

Applicant: Ryan Dunlay; Stuart Development Corporation
Consultant: Matt Pavek; Civil Site Group
Project: Knox & American II
Location: 8000 Knox Avenue South, Bloomington, MN
Applicable Rule(s): 4, 5, 11 and 12
Reviewer(s): Azeemuddin Ahmed and Louise Heffernan; Barr Engineering Co.

General Background & Comment

The applicant proposes the construction of Knox & American II, a multi-family residential building, on the 1.81-acre lot located at 8000 Knox Avenue South in Bloomington. Additional site improvements including surface parking, an underground parking garage, concrete sidewalks, utilities, landscaping, and a stormwater management facility are proposed.

Currently, the site is vacant. In 2018, the district approved the demolition and removal of the commercial office, building foundations, and concrete and bituminous pavement under NMCWD Permit #2018-068. Review of the proposed project in conformance with the current stormwater management requirements requires review with regard to the “last major use” of the site. The existing conditions, or “last major use” of the site, includes site elements (i.e. building with surface parking) prior to demolition.

The project site information includes the following:

- Total Site Area: 78,694 square feet (1.81 acres)
- Disturbed Area: 78,694 square feet (1.81 acres)
- Existing Site Impervious Area: 65,082 square feet (1.49 acres)
- Proposed Site Impervious Area: 63,520 square feet (1.46 acres)
- 2.4% decrease in the site impervious area: -1,562 square feet
- 100% disturbance of the existing impervious surface: 65,082 square feet (1.49 acres)

Exhibits Reviewed:

1. Permit Application dated July 27, 2023 (received July 31, 2023). Email correspondence dated August 22, 2023, identifying seven review comments required to be addressed to complete the permit application. Email correspondence dated September 13, 2023, identifying four review comments required to be addressed to complete the permit application. Email correspondence dated October 2, 2023, identifying three review comments required to be addressed to complete the permit application.

2. Plans dated July 31, 2023 (received July 31, 2023), revised August 31, 2023, revised September 29, 2023, revised December 4, 2023, prepared by Civil Site Group.
3. Stormwater Management Report dated July 31, 2023 (received July 31, 2023), revised August 31, 2023, revised September 29, 2023, revised December 4, 2023, prepared by Civil Site Group.
4. Geotechnical Evaluation dated April 5, 2023, revised October 17, 2023, prepared by Braun Intertec Corporation.
5. Electronic HydroCAD modeling received on July 31, 2023, revised August 31, 2023, revised September 29, 2023, prepared by Civil Site Group.
6. Electronic MIDS modeling received on July 31, 2023, revised August 31, 2023, revised September 29, 2023, prepared by Civil Site Group.
7. NMCWD review comment responses dated August 31, 2023, September 29, 2023, and December 4, 2023, prepared by Civil Site Group.
8. Signed Property Owner Authorization received December 5, 2023.
9. Site photo identifying low point in northeast corner (curb cut) of private drive, received December 4, 2023, prepared by Civil Site Group.

The application with the submittal items above is complete.

4.0 Stormwater Management

NMCWD's requirements for stormwater management apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 4.2.1a and b.

The NMCWD's Rule for Redevelopment, Rule 4.2.3, states, if the proposed activity will increase the total impervious surface on the site by 50 percent or more or will disturb 50 percent or more of the existing impervious surface on the site, the stormwater criteria will apply to the entire site. Otherwise, the criteria of section 4.3 will apply only to the disturbed areas, and replaced and net additional impervious surface on the project site. Since the proposed activities will decrease the total impervious surface of the site by 2.4% but will disturb 100% of the existing site impervious area, the district's stormwater management criteria will apply to the entire site (1.81 acres).

Stormwater management for compliance with subsection 4.3.1 criteria will be provided by an underground stormwater management facility (UGSWMF) to provide rate control, volume retention and water quality management for the entire site.

Rule 4.3.1b requires the 2-, 10-, and 100-year post development peak runoff rates be equal to or less than the existing discharge rates for the collection points where stormwater leaves the site. The applicant used a HydroCAD hydrologic model to simulate runoff rates. The existing

and proposed 2-, 10- and 100-year frequency discharge rates are summarized in the tables below.

Peak Discharge Rates (Existing)

Location	Existing 2-Year 24-hr (c.f.s.)	Existing 10-Year 24-hr (c.f.s.)	Existing 100-Year 24-hr (c.f.s.)
To Knox Ave. South	4.7	7.1	12.7
To American Blvd. West	<1.0	1.0	1.8

Peak Discharge Rates (Proposed)

Location	Proposed 2-Year 24-hr (c.f.s.)	Proposed 10-Year 24-hr (c.f.s.)	Proposed 100-Year 24-hr (c.f.s.)
To Knox Ave. South	<1.0	1.6	9.9
To American Blvd. West	<1.0	<1.0	<1.0

The proposed stormwater management plan provides rate control in compliance with the NMCWD requirements for the 2-, 10-, and 100-year events. Rule 4.3.1b is met.

A retention volume of 5,823 cubic feet is required from the 63,520 square feet (1.46 acres) of proposed impervious surface. Boring ST-307 in the geotechnical report by Braun Intertec completed in 2023 identifies the soil below the bottom of the proposed UGSWMF as primarily poorly graded sand (SP) to the bottom of the boring, elevation 817.4 M.S.L. A design infiltration rate of 0.8 inches per hour has been used for the UGSWMF, conforming with infiltration rates identified in the Minnesota Stormwater Manual. Boring ST-10, which was taken in the area of the UGSWMF in 2007, identifies the soil within the area of the proposed UGSWMF as organic silts underlain by primarily poorly graded sand with silt (SP-SM) from approximately 811-821 M.S.L. The plans indicate that if soils with lower permeability than SP soils are encountered during construction in the bottom area of the proposed stormwater management facility, they will be excavated and backfilled with soils that provide an infiltration rate of at least 0.8 inches per hour.

The table below summarizes the volume retention required and volume retention achieved. The proposed project is in conformance with subsection 4.3.1a.

Volume Retention Summary

Required Volume Retention (cubic feet)	Provided Volume Retention (cubic feet)	Maximum Infiltration Depth Allowable* (feet)	Provided Infiltration Depth (feet)
5,823	10,694	8.0	3.7

*Maximum inundation depth allowable for the UGSWMF to draw down within 48-hours based on a design infiltration rate of 0.8 inches/hour and 40% rock voids.

With a provided infiltration depth of 3.7 feet (8.0 feet allowable), the required 5,823 cubic feet of volume retention is drawn down within the required 48-hours, complying with Rule 4.3.1a (ii).

Rule 4.5.4d (i) requires at least three feet of separation between the bottom of a stormwater management facility and groundwater. Per the geotechnical report by Braun Intertec, groundwater was encountered at elevation 810.2 M.S.L. in the boring completed near the proposed UGSWMF (Boring ST-10). The bottom of the UGSWMF is 821.5 M.S.L., providing a separation of 11.3 feet (to the elevation where groundwater was encountered). Rule 4.5.4d (i) is met.

NMCWD’s water quality criterion requires 60% annual removal efficiency for total phosphorus (TP) and 90% annual removal efficiency for total suspended solids (TSS) from the regulated site runoff. A MIDS model was used to evaluate the proposed UGSWMF annual removal efficiencies. The results of the MIDS modeling are summarized in the table below. The NMCWD engineer agrees with the modeling results and the project is in conformance with Rule 4.3.1c criteria.

Annual TSS and TP Removal Summary

Pollutant of Interest	Regulated Site Loading (lbs./year)	Required Load Removal (lbs./year)	Provided Load Reduction (lbs./year)
Total Suspended Solids (TSS)	499.3	449.4 (90%)	448.0 (90%)
Total Phosphorus (TP)	2.7	1.6 (60%)	2.5 (93%)

Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that the low floor is at least two feet above the 100-year high-water elevation or one foot above the emergency overflow of a constructed facility. Additionally, Rule 4.3.3 states that all new and reconstructed buildings must be constructed such that no opening where surface flow can enter the structure is less than two feet above the 100-year high-water elevation of an adjacent facility. Rule 4.3.3 also states that a stormwater management facility must be constructed at an elevation that ensures no adjacent habitable building will be brought into noncompliance with a standard in subsection 4.3.3.

The low floor elevation of the proposed building in relation to the UGSWMF’s 100-year high-water elevation is summarized in the table below. Appendix 4a analysis was used to demonstrate compliance with subsection 4.3.3 criteria. The low floor elevation of the proposed structure is in compliance with Rule 4.3.3 criteria.

Low Floor Elevation Summary

Building	Low Floor Elevation of Building (M.S.L.)	100-year Frequency Flood Elevation of Proposed Facility (M.S.L.)	Low Floor Elevation Freeboard (feet)	Distance from Building to Proposed Facility(ft)	* Minimum permissible depth to water table (ft)
Proposed Knox & American II	823.5	827.0	-3.5	77	4.5

*Minimum permissible depth to groundwater table determined from Appendix 4a: Plot 1.

Based on Appendix 4a analysis, the minimum permissible depth to the water table from the low floor elevation is 4.5 feet, or elevation 819.0 M.S.L. The Braun Intertec geotechnical report

identifies groundwater was encountered at elevation 810.2 M.S.L. in the boring completed near the proposed UGSWMF (Boring ST-10). The separation provided between groundwater and the low floor elevation is 13.3 feet. The Appendix 4a analysis demonstrates compliance with subsection 4.3.3 criteria.

The low opening is at elevation 823.5 M.S.L. and located at the underground parking garage entrance. The volume of runoff generated from the site will be detained within the UGSWMF during the 100-year event. The underground parking garage access drive has a high point at elevation 829.0 M.S.L. just before the down ramp to the underground parking garage entrance, which provides two feet of separation from the high point to the 100-year high water elevation of the proposed stormwater management facility, 827.0 M.S.L. Therefore, the low opening elevation at 823.5 M.S.L. is not hydraulically connected to the UGSWMF. Surface overflow from the UGSWMF, should it occur, is directed from the northeast corner of the site to the street, at elevation 828.0 M.S.L. The low opening meets criteria of subsection 4.3.3, as surface overflow from the proposed UGSWMF is not connected to the low opening at the underground parking garage.

In accordance with Rule 4.3.4, a post-project chloride management plan must be provided that will, 1) designate an individual authorized to implement the chloride-use plan and 2) designate a MPCA certified salt applicator engaged in the implementation of the chloride-use plan for the site.

Subsection 4.3.5 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 applicant must provide a receipt showing recordation of a maintenance declaration for the operation and maintenance of the onsite stormwater management facility.

In accordance with Rule 4.3.1a (i), where infiltration or filtration facilities, practices or systems are proposed, pre-treatment of runoff must be provided. Pretreatment will be provided sumps, complying with Rule 4.3.1a (i).

5.0 Erosion and Sediment Control

The district's requirements for erosion and sediment control apply to the project because more than 50 cubic yards of material will be disturbed and 5,000 square feet or more of surface area is altered, Rules 5.2.1a and b.

The erosion control plan prepared by Civil Site Group includes installation of perimeter erosion control (silt fence), inlet protection, and two construction entrances.

The contractor for the project will need to designate a contact who will remain liable to the district for performance under the District's Erosion and Sediment Control Rule 5.0 from the time the permitted activities commence until vegetative cover is established, in accordance with subsection 5.4.1e. NMCWD must be notified if the responsible individual changes during the permit term.

11.0 Fees

Fees for the project are:

Rule 4:	\$750
Rule 5:	\$750
Total Fees:	\$1,500

12.0 Financial Assurances

Financial Assurances for the project are:

Rule 4: Stormwater Facility: 1,820 S.F. x \$12/S.F. =.....	\$21,840
Rule 5: Perimeter Control: 1,200 L.F. x \$2.50/L.F. =	\$3,000
Inlet Protection: 16 x \$100 =.....	\$1,600
Site Restoration: 1.8 acres x \$2,500/acre =.....	\$4,500
Chloride Management	\$5,000
Contingency and Administration	\$13,260

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 4 and 5 with the fulfilment of the conditions identified below.
3. The proposed stormwater management facility will provide volume retention, rate control, and water quality management in accordance with subsections 4.3.1a-c criteria.
4. In accordance with NMCWD Rule 4.3.5, the applicant must provide a maintenance and inspection plan that identifies and protects the design, capacity, and functionality of the stormwater management facility, and record the plan in a declaration on the property title.
5. Based on the NMCWD Atlas 14 model results in the area of Knox Avenue South, an inundation area in the 100-year, 24-hour storm event extends onto the site. Because the inundation area is not associated with a waterbody or watercourse, Rule 2.0 Floodplain Management and Drainage Alterations is not applicable.

Recommendation

Approval, contingent upon:

Compliance with the General Provisions (attached).

Financial Assurance in the amount of \$49,200; \$44,200 for stormwater management, erosion control and site restoration, \$5,000 for compliance with the chloride management requirements.

The applicant providing a name and contact information for the individual responsible for the erosion and sediment control at the site. NMCWD must be notified if the responsible individual changes during the permit term.

Per Rule 4.3.5, a receipt showing recordation of a maintenance declaration for the operation and maintenance of the stormwater management facility is required. A draft of the declaration must be approved by the district prior to recordation.

By accepting the permit, when issued, the applicant agrees to the following stipulations for closeout of the permit and release of the financial assurance after the project:

The work associated with the building construction and site improvements at 8000 Knox Avenue South under the terms of Permit #2023-097 must have an impervious surface area and configuration materially consistent with the approved plans. A design that differs materially from the approved plans will need to be the subject of a request for a permit modification or new permit, which will be subject to review for compliance with all applicable regulatory requirements.

Per Rule 4.5.6, an as-built drawing of the stormwater management facility conforming to the design specifications, including a stage volume relationship in tabular form for the underground stormwater management facility, as approved by the district, must be provided.

Submission of a plan for post-project management of Chloride use on the site. The plan must include 1) the designation of an individual authorized to implement the chloride use plan and 2) the designation of a Minnesota Pollution Control Agency certified salt applicator engaged in the implementation of the chloride-use plan for the site. The release of the \$5,000 of the financial assurance required for the chloride-management plan requires that the chloride-management plan has been provided to and approved by the District's Administrator.

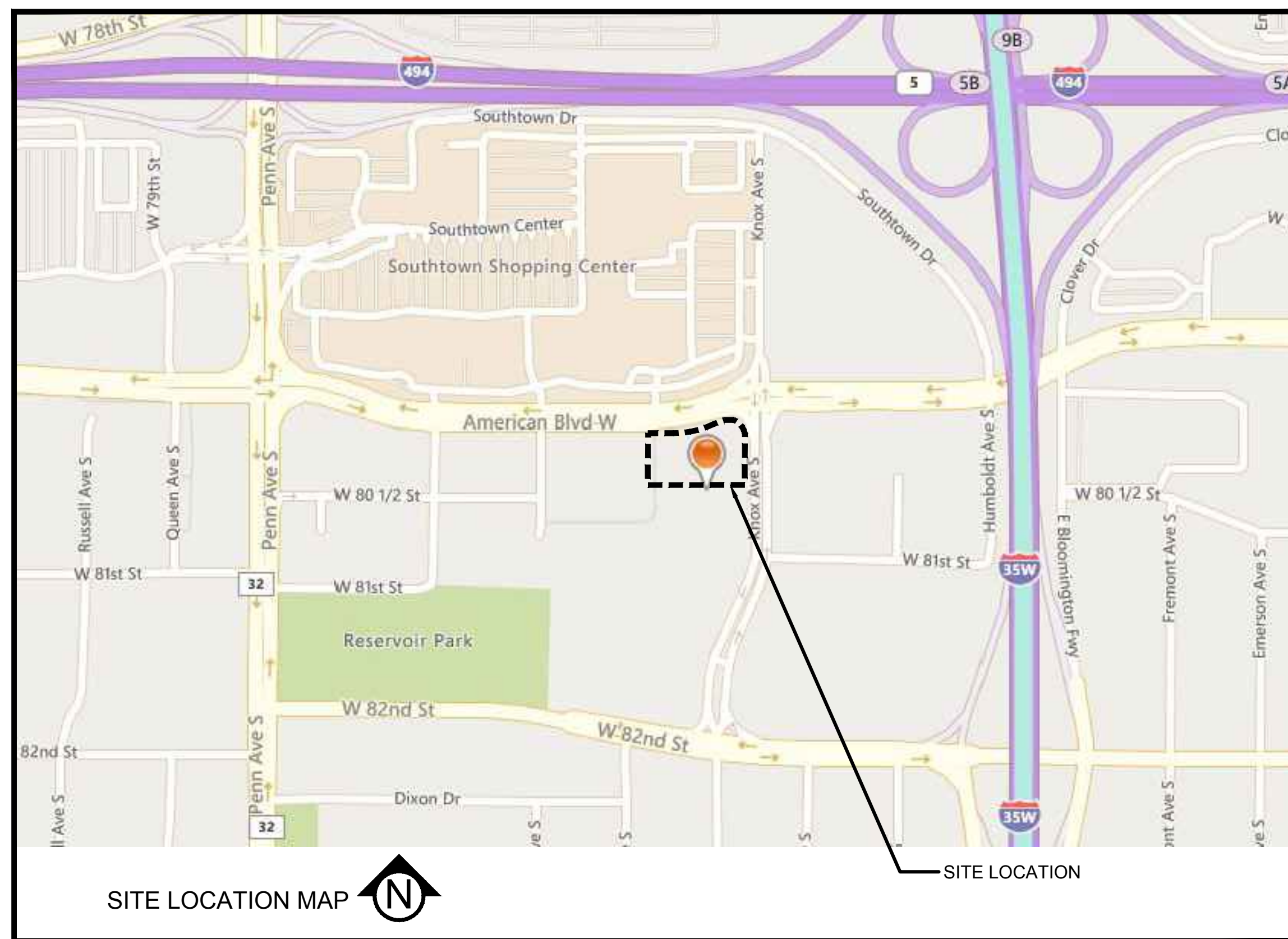
Per Rule 12.4.1b, demonstration and confirmation that the stormwater management facility has been constructed or installed and are functioning as designed and permitted. Verification, through daily observation logs and photographs, must be provided showing the stormwater management facility used for volume retention have drawn down within 48 hours from the completion of two 1-inch (approximate) separate rainfall events.

PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II

BLOOMINGTON, MINNESOTA

ISSUED FOR: WATERSHED RESUBMITTAL



PROJECT
KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

Matthew R. Pavek
Matthew R. Pavek
DATE 12/04/23 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY	
DATE	DESCRIPTION
3/20/23	SKETCH PLAN
4/26/23	PRE-APP DISC SUBMISSION
05/17/23	DEVELOPMENT APPLICATION SUBMITTAL
07/31/23	WATERSHED SUBMITTAL
08/31/23	WATERSHED RESUBMITTAL
09/28/23	DDCMP SET
12/04/23	WATERSHED RESUBMITTAL

REVISION SUMMARY	
DATE	DESCRIPTION

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

TITLE SHEET
C0.0

ARCHITECT:
ESG ARCHITECTURE & DESIGN
500 WASHINGTON AVE S, SUITE 1080
MINNEAPOLIS, MN 55415
CONTACT: ARON THOMAS
612-268-2440

DEVELOPER / PROPERTY OWNER:
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET
MINNEAPOLIS, MN 55420
CONTACT: RYAN DUNLAY
952-948-9546

ENGINEER / LANDSCAPE ARCHITECT:
CIVIL SITE GROUP CIVIL SITE GROUP
5000 GLENWOOD AVE 5000 GLENWOOD AVE
GOLDEN VALLEY, MN 55422 GOLDEN VALLEY, MN 55422
CIVIL ENGINEER CONTACT: LANDSCAPE ARCHITECT CONTACT:
MATT PAVEK BILL BROHMAN
612-615-0060 EXT 701 612-615-0060 EXT 710

SURVEYOR:
CIVIL SITE GROUP
5000 GLENWOOD AVE
GOLDEN VALLEY, MN 55422
CONTACT: RORY SYNSTELIEN
RORY@CIVILSITEGROUP.COM
612-615-0060

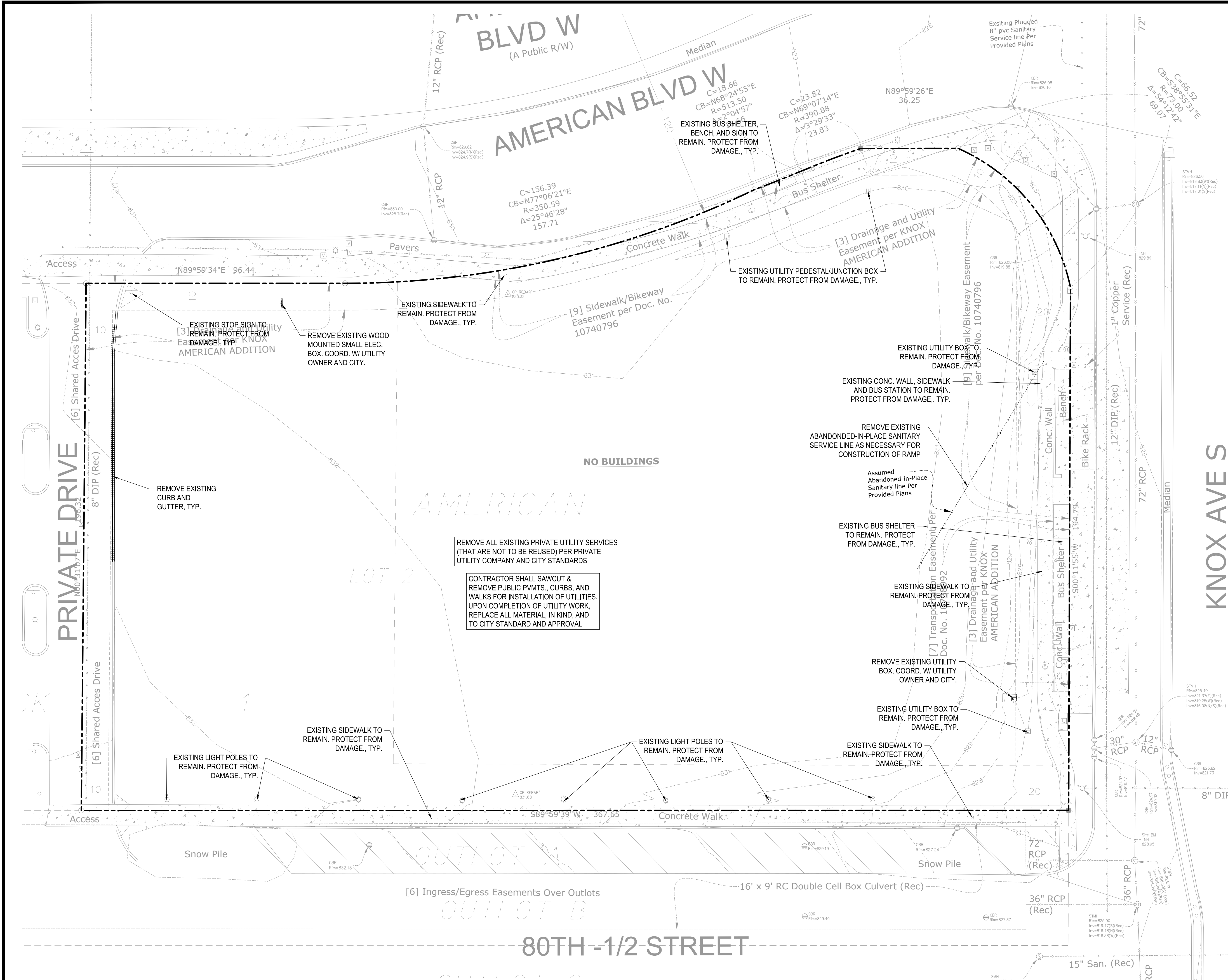
GEOTECHNICAL ENGINEER:
BRAUN INTERTEC CORPORATION
11001 HAMPSHIRE AVE S
MINNEAPOLIS, MN 55438
CONTACT: JOSEPH L. WESTPHAL
952-995-2000

ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.



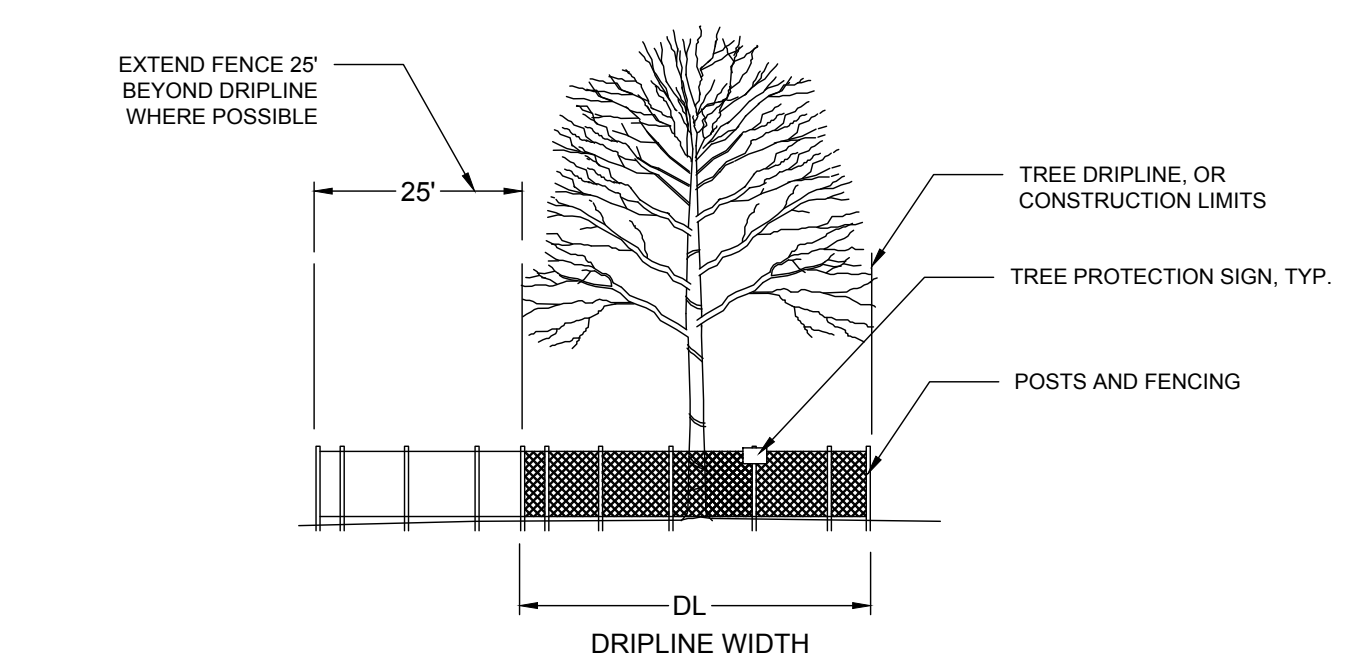
Know what's below.
Call before you dig.

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C0.0	TITLE SHEET
C1.0	REMOVALS PLAN
C2.0	SITE PLAN
C2.1	SITE PLAN - TURNING MOVEMENT EXHIBIT
C2.2	SITE PLAN - EASEMENT EXHIBIT
C3.0	GRADING PLAN
C4.0	UTILITY PLAN
C5.0	CIVIL DETAILS
C5.1	CIVIL DETAILS
C5.2	CIVIL DETAILS
C5.3	CIVIL DETAILS
C5.4	CIVIL DETAILS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN NOTES & DETAILS
SW1.0	SWPPP - EXISTING CONDITIONS
SW1.1	SWPPP - PROPOSED CONDITIONS
SW1.2	SWPPP - DETAILS
SW1.3	SWPPP - NARRATIVE
SW1.4	SWPPP - ATTACHMENTS
SW1.5	SWPPP - ATTACHMENTS



REMOVAL NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLAN FOR CONSTRUCTION STORM WATER MANAGEMENT PLAN.
3. REMOVAL OF MATERIALS NOTED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH MNDOT, STATE AND LOCAL REGULATIONS.
4. REMOVAL OF PRIVATE UTILITIES SHALL BE COORDINATED WITH UTILITY OWNER PRIOR TO CONSTRUCTION ACTIVITIES.
5. EXISTING PAVEMENTS SHALL BE SAWCUT IN LOCATIONS AS SHOWN ON THE DRAWINGS OR THE NEAREST JOINT FOR PROPOSED PAVEMENT CONNECTIONS.
6. REMOVED MATERIALS SHALL BE DISPOSED OF TO A LEGAL OFF-SITE LOCATION AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
7. ABANDON, REMOVAL, CONNECTION, AND PROTECTION NOTES SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE WITH PROPOSED PLANS.
8. EXISTING ON-SITE FEATURES NOT NOTED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE CONTRACT.
9. PROPERTY LINES SHALL BE CONSIDERED GENERAL CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED ON THE DRAWINGS. WORK WITHIN THE GENERAL CONSTRUCTION LIMITS SHALL INCLUDE STAGING, DEMOLITION AND CLEAN-UP OPERATIONS AS WELL AS CONSTRUCTION SHOWN ON THE DRAWINGS.
10. MINOR WORK OUTSIDE OF THE GENERAL CONSTRUCTION LIMITS SHALL BE ALLOWED AS SHOWN ON THE PLAN AND PER CITY REQUIREMENTS. FOR ANY WORK ON ADJACENT PRIVATE PROPERTY, THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNER PRIOR TO ANY WORK.
11. DAMAGE BEYOND THE PROPERTY LIMITS CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT OR IN ACCORDANCE WITH THE CITY.
12. PROPOSED WORK (BUILDING AND CIVIL) SHALL NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
13. SITE SECURITY MAY BE NECESSARY AND PROVIDED IN A MANNER TO PROHIBIT VANDALISM, AND THEFT, DURING AND AFTER NORMAL WORK HOURS, THROUGHOUT THE DURATION OF THE CONTRACT. SECURITY MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY.
14. VEHICULAR ACCESS TO THE SITE SHALL BE MAINTAINED FOR DELIVERY AND INSPECTION ACCESS DURING NORMAL OPERATING HOURS. AT NO POINT THROUGHOUT THE DURATION OF THE CONTRACT SHALL CIRCULATION OF ADJACENT STREETS BE BLOCKED WITHOUT APPROVAL BY THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
15. ALL TRAFFIC CONTROLS SHALL BE PROVIDED AND ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
16. SHORING FOR BUILDING EXCAVATION MAY BE USED AT THE DISCRETION OF THE CONTRACTOR AND AS APPROVED BY THE OWNERS REPRESENTATIVE AND THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
17. STAGING, DEMOLITION, AND CLEAN-UP AREAS SHALL BE WITHIN THE PROPERTY LIMITS AS SHOWN ON THE DRAWINGS AND MAINTAINED IN A MANNER AS REQUIRED BY THE CITY.
18. ALL EXISTING SITE TRAFFIC/REGULATORY SIGNAGE TO BE INVENTORIED AND IF REMOVED FOR CONSTRUCTION SHALL BE RETURNED TO LGU.
19. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.



FURNISH A AND INSTALL TEMPORARY FENCE AT THE TREE'S DRIP LINE OR CONSTRUCTION LIMITS AS SHOWN ON PLAN, PRIOR TO ANY CONSTRUCTION. WHERE POSSIBLE PLACE FENCE 25' BEYOND DRIP LINE. PLACE TREE PROTECTION SIGN ON POSTS, ONE PER INDIVIDUAL TREE (FACING CONSTRUCTION ACTIVITY), OR ONE EVERY 100' LF ALONG A GROVE OR MULTI-TREE PROTECTION AREA.

