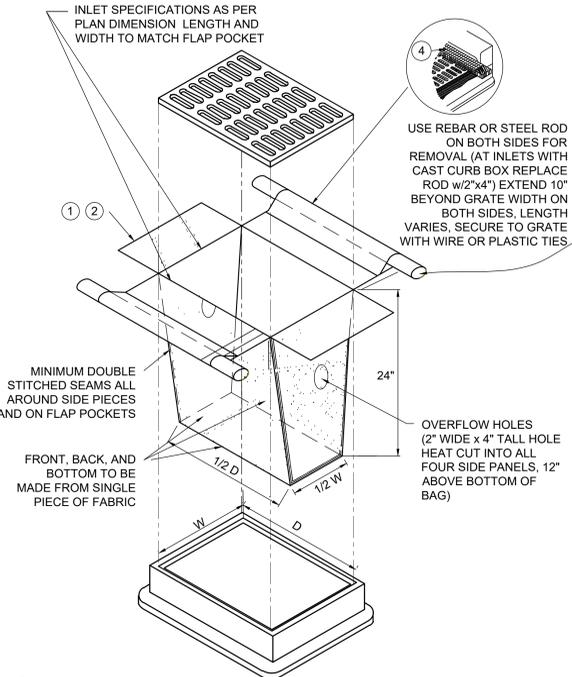


9 INLET PROTECTION - ROCK FILTER BERM w/SILT FENCE USE WHERE INLET DRAINS AN AREA WITH SLOPES 1:3 OR LESS



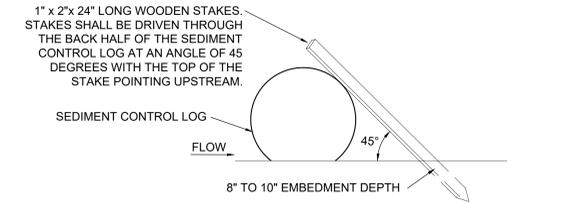
NOTE: THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE. HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION. HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

8 INLET PROTECTION - SEDIMENT CONTROL INLET HAT



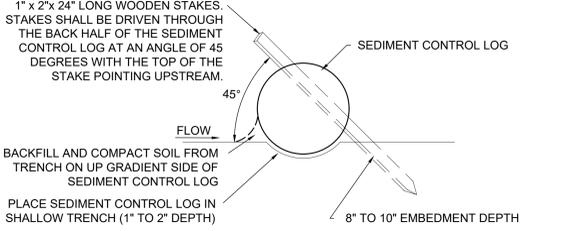
- ALL GEOTEXTILE USED FOR INLET PROTECTION TO BE MONOFILAMENT IN BOTH DIRECTIONS
- FINISHED SIZE INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND PERIMETER TO FACILITATE MAINTENANCE AND REMOVAL
- DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES. MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.
- FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2\"/>

7 INLET PROTECTION - FILTER BAG INSERT



PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS ON SLOPES, OR AS NEEDED DUE TO OTHER FACTORS (STAKES ARE INCIDENTAL TO INSTALLATION).

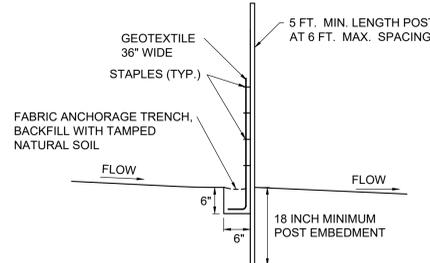
TYPES: WOOD CHIP, COMPOST, OR ROCK



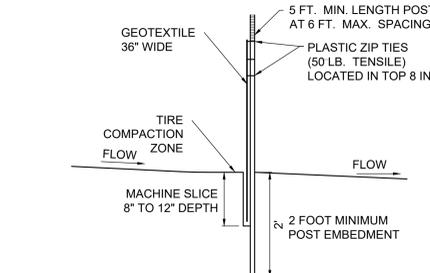
SPACE BETWEEN STAKES SHALL BE MAXIMUM 1 FOOT FOR DITCH CHECKS, AND 2 FEET FOR OTHER APPLICATIONS

TYPES: STRAW, WOOD FIBER, OR COIR

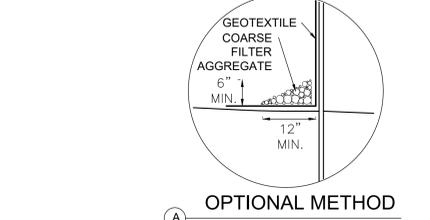
6 SEDIMENT CONTROL LOGS



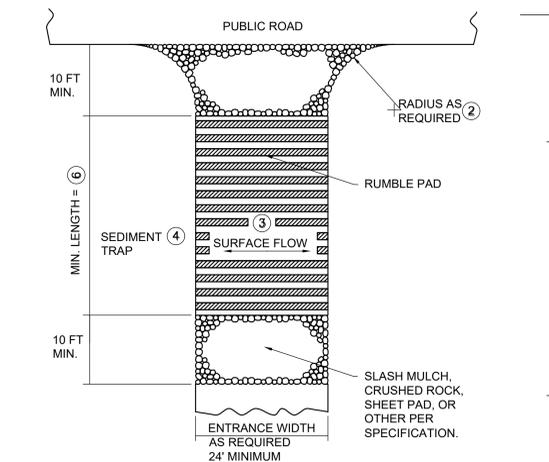
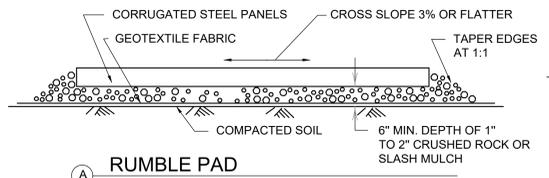
5 SILTY FENCE TYPE PA (PREASSEMBLED) FOR SHEET FLOW WITH MAXIMUM CONTRIBUTING AREA = 0.25 ACRES



