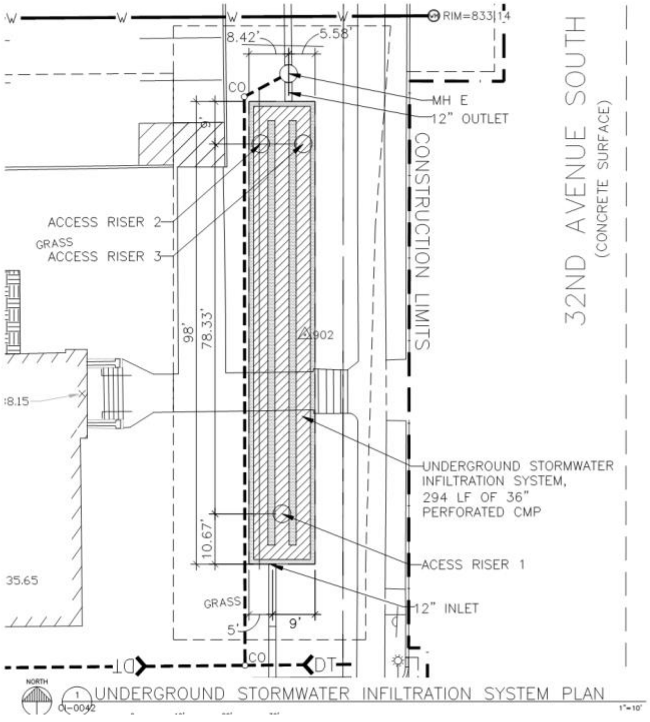
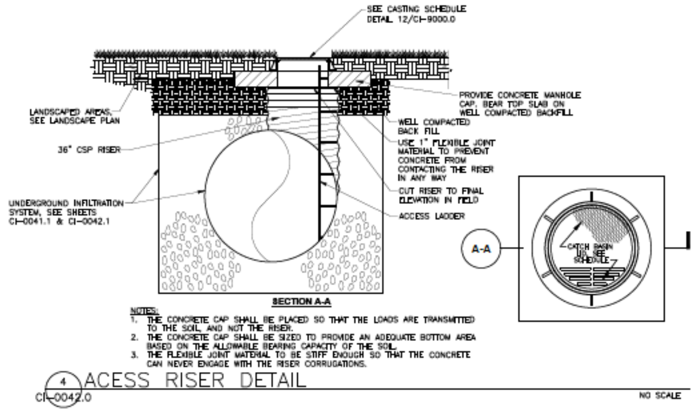
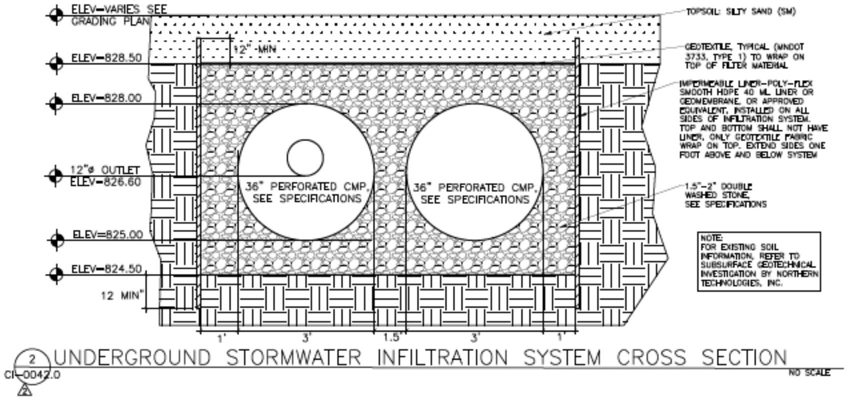
Northrup School Storm water Operations and Maintenance Plan

Underground Infiltration System







BMP ID: 3939	**Location:**	**Inspection Frequency:**
Northrup School: 4315 S 31st Avenue Minneapolis, MN		Quarterly (April, June, August, October) and following Large Storm Events (Rainfall>1") *NOTE: *After inspector has established 2 years of successful performance of BMP system, Quarterly inspections may be reduced to Annual (Spring or Fall) and following Large Storm Events (Rainfall>2"). If a failure is observed, Quarterly inspections should be resumed.*

Description of Device: Underground infiltration systems can hold large volumes of runoff in the open chamber units.

