

Riley Purgatory Bluff Creek Watershed District Permit Application Review

Permit No: 2024-077

Considered at Board of Managers Meeting: November 6, 2024

Project Procedural History: Permit application 2020-051 for the BIOLYPH parking-lot expansion was conditionally approved May 5, 2021. Because the conditions of approval for the proposed work were not complete prior the expiration date, no work was conducted and the conditional approval expired May 5, 2022. The applicant has submitted a new permit application for the same work.

Received complete: September 24, 2024

Applicant: BIOLYPH, Timothy Percy

Consultant: Sambatek, Inc., Brady Busselman

Project: BIOLYPH Parking Lot Expansion –a parking lot expansion at an existing medical facility in Chaska. Stormwater management facilities include an underground filtration system combined with rainwater harvest and reuse system to provide volume control, water quality, and rate control.

Location: 4275 Norex Drive, Chaska, MN 55318

Reviewer: Scott Sobiech P.E., Barr Engineering

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 November 6, 2024 meeting of the managers:

Resolved that the application for Permit 2024-077 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 have been affirmatively resolved, the RPBCWD president or administrator is authorized and directed to sign and deliver Permit 2024-077 to the applicant on behalf of RPBCWD.

Upon roll call vote, the resolutions were adopted, _____.

Applicable Rule Conformance Summary

Rule	Issue	Conforms to RPBCWD Rules?	Comments	
C	Erosion Control Plan	See Comment	See rule-specific permit condition C1 related to person responsible for erosion control during construction.	
J	Stormwater Management	Rate	Yes	
		Volume	Yes	
		Water Quality	Yes	
		Low Floor Elev.	Yes	
		Maintenance	See Comment	See rule-specific permit condition J1 related to recordation of stormwater facility maintenance declaration.
		Chloride Management	See Comment	See stipulation #4
		Wetland Protection	Yes	
L	Permit Fee Deposit	Yes	\$3,000 received September 26, 2024. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of October 28, 2024 the amount due is \$1,272.	
M	Financial Assurances	See Comment	The financial assurance is calculated at \$523,516	

Background

Permit 2020-051 for the proposed land-disturbing activities was conditionally approved May 5, 2021. Because the conditions of approval for the proposed work were not met, the permit was not issued and in May 2021 the conditional approval expired. The applicant did not commence proposed work. Under Rule A, subsection 5, the applicant must reapply for a permit from the District.

The applicant proposes construction of Phase I of the site redevelopment which entails the expansion of an existing parking lot for a medical building resulting in 0.55 acres of new or fully redeveloped impervious area. The project proposes construction of an underground filtration system combined with rainwater harvest and reuse system to provide stormwater quality, volume, and rate control. Runoff leaving the underground filtration system will be conveyed to either reuse storage tanks or an existing, on-site storm sewer. The existing storm sewer conveys runoff directly into a wetland in the northwest corner of the site. Because the wetland will not be disturbed and does not receive direct overland flow from the proposed land disturbing activities, the engineer judges that the wetland edge is not “downgradient” from the land-disturbing activities, and therefore the RPBCWD buffer requirements do not apply to the proposed project.

As part of the prior submittal under 2020-051, the applicant provided big picture proof of concept information for the full build-out condition of phase 1 (parking lot expansion) and phase 2 (a 26,000 square foot building expansion) to gauge whether the final project would be able to achieve compliance with the RPBCWD regulatory program. The full build-out of the site is anticipated to take several years. No work beyond the presently proposed parking-lot expansion (phase 1) will be authorized by this permit, if issued. The property owner must submit a separate permit application for any further work with necessary supporting materials showing compliance of the proposed work with applicable RPBCWD regulatory requirements applicable at the time of submission. In addition, the common scheme of development framework in subsection 2.5 of Rule J will apply to build-out of the properties. RPBCWD’s approval, if granted, of this permit 2024-077 does not represent a determination of compliance of the ultimate build-out condition with RPBCWD regulatory requirements. The data for the ultimate development in this report are provided for information only.

Project Site Information	Phase 1	Phase 1 and Phase 2
Total Site Area (acres)	13.59	13.59
Existing Impervious (acres)	3.08	3.08
Disturbed Impervious Area (acres)	0.03 (<1%)	0.03 (<1%)
Proposed Impervious Area (acres)	3.60	4.20
Additional Impervious Area (acres)	0.52 (17% increase)	1.12 (36% aggregate increase)
Regulated Impervious Area(acres)	0.55	1.15
Total Disturbed Area (acres)	0.69	1.64

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

1. Permit Application received September 24, 2024
2. Stormwater Management Report dated September 24, 2024
3. Project Plan Set (10 sheets) dated September 24, 2024
4. Geotechnical Evaluation Report by Northern Technologies, LLC dated June 5, 2014
5. Electronic HydroCAD models received on September 24, 2024
6. HydroCAD Output Drainage Summary Tables received on September 24, 2024
7. MIDS model Output Summary Tables received on September 24, 2024
8. Electronic MIDS model received on September 24, 2024
9. Stormwater BMP Opinion of Probable Cost dated October 11, 2024
10. Irrigation area plan received on September 24, 2024
11. Chloride Management Plan received on September 24, 2024 (unsigned)

12. P8 water quality model received October 11, 2024.
13. Response to comments received October 11, 2024

Rule Specific Permit Conditions

Rule C: Erosion Prevention and Sediment Control

Because the applicant proposes to alter 0.69 acres of land-surface area, the project must conform to the requirements in the RPBCWD Erosion and Sediment Control rule (Rule C, Subsection 2.1).

The erosion and sediment control plans prepared by Sambatek include installation of perimeter control, inlet protection for storm sewer catch basins, a rock construction entrance, protection of stormwater management facilities, placement of a minimum of 6 inches of topsoil, decompaction of pervious areas compacted during construction, and retention of native topsoil onsite.

To conform to RPBCWD Rule C requirements the following revisions are needed:

- C1. The Applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term. This information is required prior to issuance of the permit.

Rule J: Stormwater Management

Because the applicant proposes 0.69 acres of land-disturbing activity, 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 apply to only to the disturbed area because the project will disturb less than 50% of the existing impervious surface on the parcel and will not increase imperviousness of the parcel by more than 50 percent (Rule J, Subsection 2.3).

The applicant proposes construction of an underground filtration system combined with a rainwater harvest and reuse system to provide stormwater quantity, volume and rate quality control. The underground filtration system will discharge treated and untreated runoff to underground storage tanks to be used for irrigation.

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 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 the table below.

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
To Wetland	27.3	25.9	47.4	44.3	92.7	89.8	1.9	1.8
Southwest	3.6	3.6	6.5	6.5	13.2	13.2	0.3	0.3
Northeast	5.3	5.3	10.0	9.9	21.0	20.9	0.4	0.4

The proposed stormwater management plan will provide rate control in compliance with the RPBCWD requirements for the 2-, 10-, and 100-year events. Thus, the proposed project meets the rate control requirements in Rule J, Subsection 3.1a.

Volume Abstraction

Subsection 3.1.b of Rule J requires the abstraction onsite of 1.1 inches of runoff from the new and disturbed impervious surface of the parcel. An abstraction volume of 2,200 cubic feet is required from the 0.55 acres (24,004 square feet) of regulated impervious area for phase 1 of the project for volume retention. The Applicant proposes a rainwater harvest and reuse system to provide volume abstraction. Pretreatment is provided by sump manholes at all discharge locations into the underground facility (Rule J, Subsection 3.1.b.1).

The proposed reuse system consists of two 20,000-gallon underground storage tanks for a total of 40,000 gallons (or 5,347 cubic feet) of rainwater harvest and reuse storage volume. The applicant proposes to reuse the rainwater by irrigating 2.2 acres of pervious area with the existing, on-site irrigation system. The table below summarizes the volume abstraction required and the volume abstraction achieved by the proposed stormwater management facility on site. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.1b.

Required Abstraction Depth (inches)	Required Abstraction Volume (cubic feet)	Provided Abstraction Depth (inches)	Provided Abstraction Volume (cubic feet)
1.1	2,200	1.1	2,276

Because the proposed stormwater reuse system requires consistent use at a specified rate to meet District water quality requirements via abstractions, performance monitoring for the site will be required to ensure that the project provides the proposed volume abstraction.

Water Quality Management

Subsection 3.1.c of Rule J requires the Applicant 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 BMPs proposed by the applicant provide more volume abstraction than is required by 3.1b and the engineer concurs with the modeling, the engineer finds that the proposed project is in conformance with Rule J, Subsection 3.1.c.

Low floor Elevation

No structure may be constructed or reconstructed such that its lowest floor elevation is less than 2 feet above the 100-year event flood elevation of a waterbody or stormwater management facility. No stormwater management system may be constructed or reconstructed in a manner that brings the low floor elevation of an adjacent structure into noncompliance according to Rule J, Subsection 3.6.

The low floor elevation of the proposed building and the adjacent stormwater management feature are summarized below. The proposed project is in conformance with Rule J, Subsection 3.6.

Low Floor Elevation of Existing Building (feet)	100-year Event Flood Elevation of Stormwater Facility (feet)	Freeboard (feet)
971.78	965.89	5.89

Maintenance

Subsection 3.7 of Rule J requires the submission of a maintenance plan. All stormwater management structures and facilities must be designed for maintenance access and properly maintained in perpetuity to assure that they continue to function as designed. The stormwater management facilities include the underground filtration system, sump manhole structures, the rainwater harvest and reuse system. The Applicant provided a draft maintenance and inspection declaration for review by RPBCWD staff prior to recordation. To conform to the RPBCWD Rule J the following revisions are needed:

- J1. Permit applicant must provide an updated maintenance and inspection declaration as required by Rule J, Subsection 3.7. The declaration must also include a stormwater reuse monitoring and reporting plan, including a map of the irrigation area. A revised draft declaration must be provided for District review and approval prior to recordation as a condition of issuance of the permit.

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 Minnesota Pollution Control Agency-certified salt applicator engaged in implementing the plan. The permit applicant submitted an unsigned chloride management plan that designates Cory Zitzloff as the individual authorized to implement the chloride management plan and the MPCA-certified salt applicator engaged in

implementing the plan at the site. However, chloride management plan submitted does not indicated the class information or provide evidence that Cory Zitzloff is an MPCA-certified salt applicator. 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 signed 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.

Wetland Protection

Because the existing storm sewer system conveys runoff from the proposed stormwater management facilities to the on-site wetland, the project must comply with the wetland protection criteria in Rule J, Subsection 3.10. Subsection 3.10 of Rule J requires that the activity subject to this rule not alter a site in a manner that alters the bounce in water level, duration of inundation, or change the runout elevation beyond those specified in Table J1. Rather than conduct a MNRAM for the onsite wetland, the applicant elected to demonstrate compliance with the criteria for discharging to an exceptional value wetland. The following table summarizes the allowable change in bounce and inundation duration from Table J1 of RPBCWD Rule J.

Summary of allowable impacts on onsite wetland from Rule J, Table J1

Wetland Value/ Waterbody	Permitted Bounce for, 10-Year Event	Inundation Period for 1- and 2-Year Event	Inundation Period for 10-Year Event	Runout Control Elevation
Exceptional	Existing	Existing	Existing	No change

The Applicant used a HydroCAD hydrologic model to simulate runoff rates and flow depths for pre- and post-development conditions (phase 1 and phase 2) for applicable storm events specified in Table J1. Rule J, Subsection 3.10 identifies the permitted bounce for an exceptional value wetland must match the existing bounce for the 10-year event. The table below shows that the proposed design result in the same 10-year high water elevation for existing and proposed conditions, thus there is no change in the 10-year bounce and the project meets the bounce criteria for discharge to an exceptional value wetland.

10- Year Elevation (ft)	
Existing	Proposed
946.5	946.5

The HydroCAD model output hydrographs indicate that the proposed condition does not increase inundation in the wetland. Table J1 identifies the inundation period for 1-, 2-, and 10-year events for an exceptional value wetland must not exceed existing conditions. As shown in the table below, the submitted hydrologic models demonstrate that the duration of inundation has not been increased from existing conditions. The submitted materials demonstrate, and RPBCWD engineers concurs, that project is in conformance with Rule J, Subsection 3.10a.

2-Year Inundation Period (hrs)		10-Year Inundation Period (hrs)		100-Year Inundation Period (hrs)		10-Day Snowmelt Inundation Period (hrs)	
Ex	Prop	Ex	Prop	Ex	Prop	Ex	Prop
65	65	65	65	65	65	280	280

Rule J, Subsection 3.10b requires that for exceptional value wetlands, the project must meet at least 75 percent annual removal efficiency for phosphorus and at least 90 percent annual removal efficiency for total suspended solids. The Applicant is proposing the construction of an underground filtration system combined with a rainwater harvest and reuse system to provide volume abstraction and water quality treatment. The applicant used P8 to estimate the TP and TSS reduction provided by the underground filtration system. The resulting TP and TSS percent reductions by the underground filtration system were incorporated into the Minimal Impact Design Standards calculator to estimate the total treatment provided by the underground filtration system in combination with the rainwater harvest and reuse system. The results of this modeling are summarized in tables below showing the annual TSS and TP removal requirements are achieved prior to discharge entering the onsite wetland. The engineer concurs with the modeling, and finds that the proposed project is in conformance with Rule J, Subsection 3.10b.

Annual TSS and TP removal summary

Pollutant of Interest	Regulated Site Loading (lbs/yr)	Required Load Removal (lbs/yr)	Provided Load Reduction (lbs/yr)
Total Suspended Solids (TSS)	219	197 (90%)	216 (99%)
Total Phosphorus (TP)	1.21	0.91 (75%)	0.97 (78%)

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 September 26, 2024. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. Subsequently, 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.

The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. As of October 29, 2024 the amount due is \$1,272.

Rule M: Financial Assurance:

	Unit	Unit Cost	# of Units	Total
Rule C: Erosion Control				
Silt Fence	LF	\$2.50	375	\$938
Inlet Protection	EA	\$100	5	\$500
Rock Entrance	EA	\$250	1	\$250
Restoration of disturbance	Ac	\$2,500	0.69	\$1,725
Rule J: Stormwater Management Underground filtration system, sump manhole structures, the rainwater harvest and reuse system: 125% of engineer's opinion of cost (\$374,009*1.25)	EA	125% OPC	1	\$467,511
Chloride Management Plan	LS	\$5,000	1	\$5,000
Contingency (10%)		10%		\$47,592
Total Financial Assurance				\$523,516

Applicable General Requirements:

1. The RPBCWD Administrator and Engineer shall be notified at least three days prior to commencement of work.
2. 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.
3. The grant of the permit does not relieve the permittee of any responsibility to obtain approval of any other regulatory body with authority.
4. 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.
5. 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.
6. 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.

7. 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 will conform to Rules C and J if the Rule Specific Permit Conditions listed above are met.

Recommendation:

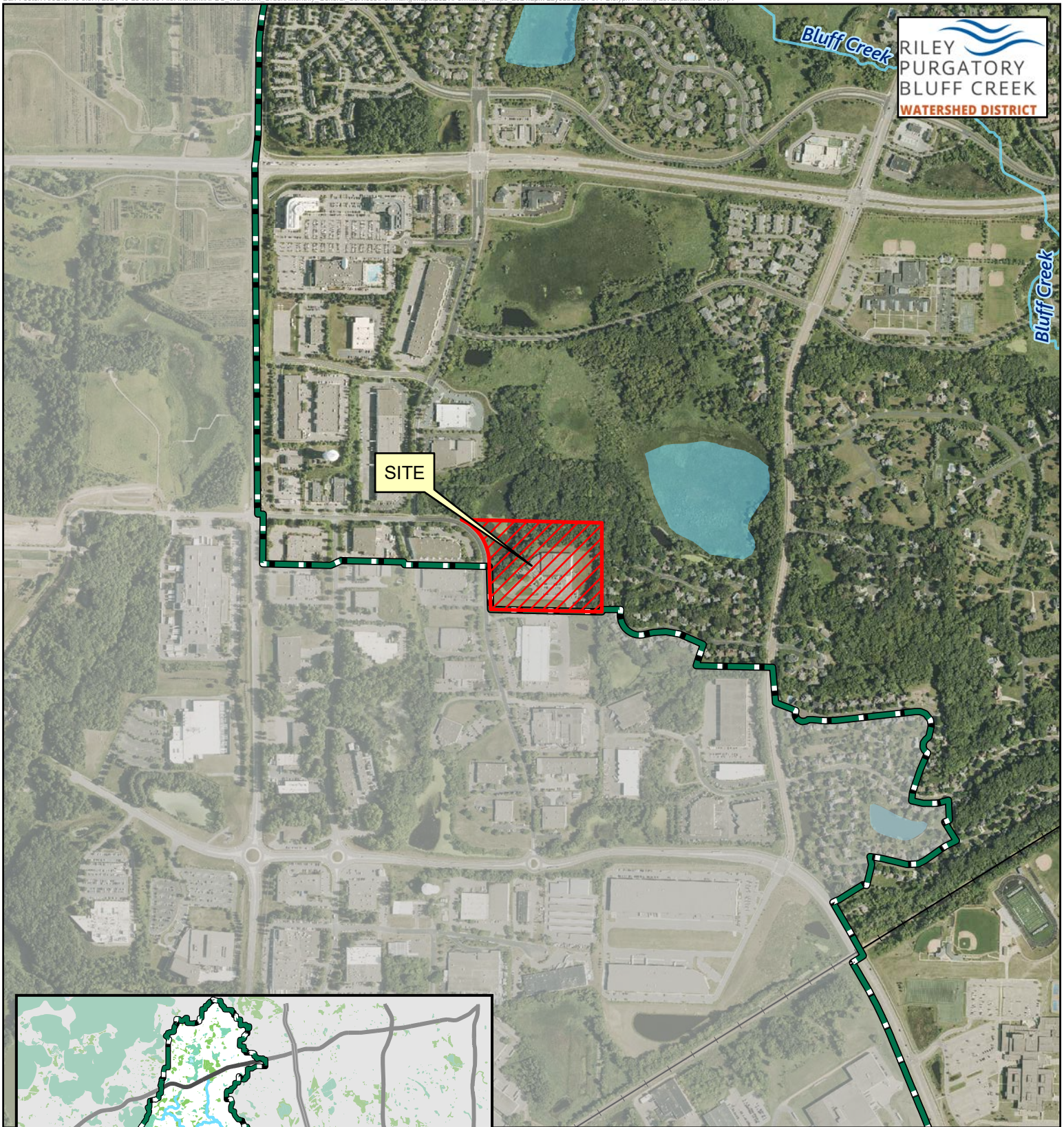
Approval, contingent upon:

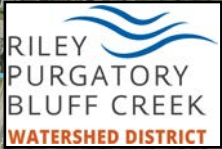
1. Financial Assurance in the amount of \$523,516.
2. Permit applicant must provide the name and contact information of the general contractor responsible for the site. RPBCWD must be notified if the responsible party changes during the permit term.
3. Receipt in recordation a maintenance declaration for the stormwater management facilities. The declaration must also include a stormwater reuse monitoring and reporting plan, including a map of the irrigation area. Drafts of the declaration must be approved by the District prior to recordation.
4. The applicant must replenish the permit fee deposit to the original amount due before the permit will be issued. The amount needed to replenish the permit fee deposit is \$1,272 as of October 29, 2024.
- 5.

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 pretreatment manholes and subsurface stormwater facility and reuse system conform to design specifications and function 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 constructed filtration facilities perform as designed. This may include filtration testing, flood testing, or other with prior approval from RPBCWD.
 - b. Documentation that disturbed pervious areas remaining pervious have been decompacted per Rule C.2c criteria.
4. 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 signed 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.