1 TREE PROTECTION NOTES

CITY OF BLOOMINGTON REMOVAL NOTES:

1. RESERVED FOR CITY SPECIFIC REMOVAL NOTES.

EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0 - SW1.5

- REMOVALS LEGEND:**
- 1'25 --- EX. 1' CONTOUR ELEVATION INTERVAL
 - [Hatched Box] REMOVAL OF PAVEMENT AND ALL BASE MATERIAL, INCLUDING BIT., CONC., AND GRAVEL PVMTS.
 - [Cross-hatched Box] REMOVAL OF STRUCTURE INCLUDING ALL FOOTINGS AND FOUNDATIONS.
 - [Dashed Line] REMOVE CURB AND GUTTER, IF IN RIGHT-OF-WAY, COORDINATE WITH LOCAL GOVERNING UNIT.
 - [Circle with X] TREE PROTECTION
 - [X] TREE REMOVAL - INCLUDING ROOTS AND STUMPS



**PRELIMINARY:
NOT FOR
CONSTRUCTION**

PROJECT
KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavlek
DATE 12/04/23 LICENSE NO. 44283

DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP/DRG SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/26/2023	DD/APP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

DATE	DESCRIPTION

**PRELIMINARY:
NOT FOR
CONSTRUCTION**

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

Matthew R. Pavsek
DATE: 12/04/23 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/28/2023	DD/IMP SET
12/04/2023	WATERSHED RESUBMITTAL

REVISION SUMMARY

DATE	DESCRIPTION

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

SITE PLAN

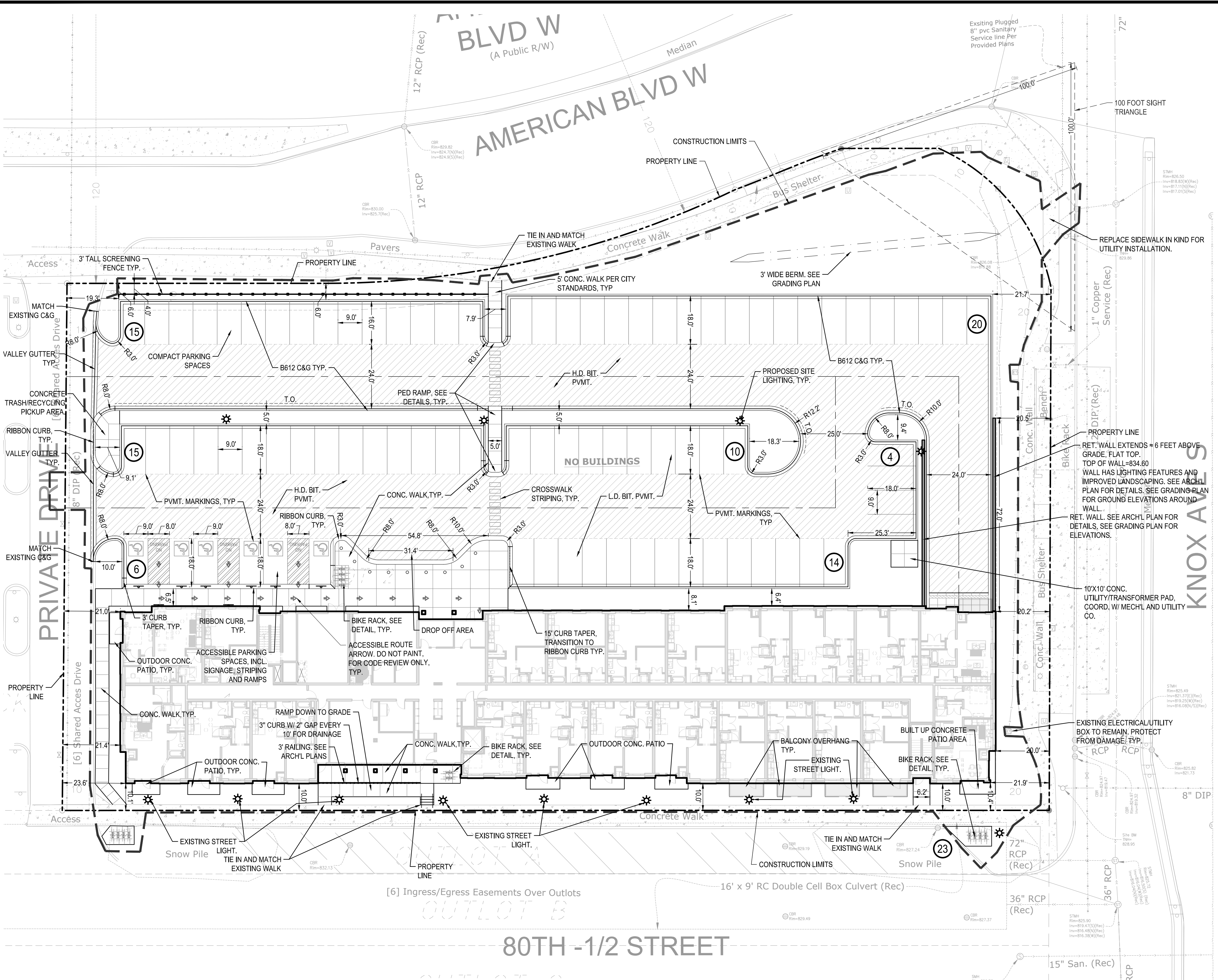
C2.0
© COPYRIGHT 2023 CIVIL SITE GROUP INC.

SITE LAYOUT NOTES:

- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- CONTRACTOR SHALL VERIFY LOCATIONS AND LAYOUT OF ALL SITE ELEMENTS PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, LOCATIONS OF EXISTING AND PROPOSED PROPERTY LINES, EASEMENTS, SETBACKS, UTILITIES, BUILDINGS AND PAVEMENTS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS OF ALL ELEMENTS FOR THE SITE. ANY REVISIONS REQUIRED AFTER COMMENCEMENT OF CONSTRUCTION, DUE TO LOCAL ADJUSTMENTS SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. ADJUSTMENTS TO THE LAYOUT SHALL BE APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF MATERIALS. STAKE LAYOUT FOR APPROVAL.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, INCLUDING A RIGHT-OF-WAY AND STREET OPENING PERMIT.
- THE CONTRACTOR SHALL VERIFY RECOMMENDATIONS NOTED IN THE GEO TECHNICAL REPORT PRIOR TO INSTALLATION OF SITE IMPROVEMENT MATERIALS.
- CONTRACTOR SHALL FIELD VERIFY COORDINATES AND LOCATION DIMENSIONS & ELEVATIONS OF THE BUILDING AND STAKE FOR REVIEW AND APPROVAL BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF FOOTING MATERIALS.
- LOCATIONS OF STRUCTURES, ROADWAY PAVEMENTS, CURBS AND GUTTERS, BOLLARDS, AND WALKS ARE APPROXIMATE AND SHALL BE STAKED IN THE FIELD, PRIOR TO INSTALLATION, FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.
- CURB DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF CONCRETE FOUNDATION. LOCATION OF BUILDING IS TO BUILDING FOUNDATION AND SHALL BE AS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR SAMPLES AS SPECIFIED FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO FABRICATION FOR ALL PREFABRICATED SITE IMPROVEMENT MATERIALS SUCH AS, BUT NOT LIMITED TO THE FOLLOWING, FURNISHINGS, PAVEMENTS, WALLS, RAILINGS, BENCHES, FLAGPOLES, LANDING PADS FOR CURB RAMPS, AND LIGHT AND POLES. THE OWNER RESERVES THE RIGHT TO REJECT INSTALLED MATERIALS NOT PREVIOUSLY APPROVED.
- ALL PEDESTRIAN RAMP COMPONENTS TO BE CONSTRUCTED AND GRADED PER M/DOT DETAILS. TRUNCATED DOMES CAN BE OMITTED ON PRIVATE PROPERTY AS DIRECTED BY THE ENGINEER/OWNERSHIP, UNLESS REQUIRED BY THE CITY.
- CROSSWALK STRIPING SHALL BE 24" WIDE WHITE PAINTED LINE, SPACED 48" ON CENTER PERPENDICULAR TO THE FLOW OF TRAFFIC. WIDTH OF CROSSWALK SHALL BE 5' WIDE. ALL OTHER PAVEMENT MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED OR REQUIRED BY ADA OR LOCAL GOVERNING BODIES.
- SEE SITE PLAN FOR CURB AND GUTTER TYPE. TAPER BETWEEN CURB TYPES-SEE DETAIL.
- ALL CURB RADII ARE MINIMUM 3' UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL REFER TO FINAL PLAT FOR LOT BOUNDARIES, NUMBERS, AREAS AND DIMENSIONS PRIOR TO SITE IMPROVEMENTS.
- FIELD VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS.
- PARKING IS TO BE SET PARALLEL OR PERPENDICULAR TO EXISTING BUILDING UNLESS NOTED OTHERWISE.
- ALL PARKING LOT PAINT STRIPING TO BE WHITE, 4" WIDE TYP.
- BITUMINOUS PAVING TO BE "LIGHT DUTY" UNLESS OTHERWISE NOTED. SEE DETAIL SHEETS FOR PAVEMENT SECTIONS.
- ALL TREES THAT ARE TO REMAIN ARE TO BE PROTECTED FROM DAMAGE WITH A CONSTRUCTION FENCE AT THE DRIP LINE. SEE LANDSCAPE DOCUMENTS.

SITE PLAN LEGEND:

- LIGHT DUTY BITUMINOUS PAVEMENT (IF APPLICABLE). SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & WEAR COURSE DEPTH, SEE DETAIL.
- HEAVY DUTY BITUMINOUS PAVEMENT (IF APPLICABLE). SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & WEAR COURSE DEPTH, SEE DETAIL.
- CONCRETE PAVEMENT (IF APPLICABLE) AS SPECIFIED (PAD OR WALK) SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & CONCRETE DEPTHS, WITHIN ROW SEE CITY DETAIL, WITHIN PRIVATE PROPERTY SEE CSG DETAIL.
- PROPERTY LINE
- CONSTRUCTION LIMITS
- CURB AND GUTTER-SEE NOTES (T.O.) TIP OUT GUTTER WHERE APPLICABLE-SEE PLAN
- TRAFFIC DIRECTIONAL ARROW PAVEMENT MARKINGS
- SIGN AND POST ASSEMBLY. SHOP DRAWINGS REQUIRED.
HC = ACCESSIBLE SIGN
NP = NO PARKING FIRE LANE
ST = STOP
CP = COMPACT CAR PARKING ONLY
ACCESSIBILITY ARROW (IF APPLICABLE) DO NOT PAINT.



CITY OF BLOOMINGTON SITE SPECIFIC NOTES:

- ALL CONSTRUCTION AND POST-CONSTRUCTION PARKING AND STORAGE OF EQUIPMENT AND MATERIALS MUST BE ON-SITE. USE OF PUBLIC STREETS FOR PRIVATE CONSTRUCTION PARKING, LOADING/UNLOADING, AND STORAGE WILL NOT BE ALLOWED.

SITE DATA

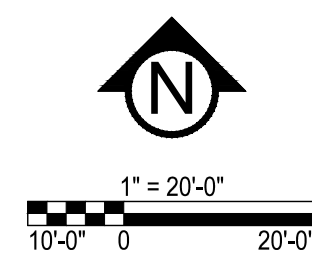
EXISTING ZONING	COMMUNITY COMMERCIAL (CC)
PROPOSED ZONING	HIGH DENSITY RESIDENTIAL (HDR) RM-100
NUMBER OF UNITS	99
PROPOSED DENSITY	54.82 DU/ACRE
PARKING SPACE	9'X18'
DRIVE AISLE	24'
REFER TO ARCHITECTURAL SITE PLAN FOR PARKING REQUIREMENTS	
SURFACE PARKING LOT SPACES PROVIDED	84
SURFACE PARKING LOT SPACES EXISTING	23
UNDERGROUND PARKING SPACES	50
TOTAL PARKING SPACES PROVIDED	157

OPERATIONAL NOTES:

- SNOW REMOVAL:** ALL SNOW SHALL BE STORED ON-SITE OUTSIDE PARKING LOT. WHEN FULL, REMOVAL CO. SHALL REMOVE EXCESS OF-SITE.
- TRASH REMOVAL:** TRASH SHALL BE WHEELED OUT TO EXTERIOR TRASH PICK-UP AREA AND REMOVED BY COMMERCIAL CO. WEEKLY.
- DELIVERIES:** DELIVERIES SHALL OCCUR AT THE FRONT DOOR VIA STANDARD COMMERCIAL DELIVERY VEHICLES (UPS, FED-EX, USPS).

SITE AREA TABLE:

BUILDING COVERAGE	EXISTING CONDITION		PROPOSED CONDITION	
	SF	%	SF	%
ALL PAVEMENTS	59,530	75.7%	43,104	54.8%
ALL NON-PAVEMENTS	13,608	17.3%	15,171	19.3%
TOTAL SITE AREA	78,691	100.0%	78,691	100.0%
IMPERVIOUS SURFACE	65,083	82.7%	63,520	80.7%
EXISTING CONDITION	65,083	82.7%	63,520	80.7%
PROPOSED CONDITION	63,520	80.7%	63,520	80.7%
DIFFERENCE (EX. VS PROP.)	-1,563	-2.0%	-1,563	-2.0%



PRELIMINARY:
NOT FOR
CONSTRUCTION

PROJECT
KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavlek
Matthew R. Pavlek
DATE 12/04/23 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
3/20/23	SKETCH PLAN
4/26/23	PRE-APP DISC SUBMISSION
05/17/23	DEVELOPMENT APPLICATION SUBMITTAL
07/31/23	WATERSHED SUBMITTAL
08/31/23	WATERSHED RESUBMITTAL
09/28/23	DD&MP SET
12/04/23	WATERSHED RESUBMITTAL

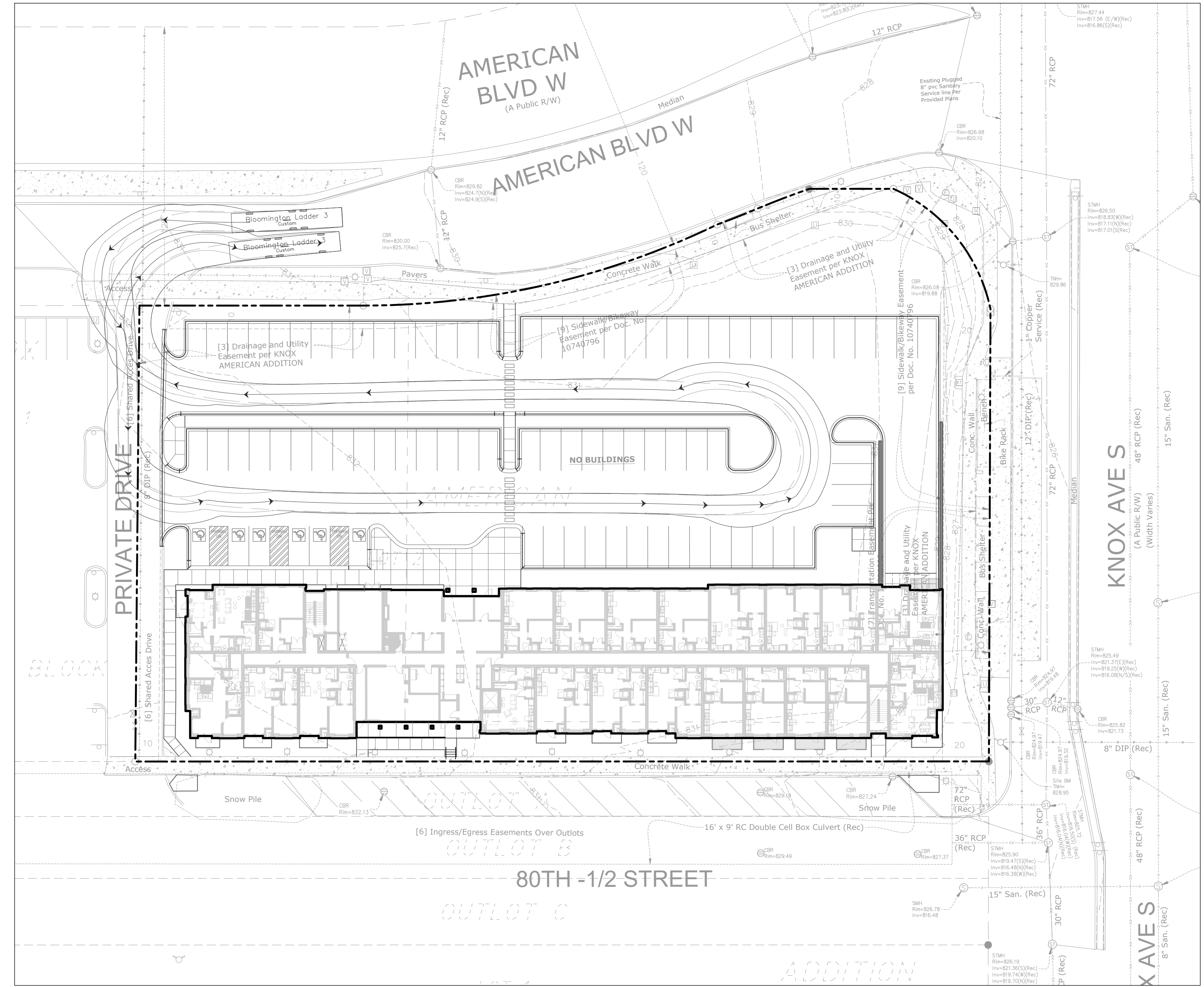
DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY

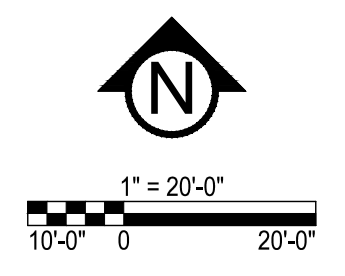
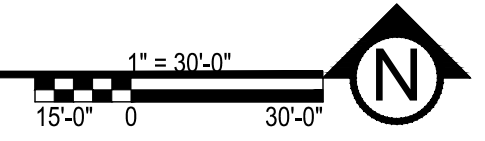
DATE	DESCRIPTION

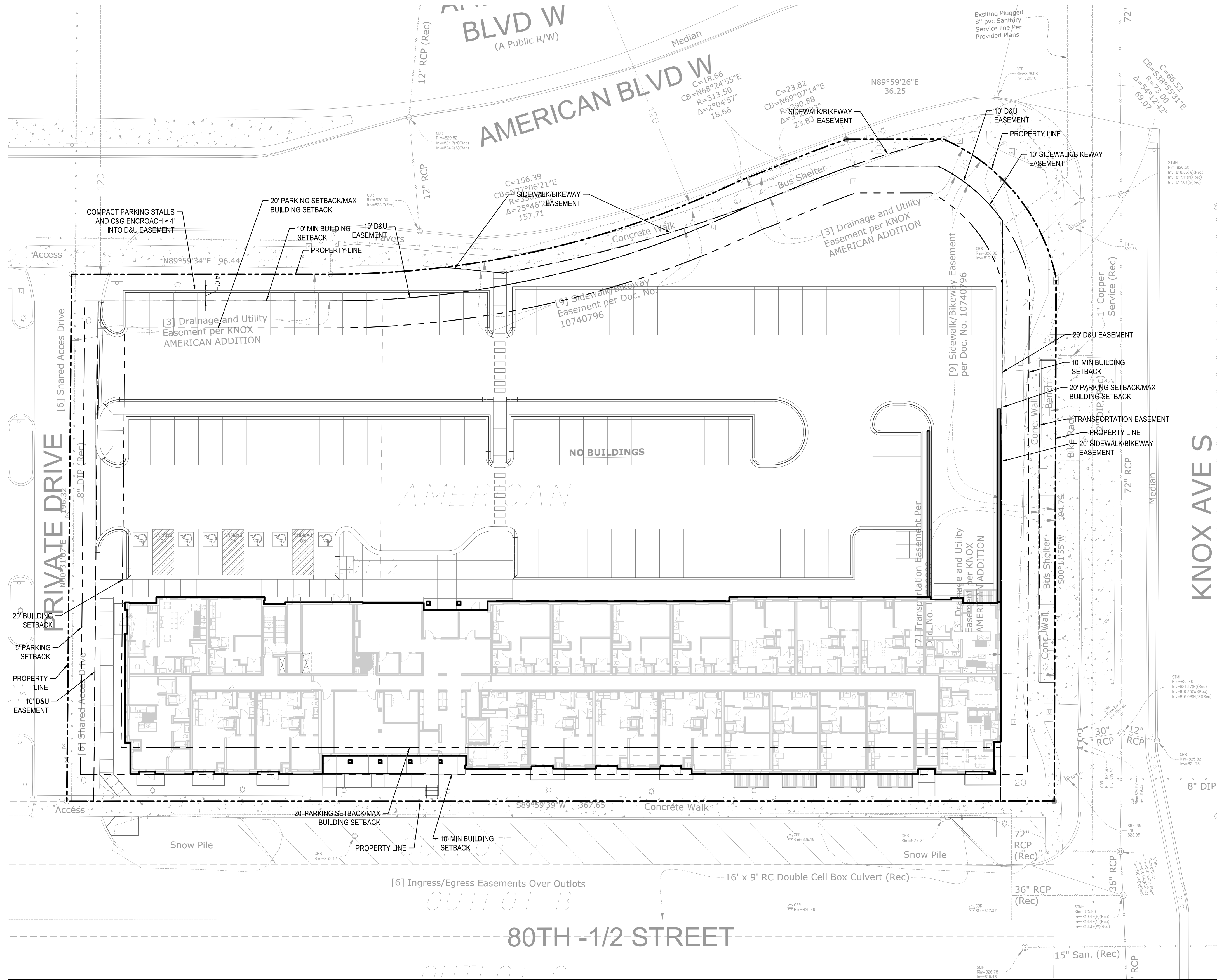
SITE PLAN - TURNING MOVEMENT EXHIBIT

C2.1

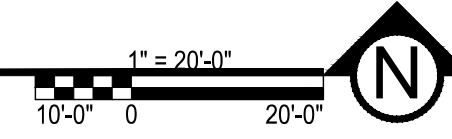


1 TURNING MOVEMENT EXHIBIT - FIRE TRUCK





1 SITE PLAN EASEMENT EXHIBIT



PRELIMINARY:
NOT FOR
CONSTRUCTION

PROJECT
KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavak
Matthew R. Pavak
DATE 12/04/23 LICENSE NO. 44263

ISSUE/SUBMITTAL SUMMARY	
DATE	DESCRIPTION
3/20/23	SKETCH PLAN
4/26/23	PRE-APP DISC SUBMISSION
05/17/23	DEVELOPMENT APPLICATION SUBMITTAL
07/31/23	WATERSHED SUBMITTAL
08/31/23	WATERSHED RESUBMITTAL
09/29/23	DD&MP SET
12/04/23	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY	
DATE	DESCRIPTION

SITE PLAN -
EASEMENT EXHIBIT

C2.2

**PRELIMINARY:
NOT FOR
CONSTRUCTION**

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

Matthew R. Pavsek
DATE 12/04/23 LICENSE NO. 44283

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP/DRG SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/28/2023	DD/IMP SET
12/04/2023	WATERSHED RESUBMITTAL

DATE	DESCRIPTION	DATE	DESCRIPTION

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY

DATE	DESCRIPTION

GRADING PLAN

C3.0
© COPYRIGHT 2023 CIVIL SITE GROUP INC.

GENERAL GRADING NOTES:

- CONTRACTOR SHALL VERIFY ALL BUILDING ELEVATIONS, (FFE, LFE, GFE), PRIOR TO CONSTRUCTION BY CROSS CHECKING WITH ARCHITECTURAL, STRUCTURAL AND CIVIL ELEVATIONS FOR EQUIVALENT "100" ELEVATIONS. THIS MUST BE DONE PRIOR TO EXCAVATION AND INSTALLATION OF ANY FOOTING MATERIALS. VERIFICATION OF THIS COORDINATION SHALL BE CONFIRMED IN WRITING BY CIVIL, SURVEYOR, ARCHITECTURAL, STRUCTURAL AND CONTRACTOR PRIOR TO CONSTRUCTION.
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.
- THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
- ANY ELEMENTS OF AN EARTH RETENTION SYSTEM AND RELATED EXCAVATIONS THAT FALL WITHIN THE PUBLIC RIGHT OF WAY WILL REQUIRE A "RIGHT OF WAY EXCAVATION PERMIT". CONTRACTOR IS RESPONSIBLE FOR ACQUIRING THIS PERMIT PRIOR TO CONSTRUCTION IF APPLICABLE.
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.
- PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
- GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN. AND 2% MAX. CROSS SLOPE, UNLESS OTHERWISE NOTED.
- PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS 4:1.
- PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.
- IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
- EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE 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. THE CONTRACTOR SHALL SUBCUT CUT 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.
- FINISHED GRADING SHALL BE COMPLETED. THE 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 FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER 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.
- PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE 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. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER. NO TEST ROLL SHALL OCCUR WITHIN 10' OF ANY UNDERGROUND STORM RETENTION/DETENTION SYSTEMS.
- TOLERANCES
 - THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
 - 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.
 - 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.
 - TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
- MAINTENANCE
 - THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRIS.
 - CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEDED AND MULCHED.
 - WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

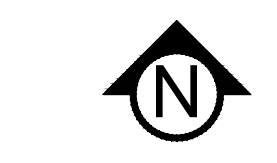
GRADING PLAN LEGEND:

1125	EX. 1' CONTOUR ELEVATION INTERVAL
1137	1.0' CONTOUR ELEVATION INTERVAL
41.26	SPOT GRADE ELEVATION (GUTTER/FLOW LINE UNLESS OTHERWISE NOTED)
891.00 GFE	GARAGE FLOOR ELEVATION
891.00 FFE	FINISHED FLOOR ELEVATION
891.00 LFE	LOW FLOOR ELEVATION
891.00 LOE	LOW OPENING ELEVATION
891.00 CB	SPOT GRADE ELEVATION CATCH BASIN
891.00 LP	SPOT GRADE ELEVATION LOW POINT
891.00 HP	SPOT GRADE ELEVATION HIGH POINT
891.00 RE	SPOT GRADE ELEVATION RIM ELEVATION
891.00 GR	SPOT GRADE ELEVATION GROUND
891.00 TE	SPOT GRADE ELEVATION THICKENED EDGE
891.00 G	SPOT GRADE ELEVATION GUTTER
891.00 TC	SPOT GRADE ELEVATION TOP OF CURB
891.00 BW/TW	SPOT GRADE ELEVATION BOTTOM OF WALL/TOP OF WALL
891.00 ME	SPOT GRADE ELEVATION MATCH EXISTING
CB	GRADE BREAK - HIGH POINTS
TO	CURB AND GUTTER (T.O. = TIP OUT)

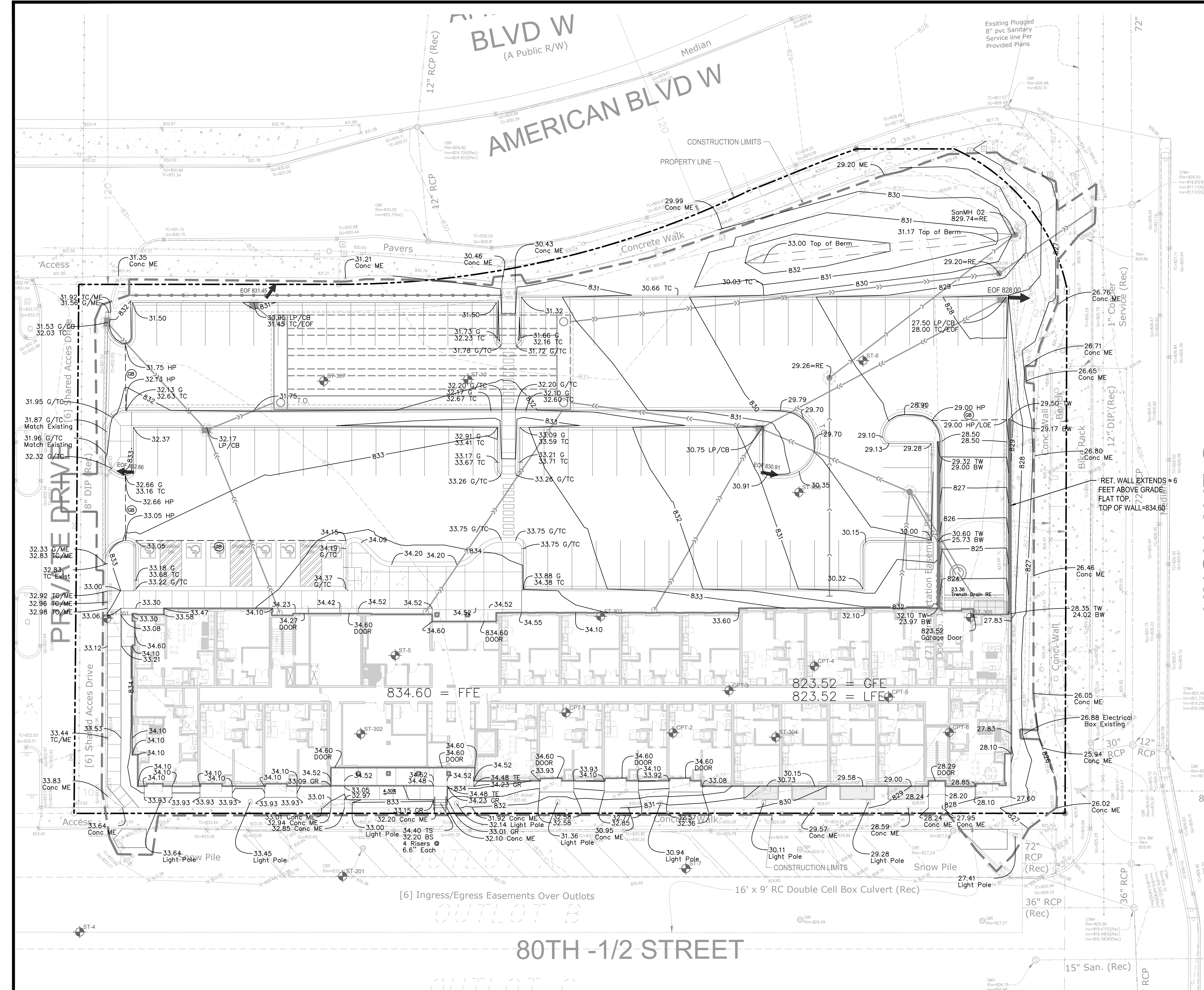
EOFF=835.52 EMERGENCY OVERTFLOW



Know what's below.
Call before you dig.



1" = 20'-0"
10'-0" 0 20'-0"



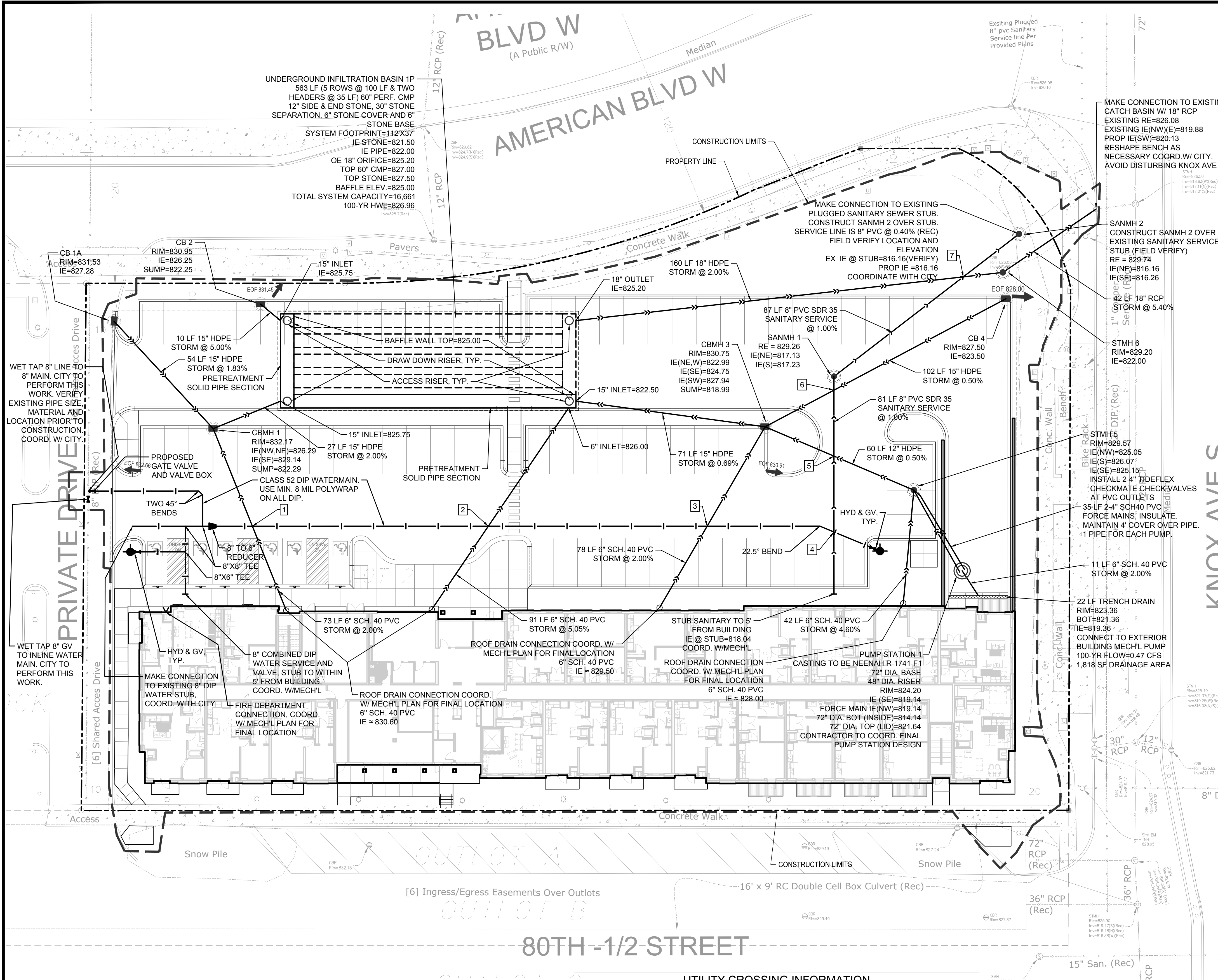
CITY OF BLOOMINGTON GRADING NOTES:
1. RESERVED FOR CITY SPECIFIC GRADING NOTES.

