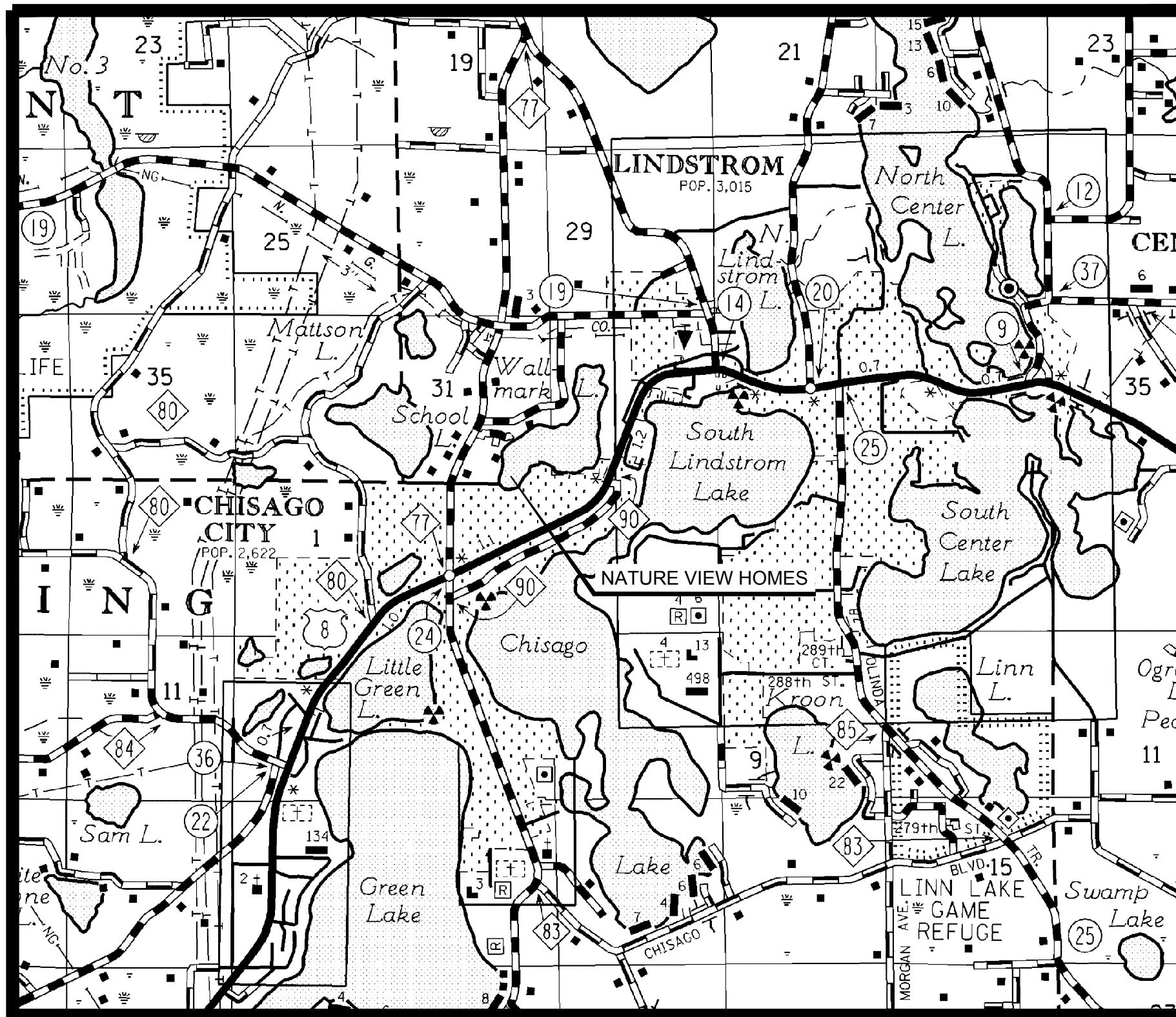
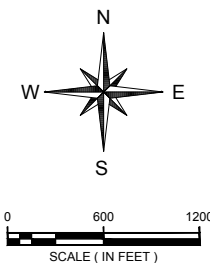


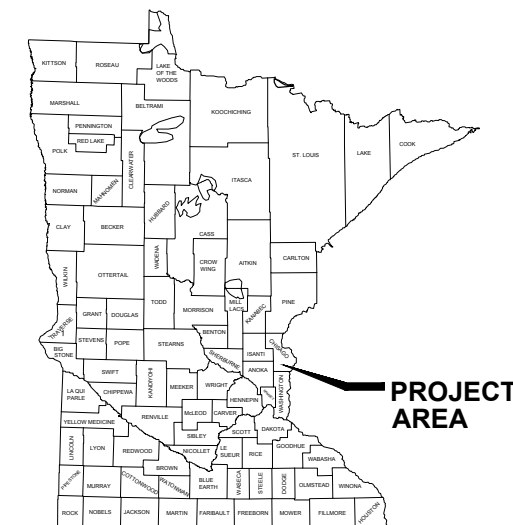
# CONSTRUCTION PLANS FOR NATURE VIEW HOMES CHISAGO CITY, MN



PARTIAL MAP OF CHISAGO CITY, MINNESOTA

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C7.4	EROSION AND SEDIMENT CONTROL PLAN



### GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL CONSTRUCTION SHALL CONFORM TO THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM) STANDARD SPECIFICATIONS.

### SUBSURFACE UTILITY NOTE

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

GOPHER STATE ONE CALL  
1-800-252-1166

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental



BY: GREGORY W. NOLTING, LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
DATE: 7-21-20 LIC. NO. 4172

DATE	REVISION DESCRIPTION
01/17/2020	CITY SUBMITTAL
03/31/2020	CITY SUBMITTAL
06/09/2020	CITY SUBMITTAL
07/19/2020	CITY SUBMITTAL

DATE: JANUARY, 2020  
SCALE: AS SHOWN  
DRAWN BY: ALS  
CHECKED BY: GWN  
JOB NUMBER: 2019-12702

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
SHEET NO. **C1.1**

**SURVEY MONUMENTS**

- BENCH MARK
- FOUND CIM
- FOUND CPNT.
- FOUND JLM
- FOUND LATH
- FOUND PIPE
- FOUND READING
- STAKED CIM
- STAKED CPNT.
- STAKED JLM
- STAKED PIPE

**EXISTING TOPO SYMBOLS**

- AC UNIT
- FENCE POST
- FLAG POLE
- GUARD POST
- GUY ANCHOR
- GUY POLE
- HANDICAP SYMBOL
- MAILBOX
- SHRUB
- SIGN DOUBLE POST
- SIGN SINGLE POST
- TREE CONIFER
- TREE DECIDUOUS
- TREE STUMP
- TV DISH
- WETLAND SYMBOL
- YARD LIGHT

**EXISTING UTILITY MUNICIPAL SYMBOLS**

- APRON
- LIFT STATION
- SANITARY CLEANOUT
- SANITARY MANHOLE
- STORM CATCH BASIN
- STORM INLET

**EXISTING UTILITY MUNICIPAL SYMBOLS (cont.)**

- STORM MANHOLE
- WATER CURB STOP
- WATER HANDHOLE
- WATER HYDRANT
- WATER MANHOLE
- WATER METER
- WATER VALVE
- WATER WELL
- UTILITY UTILITY SIZE & TYPE

**EXISTING UTILITY PRIVATE SYMBOLS**

- ELEC GROUND LIGHT
- ELEC HANDHOLE
- ELEC LIGHT POLE
- ELEC MANHOLE
- ELEC METER
- ELEC PEDESTAL
- ELEC POLE
- ELEC SIGNAL
- ELEC TRANSFORMER BOX
- GAS METER
- GAS VALVE
- LP TANK
- TELE HANDHOLE
- TELE MANHOLE
- TELE PEDESTAL
- TELE POLE
- TV HANDHOLE
- TV PEDESTAL