4 SILTY FENCE TYPE MS (MACHINE SLICED) FOR SHEET FLOW WITH MAXIMUM CONTRIBUTING AREA = 1 ACRE



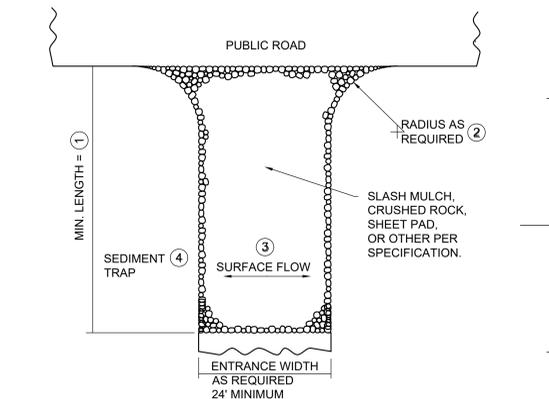
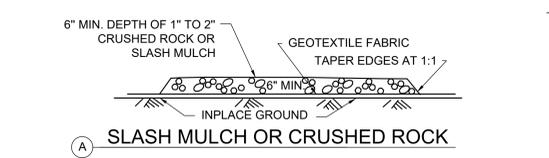
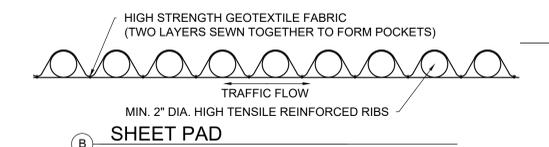
3 SILTY FENCE-TYPE HI (HAND INSTALLED) FOR SHEET FLOW WITH MAXIMUM CONTRIBUTING AREA = 1 ACRE



2 CONSTRUCTION EXIT (RUMBLE PAD TYPE)

NOTES FOR DETAILS 1 & 2

- MINIMUM LENGTH IS 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.
- PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.
- IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXIT, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.
- IF RUNOFF FROM CONSTRUCTION EXIT WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.
- IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXIT SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.
- MINIMUM LENGTH OF RUMBLE PAD IS 20 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.
- MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.



1 CONSTRUCTION EXIT (SLASH MULCH, CRUSHED ROCK OR SHEET PAD)

**Owner**  
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**Surveyor**  
Sunde Land Surveying, LLC  
9001 East Bloomington Freeway -  
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(952) 886-3118

**DESIGN TEAM**

Checked By: TEAM  
Checked By: CHECKER

**REVISIONS**

NO.	DATE	COMMENT
1	2023-12-26	RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

9301 Eden Prairie Road, Eden Prairie, MN 55347

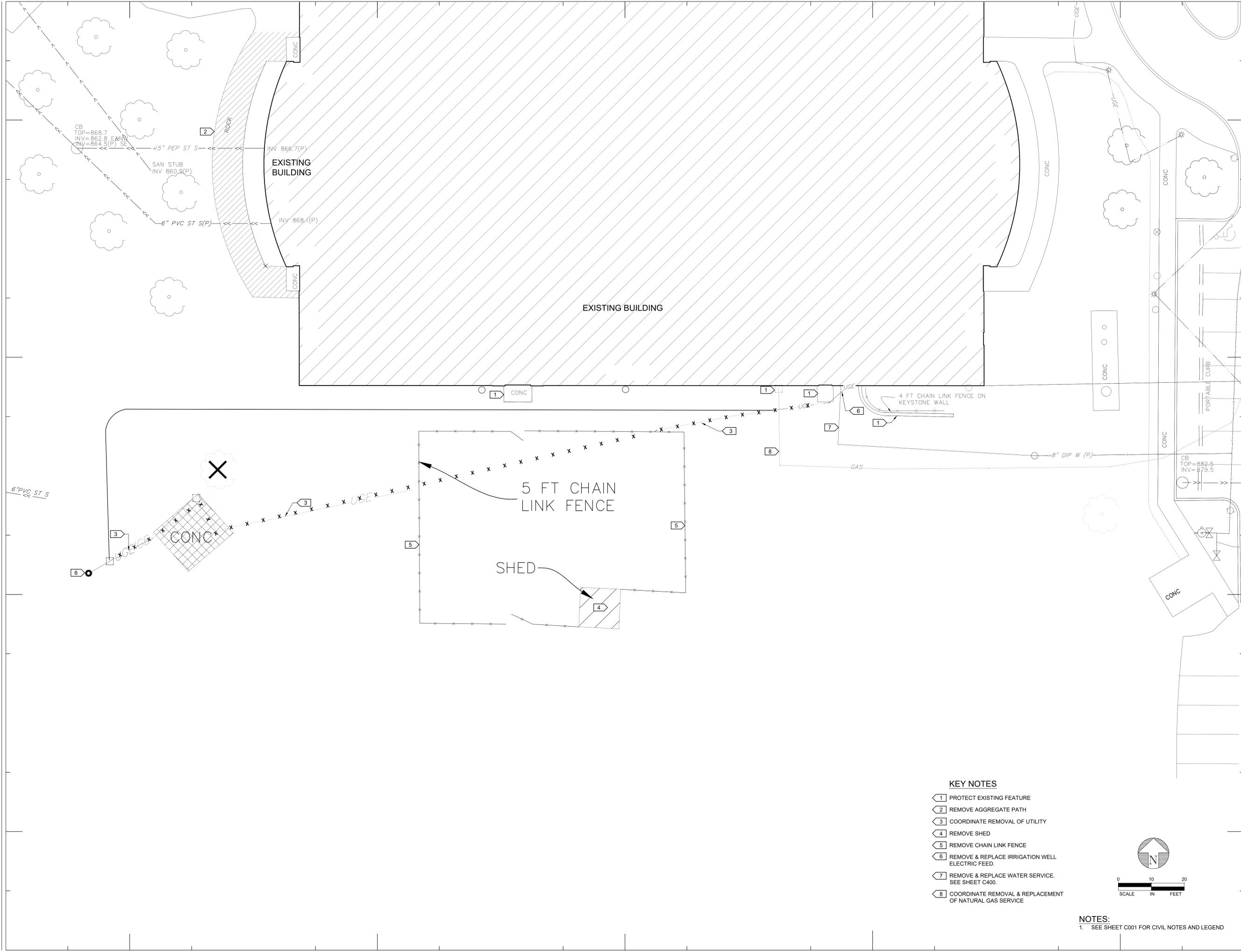
DATE: 10/13/2023

PROJECT CODE: 22641

Grace Church  
Preschool TI  
EROSION CONTROL DETAILS

RPBCWD REVIEW

Sheet No. C102



**Owner**  
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**DESIGN TEAM**

Drawn By *TEAM*  
 Checked By *CHECKER*

**REVISIONS**

NO.	DATE	COMMENT
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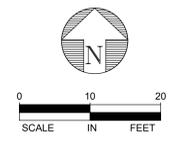
**9301 Eden Prairie Road, Eden Prairie, MN 55347**