EROSION CONTROL NOTES:
SEE SWPPP ON SHEETS SW1.0 - SW1.5

GROUNDWATER INFORMATION:
PER GEOTECHNICAL REPORT BY BRAUN INTERTEC CORPORATION, DATED 10-17-2023
GROUNDWATER WAS OBSERVED AT ELEVATIONS RANGING FROM 796.5 TO 814.5

THE BORINGS & GROUNDWATER ARE AS FOLLOWS:

BORING	GROUNDWATER	YEAR DRILLED
ST-301	808.5	2023
ST-302	802.5	2023
ST-303	805.5	2023
ST-304	804.5	2023
ST-305	796.5	2023
MW-3	810.0	2018
ST-201	812.5	2018
ST-3	810.0	2008
ST-4	810.5	2008
ST-5	808.0	2008
ST-6	814.5	2008
ST-7	808.5	2008
ST-10	810.5	2008



- GENERAL UTILITY NOTES:**
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
 - SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.
 - CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.
 - UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.
 - CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER.
 - ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) AWWA C151, ASME B16.4, AWWA C110, AWWA C153 UNLESS OTHERWISE NOTED.
 - ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) ASTM D3034 & F679, OR SCH 40 ASTM D1785, 2665, ASTM F794, 1866) UNLESS OTHERWISE NOTED.
 - ALL STORM SEWER PIPE SHALL BE HDPE ASTM F714 & F2306 WITH ASTM D3212 SPEC FITTINGS UNLESS OTHERWISE NOTED.
 - PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION.
 - UTILITIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.
 - CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.
 - ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB UNLESS OTHERWISE NOTED.
 - HYDRANT TYPE, VALVE, AND CONNECTION SHALL BE IN ACCORDANCE WITH CITY REQUIREMENTS. HYDRANT EXTENSIONS ARE INCIDENTAL.
 - A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL.
 - A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.
 - ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.
 - CONNECTIONS TO EXISTING STRUCTURES SHALL BE CORE-DRILLED.
 - COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS.
 - COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF.
 - ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
 - ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
 - CONTRACTOR SHALL COORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.
 - CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.
 - CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.
 - ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES.
 - ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.0.
 - FOR ALL SITES LOCATED IN CLAY SOIL AREAS, DRAIN TILE MUST BE INSTALLED AT ALL LOW POINT CATCH BASINS 25' IN EACH DIRECTION. SEE PLAN AND DETAIL. INSTALL LOW POINT DRAIN TILE PER PLANS AND GEOTECHNICAL REPORT RECOMMENDATIONS AND REQUIREMENTS.

- CITY OF BLOOMINGTON UTILITY NOTES:**
- UTILITY AS-BUILTS MUST BE PROVIDED TO THE CITY PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
 - HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING AN A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT, OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY THE ENGINEER.
 - UTILITY PERMITS ARE REQUIRED FOR CONNECTIONS TO THE PUBLIC STORM SANITARY AND WATER SYSTEM. CONTACT UTILITIES (952-563-8777) FOR PERMIT INFORMATION.
 - UTILITY AS-BUILTS MUST BE PROVIDED PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
 - COMBINATION OF FIRE AND DOMESTIC SERVICE MUST TERMINATE WITH A THREAD ON FLANGE OR AN MJ TO FLANGE ADAPTER.
 - TAPS OF LIVE WATER MAINS ARE DONE BY CITY FORCES. THE CONTRACTOR PAYS FOR AND COORDINATES THIS WORK.
 - CONTRACTOR SHALL OBTAIN A PUBLIC WORKS PERMIT FOR UNDERGROUND WORK WITHIN THE RIGHT-OF-WAY. A PERMIT IS REQUIRED PRIOR TO REMOVALS OR INSTALLATION. CONTACT UTILITIES (952-563-4568) FOR PERMIT INFORMATION.
 - UTILITY AND MECHANICAL CONTRACTORS MUST COORDINATE THE INSTALLATION OF ALL WATER AND SEWER SERVICE PIPES INTO THE BUILDING TO ACCOMMODATE CITY INSPECTION AND TESTING.
 - A MINIMUM 10-FOOT HORIZONTAL SEPARATION AND 18-INCH VERTICAL SEPARATION IS REQUIRED BETWEEN WATER MAIN AND SEWERS.
 - USE CLASS 52 DIP WATER MAIN FOR PIPE 12 INCH DIAMETER AND SMALLER. A MINIMUM 8 MIL POLYWRAP IS REQUIRED ON ALL DIP.
 - ALL COMPONENTS OF THE WATER SYSTEM, UP TO THE WATER METER OR FIRE SERVICE EQUIPMENT MUST UTILIZE PROTECTIVE INTERNAL COATINGS MEETING CURRENT ANSI/AWWA STANDARDS FOR CEMENT MORTAR LINING OR SPECIAL COATINGS. THE USE OF UNLINED OR UNCOATED PIPE IS NOT ALLOWED.

[6] Ingress/Egress Easements Over Outlots

16' x 9' RC Double Cell Box Culvert (Rec)

80TH -1/2 STREET

UTILITY CROSSING INFORMATION

MAINTAIN MINIMUM 18" OF SEPARATION AT ALL WATERMAIN-SEWER CROSSINGS. INSULATE AS NECESSARY

UTILITY CROSSING NUMBER	ELEVATION OF OUTER DIAMETER OF PIPE	SEPARATION BETWEEN OUTER DIAMETER OF PIPES (FT) (MIN 18" OR 1.5 FT)
1	BOTTOM OF STORM SEWER=829.8 TOP OF WATER MAIN=826.0	3.8
2	BOTTOM OF STORM SEWER=828.6 TOP OF WATER MAIN=826.3	2.3
3	BOTTOM OF STORM SEWER=828.7 TOP OF WATER MAIN=824.3	4.4
4	BOTTOM OF WATER MAIN=822.5 TOP OF SANITARY SEWER=818.5	4.0
5	BOTTOM OF STORM SEWER=824.8 TOP OF SANITARY SEWER=818.2	6.6
6	BOTTOM OF STORM SEWER=823.0 TOP OF SANITARY SEWER=818.0	5.0
7	BOTTOM OF STORM SEWER=822.2 TOP OF SANITARY SEWER=817.2	5.0

UTILITY LEGEND:

- MANHOLE
- CATCH BASIN
- GATE VALVE AND VALVE BOX
- PROPOSED FIRE HYDRANT
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- FES AND RIP RAP

811 Know what's below. Call before you dig.

1" = 20'-0"

10'-0" 0 20'-0"

UTILITY PLAN

PRELIMINARY:
NOT FOR CONSTRUCTION

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.

Matthew R. Pavak
DATE 12/04/23 LICENSE NO. 44283

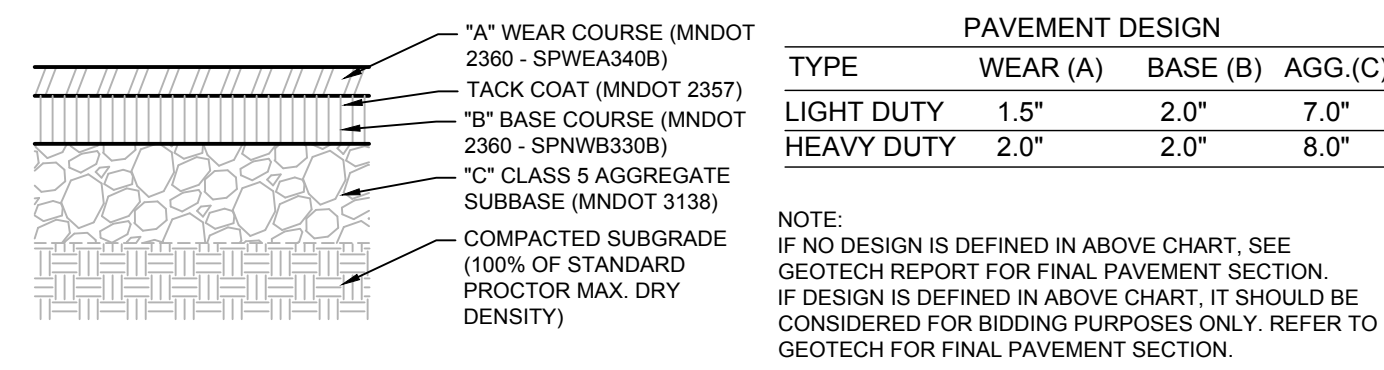
ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/26/2023	DDMGP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

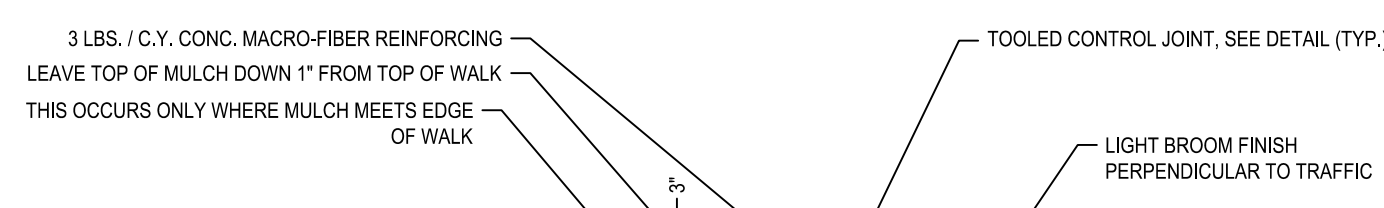
REVISION SUMMARY

DATE	DESCRIPTION

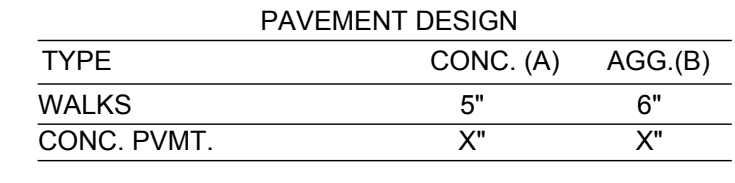


1 BITUMINOUS PAVEMENT - ALL TYPES

NTS

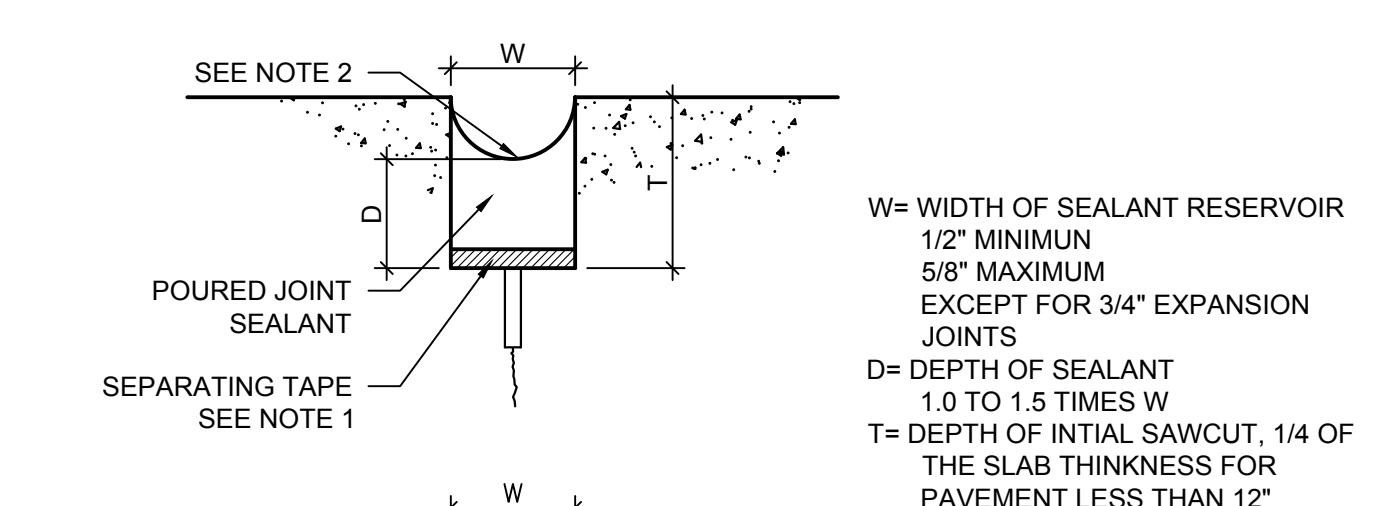


- NOTES:
- ALL CONCRETE PVMT. ON-SITE SHALL INCLUDE FIBER REINFORCING - 3 LBS./C.Y. CONC. MACRO-FIBERS PER ASTM C1118
 - INSTALLATION SHALL BE CERTIFIED AND IN ACCORDANCE TO AN ON-SITE A.C.I. TECHNICIAN AS SPECIFIED.
 - SEE GEO-TECHNICAL RECOMMENDATIONS FOR GROSS WEIGHT REQUIREMENTS.
 - SEE LAYOUT DRAWINGS FOR LIMITS OF WALKS.
 - SEE CONCRETE JOINT DETAIL FOR REQUIREMENTS.
 - 1/2" WIDE EXPANSION JOINT AND SEALANT AT ALL CURBS
 - IF NO DESIGN IS DEFINED IN CHART, SEE GEOTECH REPORT FOR FINAL PAVEMENT SECTION.
 - IF DESIGN IS DEFINED IN CHART, IT SHOULD BE CONSIDERED FOR BIDDING PURPOSES ONLY. REFER TO GEOTECH FOR FINAL PAVEMENT SECTION.



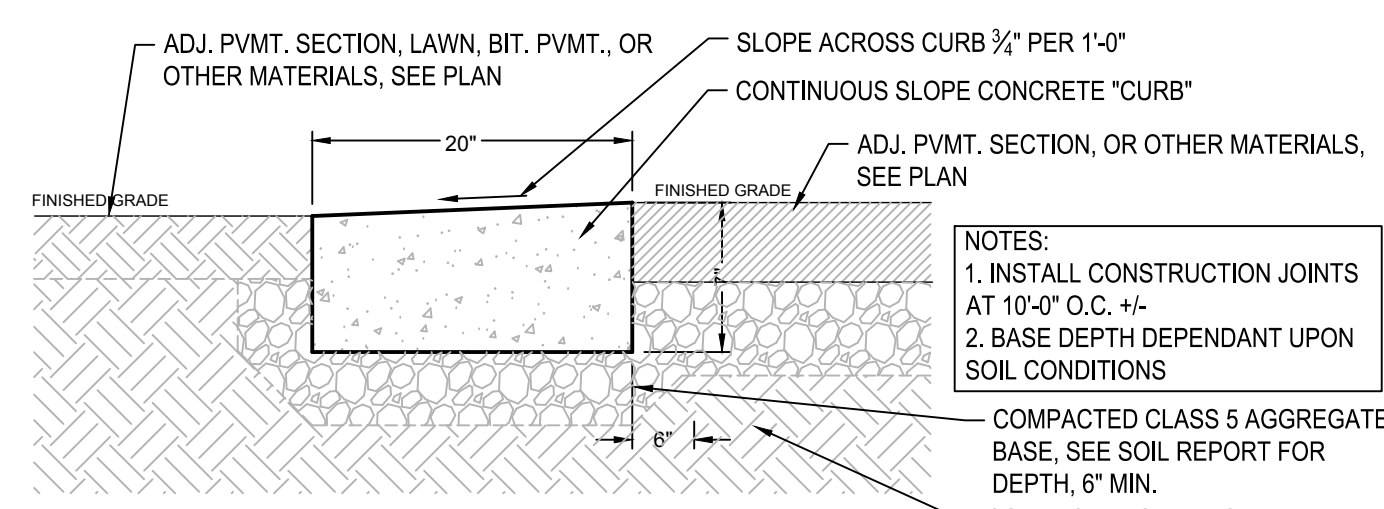
2 CONCRETE PVMT./WALK/PAD

NTS (PRIVATE PROPERTY)



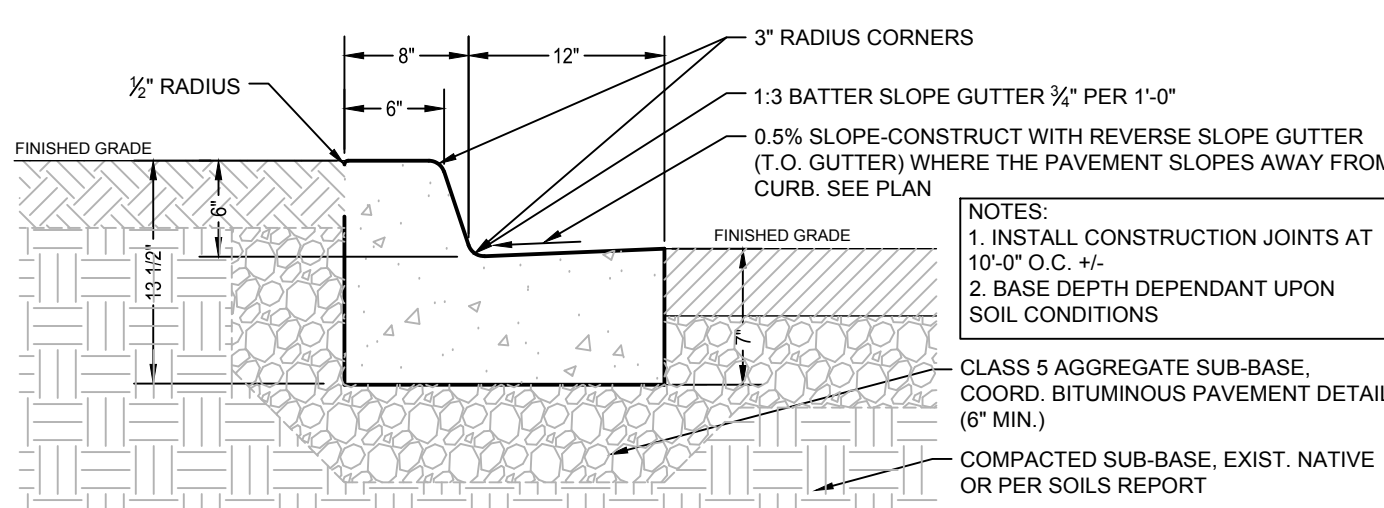
3 JOINT SEALANT DETAILS

NTS



4 RIBBON CURB

NTS

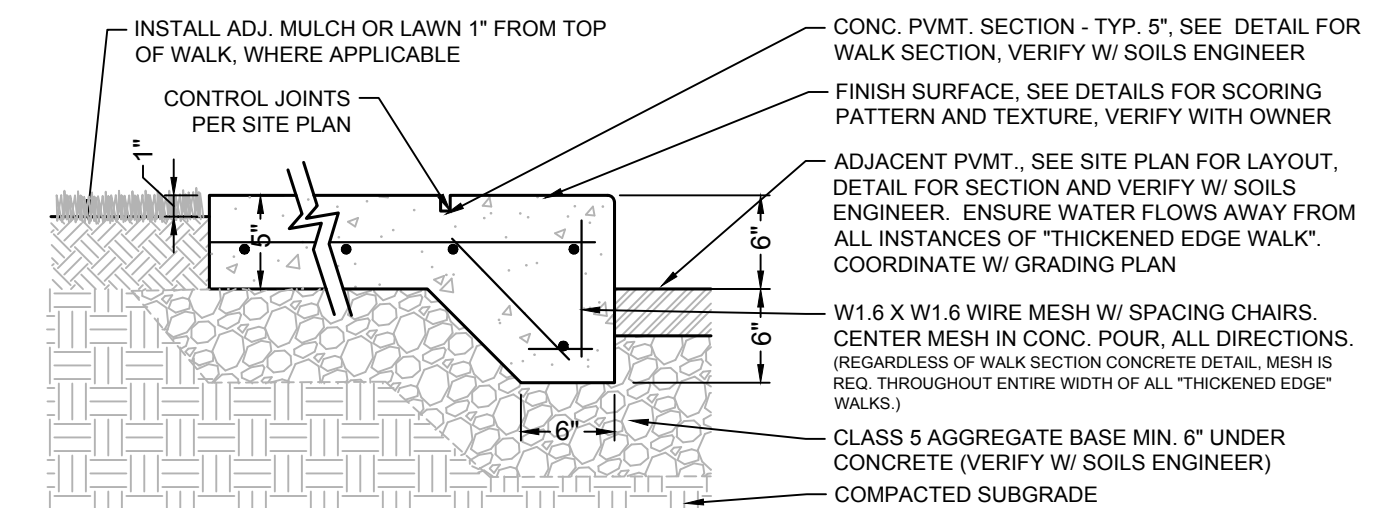


5 B-612 CONCRETE CURB AND GUTTER

NTS

GENERAL DETAILS NOTES:

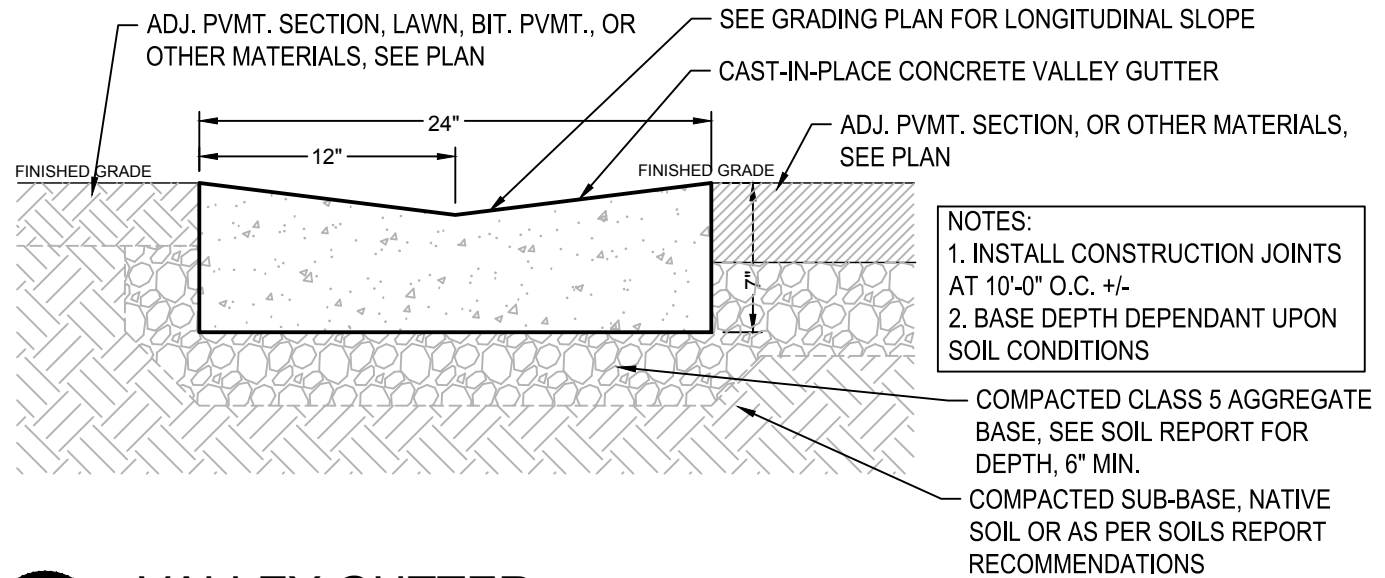
CONTRACTOR SHALL REVIEW ALL CIVIL AND ARCHITECTURAL DETAILS PRIOR TO WORK. ANY REDUNDANT, CONTRADICTORY OR CONFLICTING INFORMATION PRESENTED IN ANY PLAN OR DETAIL THROUGHOUT THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT AND CIVIL ENGINEER AND RESOLVED PRIOR TO WORK COMMENCING.



- NOTE:
- INSTALLATION AND REINFORCEMENT SHALL BE IN ACCORDANCE TO A CERTIFIED, ON-SITE A.C.I. TECHNICIAN AS SPECIFIED.
 - SEE GEO-TECHNICAL RECOMMENDATIONS FOR SOILS ENGINEER'S PVMT. SECTION REQUIREMENTS.
 - SEE LAYOUT DRAWINGS FOR LIMITS OF WALKS.
 - SEE CONCRETE JOINT DETAIL FOR REQUIREMENTS.
 - 1/2" WIDE EXPANSION JOINT AND SEALANT AT ALL CURBS
 - WIRE MESH AND CHAIRS REQUIRED FOR ALL WALKS OR IN LOCATIONS FOR VEHICULAR TRAFFIC.

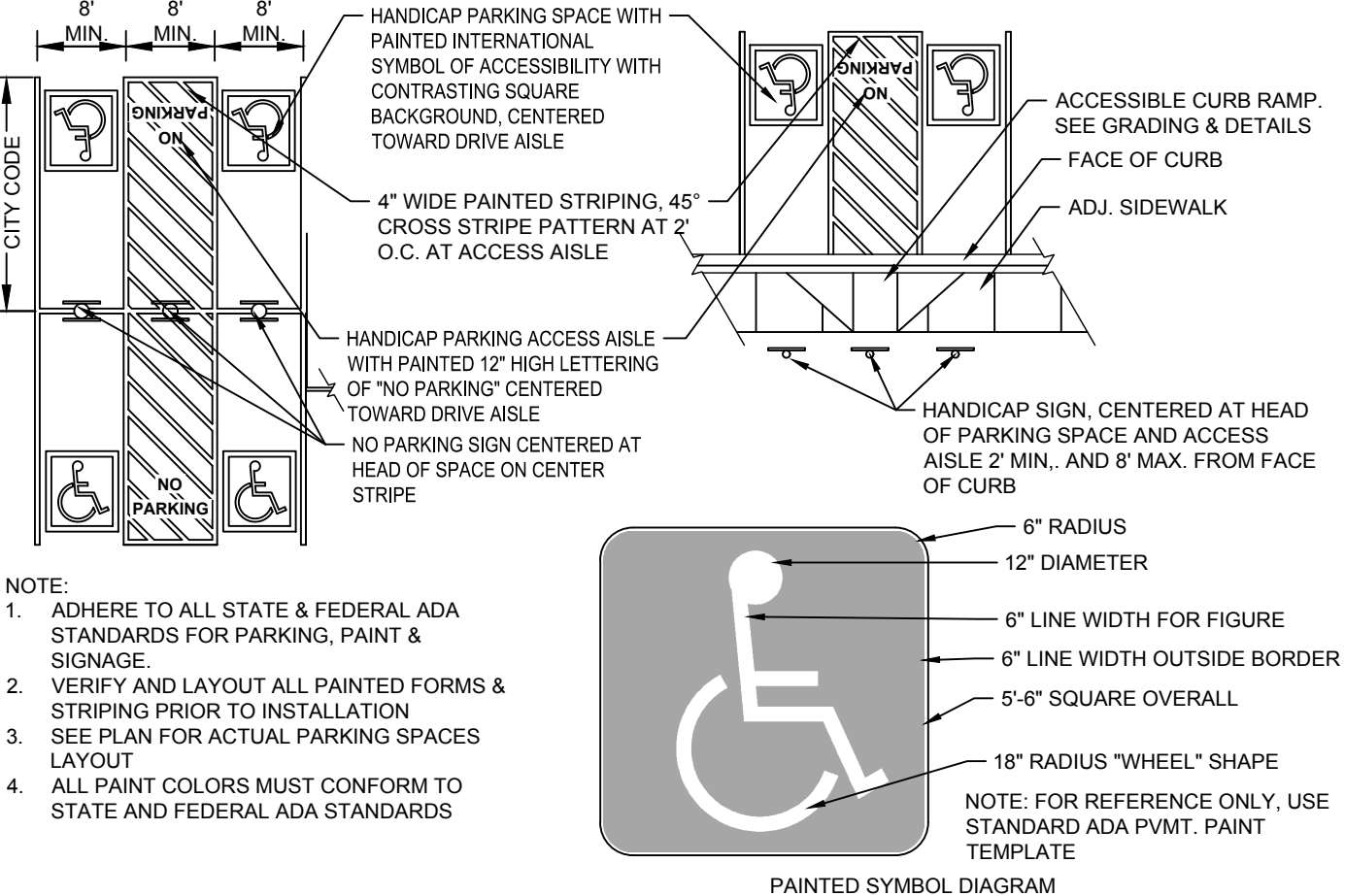
6 THICKENED EDGE CONC. WALK

NTS



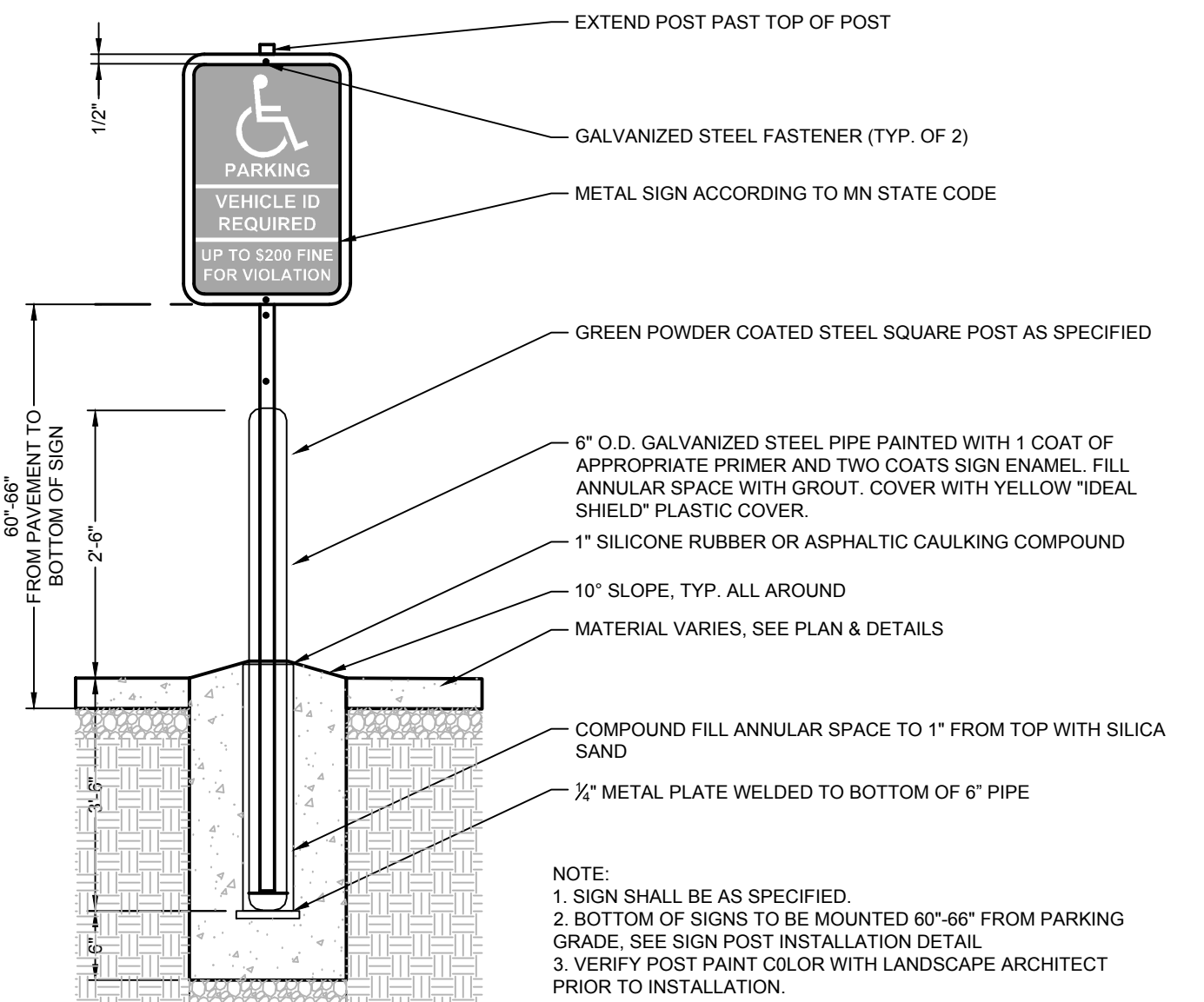
7 VALLEY GUTTER

NTS



8 ACCESSIBLE PARKING PAVEMENT MARKING

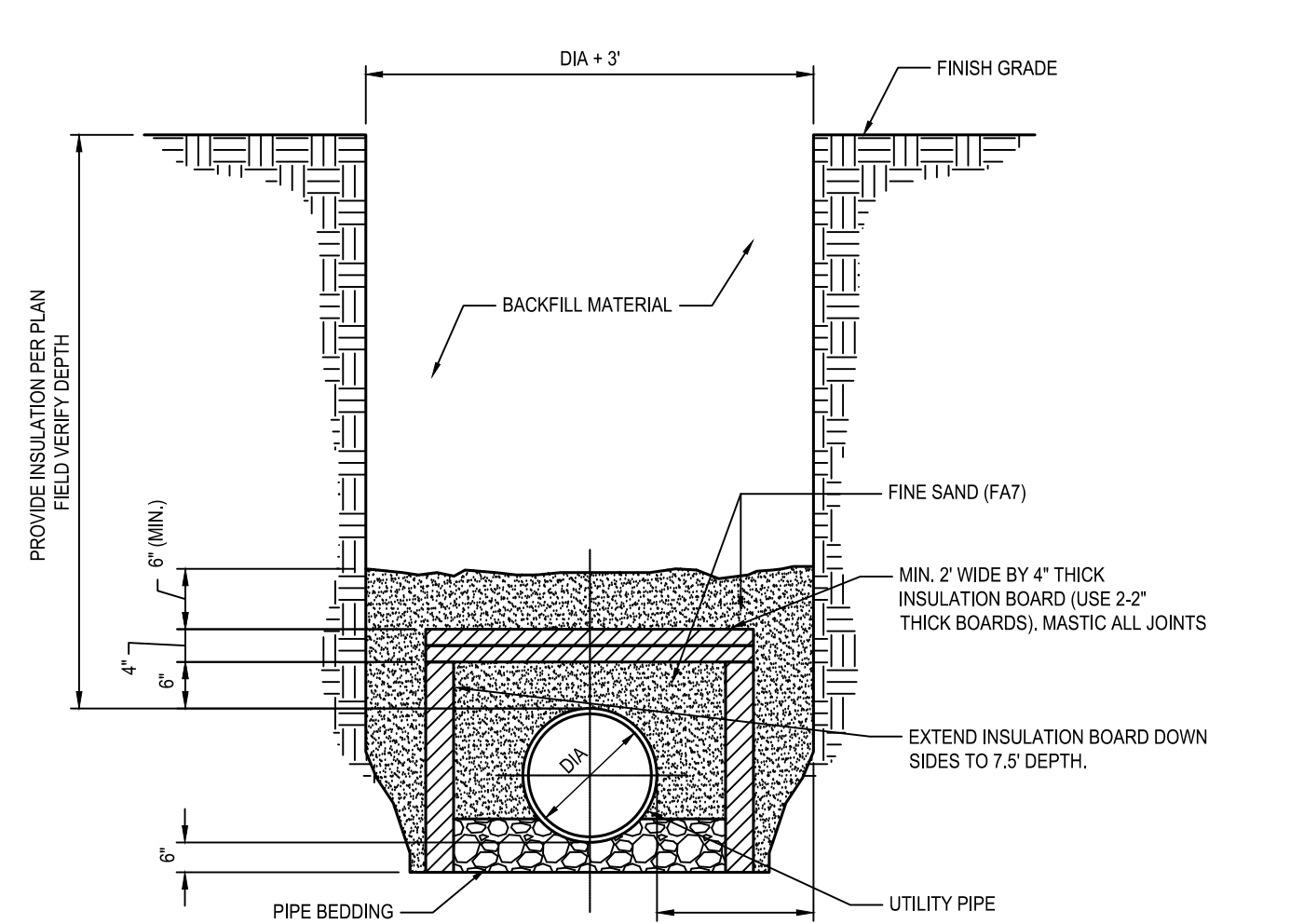
NTS



9 ACCESSIBLE SIGN AND POST

NTS

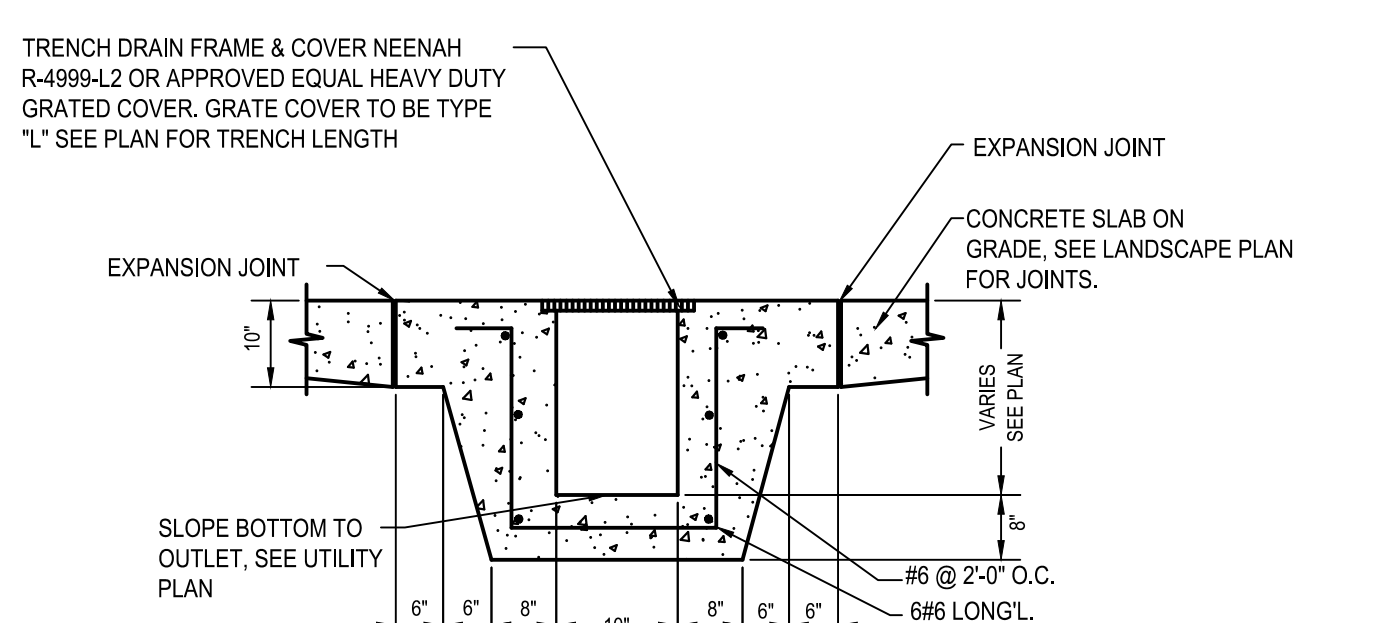
NOTE:
1. SIGN SHALL BE AS SPECIFIED.
2. BOTTOM OF SIGNS TO BE MOUNTED 60"-66" FROM PARKING GRADE, SEE SIGN POST INSTALLATION DETAIL.
3. VERIFY POST PAINT COLOR WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.