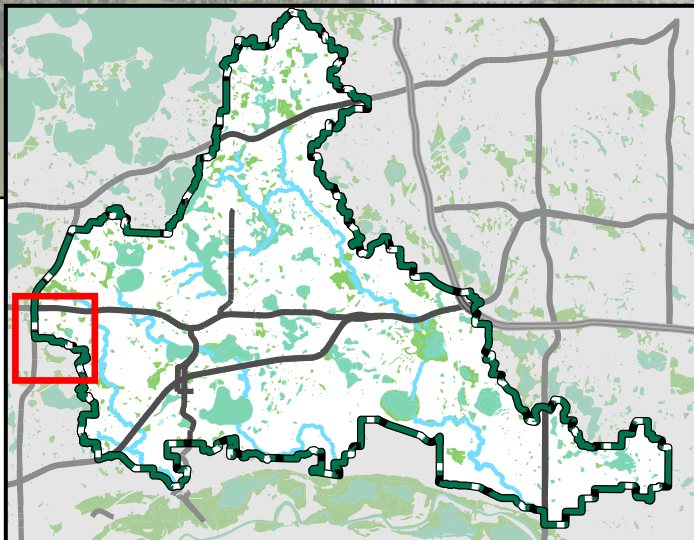
**RILEY
PURGATORY
BLUFF CREEK
WATERSHED DISTRICT**

SITE

Permit Location Map

**BIOLYPH PARKING
LOT EXPANSION
Permit 2024-077**

Riley Purgatory Bluff Creek
Watershed District



Feet



Construction Documents

for

Biolyph Parking Lot Expansion

Chaska, Minnesota

Presented by:
Martin Woody Architects

Client
EDWARD FARR ARCHITECTS, INC
7710 Golden Triangle Drive
Eden Prairie MN 55344

Project
BIOLYPH PARKING LOT EXPANSION

Location
CHASKA, MN

4275 NOREX DRIVE

Certification
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.

Brady D. Busseman
Brady D. Busseman
Registration No. 44579 Date: 9/24/2024
If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary
Designed: AXF Drawn: JMW
Approved: 806 Book / Page:
Phase: CO Initial Issued: 9/24/2024

Revision History
No. Date By Submittal / Revision
10/10/2024 WATERSHED COMMENTS

Sheet Title
TITLE SHEET

Sheet No. Revision
C1.01

Project No. 20068.01

CONSULTANT CONTACT LIST:

DEVELOPER/OWNER
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CONTACT: TIMOTHY PEARCY

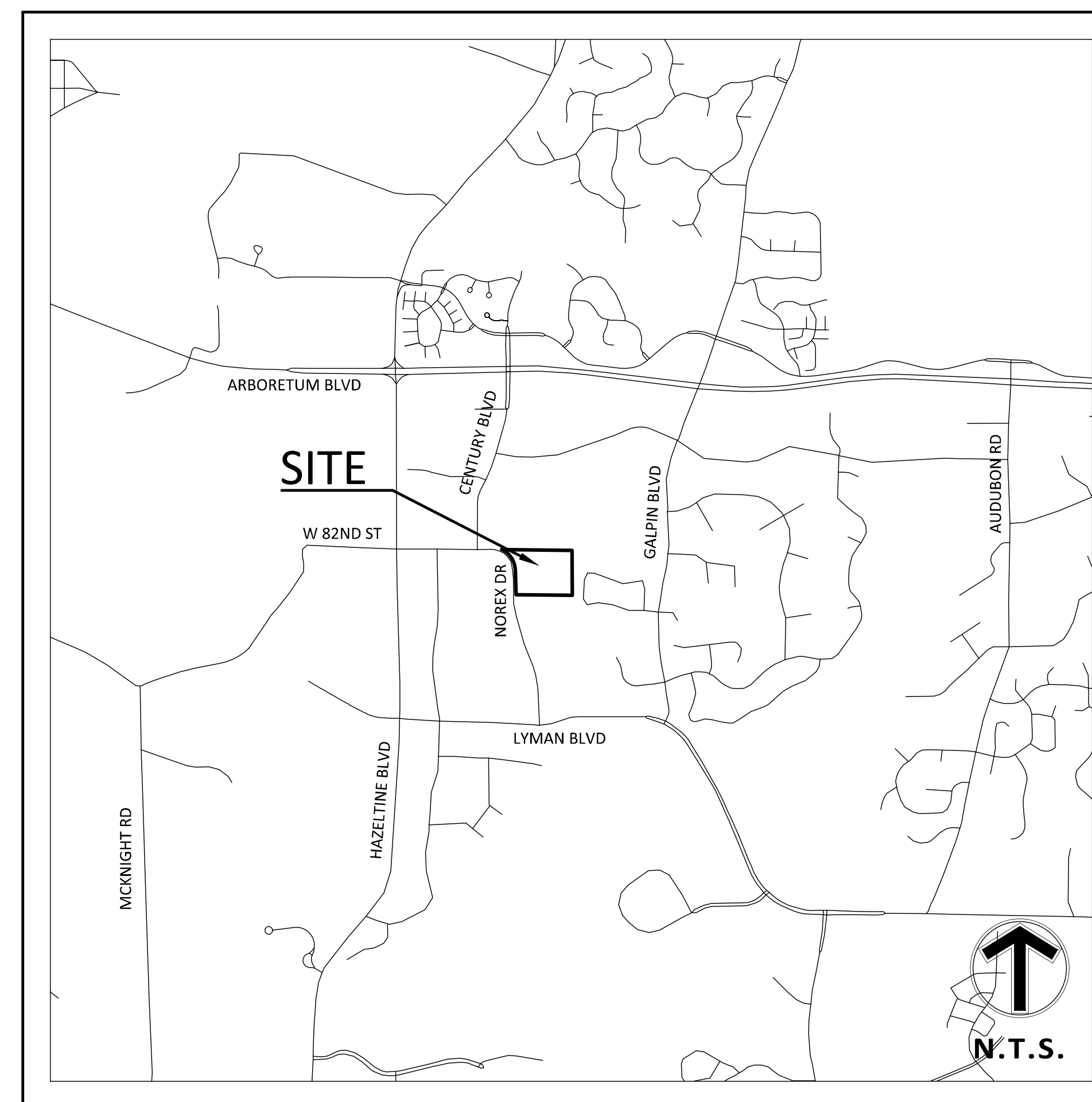
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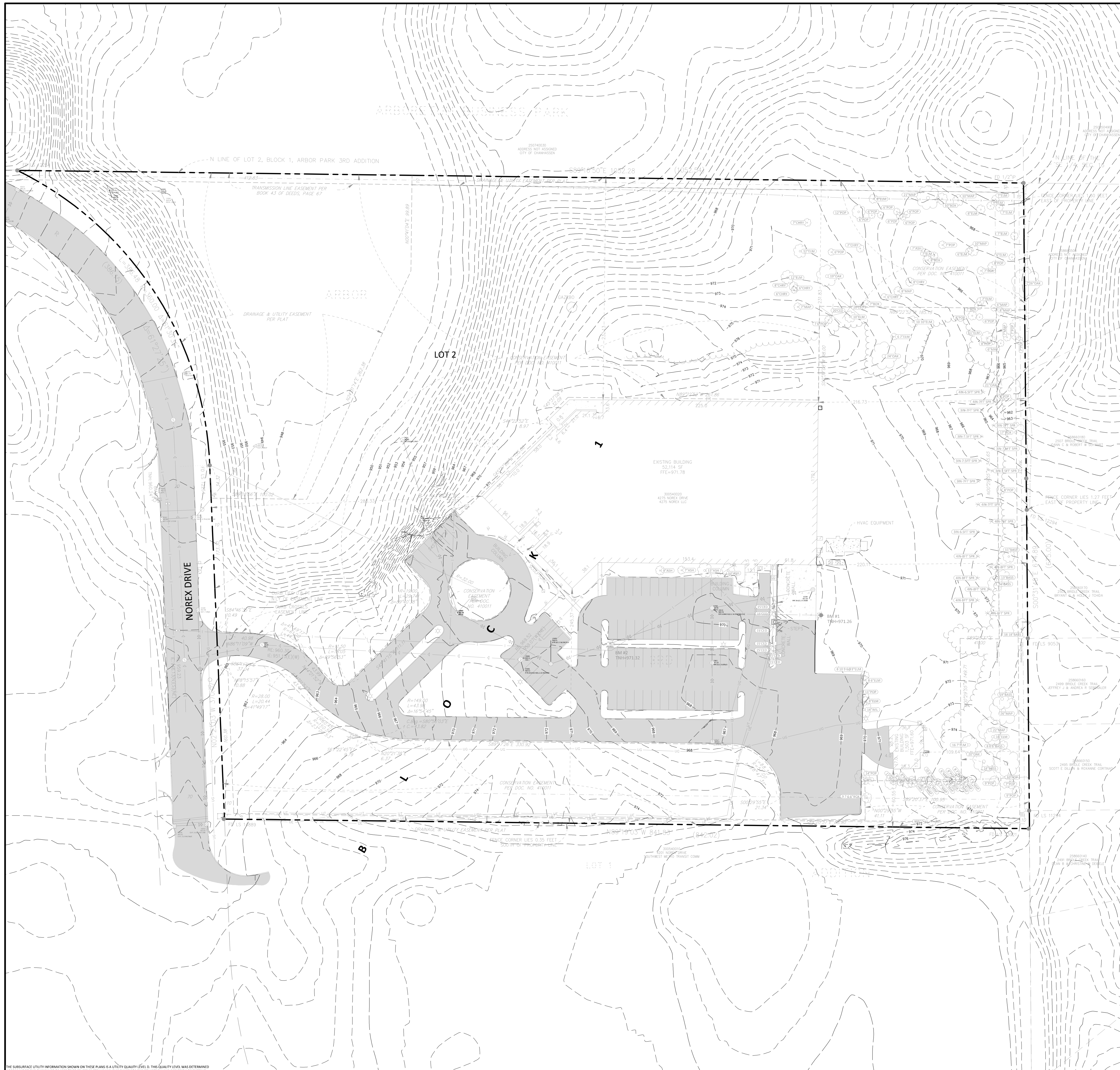
GEOTECHNICAL
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FAX 763-476-8532
CONTACT: JOHNNIE WORKMAN



VICINITY MAP
NO SCALE

SHEET INDEX	
SHEET	DESCRIPTION
C1.01	TITLE SHEET
C2.01	EXISTING CONDITIONS
C3.01	SITE PLAN
C4.01	GRADING AND EROSION CONTROL PLAN
C4.02	EROSION CONTROL NOTES AND DETAILS
C6.01	UTILITY PLAN
C9.01	DETAILS
L1.01	LANDSCAPE PLAN
L1.02	LANDSCAPE DETAILS AND NOTES



LEGEND

● FOUND MONUMENT	○ SET MONUMENT	⊗ ELECTRIC METER	⊗ LIGHT	⊗ AIR CONDITIONER	⊗ GUY ANCHOR	⊗ HANDICAP STALL	⊗ UTILITY POLE	⊗ POST	⊗ SIGN	⊗ WATERMAIN	⊗ SANITARY SEWER	⊗ STORM SEWER	⊗ FLARED END SECTION	⊗ ELECTRIC TRANSFORMER	⊗ TELEPHONE PEDESTAL	⊗ GAS METER	⊗ OVERHEAD WIRE	⊗ CHAIN LINK FENCE	⊗ IRON FENCE	⊗ WIRE FENCE	⊗ WOOD FENCE	--- EASEMENT LINE	--- SETBACK LINE	--- RESTRICTED ACCESS	--- CONCRETE CURB	--- BUILDING LINE	--- BUILDING CANOPY	--- BITUMINOUS SURFACE	--- CONCRETE SURFACE	--- LANDSCAPE SURFACE	--- DECIDUOUS TREE	--- CONIFEROUS TREE
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SURVEY NOTES

- The bearing system is based on the Carver County coordinate system, NAD83 (2011 Adjust). With an assumed bearing of South 89 degrees 16 minutes 50 seconds East for the North line of Lot 2, Arbor Park 3rd Addition.
- The vertical datum is based on NAVD88. The originating bench marks is MNDOT JON, referenced from the MNDOT Geodetic Database.
 - BENCHMARK #1
Top nut of hydrant on west side of Norex Drive. Elev.=960.24
 - BENCHMARK #2
Top nut of hydrant in parking lot south of building. Elev.=971.28
- Subject property's address is 4275 Norex Drive, Chaska, MN, its property identification number is 300540020.

SUBJECT PROPERTY

Description from title commitment:
Lot 2, Block 1, Arbor Park 3rd Addition, Carver County, Minnesota.

Abstract Property

Referencing Title Commitment No. 38171, dated 02/27/2014, that Commercial Partners Title, LLC as agent for Old Republic National Title Insurance Agency has provided us, the following comments on easements etc., that the property is subject to in Schedule B, Section 2 thereof using the same numbering system as in said Section 2. **Exception Items No's. 1-12 and 18 are not Survey related items.**

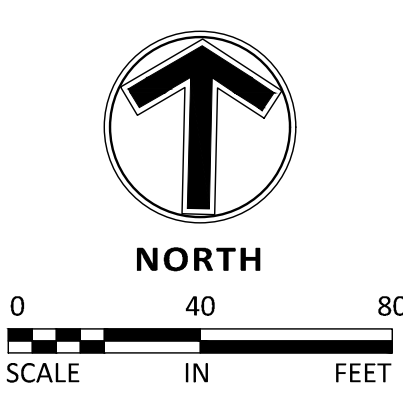
- Drainage and utility easement as shown on the recorded plat of Arbor Park, as partially vacated by Resolution No. 88-81 filed January 23, 1990, as Document No. 111619 filed February 6, 1990, as Document No. 111981 and by Resolution No. 88-110 filed March 12, 1991, as Document No. 122232. **Easements are shown on survey. The easement vacations do not affect the surveyed property.**
- Drainage and utility easement as shown on the recorded plat of Arbor Park 3rd Addition. **Easements are shown on survey.**
- Terms and conditions of Easement for electric transmission line purposes in favor of The Minnesota Valley Electric cooperative dated November 30, 1937, filed June 20, 1938 in Book 43 of deeds, Page 67. **Easement is shown on survey.**
- Terms and conditions of Easement Agreement for drainage and ditch purposes dated August 18, 1956, filed August 18, 1956 in Book 61 of Deeds, Page 204. **This item is not plotted hereon because it does not affect the subject property.**
- Terms and conditions of Grant of Easement for Conservation and Scenic Purposes dated March 1, 2005, filed March 18, 2005, as Document No. 410011. **Easement is shown on survey.**

THE SURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF AUSTIN UTILITY STANDARDS GUIDELINES FOR THE COLLECTION AND REPORTING OF EXISTING SUBSURFACE UTILITY DATA. THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTRACTING THE WORKER, THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TIE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND IF THE TIE LINE IS ACTIVE. NO DRAIN TIE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

Oct 10, 2024 - 9:21am - User: jwils L:\PROJECTS\20068.01\CA\DWG\Sheet\20068.01-C2-EXISTING.dwg



Client
EDWARD FARR ARCHITECTS, INC

7710 Golden Triangle Drive
Eden Prairie MN 55344

Project
BIOLYPH PARKING LOT EXPANSION

Location
CHASKA, MN

4275 NOREX DRIVE

Certification

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.

Brady D. Busseman
Brady D. Busseman

Registration No. 44579 Date: 9/24/2024

If applicable, contact us for a wet signed copy of this plan which is available upon request at Sambatek's, Minnetonka, MN office.

Summary

Designed: AXF Drawn: JMW

Approved: 806 Book / Page:

Phase: 00 Initial Issued: 9/24/2024

Revision History

No. Date By Submittal / Revision

10/10/2024 WATERSHED COMMENTS

Sheet Title
SITE PLAN

Sheet No. Revision
C3.01

Project No. 20068.01

LEGEND

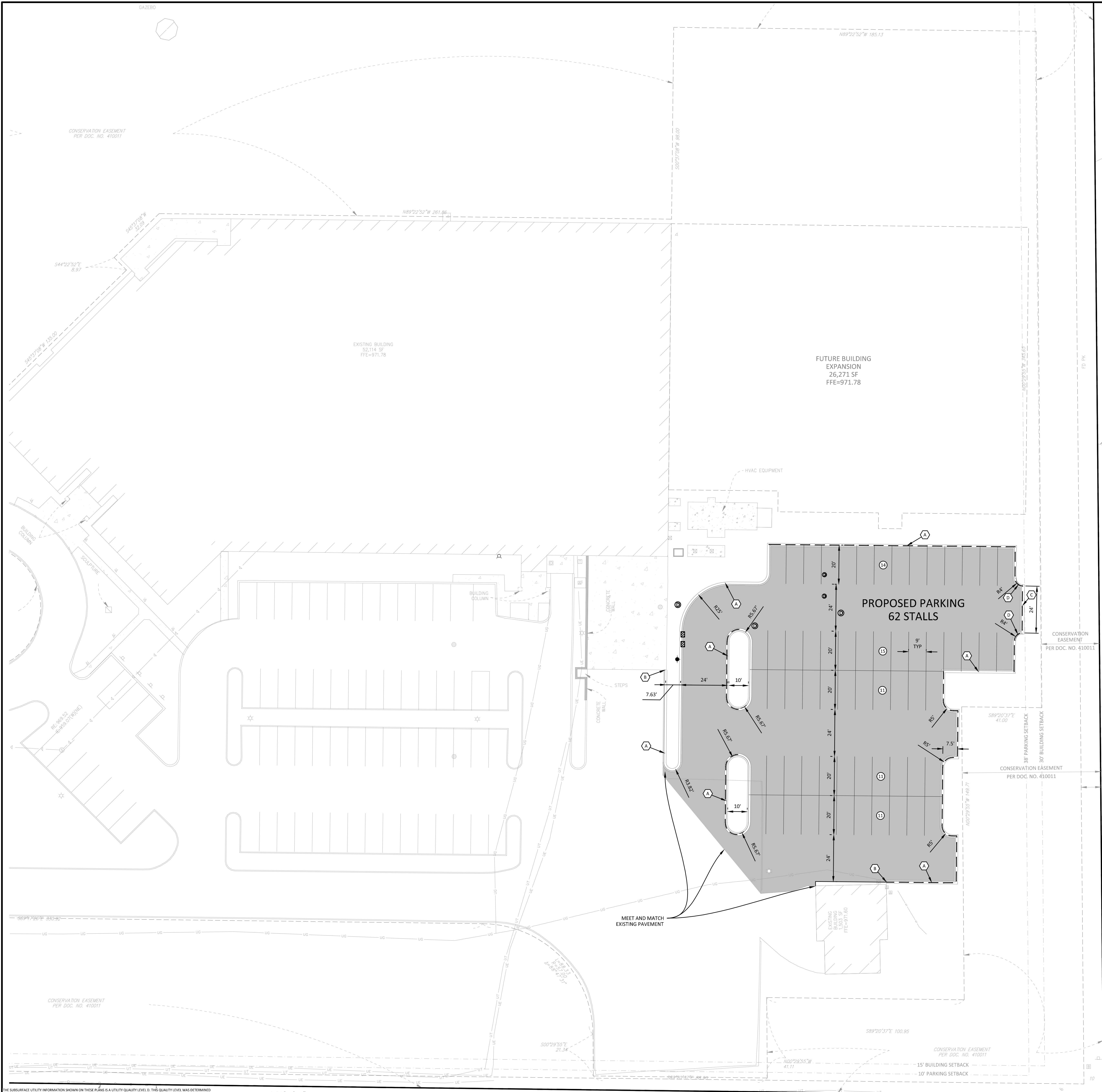
	PROPOSED	EXISTING	PROPOSED STANDARD DUTY ASPHALT PAVING
PROPERTY LIMIT	---	---	---
CURB & GUTTER	---	---	---
TIP-OUT GUTTER	---	---	---
EASEMENT	---	---	---
BUILDING	---	---	---
RETAINING WALL	---	---	---
WETLAND LIMITS	---	---	---
TREELINE	---	---	---
SAWCUT LINE	---	---	---
SIGN	---	---	---
PIPE BOLLARD	---	---	---
NUMBER OF PARKING STALLS PER ROW	---	---	---
KEY NOTE	---	---	---
			CONCRETE PAVING
			CONCRETE SIDEWALK