**SOIL BORING SYMBOLS**

- LASER-INDUCED FLUORESCENCE BORING
- LYSIMETER
- MONITOR WELL
- PERC TEST
- PIEZOMETER
- RECOVERY WELL
- SOIL BORING
- SOIL VAPOR POINT
- VAPOR SURVEY POINT

**PROPOSED UTILITY MUNICIPAL SYMBOLS**

- APRON PROPOSED
- SANITARY CLEANOUT PROPOSED
- SANITARY LIFT STATION PROPOSED
- SANITARY LIFT STATION VALVE MANHOLE PROPOSED
- SANITARY MANHOLE PROPOSED
- SANITARY PLUG PROPOSED
- STORM CATCH BASIN PROPOSED
- STORM MANHOLE PROPOSED
- WATER 11 1/4° BEND PROPOSED
- WATER 22 1/2° BEND PROPOSED
- WATER 45° BEND PROPOSED
- WATER 90° BEND PROPOSED
- WATER CAP PROPOSED
- WATER CROSS PROPOSED
- WATER CURB STOP PROPOSED
- WATER HYDRANT PROPOSED
- WATER REDUCER PROPOSED
- WATER SLEEVE PROPOSED
- WATER TEE PROPOSED
- WATER VALVE PROPOSED

**PROPOSED UTILITY PRIVATE SYMBOLS**

- ELEC LIGHT POLE PROPOSED

**EROSION CONTROL SYMBOLS**

- SURFACE DRAINAGE ARROW
- STORM DRAIN INLET PROTECTION

**TRAFFIC CONTROL DEVICES & SYMBOLS**

- TRAFFIC CONTROL SIGN (1 POST)
- TRAFFIC CONTROL SIGN (2 POST)
- TYPE III BARRICADE
- DRUM CHANNELIZER
- FLASHING ARROW OR MESSAGE BOARD

**EXISTING TOPOGRAPHIC LINES**

- CENTER LINE
- EDGE OF WOODS
- FENCE BARB WIRE
- FENCE CHAIN LINK
- FENCE WOOD
- FORCEMAIN
- OVERHEAD CABLE TV
- OVERHEAD ELECTRIC
- OVERHEAD TELE
- RAILROAD
- RETAINING WALL
- SANITARY SEWER
- SANITARY SEWER SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- UNDERGROUND CABLE TV
- UNDERGROUND ELECTRIC
- UNDERGROUND FIBER OPTIC
- UNDERGROUND GAS
- UNDERGROUND TELE
- WATERMAIN
- WATERMAIN SERVICE
- WETLAND EDGE
- WETLAND BUFFER

**R/W, LOT & EASEMENTS LINES**

- BUILDING SETBACK LINE
- LOT LINE PROPOSED
- EASEMENT LINE
- EASEMENT LINE PROPOSED
- LOT LINE
- MNDOT CONTROLLED ACCESS LINE
- RIGHT OF WAY EXISTING
- RIGHT OF WAY PROPOSED

**PROPOSED CONSTRUCTION LINES**

- FENCE CHAIN LINK PROPOSED
- FENCE WOOD PROPOSED
- FENCE BARB WIRE PROPOSED
- FORCEMAIN PROPOSED
- SANITARY SEWER PROPOSED
- SANITARY SERVICE PROPOSED
- STORM SEWER PROPOSED
- STORM SEWER DRAIN TILE PROPOSED
- WATERMAIN PROPOSED
- WATERMAIN SERVICE PROPOSED

**EROSION CONTROL LINES**

- BALE CHECK
- BIO ROLL
- SILT FENCE
- SILT FENCE TYPE HEAVY DUTY
- SILT FENCE TYPE MACHINE SLICED
- SILT FENCE TYPE PREASSEMBLED
- FLOTATION SILT CURTAIN

**HATCH PATTERN AND SHADING LEGEND**

- RANDOM RIPRAP
- SOD
- SEED
- HYDRAULIC STABILIZER
- EROSION CONTROL BLANKET
- TEMP. ROCK CONSTRUCTION ENTRANCE
- BUILDING WALL HATCH
- BITUMINOUS SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- EASEMENT PATTERN

**DOCUMENTATION SYMBOLS**

- SECTION ARROW - SECTION NUMBER TOP; PAGE OF SECTION BOTTOM

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045

7-21-20

JOB NUMBER: 2019-12702

SHEET NO. **C1.2**

DATE	REVISION DESCRIPTION	BY
01/17/2020	CITY SUBMITTAL	ALS
03/03/2020	CITY SUBMITTAL	ALS
06/09/2020	CITY SUBMITTAL	ALS

I HEREBY CERTIFY THAT THIS IS AN ACCURATE AND COMPLETE REPORT THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
*Gregory W. Nathe*  
GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 4172Z



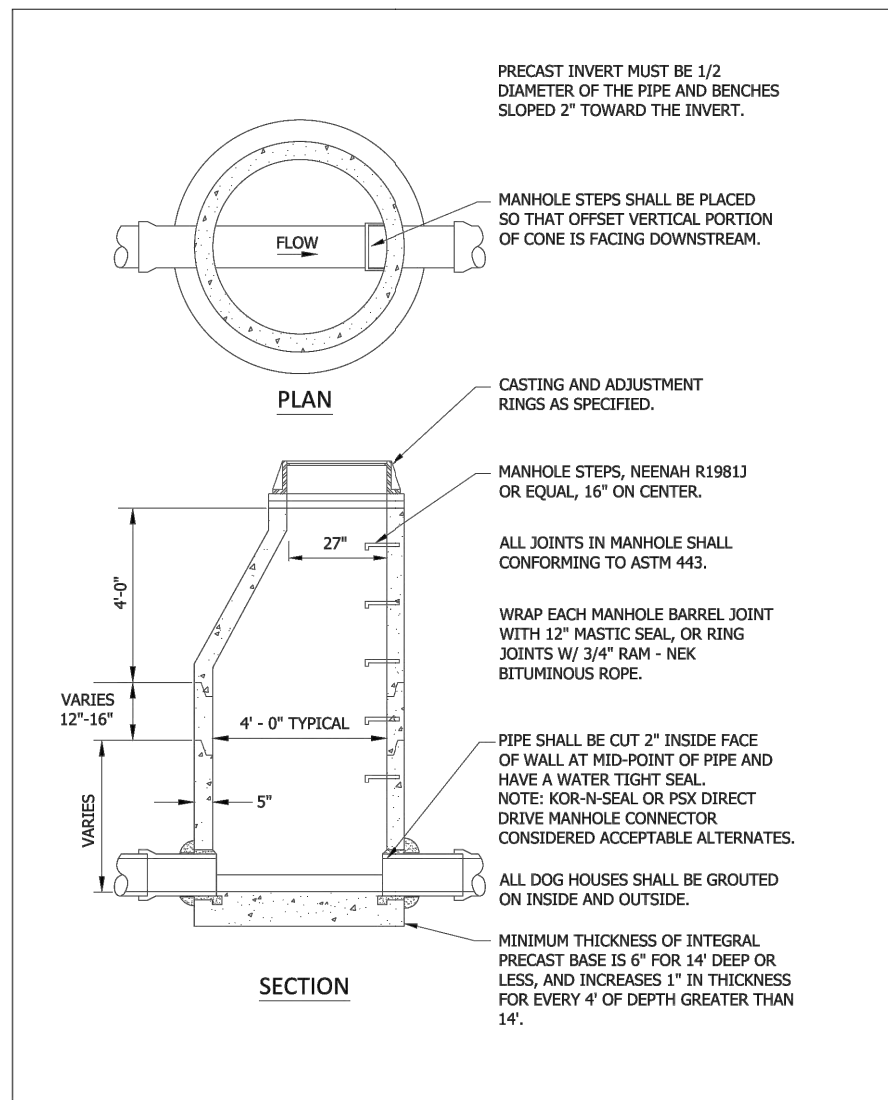
BY: GREGORY W. NATHE  
 I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, REPORT OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
 GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 41727