- NOTES:
- INSULATION BOARD TO BE CLOSED CELL, EXTRUDED POLYSTYRENE FOAM MEETING ASTM 578, TYPE VI, 40PSI COMPRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272).
 - BACKFILL MATERIAL AROUND INSULATION MUST BE FINE SAND FREE FROM ROOT, ORGANIC MATERIAL, OR OTHER INJURIOUS MATERIALS.
 - OVERLAP ALL INSULATION BOARD JOINTS.

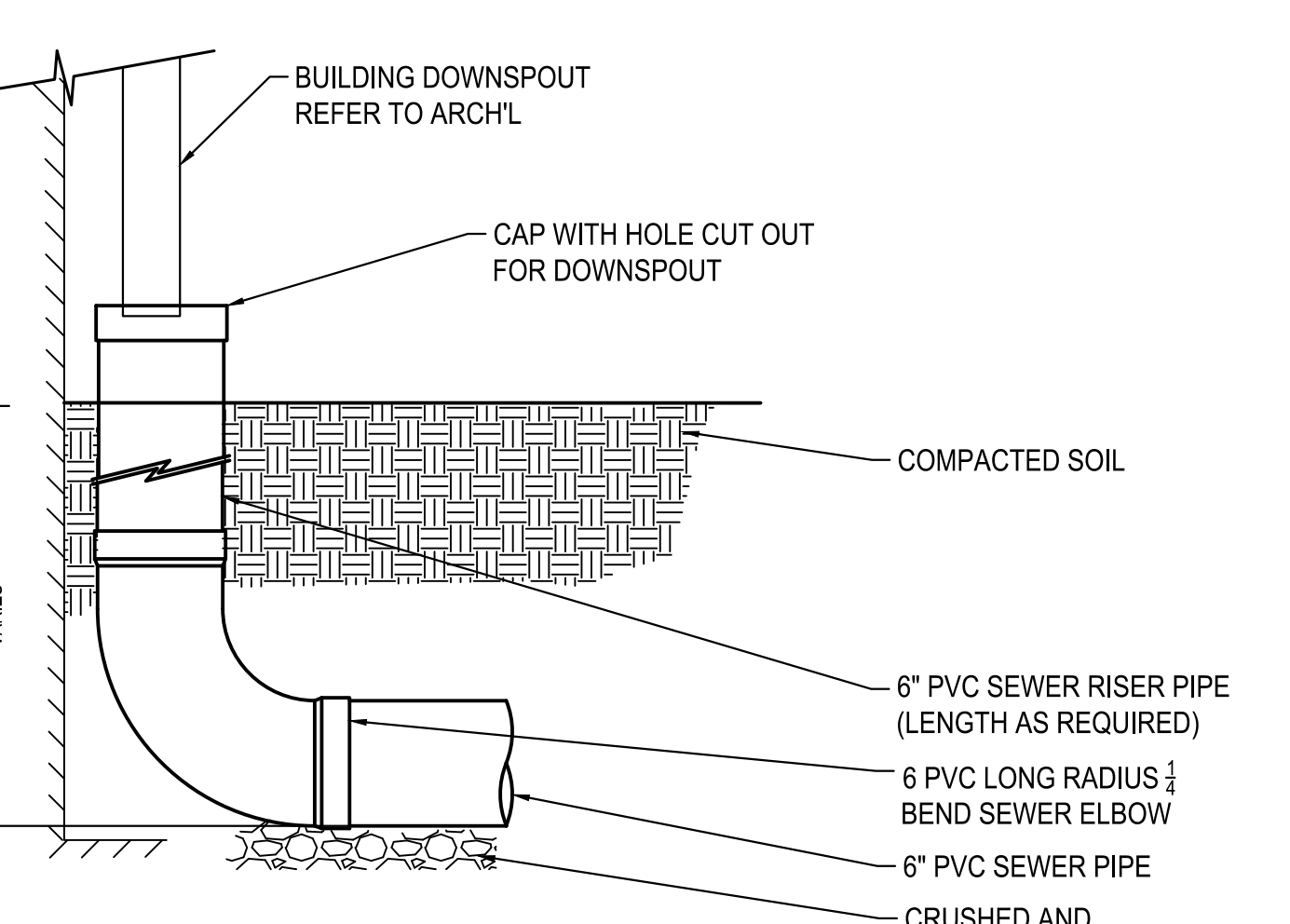
10 UTILITY PIPE INSULATION DETAIL

NTS



11 TRENCH DRAIN

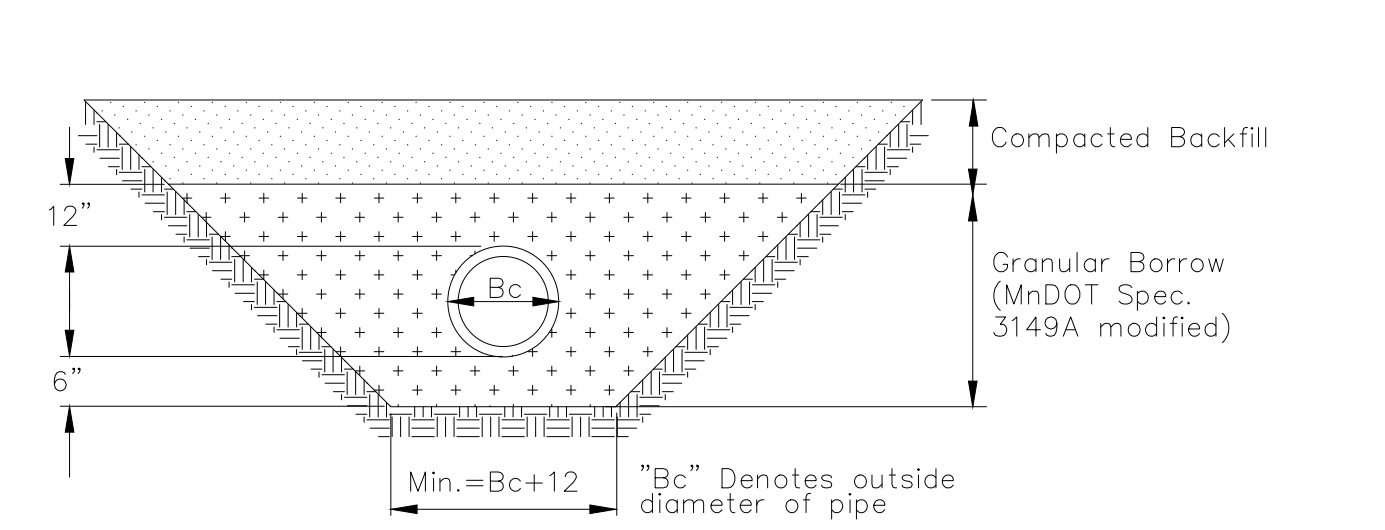
NTS



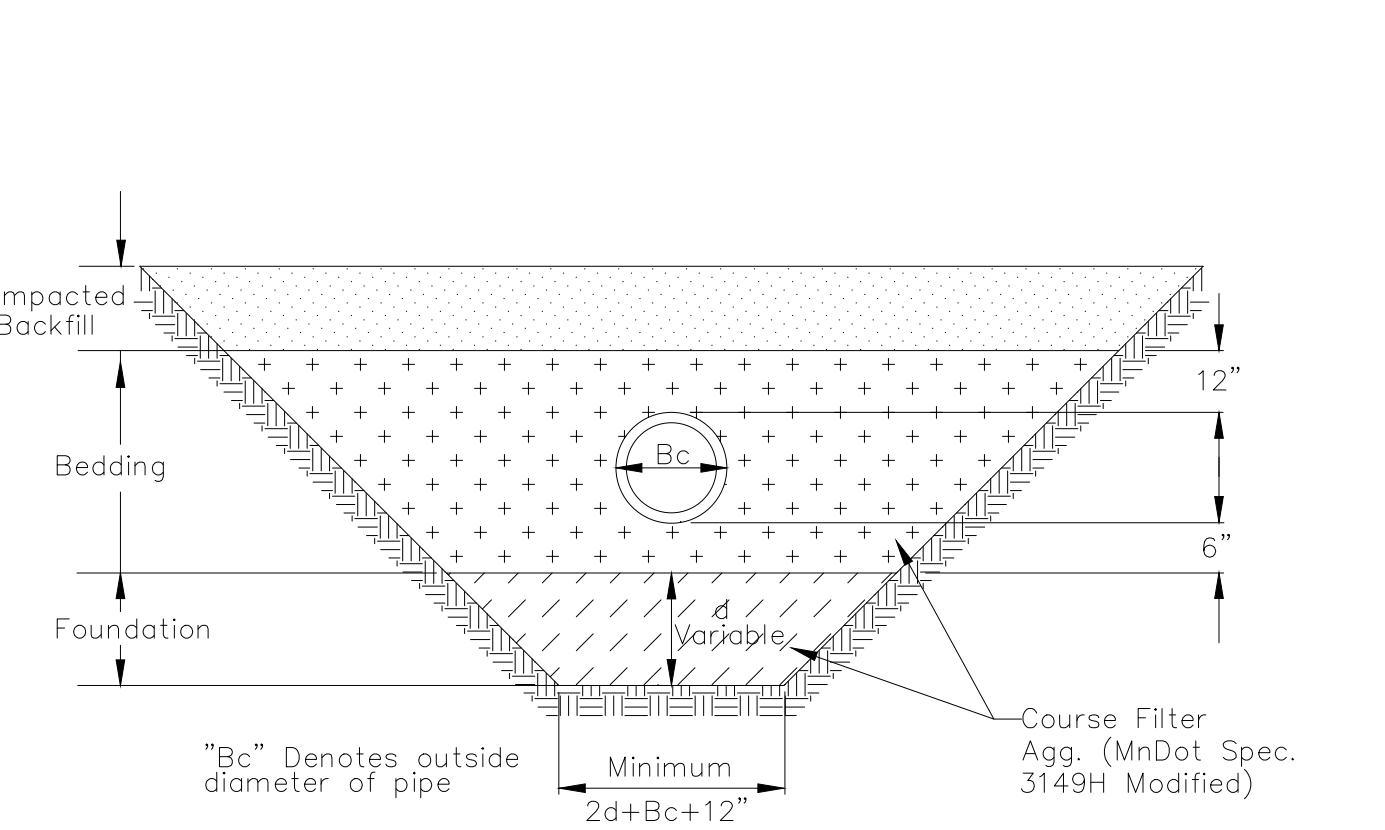
12 DOWNSPOUT TO PIPE CONNECTION

NTS

NOTE:
1. SIGN SHALL BE AS SPECIFIED.
2. BOTTOM OF SIGNS TO BE MOUNTED 60"-66" FROM PARKING GRADE, SEE SIGN POST INSTALLATION DETAIL.
3. VERIFY POST PAINT COLOR WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.



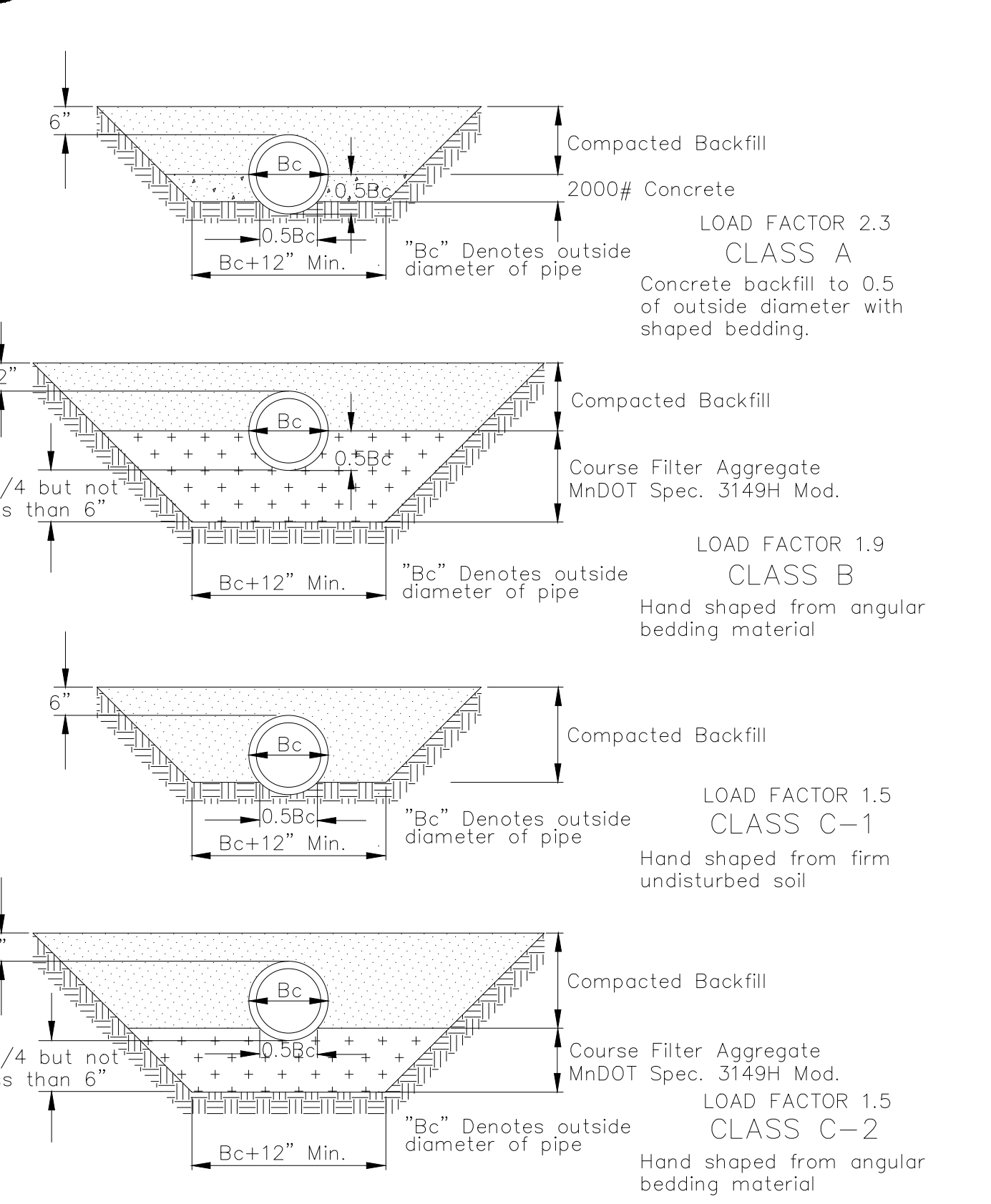
PIPE FOUNDATION & BEDDING IN GOOD SOILS



PIPE FOUNDATION & BEDDING IN POOR SOILS

13 PIPE BEDDING - PVC

NTS



14 PIPE BEDDING - RCP & DIP

NTS

NOTE:
1. SIGN SHALL BE AS SPECIFIED.
2. BOTTOM OF SIGNS TO BE MOUNTED 60"-66" FROM PARKING GRADE, SEE SIGN POST INSTALLATION DETAIL.
3. VERIFY POST PAINT COLOR WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

PRELIMINARY:
NOT FOR CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
PROJECT
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

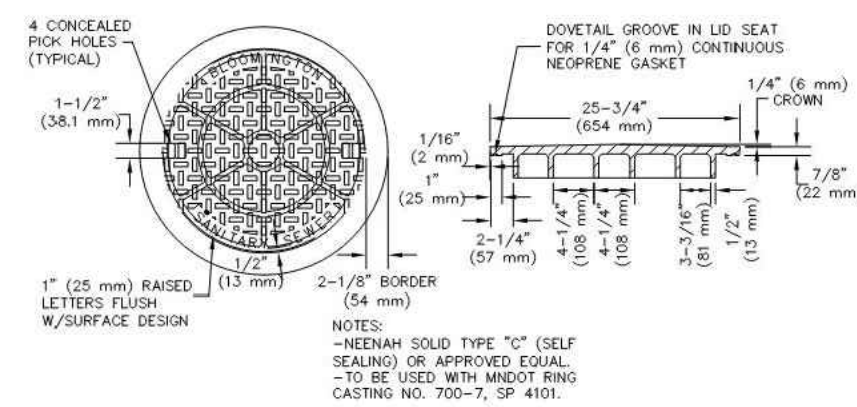
Matthew R. Pavlek
DATE 12/04/23 LICENSE NO. 44283

ISSUE/SUBMITTAL SUMMARY	
DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP/DRG SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/29/2023	DD/IMP SET
12/04/2023	WATERSHED RESUBMITTAL

REVISION SUMMARY	
DATE	DESCRIPTION

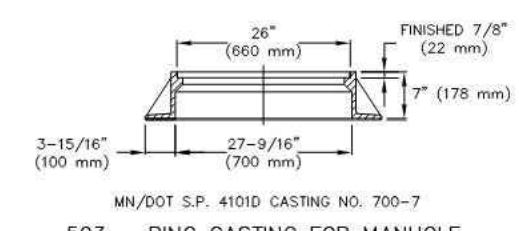
DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

CIVIL DETAILS



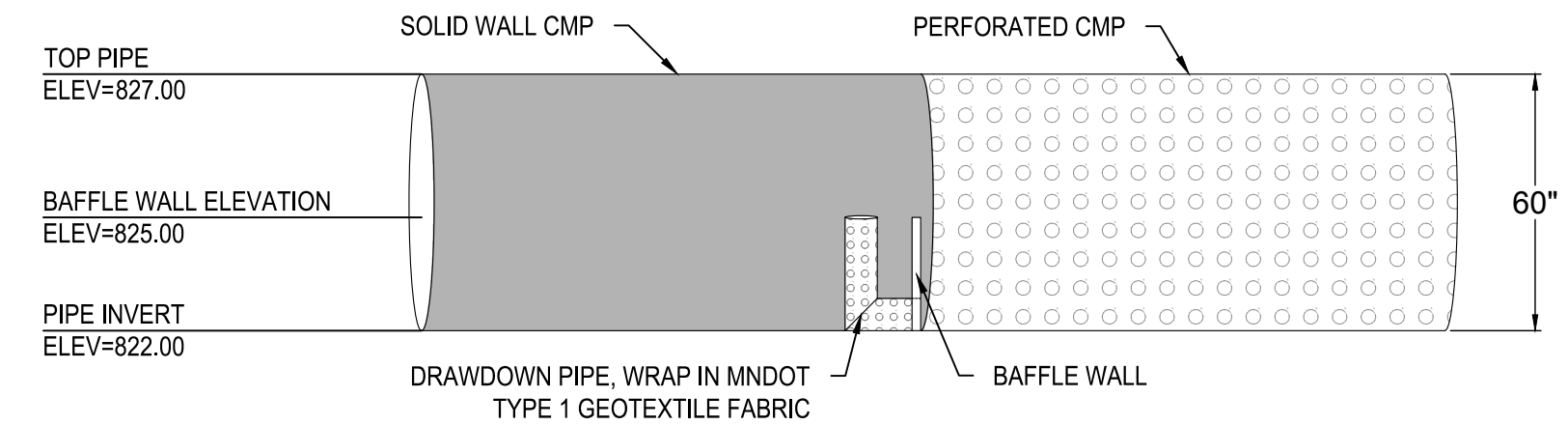
501 - STANDARD SANITARY MANHOLE COVER
501 - Standard Casting

<p>City of Bloomington Engineering Division Public Works Department</p>	<p>501 - Sanitary Cov</p> <p>LAST REVISED: 5/15/2015 LAST REVISED BY: KRG</p>
---	---

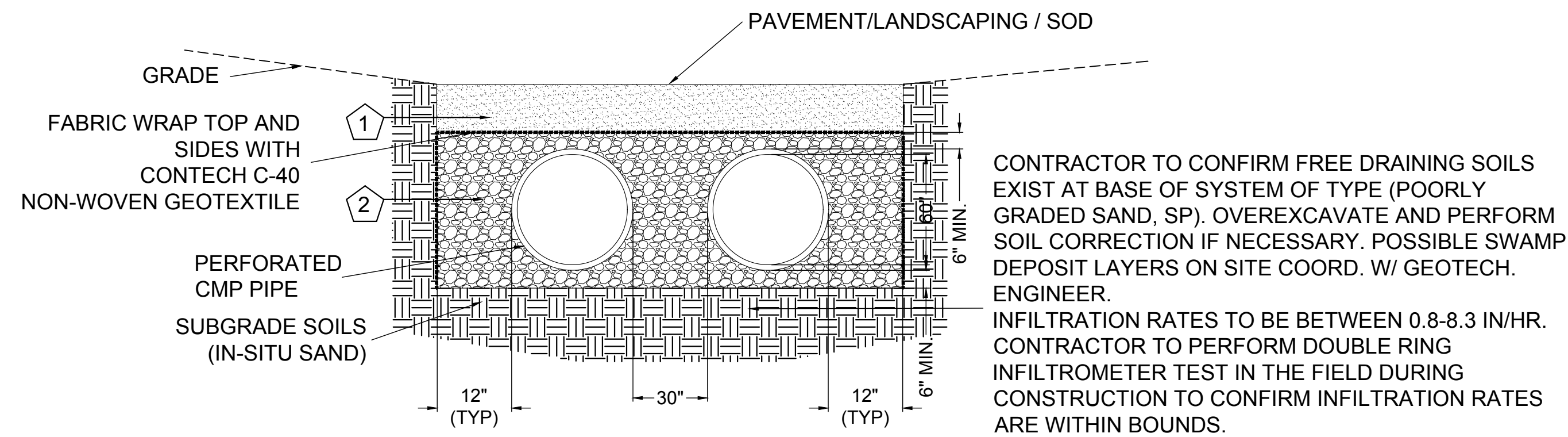


503 - RING CASTING FOR MANHOLE
503 - MH Frame Key

<p>City of Bloomington Engineering Division Public Works Department</p>	<p>503 - MH Frame</p> <p>LAST REVISED: 5/15/2015 LAST REVISED BY: KRG</p>
---	---



1 DRAWDOWN RISER DETAIL
N T S



SECTION DETAIL
N T S

- KEY
- TOPSOIL
 - FREE DRAINING ANGULAR WASHED STONE 3/4" - 2" PARTICLE SIZE (NON CARBONATE). INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.

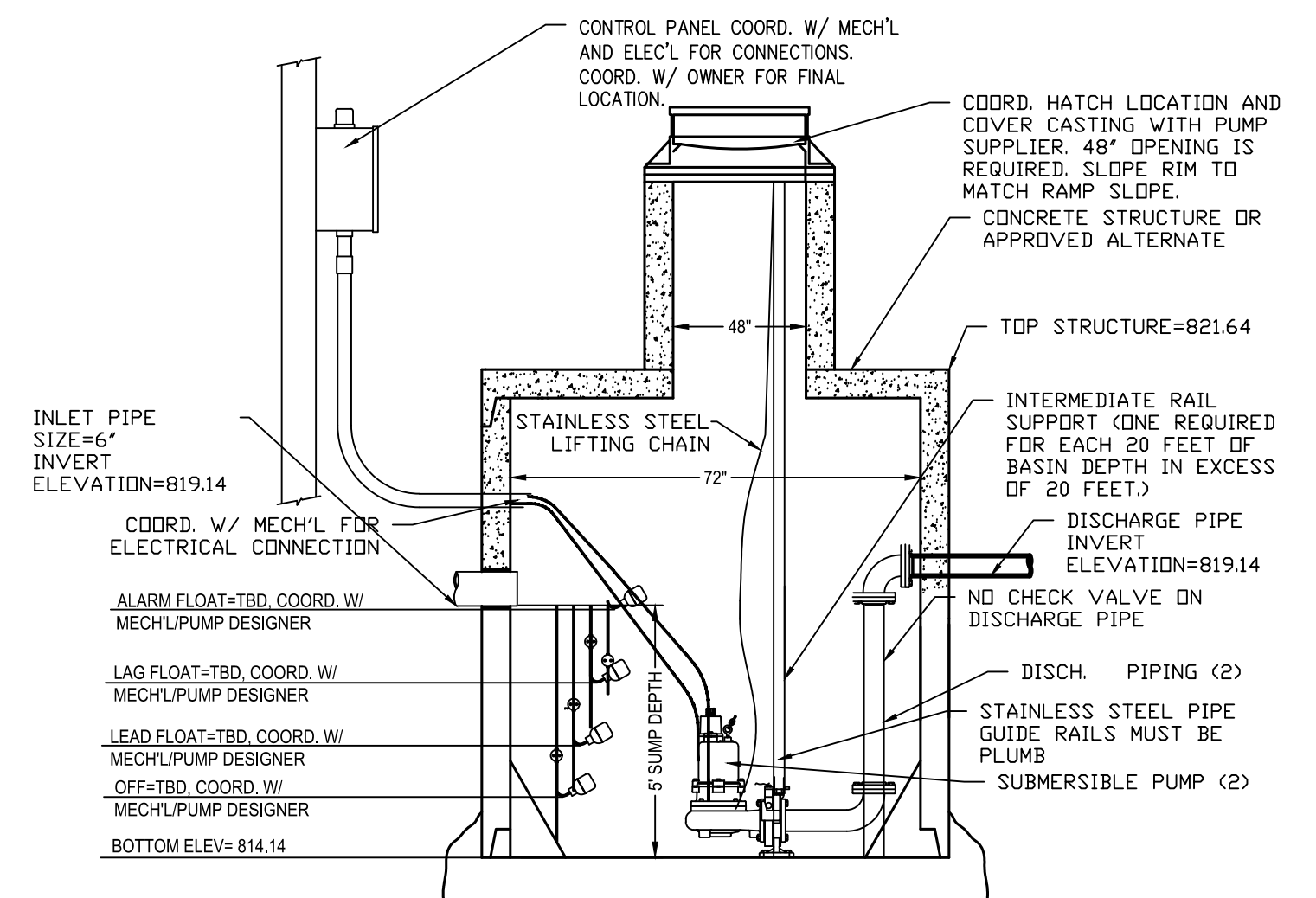
CONTRACTOR TO CONFIRM FREE DRAINING SOILS EXIST AT BASE OF SYSTEM OF TYPE (POORLY GRADED SAND, SP). OVEREXCAVATE AND PERFORM SOIL CORRECTION IF NECESSARY. POSSIBLE SWAMP DEPOSIT LAYERS ON SITE COORD. W/ GEOTECH. ENGINEER.

INFILTRATION RATES TO BE BETWEEN 0.8-8.3 IN/HR. CONTRACTOR TO PERFORM DOUBLE RING INFILTRATION TEST IN THE FIELD DURING CONSTRUCTION TO CONFIRM INFILTRATION RATES ARE WITHIN BOUNDS.

CONSTRUCTION SEQUENCING

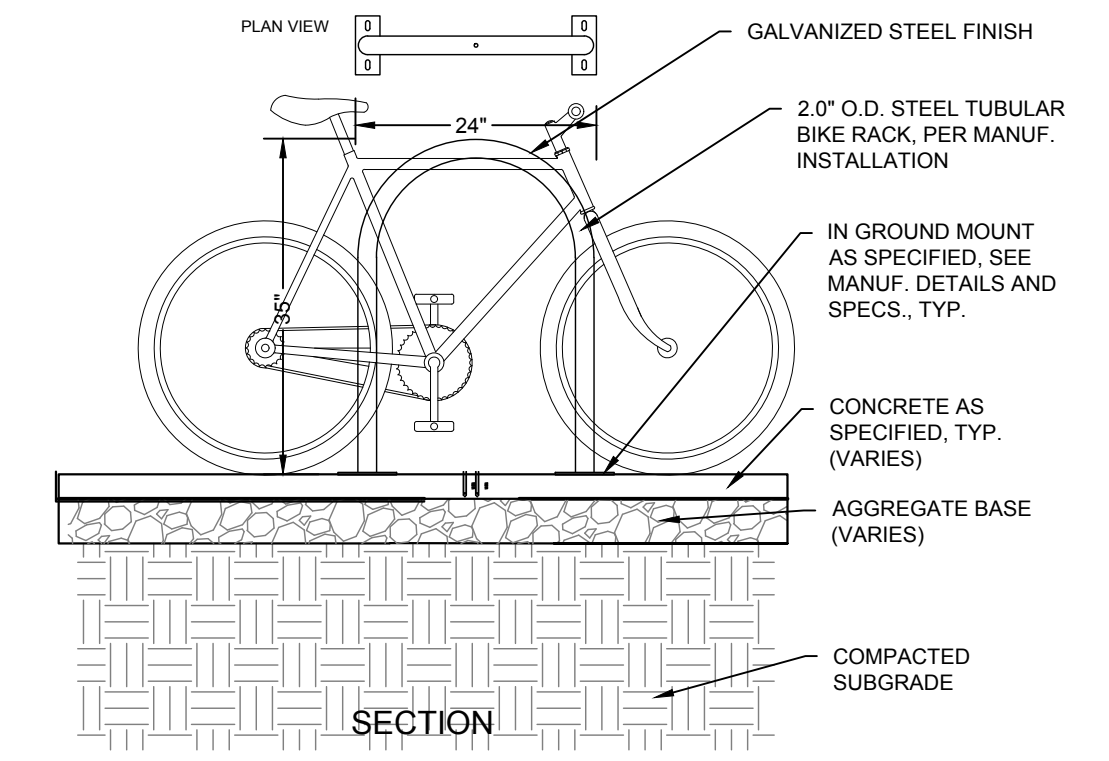
- INSTALL SILT FENCE AND/OR OTHER APPROPRIATE TEMPORARY EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
 - ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN PLACE BEFORE ANY UP GRADIENT LAND DISTURBING ACTIVITY BEGINS.
 - PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
 - INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO SETTING FINAL GRADE OF BIORETENTION DEVICE.
 - PERFORM ALL OTHER SITE IMPROVEMENTS.
 - SEED AND MULCH ALL AREAS AFTER DISTURBANCE.
 - CONSTRUCT RETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
 - IMPLEMENT TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES.
 - PLANT AND MULCH SITE.
 - REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.
- GENERAL NOTES
- IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
 - GRADING OF RETENTION DEVICES SHALL BE ACCOMPLISHED USING LOW-COMPACTATION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
 - ALL SUB MATERIALS BELOW THE SPECIFIED RETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.

