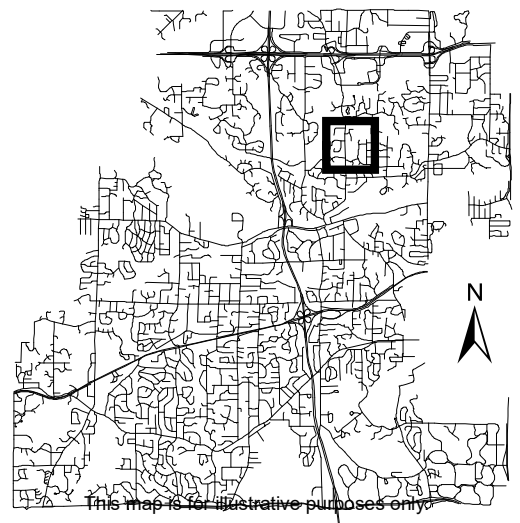




**Location Map**

Project: One Acre Oaks  
 Address: 2511 & 2615 Plymouth Rd



This map is for illustrative purposes only.

# LAKE WEST DEVELOPMENT, LLC

March 21, 2024

RE: NARRATIVE FOR "ONE ACRE OAKS" – R1 SINGLE-FAMILY RESIDENTIAL PRELIMINARY PLAT APPLICATION | 2615 & 2511 PLYMOUTH ROAD

## BRIEF SUMMARY

Welcome to 'One Acre Oaks', located just North of the development known as Bent Tree, on the east side of Plymouth Road in Minnetonka.

With easy access to the Ridgedale Mall and the City's vast trail system, the objective of this project is to create a grandeur yet intimate residential neighborhood that stands out from the neighboring developments by utilizing and preserving the site's topography to establish a naturally secluded, **1+ acre "estate" lot development**.

Combining two over-sized parcels totaling **10.01 gross acres** to create **8 single-family**, estate lots **zoned R-1**, yielding a **net density of 0.93 units per acre**. The 8 new single-family detached homes will be accessed by a cul-de-sac from Plymouth Road.



Our intention is to design a plan that embraces the preservation of the significant natural features of the topography, minimizes grading where possible and utilizes the natural flow of the land to comply with stormwater, grading and erosion requirements of the City.

We are requesting early home construction permits for the two lots with frontage on Plymouth Road for an early start prior to the installation of site grading, utility & street work, and stormwater to be substantially completed in the summer of 2024.

No variances are requested.

Sincerely,

Curt Fretham  
CEO, Lake West Development

OFFICE: (952) 930-3000  
CELL: (612) 720-5690  
EMAIL: CURTF@LWESTDEV.COM

CC: SUSAN THOMAS  
LOREN GORDON  
MIKE ST. MARTIN

**DEVELOPMENT TEAM:**

**DEVELOPER:**

**LAKE WEST DEVELOPMENT** | 612-720-5690  
CURT FRETHAM | [CURTF@LWESTDEV.COM](mailto:CURTF@LWESTDEV.COM)  
[CURTF@LWESTDEV.COM](mailto:CURTF@LWESTDEV.COM)  
14525 HIGHWAY 7, MINNETONKA, MN 55345

**CIVIL ENGINEERING, SURVEYING & LAND PLANNING:**

**LOUCKS** | 763-424-5505  
MICHAEL J. ST. MARTIN, P.E. | [MSTMARTIN@LOUCKSINC.COM](mailto:MSTMARTIN@LOUCKSINC.COM)  
GREG JOHNSON, P.L.A. | [GJOHNSON@LOUCKSINC.COM](mailto:GJOHNSON@LOUCKSINC.COM)  
LUKE HALSTEAD, E.I.T. | [LHALSTEAD@LOUCKSINC.COM](mailto:LHALSTEAD@LOUCKSINC.COM)  
VAL ANDERSON, P.E. | [VANDERSON@LOUCKSINC.COM](mailto:VANDERSON@LOUCKSINC.COM)  
SHARON F. MORIN, SR. SURVEY TECH | [SMORIN@LOUCKSINC.COM](mailto:SMORIN@LOUCKSINC.COM)  
7200 HEMLOCK LANE, SUITE 300, MAPLE GROVE, MN 55369

**TREE SURVEYOR:**

**TREEBIZ LLC** | 651-336-8095  
STEPHEN NICHOLSON, C.F. | [STEVE@TREE-BIZ.COM](mailto:STEVE@TREE-BIZ.COM)

**SOIL TECHNICIAN:**

**HAUGO GEOTECHNICAL SERVICES** | 612-729-2959  
PAUL HAUGO, PRESIDENT | [PHAUGO@HAUGOGTS.COM](mailto:PHAUGO@HAUGOGTS.COM)  
2825 CEDAR AVE. SOUTH, MINNEAPOLIS, MN 55407

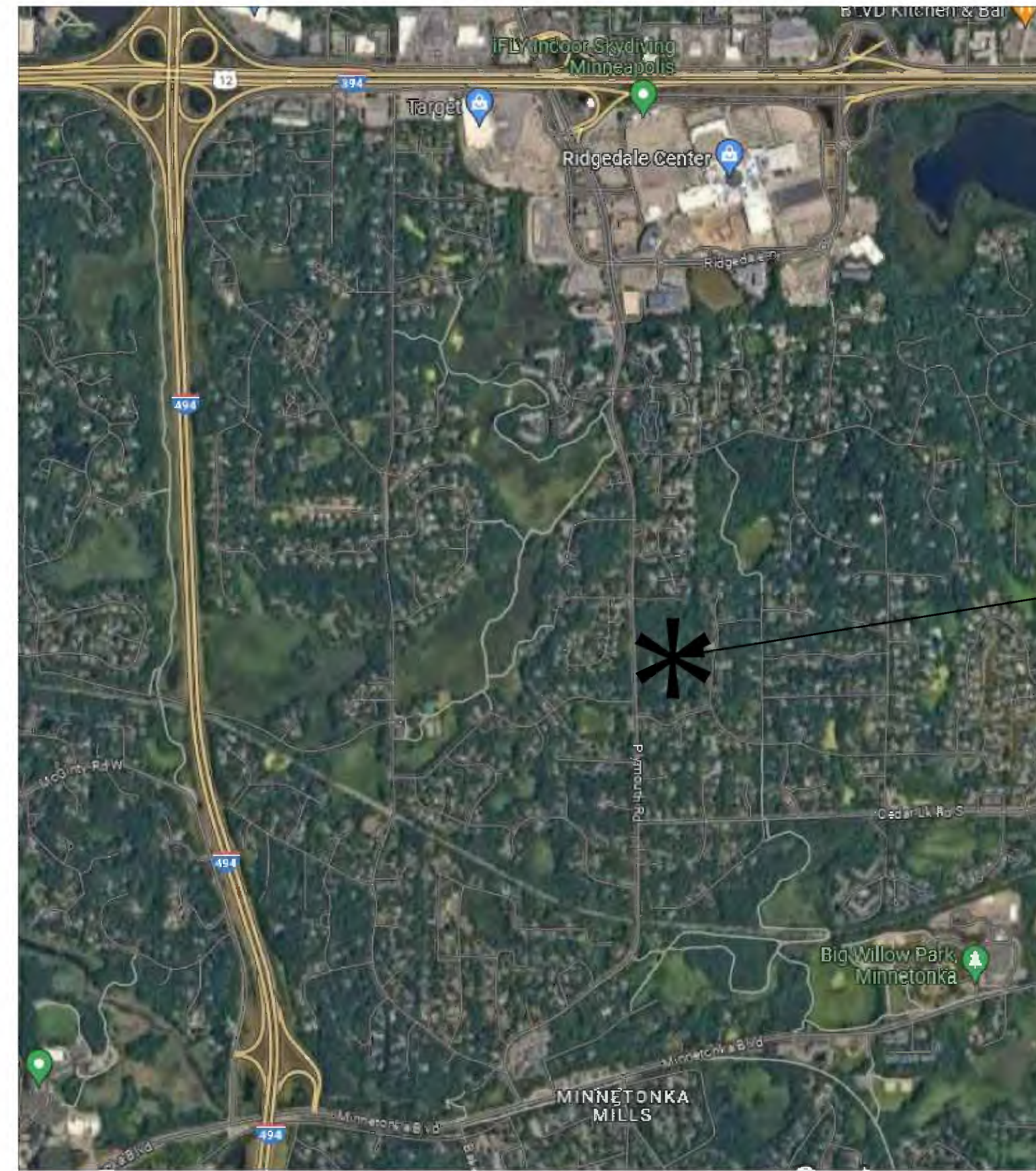
# ONE ACRE OAKS

MINNETONKA, MN

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C2-2	TURNING MOVEMENT PLAN
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C8-3	CIVIL DETAILS
L1-1	TREE INVENTORY SURVEY
L1-2	TREE INVENTORY SURVEY
L1-3	TREE INVENTORY SURVEY

## VICINITY MAP



PROPOSED SITE LOCATION

## CIVIL LEGEND

EXISTING	PROPOSED		
○	○	SANITARY MANHOLE	○
○	○	STORM MANHOLE	○
□	□	CATCH BASIN	□
○	○	CAULVERT	○
○	○	HYDRANT	○
○	○	GATEVALVE	○
○	○	POST INDICATOR VALVE	○
○	○	LIGHT POLE	○
○	○	POWER POLE	○
○	○	SIGN	○
○	○	BENCHMARK	○
○	○	SOIL BORINGS	○
○	○	WATER MANHOLE	○
○	○	TELEPHONE MANHOLE	○
○	○	UTILITY MANHOLE	○
○	○	ELECTRIC MANHOLE	○
○	○	WATER SERVICE	○
○	○	SANITARY SERVICE	○
○	○	HANDICAP PARKING	○
○	○	DIRECTION OF FLOW	○
○	○	SPOT ELEVATION	○
○	○	CONTOURS	○
○	○	SANITARY SEWER	○
○	○	STORM SEWER	○
○	○	WATERMAIN	○
○	○	FORCEMAIN	○
○	○	DRAIN TILE	○
○	○	SILT FENCE	○
○	○	CURB & GUTTER	○
○	○	RETAINING WALL	○
○	○	TREELINE	○
○	○	EASEMENT LINE	○
○	○	SETBACK LINE	○
○	○	FENCE LINE	○
○	○	UNDERGROUND TELE	○
○	○	UNDERGROUND GAS	○
○	○	OVERHEAD UTILITY	○
○	○	UNDERGROUND FIBER OPTIC	○
○	○	UNDERGROUND ELECTRIC	○
○	○	UNDERGROUND CABLE TV	○
○	○	PROPERTY LINE	○
○	○	CONFIRMED TREE	○
○	○	DECIDUOUS TREE	○
○	○	PARKING COUNTS	○

## DESIGN CONSULTANTS

<p><b>CIVIL ENGINEER</b>  <b>LOUCKS</b>                  7200 HEMLOCK LANE                  SUITE 300                  MAPLE GROVE, MINNESOTA 55369</p>	<p><b>MICHAEL ST. MARTIN, PE</b>                  TEL: 763-496-6713</p>
<p><b>LANDSCAPE ARCHITECT</b>  <b>LOUCKS</b>                  7200 HEMLOCK LANE                  SUITE 300                  MAPLE GROVE, MINNESOTA 55369</p>	<p><b>DANIEL REBOK, LA</b>                  TEL: 301-367-9230</p>

ONE ACRE OAKS

2511 and 2615 Plymouth Road, Minnetonka, MN 55305

LAKE WEST DEVELOPMENT, LLC

14525 Highway 7, Suite 265 Minnetonka, MN 55345

**LOUCKS**

PLANNING  
 CIVIL ENGINEERING  
 LAND SURVEYING  
 LANDSCAPE ARCHITECTURE  
 ENVIRONMENTAL

7200 Hemlock Lane, Suite 300  
 Maple Grove, MN 55369  
 763.424.5505  
 www.loucksinc.com

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11/29/2023	COMPLIANT
01/18/2024	PLAN GRADING
03/15/2024	CITY RESUBMITTAL
04/12/2024	CITY RESPONSE

## PROFESSIONAL SIGNATURE

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.

Licensed Professional Engineer: Michael St. Martin - PE 24440

## QUALITY CONTROL

Loucks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

## SHEET INDEX

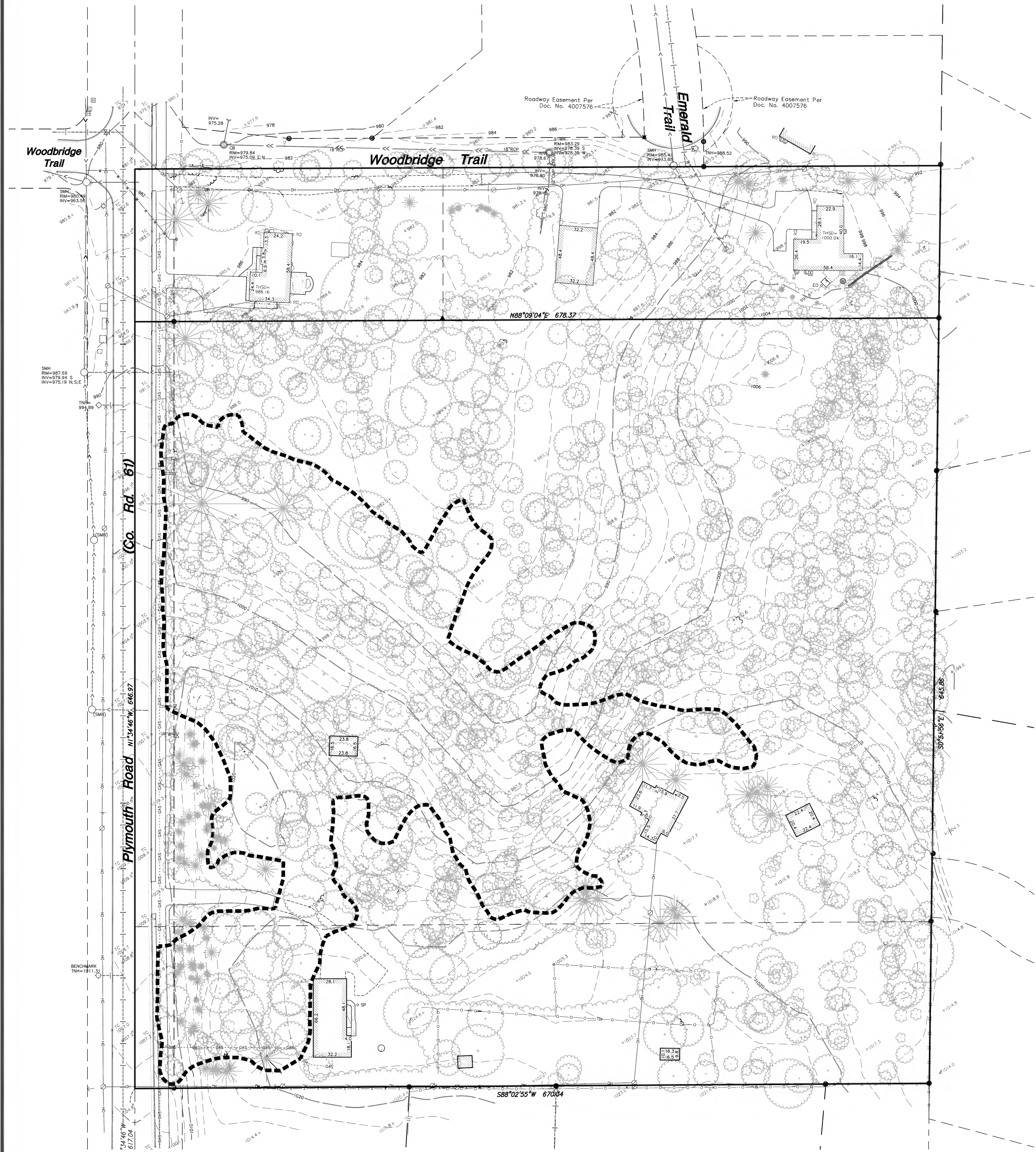
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COVER SHEET

C0-1



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**DESCRIPTION OF PROPERTY SURVEYED**

The South 136.50 feet of the North 2/3 of the South 3/4 of the West 1/2 of the Northwest Quarter of the Southwest Quarter of Section 11, Township 117, Range 22, according to the United States Government Survey thereof, Hennepin County, Minnesota.

AND

The North 2/3 of the South 3/4 of the West 1/2 of the Northwest Quarter of the Southwest Quarter of Section 11, Township 117, Range 22, except the South 136.50 feet thereof, according to the United States Government Survey thereof, Hennepin County, Minnesota.

Abstract Property.

**EXISTING CONDITIONS GENERAL NOTES**

(The following items refer to Table A optional survey responsibilities and specifications)

- Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by existing monuments or witnesses to the corner are shown hereon.
- The address, as disclosed in documents provided to the surveyor, obtained by the surveyor, or observed while conducting the fieldwork is 2511 and 2615 Plymouth Road, Minnetonka, Minnesota 55305.
- This property is contained in Zone X (areas determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map No. 27053C0329F, Community Panel No. 270173 0329 F, effective date of November 4, 2016.
- The Gross land area is 523,269 +/- square feet or 10.01 +/- acres. The Net land area is 439,003 +/- square feet or 8.28 +/- acres.
- (a) Zoning information was not provided by the client.
- (a) Exterior dimensions of all buildings are shown at ground level.
- Substantial features observed in the process of conducting fieldwork, are shown hereon.
- There are no striped parking stalls on this site.
- (a) We have shown underground utilities on and/or serving the surveyed property per Gopher State One-Call Ticket Nos. 212354708 and 212354762. The following utilities and municipalities were notified:
 

COMCAST	(800)778-9140
CITY OF MINNETONKA	(952)988-8400
CENTURYLINK	(800)778-9140
HENNEPIN COUNTY PUBLIC WORKS	(406)541-9371
CENTER POINT ENERGY	(608)223-2014
XCEL ENERGY	(800)848-7558
- Utility operators do not consistently respond to locate requests through the Gopher State One Call service for surveying purposes such as this. Those utility operators that do respond, often will not locate utilities from their main line to the customer's structure or facility. They consider those utilities "private" installations that are outside their jurisdiction. These "private" utilities on the surveyed property or adjoining properties, may not be located since most operators will not mark such "private" utilities. A private utility locator may be contacted to investigate these utilities further, if requested by the client.
- Maps provided by those notified above, either along with a field location or in lieu of such a location, are very often inaccurate or inconclusive. EXTREME CAUTION MUST BE EXERCISED BEFORE AN EXCAVATION TAKES PLACE ON OR NEAR THIS SITE. BEFORE DIGGING, YOU ARE REQUIRED BY LAW TO NOTIFY GOPHER STATE ONE CALL AT LEAST 48 HOURS IN ADVANCE AT 811 or (651) 454-0002.
- Please refer to the Tree Inventory Sheets for tree tags and list of trees.

**LEGEND**

- FOUND 1/2 INCH OPEN IRON MONUMENT UNLESS SHOWN OTHERWISE
- SET 1/2 INCH X 14 INCH IRON MONUMENT, MARKED "LS 48988"
- ⊠ CATCH BASIN
- ⊙ STORM MANHOLE
- SANITARY MANHOLE
- ⊙ HYDRANT
- ⊕ GATE VALVE
- ⊖ ELECTRIC TRANSFORMER
- ⊖ ELECTRIC METER
- ⊖ GAS METER
- ⊖ GUY WIRE
- ⊖ HAND HOLE
- ⊖ LIGHT POLE
- ⊖ POWER POLE
- ⊖ ROOF DRAIN
- ⊖ TELEPHONE PEDESTAL
- ⊖ SIGN
- ② PARKING STALL COUNT
- ⊖ DISABLED PARKING STALL
- ① SCHEDULE B ITEM
- ⊖ THE DISTANCES ARE SHOWN ON SIDE WITH FEATURE MEASURED TO PROPERTY LINE
- ⊖ WPA LIMITS (AS DEFINED BY CITY STAFF, DATED 12/11/23)
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- SANITARY SEWER
- WATERMAIN
- SANITARY SEWER SERVICE
- WATER SERVICE
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBER OPTIC
- UNDERGROUND GAS
- UNDERGROUND TELEPHONE
- OVERHEAD UTILITY
- CHAIN LINK FENCE
- CONCRETE CURB
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**PROFESSIONAL SIGNATURE**

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.

Licensed Professional Engineer: J. St. Martin - PE 24440

**QUALITY CONTROL**

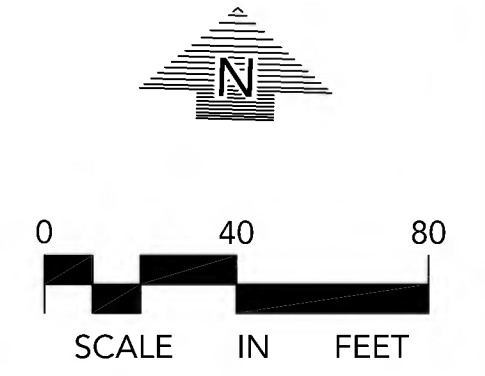
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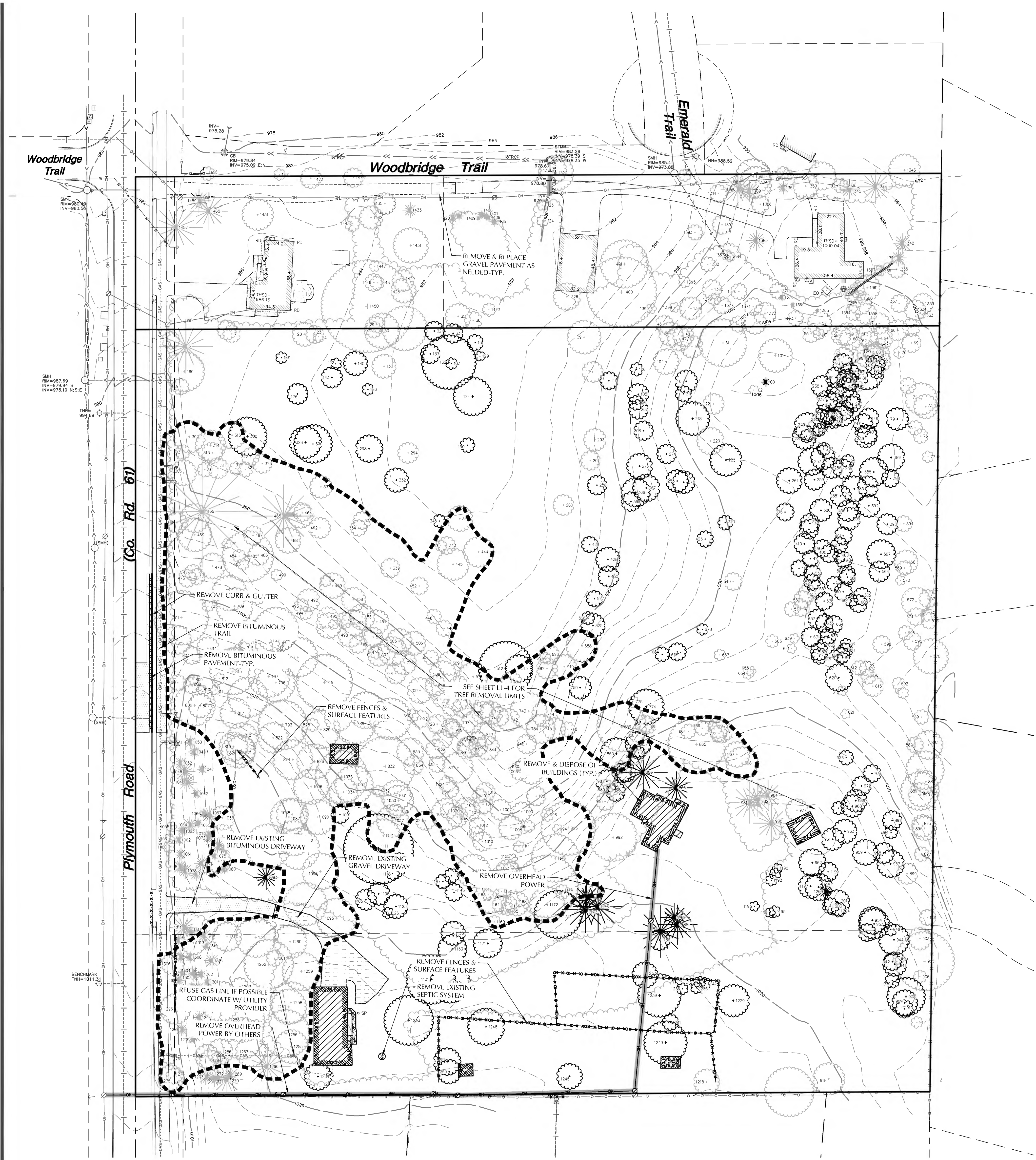
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**EXISTING CONDITIONS**  
**C1-1**



**SITE DEMOLITION SPECIFICATIONS**

- CONTRACTOR SHALL REMOVE AND/OR RELOCATE EXISTING PRIVATE UTILITIES AS NECESSARY. CONTRACTOR TO COORDINATE ACTIVITIES WITH UTILITY COMPANIES.
- CONTRACTOR SHALL PROTECT SURFACE AND SUBSURFACE FEATURES NOT NOTED FOR REMOVAL.
- CONTRACTOR TO CLEAR AND GRUB EXISTING VEGETATION WITHIN CONSTRUCTION LIMITS. STRIP TOP SOIL AND STOCKPILE ON-SITE. REFER TO GRADING PLAN AND SWPPP FOR SEDIMENT AND EROSION CONTROL REQUIREMENTS.
- CLEAR AND GRUB AND REMOVE ALL TREES, VEGETATION AND SITE DEBRIS PRIOR TO GRADING. ALL REMOVED MATERIAL SHALL BE HAULLED FROM THE SITE DAILY. EROSION CONTROL MEASURES SHALL BE IMMEDIATELY ESTABLISHED UPON REMOVAL. SEE THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
- CONTRACTOR SHALL REMOVE ALL SITE SURFACE FEATURES WITHIN REMOVAL LIMITS UNLESS OTHERWISE NOTED.
- BITUMINOUS PAVEMENT REMOVALS ARE TO BE MADE TO A VERTICAL SAW CUT OR TO A NEAT MILLED EDGE.
- CONCRETE PAVEMENT, SIDEWALK, CURB & GUTTER AND OTHER POURED CONCRETE ITEMS ARE TO BE REMOVED TO AN EXISTING EXPANSION OR CONTRACTION JOINT. SAW CUT AS NECESSARY FOR A NEAT EDGE OF REMOVAL.
- ALL REMOVAL ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFIED OTHERWISE AND SHALL BE DISPOSED OF OFF-SITE IN A MANNER MEETING ALL APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF ALL SIGNS, MAILBOXES, ETC.
- ANY DAMAGE TO ITEMS NOT NOTED TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE REPAIRED OR REPLACED TO ORIGINAL CONDITION WITH NO ADDITIONAL COMPENSATION.

**DEMOLITION LEGEND:**

- REMOVE EXISTING BUILDING
- REMOVE EXISTING BITUMINOUS PAVING
- REMOVE EXISTING CONCRETE PAVING, SIDEWALKS, ETC.
- REMOVE EXISTING GRAVEL PAVEMENT
- REMOVE EXISTING TREES/WOODS
- REMOVE EXISTING CURB & GUTTER, RETAINING WALLS, FENCE, ETC.
- REMOVE EXISTING UTILITIES
- REMOVE EXISTING MANHOLES, POWER POLES, LIGHT POLES, BOLLARDS, PARKING METERS, SIGNS, ETC.
- REMOVE EXISTING TREES (SEE TREE PRESERVATION PLAN FOR TREE REMOVALS)

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**PROFESSIONAL SIGNATURE**

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.

**PRELIMINARY**

License No. 021509.08, Martin - PE 24440

**QUALITY CONTROL**

Loucks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

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CALL BEFORE YOU DIG!

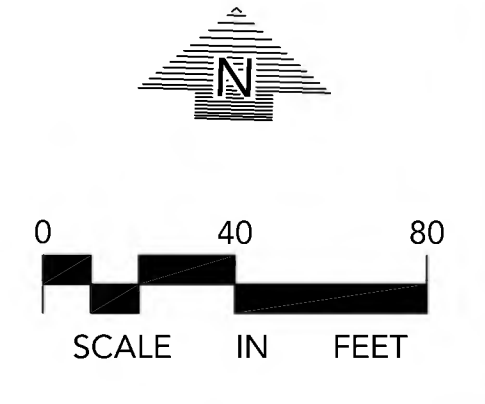
**Gopher State One Call**

TWIN CITY AREA: 651-454-0002  
TOLL FREE: 1-800-252-1166

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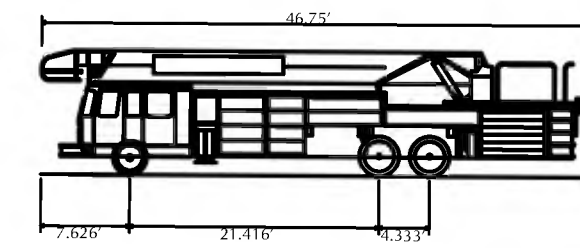
**DEMOLITION PLAN**

**C1-2**

Plotted: 04/12/2024 8:32 AM W:\2023\1509\CADD\DATA\CIVIL\Job Sheet Files\C1-2\DEMOLITION PLAN



TURNING MOVEMENT LEGEND



Minnetonka Ladder  
 Overall Length 46.7500  
 Overall Width 9.0000  
 Overall Body Height 11.6560  
 Min Body Ground Clearance 1.0870  
 Max Track Width 9.7770  
 Lock-to-lock time 4.000  
 Curb to Curb Turning Radius 36.5838

MINNETONKA LADDER

LEGEND

EXISTING	PROPOSED

ONE ACRE OAKS

2511 and 2615 Plymouth Road,  
 Minnetonka, MN 55305

LAKE WEST DEVELOPMENT, LLC

14525 Highway 7, Suite 265  
 Minnetonka, MN 55345

LOUCKS

PLANNING  
 CIVIL ENGINEERING  
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7200 Hemlock Lane, Suite 300  
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SUBMITTAL REVISIONS

DATE	REVISION
08/25/2023	PRELIMINARY PLAT
10/27/2023	CITY RESUBMITTAL COMPLIANT
11/29/2023	PLANNING GRADING
01/18/2024	CITY RESUBMITTAL
03/15/2024	CITY RESUBMITTAL
04/12/2024	CITY RESPONSE

PROFESSIONAL SIGNATURE

I hereby certify that this plan, specification, 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.

Licensed Professional Engineer: J. St. Martin - PE 24440

QUALITY CONTROL

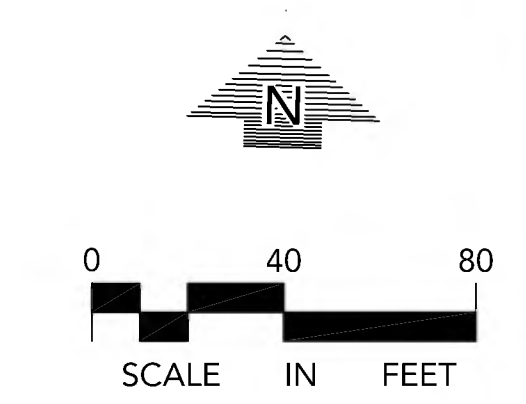
Loucks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

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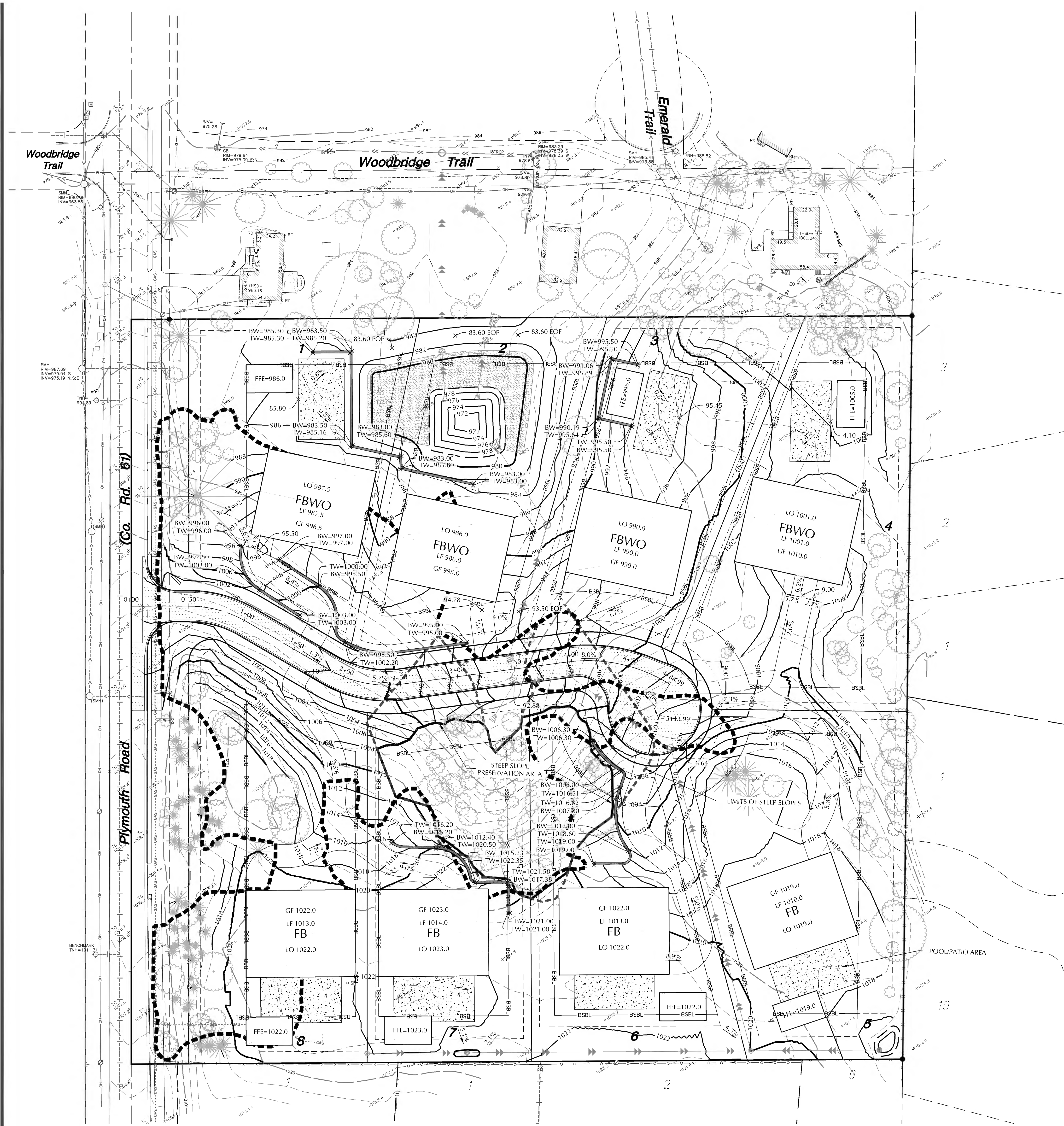
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TURNING MOVEMENT PLAN  
**C2-2**





**GRADING & DRAINAGE NOTES**

SEE STORMWATER POLLUTION PREVENTION PLAN FOR SOIL STABILIZATION INFORMATION.

EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE ESTABLISHED AROUND THE ENTIRE SITE PERIMETER AND IN ACCORDANCE WITH NPDES PERMIT REQUIREMENTS, BEST MANAGEMENT PRACTICES, CITY REQUIREMENTS AND THE DETAILS SHOWN ON THE CIVIL DETAILS SHEETS OF THESE PLANS.

ALL CURB SPOT ELEVATIONS ARE TO GUTTER LINE UNLESS NOTED OTHERWISE.

**GRADING, DRAINAGE & EROSION CONTROL SPECIFICATIONS**

- SPOT ELEVATIONS REPRESENT FINISHED SURFACE GRADES, GUTTER/FLOW LINE, FACE OF BUILDING, OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN CUTTERS SHALL BE SUMPED 0.10 FEET. RIM ELEVATIONS SHOWN ON PLANS DO NOT REFLECT SUMPED ELEVATIONS.
- ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE MINIMUM OF 4 INCHES OF PREMIUM TOP SOIL AND SEED/MULCH OR SOD. THESE AREAS SHALL BE WATERED/MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION IS ESTABLISHED. VERIFY WITH LANDSCAPE PLAN.
- FOR SITE RETAINING WALLS "TW" EQUALS SURFACE GRADE AT TOP FACE OF WALL (NOT TOP OF WALL). "CW" EQUALS SURFACE GRADE AT BOTTOM FACE OF WALL (NOT BOTTOM OF BURIED WALL COURSES).
- REFER TO THE REPORT OF GEOTECHNICAL EXPLORATION AND REVIEW (REPORT NO.23-0617), DATED 10/25/23 AS PREPARED BY HAUGO GEOTECHNICAL SERVICES, LLC FOR AN EXISTING SUBSURFACE SITE CONDITION ANALYSIS AND CONSTRUCTION RECOMMENDATIONS.
- STREETS MUST BE CLEANED AND SWEEPED WHENEVER TRACKING OF SEDIMENTS OCCURS AND BEFORE SITES ARE LEFT IDLE FOR WEEKENDS AND HOLIDAYS, OR AS DIRECTED BY CITY. A REGULAR SWEEPING SCHEDULE MUST BE ESTABLISHED.
- DUST MUST BE ADEQUATELY CONTROLLED.
- SEE SWPPP FOR ADDITIONAL EROSION CONTROL NOTES AND REQUIREMENTS.
- SEE UTILITY PLAN FOR WATER, STORM AND SANITARY SEWER INFORMATION.
- SEE SITE PLAN FOR CURB AND BITUMINOUS TAPER LOCATIONS.
- A STREET SWEEPER MUST BE AVAILABLE WITHIN 3 HOURS UPON NOTICE FROM THE CITY THAT THE STREETS NEED TO BE SWEEPED.
- THE CONTRACTOR ALONG WITH THE OWNER SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM GOVERNING AUTHORITIES, INCLUDING ANY CITY PERMITS AND THE NPDES PERMIT FROM THE MPCA.
- INSTALL EROSION CONTROL AND TREE PROTECTION MEASURES BEFORE BEGINNING SITE GRADING ACTIVITIES. SOME EROSION CONTROLS SUCH AS BALE CHECKS AND TEMPORARY SILT PONDS MAY BE INSTALLED AS GRADING OCCURS IN SPECIFIC AREAS. MAINTAIN EROSION CONTROLS THROUGHOUT THE GRADING PROCESS AND REMOVE WHEN TURF HAS BEEN ESTABLISHED.
- THE CONTRACTOR SHALL ADHERE TO ALL REQUIREMENTS OF THE MPCA NPDES PERMIT. THE AREA TO BE DISTURBED SHALL BE MINIMIZED AND TURF SHALL BE ESTABLISHED WITHIN THE TIME REQUIRED.
- GRADES SHOWN ARE FINISHED GRADES.
- FINAL GRADING TOLERANCES ARE +/-0.1 FEET TO FINISH GRADES.
- UNDER PAVEMENTS COMPACT THE UPPER 3 FEET OF SUBGRADE TO 100% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT AND 95% STANDARD PROCTOR DENSITY BLOW THE UPPER 3 FEET OF SUBGRADE. OUTSIDE PAVEMENT AREAS COMPACT EMBANKMENTS TO 95% STANDARD PROCTOR DENSITY.
- WORKING HOURS ARE 7:00 AM - 10:00 PM, MONDAY - SATURDAY. A 48 HOUR NOTICED IS REQUIRED FOR SATURDAY WORK.
- THE CONTRACTOR MUST HAVE A CITY LICENSE.
- A CITY RIGHT-OF-WAY PERMIT IS REQUIRED PRIOR TO WORKING WITHIN CITY ROW.
- TURF REINFORCEMENT MAT (TRM) SHALL BE LANDLOK 450, AS MANUFACTURED BY PROPEX GEOSOLUTIONS, OR APPROVED EQUAL. THE CONTRACTOR SHALL FOLLOW ALL OF THE MANUFACTURERS INSTRUCTIONS FOR INSTALLATION.
- STRUCTURAL RETAINING WALL, FENCING AND HANDRAIL DESIGN BY OTHERS. REFER TO ARCHITECTURAL PLANS.

**LEGEND**

EXISTING	PROPOSED

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 Minnetonka, MN 55305

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 14525 Highway 7, Suite 265  
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**PROFESSIONAL SIGNATURE**  
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 License No. 021509.08  
 Date: 03/14/2024

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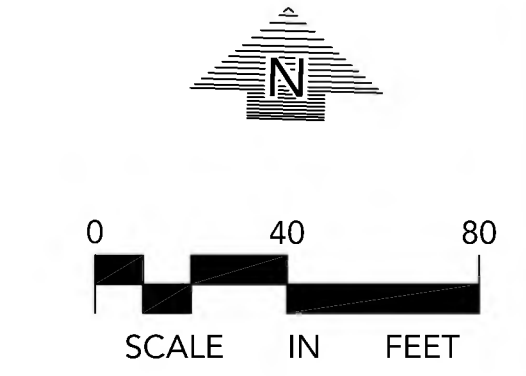
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**GRADING PLAN**  
**C3-1**

Printed: 04/16/2024 8:17 AM W:\2024\1509\CADD\DATA\CIVIL\Job Sheet Files\C3-1 GRADING PLAN



**SWPPP NOTES**

- THE NATURE OF THIS PROJECT WILL CONSIST OF CONSTRUCTING A SINGLE FAMILY DEVELOPMENT & THE ASSOCIATED STREET, UTILITIES, & STORM WATER TREATMENT AREAS.
- THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES ARE AS FOLLOWS:
  - INSTALL VEHICLE TRACKING BMP
  - INSTALL SILT FENCE AROUND SITE
  - INSTALL PROTECTIVE FENCE AROUND INFILTRATION AREAS
  - CLEAR AND CRUB SITE
  - STRIP AND STOCKPILE TOPSOIL
  - REMOVE PAVEMENTS AND UTILITIES
  - CONSTRUCT STORMWATER MANAGEMENT BASINS
  - INSTALL SILT FENCE AROUND BASINS
  - ROUGH GRADE SITE
  - IMPORT CLEAN FILL FOR REPLACEMENT AND BALANCE
  - INSTALL UTILITIES
  - INSTALL BUILDING FOUNDATIONS
  - INSTALL CURB AND CUTTER
  - INSTALL PAVEMENTS AND WALKS
  - FINAL GRADE SITE
  - REMOVE ACCUMULATED SEDIMENT FROM BASINS
  - SEED AND MULCH
  - WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE SILT FENCE AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.
- SITE DATA:
 

AREA OF DISTURBANCE:	7.34 AC
PRE-CONSTRUCTION IMPERVIOUS AREA:	0.18 AC
POST-CONSTRUCTION IMPERVIOUS AREA:	2.956 AC

GENERAL SOIL TYPE: SEE GEOTECHNICAL REPORT
- THE LOCATION OF AREAS NOT TO BE DISTURBED MUST BE IDENTIFIED WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC. BEFORE CONSTRUCTION BEGINS.
- ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN (7) OR MORE DAYS SHALL BE STABILIZED BY SEEDING OR SODDING (ONLY AVAILABLE PRIOR TO SEPTEMBER 15) OR BY MULCHING OR COVERING OR OTHER EQUIVALENT CONTROL MEASURE.
- ON SLOPES 3:1 OR GREATER MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES. SLOPE LENGTHS CAN NOT BE GREATER THAN 75 FEET. DENOTES SLOPES GREATER THAN 3:1. ALL 3:1 SLOPES TO BE STABILIZED WITH EROSION CONTROL BLANKET
- ALL STORM DRAINS AND INLETS MUST BE PROTECTED UNTIL ALL SOURCES OF POTENTIAL DISCHARGE ARE STABILIZED.
- TEMPORARY SOIL STOCKPILES MUST HAVE EFFECTIVE SEDIMENT CONTROL AND CAN NOT BE PLACED IN SURFACE WATERS OR STORM WATER CONVEYANCE SYSTEMS. TEMPORARY STOCKPILES WITHOUT SIGNIFICANT AMOUNT OF SILT, CLAY, OR ORGANIC COMPOUNDS ARE EXEMPT EX: CLEAN AGGREGATE STOCK PILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES.
- SEDIMENT LADEN WATER MUST BE DISCHARGED TO A SEDIMENTATION BASIN WHENEVER POSSIBLE. IF NOT POSSIBLE, IT MUST BE TREATED WITH THE APPROPRIATE BMP'S.
- SOLID WASTE MUST BE DISPOSED OF PROPERLY AND MUST COMPLY WITH MPCA DISPOSAL REQUIREMENTS.
- EXTERNAL WASHING OF CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE, RUNOFF MUST BE PROPERLY CONTAINED.
- NO ENGINE DEGRADING IS ALLOWED ON SITE.
- THE OWNER WHO SIGNS THE NPDES PERMIT APPLICATION IS A PERMITEE AND IS RESPONSIBLE FOR COMPLIANCE WITH ALL TERMS AND CONDITIONS OF THE PERMIT. THE OPERATOR (CONTRACTOR) WHO SIGNS THE NPDES PERMIT APPLICATION IS A PERMITEE FOR ALL APPLICABLE CONSTRUCTION ACTIVITY REQUIREMENTS FOUND IN SECTIONS 3, 4, 6-24 OF THE NPDES PERMIT AND IS JOINTLY RESPONSIBLE WITH THE OWNER FOR COMPLIANCE WITH THOSE PORTIONS OF THE PERMIT.
- TERMINATION OF COVERAGE (PERMITEE) WISHING TO TERMINATE COVERAGE MUST SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA. ALL PERMITEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER ONE OR MORE OF THE FOLLOWING CONDITIONS HAVE BEEN MET:
  - FINAL STABILIZATION, PER NPDES PERMIT SECTION 13 HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITEE IS RESPONSIBLE.
  - TRANSFER OF OWNERSHIP AS DESCRIBED IN THE PERMIT.

- FROZEN GROUND: AS SOON AS RUNOFF OCCURS OR PRIOR TO RESUMING CONSTRUCTION.
- INSPECTION AND MAINTENANCE RECORDS MUST BE RETAINED FOR 3 YEARS AFTER FILING OF THE NOTICE OF TERMINATION AND MUST INCLUDE: DATE AND TIME OF ACTION, NAME OF PERSON(S) CONDUCTING WORK, FINDING OF INSPECTIONS AND RECOMMENDATIONS FOR CORRECTIVE ACTION, DATE AND AMOUNT OF RAINFALL EVENTS GREATER THAN 0.5 INCHES IN A 24 HOUR PERIOD.
- MINIMUM MAINTENANCE
  - SILT FENCE TO BE REPAIRED, REPLACED, SUPPLEMENTED WHEN NONFUNCTIONAL, OR 1/3 FULL WITHIN 24 HOURS
  - SEDIMENT BASINS DRAINED AND SEDIMENT REMOVED WHEN REACHES 1/2 STORAGE VOLUME. REMOVAL MUST BE COMPLETE WITHIN 72 HOURS OF DISCOVERY.
  - SEDIMENT REMOVED FROM SURFACE WATERS WITHIN SEVEN DAYS
  - CONSTRUCTION SITE EXITS INSPECTED, TRACKED SEDIMENT REMOVED WITH 24 HOURS.
  - PROVIDE COPIES OF EROSION INSPECTION RESULTS TO CITY ENGINEER FOR ALL EVENTS GREATER THAN 1/2" IN 24 HOURS
- THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION ACTIVITY BY THE PERMITEE(S) WHO HAVE OPERATIONAL CONTROL OF THE SITE.
- OWNER MUST KEEP RECORDS OF ALL PERMITS REQUIRED FOR THE PROJECT, THE SWPPP, ALL INSPECTIONS AND MAINTENANCE, PERMANENT OPERATION AND MAINTENANCE AGREEMENTS, AND REQUIRED CALCULATIONS FOR TEMPORARY AND PERMANENT STORM WATER MANAGEMENT SYSTEMS. THESE RECORDS MUST BE RETAINED FOR THREE YEARS AFTER FILING NPDES NOTICE OF TERMINATION.
- SWPPP MUST BE AMENDED WHEN:
  - THERE IS A CHANGE IN DESIGN, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS THAT HAS A SIGNIFICANT EFFECT ON DISCHARGE
  - INSPECTIONS INDICATE THAT THE SWPPP IS NOT EFFECTIVE AND DISCHARGE IS EXCEEDING WATER QUALITY STANDARDS.
  - THE BMP'S IN THE SWPPP ARE NOT CONTROLLING POLLUTANTS IN DISCHARGES OR IS NOT CONSISTENT WITH THE TERMS AND CONDITIONS OF THE PERMIT.
- CONCRETE WASHOUT AREA
  - CONCRETE WASH-OUT IS NOT ALLOWED ON-SITE.
- IN THE EVENT OF ENCOUNTERING A WELL OR SPRING DURING CONSTRUCTION CONTRACTOR TO CEASE CONSTRUCTION ACTIVITY AND NOTIFY ENGINEER.
- PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER.
- FINAL STABILIZATION
 

FINAL STABILIZATION REQUIRES THAT ALL SOIL DISTURBED ACTIVITIES HAVE BEEN COMPLETED AND THAT DISTURBED AREAS ARE STABILIZED BY A UNIFORM PERENNIAL VEGETATIVE COVER WITH 70% OF THE EXPECTED FINAL DENSITY, AND THAT ALL PERMANENT PAVEMENTS HAVE BEEN INSTALLED. ALL TEMPORARY BMP'S SHALL BE REMOVED, DITCHES STABILIZED, AND SEDIMENT SHALL BE REMOVED FROM PERMANENT CONVEYANCES AND SEDIMENTATION BASINS IN ORDER TO RETURN THE POND TO DESIGN CAPACITY.
- TEMPORARY SEDIMENTATION BASINS
  - THE TEMPORARY SEDIMENTATION BASINS SHALL BE CONSTRUCTED AND MADE OPERATIONAL PRIOR TO DISTURBANCE OF 10 OR MORE ACRES DRAINING TO A COMMON LOCATION.
  - TEMPORARY SEDIMENTATION BASINS ARE REQUIRED PRIOR TO RUNOFF LEAVING THE CONSTRUCTION SITE OR ENTERING SURFACE WATERS WHEN TO OR MORE ACRES OF DISTURBED SOILS DRAIN TO A COMMON LOCATION. THE BASIN MUST PROVIDE 3,600 CUBIC FEET OF STORAGE BELOW THE OUTLET PER ACRE DRAINED. IF HYDRAULIC CALCULATIONS ARE AVAILABLE, THE TEMPORARY SEDIMENTATION BASIN MUST PROVIDE A STORAGE VOLUME EQUIVALENT TO THE 2-YEAR, 24-HOUR STORM, BUT IN NO CASE LESS THAN 1800 CUBIC FEET PER ACRE DRAINED. THE TEMPORARY SEDIMENTATION BASIN MUST BE CONSTRUCTED AND MADE OPERATIONAL PRIOR TO THE START OF SOIL DISTURBANCE UP GRADIENT OF THE POND. THE TEMPORARY SEDIMENTATION BASIN SHALL BE DESIGNED TO PREVENT SHORT CIRCUITING. THE OUTFALL SHALL BE DESIGNED TO REMOVE FLOATABLE DEBRIS, ALLOW FOR COMPLETE DRAINDOWN OF THE POND FOR MAINTENANCE ACTIVITIES, AND HAVE ENERGY DISSIPATION. THE EMERGENCY SPILLWAY SHALL BE STABILIZED.
  - TEMPORARY SEDIMENTATION BASINS SHALL BE SITUATED OUTSIDE OF SURFACE WATERS AND ANY REQUIRED BUFFER ZONE, AND MUST BE DESIGNED TO AVOID DRAINING WETLANDS, UNLESS THE IMPACT IS IN COMPLIANCE WITH THE REQUIREMENTS OF THIS PERMIT.
  - EXCESSIVE SEDIMENT-LADEN WATER THAT IS NOT PROPERLY FILTERED WILL NOT BE PERMITTED TO DISCHARGE FROM SITE.
- DEWATERING AND BASIN DRAINING
  - TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING: SHALL BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. THE TEMPORARY OR PERMANENT BASIN MAY DISCHARGE TO SURFACE WATERS IF THE BASIN WATER HAS BEEN VISUALLY CHECKED TO ENSURE ADEQUATE

- TREATMENT HAS BEEN OBTAINED IN THE BASIN AND THAT THE NUISANCE CONDITIONS WILL NOT RESULT FROM THE DISCHARGE. DISCHARGE POINTS SHALL BE ADEQUATELY PROTECTED FROM EROSION AND PROPER VELOCITY DISSIPATION PROVIDED.
- ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN THE RECEIVING CHANNELS OR ON DOWN SLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACTS TO THE WETLAND.
  - IF FILTERS WITH BACKWASH WATERS ARE USED, THE BACKWASH WATER SHALL BE HALLED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATED INTO SITE IN A MANNER THAT DOES NOT CAUSE EROSION. BACKWASH WATER MAY BE DISCHARGED TO SANITARY SEWER IF PERMISSION IS GRANTED BY THE SANITARY SEWER AUTHORITY.
- POLLUTION PREVENTION
    - BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS MUST BE UNDER COVER TO PREVENT DISCHARGE OR PROTECTED BY AN EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
    - PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE UNDER COVER.
    - HAZARDOUS MATERIALS AND TOXIC WASTE MUST BE PROTECTED TO PREVENT VANDALISM.
    - SOLID WASTE MUST BE STORED, COLLECTED AND DISPOSED OF IN COMPLIANCE WITH MINN. R. CH 7035.
    - PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH 7041.
    - DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED SHALL BE PREVENTED USING DRIP PANS OR ABSORBENTS. SUPPLIES SHALL BE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD MUST BE AVAILABLE FOR RECOVERED SPILLED MATERIALS.
  - DESIGN CALCULATIONS
 

TEMPORARY & PERMANENT STORMWATER TREATMENT ARE DESIGNED TO MEET MPCA GENERAL & SPECIAL WATER REQUIREMENTS. CALCULATIONS ARE PART OF THE HYDROLOGY REPORT, WHICH IS TO BE CONSIDERED PART OF THE SWPP DOCUMENTS. SEE HYDROLOGY REPORT FOR ADDITIONAL INFORMATION.
  - GENERAL STORMWATER DISCHARGE REQUIREMENTS
 

ALL REQUIREMENTS LISTED IN SECTIONS 5.7, 14, 16-19, 21, 24 OF THE PERMIT FOR DESIGN OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM AND DISCHARGE HAVE BEEN INCLUDED IN THE PREPARATION OF THIS SWPP. THESE INCLUDE BUT ARE NOT LIMITED TO:

    - THE EXPECTED AMOUNT, FREQUENCY, INTENSITY, AND DURATION PRECIPITATION.
    - THE NATURE OF STORMWATER RUNOFF AND RUN-ON AT THE SITE.
    - PEAK FLOW RATES AND STORMWATER VOLUMES TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNEL AND STREAM BANK EROSION.
    - THE RANGE OF SOIL PARTICLE SIZES EXPECTED TO BE PRESENT ON THE SITE.
  - CONSTRUCTION OF FILTRATION BASINS
    - NO HEAVY TRAFFIC ON FILTRATION AREAS. CONSTRUCTION TO BE DONE WITH MINIMAL COMPACTION TO FILTRATION AREAS. IF COMPACTION IS ENCOUNTERED, BASIN SOILS FOR THE FIRST & RELOAD.
    - INFILTRATION SYSTEMS MUST NOT BE EXCAVATED TO FINAL GRADE UNTIL THE CONTRIBUTING DRAINAGE AREA HAD BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS ARE PROVIDED (SECTION 16.4).
    - WHEN AN INFILTRATION SYSTEM IS EXCAVATED TO FINAL GRADE (OR WITHIN THREE (3) FEET OF FINAL GRADE), THE PERMITEE(S) MUST EMPLOY RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS (E.G., DIVERSION BERMS) TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA. THE AREA MUST BE STAKED OFF AND MARKED SO THAT HEAVY CONSTRUCTION VEHICLES OR EQUIPMENT WILL NOT COMPACT THE SOIL IN THE PROPOSED INFILTRATION AREA.
    - TO PREVENT CLOGGING OF THE INFILTRATION OR FILTRATION SYSTEM, THE PERMITEE(S) MUST USE A PRETREATMENT DEVICE SUCH AS A VEGETATED FILTER STRIP, SMALL SEDIMENTATION BASIN, OR WATER QUALITY INLET (E.G., GRIT CHAMBER) TO SETTLE PARTICULATES BEFORE THE STORMWATER DISCHARGES INTO THE INFILTRATION OR FILTRATION SYSTEM.
  - POST CONSTRUCTION
 

THE WATER QUALITY VOLUME THAT MUST BE RETAINED ON SITE BY THE PROJECT'S PERMANENT STORMWATER MANAGEMENT DESCRIBED IN SECTION 15 SHALL BE ONE (1) INCH OF RUNOFF FROM THE NEW IMPERVIOUS SURFACES, CREATED BY THE PROJECT. SEE SECTION 15. FOR MORE INFORMATION ON INFILTRATION DESIGN, PROHIBITIONS AND APPROPRIATE SITE CONDITIONS.
  - RESPONSIBILITIES
    - THE OWNER MUST IDENTIFY A CONTRACTOR WHO WILL OVERSEE THE SWPPP IMPLEMENTATION AND THE PERSON RESPONSIBLE FOR INSPECTION AND MAINTENANCE.
    - THE OWNER MUST IDENTIFY THE A PERSON WHO WILL BE RESPONSIBLE FOR LONG TERM OPERATIONS AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT SYSTEM.
  - TRAINING REQUIREMENTS

- THE PERMITEE(S) SHALL ENSURE THE FOLLOWING INDIVIDUALS IDENTIFIED IN THIS PART HAVE BEEN TRAINED IN ACCORDANCE WITH THIS PERMIT'S TRAINING REQUIREMENTS.
- WHO MUST BE TRAINED:
    - INDIVIDUAL(S) PREPARING THE SWPPP FOR THE PROJECT
    - INDIVIDUAL(S) OVERSEEING IMPLEMENTATION OF, REVISING, AND/OR AMENDING THE SWPPP AND INDIVIDUAL(S) PERFORMING INSPECTIONS FOR THE PROJECT. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY THE MPCA.
    - INDIVIDUAL(S) PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMP'S. AT LEAST ONE INDIVIDUAL ON A PROJECT MUST BE TRAINED IN THESE JOB DUTIES.
  - TRAINING CONTENT:
 

THE CONTENT AND EXTENT OF TRAINING MUST BE COMMENSURATE WITH THE INDIVIDUAL'S JOB DUTIES AND RESPONSIBILITIES WITH REGARD TO ACTIVITIES COVERED UNDER THIS PERMIT FOR THE PROJECT, AT LEAST ONE INDIVIDUAL PRESENT ON THE PERMITTED PROJECT SITE (OR AVAILABLE TO THE PROJECT SITE IN 72 HOURS) MUST BE TRAINED IN THE JOB DUTIES DESCRIBED IN SECTION 21.2B AND SECTION 21.2C.
  - THE PERMITEE(S) SHALL ENSURE THAT THE INDIVIDUALS ARE TRAINED BY LOCAL, STATE, FEDERAL AGENCIES, PROFESSIONAL OR OTHER ENTITIES WITH EXPERTISE IN EROSION PREVENTION, SEDIMENT CONTROL, PERMANENT STORMWATER MANAGEMENT AND THE MINNESOTA NPDES'S CONSTRUCTION STORMWATER PERMIT. AN UPDATE REFRISHER-TRAINING MUST BE ATTENDED EVERY THREE (3) YEARS STARTING THREE (3) YEARS FROM THE ISSUANCE DATE OF THIS PERMIT.
  - LIST OF CONTACTS

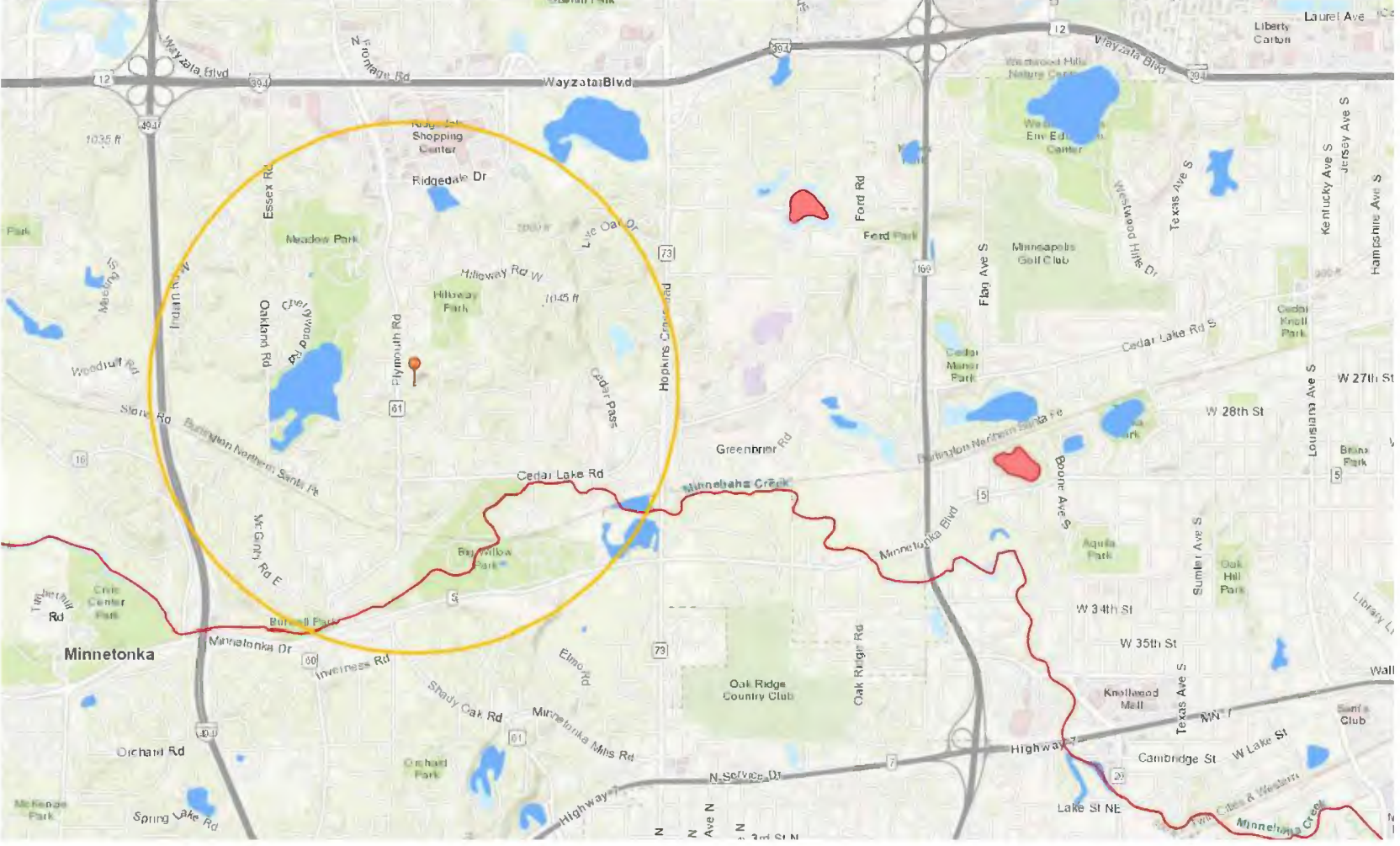
TITLE	NAME	COMPANY	PHONE NUMBER
OWNER	-	LAKE WEST DEVELOPMENT, LLC	-
PROJECT MANAGER	MICHAEL ST. MARTIN	LOUCKS	763-496-6713
ENGINEER SWPPP	ZACHARY WEBBER	LOUCKS	763-496-6753
CONTRACTOR	PENDING		
SITE MANGER			

\* MPCA 24HR. HAZARDOUS SPILL HOTLINE: 651-649-5457 OF 80420798

**CERTIFICATION**

UNIVERSITY OF MINNESOTA  
**Zachary H. Webber**  
 Design of Construction SWPPP (May 31 2024)

**IMPAIRED WATERS MAP**



**ONE ACRE OAKS**

2511 and 2615 Plymouth Road,  
 Minnetonka, MN 55305

LAKE WEST DEVELOPMENT, LLC

14525 Highway 7, Suite 265  
 Minnetonka, MN 55345

**LOUCKS**

PLANNING  
 CIVIL ENGINEERING  
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 LANDSCAPE ARCHITECTURE  
 ENVIRONMENTAL

7200 Hemlock Lane, Suite 300  
 Maple Grove, MN 55369  
 763.424.5505  
 www.louckscinc.com

**CADD QUALIFICATION**

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**SUBMITTAL REVISIONS**

08/25/2023	PRELIMINARY PLAT
10/27/2023	CITY RESUBMITTAL
11/29/2023	COMPLIANT
01/18/2024	CITY GRADING
03/15/2024	CITY RESUBMITTAL
04/12/2024	CITY RESPONSE

**PROFESSIONAL SIGNATURE**

I hereby certify that this plan, specification and 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.