**RPBCWD REVIEW**

DATE  
**10/13/2023**

PROJECT CODE  
**22641**

- KEY NOTES**
- 1 PROTECT EXISTING FEATURE
  - 2 REMOVE AGGREGATE PATH
  - 3 COORDINATE REMOVAL OF UTILITY
  - 4 REMOVE SHED
  - 5 REMOVE CHAIN LINK FENCE
  - 6 REMOVE & REPLACE IRRIGATION WELL ELECTRIC FEED.
  - 7 REMOVE & REPLACE WATER SERVICE. SEE SHEET C400.
  - 8 COORDINATE REMOVAL & REPLACEMENT OF NATURAL GAS SERVICE

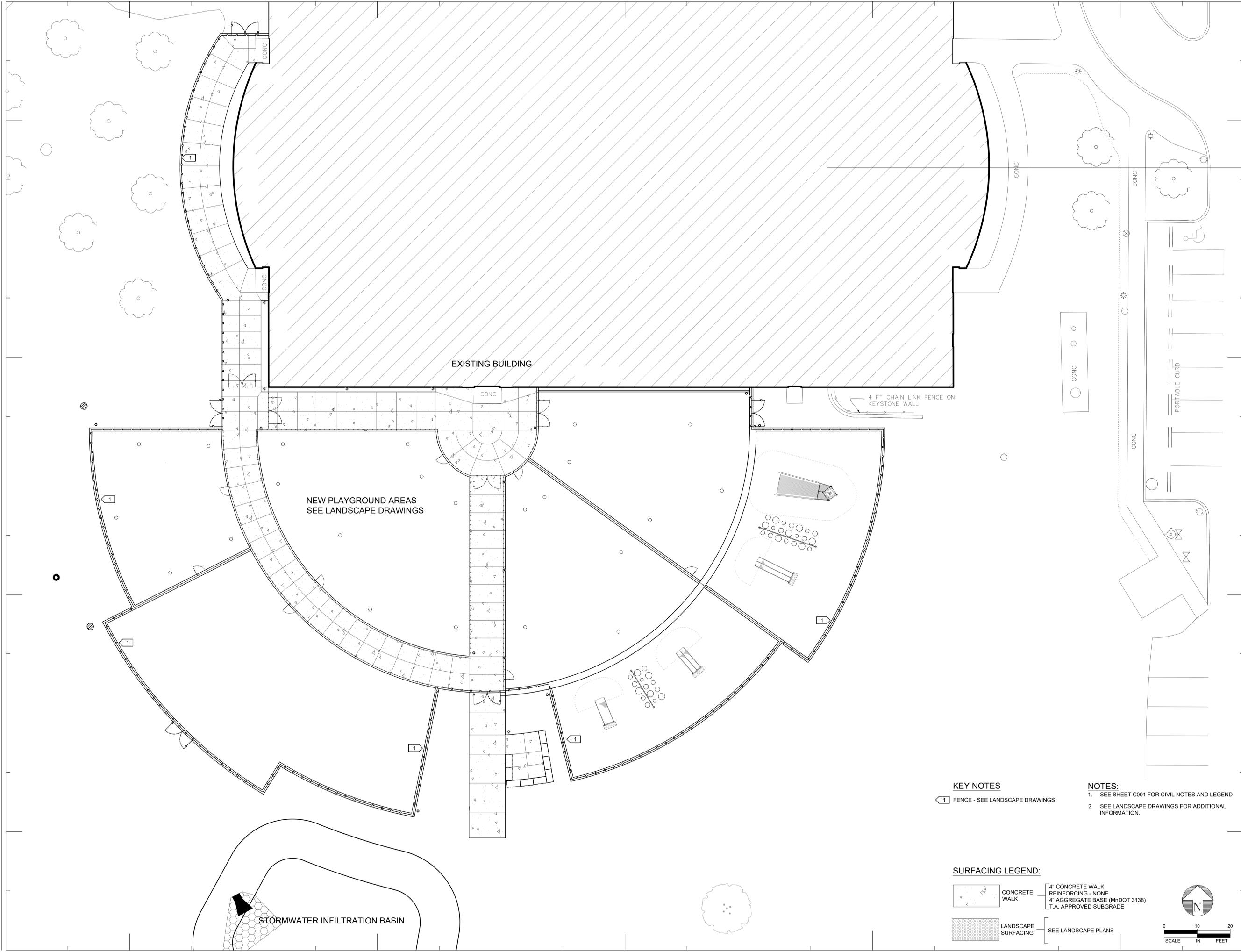


**NOTES:**  
 1. SEE SHEET C001 FOR CIVIL NOTES AND LEGEND

**Grace Church**

Preschool TI  
**SITE DEMOLITION PLAN**

Sheet No.  
**C200**



EXISTING BUILDING

NEW PLAYGROUND AREAS  
SEE LANDSCAPE DRAWINGS

STORMWATER INFILTRATION BASIN

4 FT CHAIN LINK FENCE ON  
KEYSTONE WALL

**KEY NOTES**

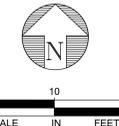
1 FENCE - SEE LANDSCAPE DRAWINGS

**NOTES:**

- SEE SHEET C001 FOR CIVIL NOTES AND LEGEND
- SEE LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.