REVISION DESCRIPTION	DATE	BY	DATE	BY
CITY SUBMITTAL	01/17/2020	ALS	JANUARY, 2020	AS SHOWN
CITY SUBMITTAL	03/03/2020	ALS	SCALE:	AS SHOWN
CITY SUBMITTAL	08/09/2020	ALS	DRAWN BY:	ALS
		ALS	CHECKED BY:	OWN
			JOB NUMBER:	2019-12702

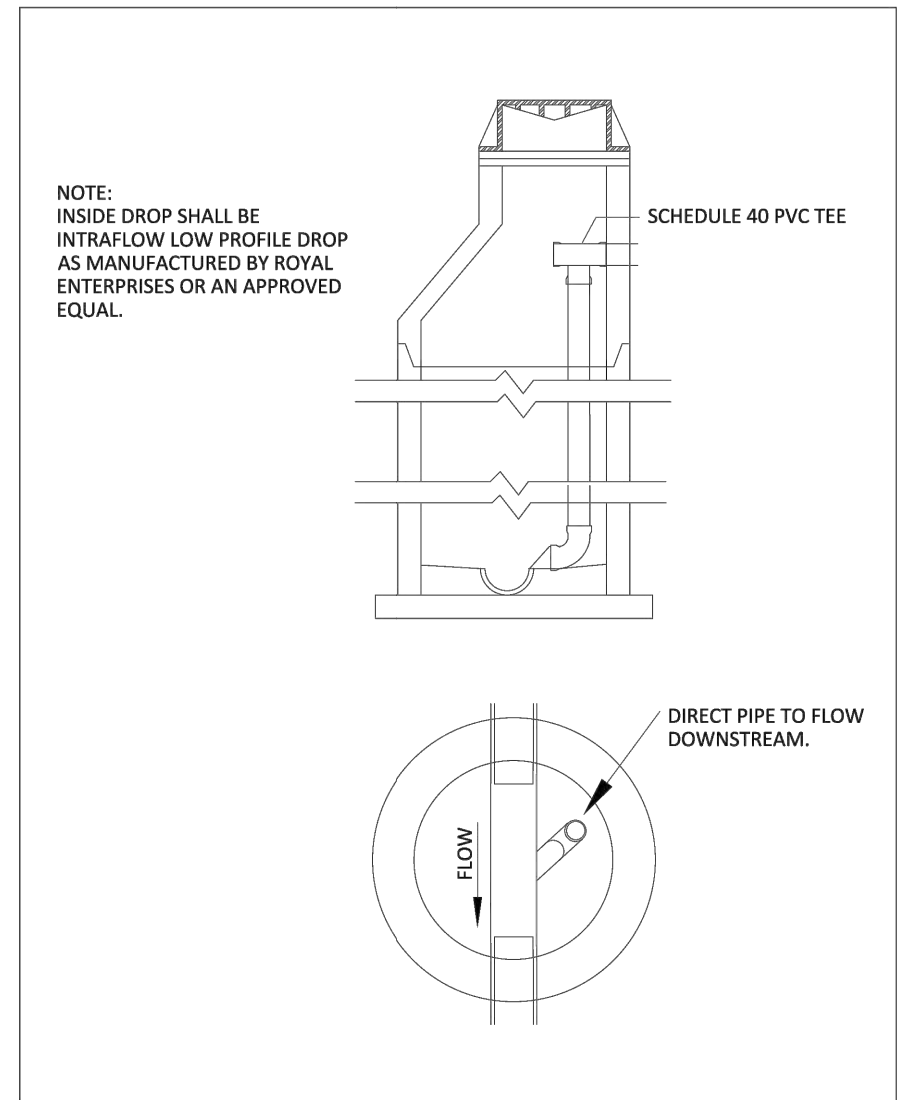
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 SCALE: AS SHOWN  
 DRAWN BY: ALS  
 CHECKED BY: OWN  
 JOB NUMBER: 2019-12702

**7-21-20**

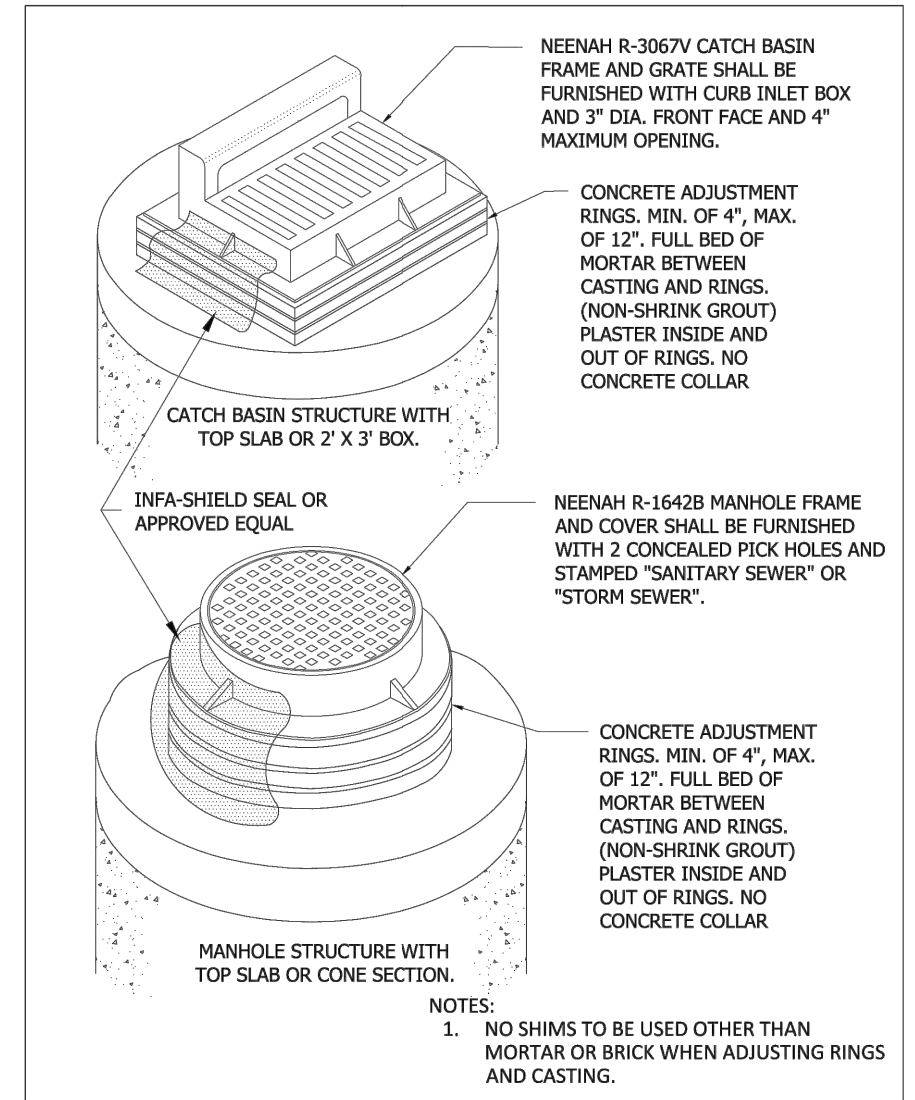
NATURE VIEW HOMES - CHISAGO CITY, MN  
 NATURE VIEW HOMES, LLC  
 PO BOX 211, LINDSTROM, MN 55045  
**SANITARY SEWER DETAILS**