2 UNDERGROUND INFILTRATION SYSTEM
N T S



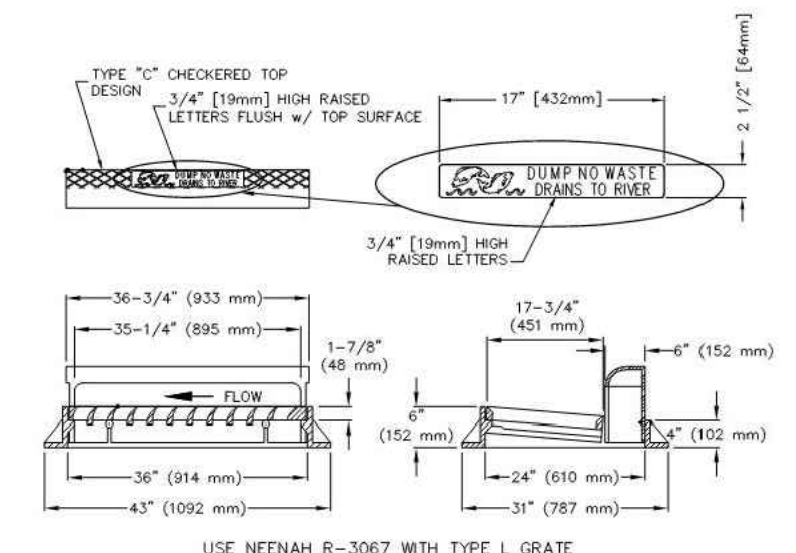
- DESIGN CRITERIA:
- REQUIRED PEAK FLOW RATE=0.47 CFS = 211 GPM
 - TANK VOLUME REQ. BELDW INLET IS APPROXIMATELY 3 TIMES PEAK FLOW RATE (CONVERTED TO GPM) IN GALLONS. PFR (GPM) X 3 = 633 GALLONS + 46 GALLONS (DISCHARGE PIPE VOLUME) = 679 GALLONS (91 CF)
 - TANK VOLUME, PROV. BELDW INLET = 141 CF = 1055 GALLONS
 - CONTRACTOR TO DETERMINE PUMP OPERATING VOLTAGE AND PHASE AND PROVIDE TO PUMP DESIGNER
- DESIGN NOTE:
- CONTRACTOR TO DESIGN-BUILD THIS PUMP STATION. COORDINATE WITH DAVE PATTERSON, HYDRONIC DISTRIBUTION CENTER, INC (320-732-6666, DAVEPATTERSON96@GMAIL.COM) OR QUALIFIED DESIGNER.

3 STORMWATER PUMPING STATION
N T S



- SECTION
- NOTES:
- SEE GEO-TECHNICAL REPORT FOR FOOTING AND BASE MATERIAL RECOMMENDATIONS.
 - SUBMIT SHOP DRAWINGS AND FINISH COLOR SAMPLES TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
 - COORDINATE INSTALLATION OF SLEEVES AND APPURTENANCES WITH THE MANUFACTURERS RECOMMENDATIONS.
 - CAST IN CONCRETE INSTALLATION UNLESS OTHERWISE NOTED.
 - TYPE: DOUBLE SIDED PARKING

4 BICYCLE RACK - HOOP STYLE
N T S



504 - RECTANGULAR CATCH BASIN CASTING ASSEMBLY
504 - Rect. CB

<p>City of Bloomington Engineering Division Public Works Department</p>	<p>504 - Rect. CB</p> <p>LAST REVISED: 5/15/2015 LAST REVISED BY: KRG</p>
---	---

PRELIMINARY:
NOT FOR CONSTRUCTION

PROJECT
KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavlek
DATE 12/04/23 LICENSE NO. 44283

ISSUE/SUBMITTAL SUMMARY
DATE DESCRIPTION
3/20/23 SKETCH PLAN
4/26/23 PRE-APP DISC SUBMISSION
05/17/23 DEVELOPMENT APPLICATION SUBMITTAL
07/31/23 WATERSHED SUBMITTAL
08/31/23 WATERSHED RESUBMITTAL
09/28/23 DD/IMP SET
12/04/23 WATERSHED RESUBMITTAL

DRAWN BY: JR, BB	REVIEWED BY: MP
PROJECT NUMBER: 23027	

REVISION SUMMARY
DATE DESCRIPTION

CIVIL DETAILS

PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

PROJECT
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.

Matthew R. Pavsek
DATE 12/04/23 LICENSE NO. 44283

ISSUE/SUBMITTAL SUMMARY

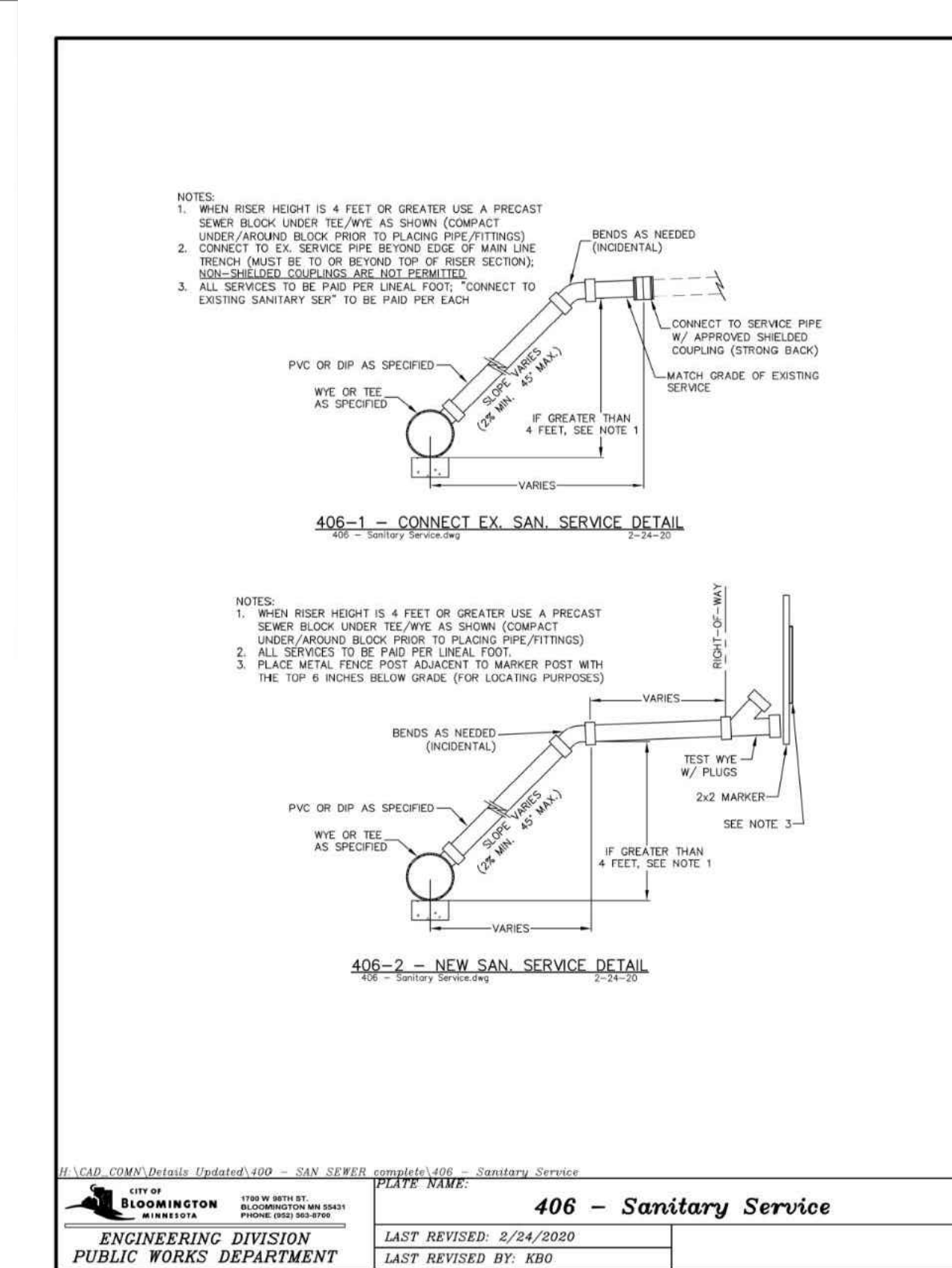
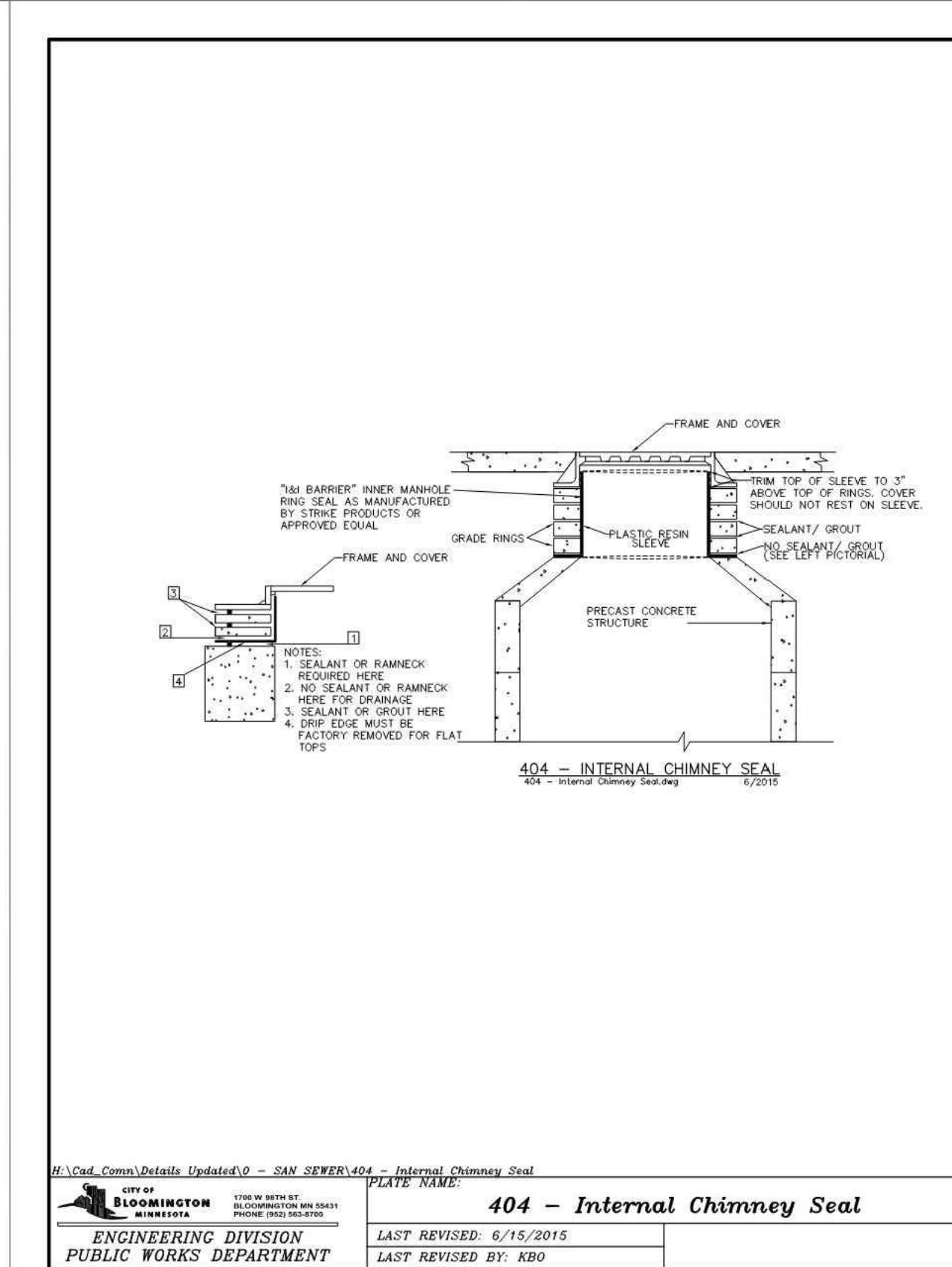
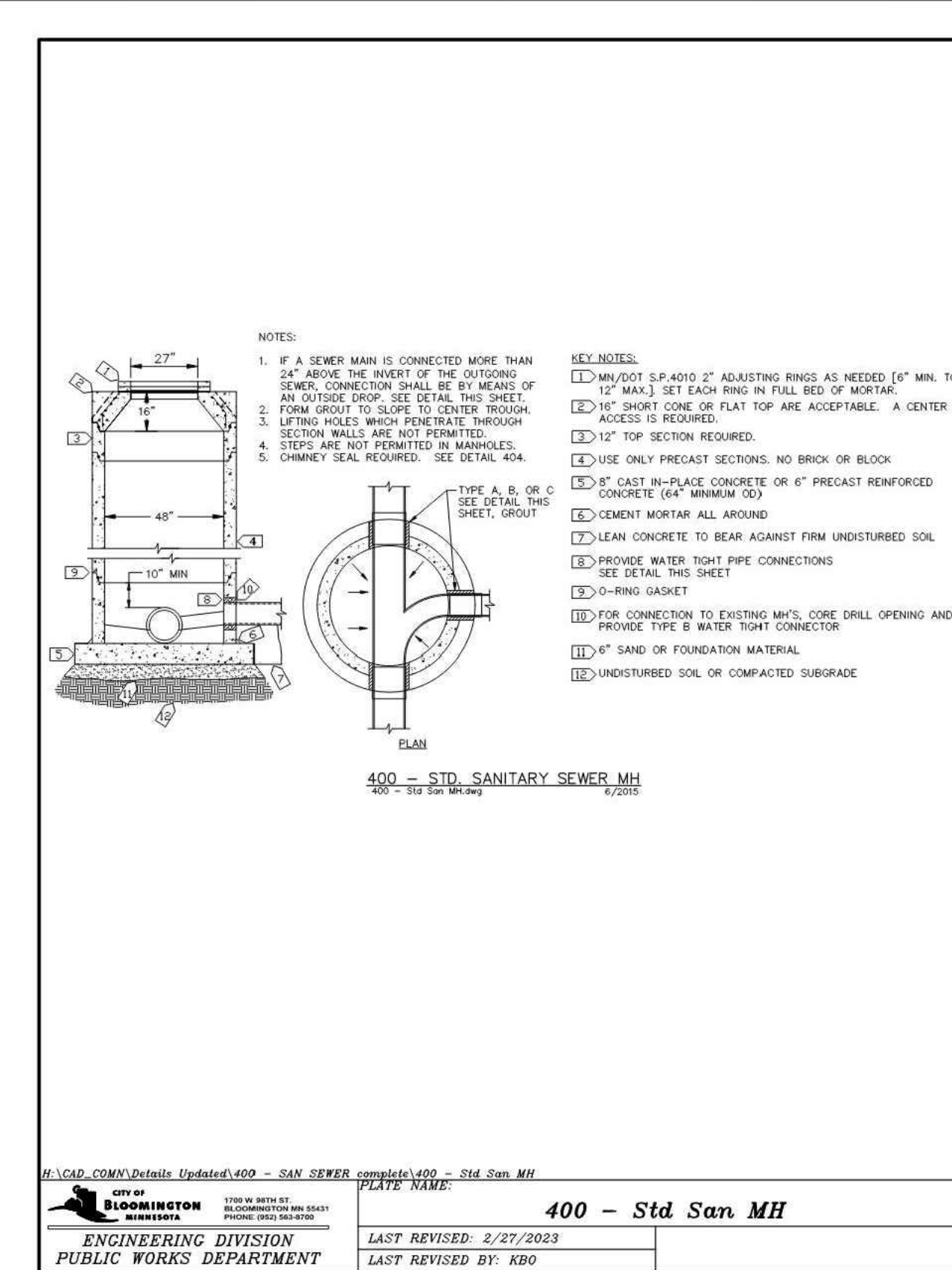
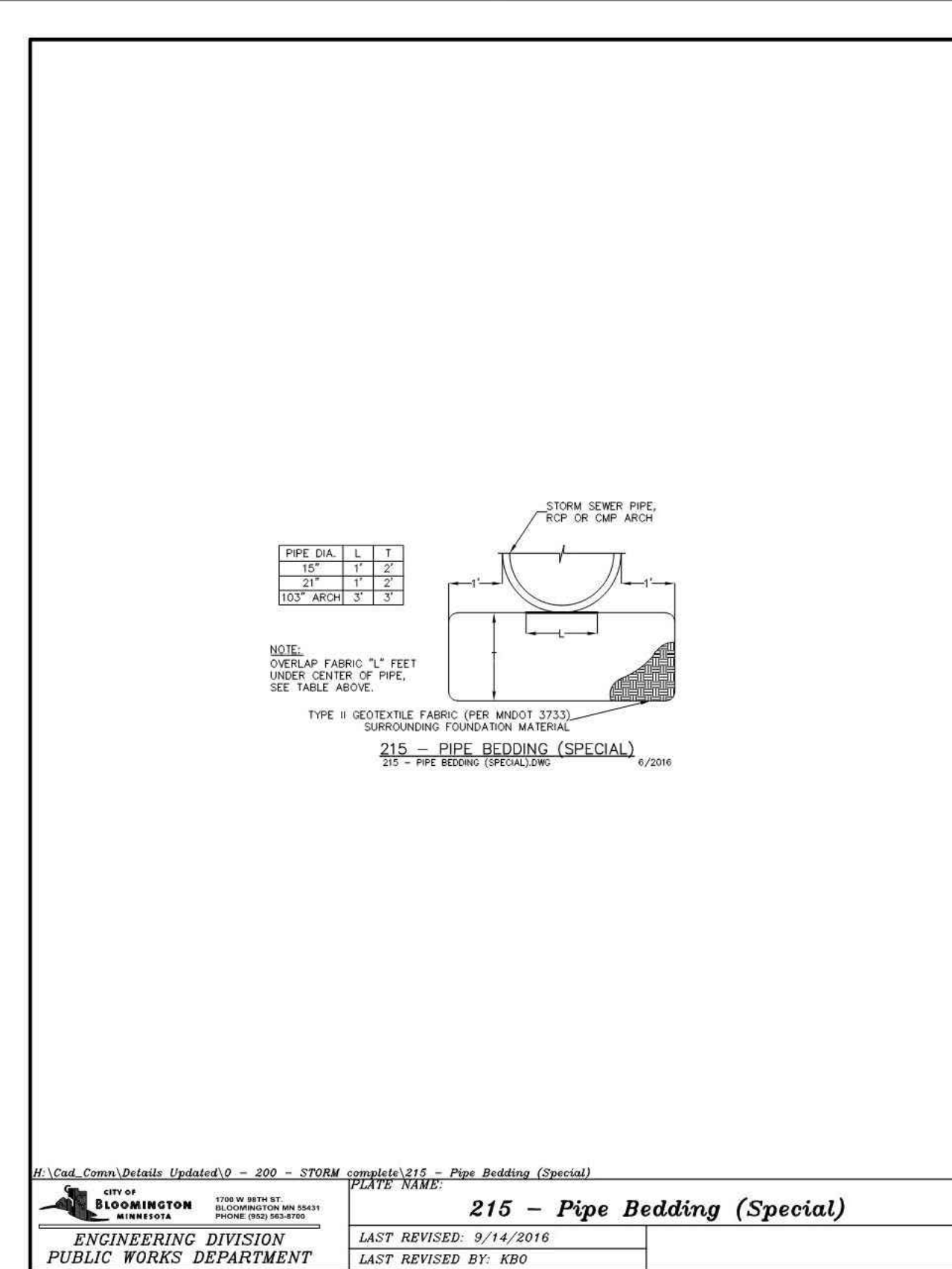
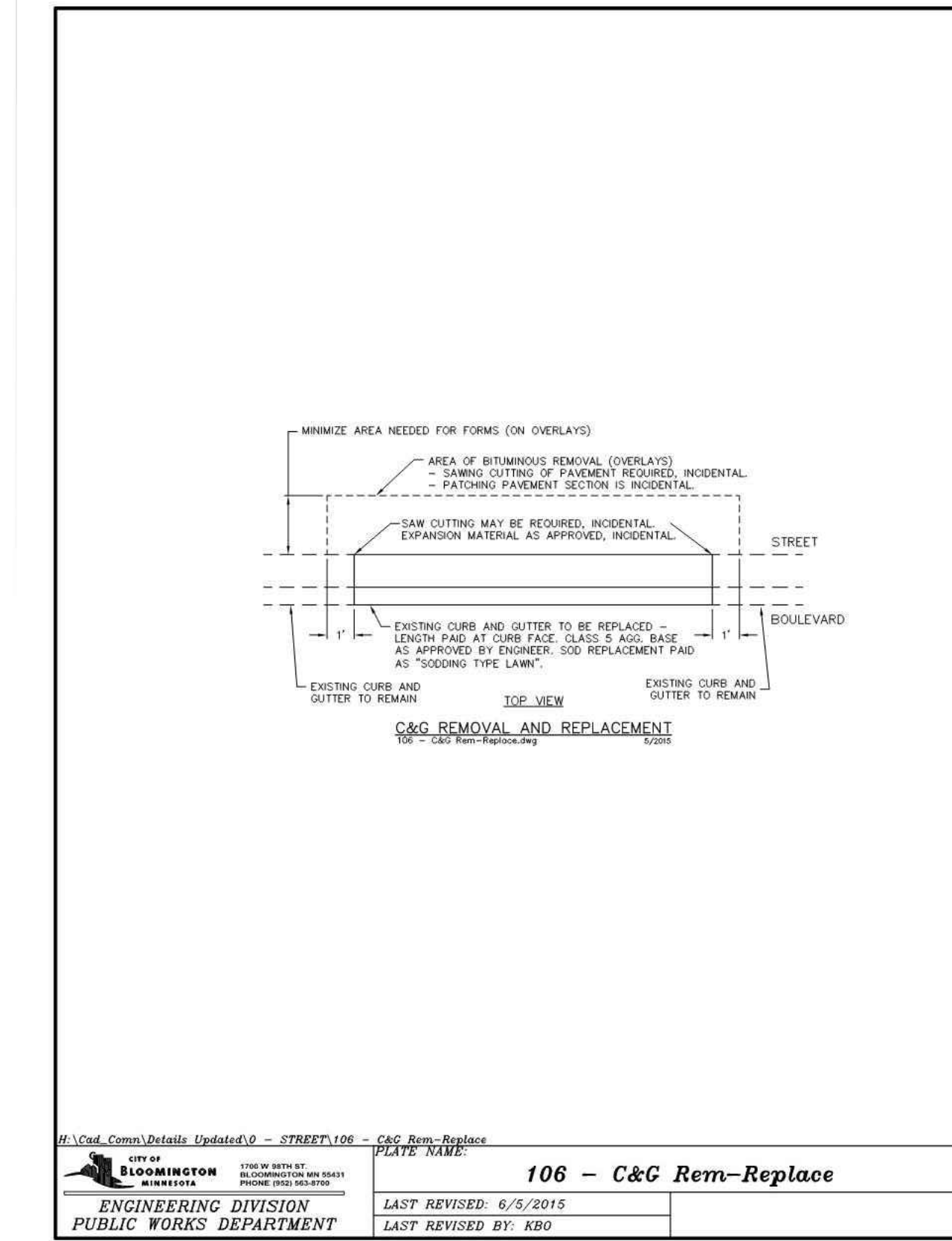
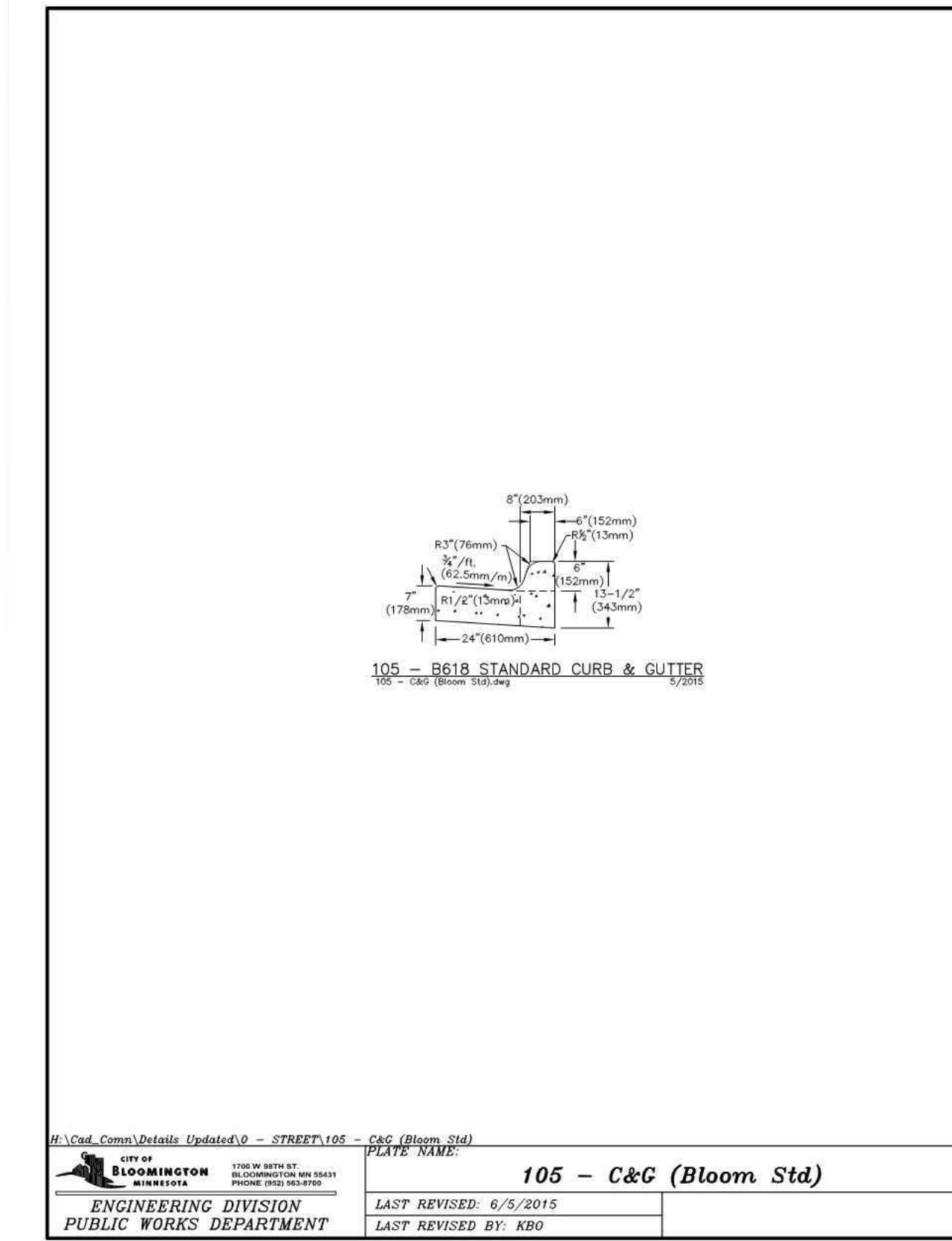
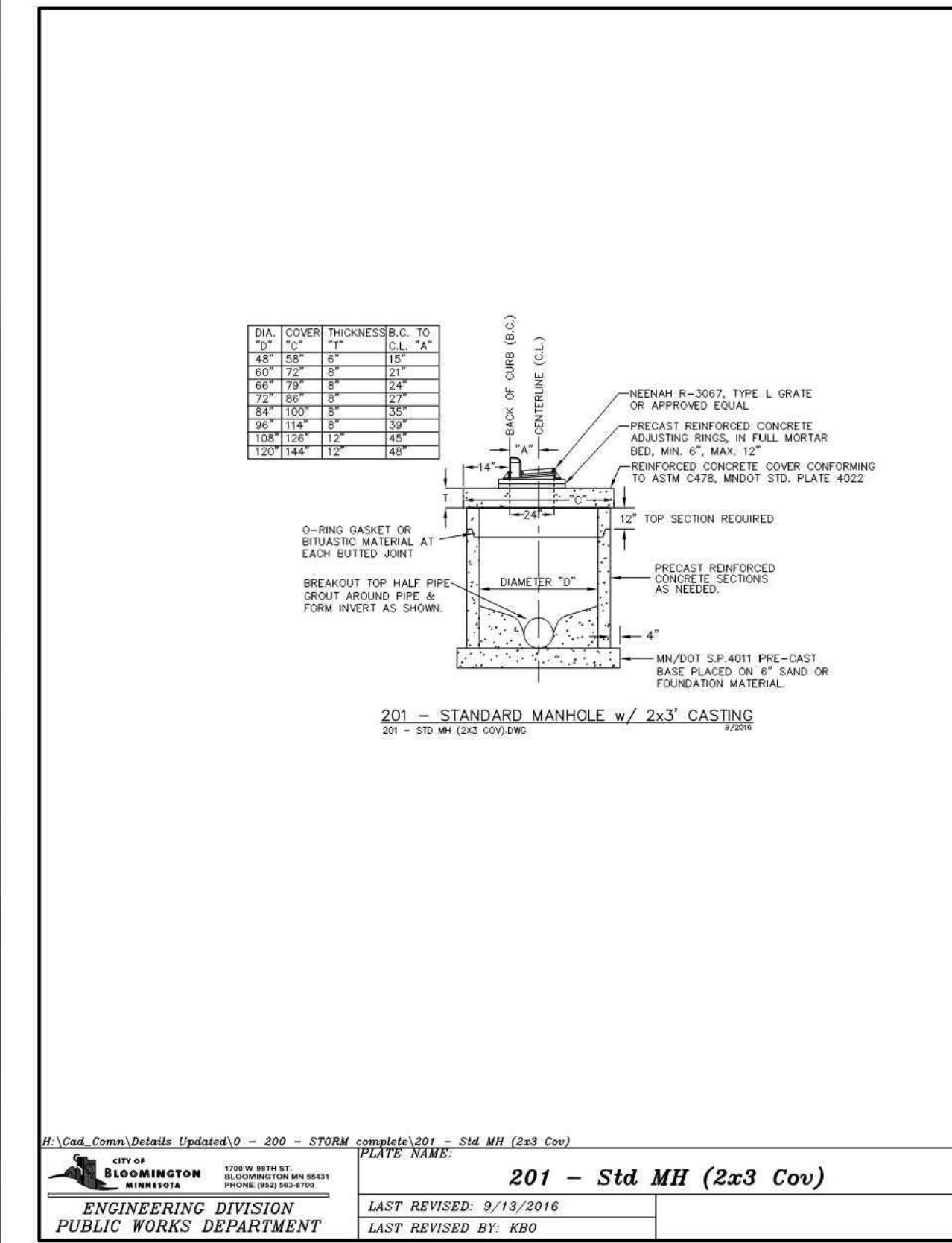
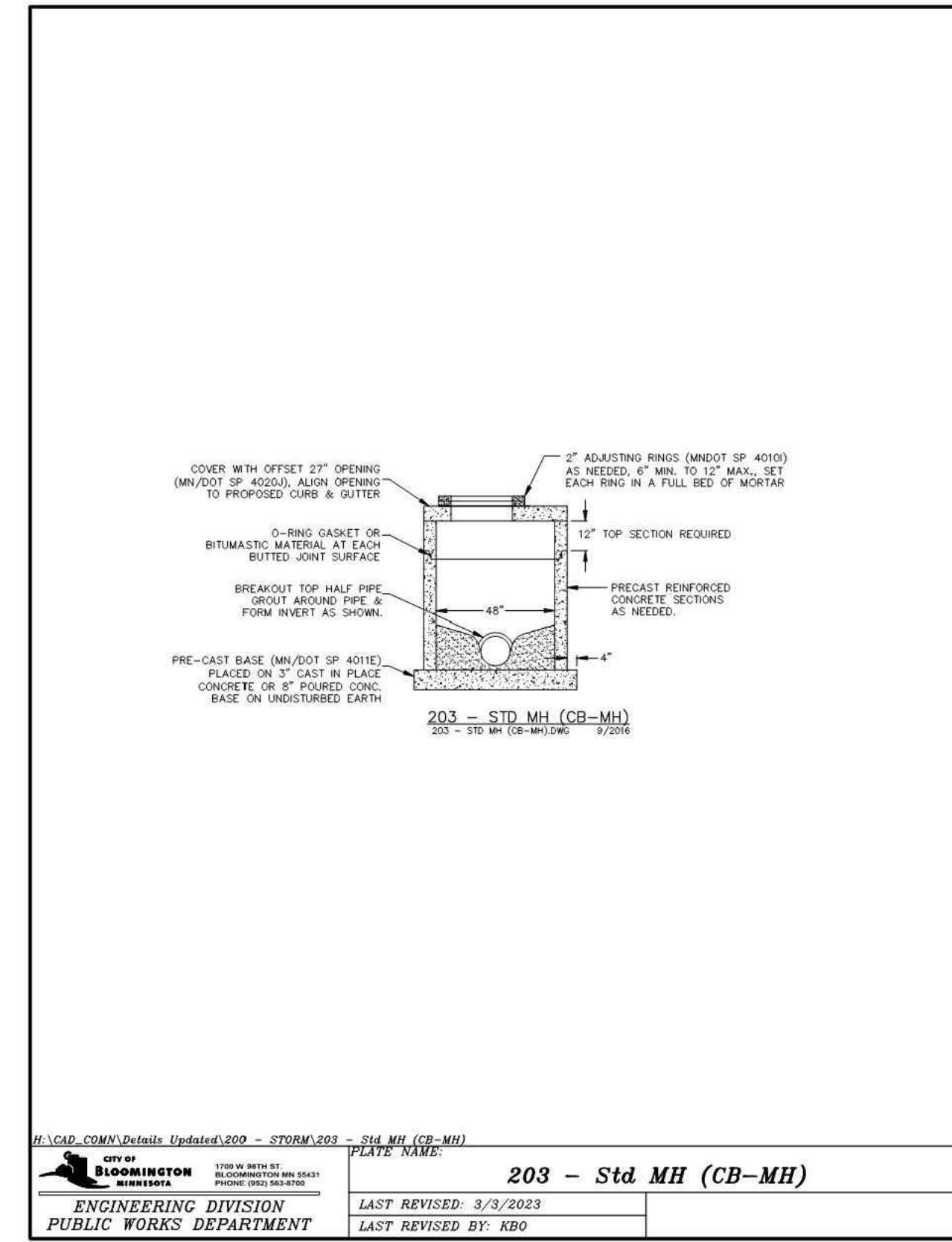
DATE	DESCRIPTION
3/20/23	SKETCH PLAN
4/26/23	PRE-APP DISC SUBMISSION
05/17/23	DEVELOPMENT APPLICATION SUBMITTAL
07/31/23	WATERSHED SUBMITTAL
08/31/23	UNWATERSHED RESUBMITTAL
09/28/23	DDCMP SET
12/04/23	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY

DATE	DESCRIPTION

CIVIL DETAILS



PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

Matthew R. Pavsek
DATE 12/04/23 LICENSE NO. 44283

ISSUE/SUBMITTAL SUMMARY	
DATE	DESCRIPTION
3/26/2023	SKETCH PLAN
4/26/2023	PRE-APP'DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/28/2023	DDGMP SET
12/04/2023	WATERSHED RESUBMITTAL

REVISION SUMMARY	
DATE	DESCRIPTION

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY	
DATE	DESCRIPTION

CIVIL DETAILS

C5.3
© COPYRIGHT 2023 CIVIL SITE GROUP INC.