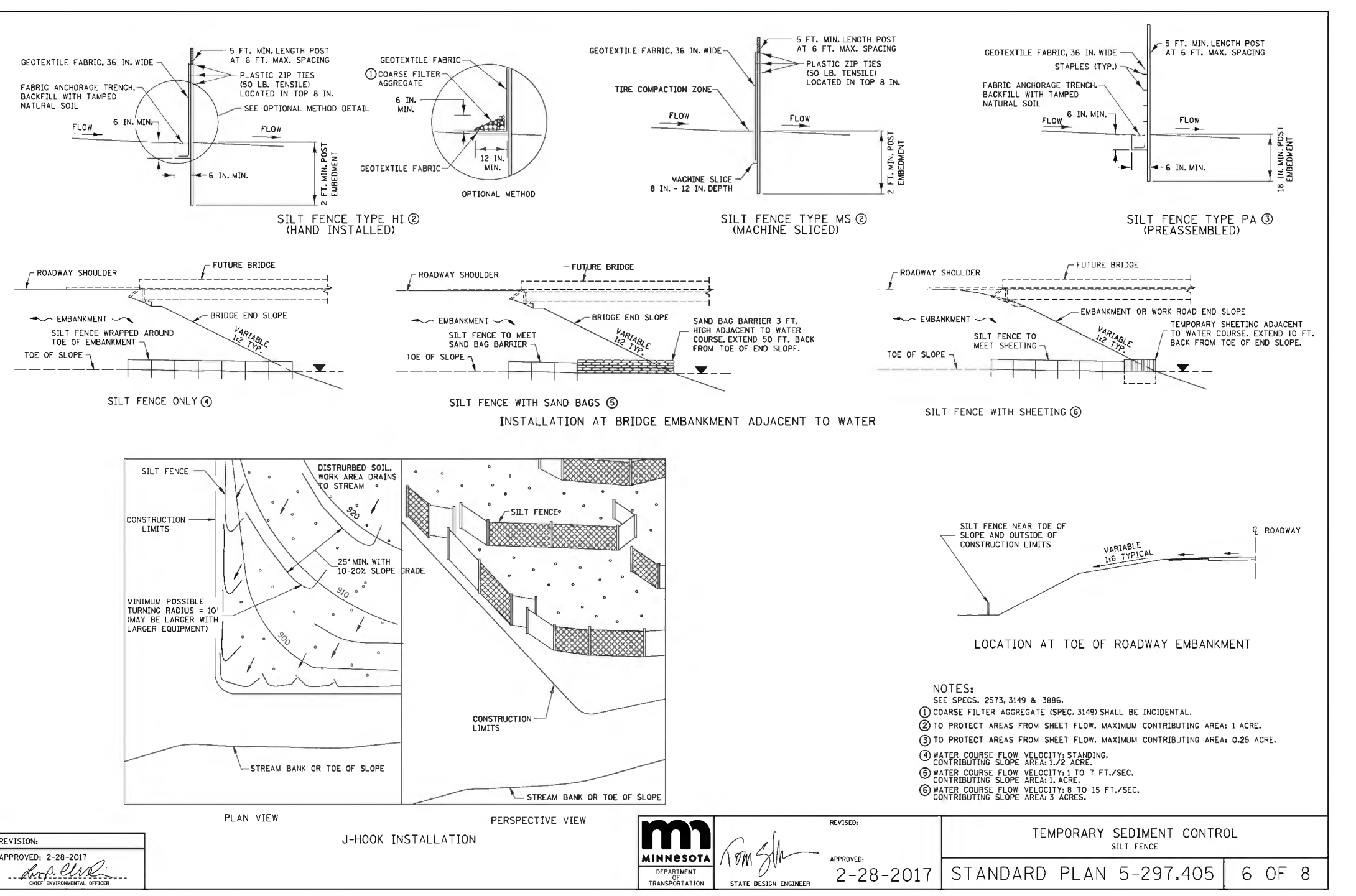
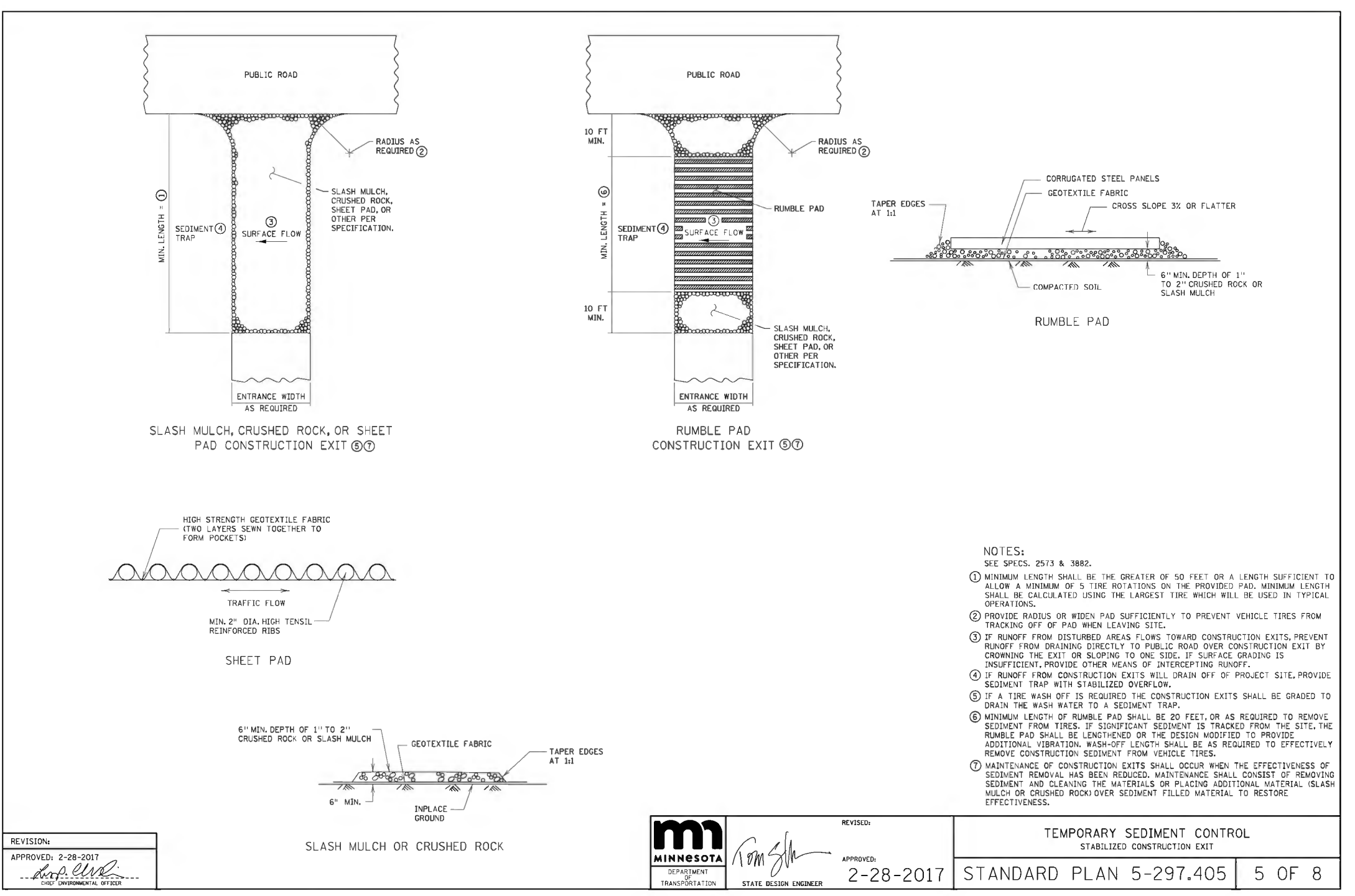
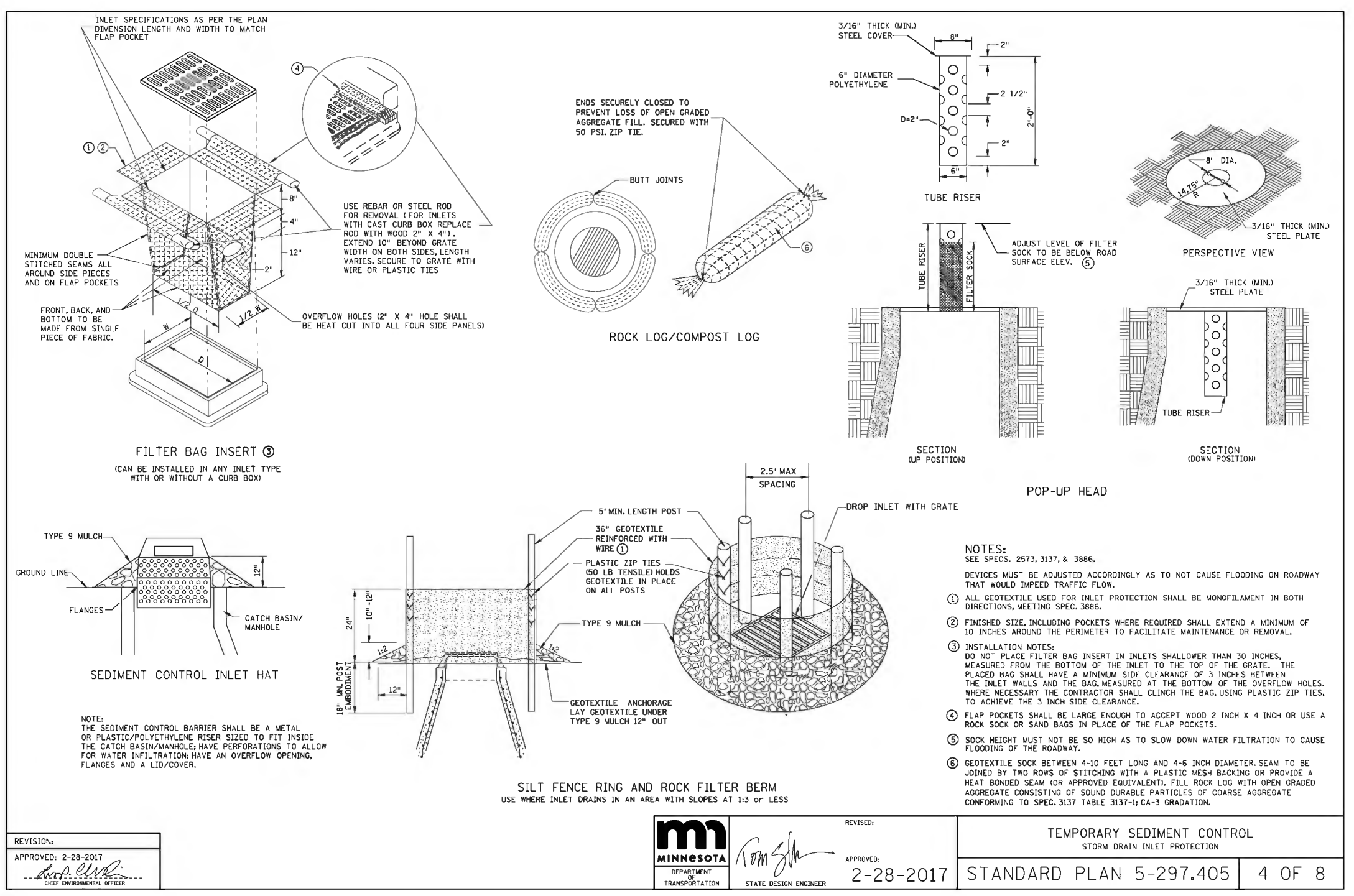
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 Michael St. Martin PE

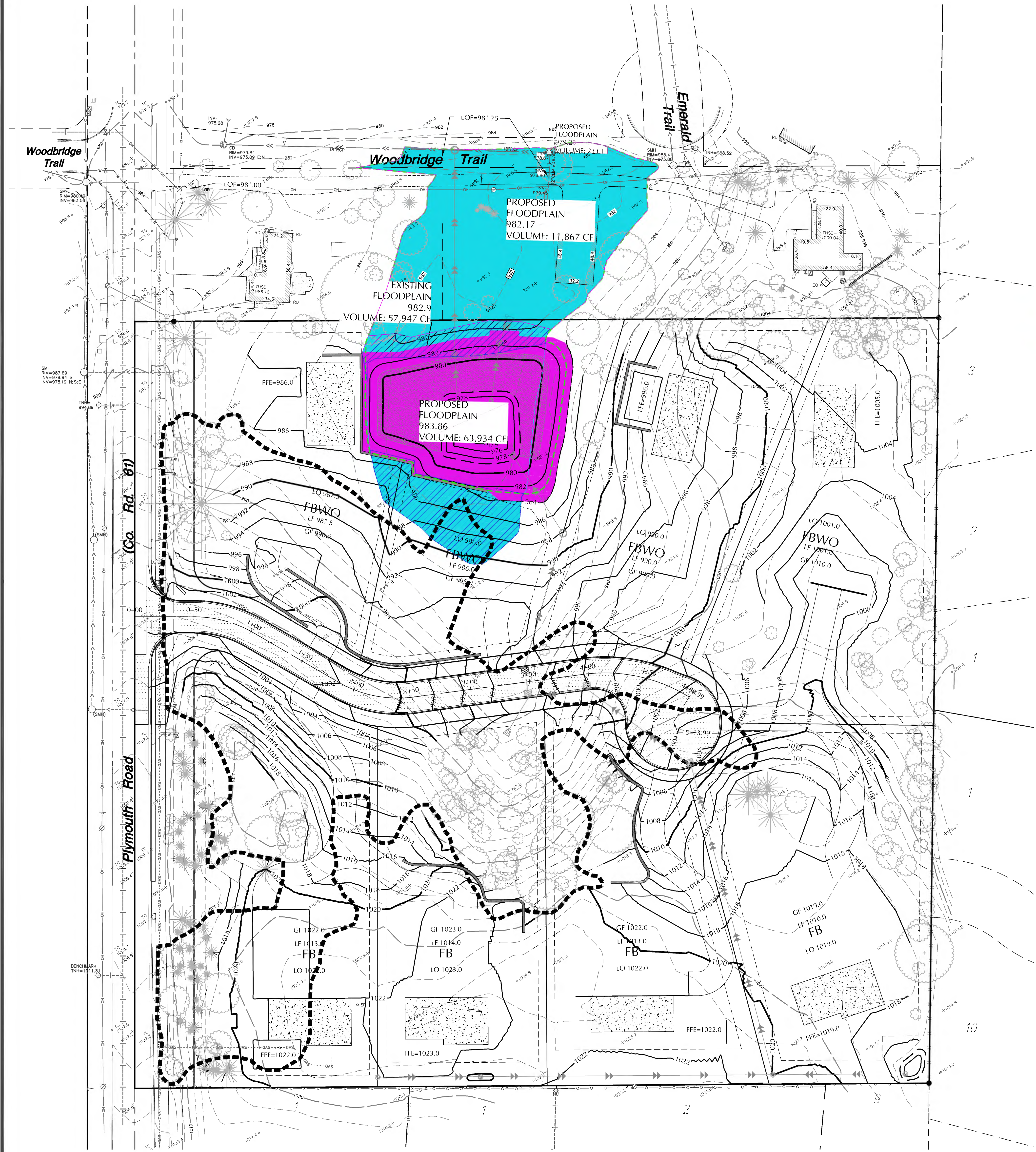
**QUALITY CONTROL**

Locks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

**SHEET INDEX**

C0-1	COVER SHEET
C1-1	EXISTING CONDITIONS
C1-2	DEMOLITION PLAN
C2-1	SITE PLAN
C2-2	TURNING MOVEMENT PLAN
C3-1	GRADING PLAN
C3-2 TO C3-3	SWPPP PLAN & NOTES
C3-4	FLOODPLAIN PLAN
C4-1	SANITARY & WATERMAIN PLAN
C4-2	STORM SEWER PLAN
C4-3	PRELIMINARY PLAT
C8-1 TO C8-3	CIVIL DETAILS
L1-1 TO L1-3	TREE INVENTORY





**FLOODPLAIN VOLUMES**

FLOODPLAIN ELEVATIONS ARE BASED ON 100-YEAR 96-HOUR EVENT OF 8.51"

EXISTING FLOOD ELEVATION: 982.90  
 EXISTING FLOODPLAIN VOLUME OF 57,947 CF  
 EXISTING DRAINAGE AREA: 8.1 AC

PROPOSED FLOOD MAIN AREA  
 PROPOSED FLOOD ELEVATION: 983.86  
 PROPOSED FLOODPLAIN VOLUME: 63,934 CF (NWL TO HWL)  
 PROPOSED DRAINAGE AREA: 7.216 AC

PROPOSED FLOOD NORTH AREA  
 PROPOSED FLOOD ELEVATION: 982.17  
 PROPOSED FLOODPLAIN VOLUME: 11,867 CF  
 PROPOSED DRAINAGE AREA: 1.803 AC

PROPOSED FLOODPLAIN TO 982.9  
 PROPOSED FLOODPLAIN VOLUME: 47,935 CF + ADDITIONAL 39,477 CF FOR MAIN BASIN TO 983.87

FLOODPLAIN FILLED: 32,325 CF  
 FLOODPLAIN REPLACEMENT EXCAVATED: 34,030 CF (TO 983.86) LIVE STORAGE ONLY  
 FLOODPLAIN REPLACEMENT EXCAVATED: 18,031 CF (TO 982.90) LIVE STORAGE ONLY  
 TOTAL EXCAVATION BELOW FLOODPLAIN: 30,627 CF

- EXISTING FLOODPLAIN = 982.90
- PROPOSED FLOODPLAIN = 981.63/983.87
- PROPOSED FLOODPLAIN FILL
- NEW FLOODPLAIN 982.9

EXISTING	PROPOSED

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SUBMITTAL REVISIONS	
08/25/2023	PRELIMINARY PLAT
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04/12/2024	CITY RESPONSE

**PROFESSIONAL SIGNATURE**

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.

\_\_\_\_\_  
 D. J. Martin, PE 24440

QUALITY CONTROL	
Loucks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

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**CALL BEFORE YOU DIG!**

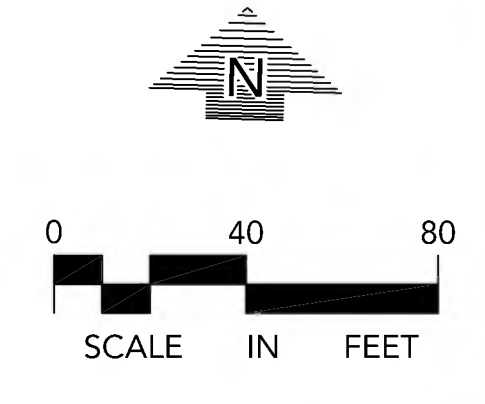
**Gopher State One Call**

TWIN CITY AREA: 651-454-0002  
 TOLL FREE: 1-800-252-1166

**WARNING:**

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**FLOODPLAIN FILL/EXCAVATE PLAN**

**C3-4**

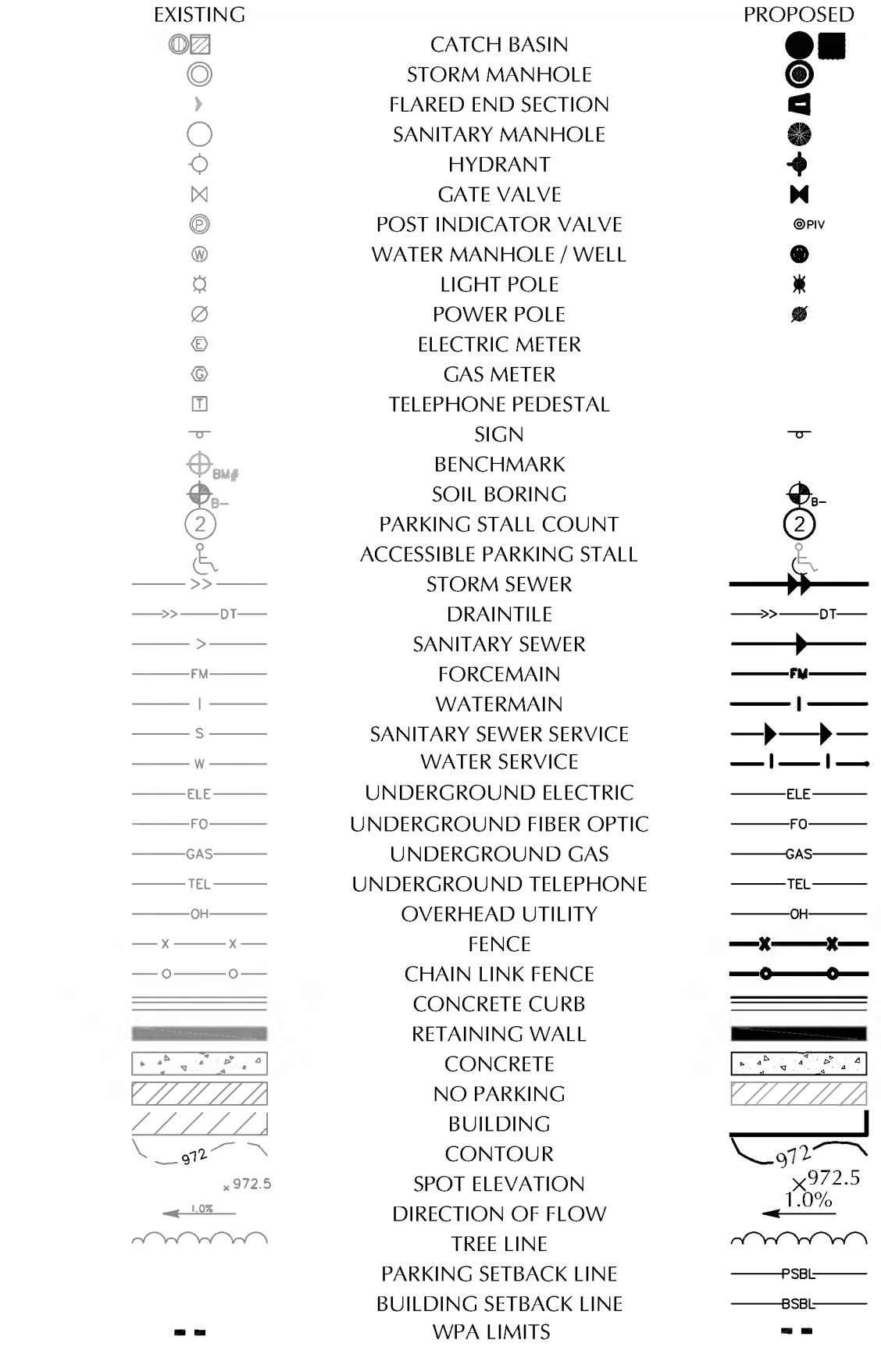
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**SANITARY & WATERMAIN NOTES**

- ALL SANITARY SEWER, STORM SEWER AND WATERMAIN UTILITIES SHALL BE FURNISHED AND INSTALLED PER THE REQUIREMENTS OF THE SPECIFICATIONS, THE MINNESOTA PLUMBING CODE, THE LOCAL GOVERNING UNIT, AND THE STANDARD UTILITIES SPECIFICATION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), 2013 EDITION.
- ALL UTILITY PIPE BEDDING SHALL BE COMPACTED SAND OR FINE GRANULAR MATERIAL. ALL COMPACTION SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CEAM SPECIFICATION AND THE GEOTECHNICAL REPORT.
- ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE PERFORMED PER THE REQUIREMENTS OF THE STATE AND LOCAL JURISDICTIONS. THE CITY DEPARTMENT OF ENGINEERING AND BUILDING INSPECTIONS DEPARTMENT AND THE CONSTRUCTION ENGINEER MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO ANY WORK WITHIN THE PUBLIC RIGHT OF WAY, OR WORK IMPACTING PUBLIC UTILITIES.
- ALL STORM SEWER, SANITARY SEWER AND WATER SERVICES SHALL TERMINATE 5' FROM THE BUILDING FACE UNLESS OTHERWISE NOTED.
- A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES UNLESS OTHERWISE NOTED.
- ALL NEW WATERMAIN AND SERVICES MUST HAVE A MINIMUM OF 7.5 FEET OF COVER. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. THE CONTRACTOR SHALL FIELD ADJUST WATERMAIN TO AVOID CONFLICTS WITH SANITARY SEWER, STORM SEWER, AND SERVICES AS REQUIRED. INSULATION OF WATER AND SANITARY SEWER LINES SHALL BE PROVIDED WHERE 7.5 FEET MINIMUM DEPTH CAN NOT BE ATTAINED.
- ALL FIRE HYDRANTS SHALL BE LOCATED 5 FEET BEHIND BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- PROPOSED PIPE MATERIALS:  
WATERMAIN: DIP CL52 PVC, 8" DIAMETER  
SANITARY SEWER: PVC, 8" DIAMETER
- ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL TRAFFIC CONTROL SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE ALL 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 THE EXPRESSED AUTHORITY OF THE CITY.
- THE CITY SHALL OPERATE ALL GATE VALVES.
- CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY CORE DRILLING THE MANHOLE AT THE PROPOSED INVERT ELEVATIONS AND INSTALLING A RUBBER BOOT, GROUT IN THE BOOT AND AN INVERT FOR THE NEW SEWER LINE.
- PIPE LENGTHS SHOWN ON THE PLAN INCLUDE THE APRON SECTION.
- WATERMAIN PIPE SHALL BE DIP CLASS 52, INSTALLED WITH 7.5 FEET OF COVER TO TOP PIPE. FITTINGS SHALL BE COMPACT TYPE. PIPE AND FITTINGS SHALL HAVE A CEMENT MORTAR LINING. CONDUCTIVITY SHALL BE PROVIDED BY WELDED STRAPS ACROSS EACH JOINT.
- TRENCH COMPACTION SHALL BE 95% STANDARD PROCTOR DENSITY IN THE AREA FROM THE PIPE ZONE TO WITHIN 3 FEET OF FINISHED GRADE AND 100% IN FINAL 3 FEET OF THE BACKFILL TO FINISH GRADE.

**LEGEND**



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**PROFESSIONAL SIGNATURE**  
I hereby certify that this plan, specification, 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.  
Date: 03/15/2024  
Signature: [Signature]  
Title: Professional Engineer  
License No.: 24440

**QUALITY CONTROL**

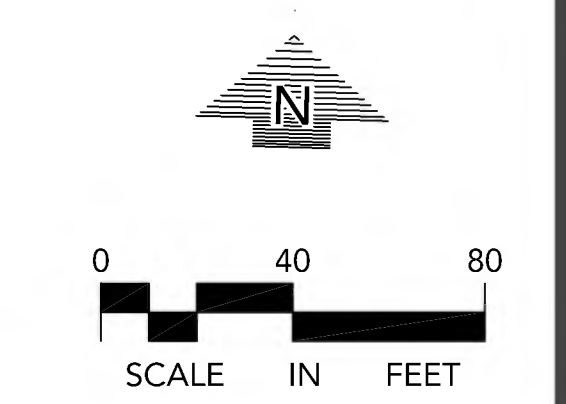
Loucks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
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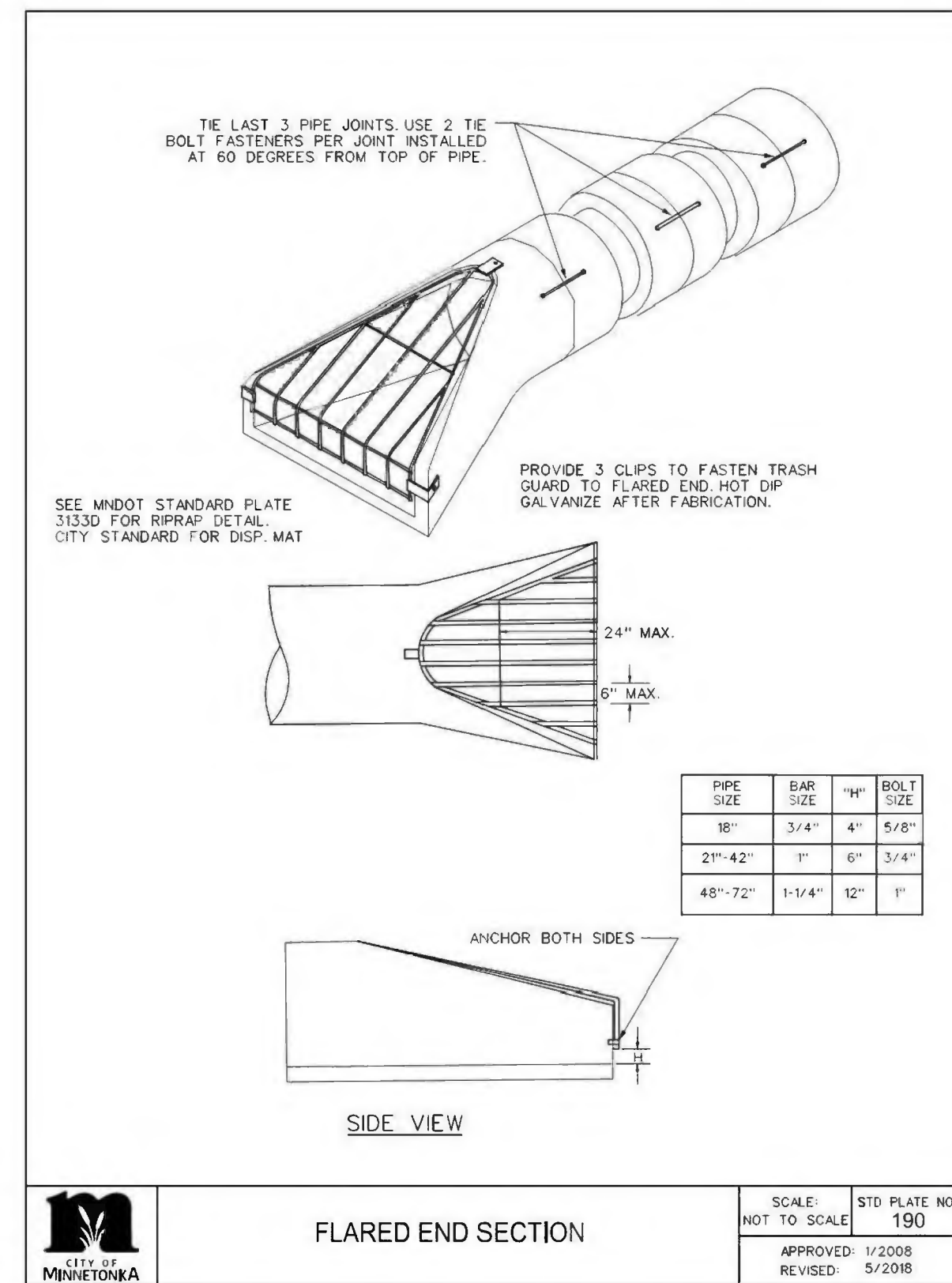
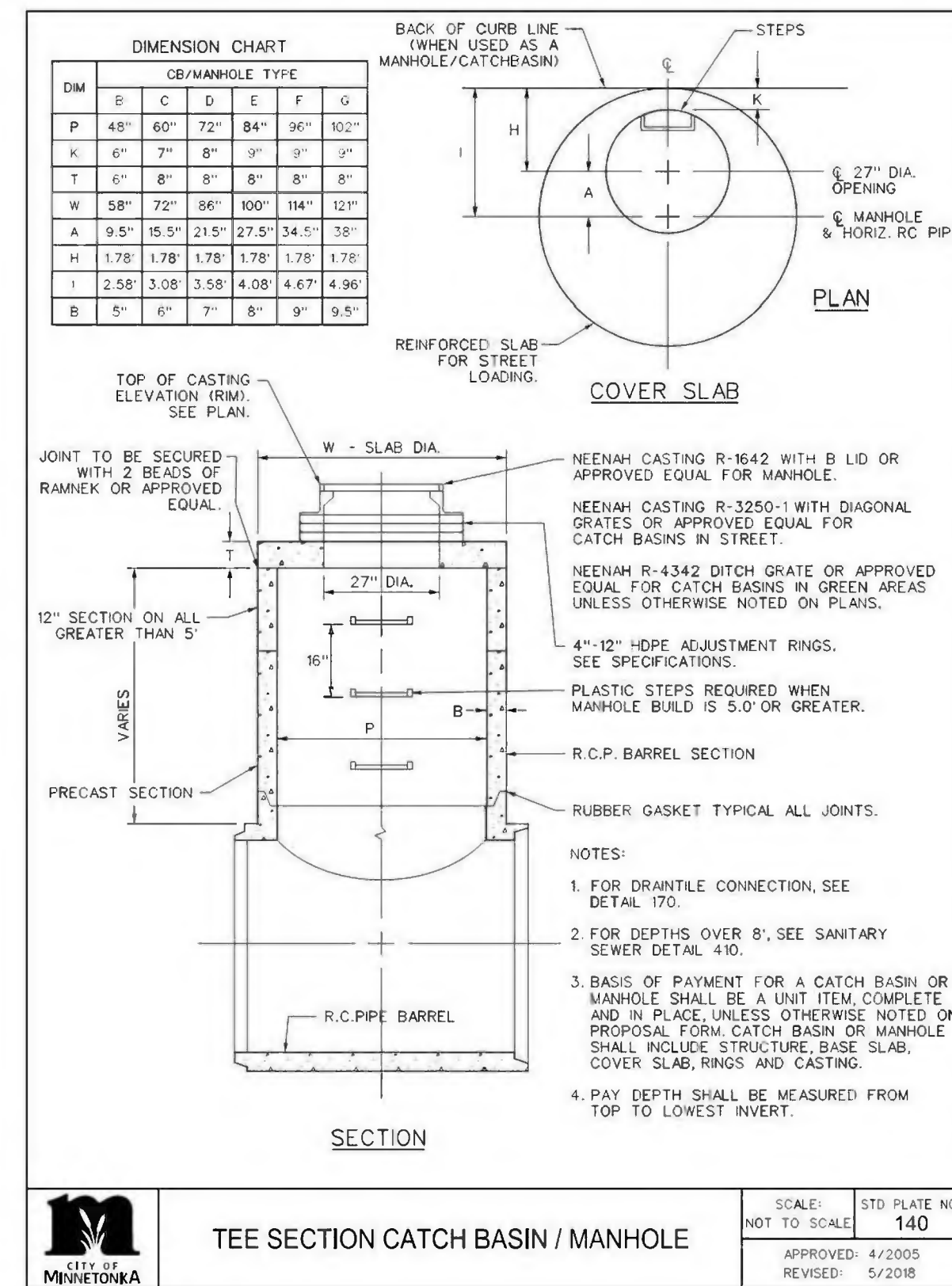
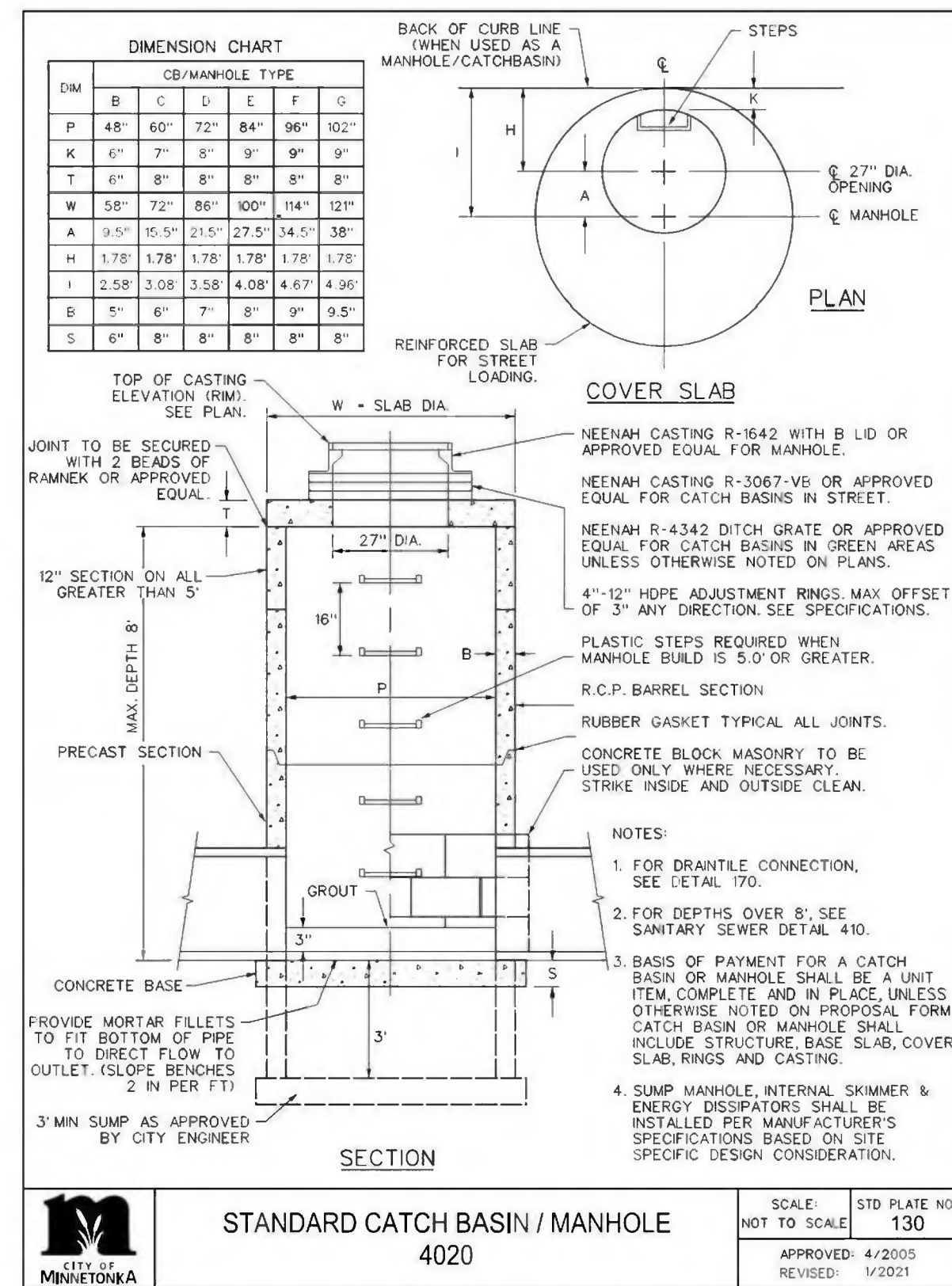
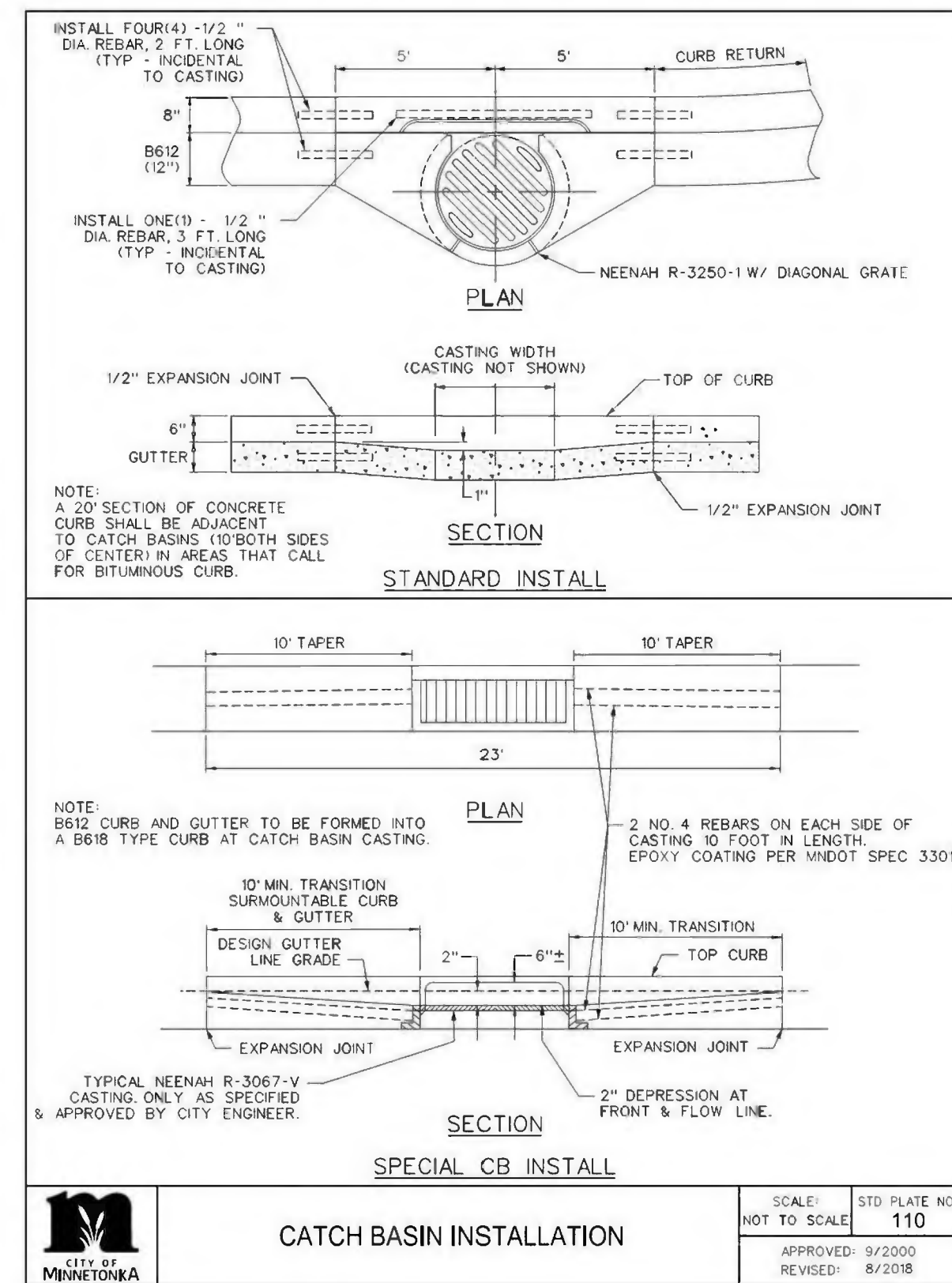
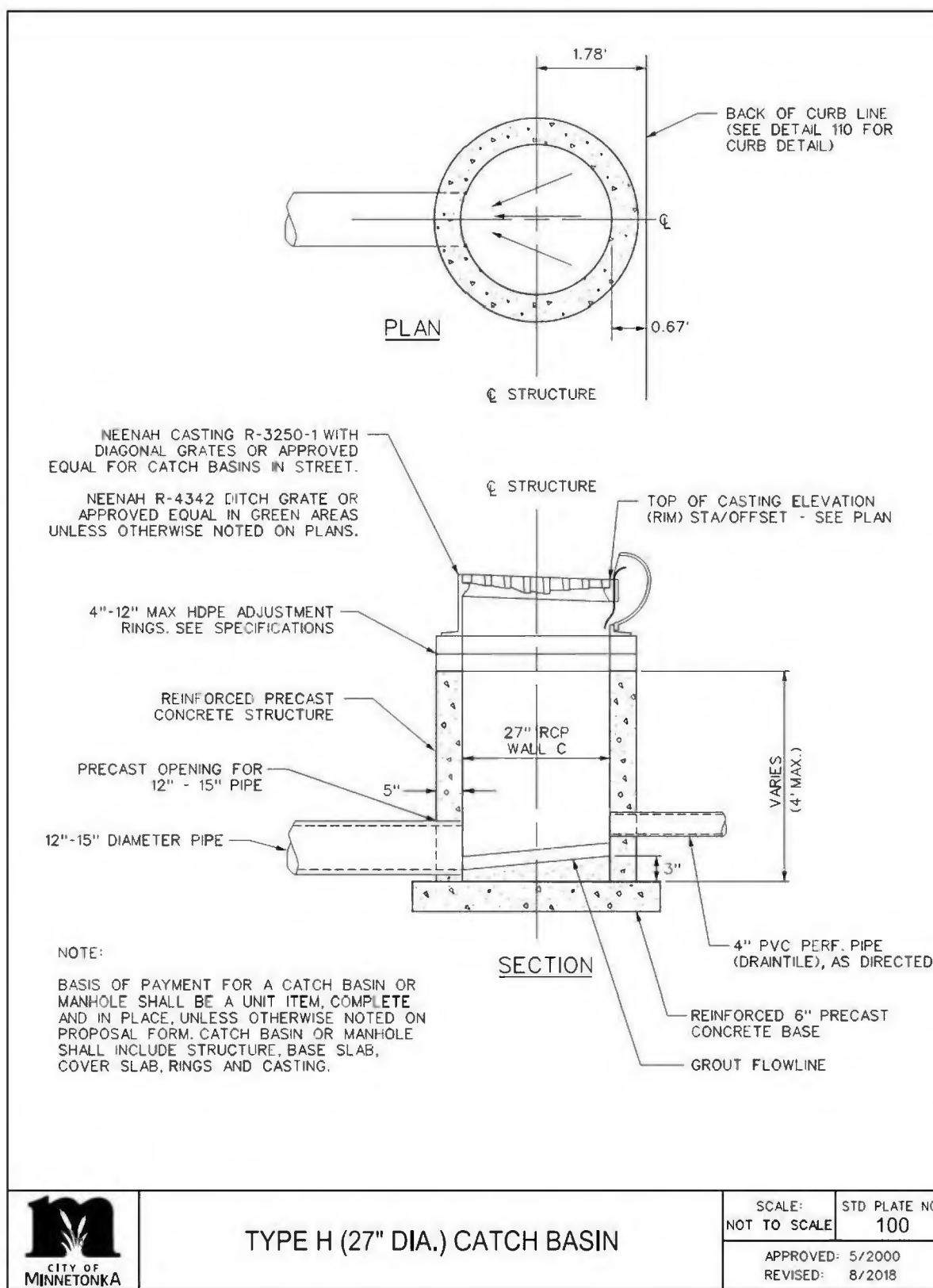
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**SANITARY AND WATERMAIN PLAN**  
**C4-1**