**SURFACING LEGEND:**

- CONCRETE WALK  
4" CONCRETE WALK  
REINFORCING - NONE  
4" AGGREGATE BASE (MnDOT 3138)  
T.A. APPROVED SUBGRADE
- LANDSCAPE SURFACING  
SEE LANDSCAPE PLANS



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**Surveyor**  
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**DESIGN TEAM**

Drawn By **TEAM**  
Checked By **CHECKER**

**REVISIONS**

NO.	DATE	COMMENT
1	2023-12-26	RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT

9301 Eden Prairie Road, Eden Prairie, MN 55347

**Grace Church**

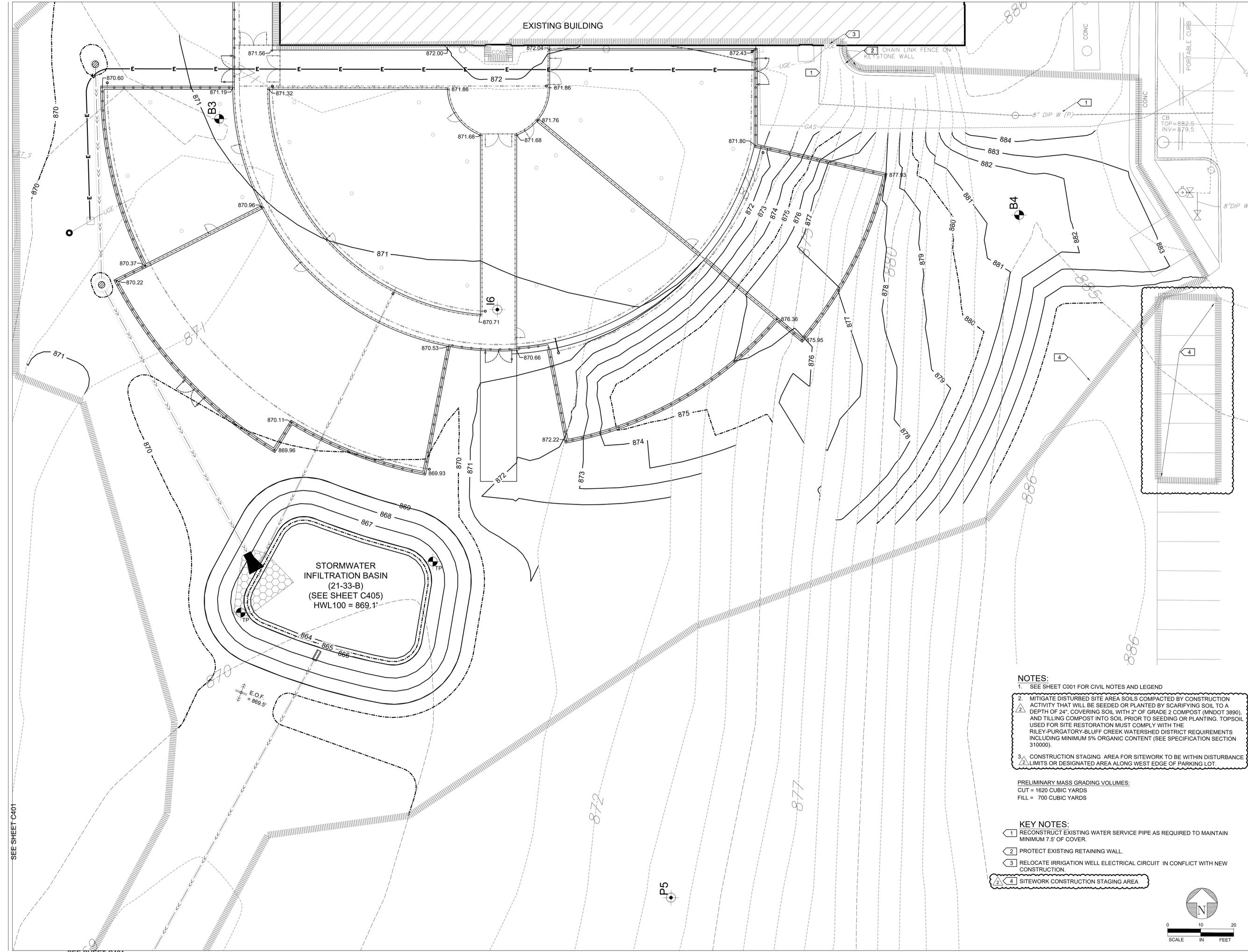
**RPBCWD  
REVIEW**

DATE  
**10/13/2023**

PROJECT  
CODE  
**22641**

**Preschool TI  
SITE LAYOUT AND SURFACING PLAN**

Sheet No.  
**C300**



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.