The run-off enters the underground system and percolates into the subsoil. Water quality is improved through the filtering of the subsoil. Underground infiltration systems remove a high percentage of suspended soils and organic compounds from runoff through filtration, preventing or reducing pollution of receiving waters.

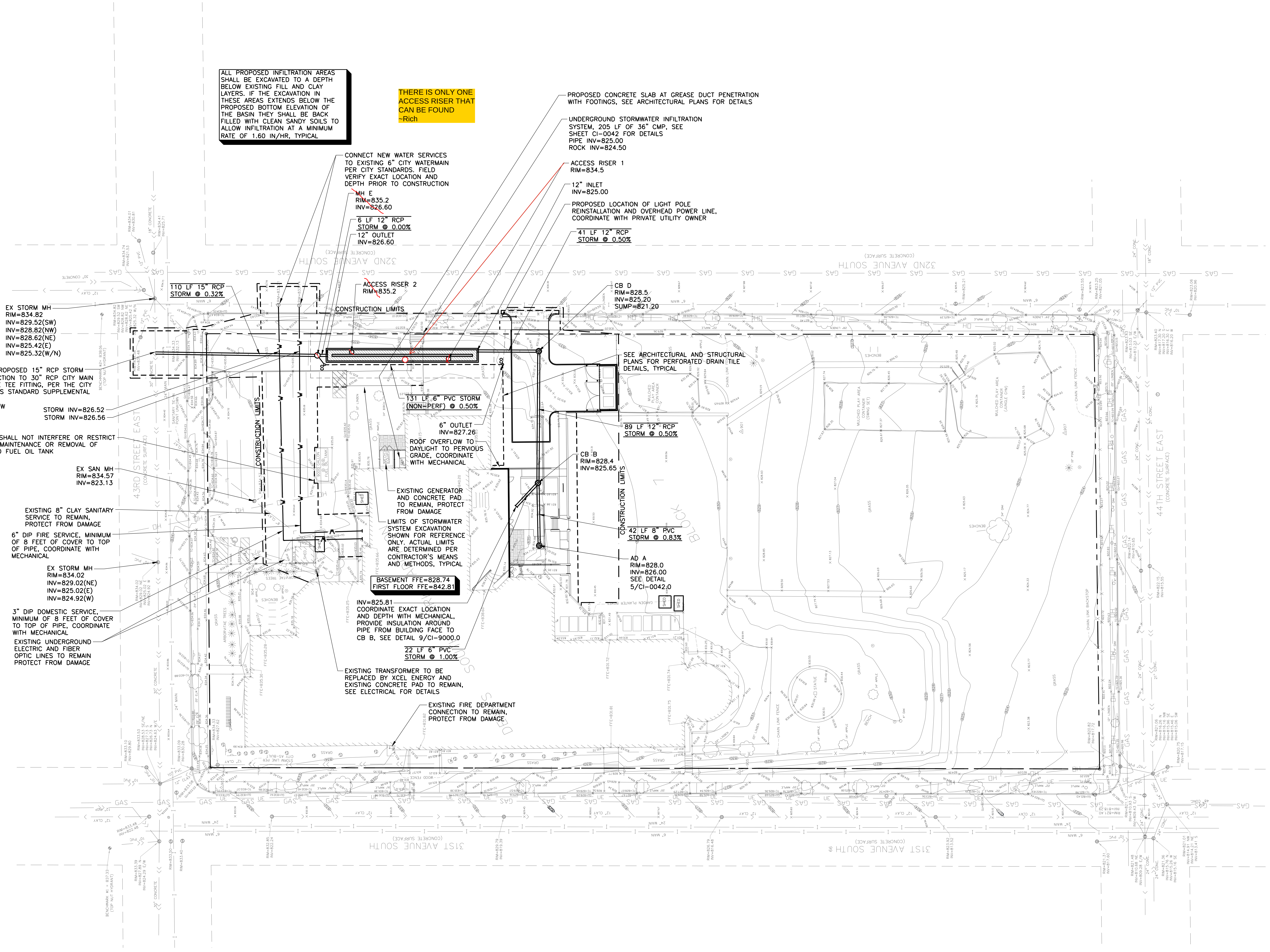
Structure Access: 1 26" access risers above the located to the northern side of the side walk perpendicular to 32nd .