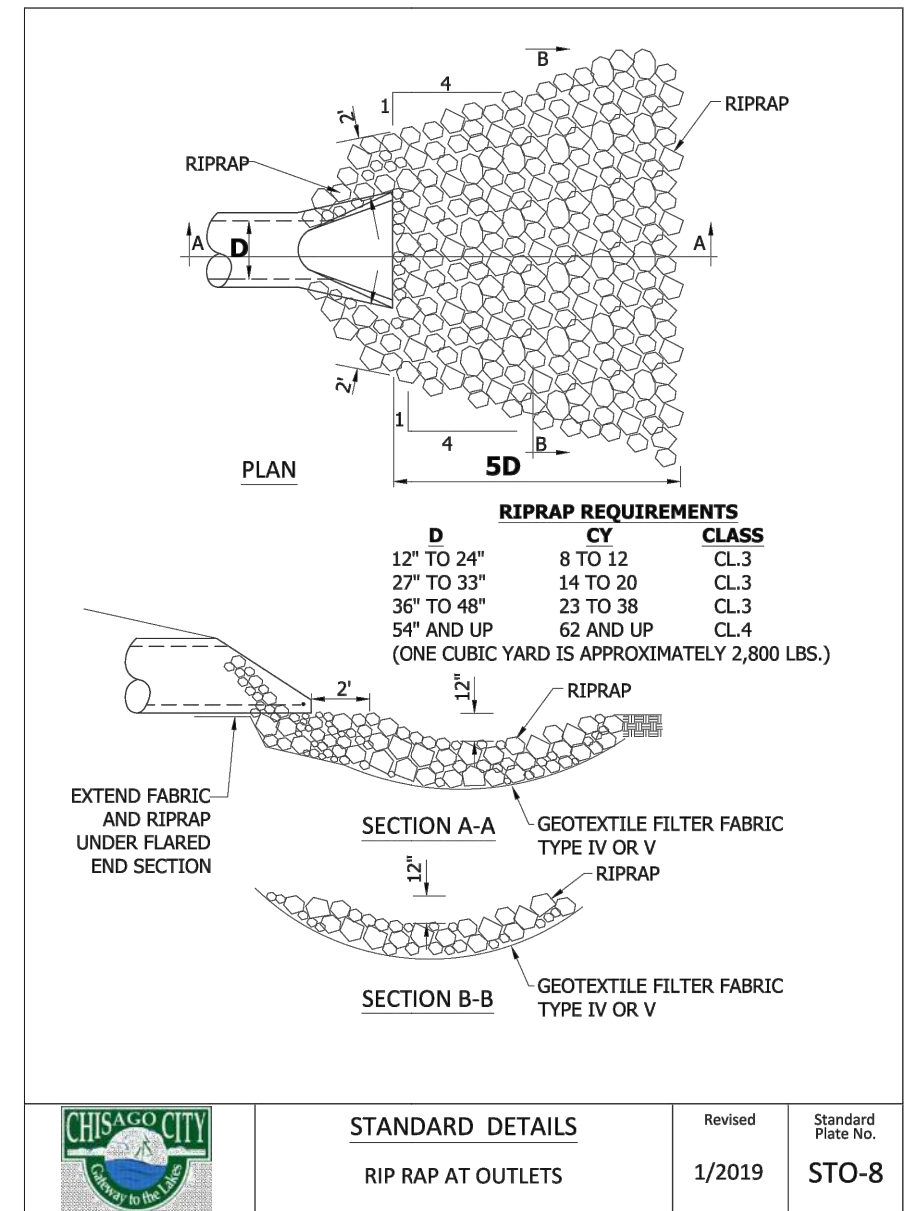
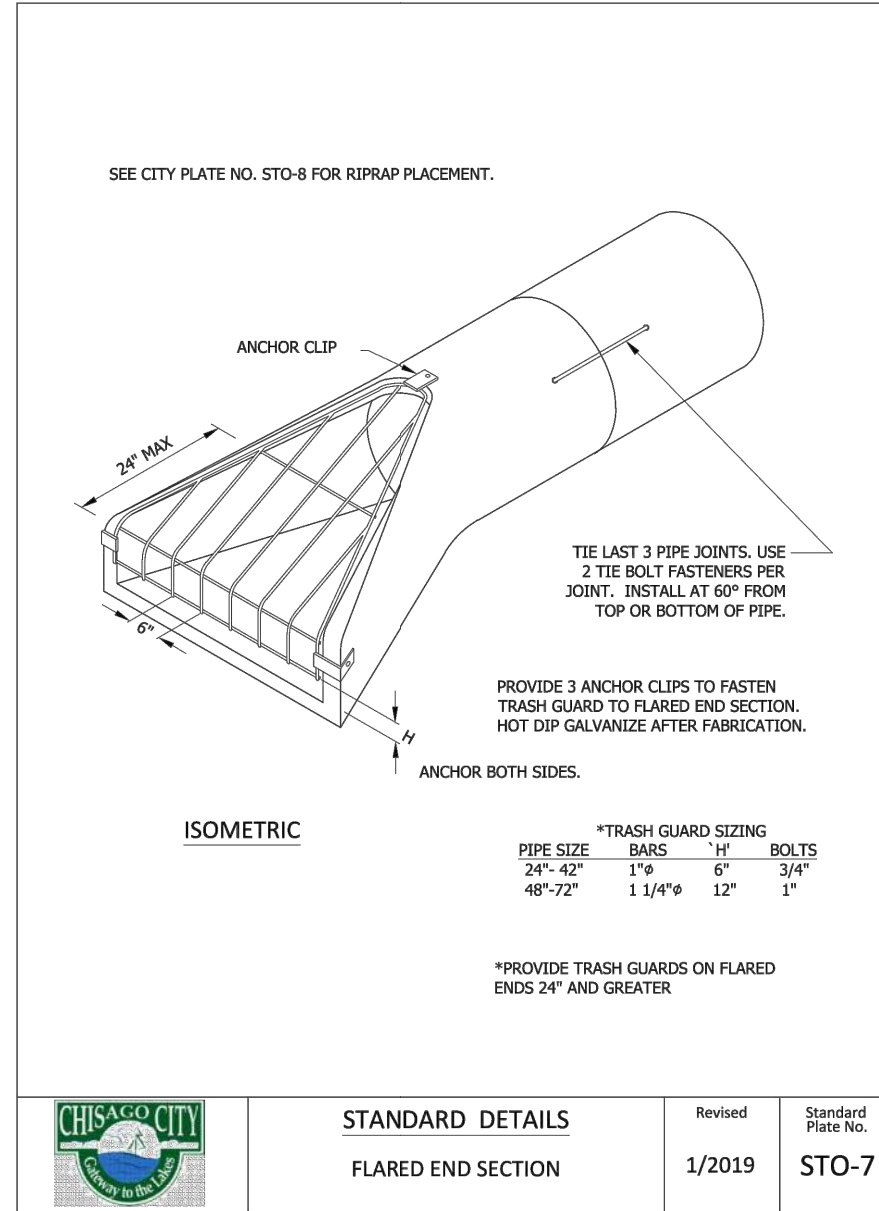
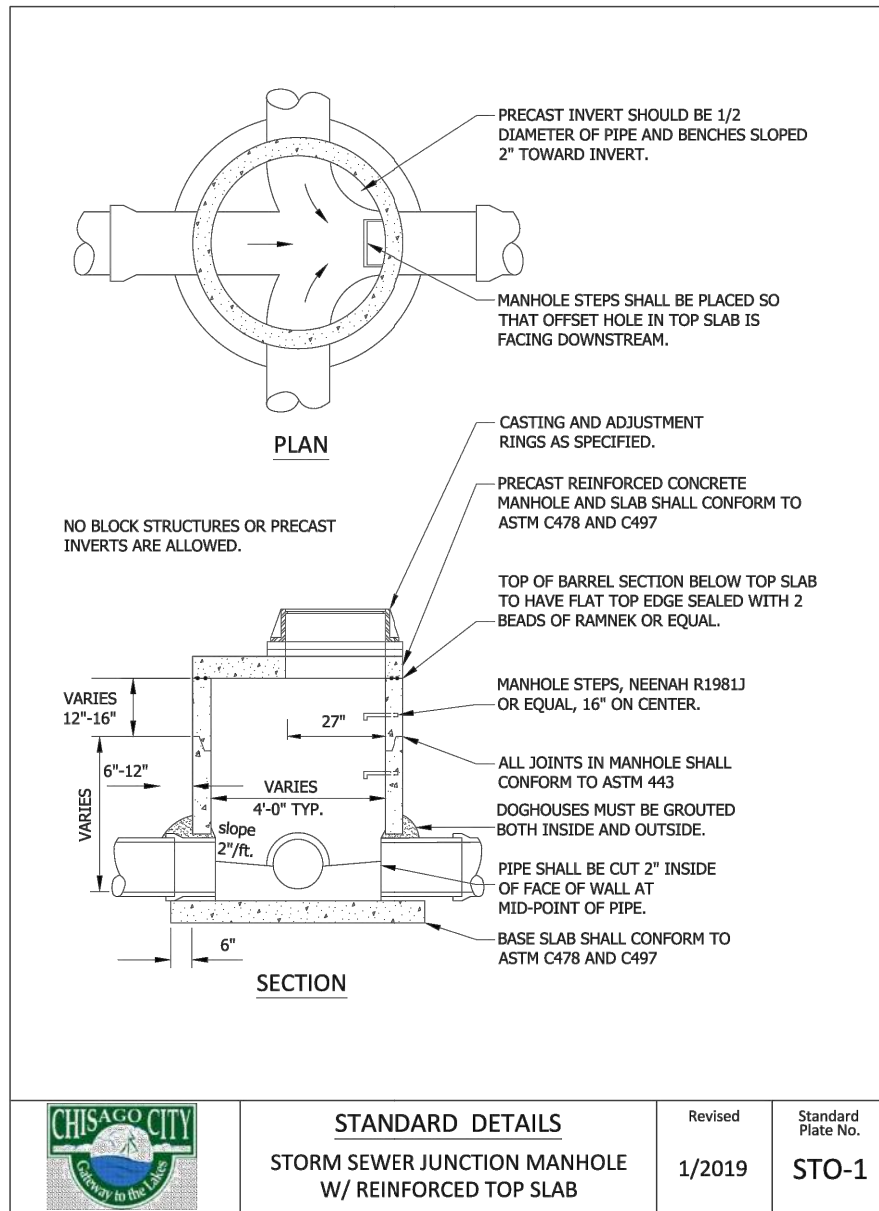
	<b>STANDARD DETAILS</b>	Revised	Standard Plate No.
	SANITARY SEWER MANHOLE	1/2019	SAN-1