NAME: KENNETH W. HORNS  
DATE: 01/11/2024  
REGISTRATION NUMBER: 19235

Consultant: **Civil Engineering & Landscape Architecture**

**HGA**  
420 North 5th Street, Suite 100  
Minneapolis, Minnesota 55401  
Telephone 612.758.4000

**REVISIONS/SUBMITTALS**

NO.	DATE	COMMENT
1	01-11-2024	BLDG DEPT SUBMITTAL
2	01/15/2024	

**GRACE CHURCH**  
9301 Eden Prairie Rd. Eden Prairie, MN 55347  
**SITE GRADING PLAN**

**DESIGN TEAM**

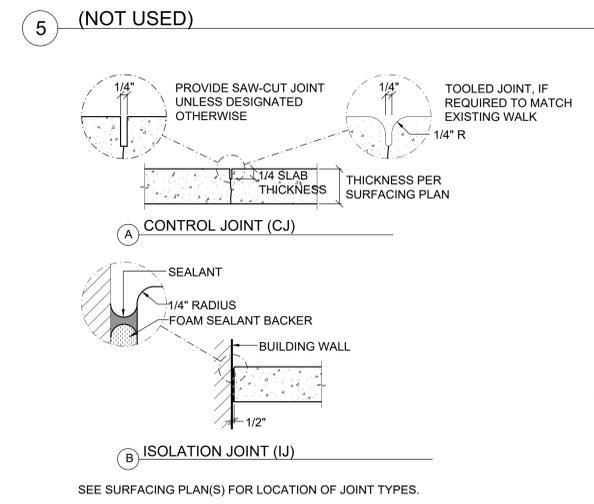
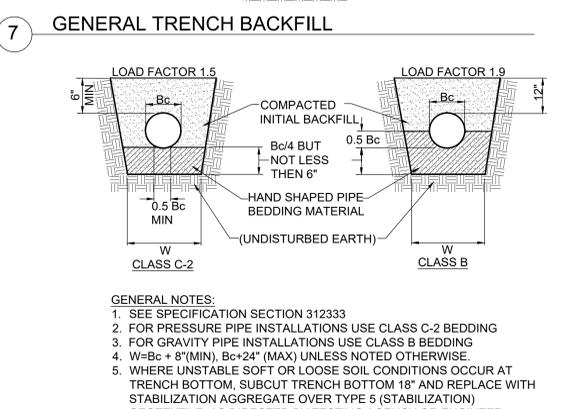
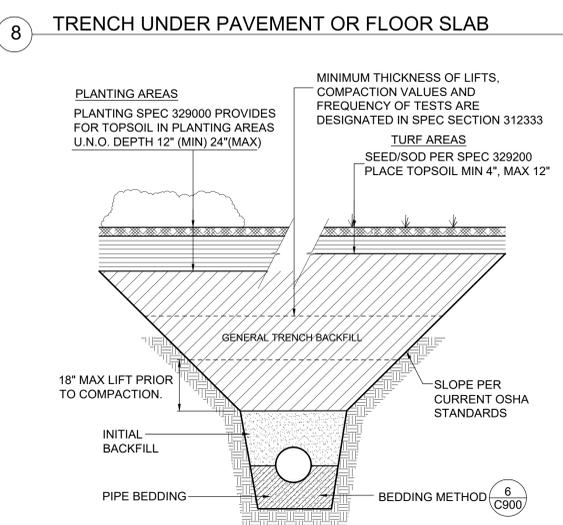
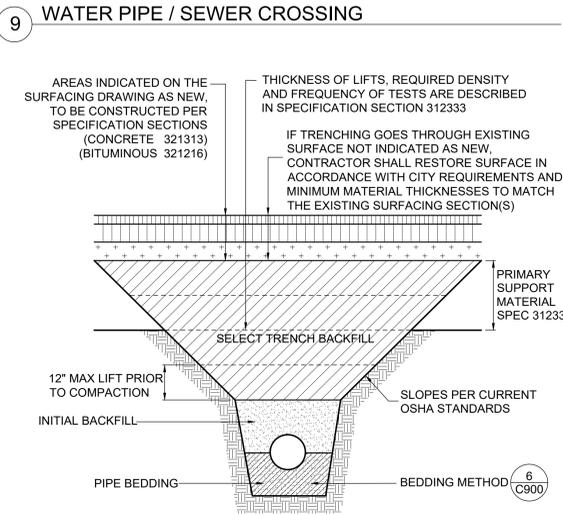
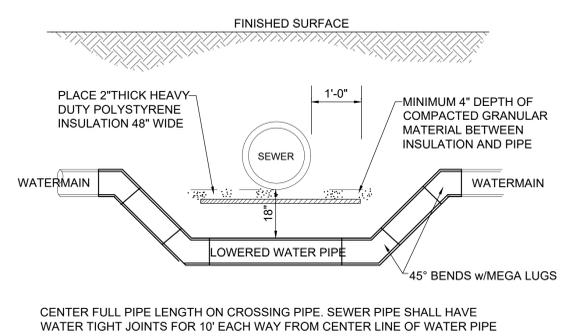
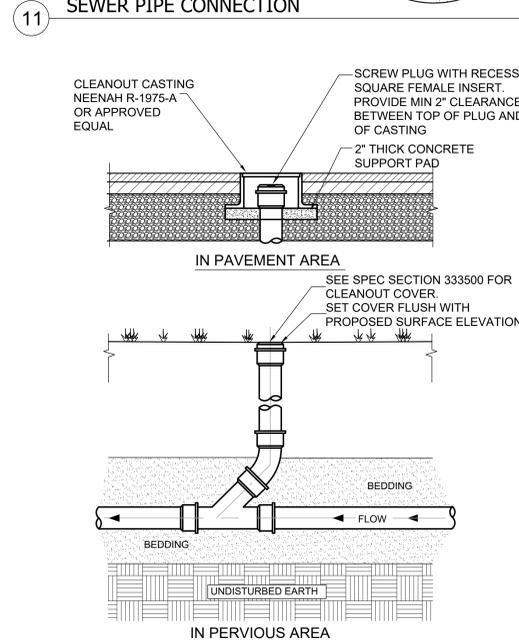
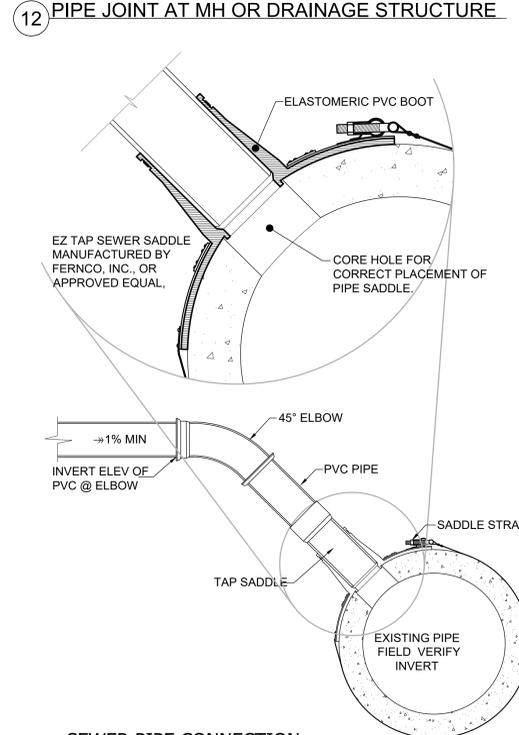
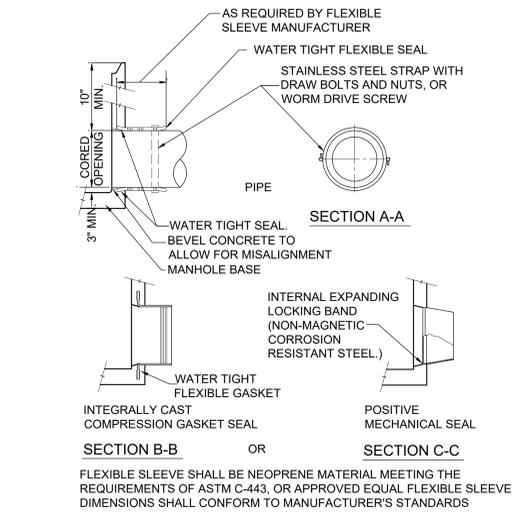
Designed By  
Drawn By  
Checked By  
Approved By