300 - Typical Hydrant Installation
300 - Hyd Install.dwg 6/2005

HYDRANT TO BE:
 • WATERSHED FINDER CLASSIC
 • MUELLER CENTERBORN MODEL A-403
 • MUELLER SUPERVENTION-250 MODEL A-423
 OR APPROVED EQUAL.
 • EQUIP WITH THREE HOSE NOZZLES/CONNECTIONS AS FOLLOWS:
 ONE - FACTORY INSTALLED 5 HIGH STROKE-TYPE
 QUARTER TURN PLUMBER NOZZLE/CONNECTOR INCLUDING A
 MANUFACTURER SUPPLIED AND INSTALLED ANODIZED
 ALUMINUM NOZZLE CAP WITH A 1.5 HIGH KENTON NUT
 AND NO ROCKER LUG.
 TWO - 2.5 HIGH HOSE NOZZLES/CONNECTIONS (WITH
 NATIONAL STANDARD THREADS) AND STANDARD NOZZLE
 CASES WITH 1.5 HIGH KENTON NUTS AND NO ROCKER
 LUG.
 • USE SS NUTS AND BOLTS AS APPROVED BY THE ENGINEER.
 • ALL EXPOSED WATERMAIN SHALL BE WRAPPED WITH
 POLYETHYLENE IN ACCORDANCE WITH AWA C-105.
 • BARREL TO BE BENT TO RISE.
 • ALL VALVES TO OPEN COUNTER-CLOCKWISE.
 • SEE TYPICAL VALVE INSTALLATION DETAIL FOR VALVE DETAILS.

4" MIN-10" MAX
AS APPROVED BY CITY FORCES

16" HIGH BREAK-AWAY
SECTION

MIN 4" OR
AS SHOWN ON PLAN

POURED CONG. THRUST
BLOCKS 2.25 SQ.FT.
BEARING SURFACE AREA

2 LAYERS OF 6 MIL
POLYETHYLENE

VALVE BOX

6" DIP

WATERMAIN

6" R.S. GATE VALVE

18"x18"x4" THICK
PRECAST CONG. BASE

1.5" DIA COMPACTED ROCK
(LIMESTONE IS NOT APPROVED)

BACKFILL & HAND TAMP SELECT
MATERIAL TO MIN. 1" OVER PIPE

1" MAX

120"

COURSE FILTER AGG.
PER MUDS 3149

307 - FOUNDATION MATERIAL DETAIL
307 - Foundation Material.dwg 6/2005

BACKFILL UPPER 3
FEET
SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 100% STANDARD
PROCTOR DENSITY

BACKFILL
SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 90% STANDARD
PROCTOR DENSITY

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

GRANULAR
ENCASUREMENT

GRANULAR
BEDDING

GRANULAR
FOUNDATION

DUCTILE IRON WATERMAIN
W/POLYETHYLENE ENCASUREMENT

308 - TYPICAL WATER MAIN INSTALLATION DETAIL
308 - Watermain Install.dwg 6/2005

SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 100% STANDARD
PROCTOR DENSITY

SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 90% STANDARD
PROCTOR DENSITY

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

GRANULAR
ENCASUREMENT

GRANULAR
BEDDING

GRANULAR
FOUNDATION

COURSE FILTER AGGREGATE
M-207 3149: 1 1/2" MINUS,
100% PASSING #4 SIEVE
WHERE NECESSARY TO REPLACE
UNSATURABLE/UNSTABLE SOILS

PIPE BEDED IN GRANULAR BEDDING
TO DEPTH OF 5 INCHES. BACKFILL
COMPACTED TO FINISHED GRADE.

309 - PIPE BEDDING DETAIL
309 - Pipe Bedding.dwg 6/2005

300 - Hyd Install

PLATE NAME: 300 - Hyd Install

LAST REVISED: 2/24/2023

LAST REVISED BY: KBO

307 - Foundation Material
307 - Foundation Material.dwg 6/2005

BACKFILL & HAND TAMP SELECT
MATERIAL TO MIN. 1" OVER PIPE

1" MAX

120"

COURSE FILTER AGG.
PER MUDS 3149

307 - FOUNDATION MATERIAL DETAIL
307 - Foundation Material.dwg 6/2005

BACKFILL UPPER 3
FEET
SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 100% STANDARD
PROCTOR DENSITY

BACKFILL
SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 90% STANDARD
PROCTOR DENSITY

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

GRANULAR
ENCASUREMENT

GRANULAR
BEDDING

GRANULAR
FOUNDATION

COURSE FILTER AGGREGATE
M-207 3149: 1 1/2" MINUS,
100% PASSING #4 SIEVE
WHERE NECESSARY TO REPLACE
UNSATURABLE/UNSTABLE SOILS

PIPE BEDED IN GRANULAR BEDDING
TO DEPTH OF 5 INCHES. BACKFILL
COMPACTED TO FINISHED GRADE.

309 - PIPE BEDDING DETAIL
309 - Pipe Bedding.dwg 6/2005

307 - Foundation Material

PLATE NAME: 307 - Foundation Material

LAST REVISED: 6/15/2015

LAST REVISED BY: KBO

308 - Watermain Install
308 - Watermain Install.dwg 6/2005

BACKFILL UPPER 3
FEET
SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 100% STANDARD
PROCTOR DENSITY

BACKFILL
SELECT MATERIAL IN 12" LIFTS
COMPACTED TO 90% STANDARD
PROCTOR DENSITY

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

1" MINUS MAXDOT GRANULAR BORROW
3149 2B - COMPACTION BY HAND
AND PORTABLE COMPACTOR
EQUIPMENT

GRANULAR
ENCASUREMENT

GRANULAR
BEDDING

GRANULAR
FOUNDATION

COURSE FILTER AGGREGATE
M-207 3149: 1 1/2" MINUS,
100% PASSING #4 SIEVE
WHERE NECESSARY TO REPLACE
UNSATURABLE/UNSTABLE SOILS

PIPE BEDED IN GRANULAR BEDDING
TO DEPTH OF 5 INCHES. BACKFILL
COMPACTED TO FINISHED GRADE.

309 - PIPE BEDDING DETAIL
309 - Pipe Bedding.dwg 6/2005

308 - Watermain Install

PLATE NAME: 308 - Watermain Install

LAST REVISED: 6/15/2015

LAST REVISED BY: KBO

309 - Pipe Bedding
309 - Pipe Bedding.dwg 6/2005

PIPE BEDED IN GRANULAR BEDDING
TO DEPTH OF 5 INCHES. BACKFILL
COMPACTED TO FINISHED GRADE.

309 - PIPE BEDDING DETAIL
309 - Pipe Bedding.dwg 6/2005

309 - Pipe Bedding

PLATE NAME: 309 - Pipe Bedding

LAST REVISED: 6/15/2015

LAST REVISED BY: KBO

310 - Thrust Blocking
310 - Thrust Blocking.dwg 6/2005

SECTION A-A

LARGE THRUST BLOCK (12"-48" PIPE)

BEARING SURFACE

STANDARD THRUST BLOCK (6"-8" PIPE)

310 - THRUST BLOCKING
310 - Thrust Blocking.dwg 6/2005

PIPE ON BEARING AREA

PIPE SIZE	BEARING AREA
12"	2.25 SQ.FT.
18"	3.38 SQ.FT.
24"	4.50 SQ.FT.
30"	5.63 SQ.FT.
36"	6.75 SQ.FT.
42"	7.88 SQ.FT.
48"	9.00 SQ.FT.

TOP VIEW

FOUR AGAINST
UNDISTURBED SOIL

30" MIN.

ADJUSTING BRGES
- SHALL BE PRECAST,
2" THICK, AND REINFORCED WITH 8
GAUGE STEEL WIRE
- SET EACH RING IN A FILL BED
OF MORTAR
- TOTAL ADJUSTMENT HEIGHT
SHALL BE BETWEEN
6" AND 12".

8" PRECAST
REINFORCED CONCRETE

OPENINGS AS NEEDED

CAST-IN-PLACE CONCRETE BASE
PLACED ON 6" SAND OR
FOUNDATION MATERIAL.

NOTE:
NO LIFT HOLES ARE ALLOWED.

306 - STD CB
306 - STD CB.dwg 9/2005

THRUST BLOCKS TO BE USED FOR BENDS 22-1/2" AND OVER, INCLUDING
HYDRANTS AND HYDRANT TEES.

THRUST BLOCKS ARE REQUIRED REGARDLESS OF ANY OTHER RESTRAINT
METHODS USED ON WATERMAIN LESS THAN 12" DIA.

RESTRAINT METHODS ON WATERMAIN LARGER THAN 12" SHALL BE
METALLIC LOUING GASKETS OR OTHER APPROVED EQUAL. THE LENGTH
OF RESTRAINT SHALL BE AS COMPUTED BY DIPA.

FITTINGS MUST BE COVERED W/POLY (5 MIL) PRIOR TO POURING CONCRETE.

FOR PIPE 12" AND LARGER, BLOCKING TO BE POURED CONCRETE, M1/DOY
MAX DESIGN 3000. FOR PIPE LESS THAN 12", MOULD HAND-MADE IS
ACCEPTABLE.

FOR 6"-8" PIPE, THE USE OF COMPOSITE BLOCKING WILL ONLY BE
PERMISSIBLE WITH AUTHORIZATION FROM THE ENGINEER

ALL BLOCKING SHALL BE PLACED AGAINST UNDISTURBED/COMPACTED
EARTH

310 - Thrust Blocking

PLATE NAME: 310 - Thrust Blocking

LAST REVISED: 3/1/2023

LAST REVISED BY: KBO

306 - Std CB
306 - STD CB.dwg 9/2005

ADJUSTING BRGES
- SHALL BE PRECAST,
2" THICK, AND REINFORCED WITH 8
GAUGE STEEL WIRE
- SET EACH RING IN A FILL BED
OF MORTAR
- TOTAL ADJUSTMENT HEIGHT
SHALL BE BETWEEN
6" AND 12".

8" PRECAST
REINFORCED CONCRETE

OPENINGS AS NEEDED

CAST-IN-PLACE CONCRETE BASE
PLACED ON 6" SAND OR
FOUNDATION MATERIAL.

NOTE:
NO LIFT HOLES ARE ALLOWED.

306 - STD CB
306 - STD CB.dwg 9/2005

306 - Std CB

PLATE NAME: 306 - Std CB

LAST REVISED: 9/14/2016

LAST REVISED BY: KBO

110 - Depresser (At CB)
110 - Cutter Dep'n (At CB).dwg 6/2005

GRADE

GRADE	DEPTH
18"	1.00m (10')
24"	1.50m (15')
30"	2.00m (20')
36"	2.50m (25')
42"	3.00m (30')
48"	3.50m (35')
54"	4.00m (40')
60"	4.50m (45')

45mm (1 1/2") AT CENTER OF C.B.

90mm (3")

45mm (1 1/2") AT CENTER OF C.B.

90mm (3")

45mm (1 1/2") AT CENTER OF C.B.

90mm (3")

EXPANSION JOINT
(TYPICAL)

C.B. CATCH BASIN ON GRADE - NORMAL GUTTER LINE

EXPANSION JOINT
(TYPICAL)

C.B. CATCH BASIN AT LOW POINT - NORMAL GUTTER LINE

110 - DEPRESSER AT CATCH BASIN
110 - Cutter Dep'n (At CB).dwg 6/2005

110 - Depresser (At CB)

PLATE NAME: 110 - Cutter Dep'n (At CB)

LAST REVISED: 6/5/2015

LAST REVISED BY: KBO

137 - Typical Seasonal Sawcut
137 - Seasonal Sawcut.dwg 6/2005

1 1/2"

137 - Typical Seasonal Sawcut

PLATE NAME: 137 - Seasonal Sawcut

LAST REVISED: 6/5/2015

LAST REVISED BY: KBO

PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavlek
DATE 12/04/23 LICENSE NO. 44263

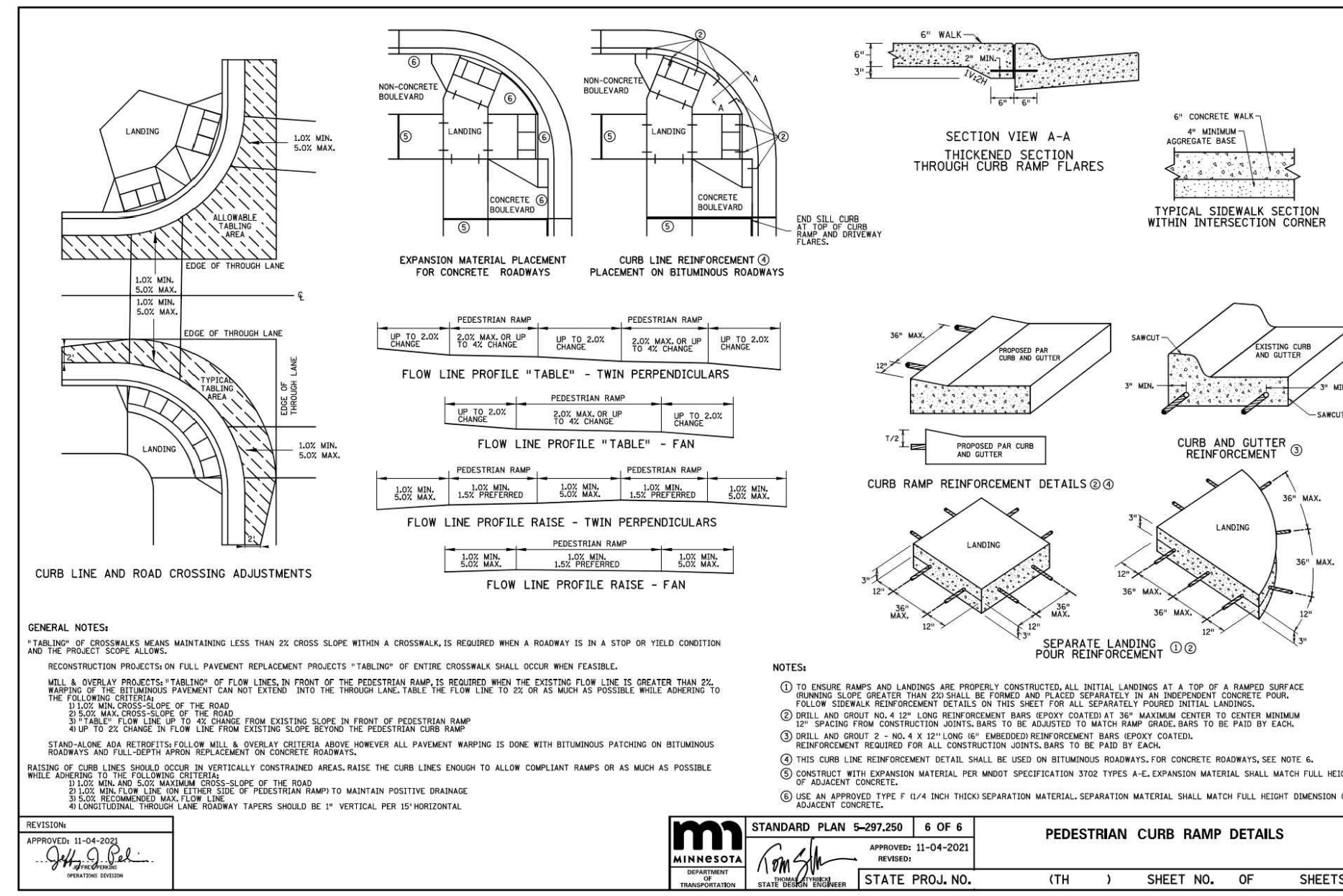
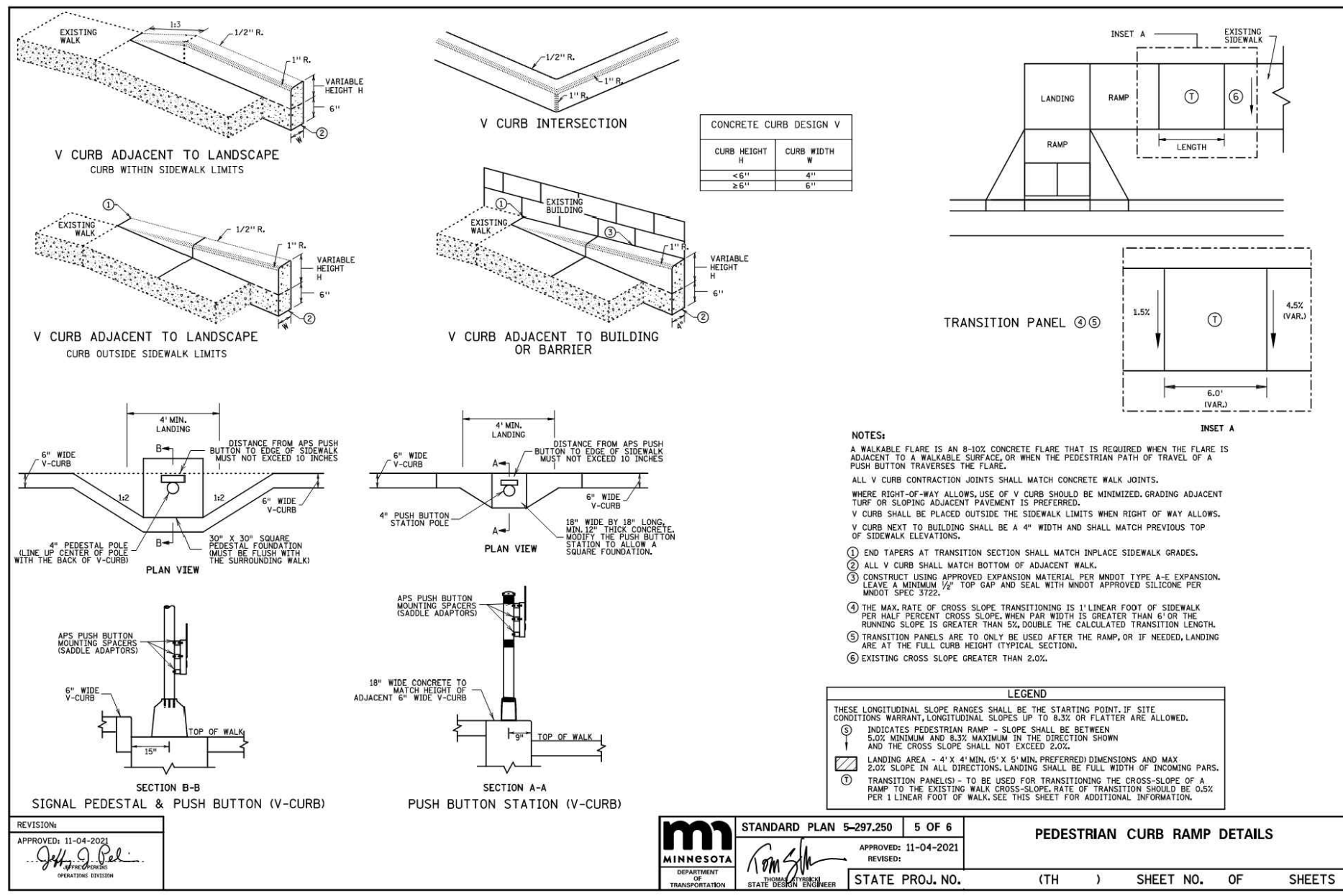
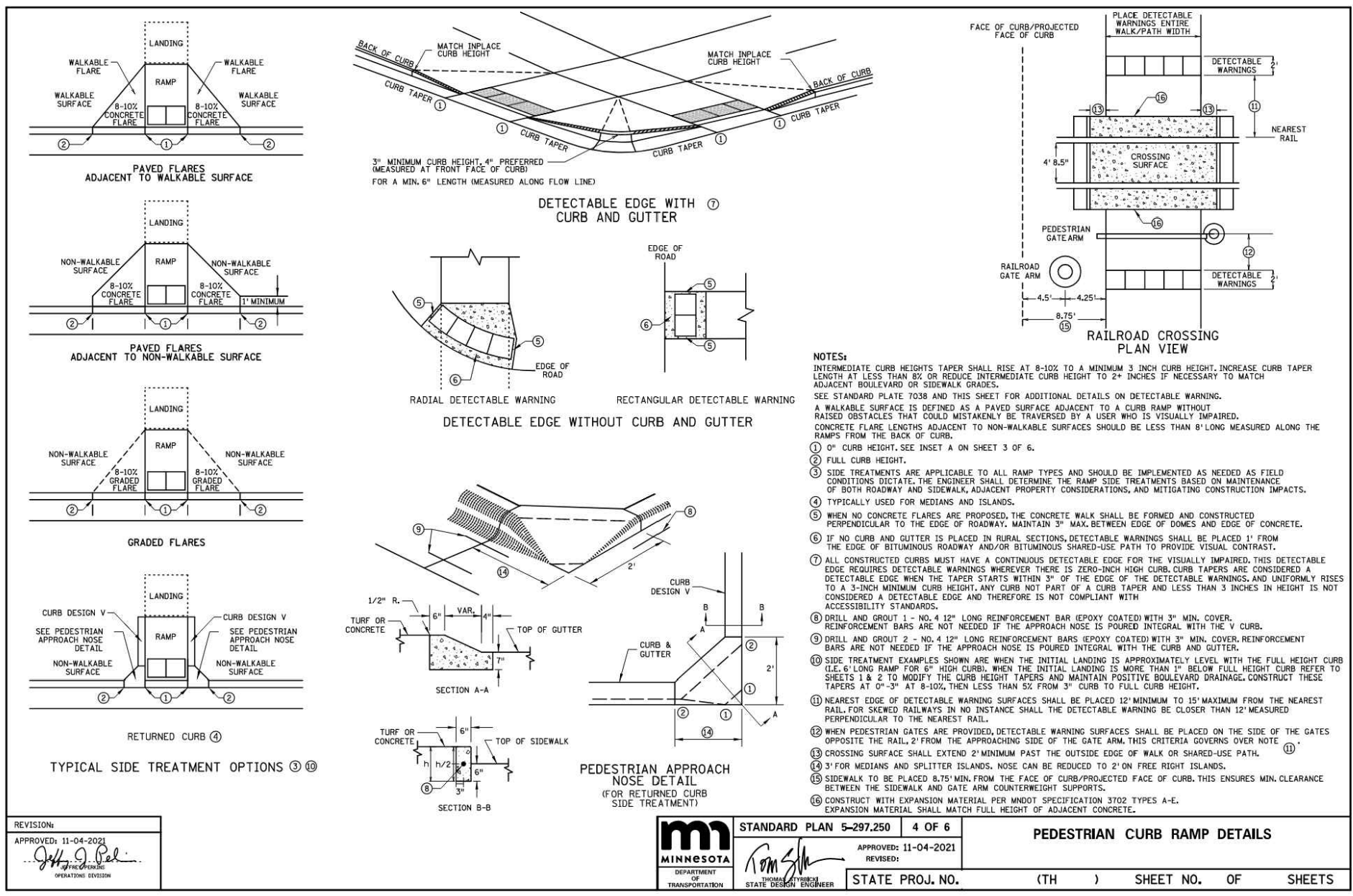
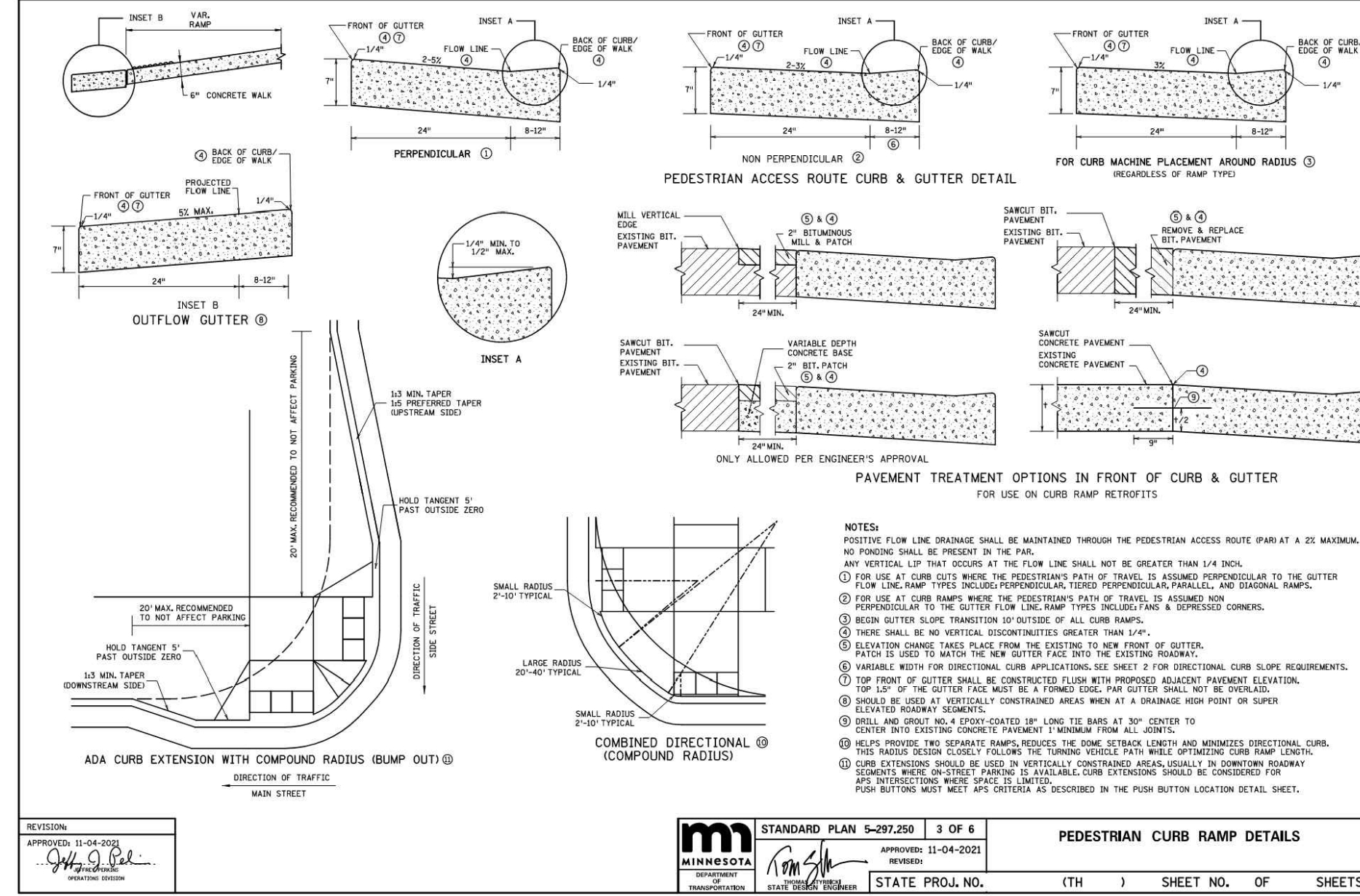
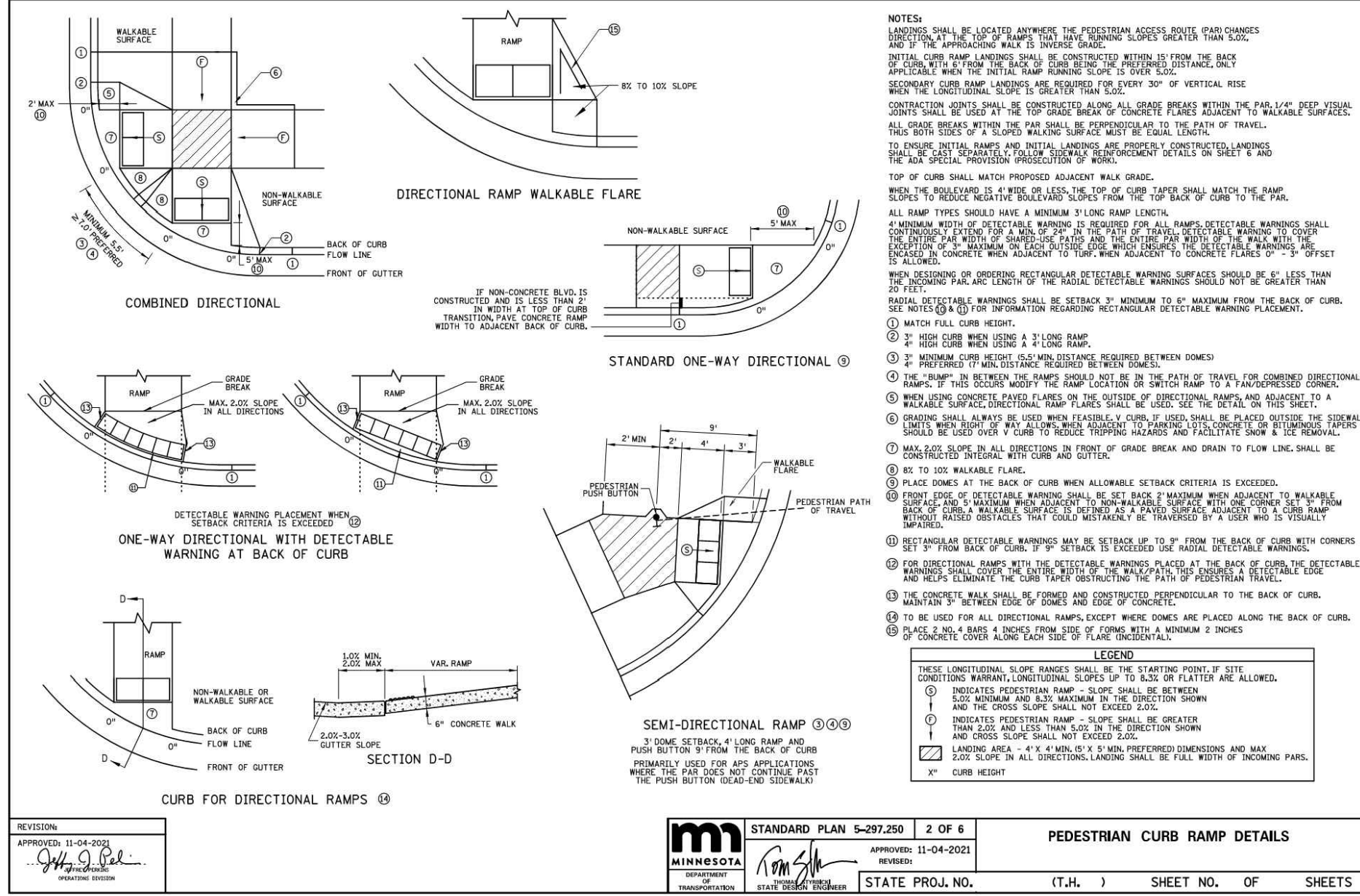
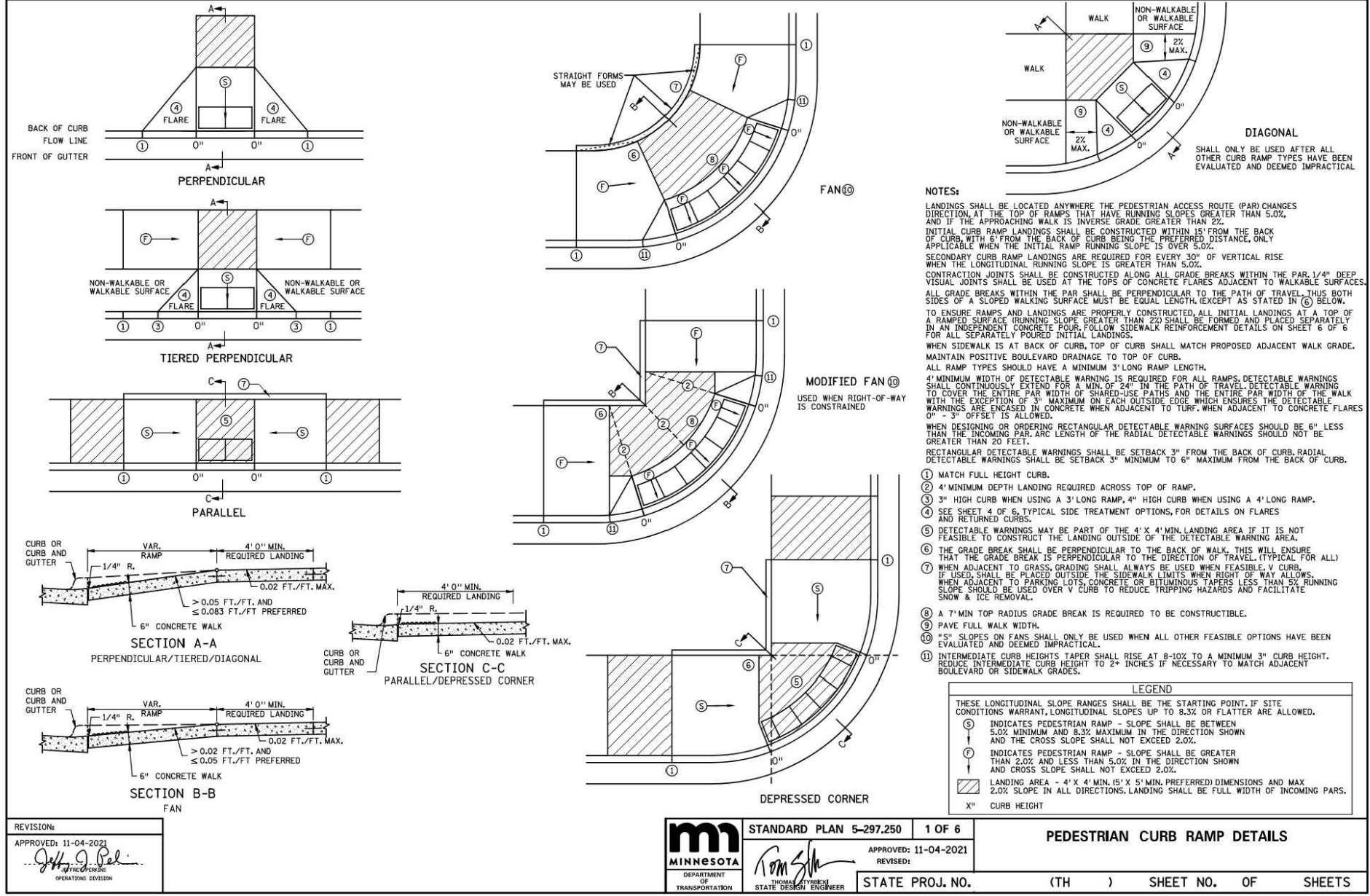
DATE	DESCRIPTION
3/26/23	SKETCH PLAN
4/26/23	PRE-APP/DRG SUBMISSION
05/17/23	DEVELOPMENT APPLICATION SUBMITTAL
07/31/23	WATERSHED SUBMITTAL
08/31/23	WATERSHED SUBMITTAL
09/26/23	DD/DMG SET
12/04/23	WATERSHED SUBMITTAL