DEVELOPMENT SUMMARY

AREA	591,846 SF	13.59 AC
GROSS SITE AREA		
DISTURBED AREA	30,135 SF	0.69 AC
PARKING		
EXISTING STALLS	79	
PROPOSED STALLS	62	
TOTAL STALLS	141	
ZONING		
EXISTING ZONING		PID-2
PROPOSED ZONING		PID-2
SETBACKS		
BUILDING	30 FT	
PARKING	5 FT	

- DEVELOPMENT NOTES**
- ALL DIMENSIONS ARE ROUNDED TO THE NEAREST TENTH FOOT.
 - ALL DIMENSIONS SHOWN ARE TO THE FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB. ALL OTHER AREAS SHALL BE CONSTRUCTED AS "GUTTER IN" CURB. COORDINATE WITH GRADING CONTRACTOR.
 - ALL AREAS ARE ROUNDED TO THE NEAREST SQUARE FOOT.
 - ALL PARKING STALLS TO BE 9' IN WIDTH AND 20' IN LENGTH UNLESS OTHERWISE INDICATED.
 - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF EXIT PORCHES, RAMPS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
 - SEE ARCHITECTURAL PLANS FOR PYLON SIGN DETAILS
 - SEE ARCHITECTURAL PLANS FOR LIGHT POLE FOUNDATION DETAIL AND FOR EXACT LOCATIONS OF LIGHT POLE.
 - ALL GRADIENTS ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20), EXCEPT AT CURB RAMPS (1:12), AND A MAXIMUM CROSS SLOPE OF 2.08% (1:48). THE MAXIMUM SLOPE IN ANY DIRECTION ON AN ADA PARKING STALL OR ACCESS AISLE SHALL BE 2.08% (1:48). THE CONTRACTOR SHALL REVIEW AND VERIFY THE GRADIENT IN THE FIELD ALONG THE ADA ROUTES PRIOR TO PLACING CONCRETE OR BITUMINOUS PAVEMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY BETWEEN THE GRADIENT IN THE FIELD VERSUS THE DESIGN GRADIENT AND COORDINATE WITH GRADING CONTRACTOR.
 - "NO PARKING" SIGNS SHALL BE PLACED ALONG ALL DRIVEWAYS AS REQUIRED BY CITY.

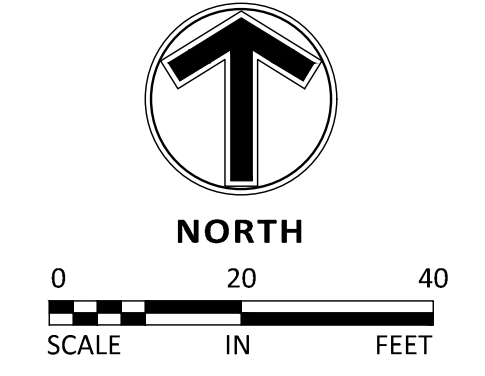
- KEY NOTES**
- B-612 CONCRETE CURB AND GUTTER (SEE DETAIL 01, SHEET C9.01) (TIP OUT LOCATION PER LEGEND)
 - END SECTION CURB AND GUTTER (SEE DETAIL 02, SHEET C9.01)
 - MOUNTABLE CURB AND GUTTER (SEE DETAIL 04, SHEET C9.01)
 - CURB TRANSITION



THE SURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF AUC 2010. THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING SUBSURFACE UTILITY DATA. THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE COLLECTION AND VERIFICATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. BY CONTRACTING THE WORK HEREON, THE CONTRACTOR AND/OR SUBCONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES UNDERGROUND AND OVERHEAD.

IF THE CONTRACTOR ENCOUNTERS ANY DRAIN TILE WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, INVERT AND IF THE TILE LINE IS ACTIVE. NO DRAIN TILE SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

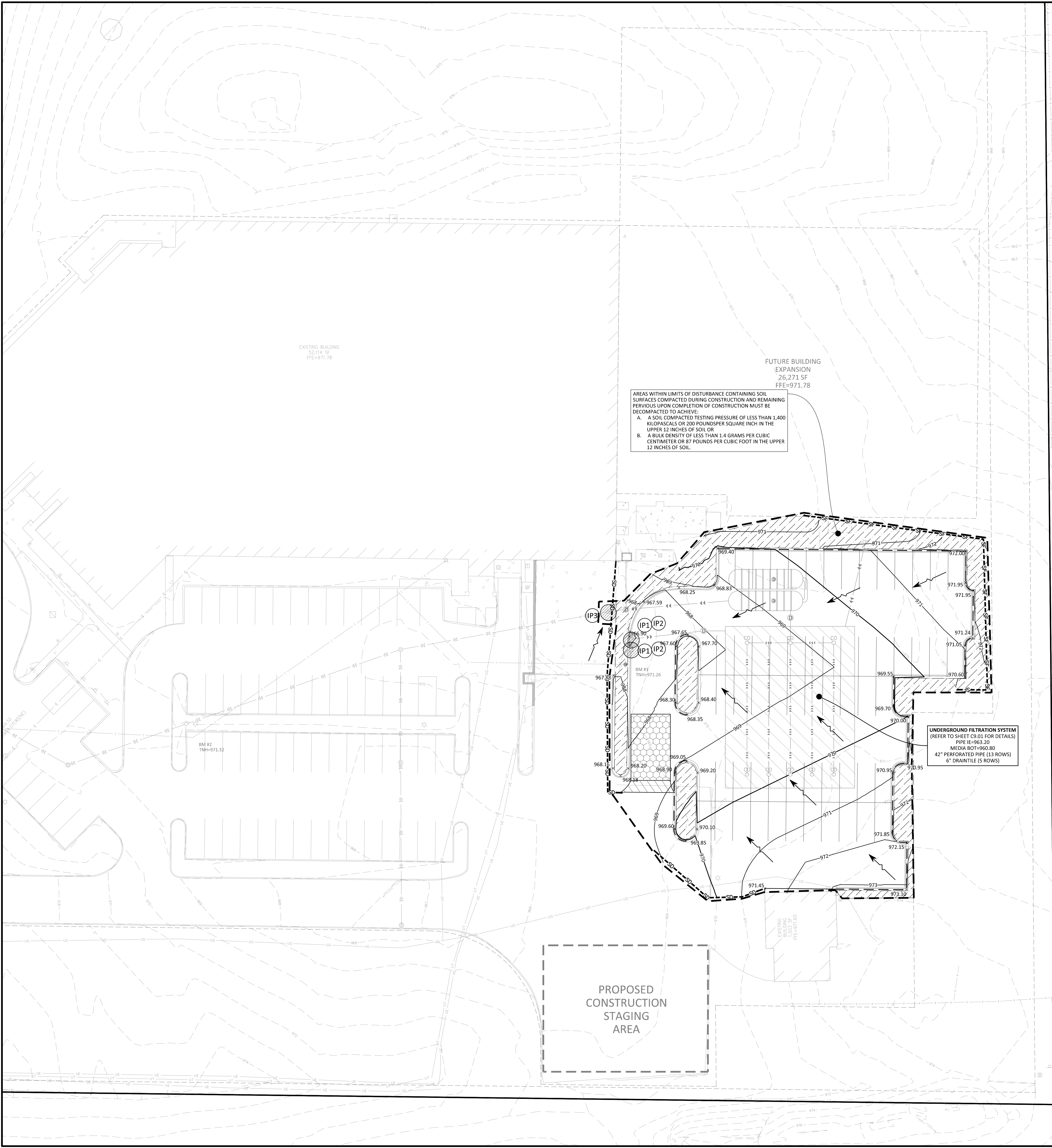
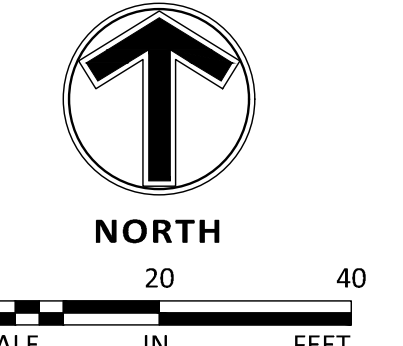


	PROPOSED	EXISTING
PROPERTY LIMIT	---	---
CURB & GUTTER	---	---
TIP OUT GUTTER	---	---
STORM SEWER	---S---	---
DRAINILE	---	---
BUILDING	---	---
RETAINING WALL	---	---
WETLAND LIMITS	---	---
TREELINE	---	---
SPOT ELEVATION	902.5	902.5
CONTOUR	---	---
RIP RAP	---	---
OVERFLOW ELEV.	EOE	---
SOIL BORINGS	---	---
LIMITS OF DISTURBANCE	---	---
AREAS OF DECOMPACTION	---	---
DIRECTION OF OVERLAND FLOW	---	---
TEMPORARY DIVERSION DITCH	---	---
CHECK DAM	---	---
LIMITS OF DRAINAGE SUB-BASIN	---	---
BIO-ROLL	---	---
INLET PROTECTION DEVICE 1	IP-1	---
INLET PROTECTION DEVICE 2	IP-2	---
TEMPORARY STONE CONSTRUCTION ENTRANCE	---	---
TEMPORARY SEDIMENT BASIN	SB	---
TEMPORARY STORAGE AND PARKING AREA	TS	---
TEMPORARY STABILIZATION MEASURES (SEED, MULCH, MATS OR BLANKETS AS OUTLINED IN THE SWPPP)	TSM	---

GRADING NOTES

- PROPOSED CONTOURS ARE TO FINISHED SURFACE ELEVATION. SPOT ELEVATIONS ALONG PROPOSED CURB DENOTE GUTTER GRADE.
- CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "GUTTER OUT" WHERE WATER DRAINS AWAY FROM CURB. ALL OTHER AREAS SHALL BE CONSTRUCTED AS "GUTTER IN" CURB.
- ALL GRADIENT ON SIDEWALKS ALONG THE ADA ROUTE SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 5% (1:20), EXCEPT AT CURB RAMPS (1:12), AND A MAXIMUM CROSS SLOPE OF 2.08% (1:48). MAXIMUM SLOPE IN ANY DIRECTION ON AN ADA PARKING STALL OR ACCESS AISLE SHALL BE IN 2.08% (1:48). CONTRACTOR SHALL REVIEW AND VERIFY THE GRADIENT IN THE FIELD ALONG THE ADA ROUTES PRIOR TO PLACING CONCRETE OR BITUMINOUS. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THERE IS A DISCREPANCY BETWEEN THE GRADIENT IN THE FIELD VERSUS THE DESIGN GRADIENT. COORDINATE ALL WORK WITH PAVING CONTRACTOR.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
- CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
A GEOTECHNICAL ENGINEERING SOILS REPORT HAS BEEN COMPLETED BY:
COMPANY: NORTHERN TECHNOLOGIES, INC.
ADDRESS: 1408 NORTHLAND DRIVE #107, MENDOTA HEIGHTS, MN 55120
PHONE: 651-389-1191
DATED: 6-5-2014
CONTRACTOR SHALL OBTAIN A COPY OF THE SOILS REPORT.
- CONTRACTOR SHALL COMPLETE DEWATERING AS REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION.
- PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL SHALL BE PERFORMED ON THE STREET AND PARKING AREA SUBGRADE. CONTRACTOR SHALL PROVIDE A LOAD SPREADING TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.
- REPLACE ALL SUBGRADE SOIL DISTURBED DURING THE CONSTRUCTION THAT HAVE BECOME UNSUITABLE AND WILL NOT PASS A TEST ROLL. REMOVE UNSUITABLE SOIL FROM THE SITE AND IMPORT SUITABLE SOIL AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
- EXISTING TREES AND OTHER NATURAL VEGETATION WITHIN THE PROJECT AND/OR ADJACENT TO THE PROJECT ARE OF PRIME CONCERN TO THE CONTRACTOR'S OPERATIONS AND SHALL BE A RESTRICTED AREA. CONTRACTOR SHALL PROTECT TREES TO REMAIN AT ALL TIMES. EQUIPMENT SHALL NOT NECESSARILY BE OPERATED UNDER NEARBY TREES AND EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING ADJACENT TO TREES. SHOULD ANY PORTION OF THE TREE BRANCHES REQUIRE REMOVAL TO PERMIT OPERATION OF THE CONTRACTOR'S EQUIPMENT, CONTRACTOR SHALL OBTAIN THE SERVICES OF A PROFESSIONAL TREE TRIMMING SERVICE TO TRIM THE TREES PRIOR TO THE BEGINNING OF OPERATION. SHOULD CONTRACTOR'S OPERATIONS RESULT IN THE BREAKING OF ANY LIMBS, THE BROKEN LIMBS SHOULD BE REMOVED IMMEDIATELY AND CUTS SHALL BE PROPERLY PROTECTED TO MINIMIZE ANY LASTING DAMAGE TO THE TREE. NO TREES SHALL BE REMOVED WITHOUT AUTHORIZATION BY THE ENGINEER. COSTS FOR TRIMMING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONSTRUCTION AND NO SPECIAL PAYMENT WILL BE MADE.
- EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. CONTRACTOR SHALL SUBCUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES. TOPSOIL SHALL CONTAIN AT LEAST 5% ORGANIC CONTENT, CONSISTENT WITH THE RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT DEFINITION.
- TRENCH BORROW CONSTRUCTION: IF ALLOWED BY THE OWNER, CONTRACTOR SHALL COMPLETE "TRENCH BORROW" EXCAVATION IN AREAS DIRECTED BY THE ENGINEER IN ORDER TO OBTAIN STRUCTURAL MATERIAL. TREES SHALL NOT BE REMOVED OR DAMAGED AS A RESULT OF THE EXCAVATION, UNLESS APPROVED BY THE ENGINEER. THE EXCAVATION SHALL COMMENCE A MINIMUM OF 10 FEET FROM THE LIMIT OF THE BUILDING PAD. THE EXCAVATION FROM THIS LIMIT SHALL EXTEND AT A MINIMUM SLOPE OF 1 FOOT HORIZONTAL TO 1 FOOT VERTICAL (1:1) DOWNWARD AND OUTWARD FROM THE FINISHED SURFACE GRADE ELEVATION. THE TRENCH BORROW EXCAVATION SHALL BE BACKFILLED TO THE PROPOSED FINISHED GRADE ELEVATION, AND SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE QUALITY CONTROL METHOD AS OUTLINED IN MINNDOT SPECIFICATION 2105.3P2. SNOW FENCE SHALL BE FURNISHED AND PLACED ALONG THE PERIMETER OF THE TRENCH BORROW AREA WHERE THE SLOPES EXCEED 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1).
- FINISHED GRADING SHALL BE COMPLETED. CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISHED GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED, ERODED OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
- TOLERANCES.
15.a. THE COMMERCIAL BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.10 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
15.b. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
15.c. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
15.d. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
- AFTER THE SITE GRADING IS COMPLETED, IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
- CONTRACTOR SHALL DETERMINE THE LOCATION OF ANY HAIL ROADS THAT MAY BE REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION AND SHALL INDICATE HAIL ROADS ON EROSION AND SEDIMENT CONTROL "SITE MAP". CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OF EACH ROADWAY. CONTRACTOR SHALL POST WHATEVER SECURITY, AND COMPLY WITH ALL CONDITIONS WHICH ARE REQUIRED BY EACH GOVERNING AUTHORITY OF EACH ROADWAY.
- CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS TO RILEY PURGATORY BLUFF CREEK WATERSHED DISTRICT AT THE TIME OF FINAL STABILIZATION THAT DEMONSTRATE THE STORMWATER MANAGEMENT FACILITIES CONFORM TO THE APPROVED DESIGN.

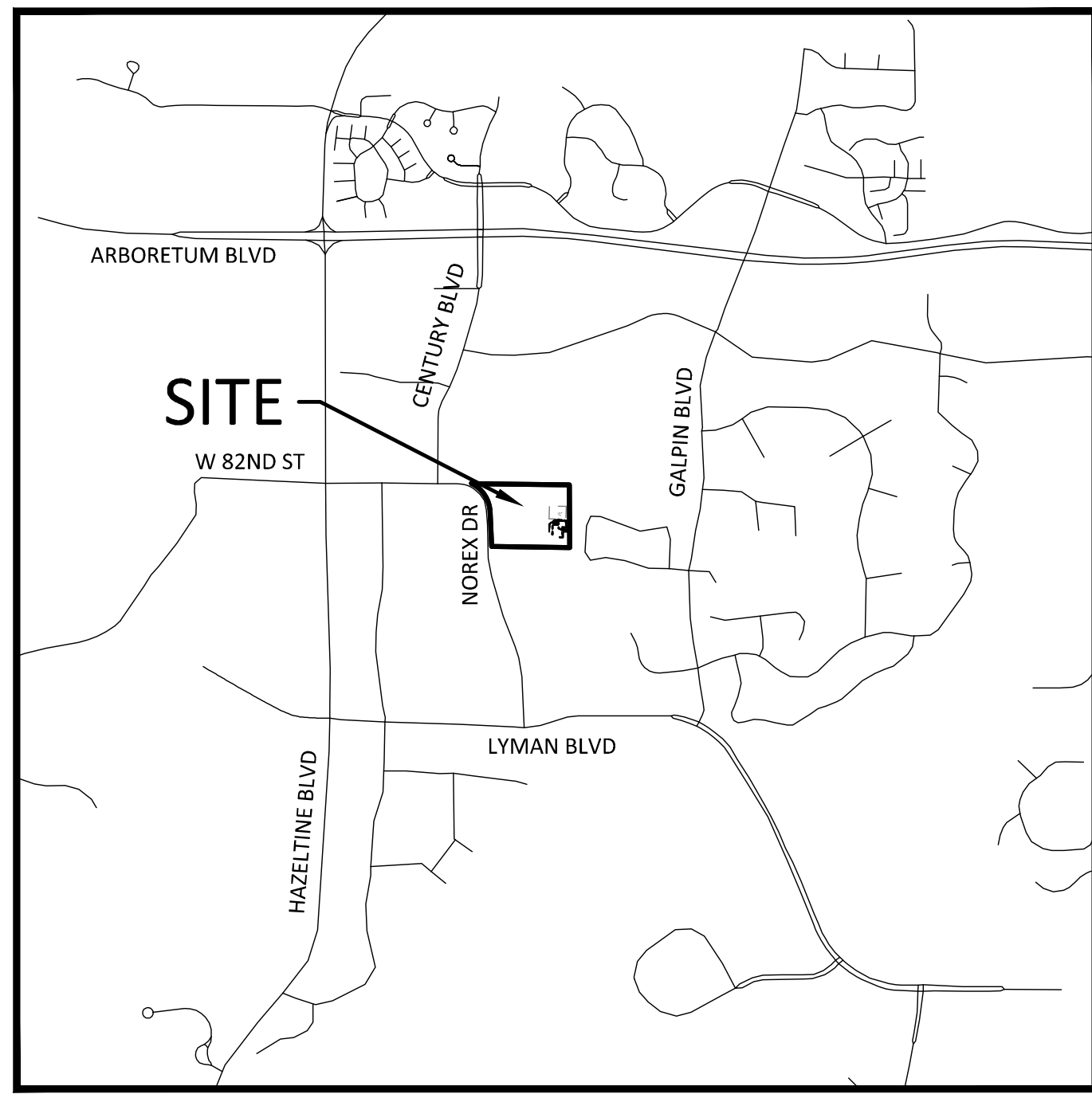
THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL 1. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF THE MNSOILS REPORT. THESE PLANS INDICATE THE LOCATION AND DEPTH OF EXISTING SUBSURFACE UTILITY DATA. THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CORRECTING THE NOTIFICATION CENTER COORDINATE SYSTEM FOR MINNESOTA. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHO MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PREPARE ANY AND ALL UTILITIES UNDERGROUND AND OVERHEAD.
IF THE CONTRACTOR ENCOUNTERS ANY UNKNOWN UTILITIES WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE LINE IS ACTIVE, AND DRAW THE SAME BE MARKED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