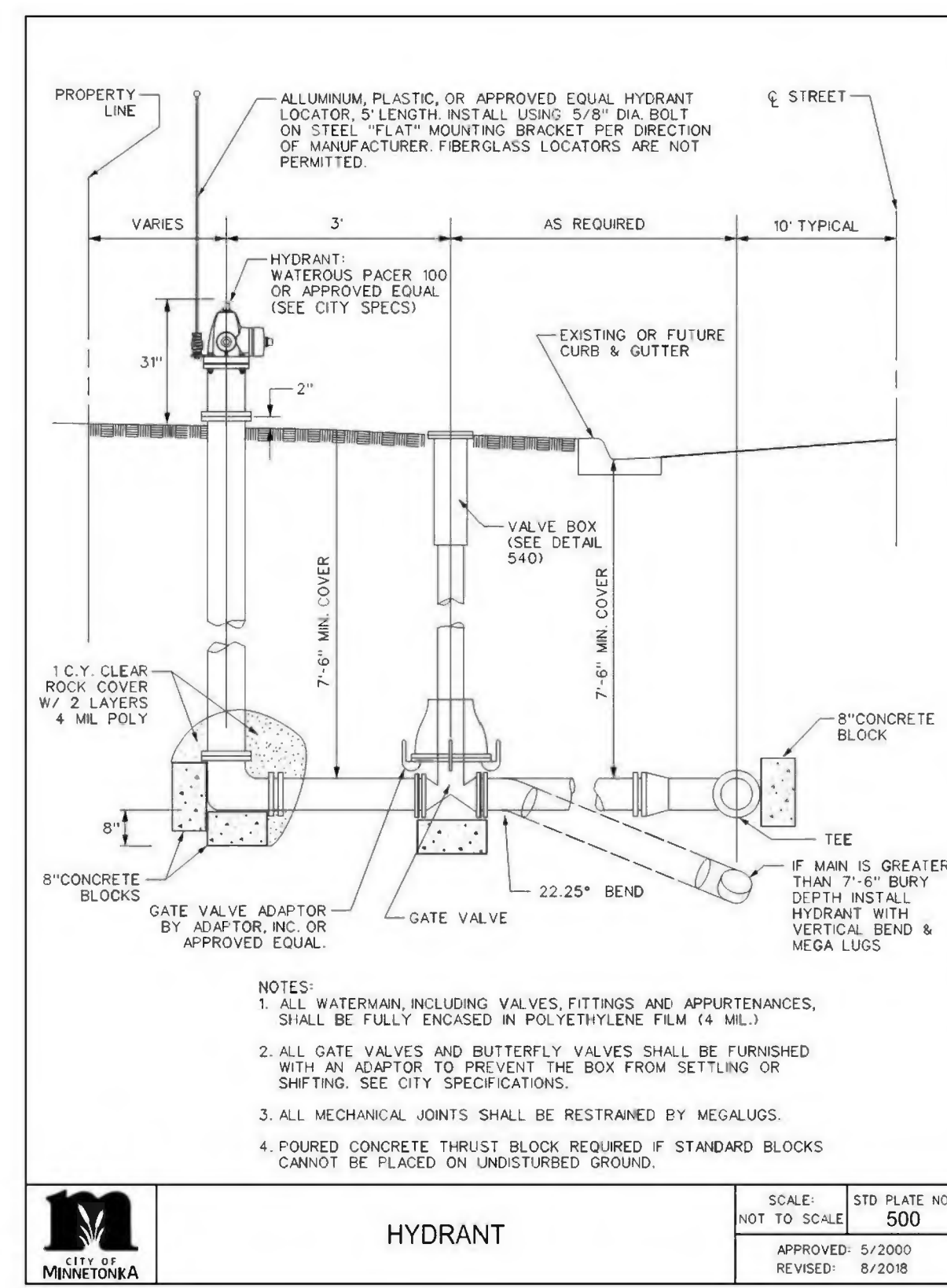
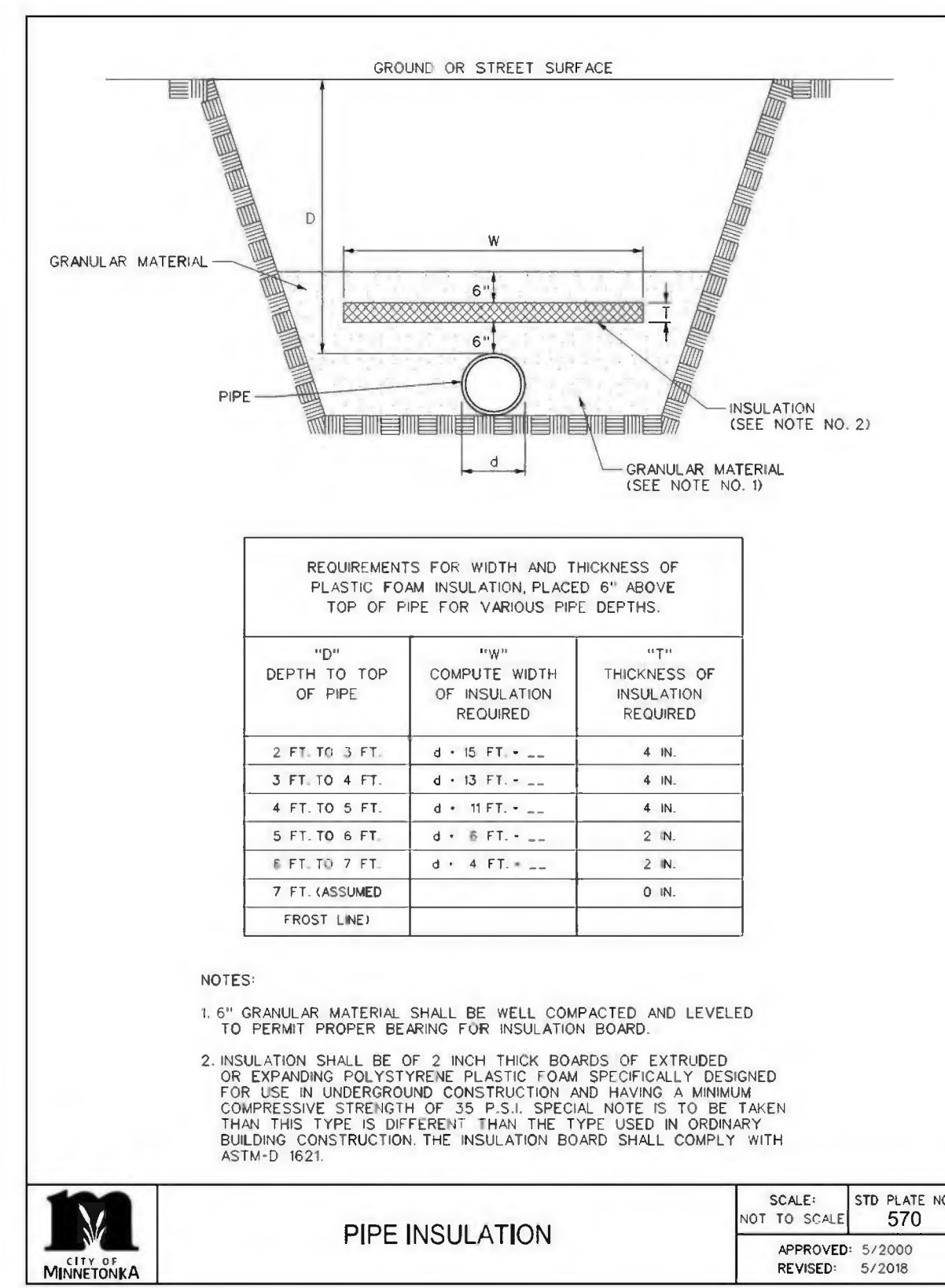
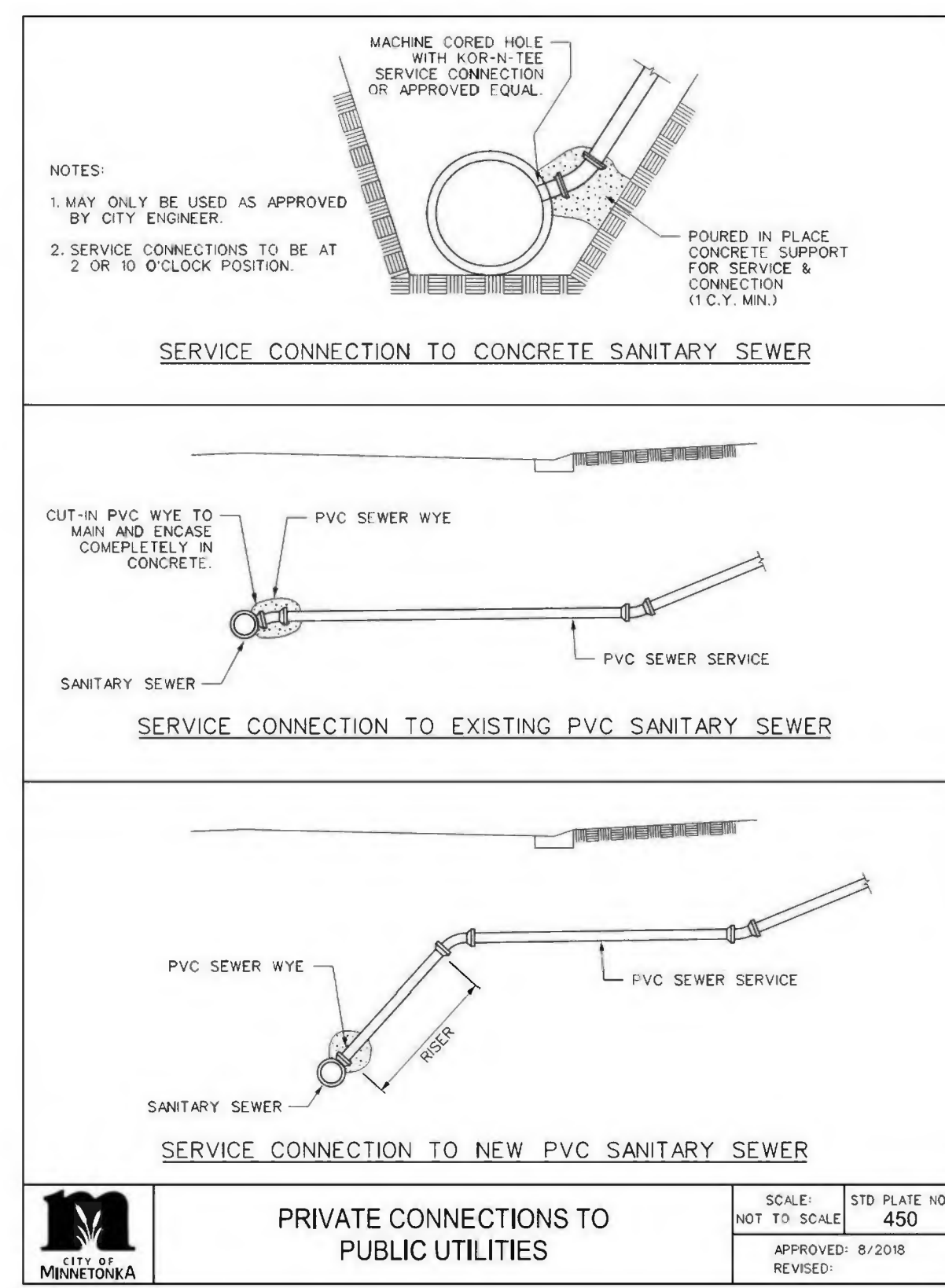
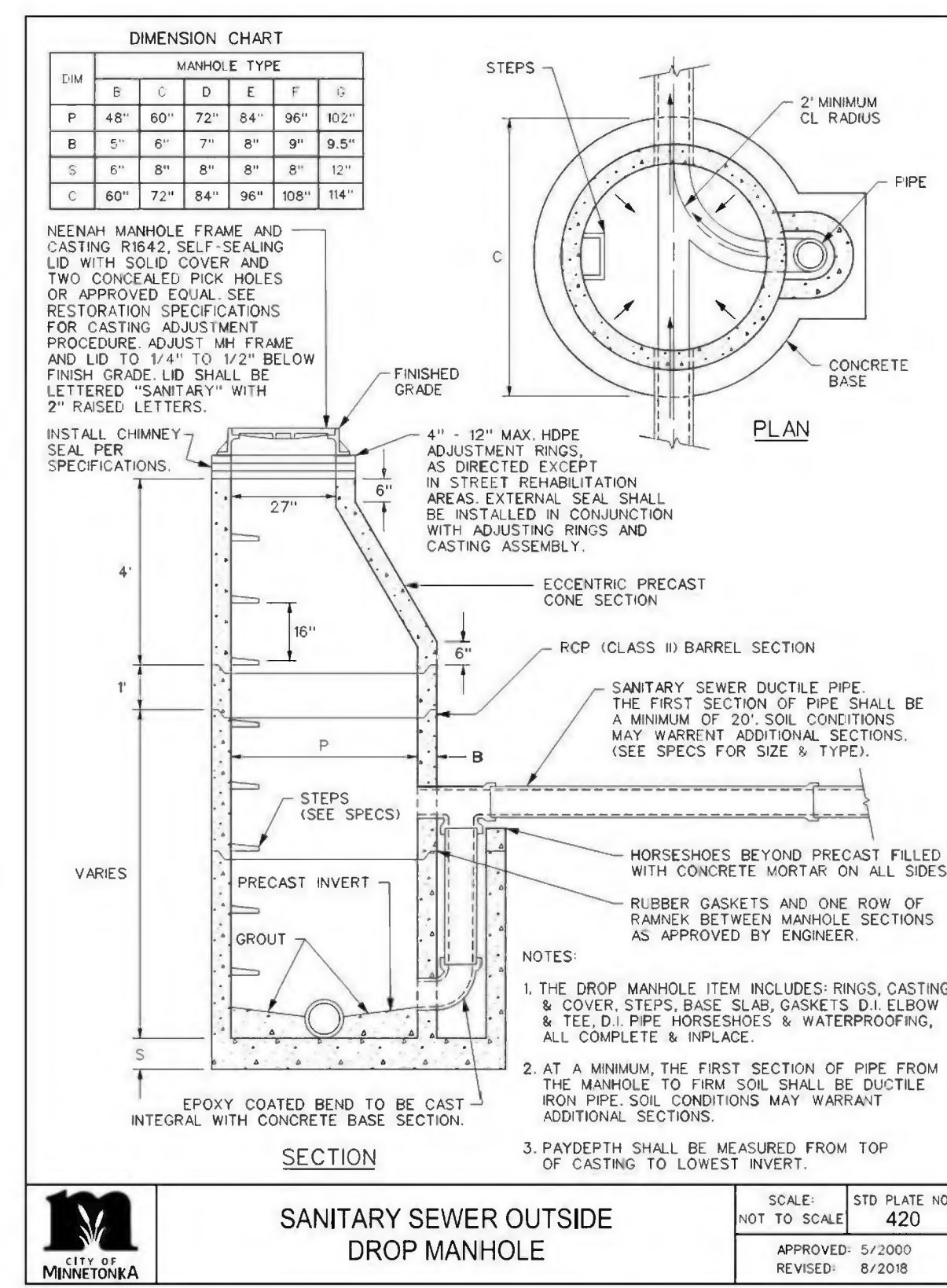
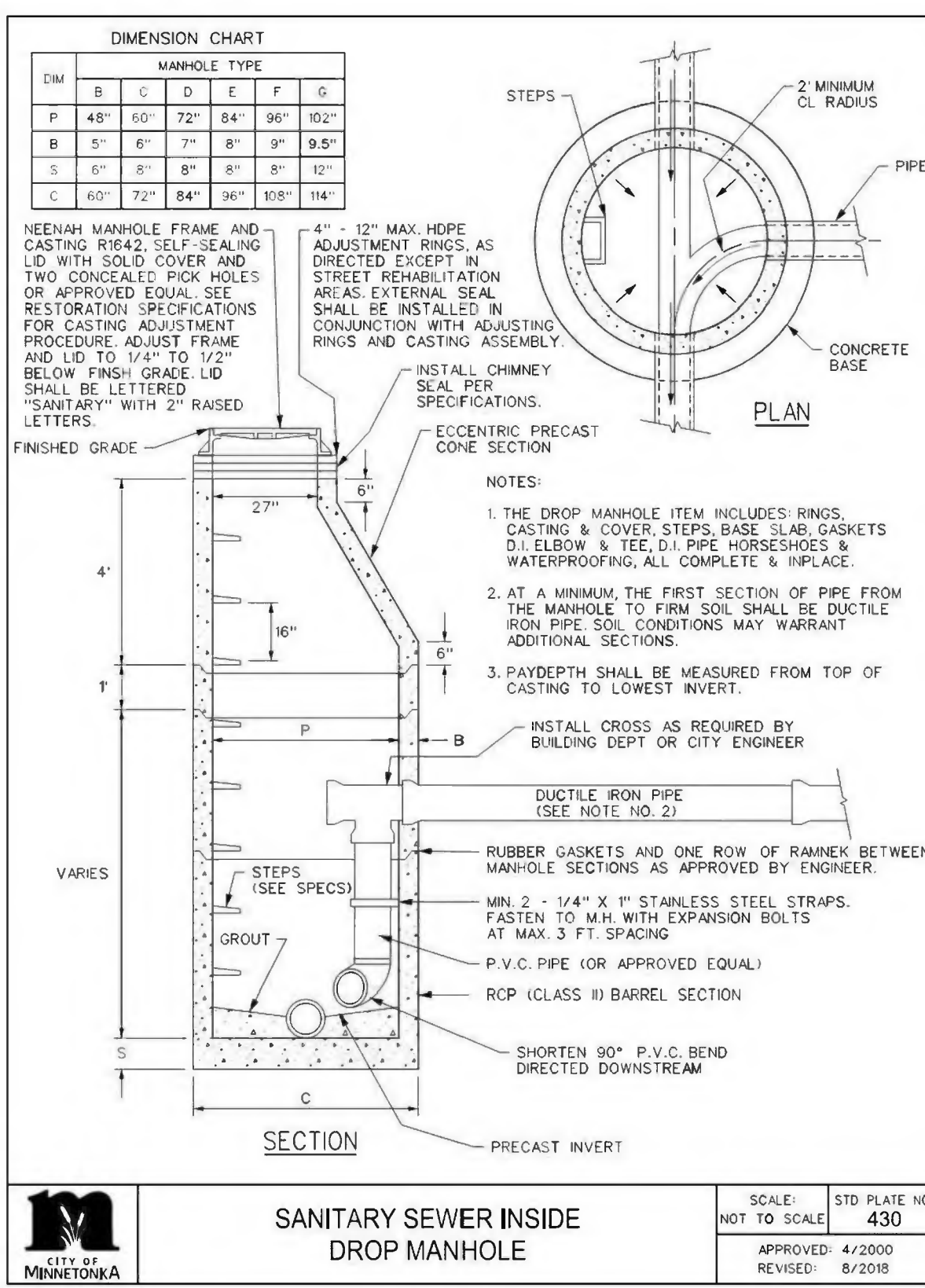
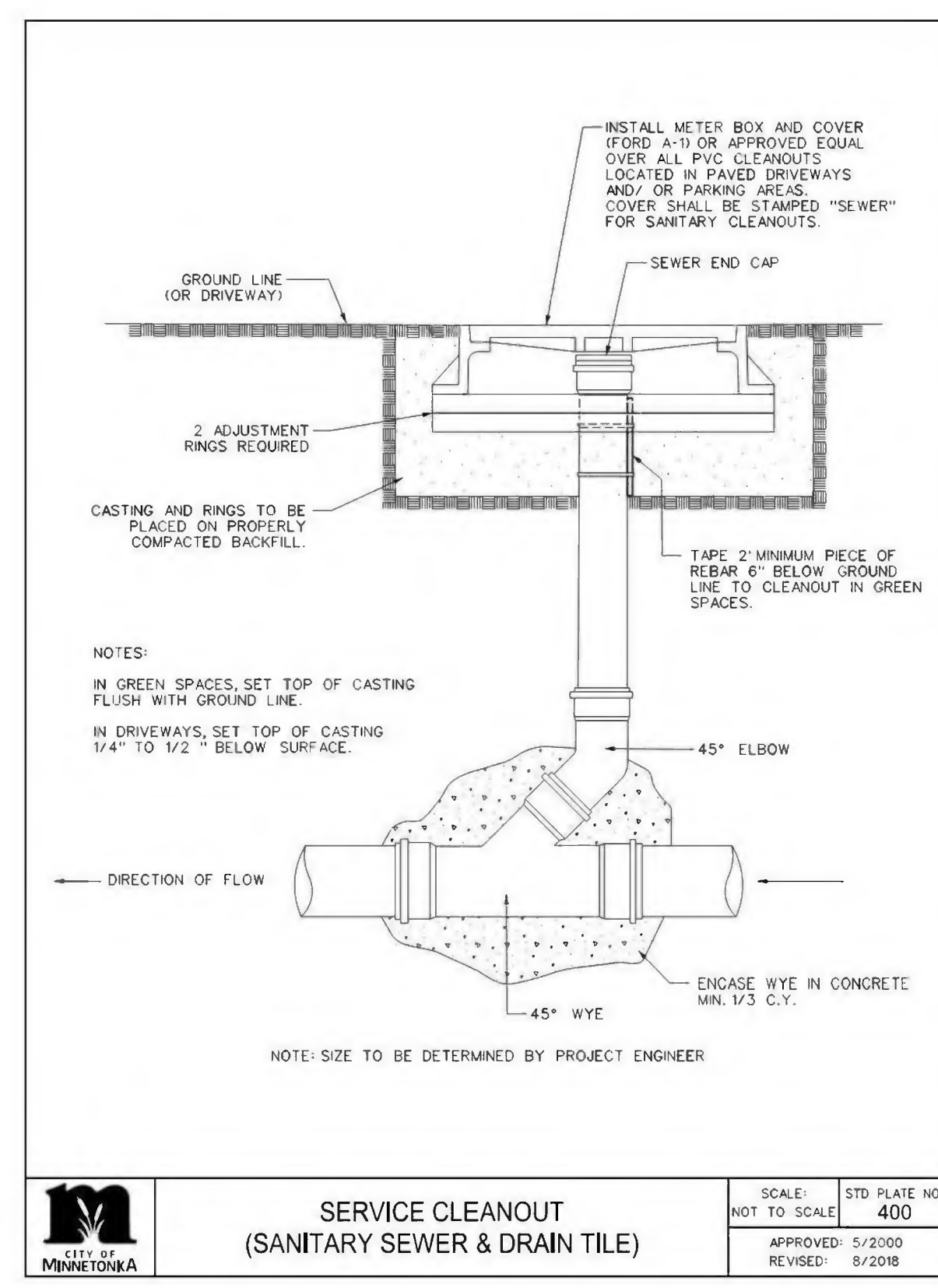
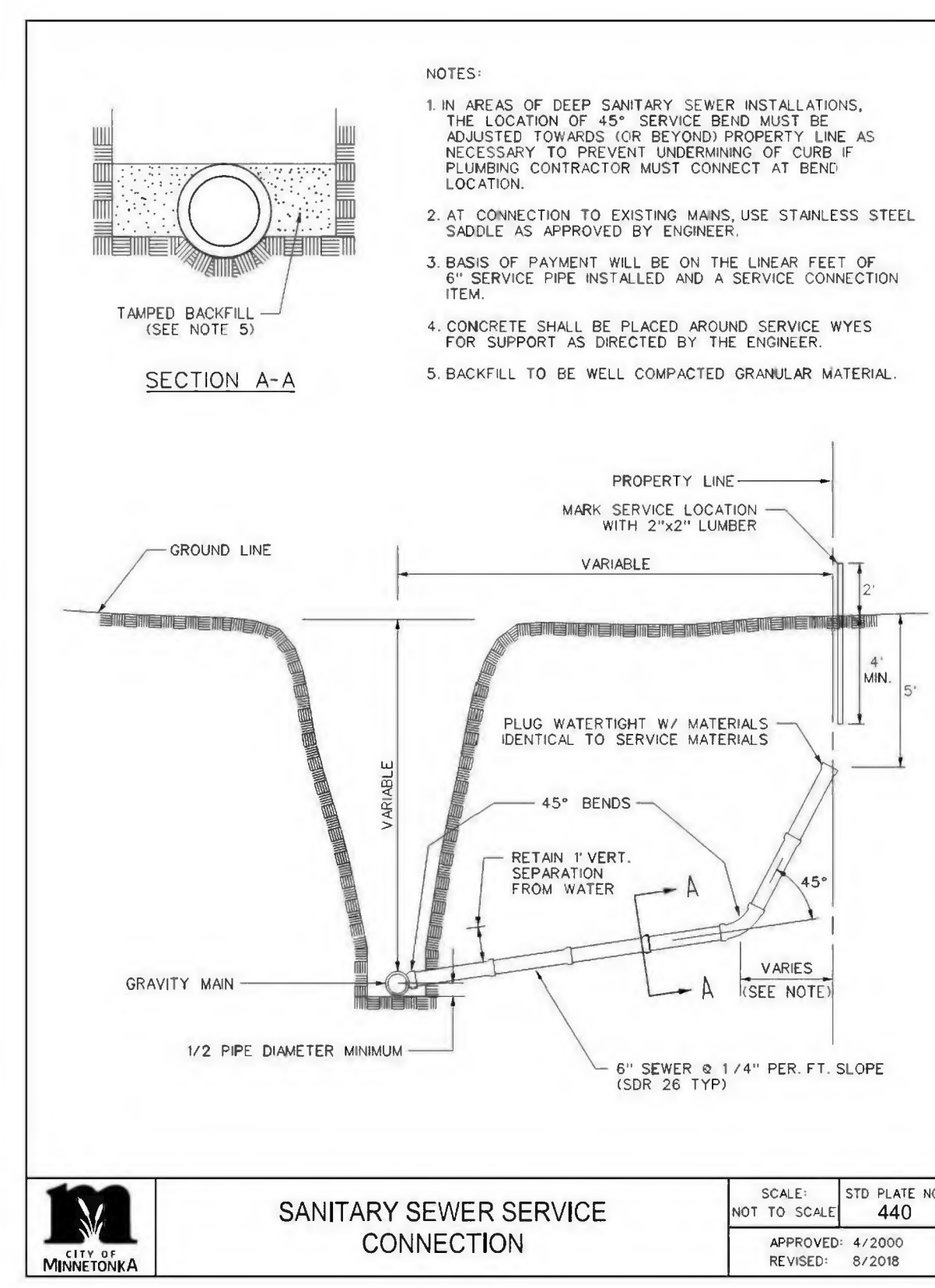
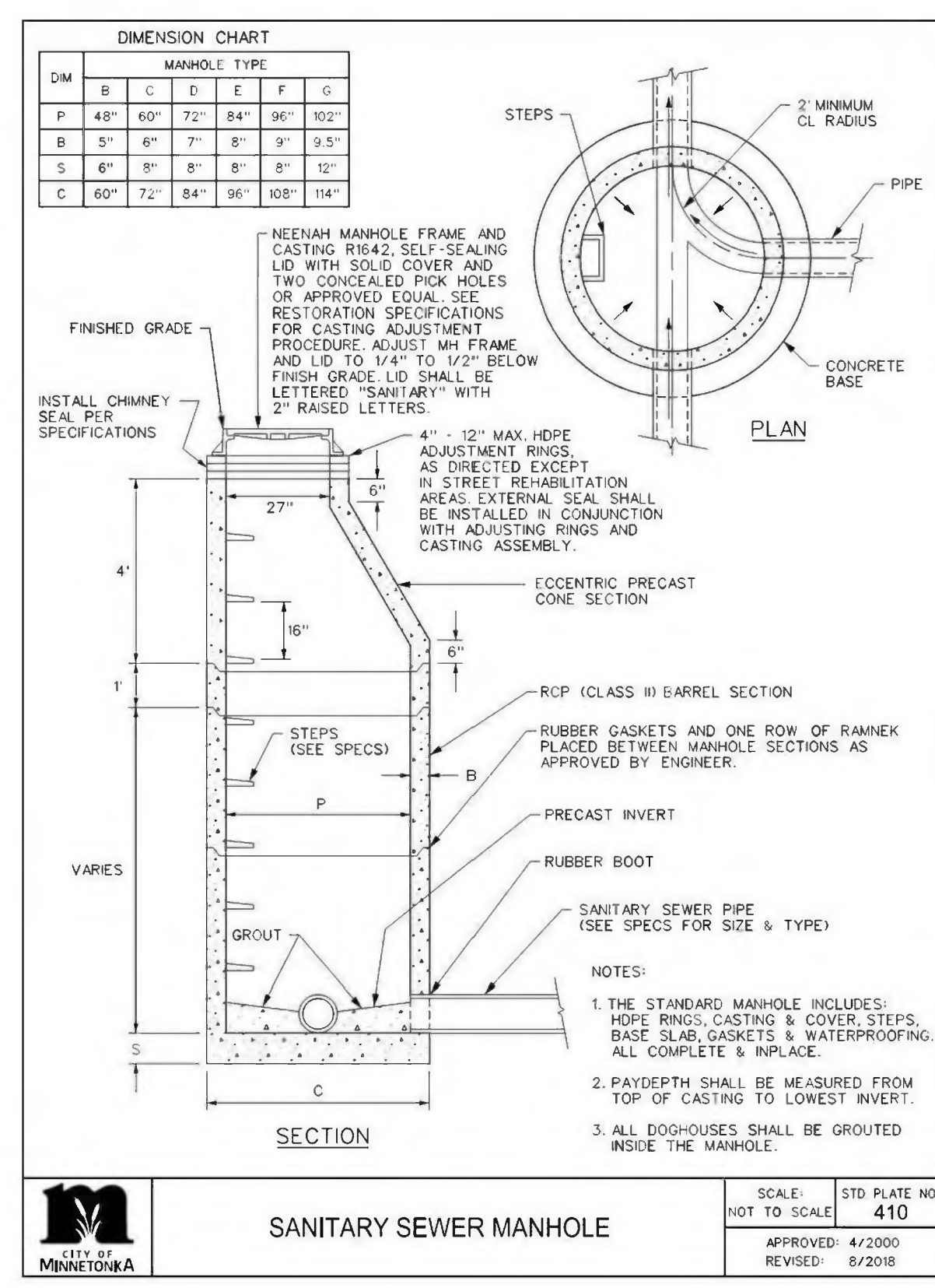
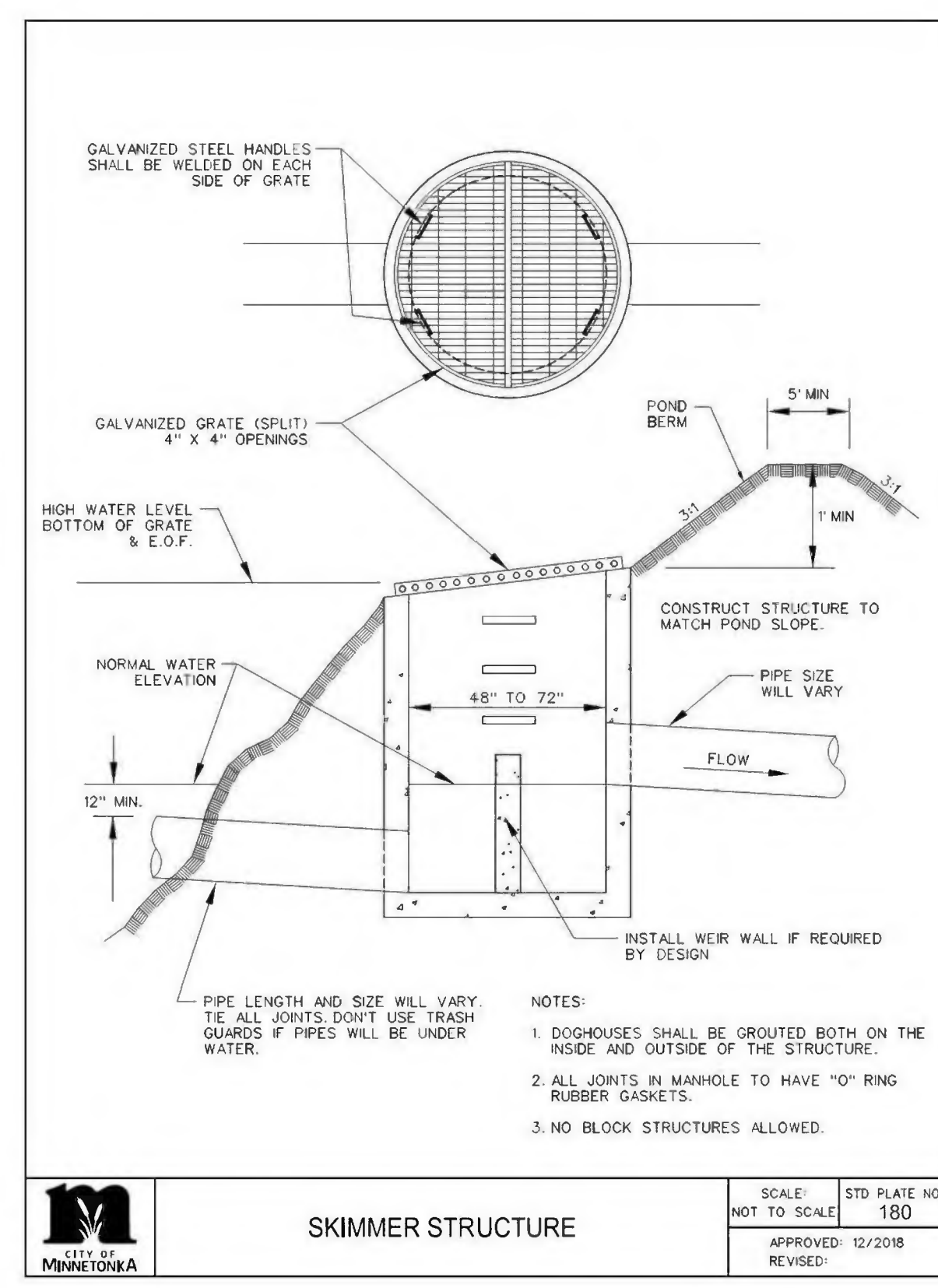