Project No. 23668  
Date 01/11/2024

Project Status  
CONSTRUCTION DOCUMENTS  
PRESCHOOL TI

Sheet No.  
**C400**





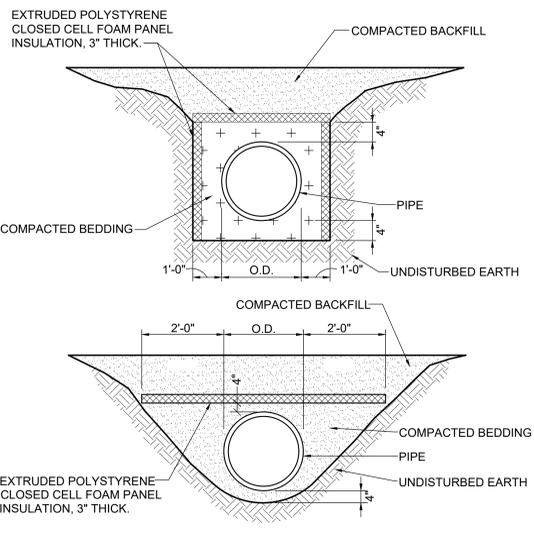
4 JOINT DETAILS

3 (NOT USED)

2 (NOT USED)

1 (NOT USED)

DESIGN TEAM		
Drawn By	TEAM	
Checked By	CHECKER	
REVISIONS		
NO.	DATE	COMMENT
1	2023-12-26	RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT



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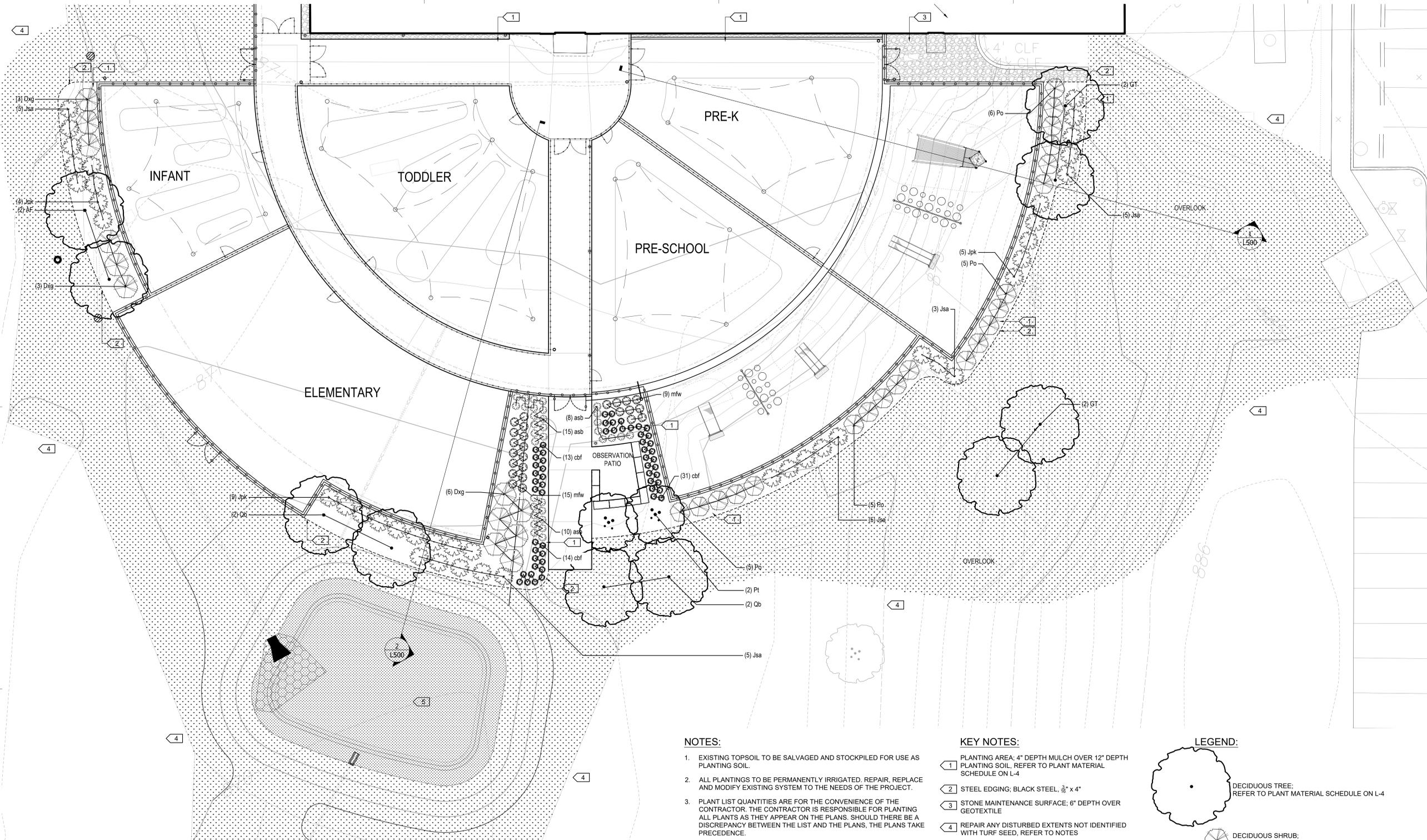
9301 Eden Prairie Road, Eden Prairie, MN 55347