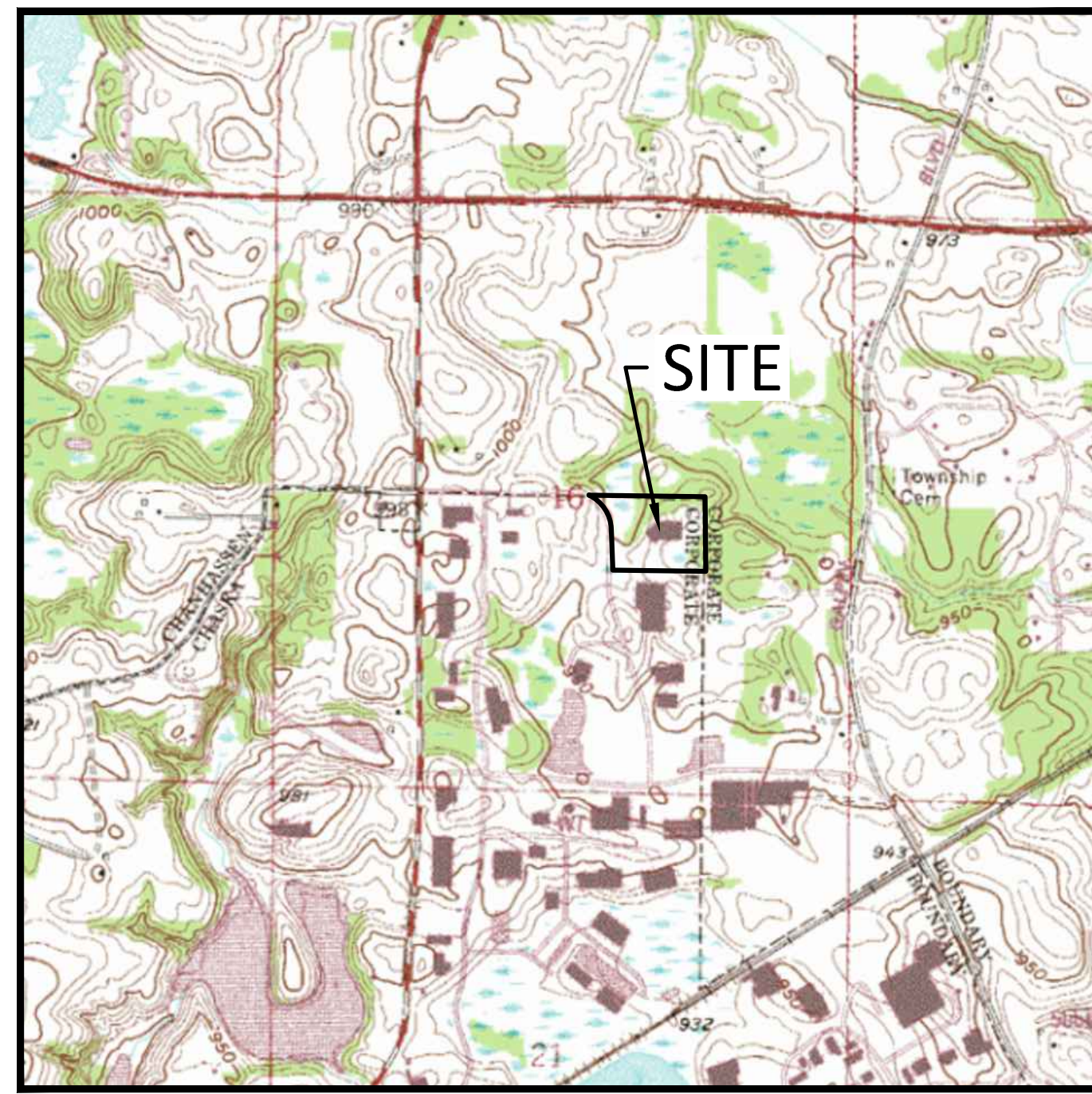
AREAS WITHIN LIMITS OF DISTURBANCE CONTAINING SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERVIOUS UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTION TO ACHIEVE:
A. A SOIL COMPACTED TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL OR
B. A BULK DENSITY OF LESS THAN 1.4 GRAMS PER CUBIC CENTIMETER OR 87 POUNDS PER CUBIC FOOT IN THE UPPER 12 INCHES OF SOIL.

UNDERGROUND FILTRATION SYSTEM
(REFER TO SHEET CS-01 FOR DETAILS)
PIPE I#-963.20
MEDIA BOT#-960.80
42" PERFORATED PIPE (13 ROWS)
6" DRAINILE (5 ROWS)

EROSION & SEDIMENTATION CONTROL NOTES & DETAILS / "SITE MAP"



SITE LOCATION MAP
NOT TO SCALE



USGS MAP
NOT TO SCALE

AREA SUMMARY IN ACRES

PRE - CONSTRUCTION IMPERVIOUS	0.03 AC±
PROPOSED NEW IMPERVIOUS	0.52 AC±
PROPOSED SEEDED AREA	0.17 AC±
TOTAL DISTURBED	0.69 AC±

GENERAL EROSION NOTES:

- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONAL STANDARD SPECIFICATIONS AND SAMBATEK STANDARD SPECIFICATIONS, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
- THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (EROSION & SEDIMENTATION CONTROL PLAN-ESC PLAN), THE STANDARD DETAILS, THE PLAN NARRATIVE, AND ITS APPENDICES, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING & SUBMITTING THE APPLICATION FOR THE MPCA GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE STATE OF MINNESOTA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THE CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION.
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP & PERMITS. CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, IS APPROVED BY ALL AUTHORITIES, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MPCA BY EITHER THE OWNER OR OPERATOR AS APPROVED ON PERMIT. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- CONTRACTOR SHALL COMPLY WITH TRAINING REQUIREMENTS IN PART III.2 OF THE GENERAL PERMIT.
- BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- ESC PLAN MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE ESC PLANS SHALL BE CLEARLY DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS. GROUND DISTURBING ACTIVITIES MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE.
- GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC) MUST BE LIMITED TO A DEFINED AREA OF THE SITE AND SHALL BE CONTAINED AND PROPERLY TREATED OR DISPOSED. NO ENGINE DEGREASING IS ALLOWED ON SITE.
- ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER IS NOT ACCEPTABLE. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE DELIVERY OPERATORS TO UTILIZE THE PROPER FACILITIES. SELF-CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS ARE ALLOWED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- SOLID WASTE: COLLECTED SEDIMENT, ASPHALT & CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION & DEMOLITION DEBRIS & OTHER WASTES MUST BE DISPOSED OF PROPERLY & MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
- HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT & ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE & DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE SWPPP, SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO SUSTAINING DISTURBING ACTIVITIES UPSLOPE.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEEDED, WITHIN 14 DAYS OF INACTIVITY. SEEDING SHALL BE IN ACCORDANCE WITH MN/DOT SEED MIXTURE NUMBER 21-111 OR 21-112 DEPENDING ON THE SEASON OF PLANTING (SEE MN/DOT SPECIFICATION SECTION 2575.3) SEEDING METHOD AND APPLICATION RATE SHALL CONFORM TO MN/DOT SPECIFICATION SECTION 2575.3. TEMPORARY MULCH SHALL BE APPLIED IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3F1 AND 2575.3G. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER IN ACCORDANCE WITH MN/DOT SPECIFICATION SECTION 2575.3H MAY BE USED IN PLACE OF TEMPORARY MULCH.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE TIME TABLE DESCRIBED ABOVE. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR VEGETATIVE COVER.
- CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN, CONVEYANCES, OR DRAINAGEWAYS DISCHARGING OFF-SITE OR TO SURFACE WATERS. THE CLEANOUT OF PERMANENT BASINS MUST BE SUFFICIENT TO RETURN THE BASIN TO DESIGN CAPACITY.
- ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, CHECK DAMS, INLET PROTECTION DEVICES, ETC) TO PREVENT EROSION.
- ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

MAINTENANCE NOTES:

- ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
- ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.
- TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART IV.D. OF THE GENERAL PERMIT).
- SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY PROXIM. CONTRACTOR MUST REMOVE ALL SILTS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGEWAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. PRE-CLEANING, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.
- CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL OFF-SITE PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART IV.C. OF THE GENERAL PERMIT.
- CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND PERMANENT WATER QUALITY MANAGEMENT BMP'S, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMP'S FOR THE PERMIT AREA OF THE CONSTRUCTION WORK AT THE SITE. THE PERMITTEE SHALL BE RESPONSIBLE UNTIL ANOTHER PERMITTEE ASSUMES CONTROL (ACCORDING TO PART I.B.5. OF THE MPCA GENERAL PERMIT) OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED OR THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.
- IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).
- ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

RPBCWD NOTES:

- NATURAL TOPOGRAPHY AND SOIL CONDITIONS MUST BE PROTECTED, INCLUDING RETENTION ON-SITE 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 PREVENT EROSION DURING 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 BMP'S 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 BMP'S MUST BE MAINTAINED UNTIL COMPLETION OF CONSTRUCTION AND VEGETATION IS ESTABLISHED SUFFICIENTLY TO ENSURE STABILITY OF THE SITE, AS DETERMINED BY THE DISTRICT.
- SOIL SURFACES COMPACTED DURING CONSTRUCTION AND REMAINING PERSISTENT UPON COMPLETION OF CONSTRUCTION MUST BE DECOMPACTED TO ACHIEVE:
 - A SOIL COMPACTION TESTING PRESSURE OF LESS THAN 1,400 KILOPASCALS OR 200 POUNDS PER SQUARE INCH IN THE UPPER 12 INCHES OF SOIL OR
 - A BULK DENSITY OF LESS THAN 1.4 GRAMS PER CUBIC CENTIMETER OR 87 POUNDS PER CUBIC FOOT IN THE UPPER 12 INCHES OF SOIL. IN ADDITION, UTILITIES, TREE ROOTS AND OTHER EXISTING VEGETATION MUST BE PROTECTED UNTIL FINAL VEGETATION OR OTHER STABILIZATION OF THE SITE.
- 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.

SEQUENCE OF CONSTRUCTION

- PHASE I:
- INSTALL STABILIZED CONSTRUCTION ENTRANCES.
 - PREPARE TEMPORARY PARKING AND STORAGE AREA.
 - CONSTRUCT THE SILT FENCES ON THE SITE.
 - CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
 - HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMP'S. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
 - CLEAR AND GRUB THE SITE.
 - BEGIN GRADING THE SITE.
 - START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
- PHASE II:
- TEMPORARILY SEED DENUDED AREAS.
 - INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
 - INSTALL RIP RAP AROUND OUTLET STRUCTURES.
 - INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
 - PREPARE SITE FOR PAVING.
 - PAVE SITE.
 - INSTALL INLET PROTECTION DEVICES.
 - COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
 - REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED), IF REQUIRED BY THE CONTRACT

EROSION CONTROL MATERIALS QUANTITIES

ITEM	UNIT	QUANTITY
SILT FENCE	LINEAR FEET	185
SILT DIKE	LINEAR FEET	190
BIO-ROLL	LINEAR FEET	0
CONSTRUCTION ENTRANCE	UNIT	1
INLET PROTECTION DEVICE (IP-1)	UNIT	2
INLET PROTECTION DEVICE (IP-2)	UNIT	2
INLET PROTECTION DEVICE (IP-3)	UNIT	1

1 SILT FENCE

N.T.S.



ALL POSTS, GEOTEXTILE MATERIAL AND FASTENERS SHALL COMPLY WITH MN/DOT SPECIFICATION 3886 AND TABLE 3886-1.

2 CONSTRUCTION ENTRANCE

N.T.S.



NOTE: ROCK EXITS SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE WORK. ROCK EXITS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. MAINTENANCE OF ROCK EXITS SHALL INCLUDE A TOP DRESSING OF NEW GRAVEL, OR REMOVAL AND REPLACEMENT OF THE GRAVEL AS NEEDED, TO KEEP THE EXITS FREE FROM COLLECTED MUDD.

3 SILT DIKE ON PAVEMENT

N.T.S.



NOTES:
1. INSTALLED SILT DIKE UNIT SHALL HAVE CONTINUOUS AND FIRM CONTACT WITH PAVEMENT.
2. ADHESIVES SHALL BE LIQUID NAIL OR APPROVED EQUAL FOR CONCRETE PAVEMENT APPLICATIONS AND EMULSIFIED ASPHALT FOR ASPHALT APPLICATIONS. ADHESIVE SHALL BE PLACED WHERE THE UNITS OVERLAP AND A 20" STRIP ALONG BOTH EDGES.



ISOMETRIC VIEW



IN-PLACE ELEVATION VIEW

SPECIFICATIONS AND STANDARDS

- AISC MANUAL OF STEEL CONSTRUCTION, 9TH EDITION.
- AWI STRUCTURAL WELDING CODE STEEL D1.14K.
- 79 CFR 191.300A SAFETY AND HEALTH STANDARDS.

DESIGN LOADS

ALLOWABLE AXLE WEIGHT LOAD: 20000 LBS.

SAFETY FACTOR: 2:1

WATER FLOW RATE (THROUGH POLYESTER FILTER): 0.476 CFS @ 3" HEAD, 1.074 CFS @ 15" HEAD

MAXIMUM OVERFLOW RATE: 1.113 CFS @ 6" HEAD, 1.575 CFS @ 12" HEAD

AVAILABILITY STOCK



HIGH-FLOW FABRIC (MIRAFIX FF101)

ROAD DRAIN CASTING APPLICABILITY: NENAH R-3067, NENAH R-3512



WOVEN WIRE FENCE WITH SILT FENCE MATERIAL COVER

1. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 1" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY AS DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART.

2. WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED ACROSS TWO POSTS.

3. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FABRIC. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SILT FENCE MATERIAL ABOVE GRADE.

4. ALL SILT FENCE INLETS SHALL INCLUDE WIRE SUPPORT.

4 IP-3

N.T.S.

5 IP-2

N.T.S.

6 IP-1

N.T.S.

SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	
TEMPORARY CONTROL MEASURES																			
STRIP & STOCKPILE TOPSOIL																			
ROUGH GRADE / SEDIMENT CONTROL																			
TEMPORARY CONSTRUCTION ROADS																			
FOUNDATION / BUILDING CONSTRUCTION																			
SITE CONSTRUCTION																			
PERMANENT CONTROL STRUCTURES																			
FINISH GRADING																			
LANDSCAPING / SEED / FINAL STABILIZATION																			
STORM FACILITIES																			

NOTE: CONTRACTOR OR GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

ANTICIPATED APPROXIMATE TIMELINE:
ESTIMATED PROJECT START DATE: 05/08/2021
ESTIMATED PROJECT COMPLETION DATE: 07/01/2021

DEVELOPER/OWNER:
BIOLYPH
4275 NOREX DRIVE
CHASKA, MN 55318
952-936-0990
CONTACT: TIMOTHY PEARY

SITE OPERATOR / GENERAL CONTRACTOR:
METRO PAVING
14350 NORTHDALE BOULEVARD
ROGERS, MN 55374
763-426-4822
CONTACT: MIKE NEWCOMB

SUPERINTENDENT:

STORM SEWER STRUCTURE SCHEDULE		
NUMBER	TYPE	CASTING*
CB 102	GRATE	R-3067
CB 103	GRATE	R-3067
STMH 101	SOLID	R-1642
OCS 100	SOLID	R-1642

*INDICATES NEENAH FOUNDRY CASTING NO., OR APPROVED EQUAL
NOTE: CONTRACTOR AND THEIR SUPPLIER SHALL DETERMINE THE MINIMUM DIAMETER REQUIRED FOR EACH STORM SEWER STRUCTURE.