**TABLE OF QUANTITIES**  
RIPRAP AT RCP OUTLETS

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81.0	81.0	81.0	81.0
82.0	82.0	82.0	82.0
83.0	83.0	83.0	83.0
84.0	84.0	84.0	84.0
85.0	85.0	85.0	85.0
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87.0	87.0	87.0	87.0
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97.0	97.0	97.0	97.0
98.0	98.0	98.0	98.0
99.0	99.0	99.0	99.0
100.0	100.0	100.0	100.0

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION  
SPECIFICATION  
3300  
3373  
3373

STANDARD  
PLATE  
NO.  
3133D



**ONE ACRE OAKS**

2511 and 2615 Plymouth Road,  
Minnetonka, MN 55305

LAKE WEST  
DEVELOPMENT, LLC

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**SUBMITTAL REVISIONS**

08/25/2023	PRELIMINARY PLAT
10/27/2023	CITY RESUBMITTAL COMPLIANT
11/29/2023	CITY RESUBMITTAL COMPLIANT
01/18/2024	CITY RESUBMITTAL COMPLIANT
03/15/2024	CITY RESUBMITTAL COMPLIANT
04/12/2024	CITY RESPONSE

**PROFESSIONAL SIGNATURE**

I hereby certify that this plan, specification, 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.