DATE  
10/13/2023

PROJECT CODE  
22641

Grace Church  
Preschool TI  
SITE DETAILS  
C900

RPBCWD REVIEW



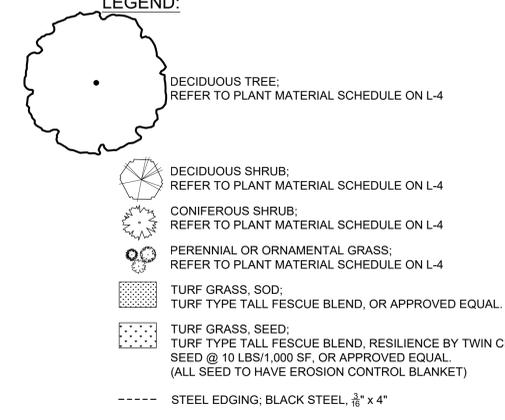
**NOTES:**

- EXISTING TOPSOIL TO BE SALVAGED AND STOCKPILED FOR USE AS PLANTING SOIL.
- ALL PLANTINGS TO BE PERMANENTLY IRRIGATED. REPAIR, REPLACE AND MODIFY EXISTING SYSTEM TO THE NEEDS OF THE PROJECT.
- PLANT LIST QUANTITIES ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PLANTING ALL PLANTS AS THEY APPEAR ON THE PLANS. SHOULD THERE BE A DISCREPANCY BETWEEN THE LIST AND THE PLANS, THE PLANS TAKE PRECEDENCE.
- FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- THE LANDSCAPE ARCHITECT RESERVE THE RIGHT TO REFUSE ANY PLANT MATERIALS DEEMED UNACCEPTABLE.
- MULCH, WHERE DESIGNATED ON THE PLANS, SHALL EXTEND UNDER ALL SHRUBS AND GROUNDCOVER TO THE DEPTH SPECIFIED.
- ALL WEEDS AND UNWANTED GRASSES SHALL BE TREATED WITH CONTACT HERBICIDE AS PER MANUFACTURER'S INSTRUCTIONS. REAPPLY AS NECESSARY DURING THE CONSTRUCTION AND MAINTENANCE PERIODS TO COMPLETELY KILL WEEDS. REMOVE ALL DEAD DEBRIS.
- FINISH GRADE OF ALL PLANTING BEDS AND LAWN AREAS TO BE ONE HALF INCH (1/2") BELOW ADJACENT PAVING.
- PLANTS SHALL BE LOCATED A MINIMUM OF THREE (3) FEET FROM ANY FIRE HYDRANT, TRANSFORMER, LIGHT FIXTURE OR SIMILAR OBJECT.
- STAKE TREES AS REQUIRED AND INDICATED ON THE PLANS AND IN THE DETAILS.
- REPAIR ANY DAMAGED TURF WITH TURF SEED. TURF TYPE: TALL FESCUE BLEND, RESILIENCE BY TWIN CITY SEED @ 10LBS/1,000 SF, OR APPROVED EQUAL. ALL SEED TO HAVE EROSION CONTROL BLANKET.
- TREES PLANTED IN TURF TO HAVE A THREE (3) FOOT RADIUS MULCH RING, 4" DEPTH WITH MULCH PULLED AWAY FROM TRUNK AND A SPADED EDGE BETWEEN MULCH AND TURF.

**KEY NOTES:**

- PLANTING AREA: 4" DEPTH MULCH OVER 12" DEPTH PLANTING SOIL, REFER TO PLANT MATERIAL SCHEDULE ON L-4
- STEEL EDGING: BLACK STEEL, 3/8" x 4"
- STONE MAINTENANCE SURFACE: 6" DEPTH OVER GEOTEXTILE
- REPAIR ANY DISTURBED EXTENTS NOT IDENTIFIED WITH TURF SEED, REFER TO NOTES
- TURF GRASS, SOD: TURF TYPE TALL FESCUE BLEND, OR APPROVED EQUAL.

**LEGEND:**



**PLANT MATERIAL SCHEDULE:**

DECIDUOUS TREES						
Symbol	Code	Botanical Name	Common Name	Size	Spacing	Qty
	AF	Acer * freemanii 'AF #1'	Firefall Autumn Blaze Maple	2.5' cal. B&B	As shown	2
	Gt	Gleditsia triacanthos 'Imperial'	Imperial® Honeylocust	2.5' cal. B&B	As shown	4
	Pt	Populus tremuloides 'NE Arb'	Prairie Gold Aspen	10' ht. clump. B&B	As shown	2
	Qb	Quercus bicolor 'JFS-KW12'	American Dream Swamp White Oak	2.5' cal. B&B	As shown	4
DECIDUOUS SHRUBS, Potential Species						
Symbol	Code	Botanical Name	Common Name	Size	Spacing	Qty
	Dxg	Dicentra x 'G2XB8544' PP27,548	Kodiak® Orange Bush Honeysuckle	#5	As shown	12
	Pa	Physocarpus opulifolius 'SMPOTW' PP26,749	Tiny Wine Ninebark	#5	As shown	21
CONIFEROUS SHRUBS, Potential Species						
Symbol	Code	Botanical Name	Common Name	Size	Spacing	Qty
	Jpk	Juniperus * pfitzeriana 'Kallay's Compact'	Kallay's Compact Juniper	#5	As shown	18
	Jsa	Juniperus sabinia 'Arcadia'	Arcadia Juniper	#3	As shown	25
PERENNIALS & ORNAMENTAL GRASSES, Potential Species						
Symbol	Code	Botanical Name	Common Name	Size	Spacing	Qty
	asb	Allium 'Summer Beauty'	Summer Beauty Ornamental Onion	#1	18" o.c.	33
	cbf	Calamagrostis brachytricha	Korean Feather Grass	#1	18" o.c.	58
	mfw	Monarda fistulosa	Wild Bergamot	#1	18" o.c.	24

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**DESIGN TEAM**  
Drawn By: TEAM  
Checked By: CHECKER