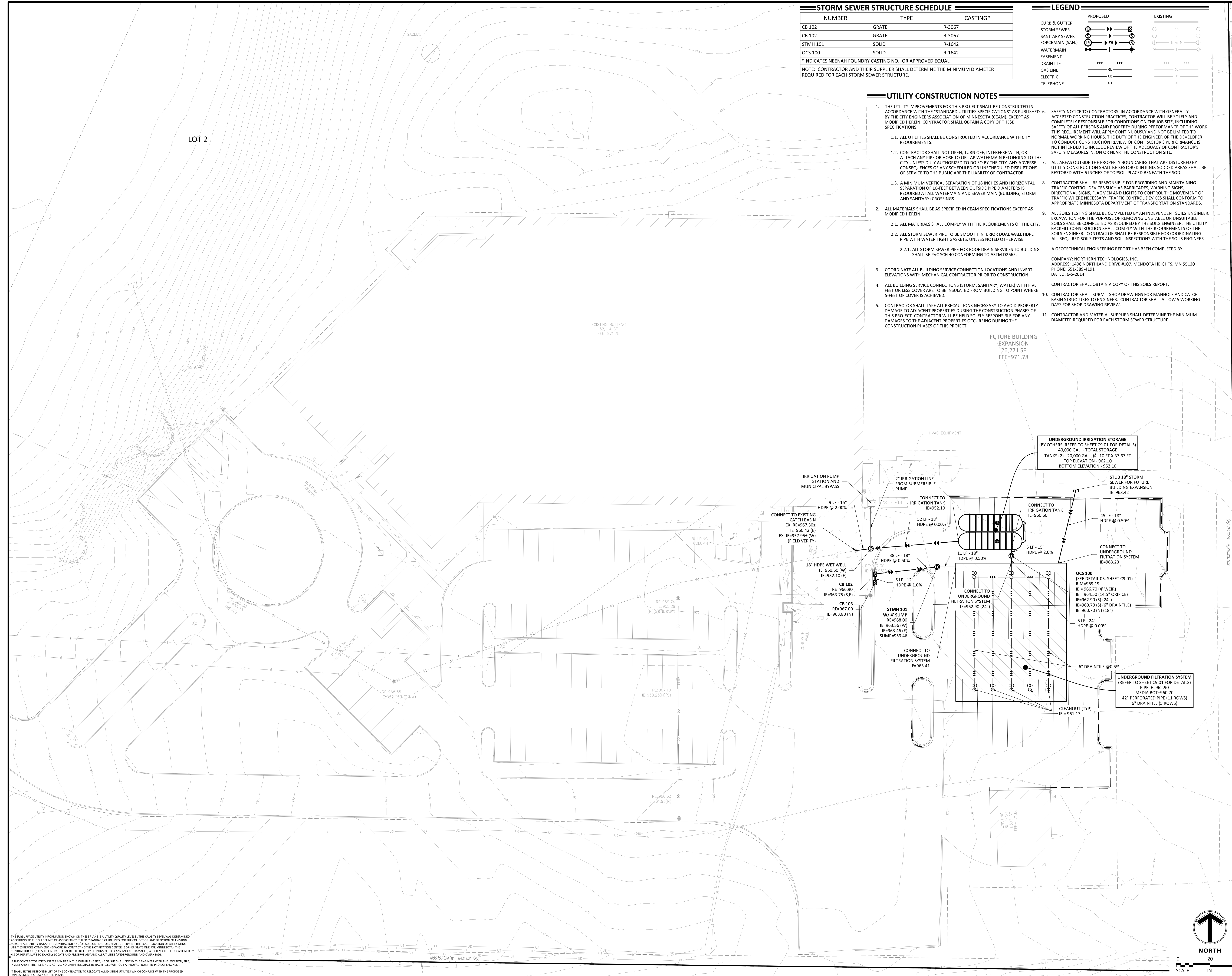
LEGEND	
PROPOSED	EXISTING
CURB & GUTTER	---
STORM SEWER	---
SANITARY SEWER	---
FORCEMAIN (SAN.)	---
WATERMAIN	---
EASEMENT	---
DRAIN TILE	---
GAS LINE	---
ELECTRIC	---
TELEPHONE	---

UTILITY CONSTRUCTION NOTES

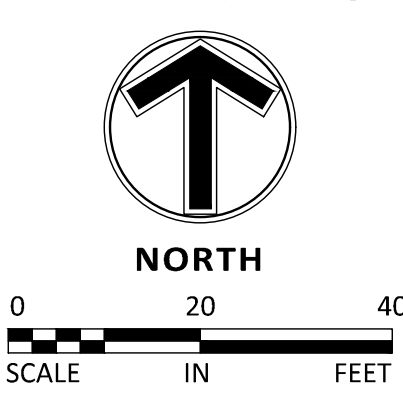
- THE UTILITY IMPROVEMENTS FOR THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD UTILITIES SPECIFICATIONS" AS PUBLISHED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), EXCEPT AS MODIFIED HEREIN. CONTRACTOR SHALL OBTAIN A COPY OF THESE SPECIFICATIONS.
 - ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY REQUIREMENTS.
 - CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP WATERMAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE THE LIABILITY OF CONTRACTOR.
 - A MINIMUM VERTICAL SEPARATION OF 18 INCHES AND HORIZONTAL SEPARATION OF 10-FEET BETWEEN OUTSIDE PIPE DIAMETERS IS REQUIRED AT ALL WATERMAIN AND SEWER MAIN (BUILDING, STORM AND SANITARY) CROSSINGS.
- ALL MATERIALS SHALL BE AS SPECIFIED IN CEAM SPECIFICATIONS EXCEPT AS MODIFIED HEREIN.
 - ALL MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY.
 - ALL STORM SEWER PIPE TO BE SMOOTH INTERIOR DUAL WALL HDPE PIPE WITH WATER TIGHT GASKETS, UNLESS NOTED OTHERWISE.
 - ALL STORM SEWER PIPE FOR ROOF DRAIN SERVICES TO BUILDING SHALL BE PVC SCH 40 CONFORMING TO ASTM D2665.
- COORDINATE ALL BUILDING SERVICE CONNECTION LOCATIONS AND INVERT ELEVATIONS WITH MECHANICAL CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL BUILDING SERVICE CONNECTIONS (STORM, SANITARY, WATER) WITH FIVE FEET OR LESS COVER ARE TO BE INSULATED FROM BUILDING TO POINT WHERE 5-FEET OF COVER IS ACHIEVED.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.
- ALL AREAS OUTSIDE THE PROPERTY BOUNDARIES THAT ARE DISTURBED BY UTILITY CONSTRUCTION SHALL BE RESTORED IN KIND. SODDED AREAS SHALL BE RESTORED WITH 6 INCHES OF TOPSOIL PLACED BENEATH THE SOD.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.
- ALL SOILS TESTING SHALL BE COMPLETED BY AN INDEPENDENT SOILS ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE SOILS ENGINEER. THE UTILITY BACKFILL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND SOIL INSPECTIONS WITH THE SOILS ENGINEER.

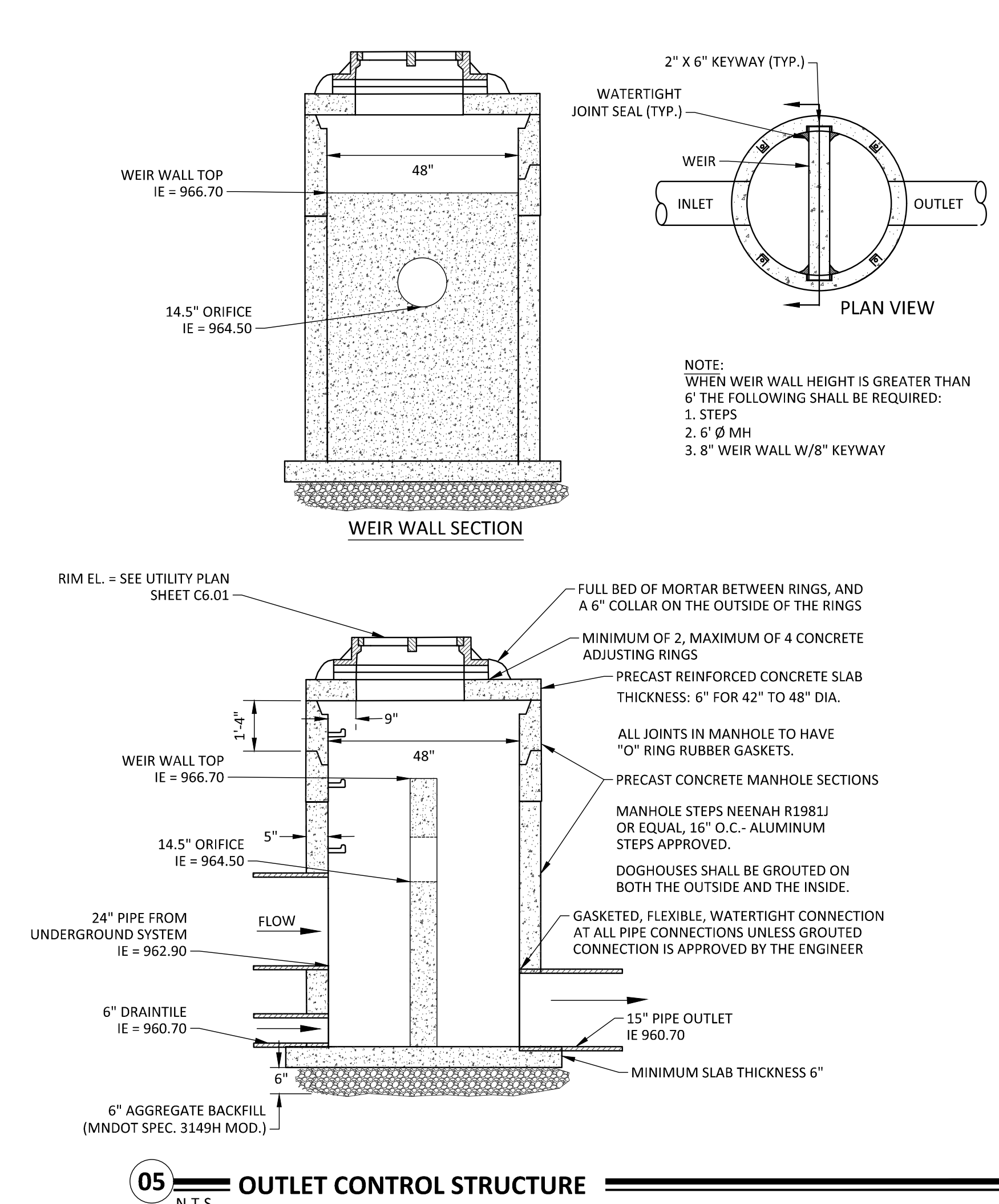
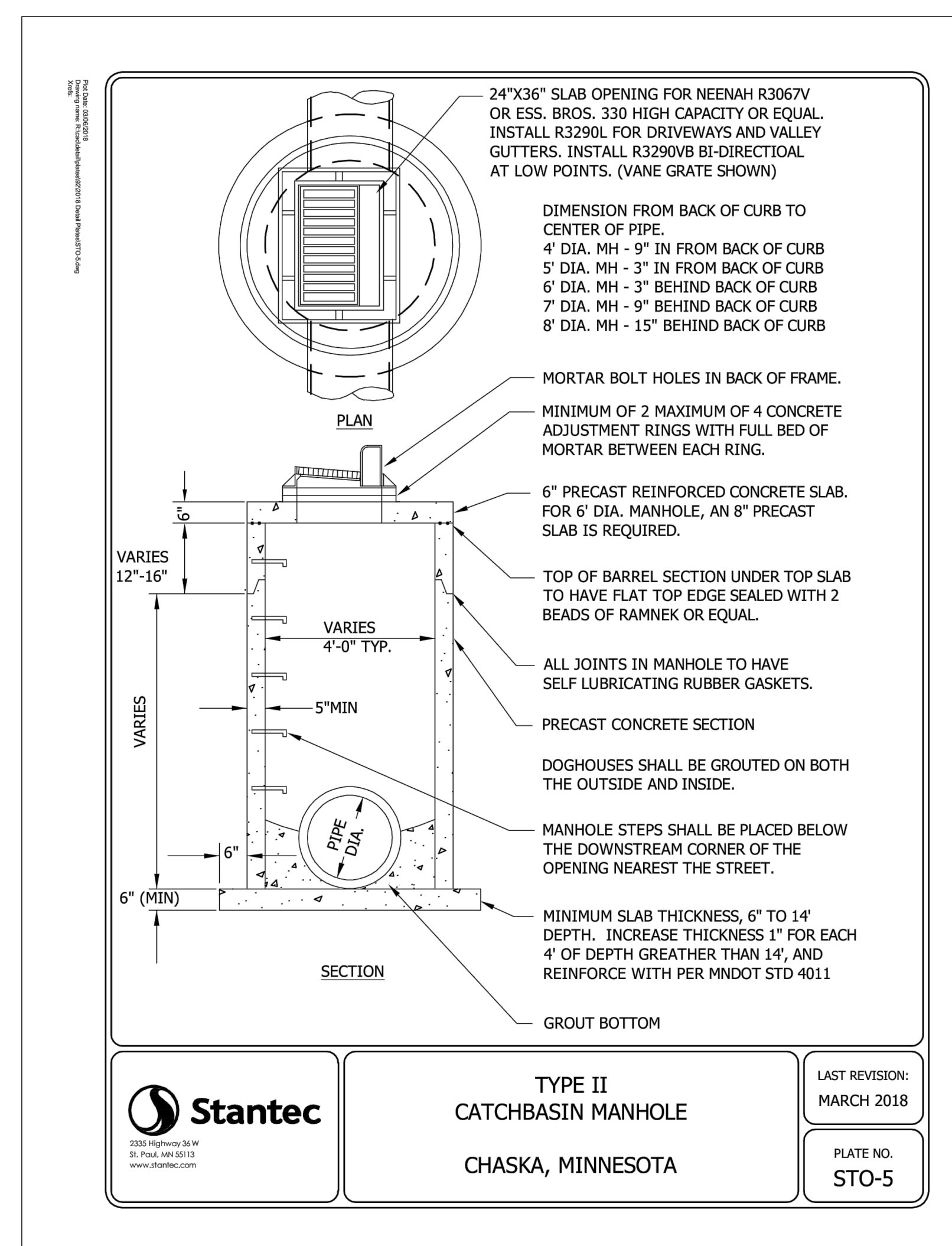
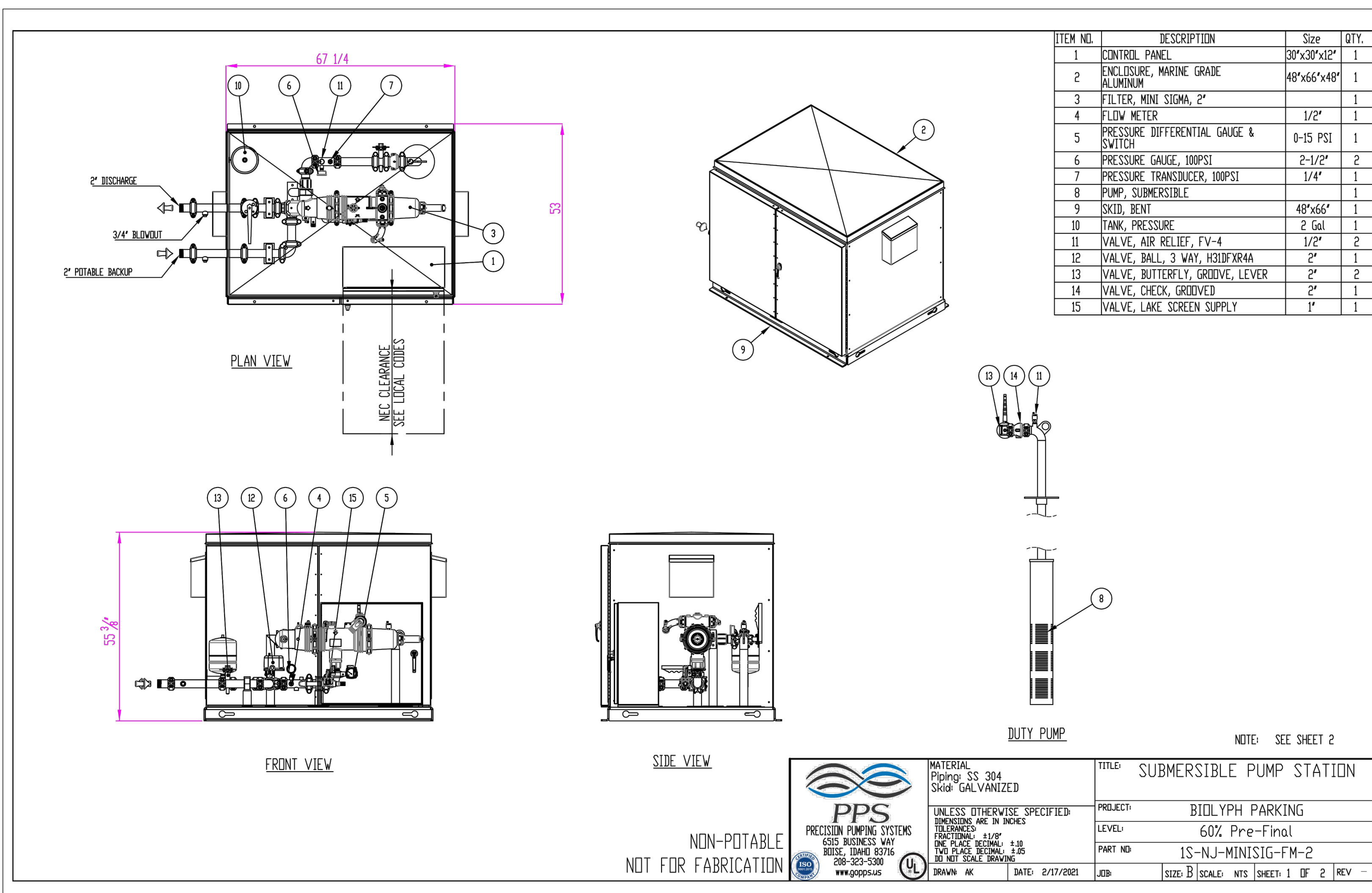
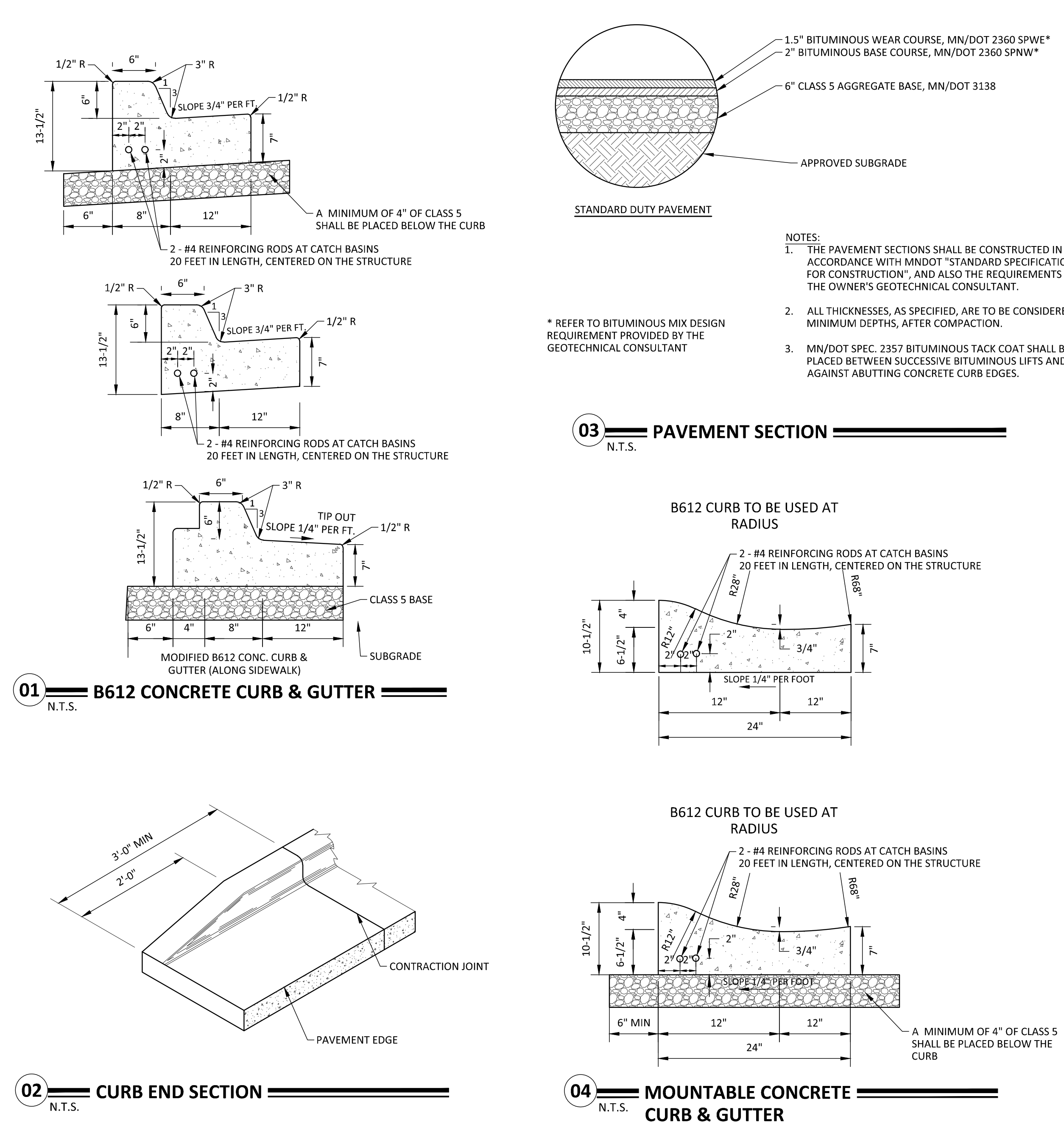
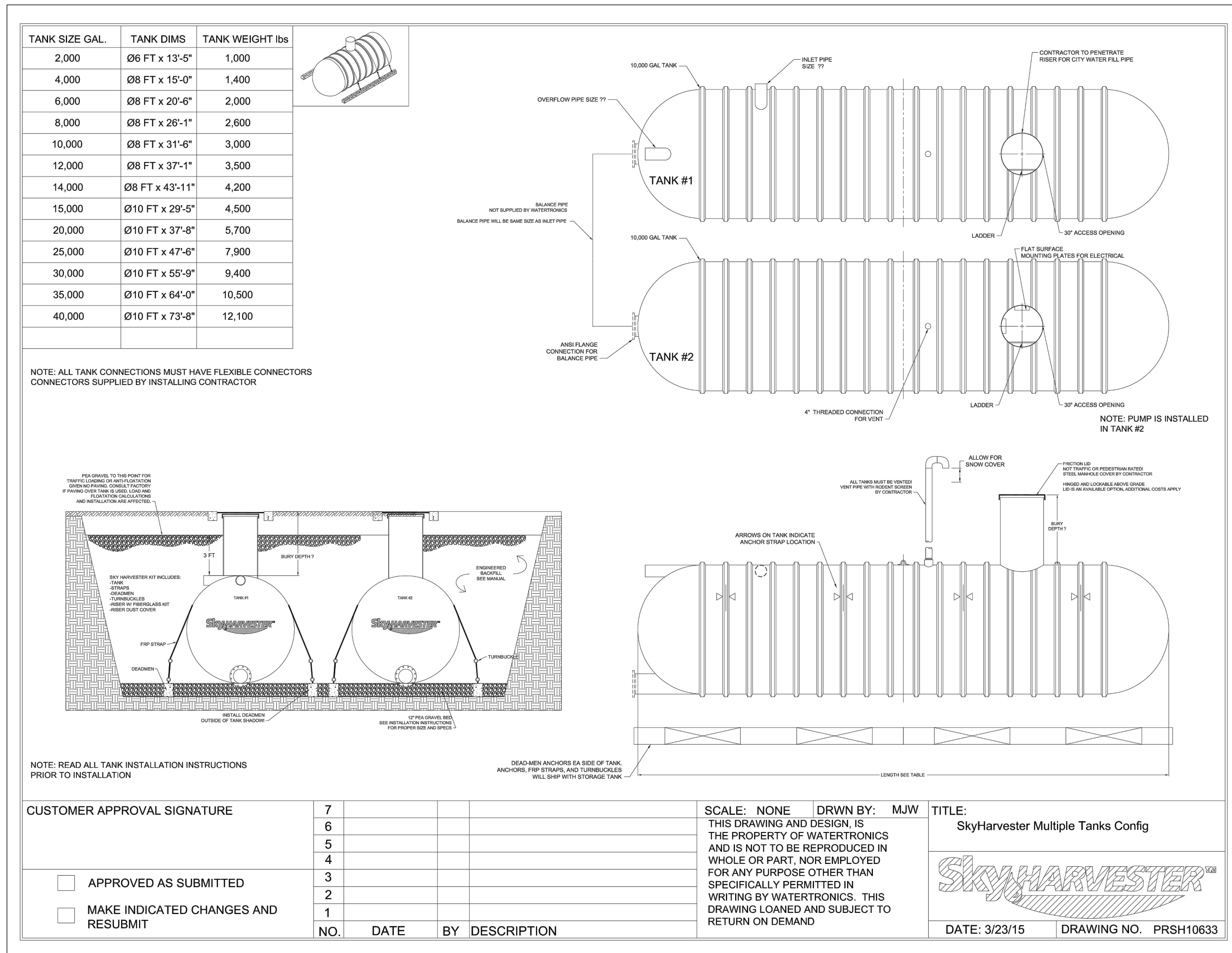
A GEOTECHNICAL ENGINEERING REPORT HAS BEEN COMPLETED BY:
COMPANY: NORTHERN TECHNOLOGIES, INC.
ADDRESS: 1408 NORTHLAND DRIVE #107, MENDOTA HEIGHTS, MN 55120
PHONE: 651-389-4191
DATED: 6-9-2014