	<b>STANDARD DETAILS</b>	Revised	Standard Plate No.
	SANITARY SEWER INSIDE DROP MANHOLE	1/2019	SAN-4



	<b>STANDARD DETAILS</b>	Revised	Standard Plate No.
	MANHOLE ADJUSTMENT CONCRETE RINGS	1/2019	SAN-6





BY: GREGORY W. NOLTING  
 DATE: 7-21-20  
 LIC. NO. 4172

REVISION DESCRIPTION	DATE	BY
CITY SUBMITTAL	01/17/2020	01
CITY SUBMITTAL	03/13/2020	02
CITY SUBMITTAL	08/09/2020	03

DATE: JANUARY, 2020  
 AS SHOWN  
 SCALE:  
 DRAWN BY:  
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**STANDARD DETAILS**  
**GATE VALVE AND BOX**  
**TYPICAL INSTALLATION**

Revised: 1/2019  
 Standard Plate No.: WAT-3

CHICAGO CITY  
 Gateway to the Lakes

**NOTES:**

- SHAPE OF BACK OF BUTTRESS MAY VARY AS LONG AS Poured AGAINST FIRM UNDISTURBED EARTH.
- DIMENSION C1,C2,C3 SHOULD BE AS LARGE AS POSSIBLE TO MAKE ANGLE  $\phi$  EQUAL TO OR LARGER THAN 45°.
- DIMENSION A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS.
- $\phi = 45^\circ$  MINIMUM.
- PLACE POLYETHYLENE BETWEEN CONCRETE & PIPE.

PIPE SIZE	22 1/2° BEND		45° BEND		90° BEND	
	B <sub>1</sub>	D <sub>1</sub>	B <sub>2</sub>	D <sub>2</sub>	B <sub>3</sub>	D <sub>3</sub>
6"	1'-5"	1'-5"	1'-5"	1'-5"	2'-1"	1'-6"
8"	1'-5"	1'-5"	2'-1"	1'-6"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
16"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-6"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"
30"	-	-	9'-3"	6'-0"	17'-0"	6'-0"

**STANDARD DETAILS**  
**CONCRETE THRUST BLOCKING**

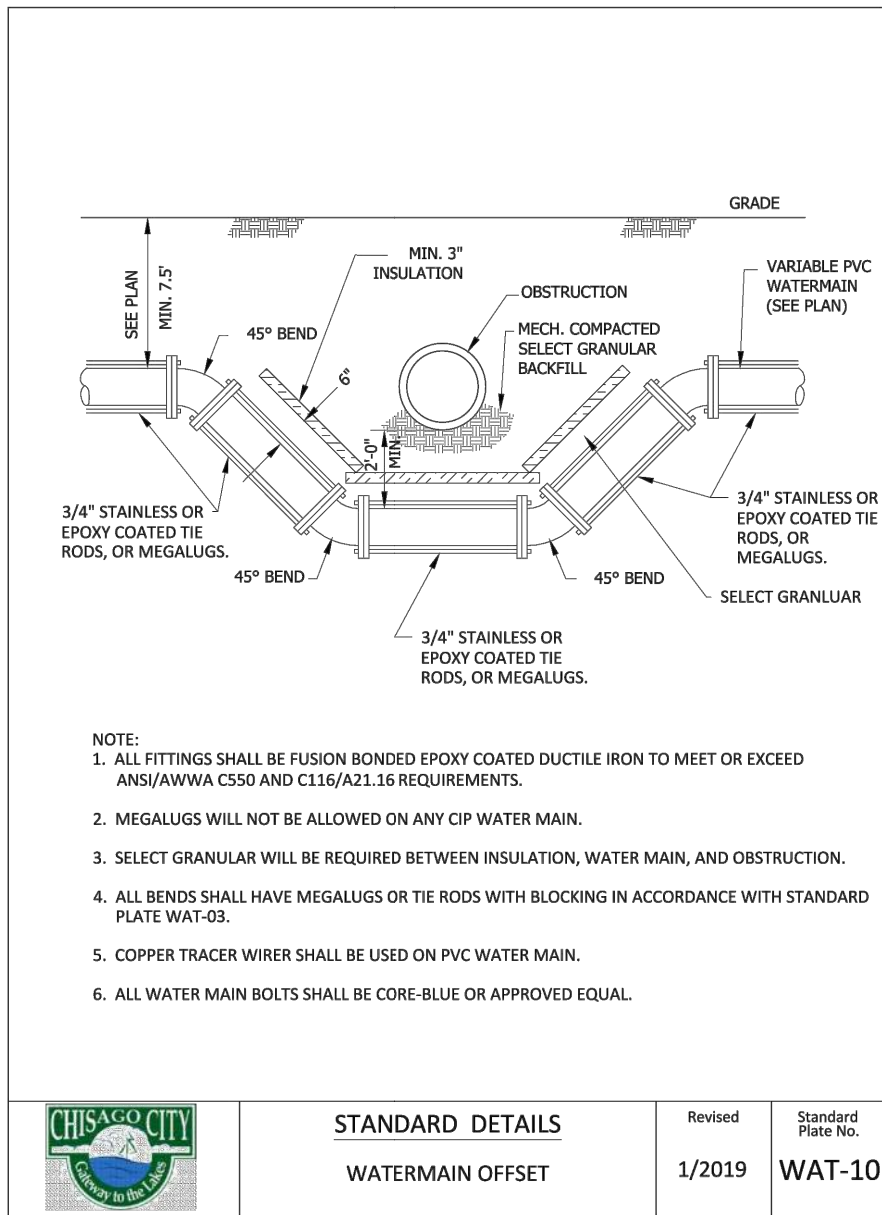
Revised: 1/2019  
 Standard Plate No.: WAT-5