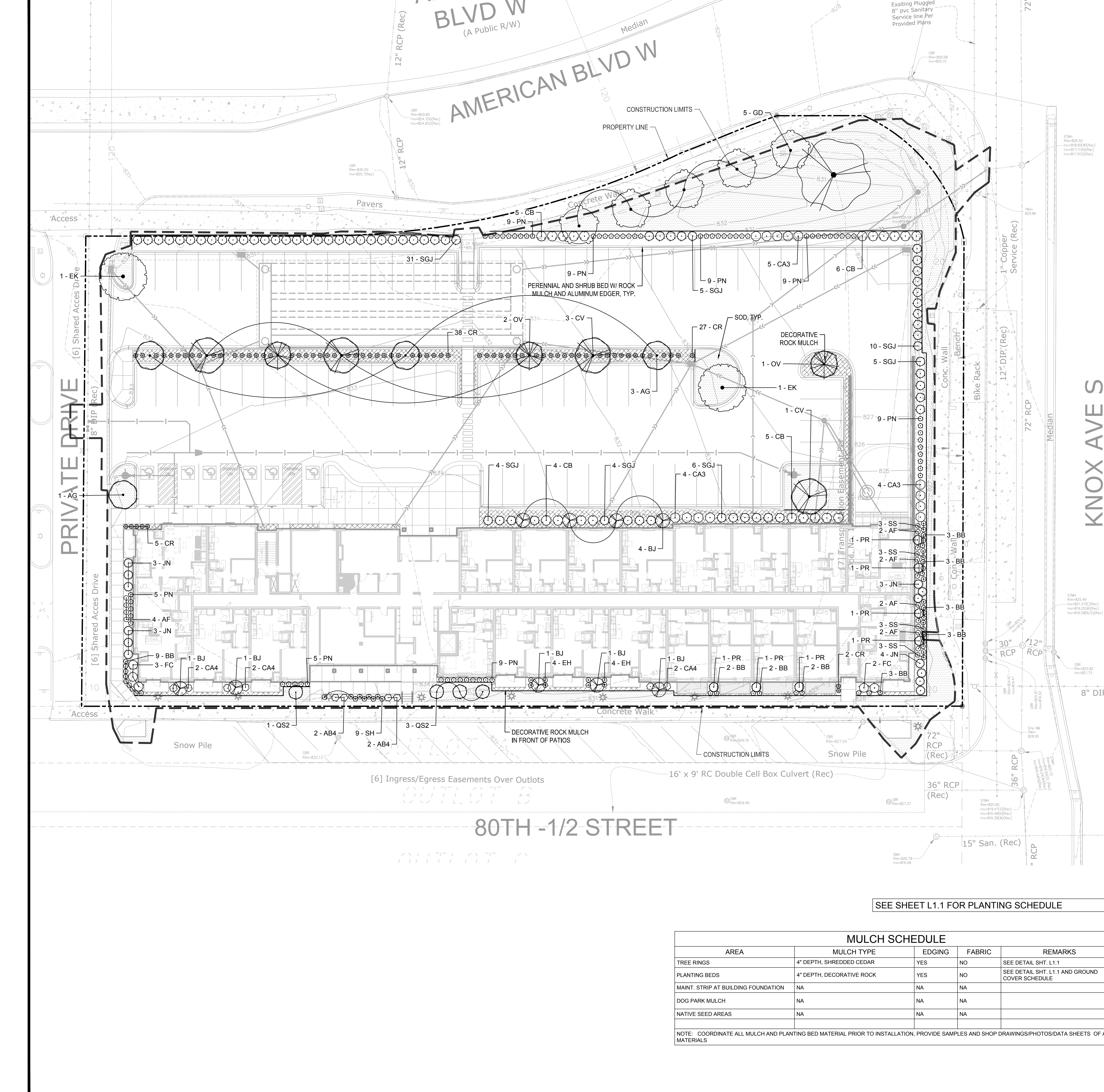
DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

DATE	DESCRIPTION

CIVIL DETAILS

C5.4





- LANDSCAPE NOTES:**
- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
 - WHERE SHOWN, SHRUB & PERENNIAL BEDS SHALL BE MULCHED WITH 4" DEPTH (MINIMUM AFTER INSTALLATION AND/OR TOP DRESSING OPERATIONS) OF DECORATIVE ROCK MULCH.
 - ALL TREES SHALL BE MULCHED WITH SHREDDED CEDAR MULCH TO OUTER EDGE OF SAUCER OR TO EDGE OF PLANTING BED, IF APPLICABLE. ALL MULCH SHALL BE KEPT WITHIN A MINIMUM OF 2' FROM TREE TRUNK.
 - IF SHOWN ON PLAN, RANDOM SIZED LIMESTONE BOULDERS COLOR AND SIZE TO COMPLIMENT NEW LANDSCAPING. OWNER TO APPROVE BOULDER SAMPLES PRIOR TO INSTALLATION.
 - PLANT MATERIALS SHALL CONFORM WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND SHALL BE OF HARDY STOCK, FREE FROM DISEASE, DAMAGE AND DISFIGURATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PLUMPNESS OF PLANT MATERIAL FOR DURATION OF ACCEPTANCE PERIOD.
 - UPON DISCOVERY OF A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE SCHEDULE AND THE QUANTITY SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.
 - CONDITION OF VEGETATION SHALL BE MONITORED BY THE LANDSCAPE ARCHITECT THROUGHOUT THE DURATION OF THE CONTRACT. LANDSCAPE MATERIALS PART OF THE CONTRACT SHALL BE WARRANTED FOR TWO (2) FULL GROWING SEASONS FROM SUBSTANTIAL COMPLETION DATE.
 - ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL RECEIVE 6" LAYER TOPSOIL AND SOD AS SPECIFIED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - COORDINATE LOCATION OF VEGETATION WITH UNDERGROUND AND OVERHEAD UTILITIES, LIGHTING FIXTURES, DOORS AND WINDOWS. CONTRACTOR SHALL STAKE IN THE FIELD FINAL LOCATION OF TREES AND SHRUBS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
 - ALL PLANT MATERIALS SHALL BE WATERED AND MAINTAINED UNTIL ACCEPTANCE.
 - REPAIR AT NO COST TO OWNER ALL DAMAGE RESULTING FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
 - SWEEP AND MAINTAIN ALL PAVED SURFACES FREE OF DEBRIS GENERATED FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
 - PROVIDE SITE WIDE IRRIGATION SYSTEM DESIGN AND INSTALLATION. SYSTEM SHALL BE FULLY PROGRAMMABLE AND CAPABLE OF ALTERNATE DATE WATERING. THE SYSTEM SHALL PROVIDE HEAD TO HEAD OR DRIP COVERAGE AND BE CAPABLE OF DELIVERING ONE INCH OF PRECIPITATION PER WEEK. SYSTEM SHALL EXTEND INTO THE PUBLIC RIGHT-OF-WAY TO THE EDGE OF PAVEMENT/BACK OF CURB.
 - CONTRACTOR SHALL SECURE APPROVAL OF PROPOSED IRRIGATION SYSTEM INCLUDING PRICING FROM OWNER, PRIOR TO INSTALLATION.

- IRRIGATION NOTES:**
- ENTIRE SITE SHALL BE FULLY IRRIGATED. THE CONTRACTOR SHALL SUBMIT IRRIGATION SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
 - SEE MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR IRRIGATION WATER, METER, AND POWER CONNECTIONS.
 - CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND/ABOVE GROUND FACILITIES PRIOR TO ANY EXCAVATION/INSTALLATION. ANY DAMAGE TO UNDERGROUND/ABOVE GROUND FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COSTS ASSOCIATED WITH CORRECTING DAMAGES SHALL BE BORNE ENTIRELY BY THE CONTRACTOR.
 - SERVICE EQUIPMENT AND INSTALLATION SHALL BE PER LOCAL UTILITY COMPANY STANDARDS AND SHALL BE PER NATIONAL AND LOCAL CODES. EXACT LOCATION OF SERVICE EQUIPMENT SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT OR EQUIVALENT AT THE JOB SITE.
 - CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR THE PROPOSED ELECTRICAL SERVICE AND METERING FACILITIES.
 - IRRIGATION WATER LINE CONNECTION SIZE IS 1-1/2" AT BUILDING. VERIFY WITH MECHANICAL PLANS/COVERAGE.
 - ALL MAIN LINES SHALL BE 18" BELOW FINISHED GRADE.
 - ALL LATERAL LINES SHALL BE 12" BELOW FINISHED GRADE.
 - ALL EXPOSED PVC RISERS, IF ANY, SHALL BE GRAY IN COLOR.
 - CONTRACTOR SHALL LAY ALL SLEEVES AND CONDUIT AT 2'-0" BELOW THE FINISHED GRADE OF THE TOP OF PAVEMENT. EXTEND SLEEVES TO 2'-0" BEYOND PAVEMENT.
 - CONTRACTOR SHALL MARK THE LOCATION OF ALL SLEEVES AND CONDUIT WITH THE SLEEVING MATERIAL "ELLED" TO 2'-0" ABOVE FINISHED GRADE AND CAPPED.
 - FABRICATE ALL PIPE TO MANUFACTURE'S SPECIFICATIONS WITH CLEAN AND SQUARE CUT JOINTS. USE QUALITY GRADE PRIMER AND SOLVENT CEMENT FORMULATED FOR INTENDED TYPE OF CONNECTION.
 - BACKFILL ALL TRENCHES WITH SOIL FREE OF SHARP OBJECTS AND DEBRIS.
 - ALL VALVE BOXES AND COVERS SHALL BE BLACK IN COLOR.
 - GROUP VALVE BOXES TOGETHER FOR EASE WHEN SERVICE IS REQUIRED. LOCATE IN PLANT BED AREAS WHENEVER POSSIBLE.
 - IRRIGATION CONTROLLER LOCATION SHALL BE VERIFIED ON-SITE WITH OWNER'S REPRESENTATIVE.
 - CONTROL WIRES: 14 GAUGE DIRECT BURIAL, SOLID COPPER IRRIGATION WIRE. RUN UNDER MAIN LINE. USE MOISTURE-PROOF SPLICES AND SPLICE ONLY AT VALVES OR PULL BOXES. RUN SEPARATE HOT AND COMMON WIRE TO EACH VALVE AND ONE (1) SPARE WIRE AND GROUND TO FURTHEST VALVE FROM CONTROLLER. LABEL OR COLOR CODE ALL WIRES.
 - AVOID OVER SPRAY ON BUILDINGS, PAVEMENT, WALLS AND ROADWAYS BY INDIVIDUALLY ADJUSTING RADIUS OR ARC ON SPRINKLER HEADS AND FLOW CONTROL ON AUTOMATIC VALVE.
 - ADJUST PRESSURE REGULATING VALVES FOR OPTIMUM PRESSURE ON SITE.
 - USE SCREENS ON ALL HEADS.
 - A SET OF AS-BUILT DRAWINGS SHALL BE MAINTAINED ON-SITE AT ALL TIMES IN AN UPDATED CONDITION.
 - ALL PIPE 3" AND OVER SHALL HAVE THRUST BLOCKING AT EACH TURN.
 - ALL AUTOMATIC REMOTE CONTROL VALVES WILL HAVE 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL UNDERNEATH VALVE AND VALVE BOX. GRAVEL SHALL EXTEND 3' BEYOND PERIMETER OF VALVE BOX.
 - THERE SHALL BE 3" MINIMUM SPACE BETWEEN BOTTOM OF VALVE BOX COVER AND TOP OF VALVE STRUCTURE.

Landscape Requirements

Developable Landscape Area (square feet):	78,691
Required Trees:	31
Provided Trees:	32
Required Shrubs:	79
Provided Shrubs:	129

SEE SHEET L1.1 FOR PLANTING SCHEDULE

MULCH SCHEDULE

AREA	MULCH TYPE	EDGING	FABRIC	REMARKS
TREE RINGS	4" DEPTH, SHREDDED CEDAR	YES	NO	SEE DETAIL SHT. L1.1
PLANTING BEDS	4" DEPTH, DECORATIVE ROCK	YES	NO	SEE DETAIL SHT. L1.1 AND GROUND COVER SCHEDULE
MAINT. STRIP AT BUILDING FOUNDATION	NA	NA	NA	
DOG PARK MULCH	NA	NA	NA	
NATIVE SEED AREAS	NA	NA	NA	

NOTE: COORDINATE ALL MULCH AND PLANTING BED MATERIAL PRIOR TO INSTALLATION. PROVIDE SAMPLES AND SHOP DRAWINGS/PHOTOS/DATA SHEETS OF ALL MATERIALS

LEGEND

EDGING - SHALL BE COMMERCIAL GRADE, 4" DEPTH ALUMINUM, BLACK OR DARK GREEN IN COLOR. INCLUDE ALL CONNECTORS, STAKES, & ALL APPURTENANCES PER MANUF. INSTALL PER MANUF. INSTRUC./SPECS.

PRELIMINARY:
NOT FOR CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Patrick J. Sanver
DATE: 12/04/23 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP/DRG SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/26/2023	DD/IMP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY

DATE	DESCRIPTION

LANDSCAPE PLAN

L1.0



Know what's below.
Call before you dig.



1" = 20'-0"
0 20'-0"

PLANT SCHEDULE

TREES	QTY	COMMON / BOTANICAL NAME	CONT	NATIVE PLANTS	POLLINATOR FRIENDLY
BJ	9	Parkland Pillar® Asian White Birch / Betula platyphylla 'Jefpark'	2.5" CAL. B&B	NOT NATIVE	N
GD	5	Street Keeper Honey Locust / Gleditsia triacanthos 'Draves' TM	2.5" Cal. B&B	NATIVE CULTIVAR	N
EK	2	Espresso Kentucky Coffeetree / Gymnocladus dioica 'Espresso'	2.5" Cal. B&B	NATIVE CULTIVAR	N
QP	1	American Dream® Oak / Quercus bicolor 'JFS-KW12'	2.5" CAL. B&B	NATIVE CULTIVAR	N
QS2	4	Kindered Spirit Oak / Quercus robur x bicolor 'Nader'	2.5" Cal. B&B	NOT NATIVE	Y

ORNAMENTAL TREES	QTY	COMMON / BOTANICAL NAME	CONT	NATIVE PLANTS	POLLINATOR FRIENDLY
AG	4	Autumn Brilliance Serviceberry / Amelanchier x grandiflora 'Autumn Brilliance'	1.5" Cal. B&B	NATIVE	Y
CV	4	Thornless Cockspur Hawthorn / Crataegus crus-galli inermis TM	1.5" Cal. B&B	NATIVE	Y
OV	3	American Hophornbeam / Ostrya virginiana	1.75" Cal B&B	NATIVE	Y

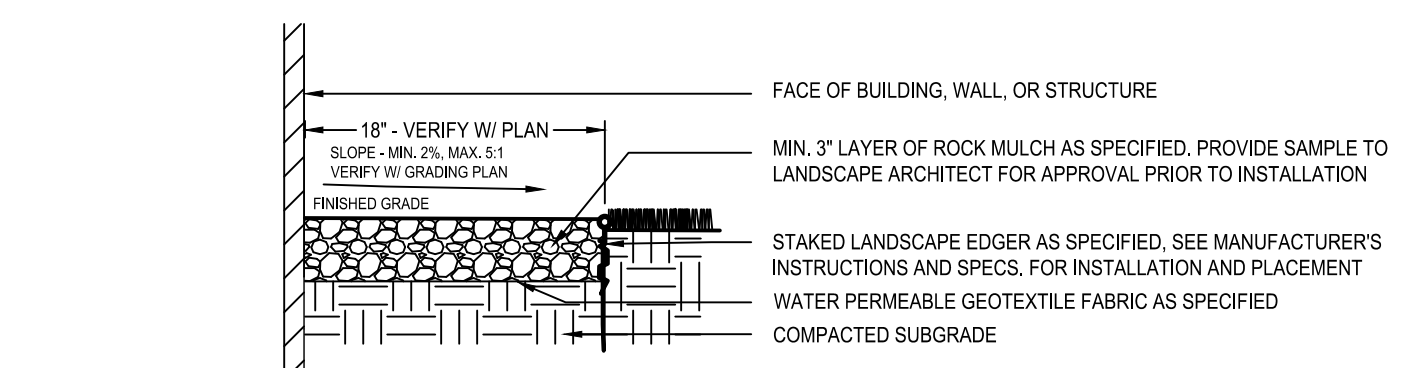
SHRUBS	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	POLLINATOR FRIENDLY
AB4	4	Low Scape Mound Black Chokeberry / Aronia melanocarpa 'UCONNAM165' TM	#5 CONT	NATIVE CULTIVAR	Y
CA4	6	New Jersey Tea / Ceanothus americanus	#1 CONT	NATIVE	Y
CA3	13	Arctic Fire Dogwood / Cornus sericea 'Arctic Fire'	#5 CONT	NATIVE CULTIVAR	Y
CB	20	Firedance Dogwood / Cornus sericea 'Balladeline' TM	#5 CONT	NATIVE CULTIVAR	Y
FC	5	Gold Tide Forsythia / Forsythia x 'Courtaso' TM	#2 CONT	NOT NATIVE	Y
SGJ	65	Sea Green Juniper / Juniperus chinensis 'Sea Green'	#5 CONT	NOT NATIVE	N
JN	13	Grey Guardian Juniper / Juniperus virginiana 'Greguard' TM	#5 CONT	NATIVE	N
PR	7	Raspberry Lemonade Ninebark / Physocarpus opulifolius 'ZLEyel2' TM	#5 CONT	NATIVE CULTIVAR	Y

GRASSES	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	POLLINATOR FRIENDLY
BB	30	Blonde Ambition Blue Grama / Bouteloua gracilis 'Blonde Ambition'	#1 CONT	NATIVE CULTIVAR	Y
CR	72	Reed Grass / Calamagrostis brachytricha	#1 CONT	NOT NATIVE	N
EH	8	Bottlebrush Grass / Elymus hystrix	#1 CONT	NATIVE	Y
PN	64	Northwind Switch Grass / Panicum virgatum 'North Wind'	#1 CONT	NATIVE CULTIVAR	Y
SS	14	Smoke Signal Little Bluestem / Schizachyrium scoparium 'Smoke Signal'	#1 CONT	NATIVE CULTIVAR	Y
SH	9	Prairie Dropseed / Sporobolus heterolepis	#1 CONT	NATIVE	Y

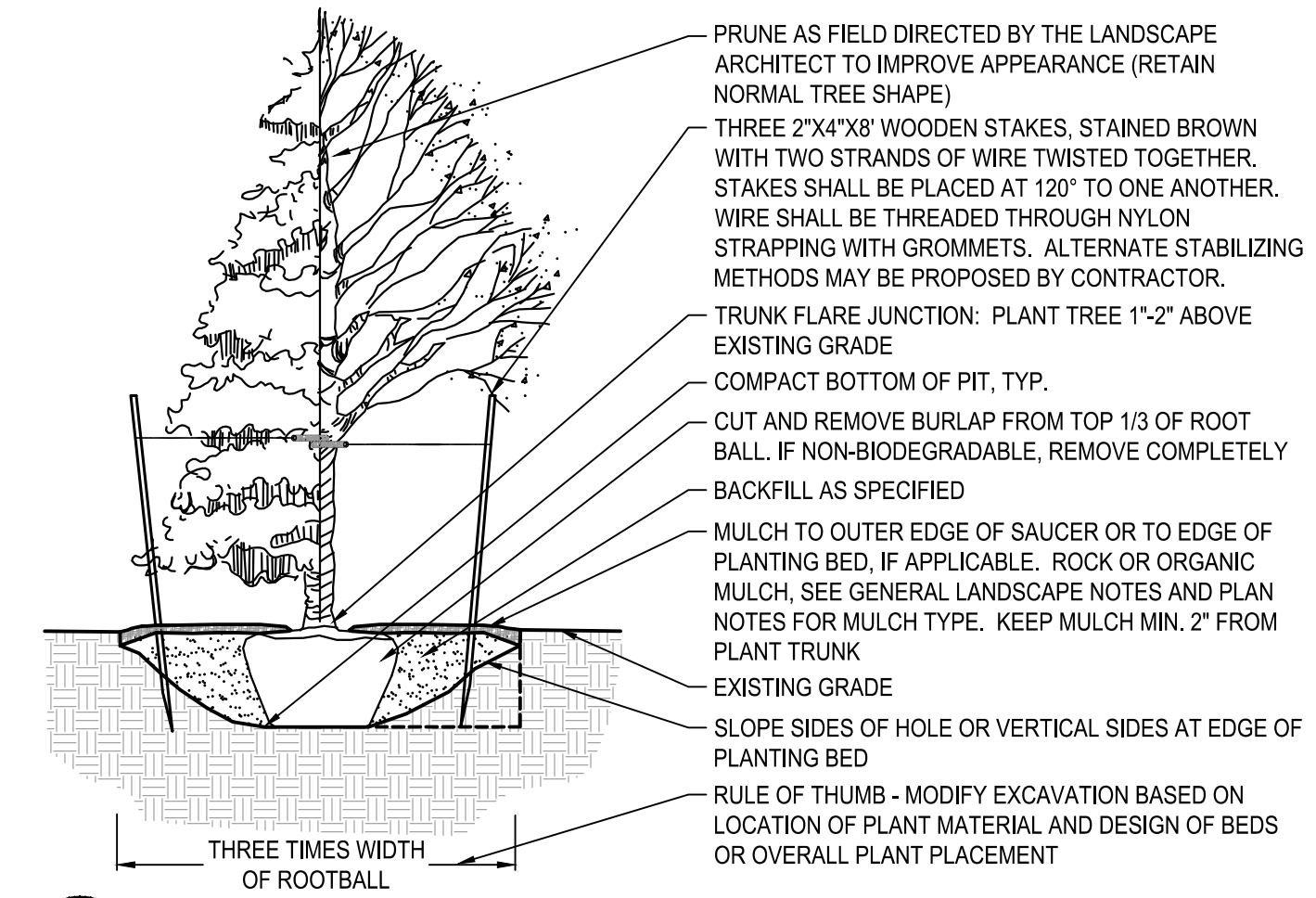
PERENNIALS	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	POLLINATOR FRIENDLY
AF	12	Blue Fortune Anise Hyssop / Agastache x 'Blue Fortune'	#1 CONT	NATIVE CULTIVAR	Y

PLANT SCHEDULE

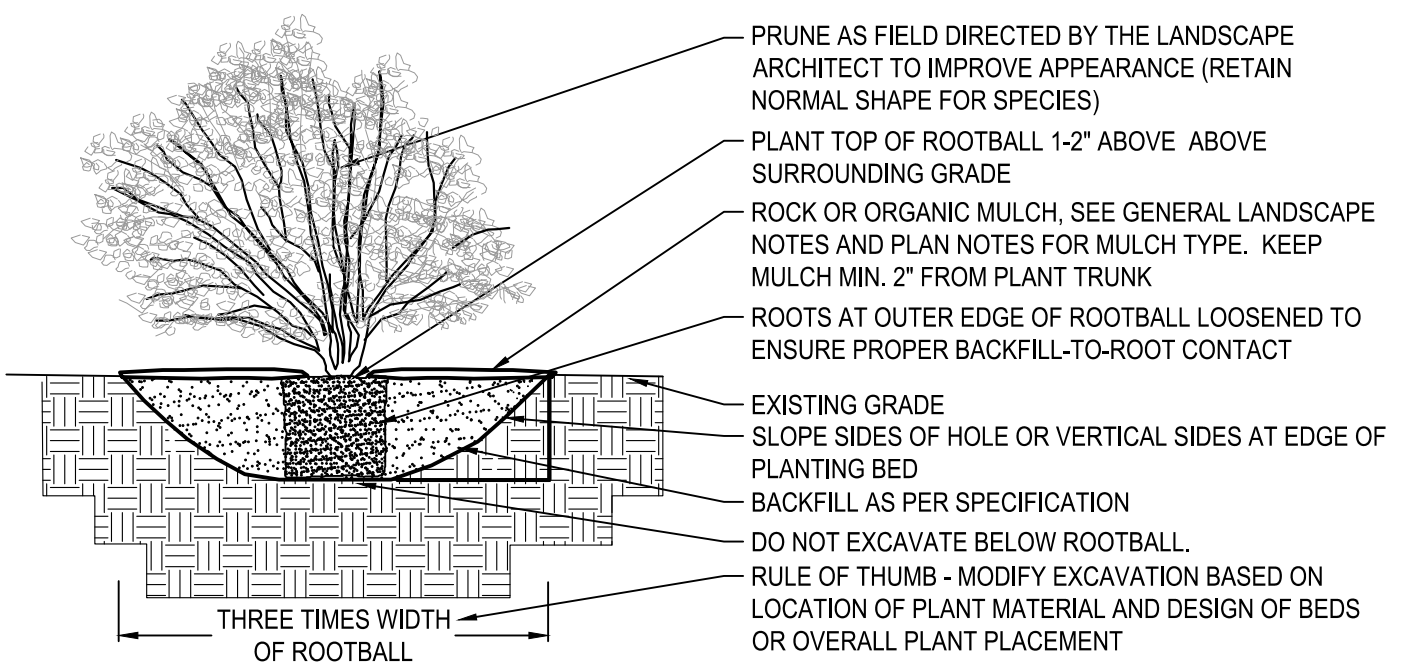
GROUND COVERS	COMMON / BOTANICAL NAME	SIZE
	Decorative Rock Mulch / Decorative Rock Mulch 2" - 4" Dresser Trap Rock, uniform in size over filter fabric. Include aluminum edging as shown on plan, or as needed. Provide Samples.	Mulch
	Blue Grass Based / Sod Commercial grade, locally grown, well rooted sod blend of improved Kentucky Bluegrass w/ uniform color, leaf texture, density and varieties consisting of a minimum of two and no more than four common cultivars.	Sod



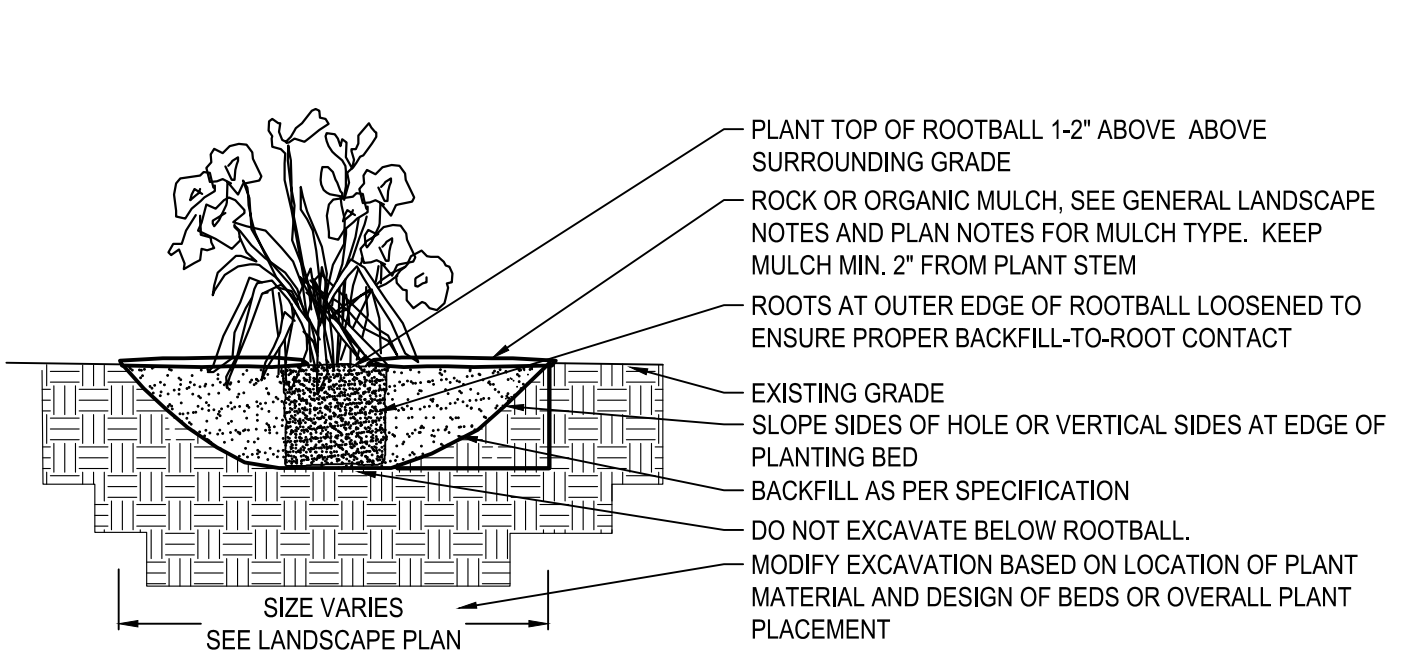
1 AGGREGATE MAINTENANCE STRIP
NTS



2 DECIDUOUS & CONIFEROUS TREE PLANTING
NTS



3 DECIDUOUS & CONIFEROUS SHRUB PLANTING
NTS




4 PERENNIAL BED PLANTING
NTS

PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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 LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.