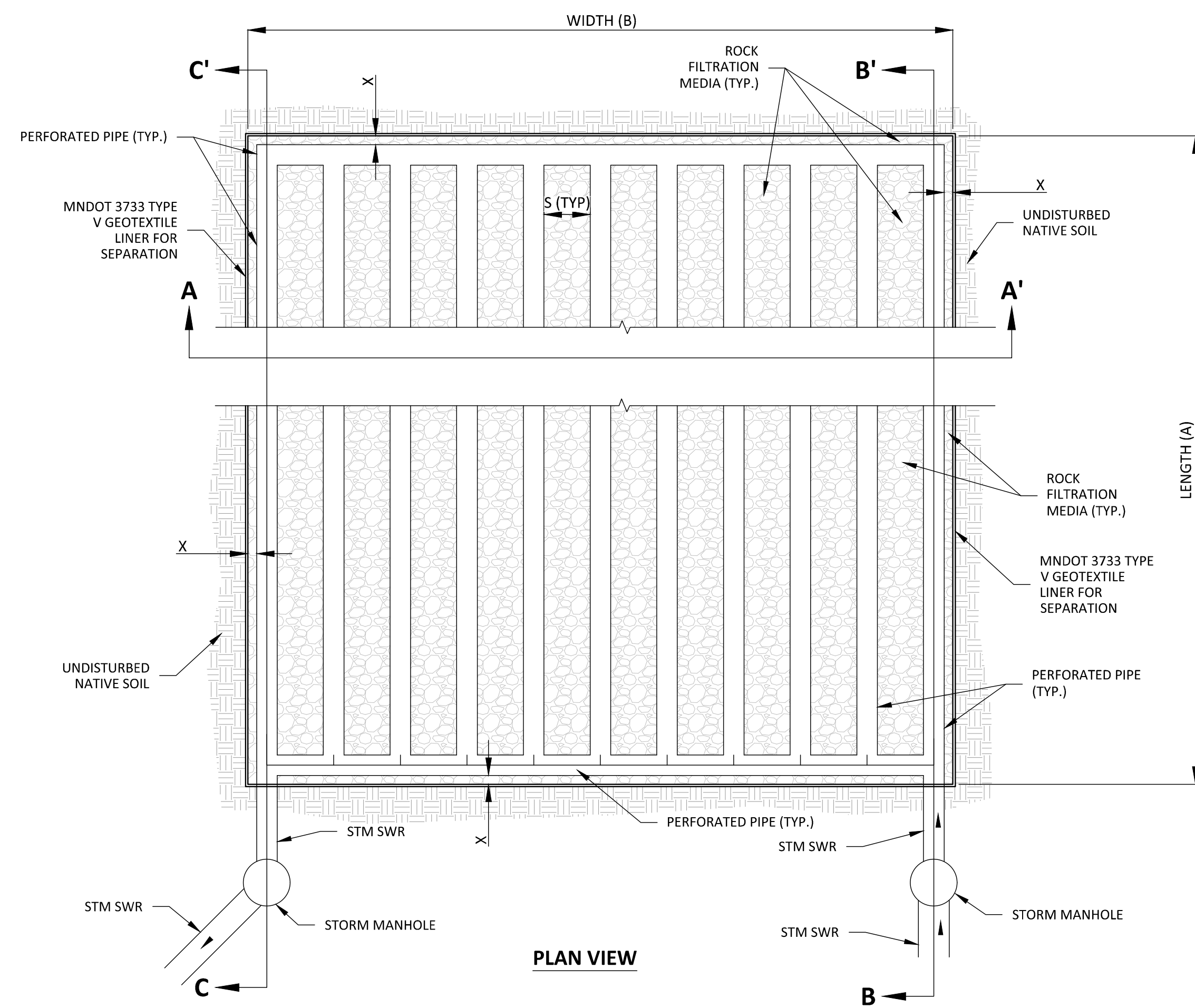
CONTRACTOR SHALL OBTAIN A COPY OF THIS SOILS REPORT.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR MANHOLE AND CATCH BASIN STRUCTURES TO ENGINEER. CONTRACTOR SHALL ALLOW 5 WORKING DAYS FOR SHOP DRAWING REVIEW.
- CONTRACTOR AND MATERIAL SUPPLIER SHALL DETERMINE THE MINIMUM DIAMETER REQUIRED FOR EACH STORM SEWER STRUCTURE.



THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL 2. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF AASHTO ROAD TEST STANDARD UTILITIES FOR THE LOCATION AND DEPTH OF EXISTING UTILITIES. THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL OBTAIN THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. WORK SHALL BE STOPPED IMMEDIATELY UPON CONTACT WITH ANY EXISTING UTILITIES. THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MAY BE OCCURRED BY THIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).
IF THE CONTRACTOR ENCOUNTERS ANY GROUND TALK WITHIN THE SITE, HE OR SHE SHALL NOTIFY THE ENGINEER WITH THE LOCATION, SIZE, DEPTH AND IF THE TALK LINE IS ACTIVE. NO WORK SHALL BE BACKFILLED WITHOUT APPROVAL FROM THE PROJECT ENGINEER.
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.



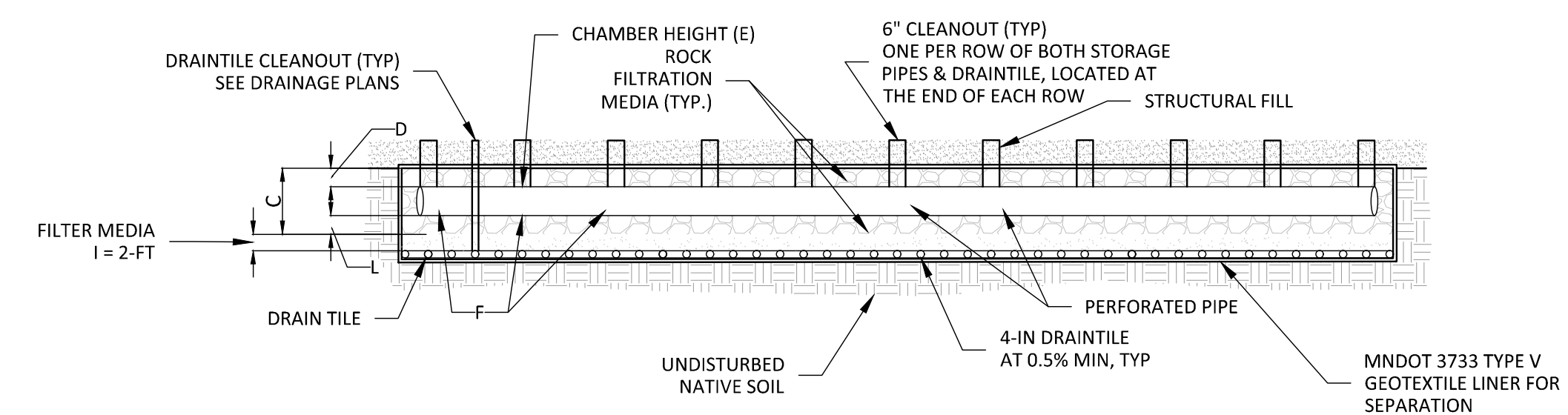




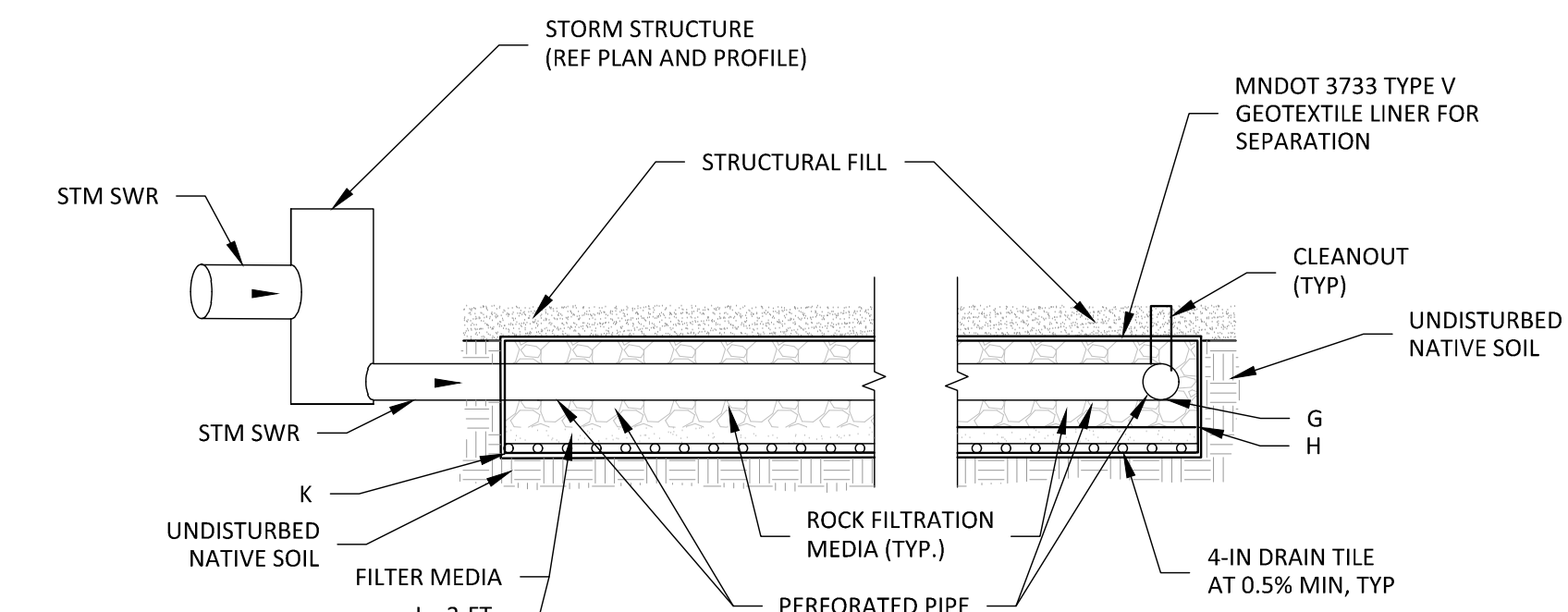
- NOTES:**
- ROCK FILTRATION MEDIA SHALL CONSIST OF A WASHED OPEN GRADED ASTM NO. 2 CRUSHED STONE.
 - SHOP DRAWING SUBMITTALS FOR SUBSURFACE SYSTEMS SHALL INCLUDE INSTALLATION METHODS PER PIPE MANUFACTURER TO MAINTAIN STRUCTURAL CAPACITY OF PIPES. THE MATERIAL ON WHICH THE PIPE IS BEDDED SHALL BE SHAPED AND COMPACTED TO CONFORM TO THE BOTTOM OF THE PIPE, UP TO THE SPRINGLINE. (SEE NOTE #12 ON SHEET C6.01).

SUBSURFACE FILTRATION SYSTEM													
BMP	LENGTH, FT (A)	WIDTH, FT (B)	DEPTH, FT (C)	STONE COVER, IN (D)	STONE BASE, IN (D)	PIPE DIA., IN (E)	ROWS (F)	PIPE INVERT (G)	BOTTOM OF ROCK (H)	BOTTOM OF SAND (K)	EDGE SPACING, IN (X)	PIPE SPACING, IN (S)	TOTAL STORAGE CF
3P	81.95	65.64	4.22	3.0	0.0	42	11	962.90	962.90	960.70	18.0	22.7	13449.0

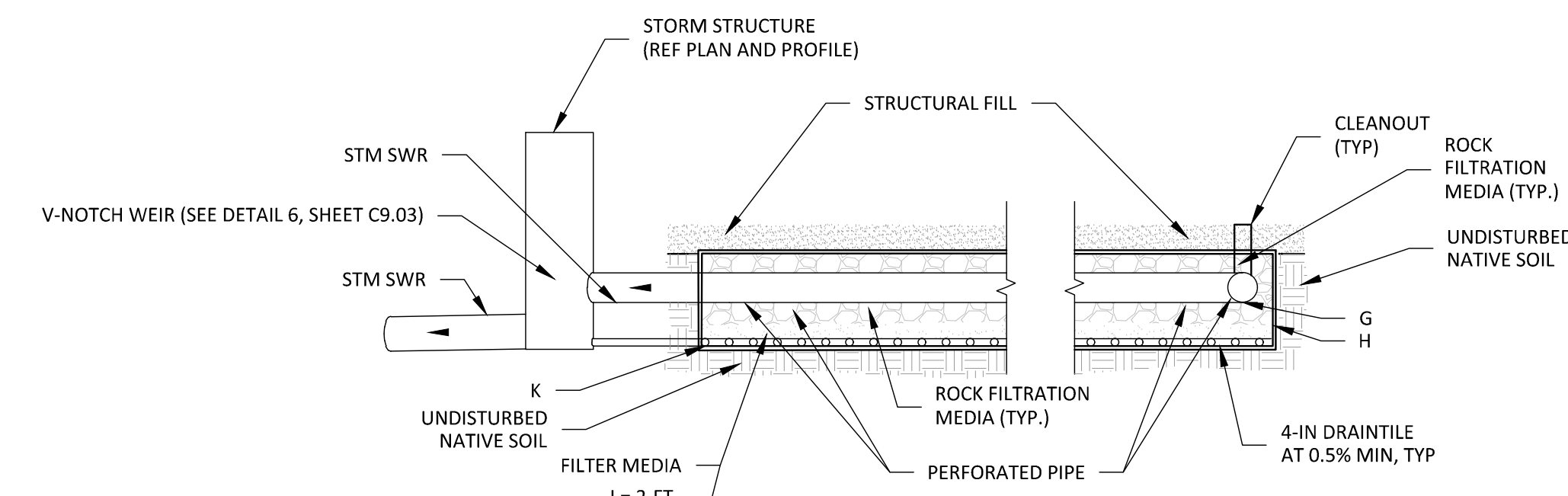
SUBSURFACE FILTRATION SYSTEM WITH SAND



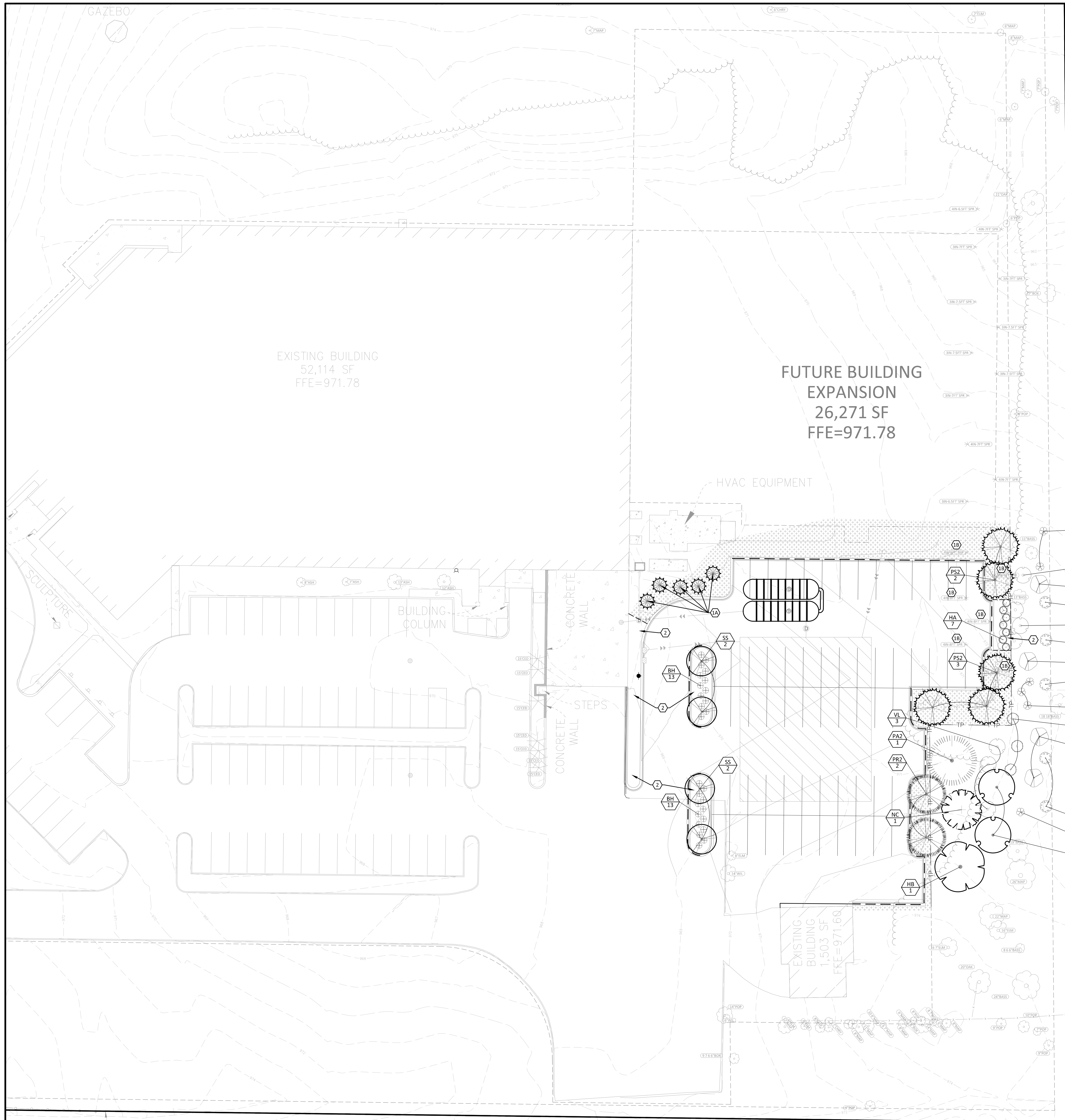
SECTION A - A'