CHICAGO CITY  
 Gateway to the Lakes

**STANDARD DETAILS**  
**HYDRANT AND GATE VALVE**  
**IN BOULEVARD**

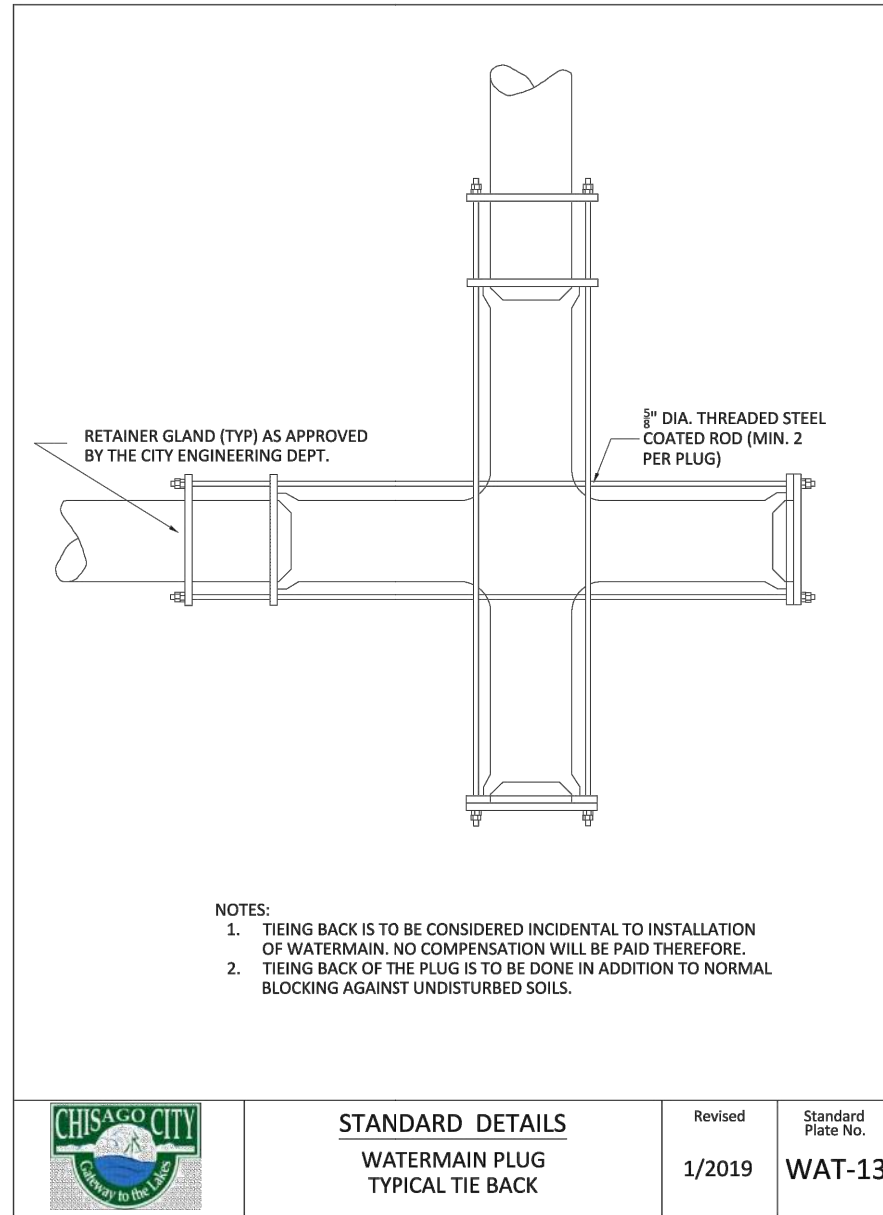
Revised: 1/2019  
 Standard Plate No.: WAT-7

CHICAGO CITY  
 Gateway to the Lakes



**STANDARD DETAILS**  
WATERMAIN OFFSET

Revised  
1/2019  
Standard  
Plate No.  
WAT-10



**STANDARD DETAILS**  
WATERMAIN PLUG  
TYPICAL TIE BACK

Revised  
1/2019  
Standard  
Plate No.  
WAT-13

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

BY: GREGORY W. NATHE  
DATE: 7-21-20  
LIC. NO. 4172

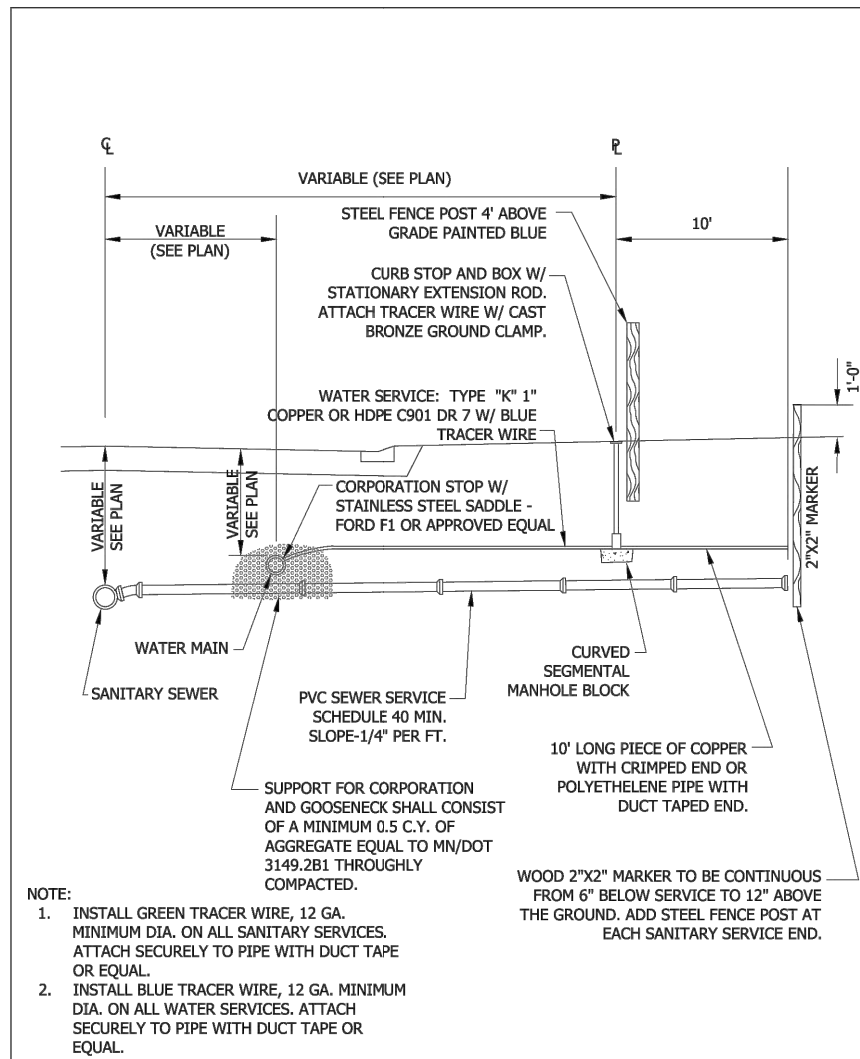
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CITY SUBMITTAL	01/17/2020	ALS
CITY SUBMITTAL	03/03/2020	ALS
CITY SUBMITTAL	06/09/2020	ALS