**PRELIMINARY**

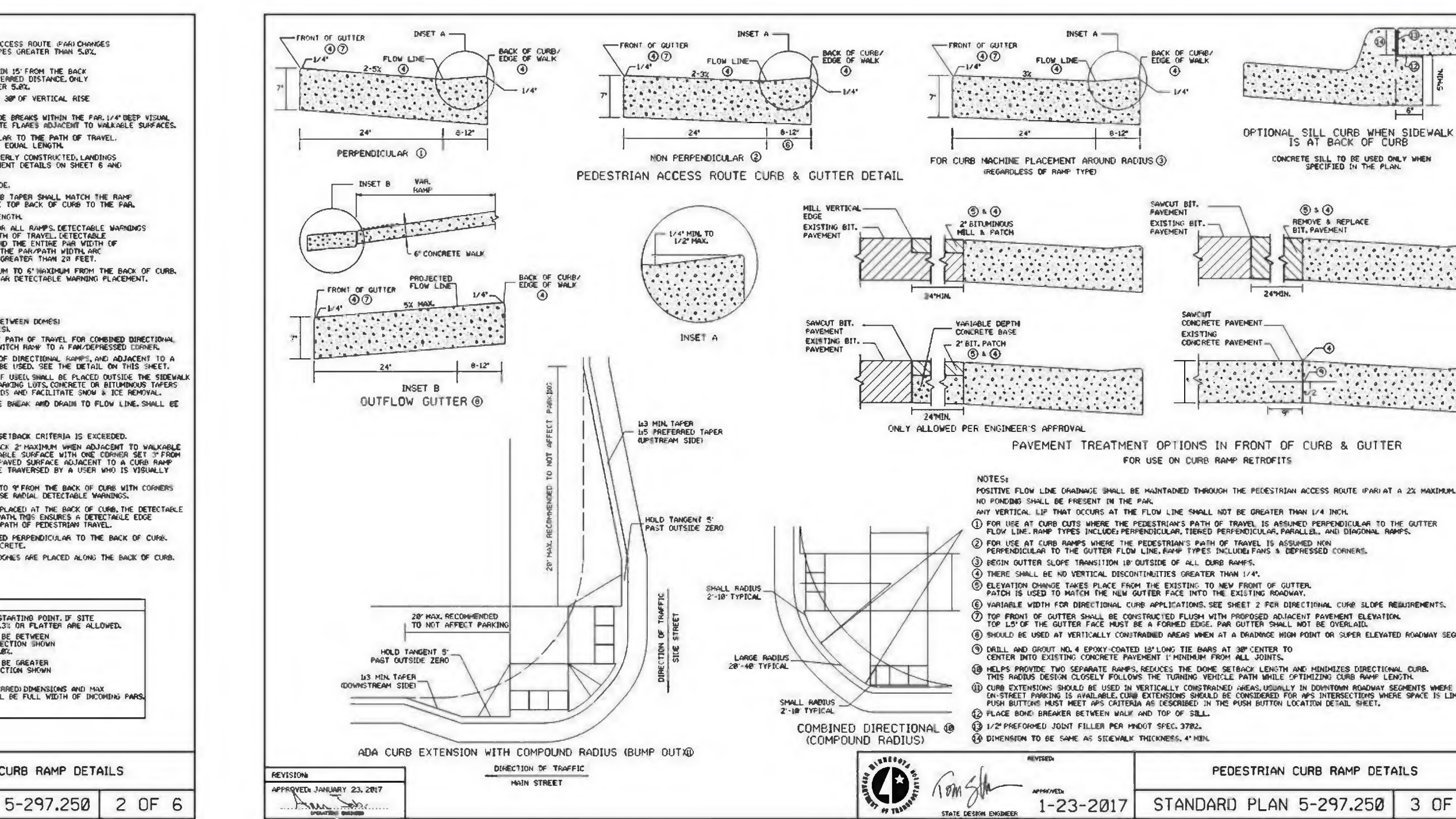
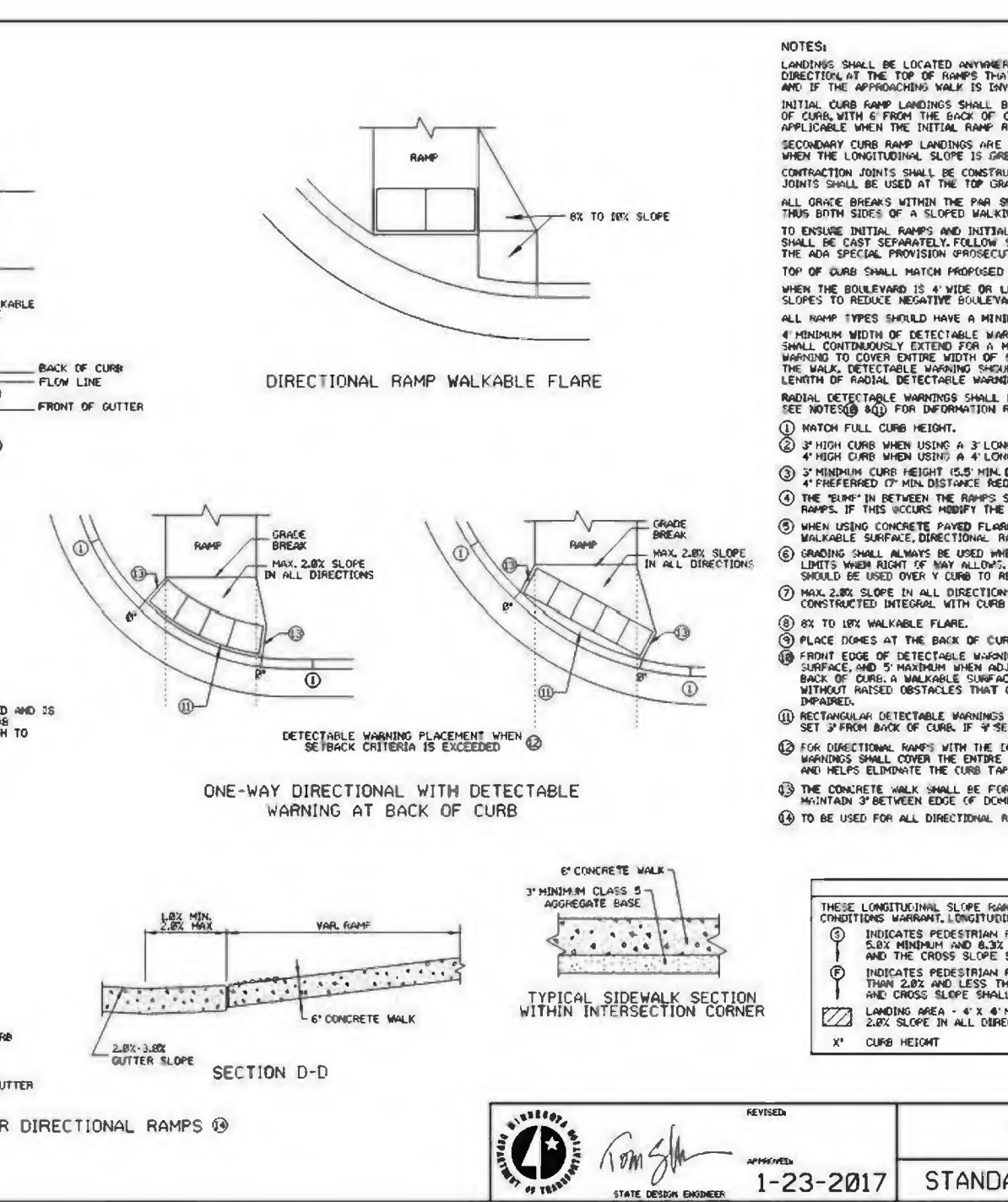
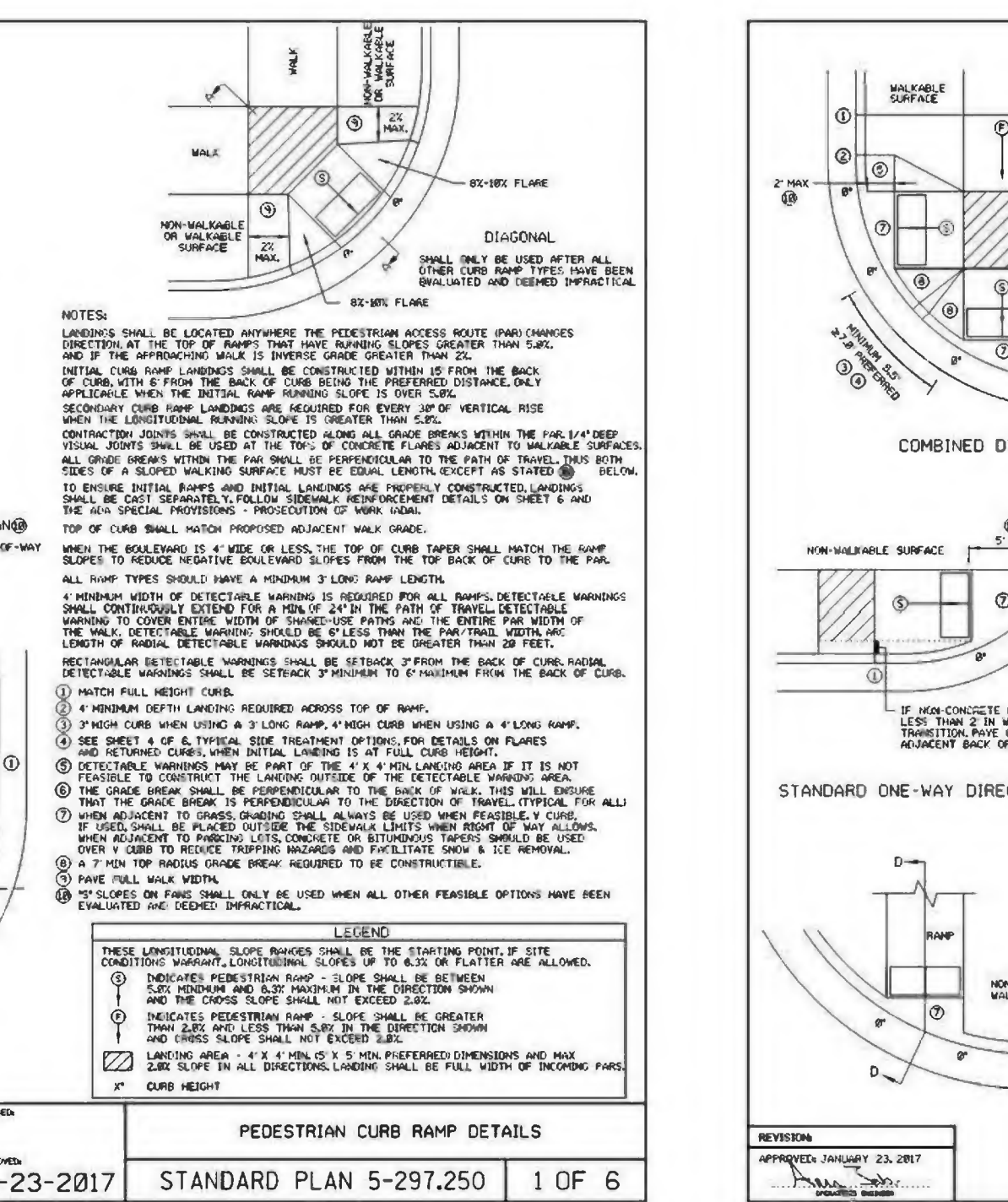
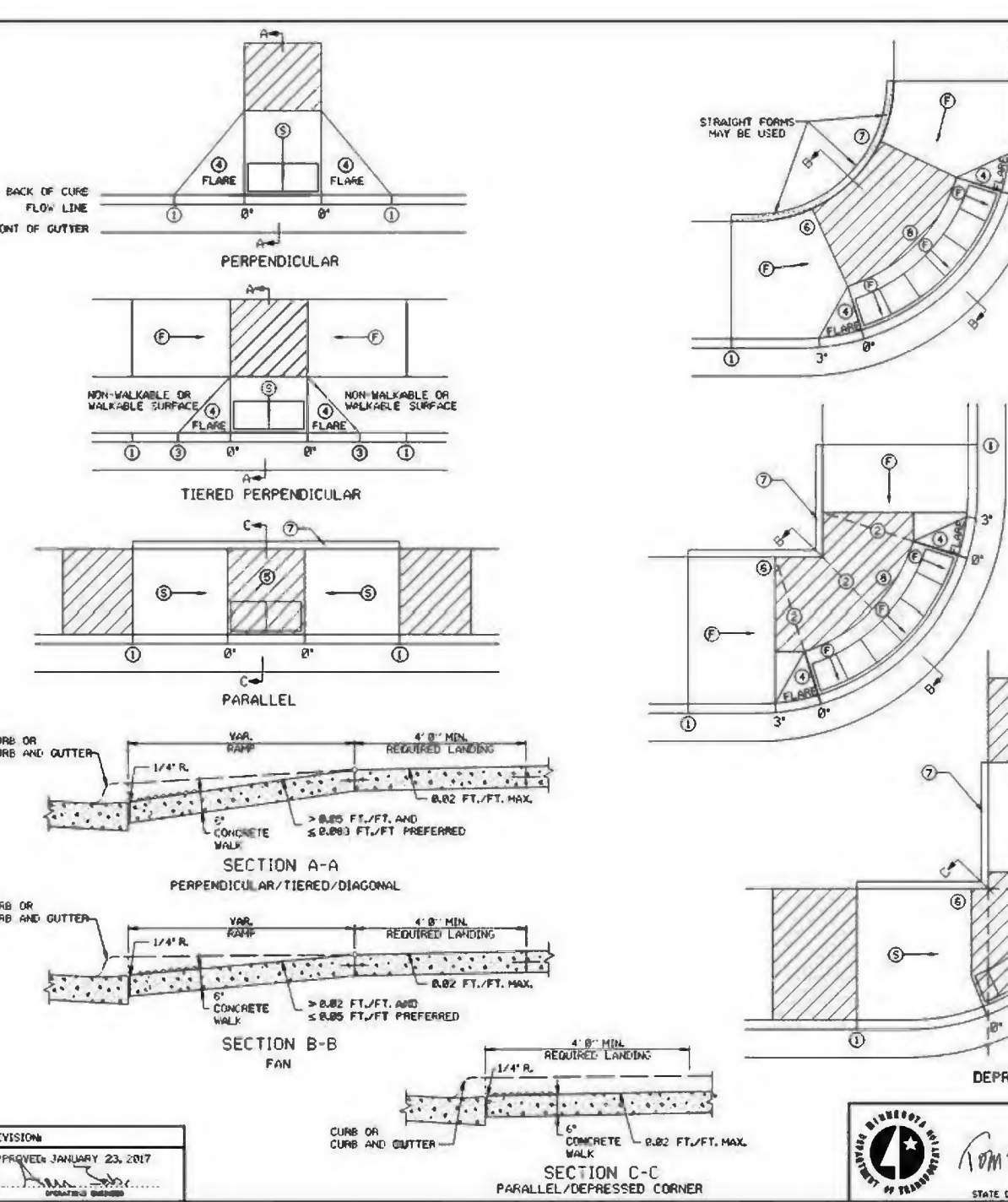
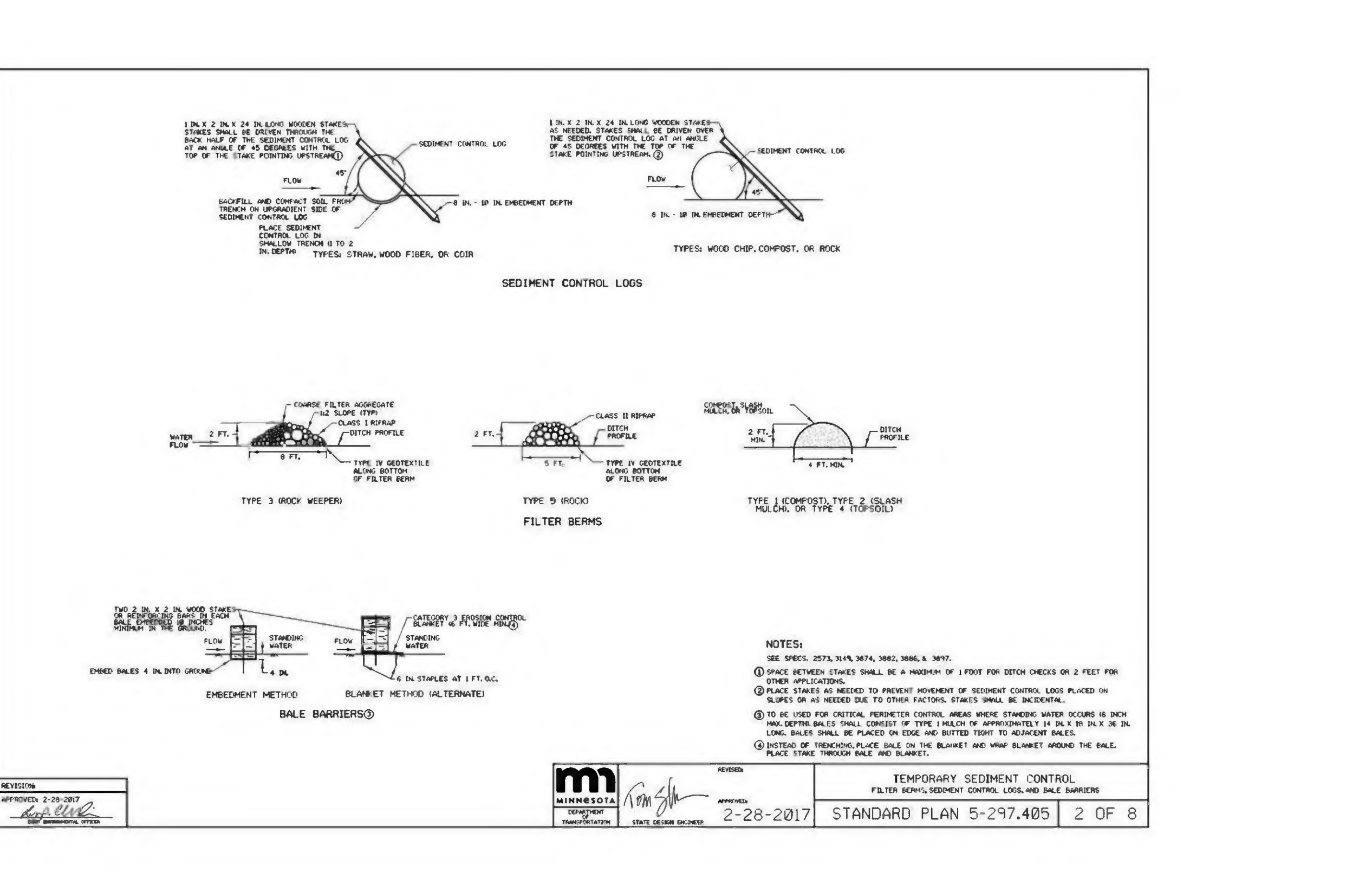
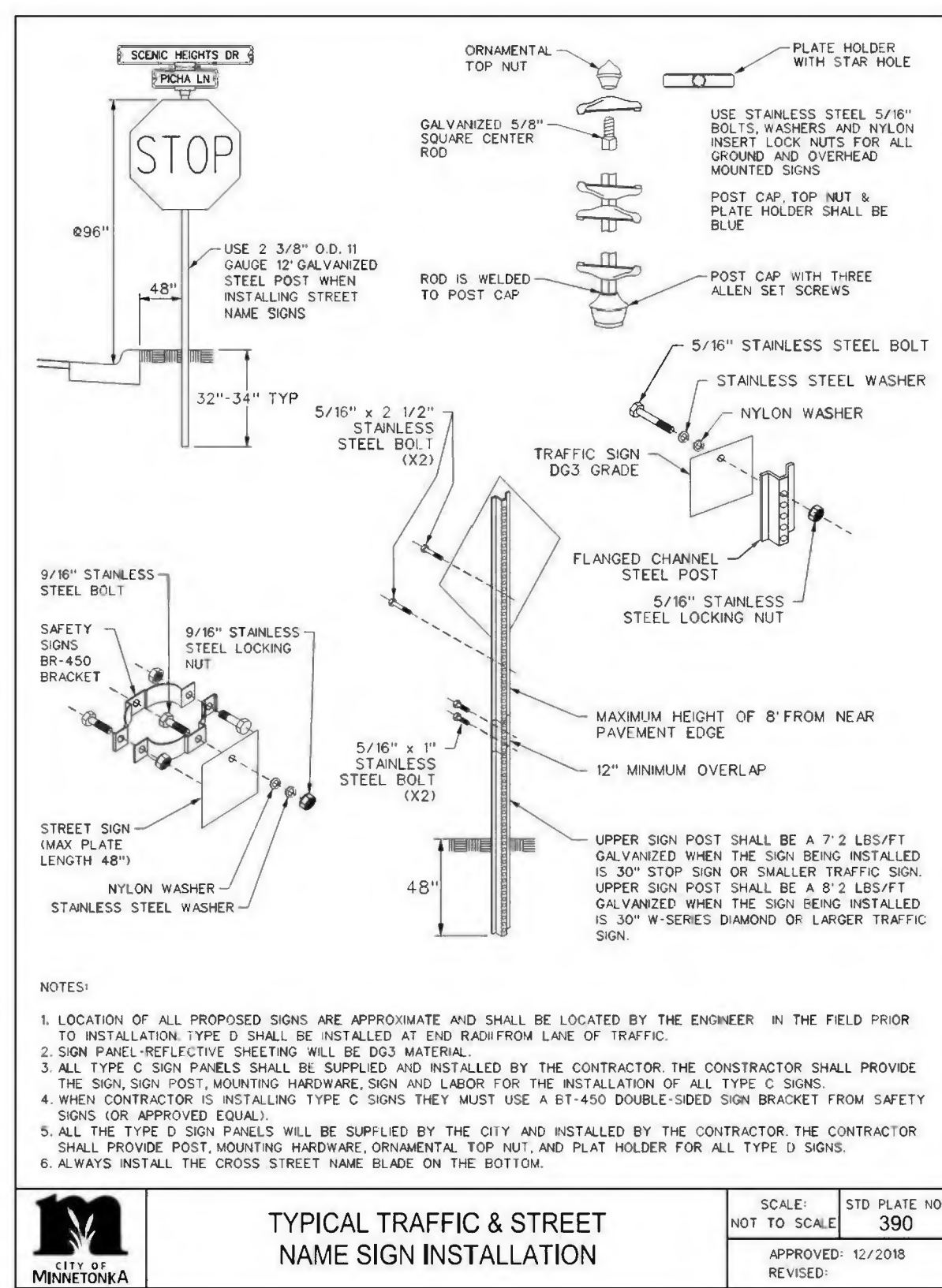
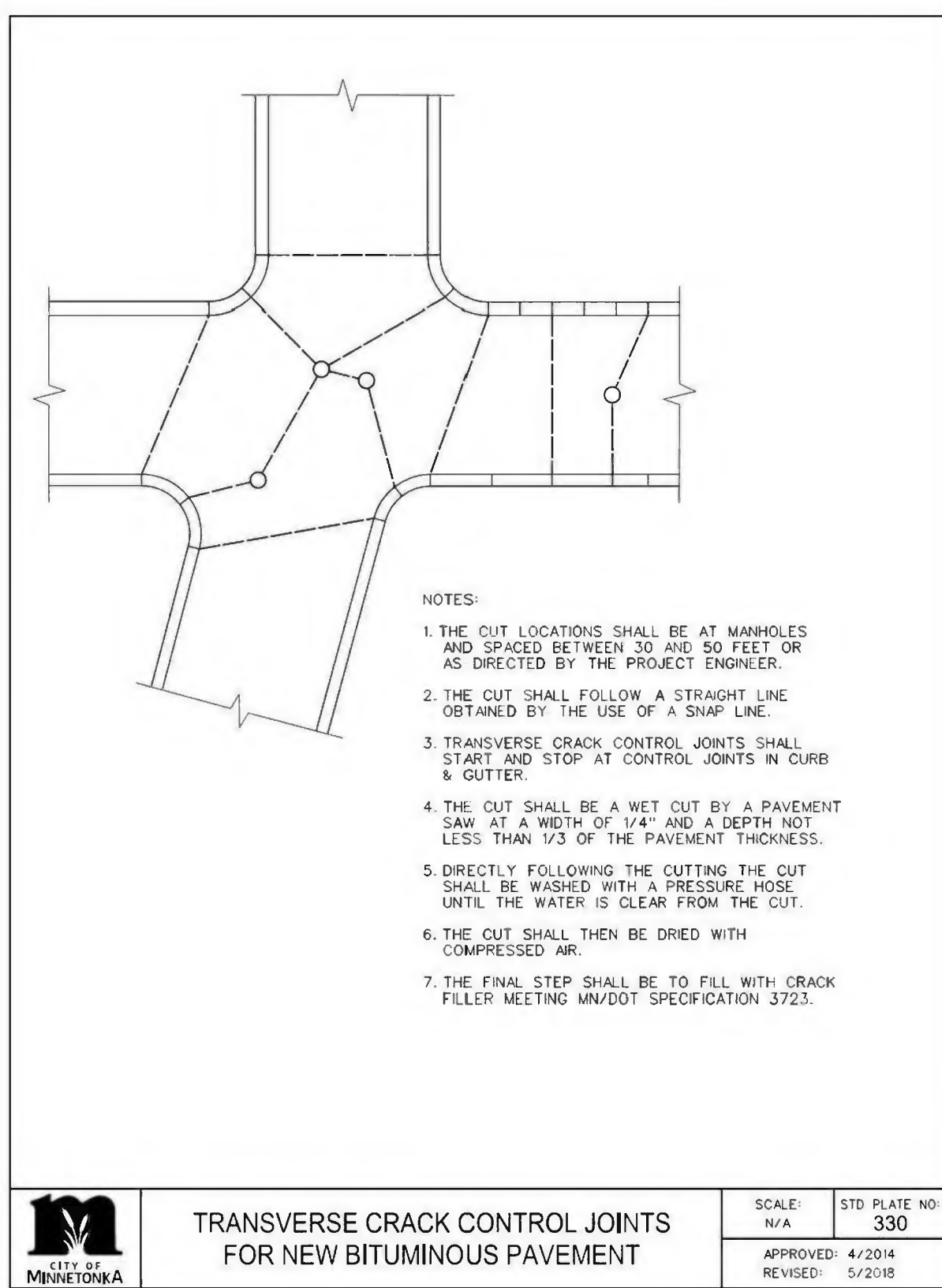
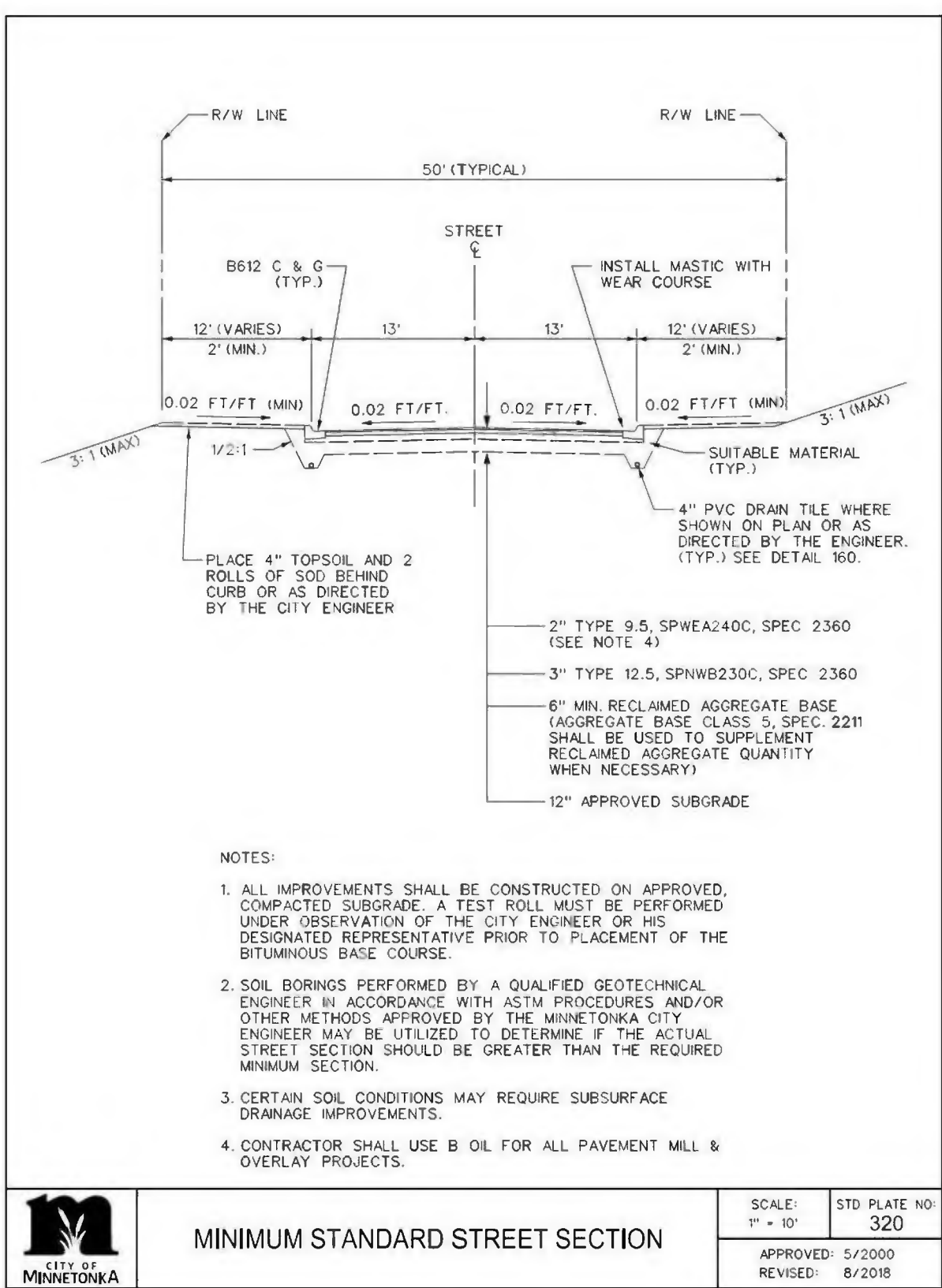
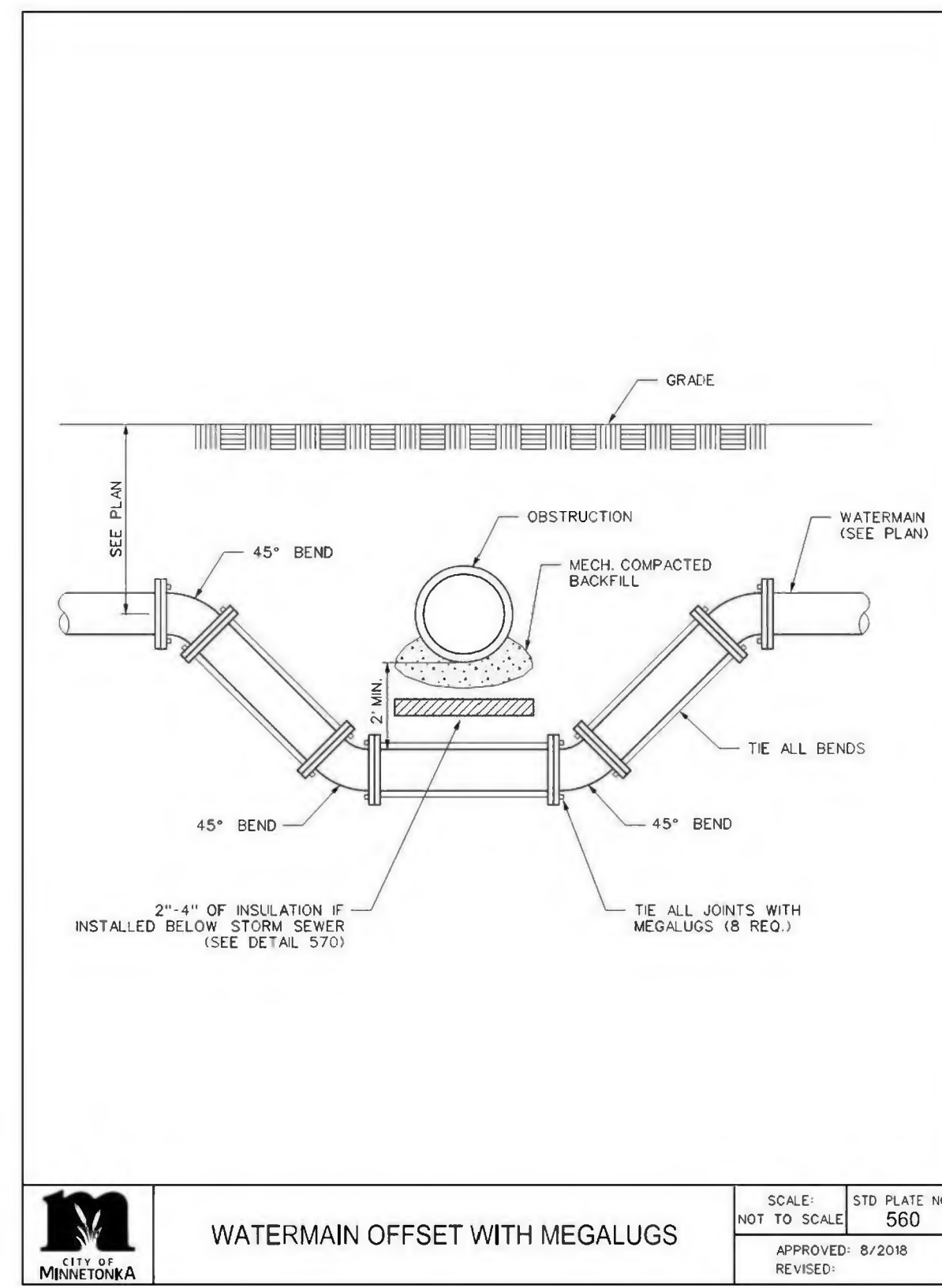
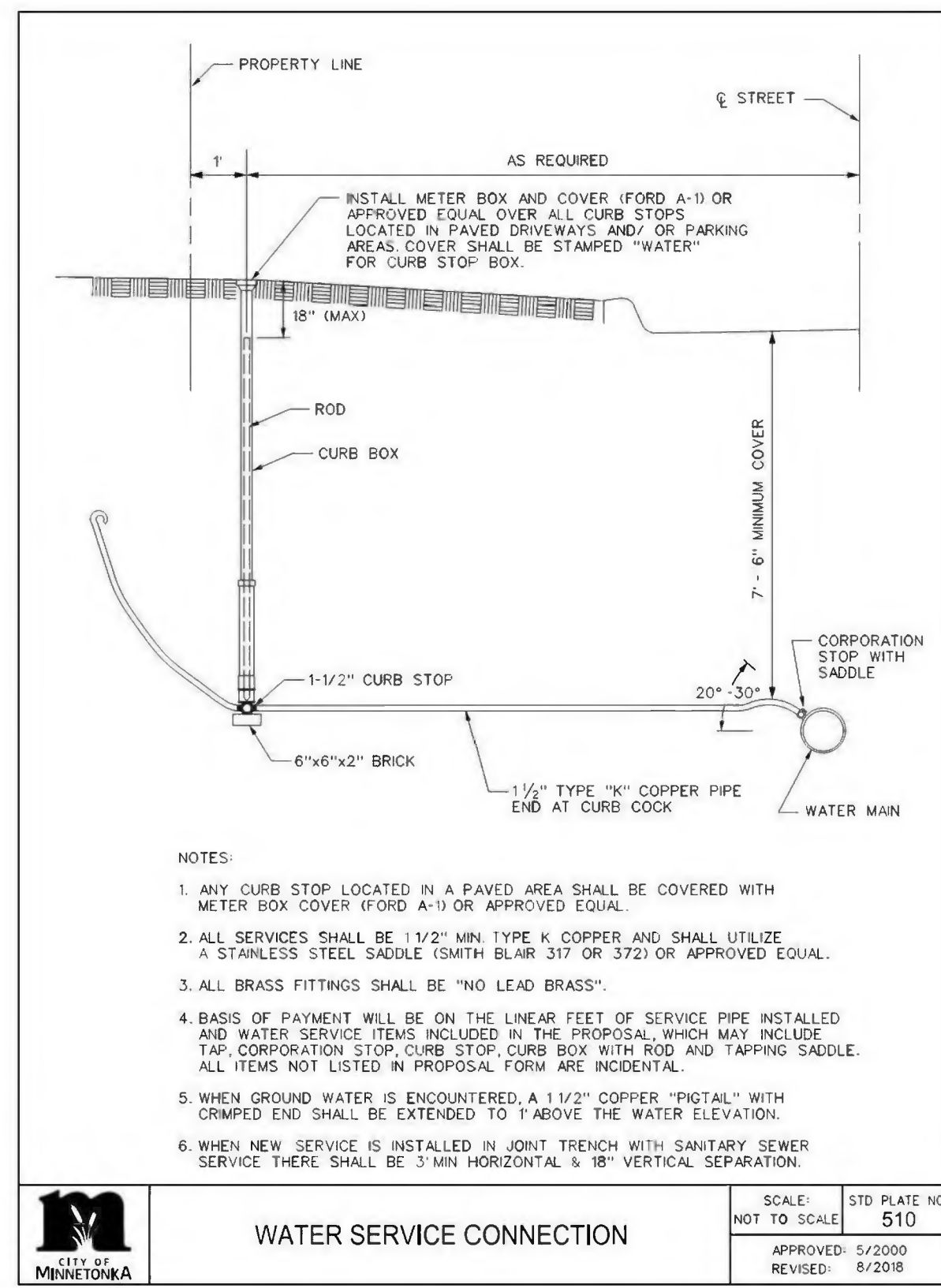
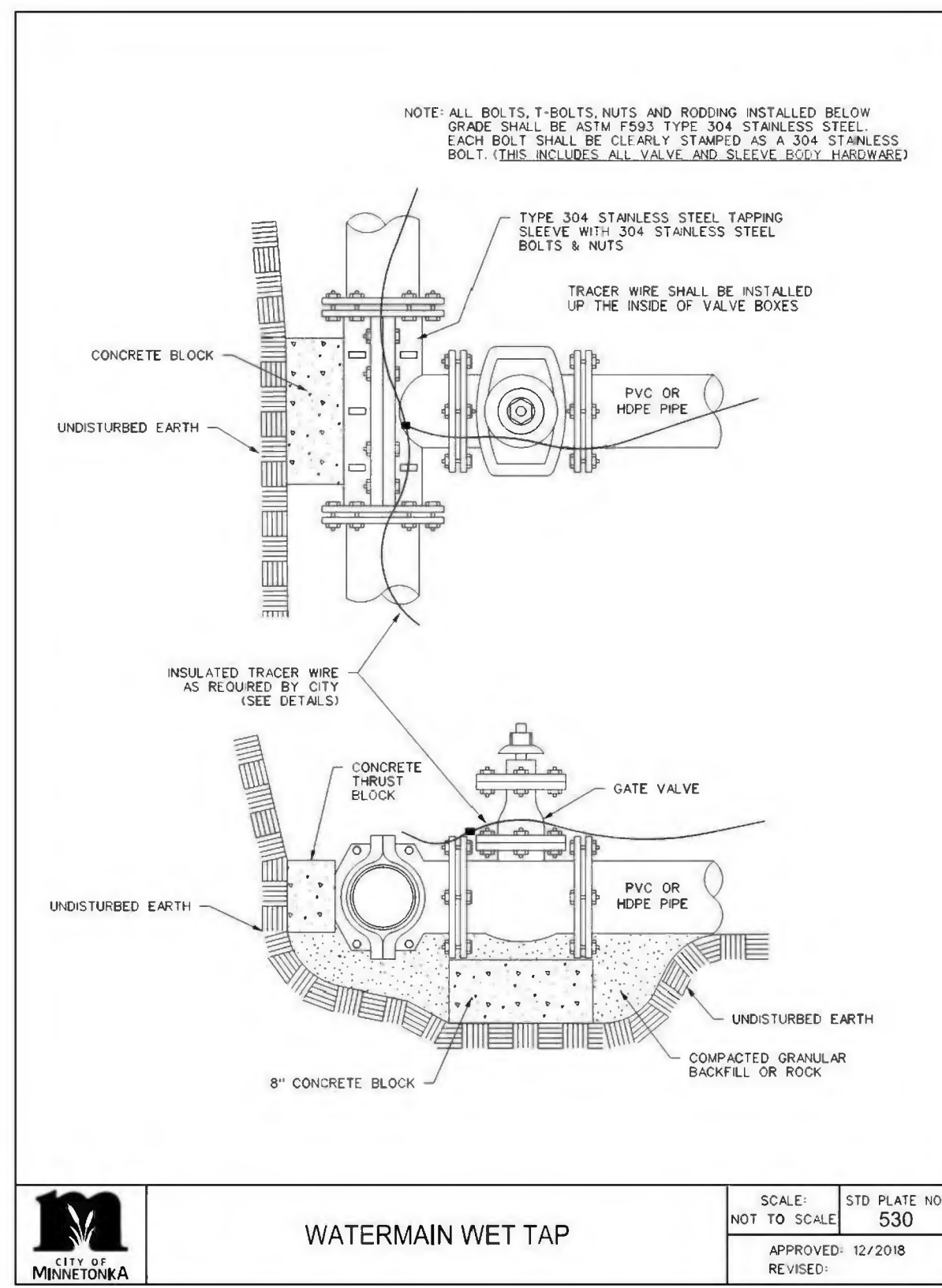
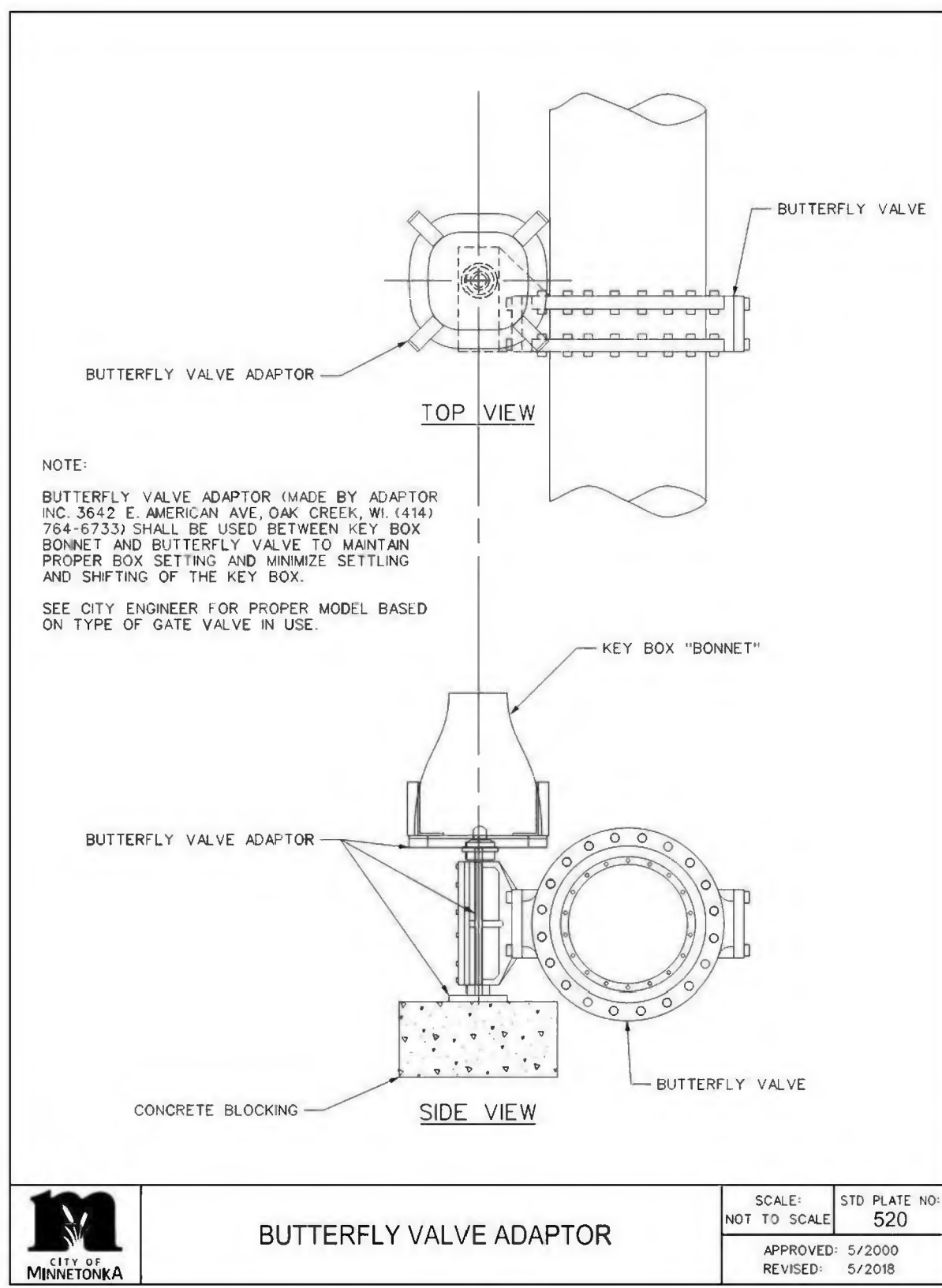
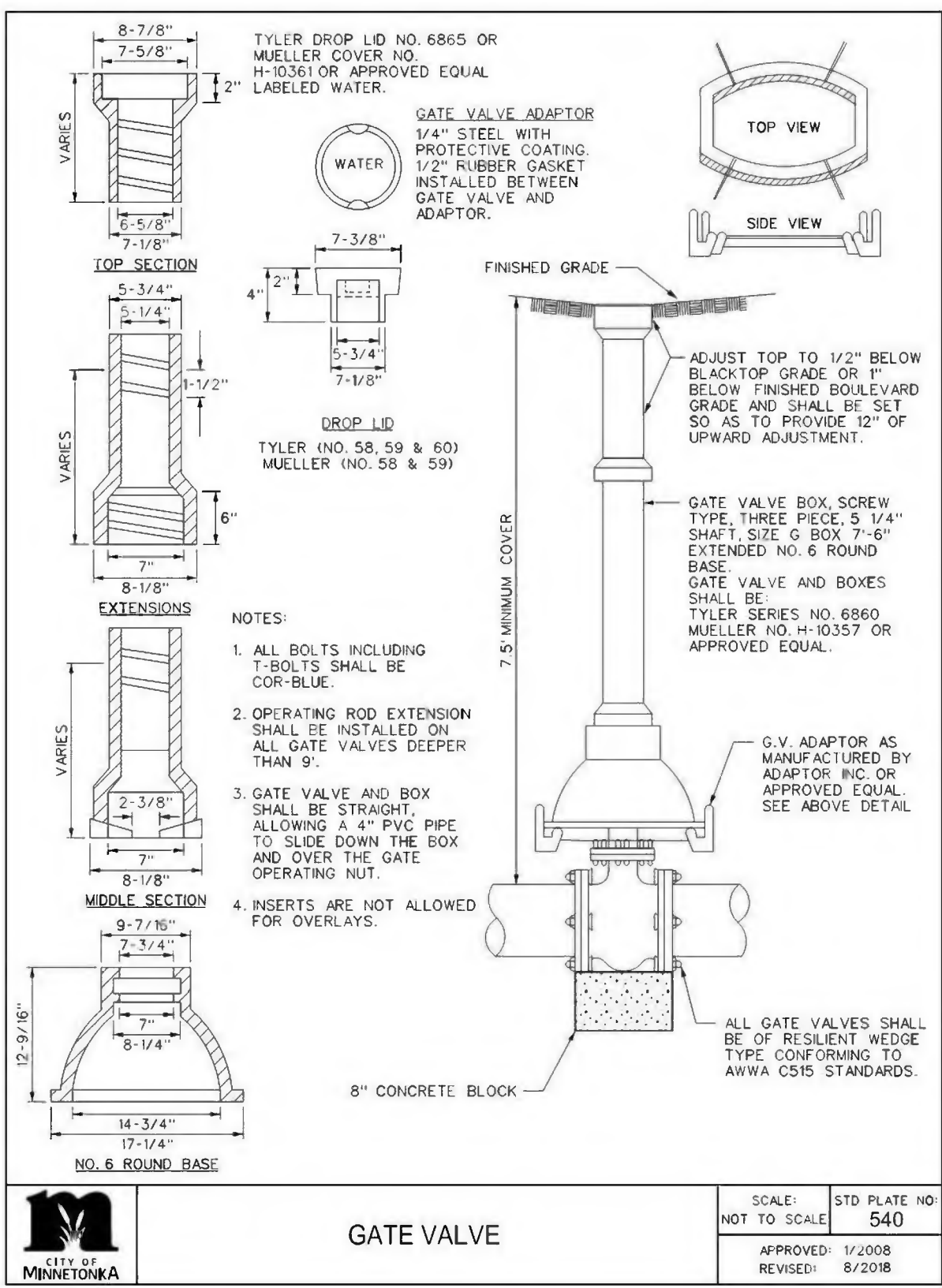
License No. 133,933, St. Martin PE 24440

**QUALITY CONTROL**

Loecks Project No.	021509.0B
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

**SHEET INDEX**

C0-1	COVER SHEET
C1-1	EXISTING CONDITIONS
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C2-2	TURNING MOVEMENT PLAN
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C3-4	FLOODPLAIN PLAN
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C6-1	PRELIMINARY PLAT
C8-1 TO C8-3	CIVIL DETAILS
L1-1 TO L1-3	TREE INVENTORY



**ONE ACRE OAKS**

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**SUBMITTAL REVISIONS**

08/25/2023	PRELIMINARY PLAT
10/27/2023	CITY RESUBMITTAL
11/29/2023	COMPLIANT
01/18/2024	PLAN GRADING
03/15/2024	CITY RESUBMITTAL
04/12/2024	CITY RESPONSE

**PROFESSIONAL SIGNATURE**

I hereby certify that this plan, specification, and 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.

License No. 100,378, Martin PE 24440

**QUALITY CONTROL**

Locks Project No.	021509.08
Project Lead	MJS
Drawn By	LAH
Checked By	MJS
Review Date	03/14/2024