SECTION B - B'



SECTION C - C'



LEGEND

PROPOSED	EXISTING	STANDARD DUTY ASPHALT PAVING
PROPERTY LIMIT	CURB & GUTTER	CONCRETE PAVING
EASEMENT	RETAINING WALL	CONCRETE SIDEWALK
BUILDING	WETLAND LIMITS	
TREELINE	LANDSCAPE EDGING	
STORM SEWER	SANITARY SEWER	
FORCEMAIN (SAN.)	WATERMAIN	
YARD DRAIN	LIMITS OF DISTURBANCE	
TREE TO BE REMOVED	TREE PROTECTION FENCE	
SIGN	PIPE BOLLARD	

CITY LANDSCAPE CODE

MINIMUM SIZE REQUIREMENTS:
 OVERSTORY DECIDUOUS TREE 2.5" UNDERSTORY DECIDUOUS TREE 2"
 CONIFEROUS TREE 6" MAJOR SHRUB PLANTING 5 GAL

TOTAL CALIPER INCHES REQUIRED: BASED ON PREVIOUSLY APPROVED LANDSCAPE PLAN

TREE CALIPER	2.5"	3.0"	3.5"	4.0"	4.5"+
TREES REQ.	X	X	X	X	X
TREES PROP.	3	-	5	-	8

TOTAL CALIPER INCHES PROPOSED: = 65 CAL. INCHES

UNDERSTORY/SHRUBS	REQUIRED	PROPOSED
UNDERSTORY TREES	X	4
SHRUBS	X	58

9.2.5.6 Screening and Landscaping
 Open parking areas containing six (6) or more parking spaces shall be screened on each side adjoining a residential or public use or a public street. [See Subsection 9.6.6.1(a).]

PLANT SCHEDULE PARKING EXPANSION

TREES	CODE	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	NC	Catalpa speciosa / Northern Catalpa	B & B	2.5" Cal	1
	HB	Celtis occidentalis / Common Hackberry	B & B	3" Cal.	1
	IW	Ostrya virginiana / American Hophornbeam	B & B	2.5" Cal	2
CONIFERS	CODE	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	PA2	Picea abies / Norway Spruce	12' Ht.	Spade	1
	PPU	Picea pungens / Colorado Spruce	8' Ht.	Transplant	5
	PR2	Pinus resinosa / Red Pine	12' Ht.	Spade	2
	PS2	Pinus strobus / White Pine	12' Ht.	Spade	5
ORN. TREES	CODE	BOTANICAL / COMMON NAME	CONT	CAL	QTY
	SS	Malus x 'Spring Snow' / Spring Snow Crab Apple	B & B	2" Cal	4
SHRUBS	CODE	BOTANICAL / COMMON NAME	CONT	QTY	
	COA	Corylus americana / American Hazelnut	5 gal	6	
	BH	Diervilla lonicera / Dwarf Bush Honeysuckle	5 gal	26	
	CE	Euonymus alatus 'Compactus' / Compact Burning Bush	5 gal	3	
	HAV	Hamamelis virginiana / Common Witch Hazel	10 gal	4	
	HA	Thuja occidentalis 'Holmstrup' / Holmstrup Cedar	10 gal	7	
	VL	Viburnum lentago / Nannyberry	5 gal	7	
	VTW	Viburnum trilobum 'Wentworth' / Wentworth Cranberry Bush Viburnum	7 gal	5	
GROUND COVERS	CODE	BOTANICAL / COMMON NAME	CONT	QTY	
	TUR HIG	Turf Sod Highland Sod / Sod	Sod	5,162 sf	

LANDSCAPE KEY

TRANSPLANT EXISTING TREES WITH TREE SPADE AS FEASIBLE FOR USE IN LANDSCAPE BUFFER

ROCK MULCH - 1 1/2" RIVER ROCK MULCH @ 3" DEPTH OVER COMMERCIAL WEED BARRIER

Project
BIOLYPH PARKING LOT EXPANSION

Location
CHASKA, MN

4275 NOREX DRIVE

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

John R Workman
 Registration No. 59119 Date: 9/24/2024
 This certification is not valid unless wet signed in blue ink. If applicable, contact us for a wet signed copy of this survey which is available upon request at Sambatek, Minnetonka, MN office.

Summary
 Designed: AXF Drawn: JMW
 Approved: s06 Book / Page:
 Phase: CO Initial Issued: 9/24/2024

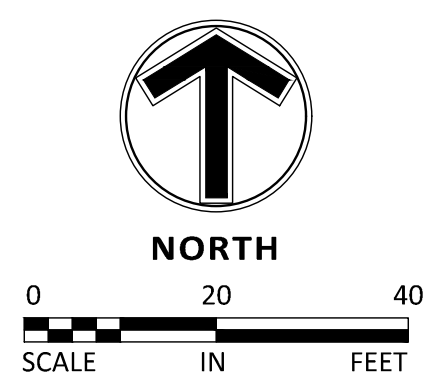
Revision History

No.	Date	By	Submittal / Revision
10/10/2024			WATERSHED COMMENTS

Sheet Title
LANDSCAPE PLAN

Sheet No. Revision
L1.01

Project No. 20068.01



Client
EDWARD FARR ARCHITECTS, INC

7710 Golden Triangle Drive
Eden Prairie MN 55344

Project
BIOLYPH PARKING LOT EXPANSION

Location
CHASKA, MN

4275 NOREX DRIVE

Certification

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

John R Workman

Registration No. 59119 Date: 9/24/2024

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Summary

Designed: AXF Drawn: JMW

Approved: 806 Book / Page:

Phase: cd Initial Issued: 9/24/2024

Revision History

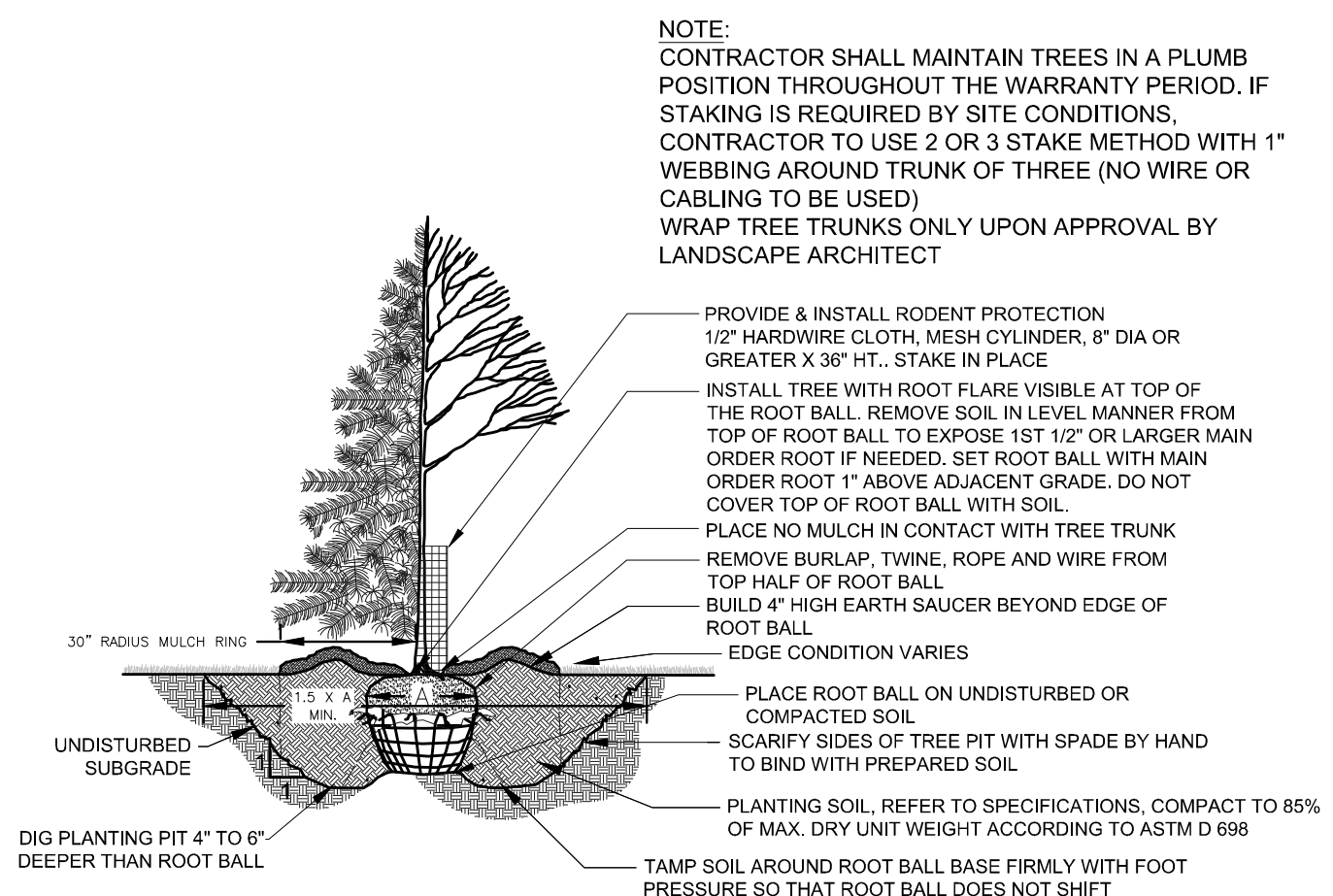
No. Date By Submittal / Revision

10/10/2024 WATERSHED COMMENTS

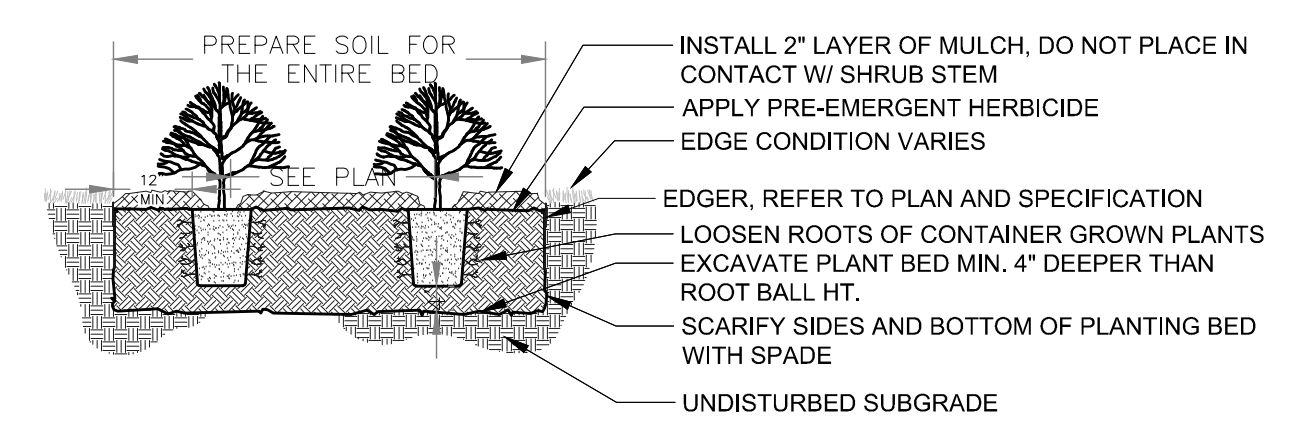
Sheet Title
LANDSCAPE DETAILS AND NOTES

Sheet No. Revision
L1.02

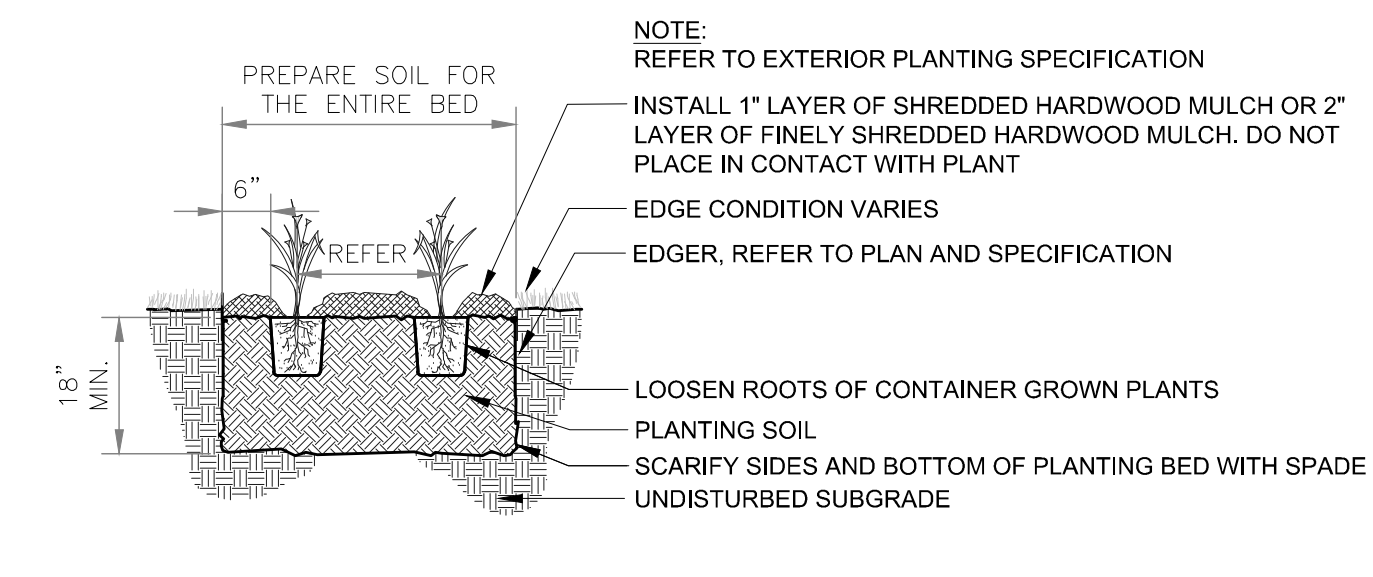
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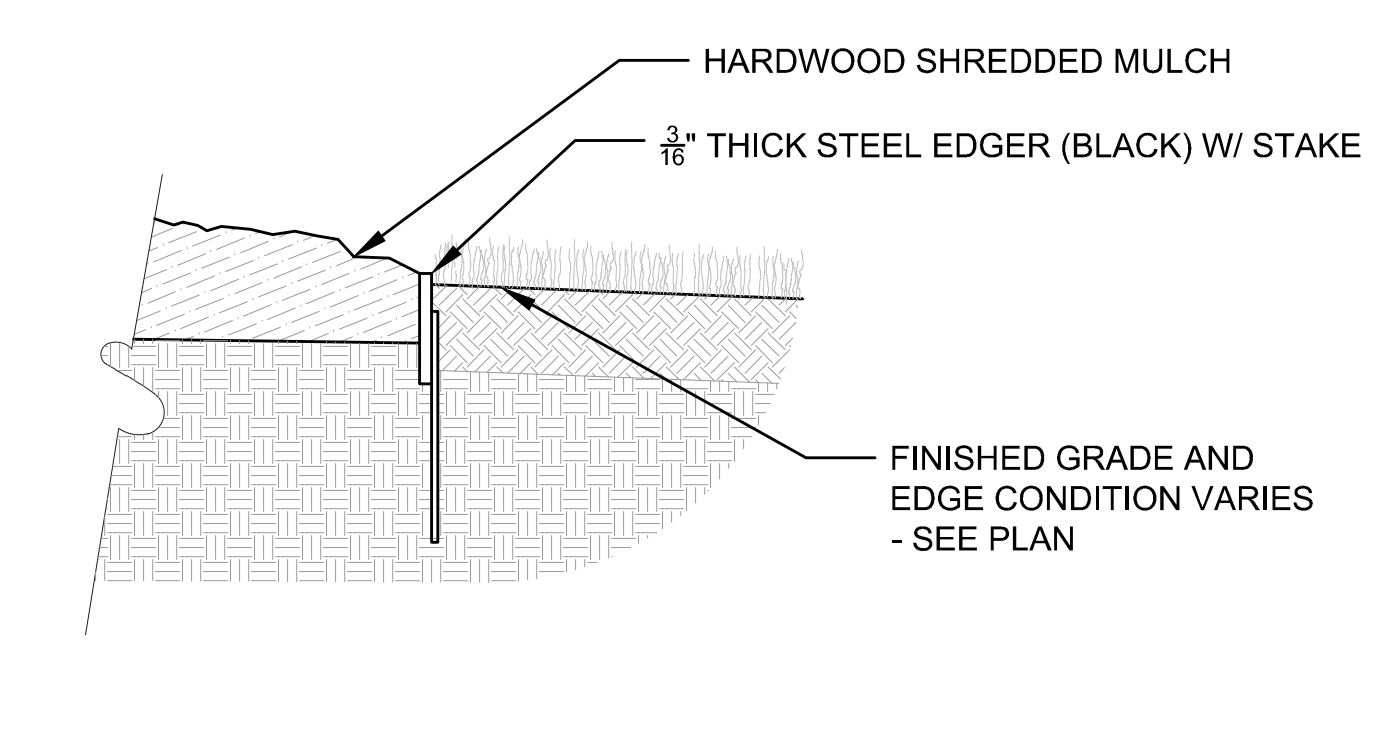
1 TREE PLANTING DETAIL
L1.02 NTS