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**7-21-20**

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
**WATERMAIN DETAILS**

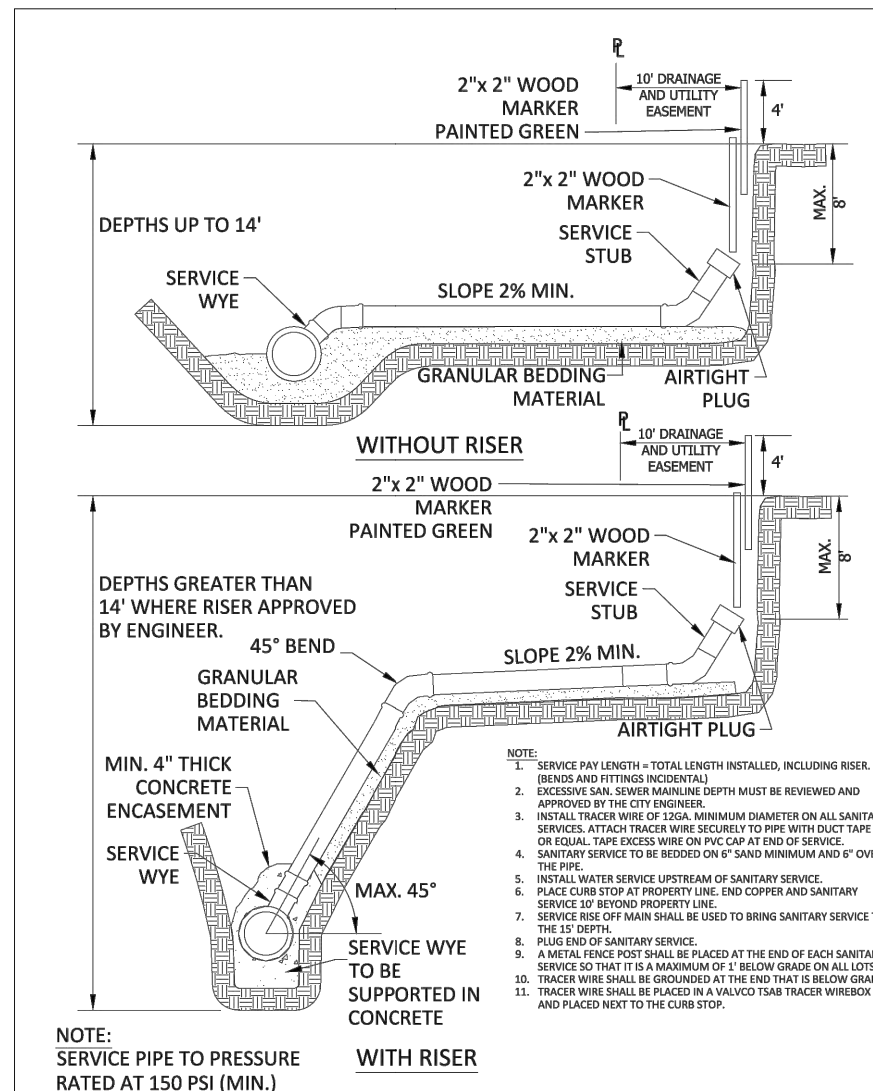
SHEET NO.  
**C2.4**



STANDARD DETAILS  
SEWER AND WATER  
SERVICE CONNECTIONS

Revised  
1/2019

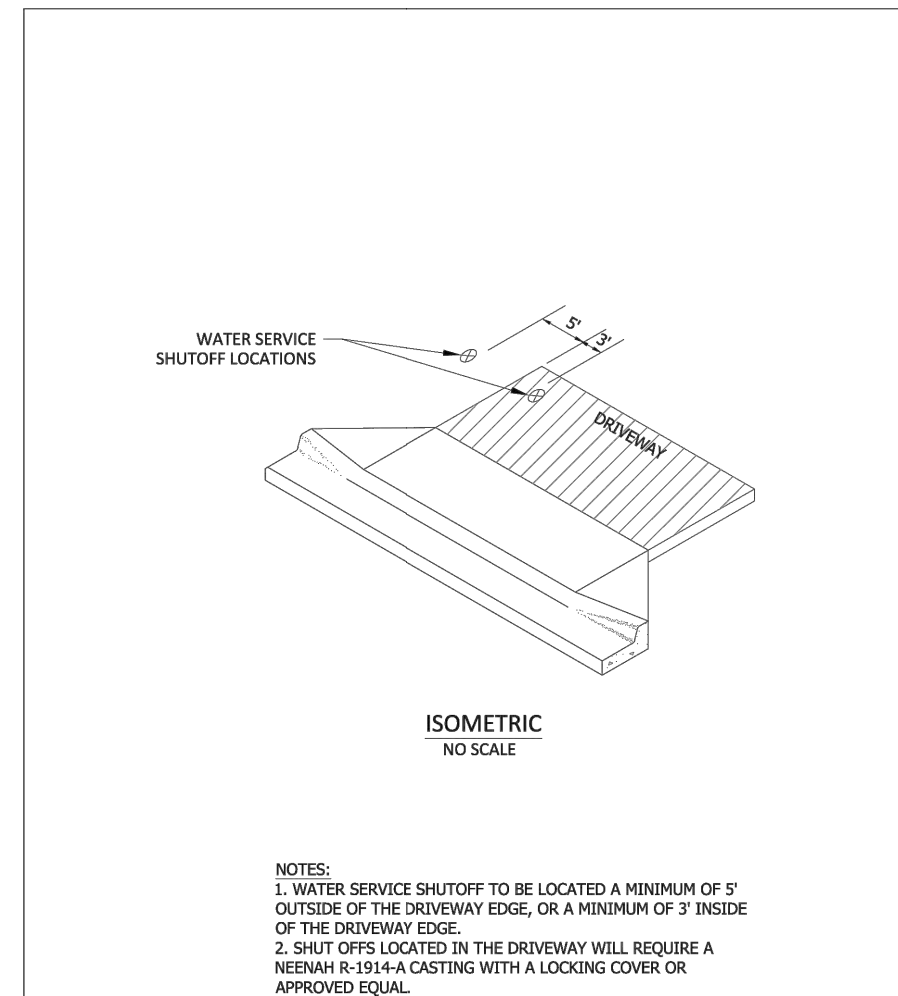
Standard  
Plate No.  
SER-1



STANDARD DETAILS  
SANITARY SEWER SERVICE

Revised  
1/2019

Standard  
Plate No.  
SER-3



STANDARD DETAILS  
WATER SERVICE  
SHUT OFF LOCATION

Revised  
1/2019

Standard  
Plate No.  
SER-6

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

**Gregory W. Nathe**  
DATE: 7-21-20 LIC. NO. 41727

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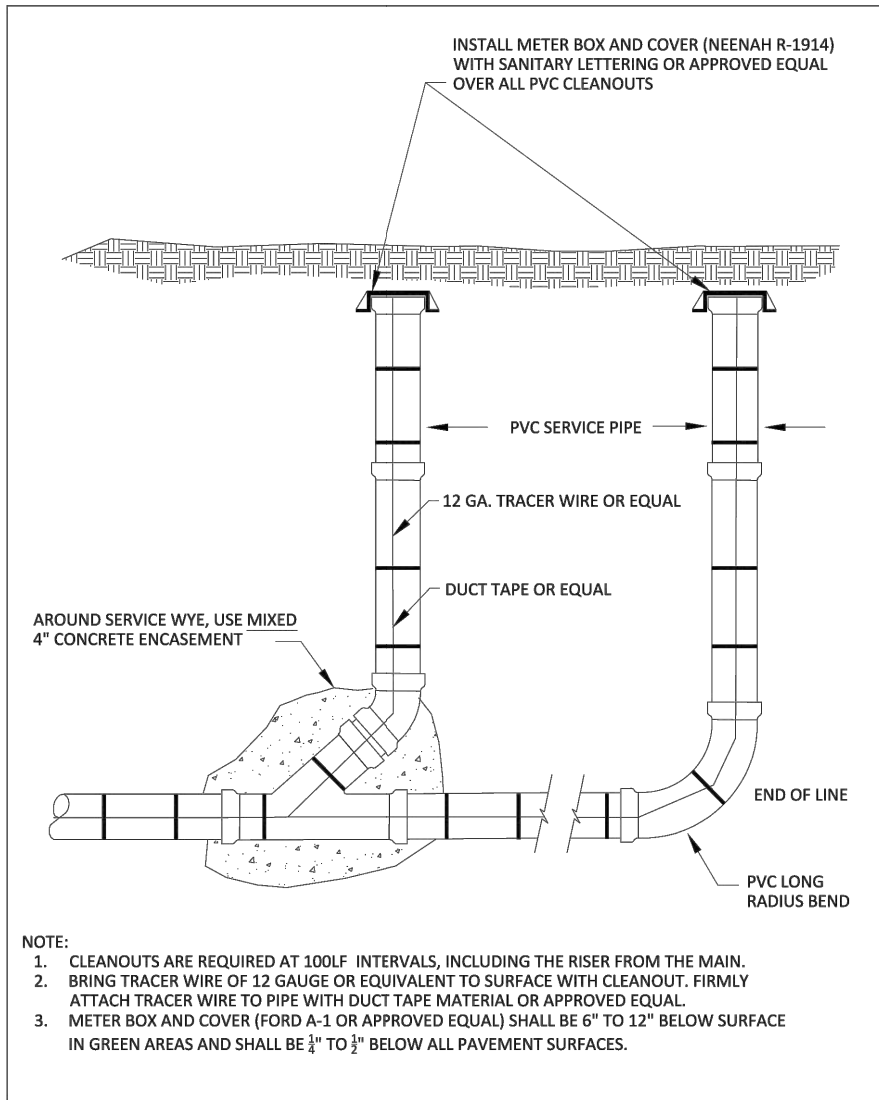
REVISIONS DESCRIPTION	BY	DATE
CITY SUBMITTAL	ALS	01/17/2020
CITY SUBMITTAL	ALS	03/03/2020
CITY SUBMITTAL	ALS	08/09/2020