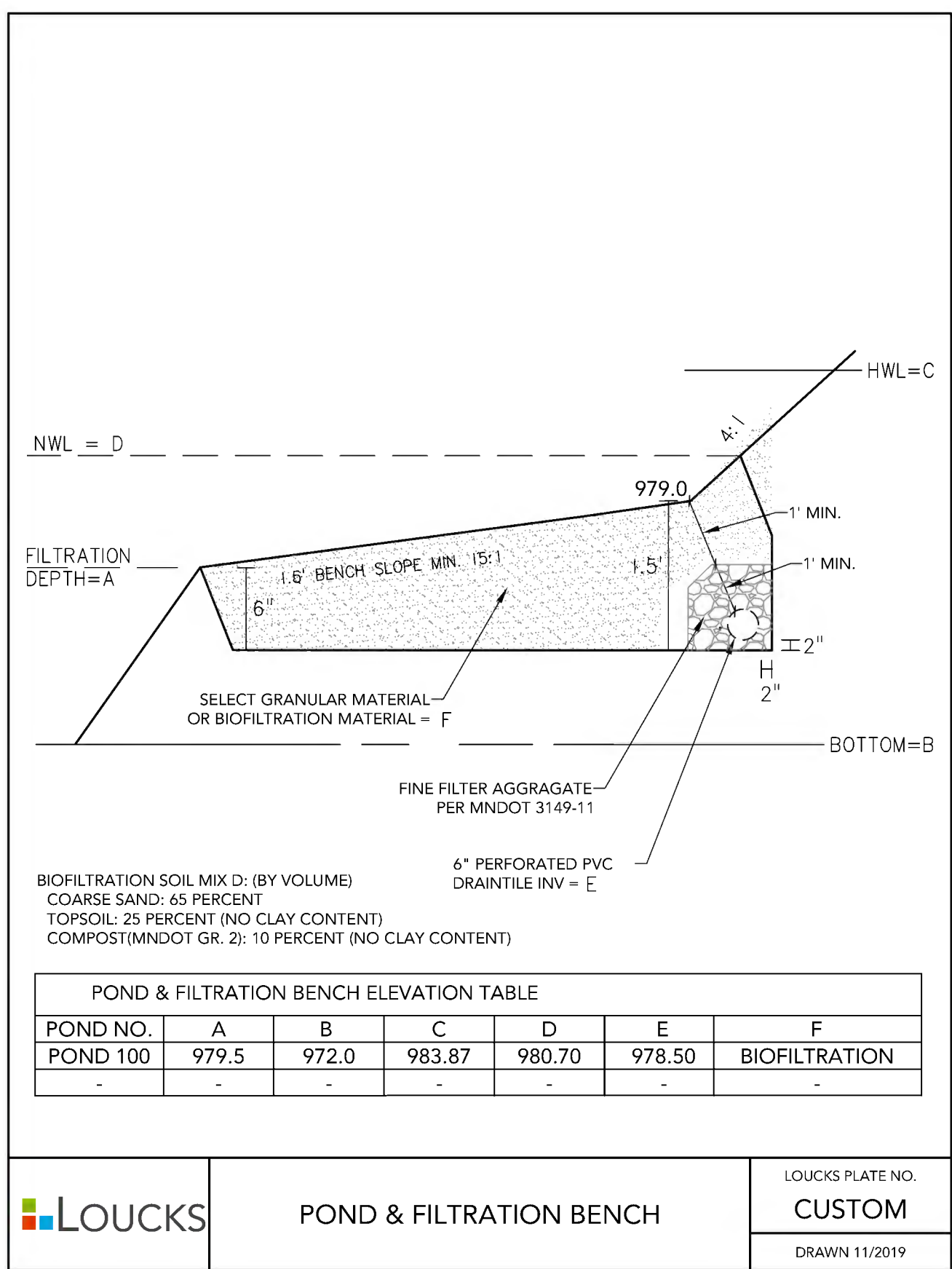
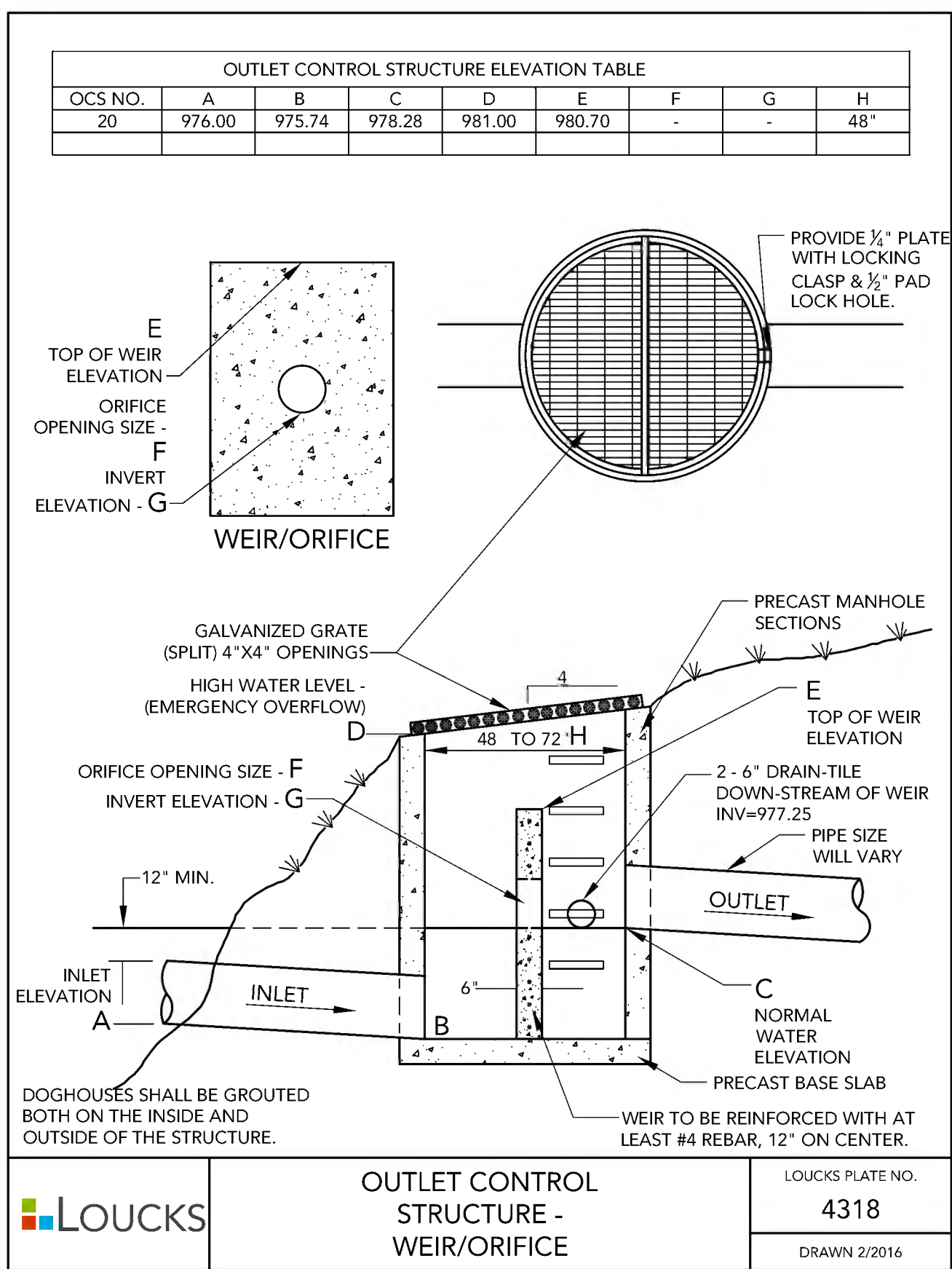
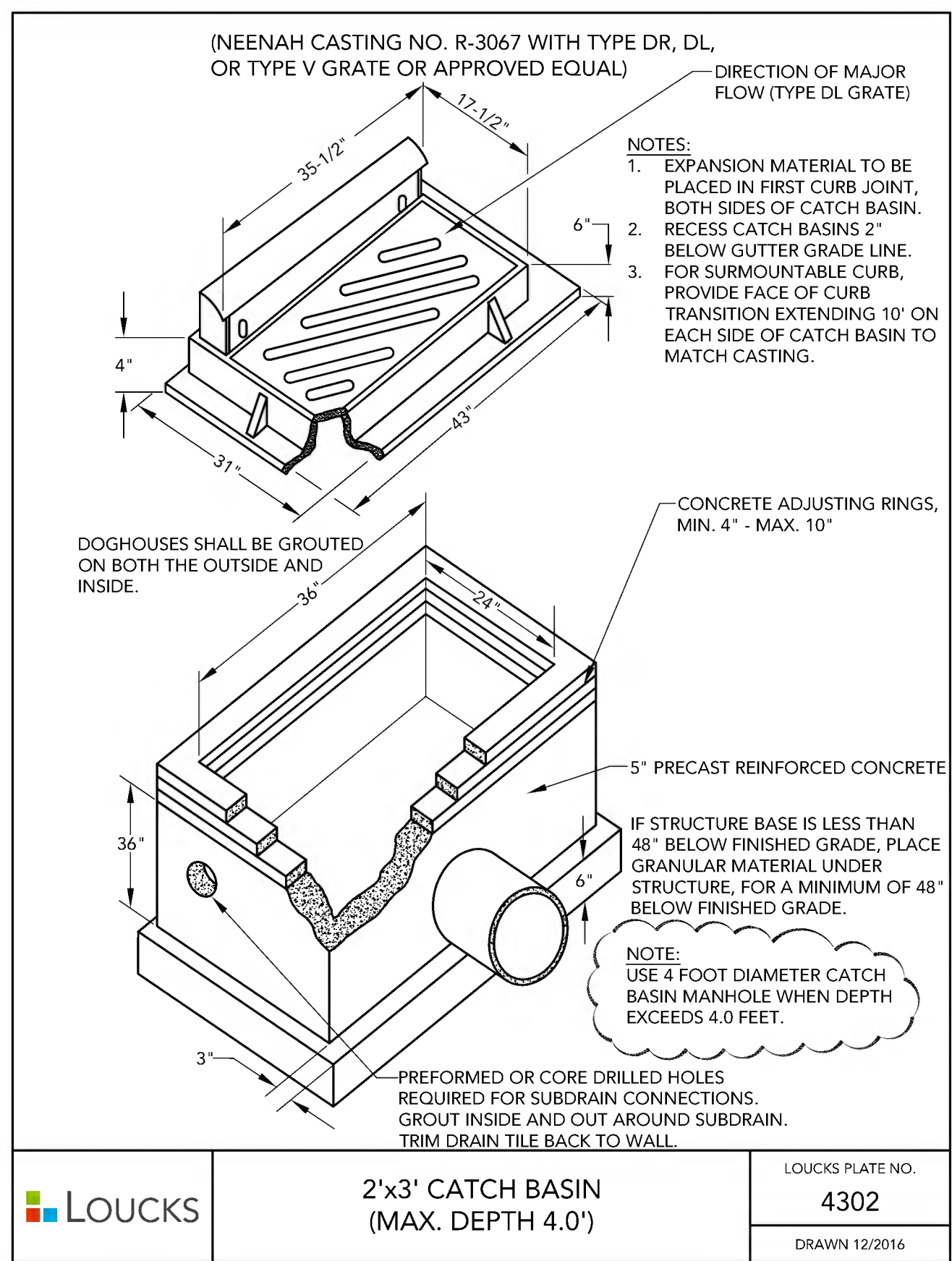
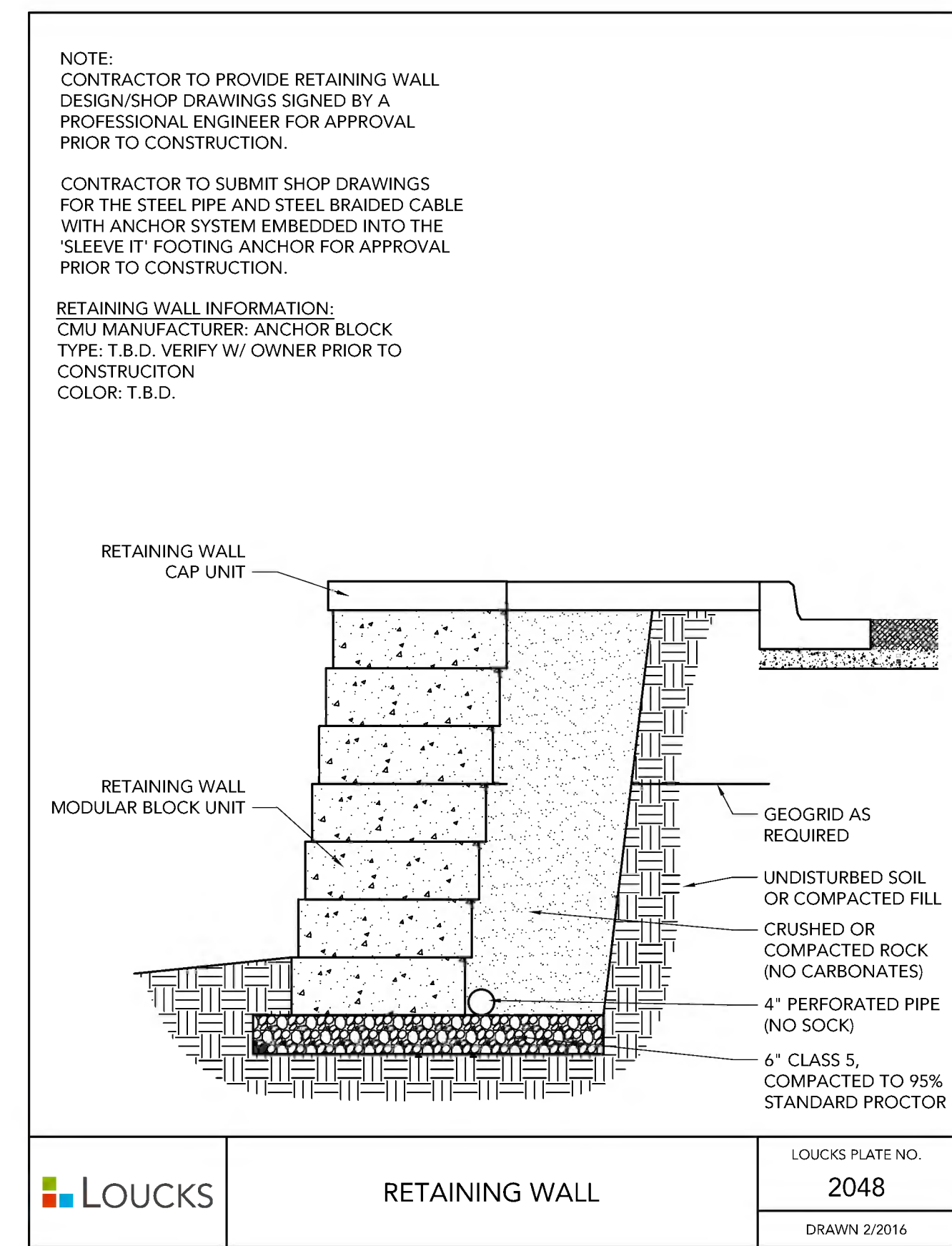
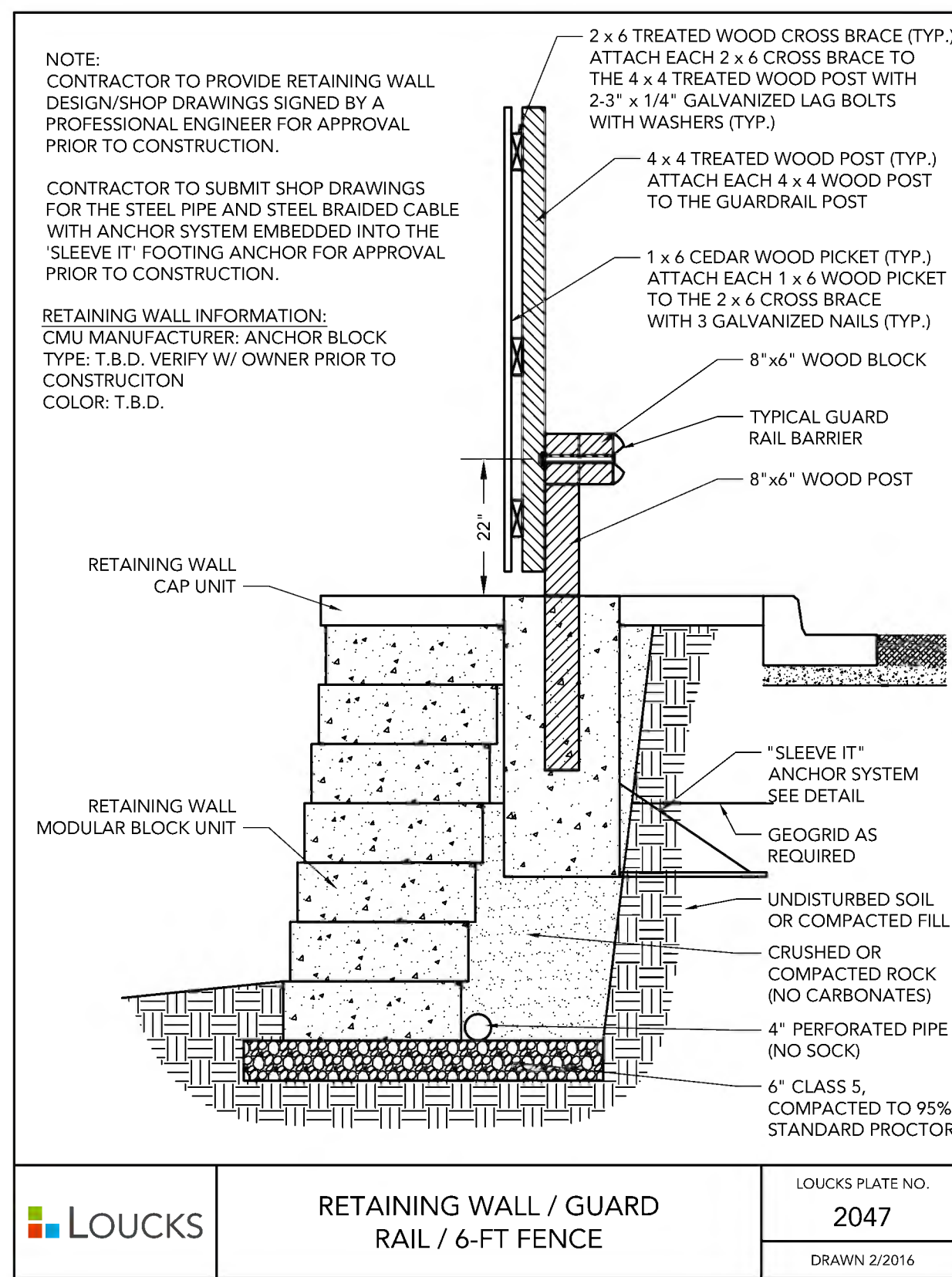
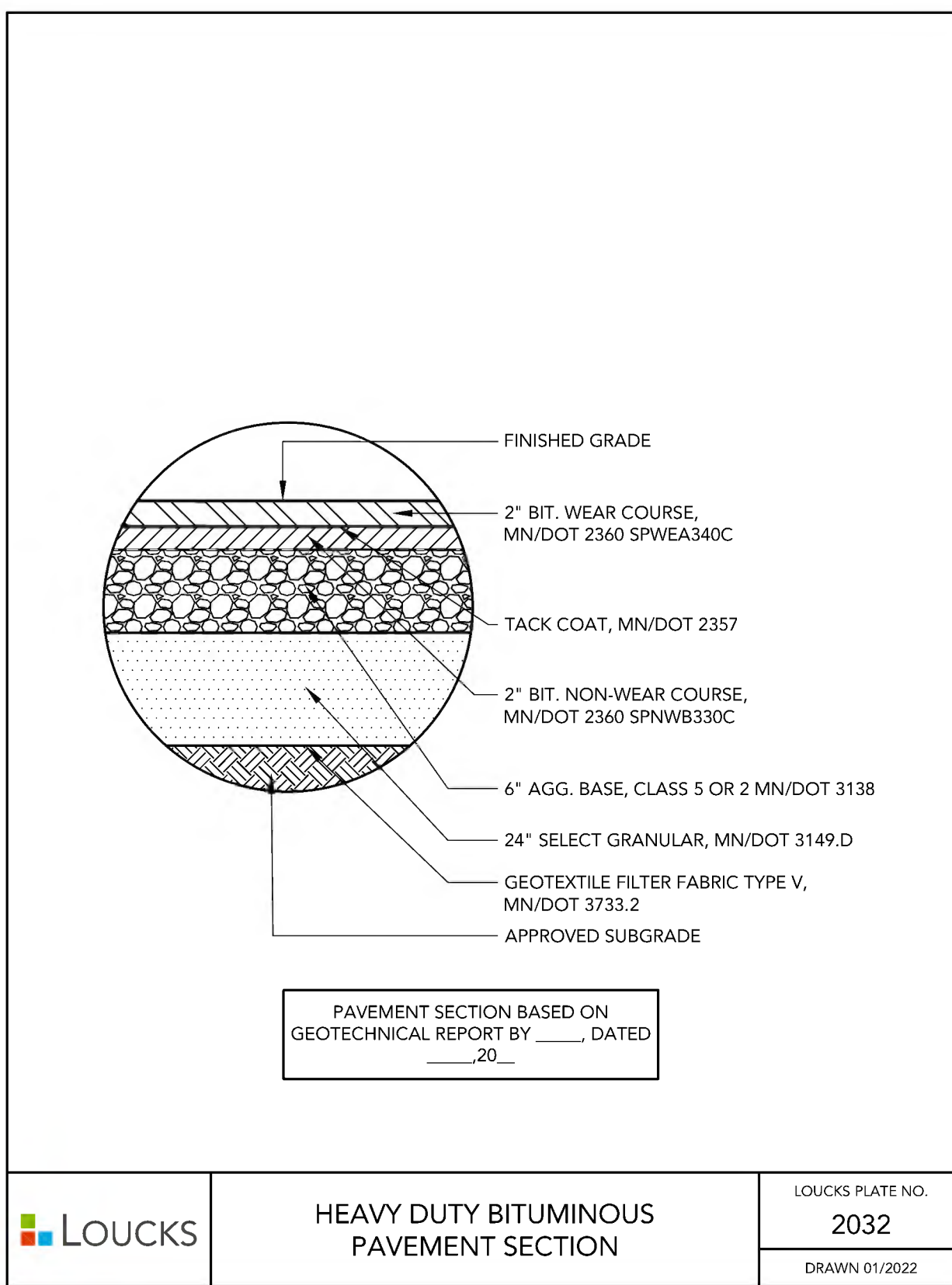
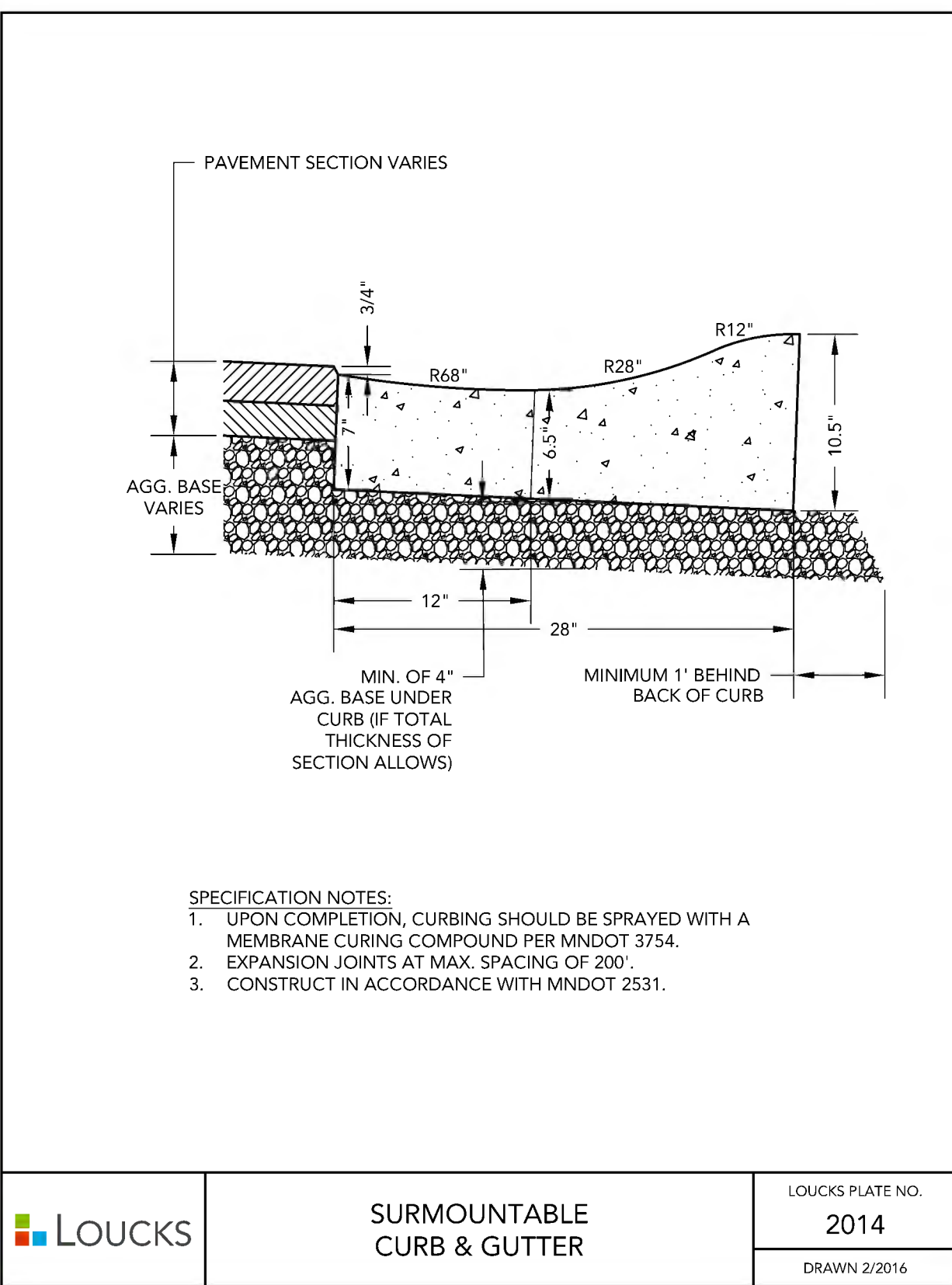
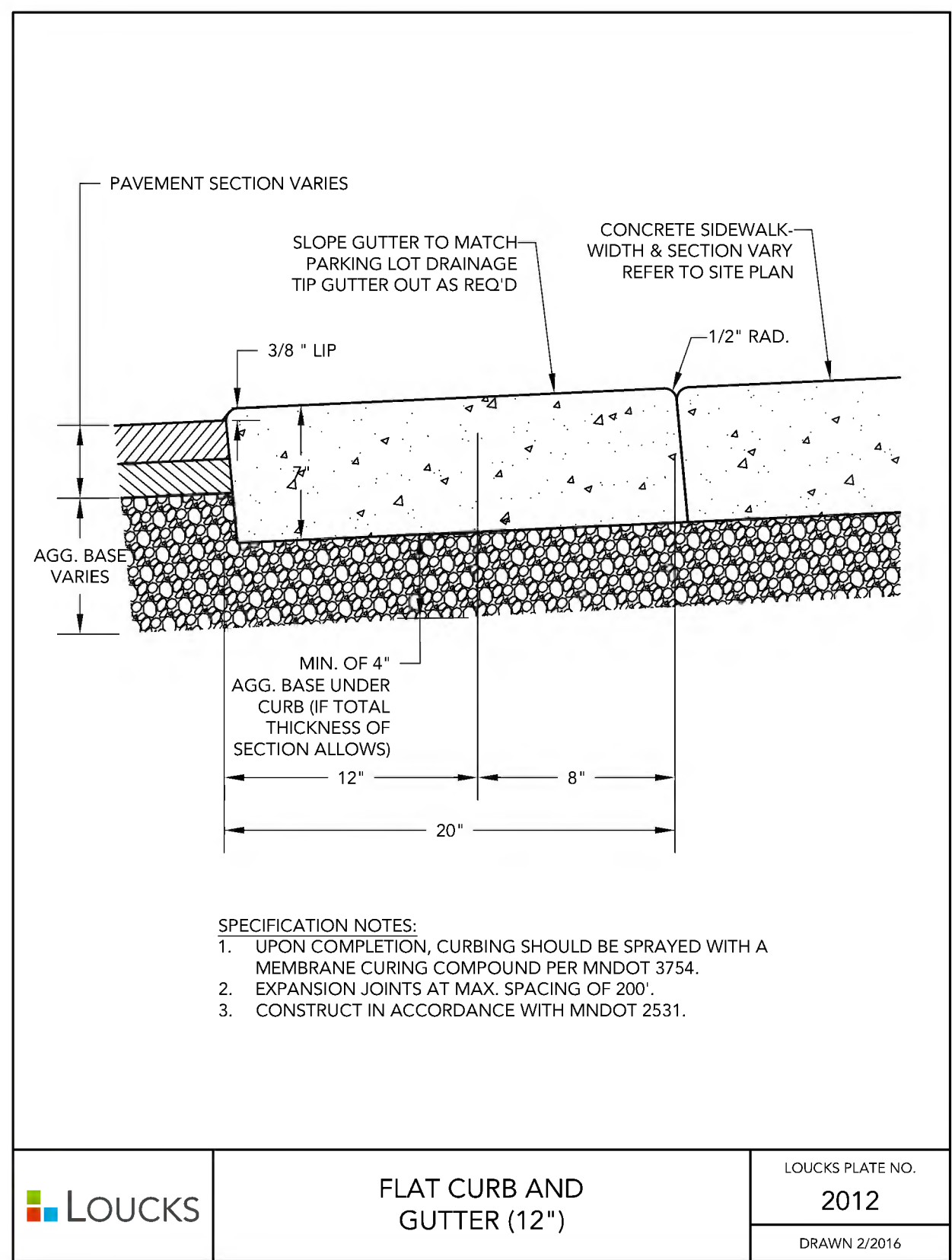
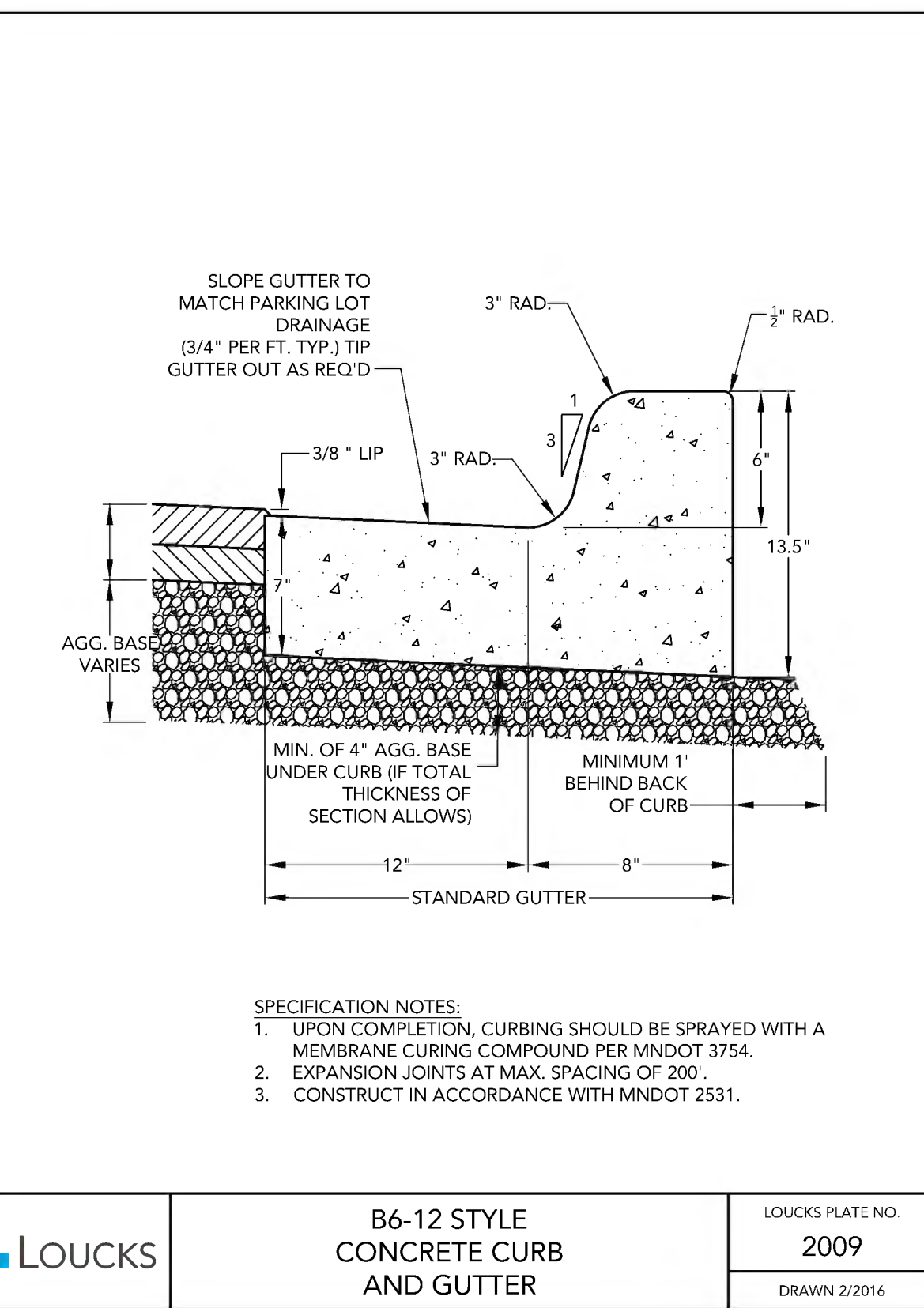
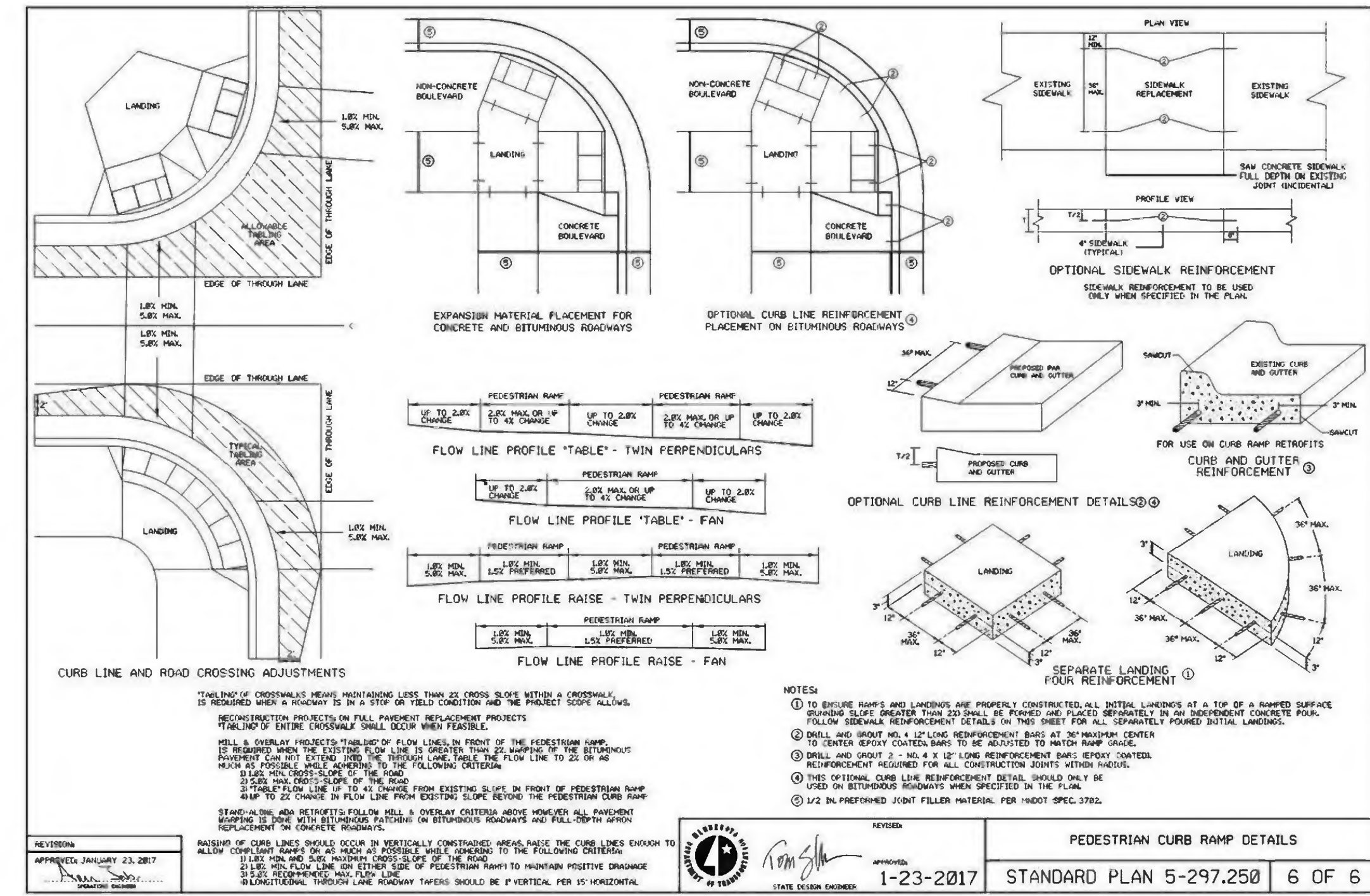
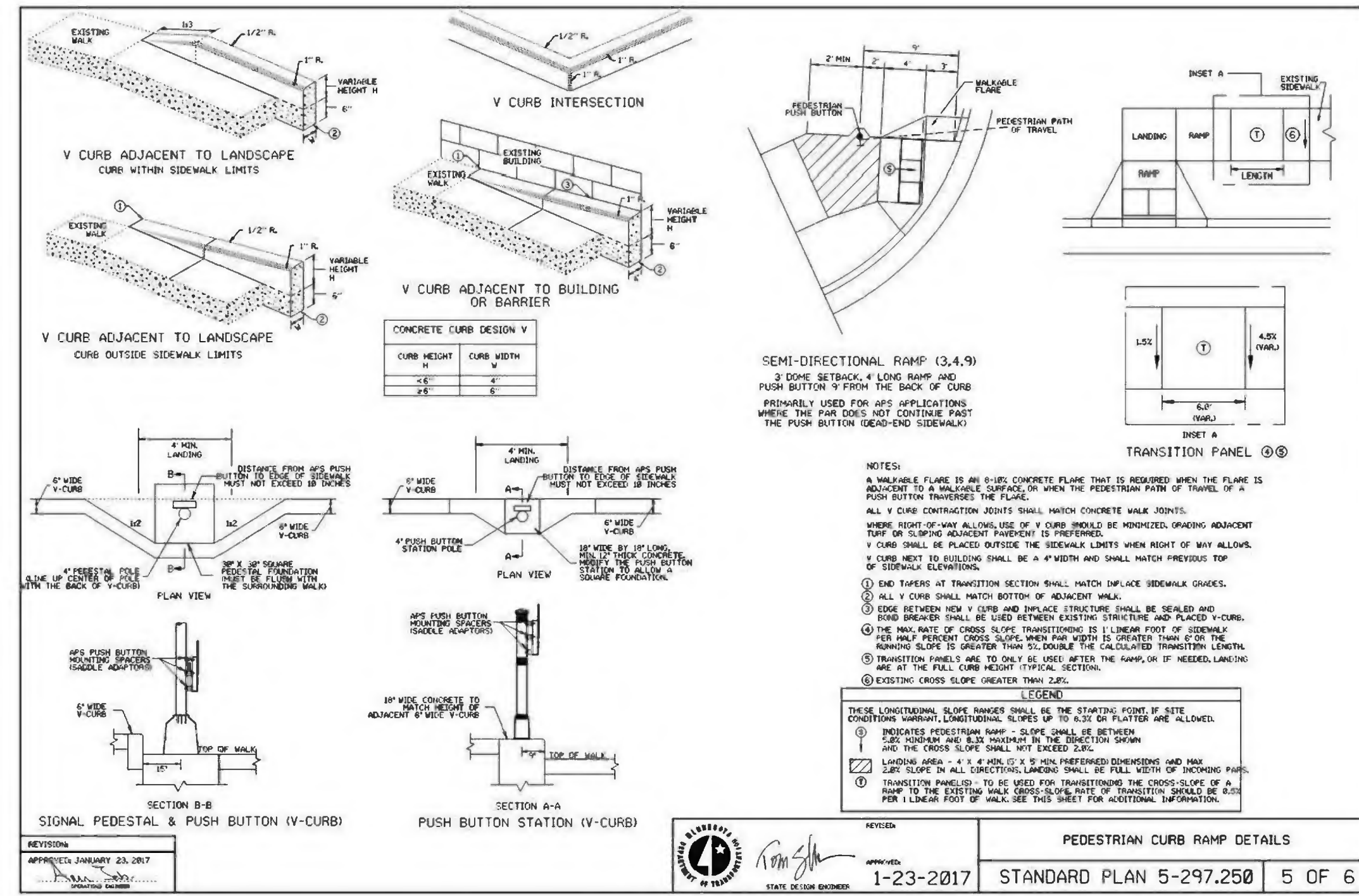
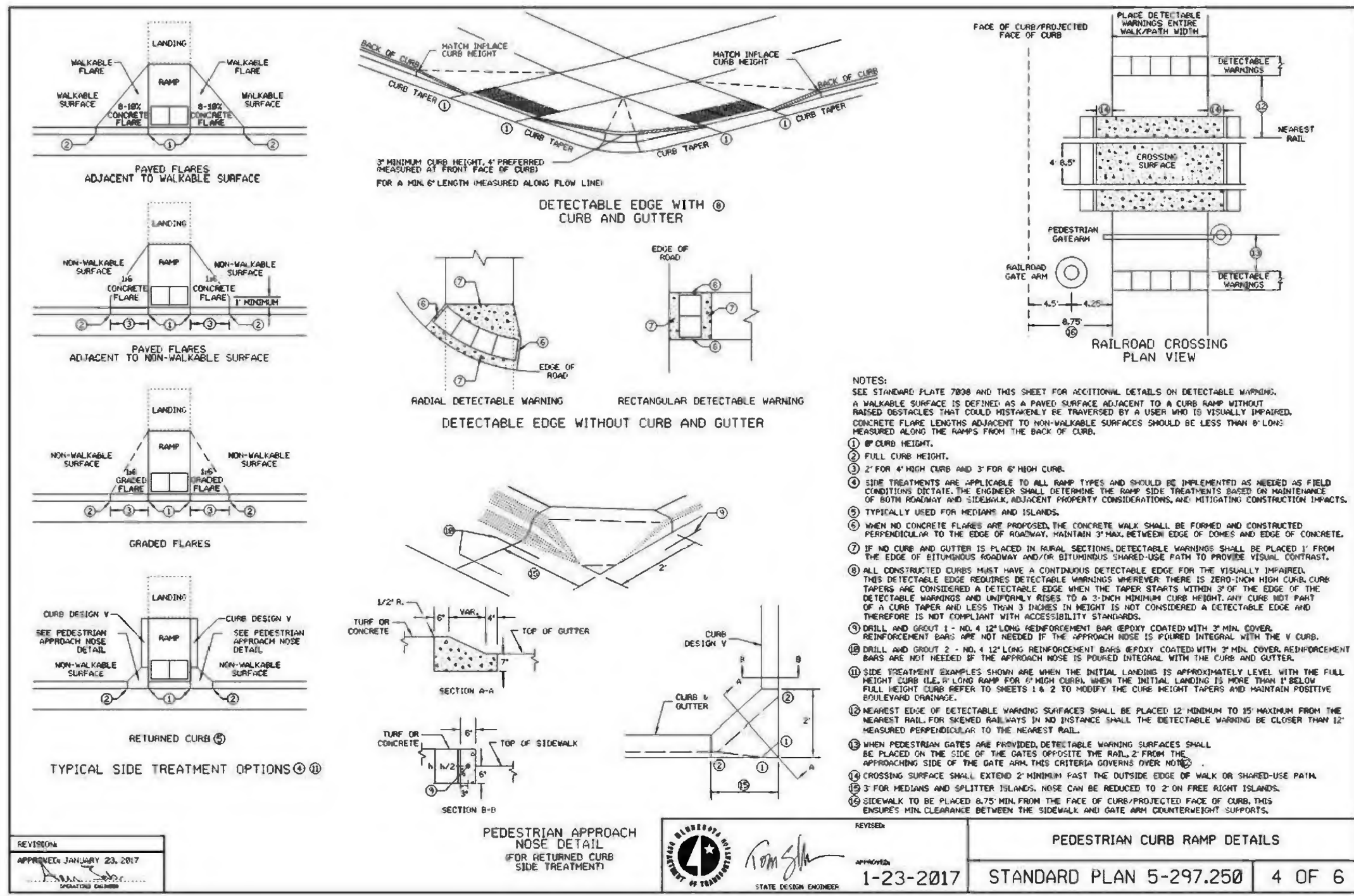
**SHEET INDEX**

C0-1	COVER SHEET
C1-1	EXISTING CONDITIONS
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C4-2	STORM SEWER PLAN
C4-3	PRELIMINARY PLAT
C8-1 TO C8-3	CIVIL DETAILS
L1-1 TO L1-3	TREE INVENTORY

**CIVIL DETAILS**

**C8-2**





**ONE ACRE OAKS**

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**SUBMITTAL REVISIONS**

DATE	REVISION
08/25/2023	PRELIMINARY PLAT
10/27/2023	CITY RESUBMITTAL COMPLIANT
11/29/2023	PLAN GRADING
01/18/2024	CITY RESUBMITTAL
03/15/2024	CITY RESUBMITTAL CITY RESPONSE
04/12/2024	CITY RESPONSE

**PROFESSIONAL SIGNATURE**

I hereby certify that this plan, specification and 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.