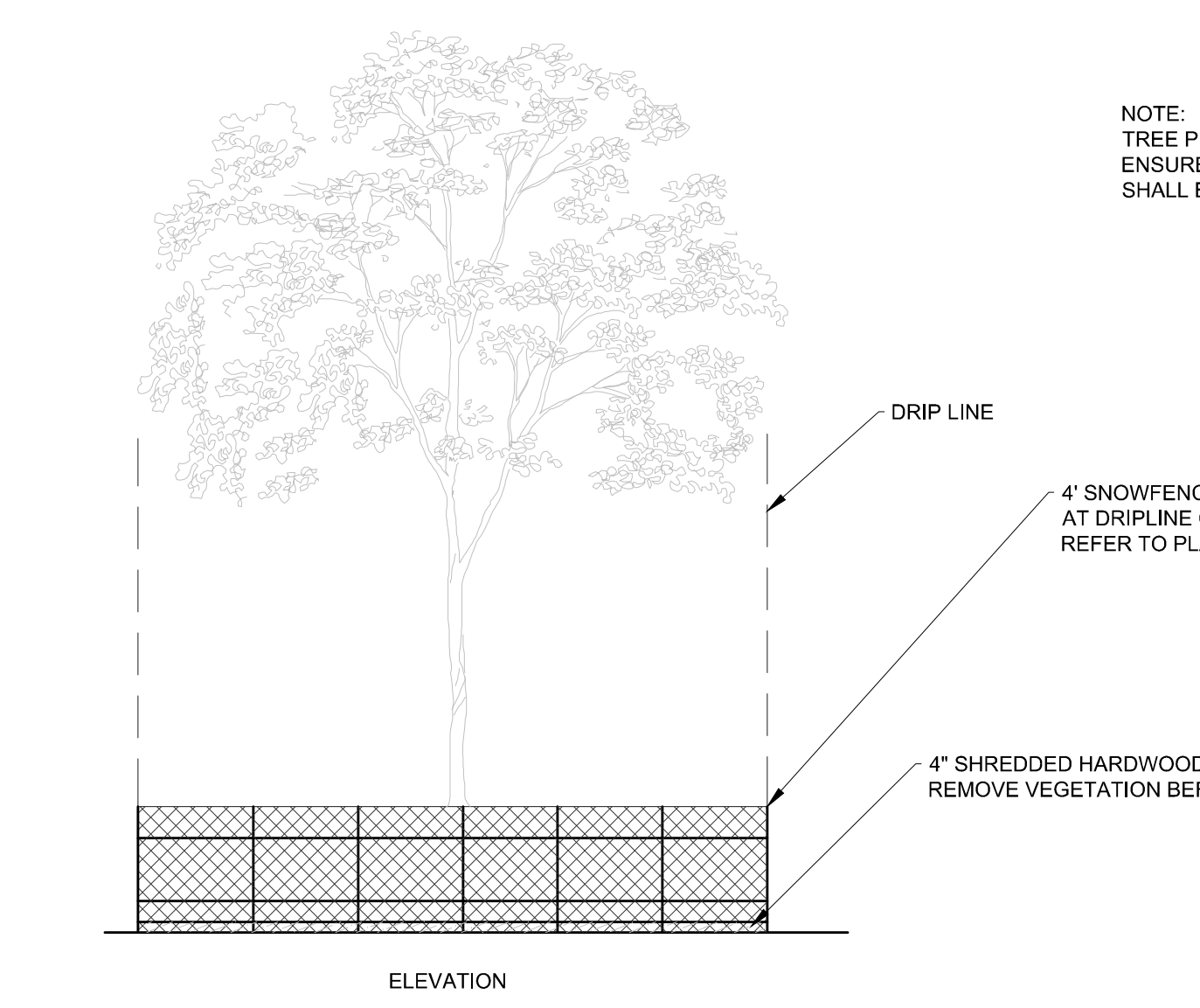
2 SHRUB PLANTING DETAIL
L1.02 NTS



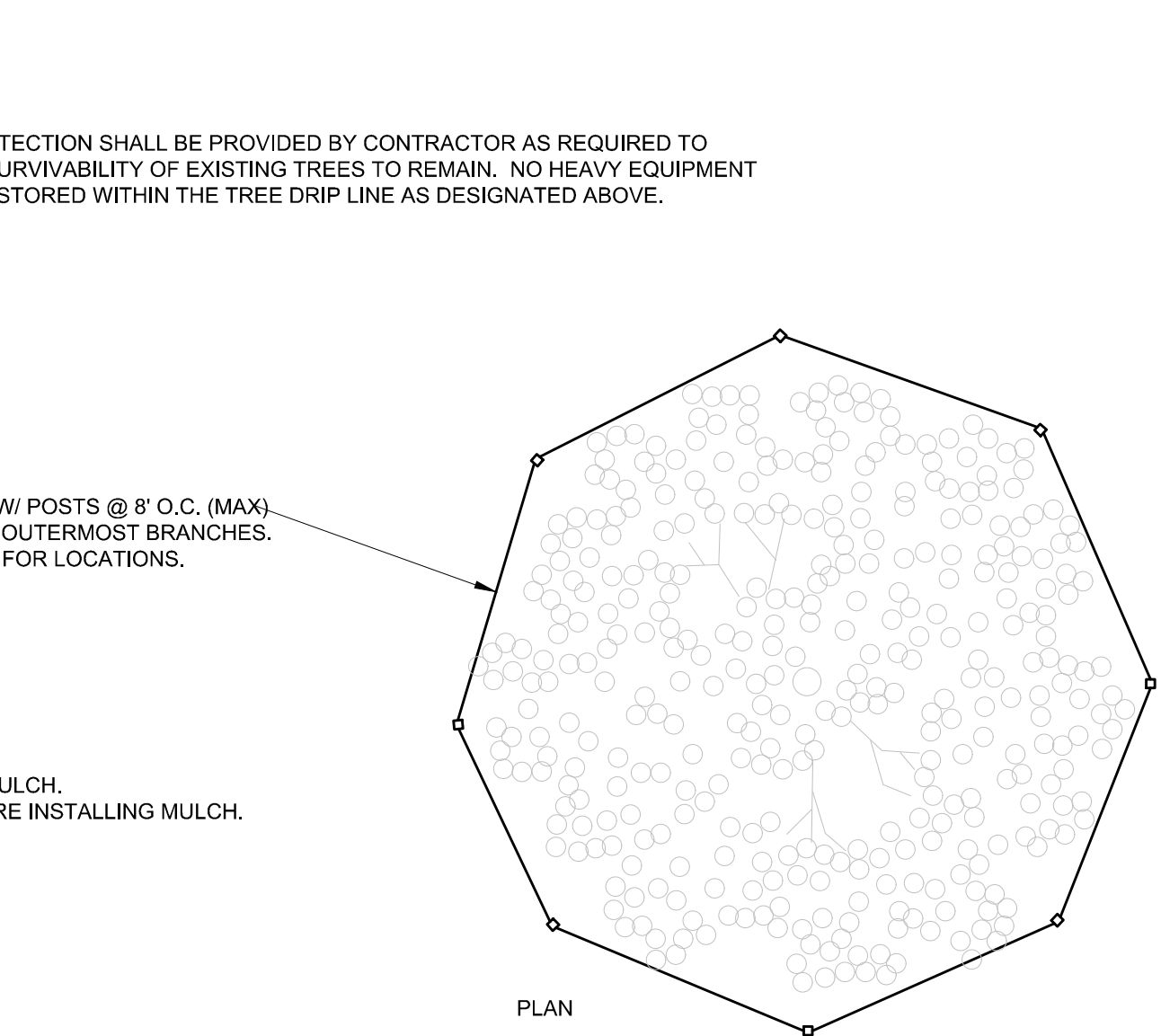
3 PERENNIAL PLANTING DETAIL
L1.02 NTS



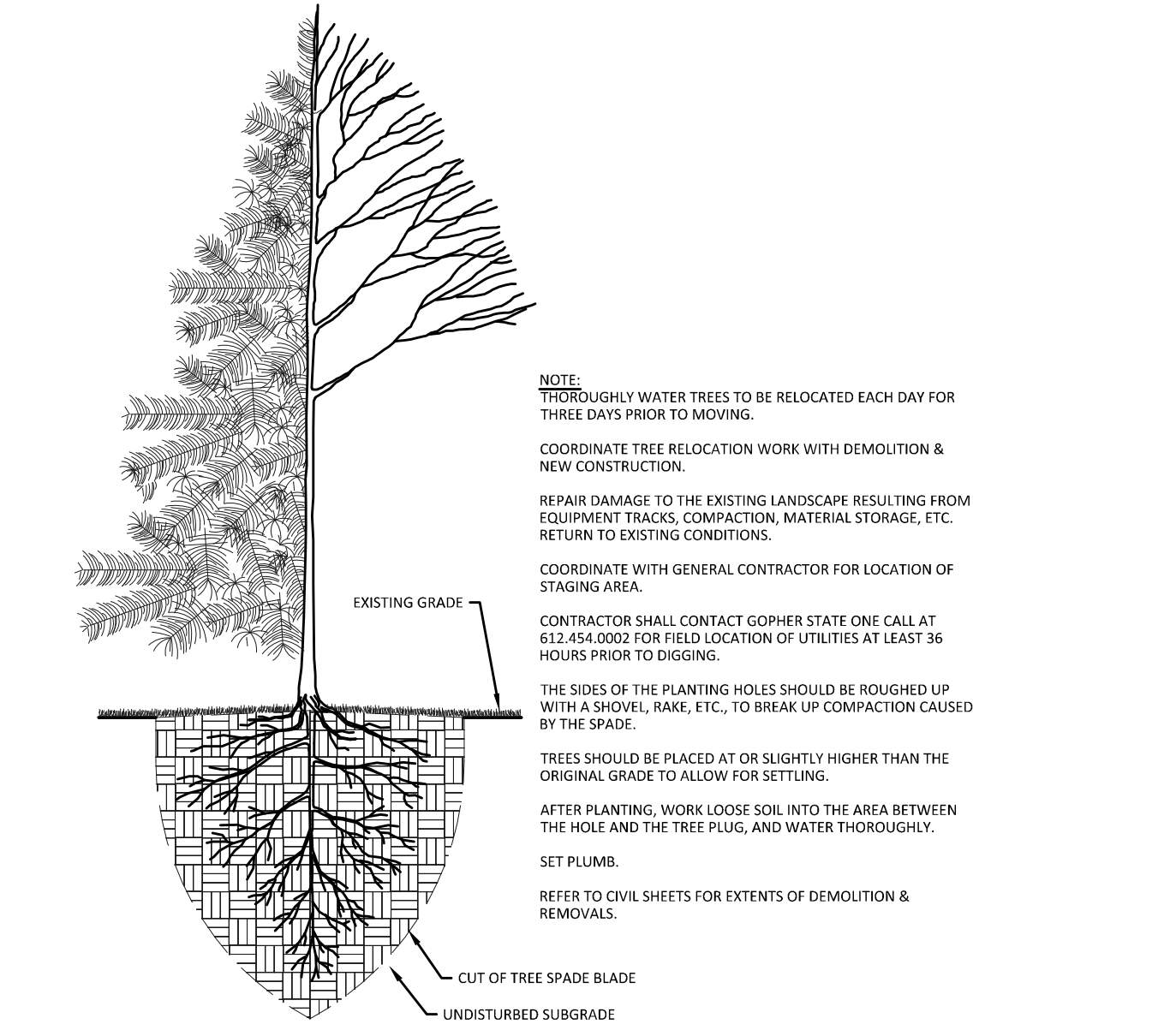
4 STEEL EDGER
L1.02 NTS



5 TREE PROTECTION DETAIL
L1.02 3/16\"/>



6 TREE SPADE DETAIL
L1.02 1/4\"/>



7 TREE SPADE DETAIL
L1.02 1/4\"/>

NOTES

GENERAL NOTES:

- THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF THE WORK.
- THE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
- THE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION. DAMAGE TO SAME SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
- LOCATE AND VERIFY ALL UTILITIES, INCLUDING IRRIGATION LINES, WITH THE OWNER FOR PROPRIETARY UTILITIES AND GOPHER STATE ONE CALL 48 HOURS BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGES TO SAME. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
- THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.
- THE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNSUITABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK.
- THE PLAN TAKES PRECEDENCE OVER THE LANDSCAPE LEGEND IF DISCREPANCIES EXIST. QUANTITIES SHOWN IN THE PLANTING SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR TO VERIFY QUANTITIES SHOWN ON THE PLAN.
- THE SPECIFICATIONS TAKE PRECEDENCE OVER THE PLANTING NOTES AND GENERAL NOTES.
- EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED TO THE DRIP LINE FROM ALL CONSTRUCTION TRAFFIC. STORAGE OF MATERIALS ETC. WITHIN THE ORANGE PLASTIC SAFETY FENCING ADEQUATELY SUPPORTED BY STEEL FENCE POSTS 6' O.C. MAXIMUM SPACING.
- LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
- CONTRACTOR SHALL REQUEST IN WRITING, A FINAL ACCEPTANCE INSPECTION.

PLANTING NOTES:

- NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
- A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AT THE MANUFACTURER'S RECOMMENDED RATE PRIOR TO PLANT INSTALLATION.
- ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
- OVERSTORY TREES SHALL BEGIN BRANCHING NO LOWER THAN 6' ABOVE PAVED SURFACES.
- ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE AND BE CONTAINER GROWN OR BALLED AND BURLEPPED AS INDICATED IN THE LANDSCAPE LEGEND. PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.
- ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
- THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION.
- NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL QUANTITIES, SHAPES OF BEDS AND LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN AND ADJUSTED TO CONFORM TO THE EXACT CONDITIONS OF THE SITE. THE LANDSCAPE ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIALS PRIOR TO INSTALLATION.
- ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
- MULCH: DOUBLE SHREDDED HARDWOOD MULCH, CLEAN AND FREE OF NOXIOUS WEEDS OR OTHER DELETERIOUS MATERIAL, IN ALL MASS PLANTING BEDS AND FOR TREES, UNLESS INDICATED AS ROCK MULCH ON DRAWINGS. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT PRIOR TO DELIVERY ON-SITE FOR APPROVAL. DELIVER MULCH ON DAY OF INSTALLATION. USE 3\"/>
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE THE WORK SHOWN ON THE PLAN.
- USE ANTI-DESCICANT (WILTRUP OR APPROVED EQUAL) ON DECIDUOUS PLANTS MOVED IN LEAF AND FOR EVERGREENS MOVED ANYTIME. APPLY AS PER MANUFACTURER'S INSTRUCTION. ALL EVERGREENS SHALL BE SPRAYED IN THE LATE FALL FOR WINTER PROTECTION DURING WARRANTY PERIOD.
- WRAP ALL SMOOTH-BARKED DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO DECEMBER 1 AND REMOVE WRAPPING AFTER MAY 1. TREE WRAPPING MATERIAL SHALL BE WHITE TWO-WALLED PLASTIC SHEETING APPLIED FROM TRUNK FLARE TO THE FIRST BRANCH.
- ALL DECIDUOUS, PINE, AND LARCH PLANTINGS SHALL RECEIVE RODENT PROTECTION PER MNDOT 2571.31.2
- PLANTING SOIL FOR TREES, SHRUBS AND GROUND COVERS: FERTILE FRIABLE LOAM CONTAINING A LIBERAL AMOUNT (4% MIN.) OF HUMUS AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHALL CONFORM WITH MNDOT SPECIFICATION 3877 TYPE B SELECT TOPSOIL. MIXTURE SHALL BE FREE FROM HARDPAK, SUBSOIL, STONES, CHEMICALS, NOXIOUS WEEDS, ETC. SOIL MIXTURE SHALL HAVE A PH BETWEEN 6.1 AND 7.5 AND 10-10 FERTILIZER AT THE RATE OF 3 POUNDS PER CUBIC YARD. IN PLANTING BEDS INCORPORATE THIS MIXTURE THROUGHOUT THE ENTIRE BED IN A 6\"/>
- CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT EACH EXCAVATED TREE AND SHRUB PIT WILL PERCOLATE PRIOR TO INSTALLING PLANTING MEDIUM AND PLANTS. THE CONTRACTOR SHALL FILL THE BOTTOM OF SELECTED HOLES WITH SIX INCHES OF WATER AND CONFIRM THAT THIS WATER WILL PERCOLATE WITHIN A 24-HOUR PERIOD. IF THE SOIL AT A GIVEN AREA DOES NOT DRAIN PROPERLY, A PVC DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE PLANTING SHALL BE RELOCATED AS DIRECTED BY THE LANDSCAPE ARCHITECT.
- ALL PLANTS SHALL BE GUARANTEED FOR TWO COMPLETE GROWING SEASONS (APRIL 1 -

TURF NOTES:

- TURF ESTABLISHMENT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROVISIONS OF THE MNDOT 2105 AND 2575 EXCEPT AS MODIFIED BELOW:
- ALL AREAS TO RECEIVE SOD SHALL ALSO RECEIVE 6\"/>
 - WHERE SOD ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED SHALL BE HELD 1\"/>
 - SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, SOD SHALL BE STAKED SECURELY.
 - TURF ON ALL OTHER AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED BY SEEDING, MULCHING AND FERTILIZING. SEED MIXTURE NO. 25-151 WILL BE PLACED AT THE RATE OF 120 POUNDS PER ACRE.
 - ALL DISTURBED AREAS TO BE TURF SEED, ARE TO RECEIVE 6\"/>
 - ALL DISTURBED AREAS TO RECEIVE NATIVE SEED, ARE TO RECEIVE PLANTING SOIL, SEED, MULCH, AND WATER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. FOR SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES INSTALL EROSION CONTROL BLANKET.

GENERAL TREE SPECIFICATIONS:

- ALL STREET AND PARKING LOT TREES SHALL BE LIMBED UP TO THE FOLLOWING HEIGHTS:
 - 2\"/>
 - 3\"/>
- TREE CANOPY WIDTH SHALL BE RELATIVE TO HEIGHT/CALIPER OF TREE AND TYPE OF TREE.
 - 1\"/>
 - 2\"/>
 - 3\"/>
- CANOPY TREES SHALL NOT HAVE CO-DOMINATE LEADERS IN LOWER HALF OF TREE CROWN.
- ALL TREES SHALL HAVE SYMMETRICAL OR BALANCED BRANCHING ON ALL SIDES OF THE TREE.
- TREES SHALL NOT BE TIPPED PRUNED.
- TREES SHALL BE FREE OF PHYSICAL DAMAGE FROM SHIPPING AND HANDLING. DAMAGED TREES SHALL BE REJECTED.
- SUMMER DUG TREES SHALL HAVE ROOTBALL SIZE INCREASED BY 20%.
- TREES WHICH EXCEED RECOMMENDED CALIPER TO HEIGHT RELATIONSHIP SHALL BE REJECTED.

IRRIGATION NOTES:

- IRRIGATION SYSTEM TO BE DESIGN/BUILD. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL OF SYSTEM LAYOUT PRIOR TO INSTALLATION.
- ALL SOD TO RECEIVE SPRAY OR ROTOR IRRIGATION HEADS WITH MINIMUM DESIGN OF 1\"/>
- ALL PLANT BEDS TO RECEIVE DRIP LINE IRRIGATION, WITH A MINIMUM DESIGN OF .25\"/>
- PARKING ISLANDS TO BE IRRIGATED.