Patrick J. Sarver
DATE 12/04/23 LICENSE NO. 24904

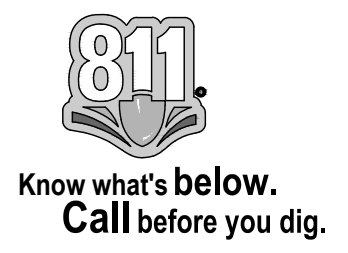
DATE	DESCRIPTION
3/9/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/29/2023	ID/IMP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

DATE	DESCRIPTION

LANDSCAPE PLAN
NOTES & DETAILS

L1.1



PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavek
DATE 12/04/23 LICENSE NO. 44263

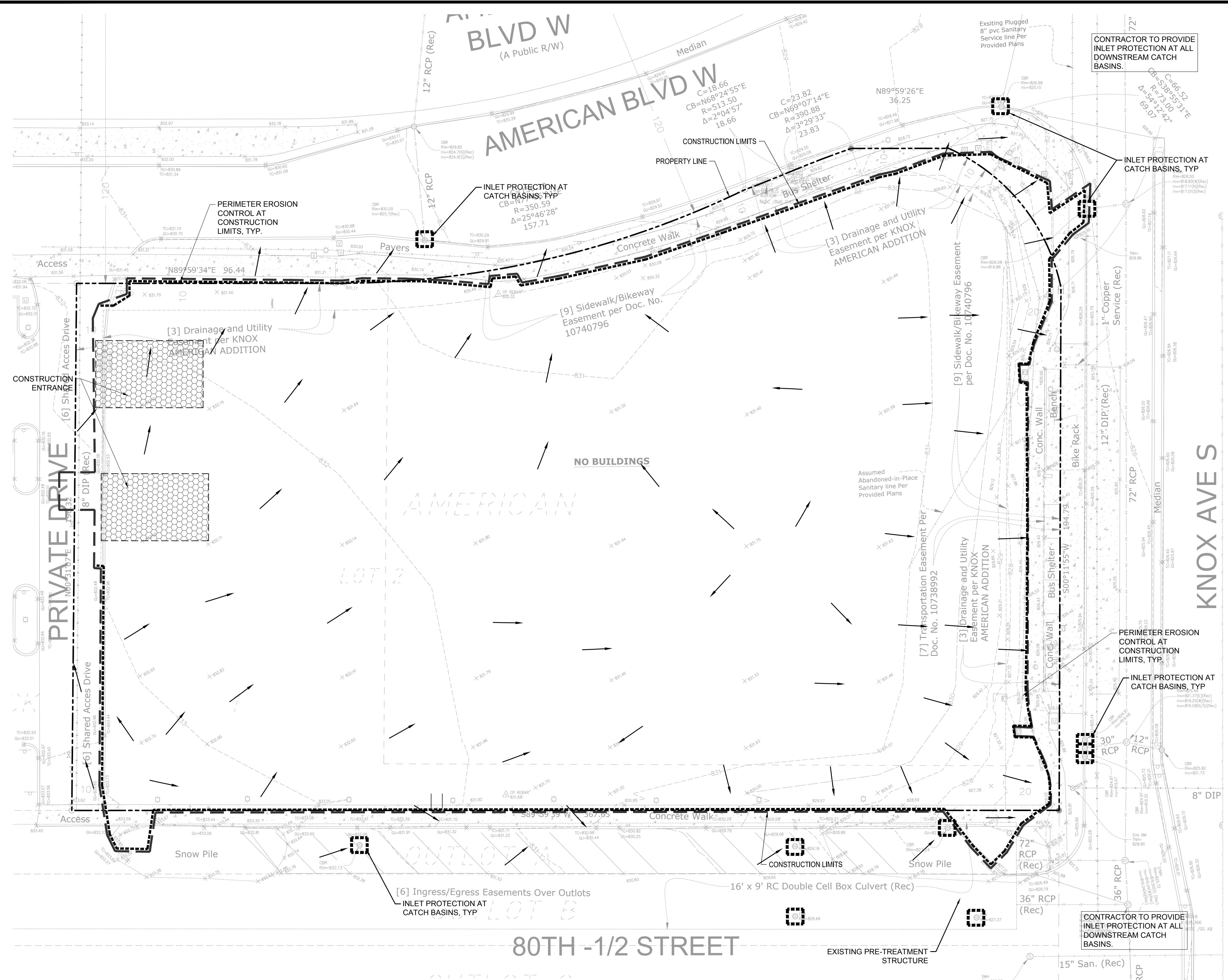
ISSUE/SUBMITTAL SUMMARY	
DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/29/2023	DDGMP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY	
DATE	DESCRIPTION

SWPPP - EXISTING CONDITIONS

SW1.0



CONTRACTOR TO PROVIDE INLET PROTECTION AT ALL DOWNSTREAM CATCH BASINS.

PERIMETER EROSION CONTROL AT CONSTRUCTION LIMITS, TYP.

CONTRACTOR TO PROVIDE INLET PROTECTION AT ALL DOWNSTREAM CATCH BASINS.

CITY OF BLOOMINGTON EROSION CONTROL NOTES:

- AN EROSION CONTROL BOND IS REQUIRED. COORDINATE WITH CITY.
- CITY OWNED PRE-TREATMENT STRUCTURE THAT IS OVERLOADED WITH CONSTRUCTION RELATED SEDIMENT WILL BE THE RESPONSIBILITY OF THE PROJECT TO REMOVE. CITY WILL PERFORM AN INSPECTION OF THE SYSTEM IN EARLY AUGUST 2023 TO DOCUMENT CURRENT CONDITIONS AND PERFORM POST CONSTRUCTION INSPECTION ONCE PROJECT IS COMPLETE. OWNER'S REPRESENTATIVE WELCOME TO COORDINATE WITH CITY TO BE INVOLVED IN ANY CITY INFRASTRUCTURE INSPECTION ACTIVITY.
- ENSURE ALL INLET PROTECTION DEVICES HAVE EMERGENCY OVERFLOW PROTECTION TO PREVENT FLOODING.

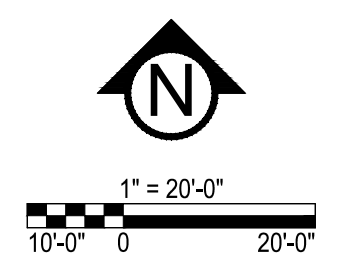
SWPPP NOTES:

- ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT 'GOPHER STATE ONE CALL' (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
- THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY EROSION CONTROL PERMITS REQUIRED BY THE CITY.
- SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.
- SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.
- CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

LEGEND:

	EX. 1' CONTOUR ELEVATION INTERVAL
	1.0' CONTOUR ELEVATION INTERVAL
	DRAINAGE ARROW
	SILT FENCE / BIOROLL - GRADING LIMIT
	INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	EROSION CONTROL BLANKET



PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55425

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.

Matthew R. Pavek
DATE 12/04/23 LICENSE NO. 44283

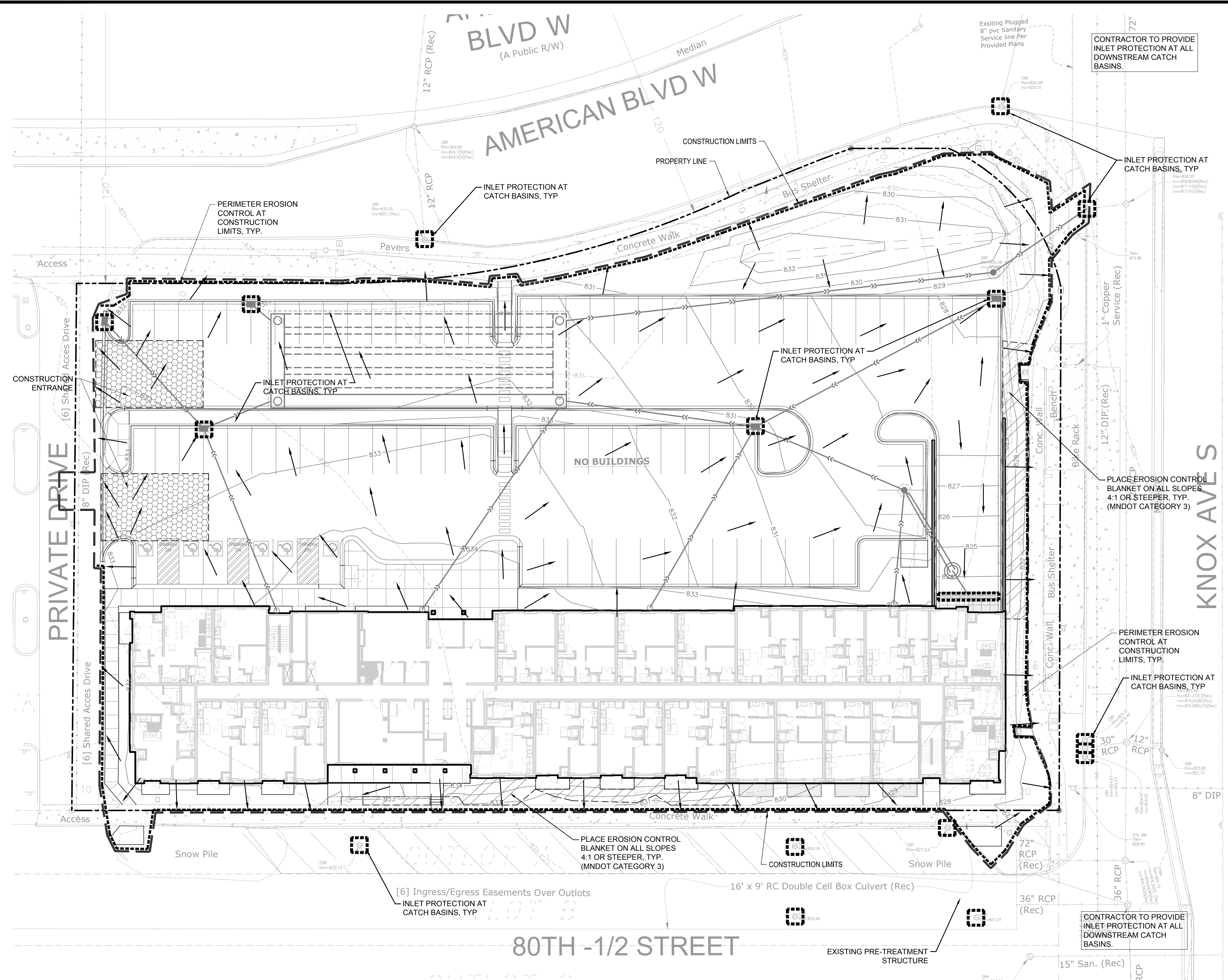
ISSUE/SUBMITTAL SUMMARY	
DATE	DESCRIPTION
3/6/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/28/2023	DDWMP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

REVISION SUMMARY	
DATE	DESCRIPTION

SWPPP - PROPOSED CONDITIONS

SW1.1



CITY OF BLOOMINGTON EROSION CONTROL NOTES:

1. AN EROSION CONTROL BOND IS REQUIRED. COORDINATE WITH CITY.
2. CITY OWNED PRE-TREATMENT STRUCTURE THAT IS OVERLOADED WITH CONSTRUCTION RELATED SEDIMENT WILL BE THE RESPONSIBILITY OF THE PROJECT TO REMOVE. CITY WILL PERFORM AN INSPECTION OF THE SYSTEM IN EARLY AUGUST 2023 TO DOCUMENT CURRENT CONDITIONS AND PERFORM POST CONSTRUCTION INSPECTION ONCE PROJECT IS COMPLETE. OWNER'S REPRESENTATIVE WELCOME TO COORDINATE WITH CITY TO BE INVOLVED IN ANY CITY INFRASTRUCTURE INSPECTION ACTIVITY.
3. ENSURE ALL INLET PROTECTION DEVICES HAVE EMERGENCY OVERFLOW PROTECTION TO PREVENT FLOODING.

SWPPP NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY EROSION CONTROL PERMITS REQUIRED BY THE CITY.
3. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.
4. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.
5. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, AND COMPLIANCE WITH NPDES PERMIT.

ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

LEGEND:

	EX. 1' CONTOUR ELEVATION INTERVAL
	1.0' CONTOUR ELEVATION INTERVAL
	DRAINAGE ARROW
	SILT FENCE / BIOROLL - GRADING LIMIT
	INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE
	EROSION CONTROL BLANKET

811
Know what's below.
Call before you dig.

1" = 20'-0"
10'-0" 0 20'-0"

PRELIMINARY:
NOT FOR
CONSTRUCTION

KNOX & AMERICAN II
8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

Matthew R. Pavak
DATE 12/04/23 LICENSE NO. 44283

DATE	DESCRIPTION
3/9/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/28/2023	DD&MP SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
PROJECT NUMBER: 23027

DATE	DESCRIPTION

SWPPP - DETAILS

SW1.2

609 - Erosion Control Fence
609 - 36" (914mm) (STANDARD)
5/2015

NOTE:
- PLACE BOTTOM EDGE OF FENCE INTO 6" (153mm) DEEP TRENCH AND BACKFILLED IMMEDIATELY.
- POSTS SHALL BE:
- 4" (102mm) ON CENTER
- 2" (50.8mm) x 2" (50.8mm) HARDWOOD, PINE OR STEEL FENCE POSTS, MINIMUM LENGTH 4'-0"
- DRIVEN 2" (51mm) INTO THE GROUND.

PLATE NAME: **609 - Silt Fen (STANDARD)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

608 - Silt Fen (MACHINE SLICED)
608 - 36" (914mm) (MACHINE SLICED)
5/2015

NOTE:
- ATTACH FABRIC TO POST WITH A MINIMUM 3 SP. TIES (50 LB TENSILES PER POST) IN TOP 8" OF FABRIC WITH HOLES SPACED A MINIMUM OF 1" APART.
- MONOPLAMENT GEOTEXTILE FABRIC ARE COMPACTION ZONE
- 2" MINIMUM POST EMBEDMENT
- MACHINE SLICE 8-12" DEPTH

PLATE NAME: **608 - Silt Fen (MACHINE SLICED)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

602 - Inlet Protection, Manhole Cover Assembly
602 - 18" (457mm)
5/2015

PLATE NAME: **602 - Wimco (MH)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

610 - Bioroll Blanket System
610 - 36" (914mm)
5/2015

NOTE:
- 4" x 4" TRENCH BACKFILLED OVER EROSION CONTROL BLANKET (SPEC. 3003)
- 2" x 2" x 18" LONG WOODEN STAKES AT 2'-0" SPACING. DRIVE THROUGH NETTING AND FIBER ROLL.
- POINT 'A' MUST BE HIGHER THAN POINT 'B' TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

PLATE NAME: **610 - Bioroll**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

600 - Rock Const. Ent
600 - 36" (914mm)
5/2015

NOTE:
- 'B' TAMP THE TRENCH FULL OF SOIL. SECURE WITH ROW OF STAPLES, 10" SPACING, 4" DOWN FROM TRENCH.
- 'A' BURY THE TOP END OF THE MATTING IN A TRENCH 4" OR MORE IN DEPTH.
- 'C' OVERLAP: BURY UPPER END OF LOWER STRIP AS IN 'A' AND 'B'. OVERLAP END OF TOP STRIP 4" AND STAPLE.
- 'D' EROSION STOP: FOLD OF MATTING BURIED IN SILT TRENCH AND TAMPED. DOUBLEROW OF STAPLES.
- 'E' OVERFALL
- PLACE STAPLES 2 FEET APART TO KEEP MATTING FIRMLY PRESSED TO SOIL.
- TYPICAL STAPLE #8 GAUGE WIRE

NOTE:
1. ANY USE OF EROSION CONTROL BLANKET MUST UTILIZE A FULLY BIO-DEGRADABLE EROSION CONTROL BLANKET (NO PLASTIC NETTING) WITH LOOSE WEAVE NETTING (OR NETLESS). SEE NMCWD RULE 5.3.1B.

PLATE NAME: **600 - Rock Const. Ent**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

604 - Inlet Shroud (2x3)
604 - 24" (610mm) (2x3)
5/2015

NOTE:
- SHROUD MADE OF SAFETY ORANGE POLYETHYLENE (1/32" (0.76mm) MIN. THICKNESS) WRAP PERFORATED AREA W/ FILTER FABRIC.
- LOOK IN TAB 2-1/2" (64mm)

PLATE NAME: **604 - Inlet Shroud (2x3)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

601 - Inlet Protection, Metal Basket Type
601 - 36" (914mm)
2/17/2016

NOTE:
- MODIFY BACK TO PROVIDE OVERFLOW PROTECTION AT LOW POINTS
- FILTER ASSEMBLY PREPARED BY PWC WITH GEOTEXTILE SOCK
- EXISTING CURB
- METAL BASKET INSERT

PLATE NAME: **601 - Wimco (CB)**
LAST REVISED: 2/17/2016
LAST REVISED BY: KBO

604 - Inlet Protection, Perforated Erosion Barrier Shroud
604 - 24" (610mm) (2x3)
5/2015

NOTE:
- SHROUD MADE OF SAFETY ORANGE POLYETHYLENE (1/32" (0.76mm) MIN. THICKNESS) WRAP PERFORATED AREA W/ FILTER FABRIC.
- LOOK IN TAB 2-1/2" (64mm)

PLATE NAME: **604 - Inlet Shroud (2x3)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

600 - Rock Const. Ent
600 - 36" (914mm)
5/2015

NOTE:
- MIN. 6" (152mm) OF 1" TO 2" (25mm TO 51mm) DIA. ROCK.
- MGDOT STANDARD SPECIFICATION 3723 TYPE V PERMEABLE GEOTEXTILE FABRIC BENEATH ROCK.
- 18" (457mm) MIN. HIGH CUT-OFF BERM TO MINIMIZE SILT RUNOFF FROM SITE.
- VARIES: FULL WIDTH OF EXISTING DRIVEWAY OPENING, ELSE 20' (6.10m) MIN. WIDTH.

PLATE NAME: **600 - Rock Const. Ent**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

601 - Inlet Protection, Metal Basket Type
601 - 36" (914mm)
2/17/2016

NOTE:
- MODIFY BACK TO PROVIDE OVERFLOW PROTECTION AT LOW POINTS
- FILTER ASSEMBLY PREPARED BY PWC WITH GEOTEXTILE SOCK
- EXISTING CURB
- METAL BASKET INSERT

PLATE NAME: **601 - Wimco (CB)**
LAST REVISED: 2/17/2016
LAST REVISED BY: KBO

604 - Inlet Protection, Perforated Erosion Barrier Shroud
604 - 24" (610mm) (2x3)
5/2015

NOTE:
- SHROUD MADE OF SAFETY ORANGE POLYETHYLENE (1/32" (0.76mm) MIN. THICKNESS) WRAP PERFORATED AREA W/ FILTER FABRIC.
- LOOK IN TAB 2-1/2" (64mm)

PLATE NAME: **604 - Inlet Shroud (2x3)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

602 - Inlet Protection, Manhole Cover Assembly
602 - 18" (457mm)
5/2015

PLATE NAME: **602 - Wimco (MH)**
LAST REVISED: 5/15/2015
LAST REVISED BY: KBO

1 EROSION BLANKET
NTS

ATTACHMENT B: SWPPP INSPECTION FORM

NOTE: THIS INSPECTION REPORT DOES NOT ADDRESS ALL ASPECTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) CONSTRUCTION STORMWATER PERMIT (PERMIT) ISSUED ON AUGUST 1, 2018. THE COMPLETION OF THIS CHECKLIST DOES NOT GUARANTEE THAT ALL PERMIT REQUIREMENTS ARE IN COMPLIANCE; IT IS THE RESPONSIBILITY OF THE PERMITTEE(S) TO READ AND UNDERSTAND THE PERMIT REQUIREMENTS.

FACILITY INFORMATION

SITE NAME: _____
 SITE ADDRESS: _____ PERMIT NUMBER: _____
 CITY: _____ STATE: _____ ZIP CODE: _____

INSPECTION INFORMATION

INSPECTOR NAME: _____ PHONE NUMBER: _____
 ORGANIZATION/COMPANY MAN: _____
 DATE (MM/DD/YYYY): _____ TIME: _____ AM / PM
 IS THE INSPECTOR CERTIFIED IN SEDIMENT AND EROSION CONTROL AND IS IT DOCUMENTED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)? Y N
 IS THIS INSPECTION ROUTINE OR IN RESPONSE TO A STORM EVENT?
 7 DAY RAIN

RAINFALL AMOUNT (IF APPLICABLE): _____ Y N
 IS SITE WITHIN ONE AERIAL MILE OF SPECIAL OR IMPAIRED WATER THAT CAN POTENTIALLY RECEIVE DISCHARGE FROM THE SITE? Y N
 IF YES, FOLLOW SECTION 23 AND OTHER APPLICABLE PERMIT REQUIREMENTS

NOTE: IF N/A IS SELECTED AT ANY TIME, SPECIFY WHY IN THE COMMENT AREA FOR THAT SECTION.

EROSION CONTROL REQUIREMENT (SECTION 8.1)

	Y	N	N/A
1. ARE SOILS STABILIZED WHERE NO CONSTRUCTION ACTIVITY HAS OCCURRED FOR 14 DAYS (INCLUDING STOCKPILES)? (7 DAYS WHERE APPLICABLE, OR 24 HOURS DURING MINNESOTA DEPARTMENT OF NATURAL RESOURCES [DNR] FISH SPAWNING RESTRICTIONS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. HAS THE NEED TO DISTURB STEEP SLOPES BEEN MINIMIZED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. IF STEEP SLOPES ARE DISTURBED, ARE STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES USED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. ALL DITCHES/SWALES STABILIZED 200' BACK FROM POINT OF DISCHARGE OR PROPERTY EDGE WITHIN 24 HOURS? (MULCH, HYDROMULCH, TACKIFIER, OR SIMILAR BEST MANAGEMENT PRACTICES [BMPs] ARE NOT ACCEPTABLE IN DITCHES/SWALES IF THE SLOPE IS GREATER THAN 2%) ARE APPROPRIATE BMPs INSTALLED PROTECTING INLETS/OUTLETS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. DO PIPE OUTLETS HAVE ENERGY DISSIPATION (WITHIN 24 HOURS OF CONNECTION)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IS CONSTRUCTION PHASING BEING FOLLOWED IN ACCORDANCE WITH THE SWPPP?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. ARE AREAS NOT TO BE DISTURBED MARKED OFF (FLAGS, SIGNS, ETC.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS:

SEDIMENT CONTROL REQUIREMENTS (SECTION 9.1)

	Y	N	N/A
1. ARE PERIMETER SEDIMENT CONTROLS INSTALLED PROPERLY ON ALL DOWN GRADIENT PERIMETERS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ARE APPROPRIATE BMPs INSTALLED PROTECTING INLETS, CATCH BASINS, AND CULVERT INLETS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. IS A 50 FOOT NATURAL BUFFER PRESERVED AROUND ALL SURFACE WATERS DURING CONSTRUCTION?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1. IF NO, HAVE REDUNDANT SEDIMENT CONTROLS BEEN INSTALLED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. DO ALL ERODIBLE STOCKPILES HAVE PERIMETER CONTROL IN PLACE?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. IS THERE A TEMPORARY SEDIMENT BASIN ON SITE, AND IS IT BUILT AS REQUIRED IN SECTION 14 OF THE PERMIT?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IS SOIL COMPACTION BEING MINIMIZED WHERE NOT DESIGNED FOR COMPACTION?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. IS TOPSOIL BEING PRESERVED UNLESS INFEASIBLE?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. IF CHEMICAL FLOCCULANTS ARE USED, IS THERE A CHEMICAL FLOCCULANT PLAN IN PLACE?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS:

MAINTENANCE AND INSPECTIONS (SECTION 11)

	Y	N	N/A
1. ARE ALL PREVIOUSLY STABILIZED AREAS MAINTAINING GROUND COVER?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ARE PERIMETER CONTROLS MAINTAINED AND FUNCTIONING PROPERLY, SEDIMENT REMOVED WHEN ONE-HALF FULL?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. ARE INLET PROTECTION DEVICES MAINTAINED AND ADEQUATELY PROTECTING INLETS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. ARE THE TEMPORARY SEDIMENT BASINS BEING MAINTAINED AND FUNCTIONING PROPERLY?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. ARE VEHICLE TRACKING BMPs AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR, ODOR, FOAM, OIL SHEEN, TIME, ETC.). DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BE RECOVERED WITHIN SEVEN DAYS AND IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?

COMMENTS:

POLLUTION PREVENTION (SECTION 12)

	Y	N	N/A
1. ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ARE HAZARDOUS MATERIALS BEING PROPERLY STORED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. ARE APPROPRIATE BMPs BEING USED TO PREVENT DISCHARGES ASSOCIATED WITH FUELING AND MAINTENANCE OF EQUIPMENT OR VEHICLES?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. ARE ALL SOLID WASTES BEING PROPERLY CONTAINED AND DISPOSED OF?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. IS THERE A CONCRETE/OTHER MATERIAL WASHOUT AREA ON SITE AND IS IT BEING USED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. IS THE CONCRETE WASHOUT AREA MARKED WITH A SIGN?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. ARE THE CONCRETE/OTHER MATERIAL WASHOUT AREAS PROPERLY MAINTAINED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS:

OTHER

	Y	N	N/A
1. IS A COPY OF THE SWPPP, INSPECTION RECORDS, AND TRAINING DOCUMENTATION LOCATED ON THE CONSTRUCTION SITE, OR CAN IT BE MADE AVAILABLE WITHIN 72 HOURS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. HAS THE SWPPP BEEN FOLLOWED AND IMPLEMENTED ON SITE, AND AMENDED AS NEEDED?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. IS ANY DEWATERING OCCURRING ON SITE? IF YES, WHAT BMPs ARE BEING USED TO ENSURE THAT CLEAN WATER IS LEAVING THE SITE AND THE DISCHARGE IS NOT CAUSING EROSION OR SCOUR?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. WILL A PERMANENT STORMWATER MANAGEMENT SYSTEM BE CREATED FOR THIS PROJECT IF REQUIRED AND IN ACCORDANCE WITH SECTION 15 OF THE PERMIT (IF ADDING AN ACRE OR MORE OF NEW IMPERVIOUS SURFACE)? IF YES, DESCRIBE:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. IF INFILTRATION/FILTRATION SYSTEMS ARE BEING CONSTRUCTED, ARE THEY MARKED AND PROTECTED FROM COMPACTION AND SEDIMENTATION?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. DESCRIPTION OF AREAS OF NON-COMPLIANCE NOTED DURING THE INSPECTION, REQUIRED CORRECTIVE ACTIONS, AND RECOMMENDED DATE OF COMPLETION OF CORRECTIVE ACTIONS:			
7. PROPOSED AMENDMENTS TO THE SWPPP:			
8. POTENTIAL AREAS OF FUTURE CONCERN:			
9. ADDITIONAL COMMENTS			

DISCLOSURES:

- AFTER DISCOVERY, THE PERMIT REQUIRES MANY OF THE DEFICIENCIES THAT MAY BE FOUND ON SITE BE CORRECTED WITHIN A SPECIFIED PERIOD OF TIME. SEE PERMIT FOR MORE DETAILS.
- THE PERMITTEE(S) IS/ARE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPs AS WELL AS EROSION PREVENTION AND SEDIMENT CONTROL BMPs UNTIL ANOTHER PERMITTEE HAS OBTAINED COVERAGE UNDER THIS PERMIT ACCORDING TO SECTION 3, OR THE PROJECT HAS MET THE TERMINATION CONDITIONS OF THE PERMIT AND A NOTICE OF TERMINATION HAS BEEN SUBMITTED TO THE MINNESOTA POLLUTION CONTROL AGENCY.

ATTACHMENT C: MAINTENANCE PLAN FOR PERMANENT STORM WATER TREATMENT SYSTEM

ATTACHMENT C - CHAMBER
 FACILITY MANAGEMENT SCHEDULE

- ALL GRIT CHAMBERS, SUMP CATCH BASINS, SUMP MANHOLES, OUTLET STRUCTURES, CULVERTS, OUTFALL STRUCTURES AND OTHER STORM WATER FACILITIES FOR WHICH MAINTENANCE REQUIREMENTS ARE NOT OTHERWISE SPECIFIED HEREIN MUST BE INSPECTED IN THE SPRING, SUMMER AND FALL OF EACH YEAR, WITHIN 30 DAYS OF THE INSPECTION DATE. ALL ACCUMULATED SEDIMENT AND DEBRIS MUST BE REMOVED SUCH THAT EACH STORM WATER FACILITY OPERATES AS DESIGNED AND PERMITTED. CONTRIBUTING DRAINAGE AREAS MUST BE KEPT CLEAR OF LITTER AND VEGETATIVE DEBRIS, INFLOW PIPES AND OVERFLOW SPILLWAYS KEPT CLEAR, INLET AREAS KEPT CLEAN, AND UNDESIRABLE VEGETATION REMOVED. EROSION IMPAIRING THE FUNCTION OR INTEGRITY OF THE FACILITIES, IF ANY, WILL BE CORRECTED, AND ANY STRUCTURAL DAMAGE IMPAIRING OR THREATENING TO IMPAIR THE FUNCTION OF THE FACILITIES MUST BE REPAIRED.
- VOLUME CONTROL FACILITIES AND CONTRIBUTING DRAINAGE AREAS MUST BE INSPECTED EVERY THREE MONTHS DURING THE OPERATIONAL PERIOD (BETWEEN SPRING SNOWMELT AND FIRST SUBSTANTIAL SNOWFALL) AND MONITORED AFTER RAINFALL EVENTS OF 1 INCH OR MORE TO ENSURE THAT THE CONTRIBUTING DRAINAGE AREA IS CLEAR OF LITTER AND DEBRIS, INFLOW PIPES AND OVERFLOW SPILLWAYS ARE CLEAR, INLET AREAS ARE CLEAN, UNDESIRABLE VEGETATION IS REMOVED AND THERE IS NO EROSION IMPAIRING OR THREATENING TO IMPAIR THE FUNCTION OF A FACILITY. IF SEDIMENT HAS ACCUMULATED IN A INFILTRATION FEATURE, WITHIN 30 DAYS OF INSPECTION DEPOSITED SEDIMENTS MUST BE REMOVED, THE INFILTRATION CAPACITY OF THE UNDERLYING SOILS MUST BE RESTORED, AND ANY SURFACE DISTURBANCE MUST BE STABILIZED. INSPECTION MUST ENSURE THAT SEDIMENT TRAPS AND FOREBAYS ARE TRAPPING SEDIMENT AND THAT MORE THAN 50 PERCENT OF THE STORAGE VOLUME REMAINS, THE CONTRIBUTING DRAINAGE AREA IS STABLE (I.E., NO EROSION IS OBSERVED), AND INLETS AND OUTLET/OVERFLOW SPILLWAYS ARE IN GOOD CONDITIONS WITH NO EROSION. MAINTENANCE TECHNIQUES USED MUST PROTECT THE INFILTRATION CAPACITY OF THE PRACTICE BY LIMITING SOIL COMPACTION TO THE GREATEST EXTENT POSSIBLE (E.G., BY USING LOW-IMPACT EARTH-MOVING EQUIPMENT).
- UNDERGROUND STORAGE CHAMBERS MUST BE INSPECTED AT LEAST ONCE A YEAR TO ENSURE THAT ADEQUATE STORAGE CAPACITY REMAINS. CAPACITY WILL BE CONSIDERED INADEQUATE IF SEDIMENT HAS DECREASED THE STORAGE VOLUME BY 50 PERCENT OF ITS ORIGINAL DESIGN VOLUME. ACCUMULATED DEBRIS AND SEDIMENT WILL BE REMOVED, AND INLET AND OUTLET STRUCTURES WILL BE CLEARED OF ANY FLOW IMPEDIMENTS.



KNOX & AMERICAN II
 8000 KNOX AVE S, BLOOMINGTON, MN 55431
STUART DEVELOPMENT CORPORATION
 1000 W 80TH STREET, MINNEAPOLIS, MN 55420

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.

Matthew R. Pavsek
 Matthew R. Pavsek
 DATE 12/04/23 LICENSE NO. 44283

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
3/9/2023	SKETCH PLAN
4/26/2023	PRE-APP DISC SUBMISSION
05/17/2023	DEVELOPMENT APPLICATION SUBMITTAL
07/31/2023	WATERSHED SUBMITTAL
08/31/2023	WATERSHED RESUBMITTAL
09/28/2023	IDQ&M SET
12/04/2023	WATERSHED RESUBMITTAL

DRAWN BY: JR, BB REVIEWED BY: MP
 PROJECT NUMBER: 23027

REVISION SUMMARY

DATE	DESCRIPTION

SWPPP - ATTACHMENTS

SW1.5