**PRELIMINARY**

License No. 021509.08  
Project No. MJS  
Drawn By MJS  
Checked By MJS  
Review Date 03/14/2024

**QUALITY CONTROL**

NO.	REVISION
C0-1	COVER SHEET
C1-1	EXISTING CONDITIONS
C1-2	DEMOLITION PLAN
C2-1	SITE PLAN
C2-2	TURNING MOVEMENT PLAN
C3-1	GRADING PLAN
C3-2 TO C3-3	SWPPP PLAN & NOTES
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C4-2	STORM SEWER PLAN
C6-1	PRELIMINARY PLAT
C8-1 TO C8-3	CIVIL DETAILS
L1-1 TO L1-3	TREE INVENTORY

**CIVIL DETAILS**

**C8-3**

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**SUBMITTAL/REVISIONS**

08/25/2023	PRELIMINARY PLAT
10/27/2023	CITY RESUBMITTAL COMPLIANT
11/29/2023	PLAN GRADING
01/18/2024	CITY RESUBMITTAL
03/15/2024	CITY RESUBMITTAL
04/12/2024	CITY RESPONSE

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**PRELIMINARY**  
Loren C. Cheek - LA 56877

**QUALITY CONTROL**

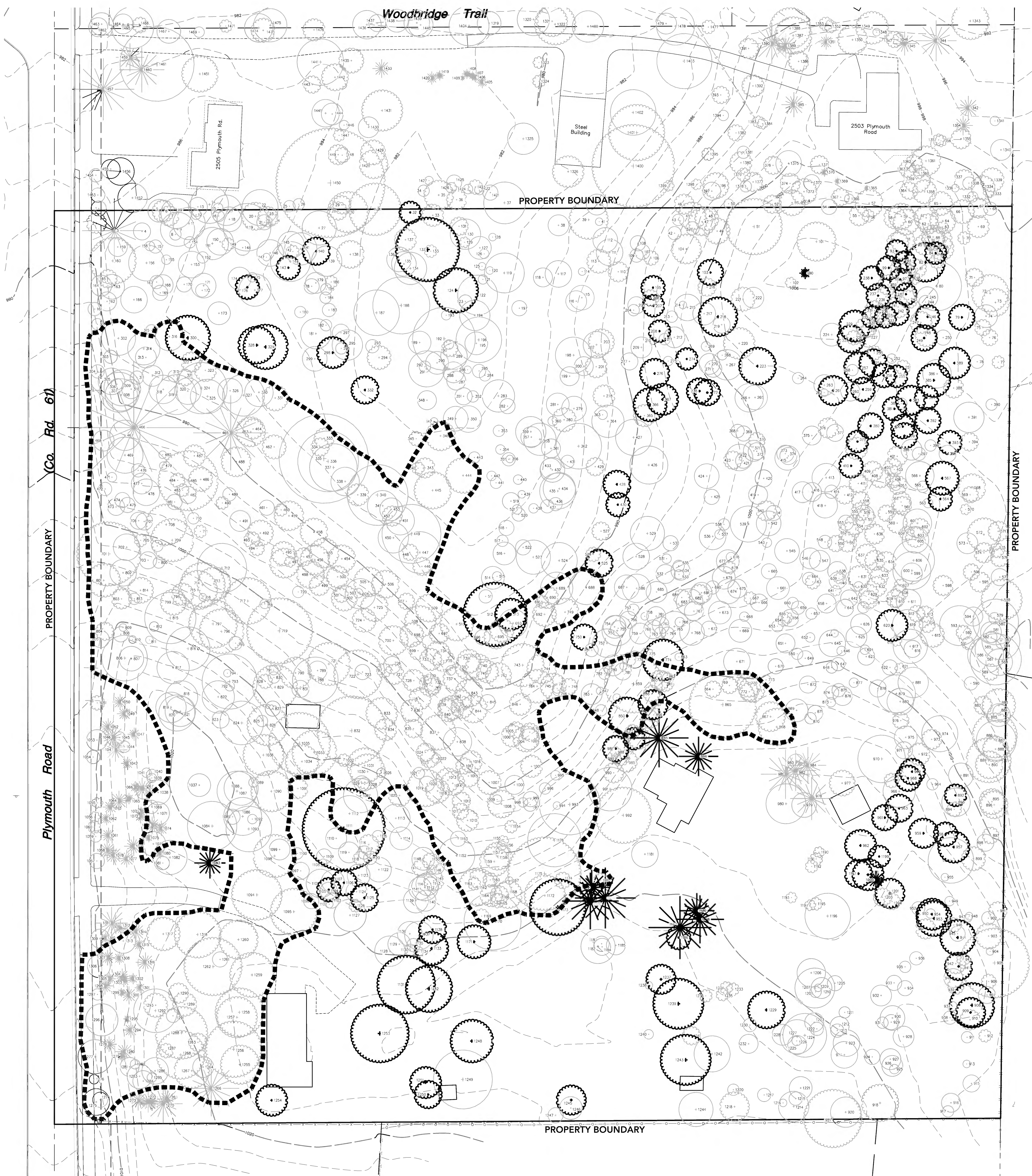
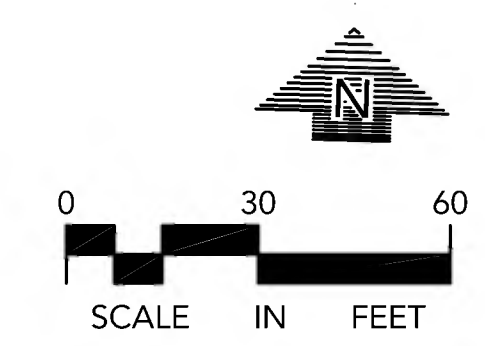
Loucks Project No.	021509.08
Project Lead	MJS
Drawn By	DCR
Checked By	DCR
Review Date	03/14/2024

**SHEET INDEX**

C0-1	COVER SHEET
C1-1	EXISTING CONDITIONS
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C8-1 TO C8-3	CIVIL DETAILS
L1-1 TO L1-3	TREE INVENTORY

**SURVEY REPORT**

- The purpose of this sheet is to depict and list the significant and high priority trees inventoried on the property, including Ash, Black Locust and Siberian Elm.
- The trees shown hereon were identified and field located to sub-meter accuracy by Stephen Nicholson, a Certified Arborist and Forester with TreeBiz.
- See Sheets L1-2 and L1-3 for tree inventory tables.



ONE ACRE OAKS

2511 and 2615 Plymouth Road, Minnetonka, MN 55305

LAKE WEST DEVELOPMENT, LLC

14525 Highway 7, Suite 265, Minnetonka, MN 55345



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SUBMITTAL REVISIONS

Table with 2 columns: Date and Description of revision. Includes dates like 08/25/2023 and descriptions like 'PRELIMINARY PLAT CITY RESUBMITTAL COMPLIANT'.

PROFESSIONAL SIGNATURE

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

Location: Hennock - LA 5677

QUALITY CONTROL

Loucks Project No. 021509.0B Drawn By: MJS Checked By: DCR Review Date: 03/14/2024

SHEET INDEX

Table listing sheet numbers and titles: C0-1 COVER SHEET, C1-1 EXISTING CONDITIONS, C1-2 DEMOLITION PLAN, C2-1 SITE PLAN, C2-2 TURNING MOVEMENT PLAN, C3-1 GRADING PLAN, C3-2 TO C3-3 SWPPP PLAN & NOTES, C3-4 FLOODPLAIN PLAN, C4-1 SANITARY & WATERMAIN PLAN, C4-2 STORM SEWER PLAN, C4-3 PRELIMINARY PLAT, C4-1 TO C4-3 CIVIL DETAILS, L1-1 TO L1-3 TREE INVENTORY.

TREE INVENTORY SURVEY

Table 1: Tree inventory data for the left side of the site, including columns for Tree No., Species, DBH, Height, Tree Condition, No. of Stems, WPA Tree, and High Priority Tree.

Table 2: Tree inventory data for the middle section of the site, including columns for Tree No., Species, DBH, Height, Tree Condition, No. of Stems, WPA Tree, and High Priority Tree.

Table 3: Tree inventory data for the right side of the site, including columns for Tree No., Species, DBH, Height, Tree Condition, No. of Stems, WPA Tree, and High Priority Tree.

Table 4: Tree inventory data for the right side of the site, including columns for Tree No., Species, DBH, Height, Tree Condition, No. of Stems, WPA Tree, and High Priority Tree.

Table 5: Tree inventory data for the right side of the site, including columns for Tree No., Species, DBH, Height, Tree Condition, No. of Stems, WPA Tree, and High Priority Tree.

CONTINUED ON SHEET L1-3

NOTE: ALL LISTED TREES ARE SIGNIFICANT UNLESS NOTED AS 'HP'



LEGAL DESCRIPTION

The South 136.50 feet of the North 2/3 of the South 3/4 of the West 1/2 of the Northwest Quarter of the Southwest Quarter of Section 11, Township 117, Range 22, according to the United States Government Survey thereof, Hennepin County, Minnesota.

AND

The North 2/3 of the South 3/4 of the West 1/2 of the Northwest Quarter of the Southwest Quarter of Section 11, Township 117, Range 22, except the South 136.50 feet thereof, according to the United States Government Survey thereof, Hennepin County, Minnesota.

Abstract Property.

GENERAL NOTES

- 1. Prepared August 25, 2023.
2. The address, as disclosed in documents provided to the surveyor, obtained by the surveyor, or observed while conducting the fieldwork is 2503, 2505, 2511 and 2615 Plymouth Road, Minnetonka, Minnesota 55305.
3. The bearings for this survey are based on the Hennepin County Coordinate System NAD 83 (1986 Adjust).
4. Benchmark: MnDOT 2789 AH (Disk In Bridge Railing) In Minnetonka; in a bridge railing at the southeast corner of CR61/Plymouth Rd - Bridge No. 27736 over I-394; at I-394 milepoint 0.75; 0.8 mile east along I-394 from the junction of I-394 and I-494; 28.0 feet east of CR 61. Elevation = 898.52 feet (NGVD29)
Site Benchmark: Top nut of hydrant located on west side of Plymouth Road near the southwest corner of the property, shown hereon. Elevation = 1011.31 feet (NGVD29)
5. This property is contained in Zone X (areas determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map No. 27053C0329F, Community Panel No. 270173 0329 F, effective date of November 4, 2016.
6. The field work was completed on October 6, 2021.
7. This property is currently under construction. All monuments will be set after construction is completed, or within one year of the plat being recorded.

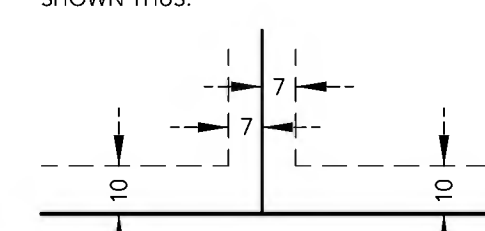
ZONING INFORMATION

Current Zoning: R-1 (Low Density Residential District)
Current Setbacks:
Front Yard: 35 Feet (Local & Neighborhood Collector Streets) 50 Feet (Major Collector & Arterial Roadways)
Side Yard: Sum Shall Not Be Less Than 30 Feet, With A Min. Of 10 Feet
Rear Yard: Min. Of 40 Feet Or 20% Of Lot Depth, Whichever Is Less

SITE DATA

Table with 3 columns: Lot Number, Area (square feet), and Area (acres). Total Property = 435,877 +/- square feet or 10.01 +/- acres.

DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THIS:



BEING 7 FEET IN WIDTH, UNLESS OTHERWISE INDICATED AND ADJOINING LOT LINES, AND BEING 10 FEET IN WIDTH, UNLESS OTHERWISE INDICATED, AND ADJOINING RIGHT-OF-WAY AND BOUNDARY LINES, AS SHOWN ON THE PLAN.

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SUBMITTAL REVISIONS

Table with 2 columns: Date and Description of revision (e.g., PRELIMINARY PLAT, CITY RESUBMITTAL COMPLIANT).

PROFESSIONAL SIGNATURE

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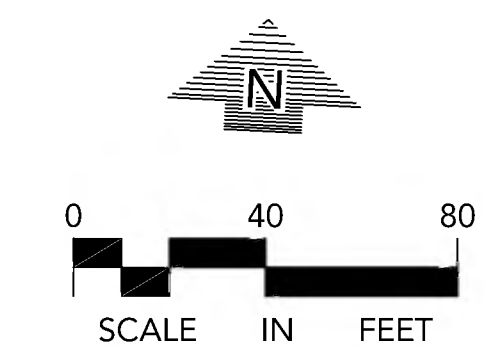
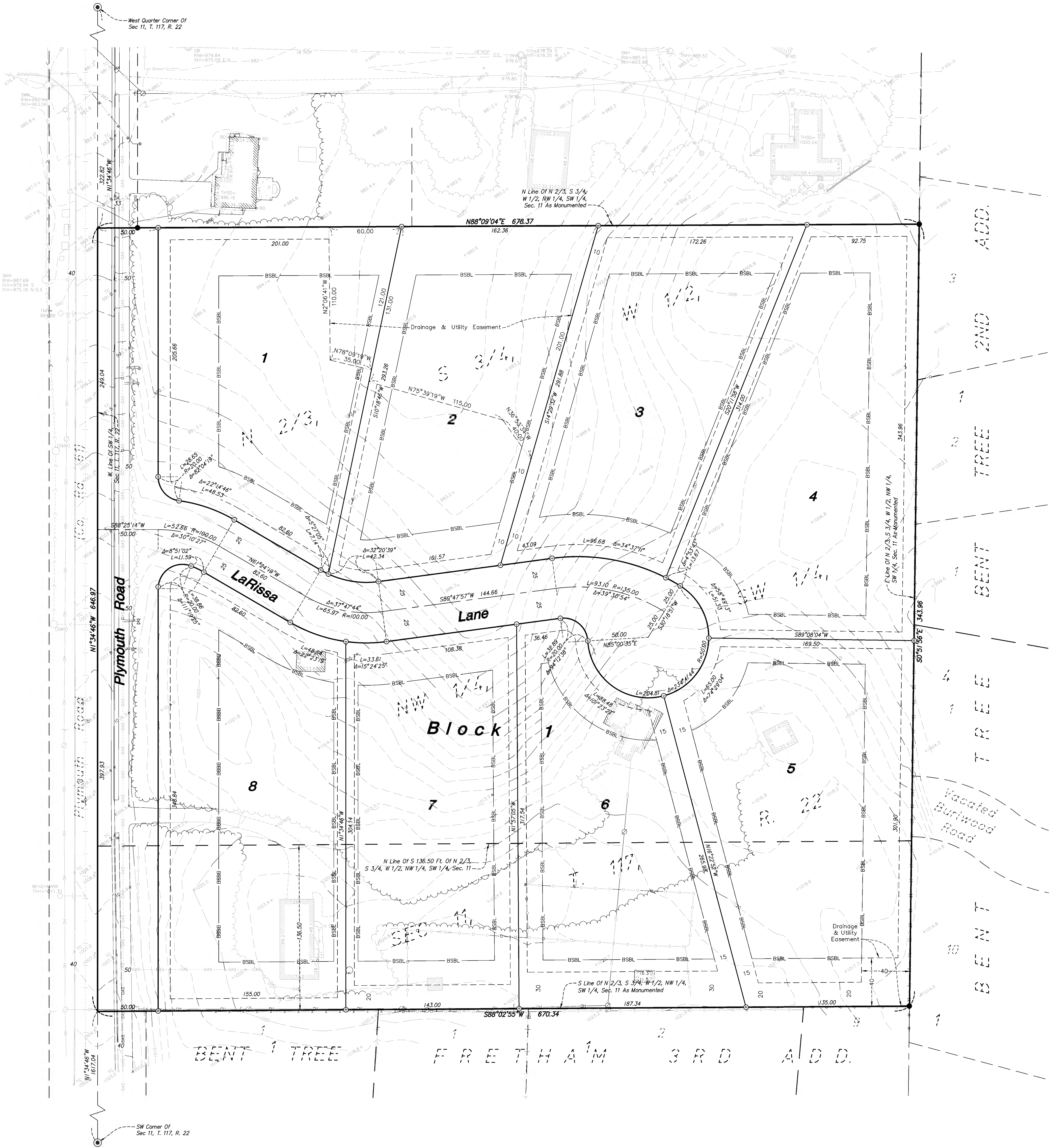
Max L. Stenlowski - PLS Date: 08/25/23

QUALITY CONTROL

Table with 2 columns: Role (e.g., Project Lead, Drawn By) and Name (e.g., MLS, SFM).

VICINITY MAP

- C0-1 COVER SHEET
C1-1 EXISTING CONDITIONS
C1-2 DEMOLITION PLAN
C2-1 SITE PLAN
C2-2 TURNING MOVEMENT PLAN
C3-1 GRADING PLAN
C3-2 TO C3-3 SWPPP PLAN & NOTES
C3-4 FLOODPLAIN PLAN
C4-1 SANITARY & WATERMAIN PLAN
C4-2 STORM SEWER PLAN
C6-1 PRELIMINARY PLAT
C8-1 TO C8-3 CIVIL DETAILS
L1-1 TO L1-3 TREE INVENTORY



# EXHIBIT

## Storm Sewer Easement Description

March 7, 2024



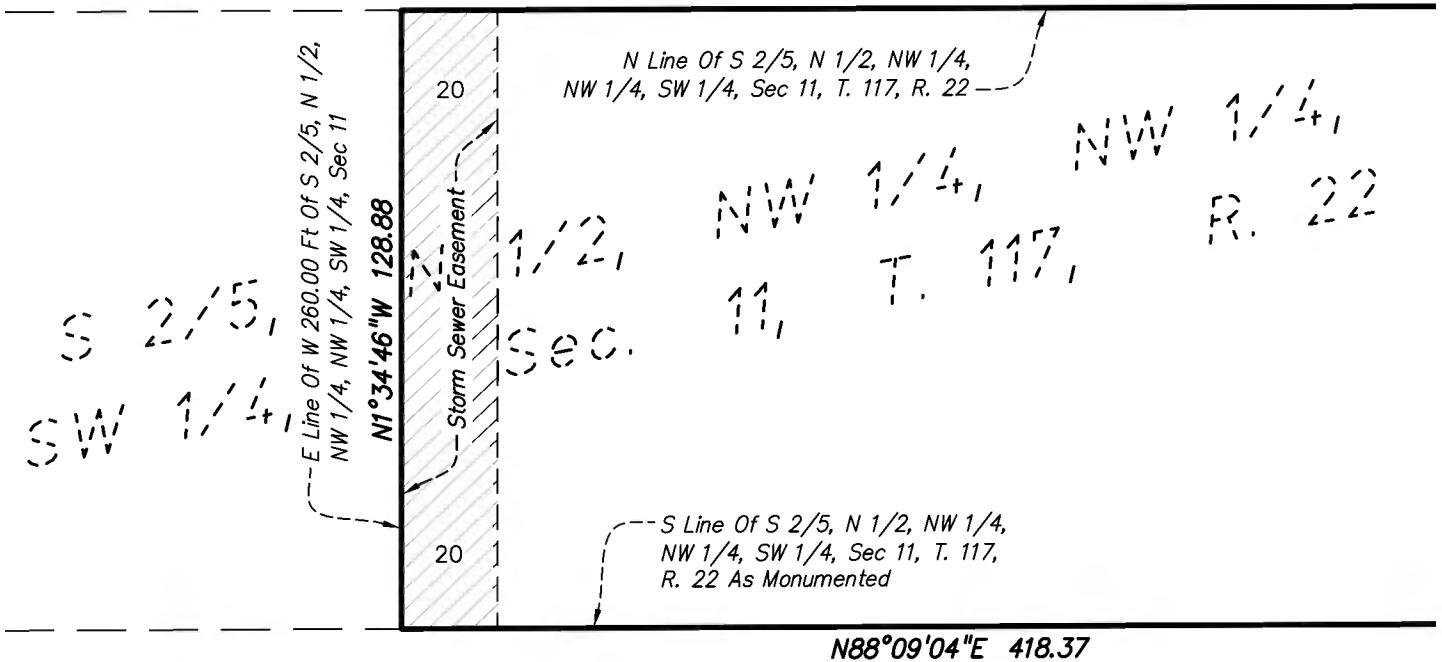
The west 20.00 feet of that part of the South 2/5 of the North 1/2 of the Northwest 1/4 of the Northwest 1/4 of the Southwest 1/4 of Section 11, Township 117, Range 22, Hennepin County, Minnesota, lying east of the west 260.00 feet thereof.

EMERALD TRAIL 4TH ADD.

Emerald Trail

Woodbridge Trail

N88°11'56"E 419.97



DENOTES STORM SEWER EASEMENT  
2,577 ± SQ. FT.

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

*Max L. Stanislawski*

Max L. Stanislawski - PLS

License No. 48988

03/07/24

Date



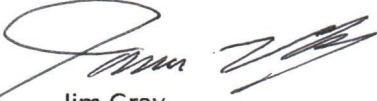
Loucks Project No. 21509B

Thursday, April 15, 2024

Dear City of Minnetonka,

As the owner of 2503 Plymouth Road in Minnetonka, I acknowledge that the One Acre Oaks application requires an easement across my property as well as a concentrated discharge directed onto my property during smaller storms. Formal documentation of said easement was reviewed as well as a description of the concentrated discharge.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Gray", with a large, sweeping flourish extending to the left.

Jim Gray

Property Owner:  
2503 Plymouth Road, Minnetonka

March 20, 2024



**Susan Thomas**

Assistant City Planner  
City of Minnetonka  
Community Development Department, Planning Division  
14600 Minnetonka Blvd  
Minnetonka, MN 55345

**MEMORANDUM**

**Subject: One Acre Oaks – City Steep Slope Ordinance Section 300.28. Performance Standards, Section 20. Performance Standards Regulating Steep Slopes. a) 1-6 and b) 1-3: Findings 1-3**  
Loucks Proj. No. 21509.0B

Susan,

On behalf of Lake West Development, we have addressed each element of Findings 1, 2 & 3 listed in 20.b). of the subject ordinance to emphasize that the plan embraces the purpose of the ordinance and specifically captures the spirit of Section 20. a) 1-6. of the steep slope ordinance. Please see the following numbered code references and related responses in [blue](#).

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**Finding 1. The plan embraces the existing topographical features of the site. The proposed development will preserve significant natural features by minimizing disturbance to existing topographical forms.**

- a. Design developments into steep slopes, rather than making significant alterations to the slope to fit the development:

*Minimal alternations will be made to the slopes as the design of the development is to minimize disturbance to existing topographical forms. The south side house pads are situated at the high point of the site, south of the steep slopes. Retaining walls will be used to support the house pads and driveways to minimize impacts to the steep slope features of each lot.*

- 1. Avoid building pads that result in extensive grading outside the building footprint and driveway areas;  
*The grading uses 3:1 slopes or less and retaining walls where applicable to limit grading to the existing topography, and to allow for construction of the homes and rear yard pool and patio areas.*
- 2. Use retaining walls as an alternative to banks of cut-and-fill, and design and site such walls to avoid adverse visual impact;



*Retaining walls will be incorporated where necessary to minimize impacts to steep slopes. The exposed side of the retaining walls south of the proposed street faces the wooded steep slopes, so they will have minimum visibility.*

3. Allow for clustering with different lot shapes and sizes, with the prime determinant being to maximize the preservation of the natural terrain;

*The lot sizes are one acre minimum and typical rectangular shapes; however, the house pad locations and driveway layouts are strategically placed to minimize impacts to steep slopes. Some driveways are shared to minimize disturbed area. The size of the lots permits key natural features of the site to remain undisturbed.*

4. Allow flag lots when appropriate to minimize grading;

*Not applicable, see item 3. above.*

5. Avoid cuts and fills greater than 25 feet in depth; and

*Not applicable.*

6. Design grading to preserve the crest of prominent ridges. Buildings may be located on the prominent ridges, as long as the requirements of this subdivision are met.

*The southerly four house pads are situated on the natural ridge permitting the crest of the ridges in this area to remain in their current condition. The driveways will be routed up to the homes situated on the crest, minimizing impacts to steep slopes.*

- b. Design streets and driveways that generally follow existing contours, except where necessary for public safety or to minimize the adverse impacts from traffic:

*The public street enters the property based on Hennepin County's direction. The street grades generally follow the topography and meet the city maximum slope of eight percent.*

1. Use cul-de-sacs and common drives where practical and desirable to preserve slopes; and

*The public street ends in a cul-de-sac and follows the topography. Two of the driveways are shared to allow access to four lots total.*

2. Avoid individual long driveways, unless necessary to locate the principal structure on a less sensitive area of the site.

*Lot 6 has an individual long driveway to allow access to the house pad at the southern part of the lot, which is located on top of the ridge. This long driveway feature preserves the crest of the steep slope.*

- c. Concentrate development on the least sensitive portion of the site to maximize the preservation of significant trees and natural features:

*The public street enters the property based on Hennepin County's direction, which is in the center of the two parcels. This access creates a site plan featuring a subdivision at no more than 1 unit per acre with lot location and house pads that are concentrated in the least sensitive portion of the site. On balance, the location of the access to the site preserves much of the current features of the site including features within the WPA. The house pads for the most part, fall outside the WPA. Finally, the layout preserves a buffer of significant trees along the perimeter of the site.*

1. Preserve sensitive areas by clustering buildings or using other innovative approaches; and

*The four lots using two shared driveways minimize grading and impact to the site's current features.*

2. Maintain sufficient vegetation and design the scale of development so that it does not overwhelm the natural character of the steep slope.

*The preserved steep slope area is heavily wooded and will be preserved.*

- d. Preserve steep slopes that buffer residences from non-residential sources of light and noise.

*Not applicable, neighbors are residential.*

**Finding 2. The development will not result in soil erosion, flooding, severe scarring, reduced water quality, inadequate drainage control, or other problems.**

- a. Wherever practical, minimize the impervious surface area and maximize the use of the natural drainage systems:

*To minimize the impervious surface area, we minimized the width and length of the street by meeting the minimum street width and minimized the cul-de-sac length by using long and shared driveways.*

*To maximize the use of the natural drainage systems, we have designed the site to maintain the natural drainage patterns through the existing steep slope area that collects in the existing storm sewer. This, along with the street and other site areas, is routed to a stormwater pond for treatment and rate control. The pond outlets to the existing ditch on the Irving Property to the North and there is also a secondary piped outlet parallel to the ditch to minimize flood impacts and erosion to the neighbor.*

1. Design any new drainage systems away from neighboring properties, away from cut faces or sloping surfaces of a fill, and toward appropriate drainage facilities, whether artificial or natural. Drainage systems must comply with the city's water resources management plan; and

*To maximize the use of the natural drainage systems, we have designed the site to maintain the natural drainage patterns through the existing steep slope area that collects in the existing storm sewer. This, along with the street and other site areas, is routed to a stormwater pond for treatment and rate control. The pond outlets to the existing ditch on the Irving Property to the North and there is also a secondary piped outlet parallel to the ditch to minimize flood impacts and erosion to the neighbor and to comply with the City's water resources management plan.*

2. Use the existing natural drainage system as much as possible in its unimproved state, if the natural system adequately controls erosion:

*To use the existing natural drainage systems, we have designed the site to maintain the natural drainage patterns through the existing steep slope area that collects in the existing storm sewer. This, along with the street and other site areas, is routed to a stormwater pond for treatment and rate control. The pond outlets to the existing ditch on the Irving Property to the North and there is also a secondary piped outlet parallel to the ditch to minimize flood impacts and erosion to the neighbor.*

- b. Avoid building on or creating steep slopes with an average grade of 30 percent or more. The city may prohibit building on or creating such slopes in the following situations:

1. Where the city determines that reasonable development can occur on the site without building on or creating such slopes; or

*The plan uses industry standard 3:1 slopes or less to limit impacts to wooded areas and steep slopes.*

2. Development on such slopes would create real or potentially detrimental drainage or erosion problems.

*The drainage area to the steep slope area is minimal and utilizes existing drainage configurations.*

- c. Design slopes to be in character with the surrounding natural terrain;

*The site plan topography conforms to the naturally steep terrain. The house pads, driveways, streets and pond utilize the existing ridges and valleys to permit the ongoing use of the current drainage and erosion features.*

- d. Use benching, terracing, or other slope-stabilizing techniques for fill, as determined appropriate by the city engineer;

*Not applicable.*

- e. Install and maintain erosion control measures during construction in accordance with the current Minnesota Pollution Control Agency best management practices; and

*The project SWPPP plan complies with the MPCA NPDES permit requirements.*

- f. Revegetate disturbed slopes as soon as practical after grading to stabilize steep slopes and prevent erosion, as required by the city.

*The project SWPPP plan complies with the MPCA NPDES permit requirements, including revegetation.*

**Finding 3. The proposed development provides adequate measures to protect public safety.**

- a. Limit the slopes of private driveways to not more than 10 percent, unless necessary to minimize excessive grading. Where the grade exceeds 10 percent, the driveway should have sufficient flat areas at the top and toe to provide vehicles a landing area and to avoid vehicles slipping onto the adjacent street during icy conditions. The city may require a driveway turn-around; and

*The project has driveways of 10 percent or less. The two shared driveways have a hammerhead turnaround to allow emergency vehicle access.*

- b. Provide sufficient access for emergency vehicles to reach the proposed buildings

*In most instances, the building pads are within 150' minimum length for the public road. The two shared driveways have a hammerhead turnaround to allow for emergency vehicle access.*

4) The city may require that the applicant provide engineering certification, acceptable to the city, that no excavation or fill will cause any steep slope to become unstable; impose loads that may affect the safety of structures or steep slopes; interfere with adequate drainage for the site area and the area that drains directly to the site; obstruct, damage, or adversely affect existing sewerage or drainage; adversely affect the quality of stormwater runoff; adversely affect downstream properties, wetlands or bodies of water; or cause adverse erosion or sedimentation.

*Noted.*

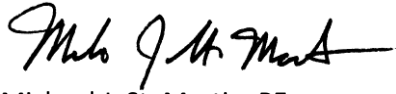
5) the city may require that the applicant provide certification from a registered engineer that the final grading was completed in compliance with the approved grading plan.

*Noted.*

6) the city may require the applicant to prepare and record a declaration of covenants, conditions and restrictions, in a form acceptable to the city attorney, providing for property owner maintenance of manufactured slope areas, acceptance of all risks and liability associated with those areas, and release of the city from all associated claims.

*Noted.*

Regards,  
**LOUCKS**

A handwritten signature in black ink, appearing to read "Michael J. St. Martin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael J. St. Martin, PE  
President, Principal Civil Engineer