Notes and Comments: Camera System every 10 years beginning in 2025 to access the pipes condition**.**

Northrup/Ericcson School Storm water Operations and Maintenance Plan

Site ID : 03939		**Stormtech Underground Infiltration Device**		
Inspection Date - / - / 20 - -		**Inspector:**		
Inspection Activity	**Observations Measurements**	**Maintenance**	**Maint. Required**	**Actions Required/Date Completed/Responsible Foreman**
Trash and Debris Visual inspection of CB-D / 4' Sump and 12" RCP storm 12" pipes Risers: *(Refer location Map)* CB-D: Design depth = 9.46'	**Measured Depth of sediment** Sediment Depth:	• Remove trash and debris in dry weather conditions. (Zone off area when removing trash and debris to ensure safety of traffic near area) • Record depth of sediment at each inspection to gauge sediment accumulation rate • Remove sediment in pipes when depth exceeds 6" or when infiltration is compromised • Remove sediment when sump is 25% full (12") • Notify maintenance staff of need to sweep and/or remove debris	Yes No	/ / 20 Responsible Party:
Dewatering,		If standing water is located, notify the city of the system's failure to drain within 72 hours of a storm event for further direction. Notify The City of Minneapolis of the System's failure stormwater@minneapolismn.gov	Yes No	/ / 20 Responsible Party:
Inspect contributing areas for plugged catch basins, erosion, trash, leaves, and debris. Check the ground surface above system for sinkholes or depressions		Notify appropriate maintenance staff or property owner of need sweep and or remove litter/debris. Sink holes shall be filled and monitored for further depression.	Yes No	/ / 20 Responsible Party:
Inspect all visible structural components: Manholes, Castings, Covers, pipe connections etc.		Repair as able and note observations notifying maintenance foremen of any observed damage to structure, manholes, casings, tide flex valves and associated loose or missing bolts, blockages of inlets/outlets, etc.	Yes No	/ / 20 Responsible Party:

Complete this self-inspection form for each site inspection, and return a copy annually to: Minneapolis Surface Waters and Sewers stormwater@minneapolismn.gov



ALL PROPOSED INFILTRATION AREAS SHALL BE EXCAVATED TO A DEPTH BELOW EXISTING FILL AND CLAY LAYERS. IF THE EXCAVATION IN THESE AREAS EXTENDS BELOW THE PROPOSED BOTTOM ELEVATION OF THE BASIN THEY SHALL BE BACK FILLED WITH CLEAN SANDY SOILS TO ALLOW INFILTRATION AT A MINIMUM RATE OF 1.60 IN/HR, TYPICAL

THERE IS ONLY ONE ACCESS RISER THAT CAN BE FOUND
~Rich

PROPOSED CONCRETE SLAB AT GREASE DUCT PENETRATION WITH FOOTINGS, SEE ARCHITECTURAL PLANS FOR DETAILS

UNDERGROUND STORMWATER INFILTRATION SYSTEM, 205 LF OF 36" CMP, SEE SHEET CI-0042 FOR DETAILS
PIPE INV=825.00
ROCK INV=824.50

CONNECT NEW WATER SERVICES TO EXISTING 6" CITY WATERMAIN PER CITY STANDARDS. FIELD VERIFY EXACT LOCATION AND DEPTH PRIOR TO CONSTRUCTION

MH E
RIM=835.2
INV=826.60

6 LF 12" RCP
STORM @ 0.00%

12" OUTLET
INV=826.60

ACCESS RISER 1
RIM=834.5

12" INLET
INV=825.00

PROPOSED LOCATION OF LIGHT POLE REINSTALLATION AND OVERHEAD POWER LINE, COORDINATE WITH PRIVATE UTILITY OWNER

41 LF 12" RCP
STORM @ 0.50%

110 LF 15" RCP
STORM @ 0.32%

ACCESS RISER 2
RIM=835.2

CB D
RIM=828.5
INV=825.20
SUMP=821.20

EX STORM MH
RIM=834.82
INV=829.52(SW)
INV=828.82(NW)
INV=828.62(NE)
INV=825.42(E)
INV=825.32(W/N)