**REVISIONS**

NO.	DATE	COMMENT
	2023-12-14	RESPONSES TO EDEN PRAIRIE COMMENTS

**PLANNING REVIEW**

DATE  
10/13/2023

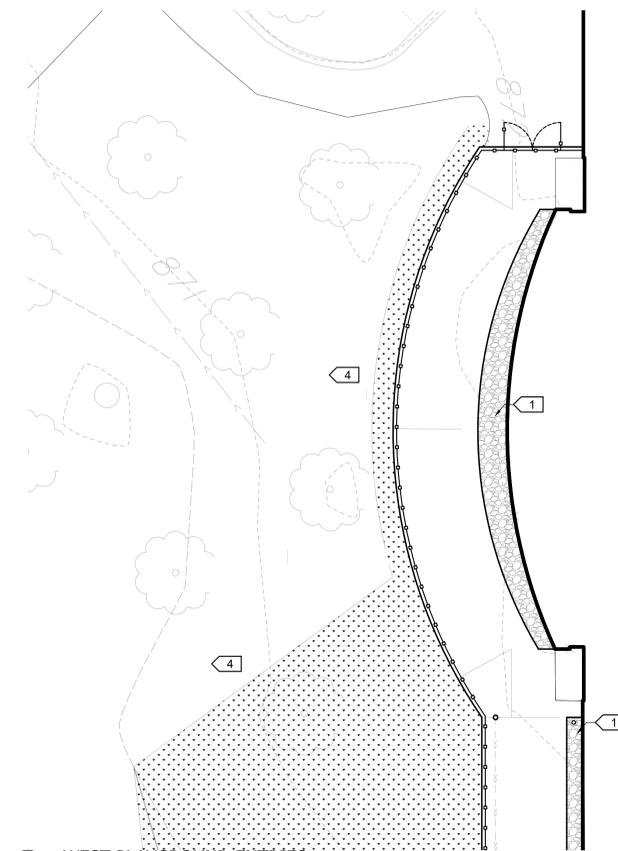
PROJECT CODE  
22641

9301 Eden Prairie Road, Eden Prairie, MN 55347

Grace Church  
Preschool TI  
PLANNING PLAN -  
PLAYGROUND

Sheet No.

L-400



3 WEST PLAYGROUND ENTRIES

Scale: 1" = 10'

**NOTES:**

1. EXISTING TOPSOIL TO BE SALVAGED AND STOCKPILED FOR USE AS PLANTING SOIL.
2. ALL PLANTINGS TO BE PERMANENTLY IRRIGATED. REPAIR, REPLACE AND MODIFY EXISTING SYSTEM TO THE NEEDS OF THE PROJECT.
3. PLANT LIST QUANTITIES ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PLANTING ALL PLANTS AS THEY APPEAR ON THE PLANS. SHOULD THERE BE A DISCREPANCY BETWEEN THE LIST AND THE PLANS, THE PLANS TAKE PRECEDENCE.
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7. ALL WEEDS AND UNWANTED GRASSES SHALL BE TREATED WITH CONTACT HERBICIDE AS PER MANUFACTURER'S INSTRUCTIONS. REAPPLY AS NECESSARY DURING THE CONSTRUCTION AND MAINTENANCE PERIODS TO COMPLETELY KILL WEEDS. REMOVE ALL DEAD DEBRIS.
8. FINISH GRADE OF ALL PLANTING BEDS AND LAWN AREAS TO BE ONE HALF INCH (1/2") BELOW ADJACENT PAVING.
9. PLANTS SHALL BE LOCATED A MINIMUM OF THREE (3) FEET FROM ANY FIRE HYDRANT, TRANSFORMER, LIGHT FIXTURE OR SIMILAR OBJECT.
10. STAKE TREES AS REQUIRED AND INDICATED ON THE PLANS AND IN THE DETAILS.
11. REPAIR ANY DAMAGED TURF WITH TURF SEED. TURF TYPE: TALL FESCUE BLEND, RESILIENCE BY TWIN CITY SEED @ 10LBS/1,000 SF, OR APPROVED EQUAL. ALL SEED TO HAVE EROSION CONTROL BLANKET.
12. TREES PLANTED IN TURF TO HAVE A THREE (3) FOOT RADIUS MULCH RING, 4" DEPTH WITH MULCH PULLED AWAY FROM TRUNK AND A SPADED EDGE BETWEEN MULCH AND TURF.

**KEY NOTES:**

- 1 PLANTING AREA; 4" DEPTH MULCH OVER 12" DEPTH PLANTING SOIL, REFER TO PLANT MATERIAL SCHEDULE ON L-4
- 2 STEEL EDGING; BLACK STEEL, 3/8" x 4"
- 3 STONE MAINTENANCE SURFACE; 6" DEPTH OVER GEOTEXTILE
- 4 REPAIR ANY DISTURBED EXTENTS NOT IDENTIFIED WITH TURF SEED, REFER TO NOTES
- 5 TURF GRASS, SOD; TURF TYPE TALL FESCUE BLEND, OR APPROVED EQUAL.

**LEGEND:**

- DECIDUOUS TREE; REFER TO PLANT MATERIAL SCHEDULE ON L-4
- DECIDUOUS SHRUB; REFER TO PLANT MATERIAL SCHEDULE ON L-4
- CONIFEROUS SHRUB; REFER TO PLANT MATERIAL SCHEDULE ON L-4
- PERENNIAL OR ORNAMENTAL GRASS; REFER TO PLANT MATERIAL SCHEDULE ON L-4
- TURF GRASS, SOD; TURF TYPE TALL FESCUE BLEND, OR APPROVED EQUAL.
- TURF GRASS, SEED; TURF TYPE TALL FESCUE BLEND, RESILIENCE BY TWIN CITY SEED @ 10 LBS/1,000 SF, OR APPROVED EQUAL. (ALL SEED TO HAVE EROSION CONTROL BLANKET)
- STEEL EDGING; BLACK STEEL, 3/8" x 4"



**Owner**  
Grace Church Eden Prairie  
9301 Eden Prairie Rd.  
Eden Prairie, MN 55347  
(952) 224-3900

**Architect**  
Visioneering Studios Architecture  
106 W. 4th Street, Suite 600  
Santa Ana, CA 92701  
(888) 539-1957

**Engineer**  
Hammel, Green and Abrahamson, Inc.  
420 North 5th Street  
Minneapolis, MN 55401  
(612) 758-4000

**Surveyor**  
Sunde Land Surveying, LLC  
9001 East Bloomington Freeway - STE 118  
Bloomington, MN 55420  
(952) 886-3118

**DESIGN TEAM**

Drawn By *TEAM*  
Checked By *CHECKER*

**REVISIONS**

NO.	DATE	COMMENT
	2023-12-14	RESPONSES TO EDEN PRAIRIE COMMENTS

9301 Eden Prairie Road, Eden Prairie, MN 55347

**PLANNING REVIEW**

DATE  
**10/13/2023**

PROJECT CODE  
**22641**

**Grace Church  
Preschool TI  
PLANNING PLAN -  
WEST PLAYGROUND ENTRIES**

Sheet No.  
**L-401**