CORE-DRILL PROPOSED 15" RCP STORM SEWER CONNECTION TO 30" RCP CITY MAIN WITH A SADDLE TEE FITTING, PER THE CITY OF MINNEAPOLIS STANDARD SUPPLEMENTAL SPECIFICATIONS
INV=825.25 E/W
INV=826.25 S

STORM INV=826.52
STORM INV=826.56

SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR PERFORATED DRAIN TILE DETAILS, TYPICAL

131 LF 6" PVC STORM
(NON-PERF) @ 0.50%

6" OUTLET
INV=827.26

89 LF 12" RCP
STORM @ 0.50%

CONTRACTOR SHALL NOT INTERFERE OR RESTRICT ACCESS FOR MAINTENANCE OR REMOVAL OF UNDERGROUND FUEL OIL TANK

ROOF OVERFLOW TO DAYLIGHT TO PERVIOUS GRADE, COORDINATE WITH MECHANICAL

CB B
RIM=828.4
INV=825.65

EX SAN MH
RIM=834.57
INV=823.13

EXISTING GENERATOR AND CONCRETE PAD TO REMIAN, PROTECT FROM DAMAGE

EXISTING 8" CLAY SANITARY SERVICE TO REMAIN, PROTECT FROM DAMAGE

LIMITS OF STORMWATER SYSTEM EXCAVATION SHOWN FOR REFERENCE ONLY. ACTUAL LIMITS ARE DETERMINED PER CONTRACTOR'S MEANS AND METHODS, TYPICAL

6" DIP FIRE SERVICE, MINIMUM OF 8 FEET OF COVER TO TOP OF PIPE, COORDINATE WITH MECHANICAL

42 LF 8" PVC
STORM @ 0.83%

AD A
RIM=828.0
INV=826.00
SEE DETAIL
5/CI-0042.0

EX STORM MH
RIM=834.02
INV=829.02(NE)
INV=825.02(E)
INV=824.92(W)

BASEMENT FFE=828.74
FIRST FLOOR FFE=842.81

INV=825.81
COORDINATE EXACT LOCATION AND DEPTH WITH MECHANICAL, PROVIDE INSULATION AROUND PIPE FROM BUILDING FACE TO CB B, SEE DETAIL 9/CI-9000.0

3" DIP DOMESTIC SERVICE, MINIMUM OF 8 FEET OF COVER TO TOP OF PIPE, COORDINATE WITH MECHANICAL

EXISTING UNDERGROUND ELECTRIC AND FIBER OPTIC LINES TO REMAIN PROTECT FROM DAMAGE

22 LF 6" PVC
STORM @ 1.00%

EXISTING TRANSFORMER TO BE REPLACED BY XCEL ENERGY AND EXISTING CONCRETE PAD TO REMAIN, SEE ELECTRICAL FOR DETAILS

EXISTING FIRE DEPARTMENT CONNECTION TO REMAIN, PROTECT FROM DAMAGE

NORTH

1
CI-0041.0
UTILITY PLAN

0 30' 60' 90'

1"=30'

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Consulting Civil Engineers

CONFORMED SET
5/24/2017

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.

Printed Name: Patrick Sveum
Signature: Patrick Sveum
Date: 4/14/2017 License #: 54244

No.	Date	Revision Description
2	4/27/2017	ADDENDUM #2
3	6/5/2017	PR-001

MINNEAPOLIS PUBLIC SCHOOLS
ERICSSON ELEMENTARY
CAFETERIA AND CLASSROOM RENOVATION

4315 31st Avenue South
Minneapolis, MN 55406

UTILITY PLAN

Project	15-036	Drawing Number
Date	4/14/2017	ERIC - CI-0041.0
Drawn by	PWS	
Checked by	RSP	