**7-21-20**

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045

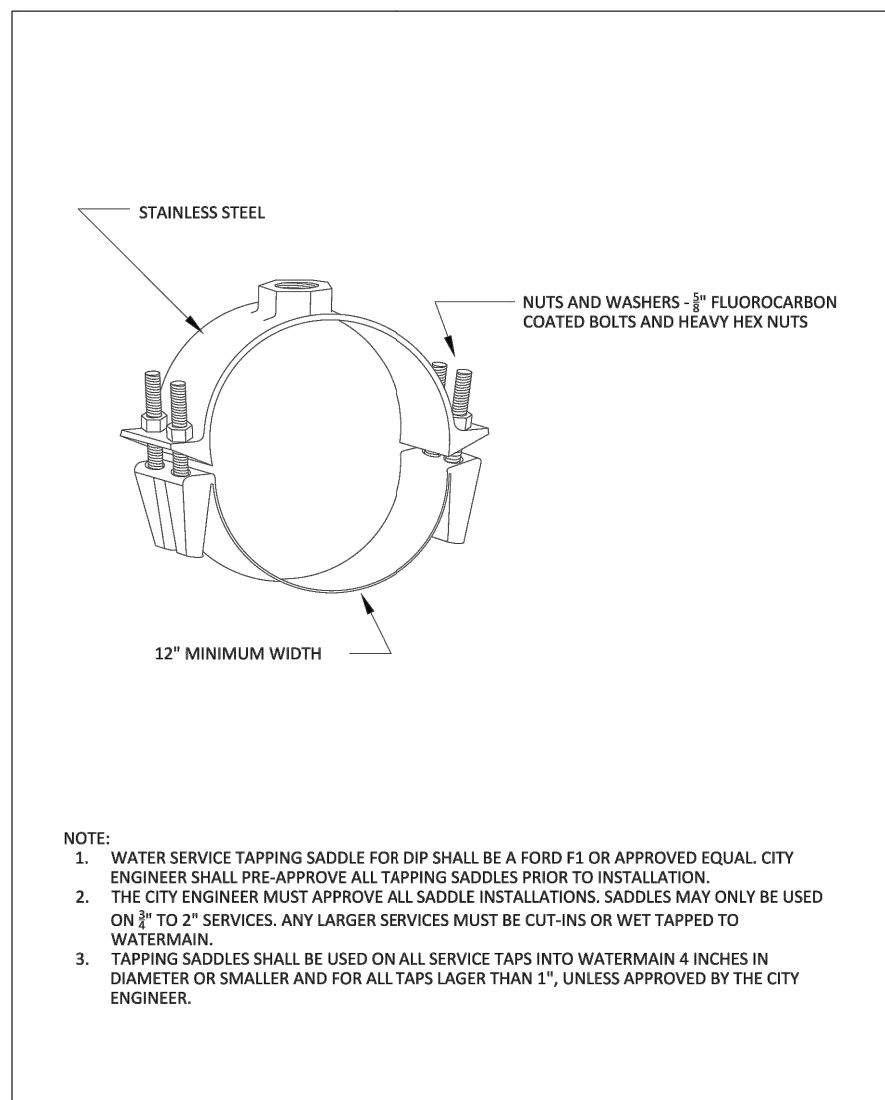
**SERVICES DETAILS**

SHEET NO.  
**C2.5**



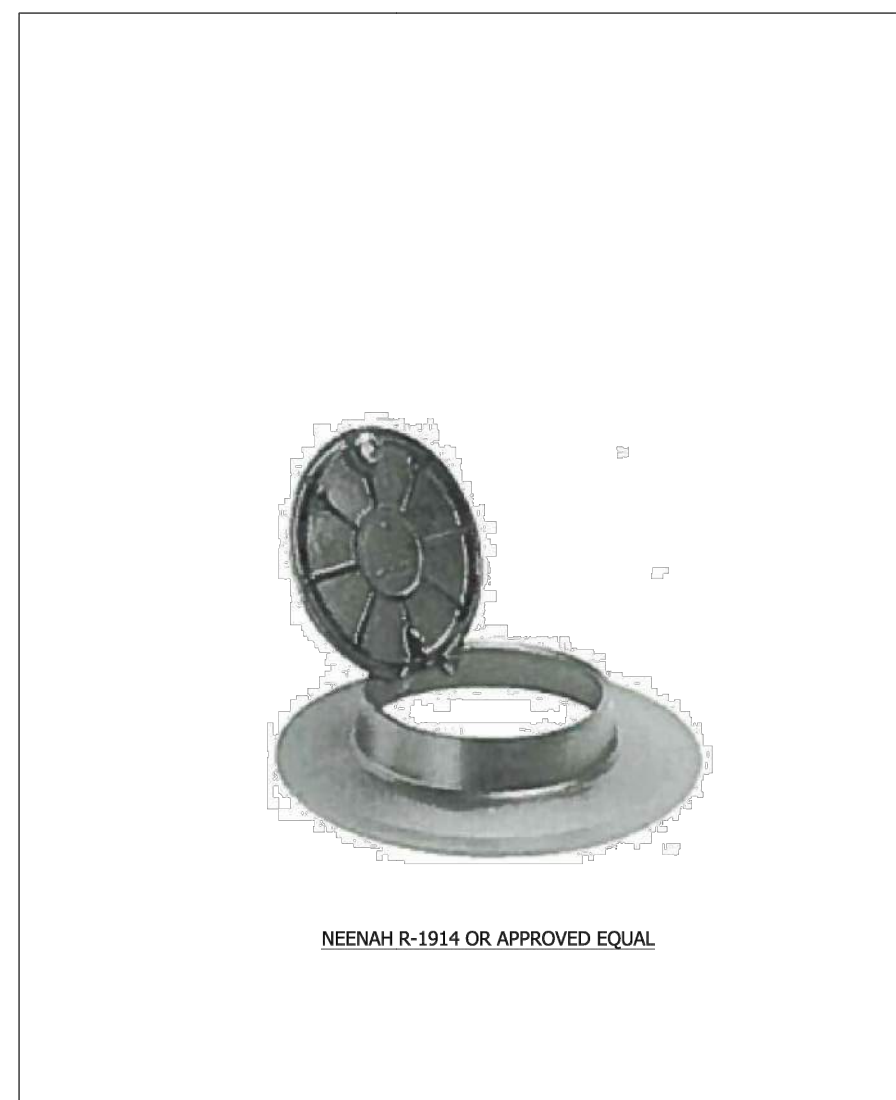
- NOTE:
- CLEANOUTS ARE REQUIRED AT 100LF INTERVALS, INCLUDING THE RISER FROM THE MAIN.
  - BRING TRACER WIRE OF 12 GAUGE OR EQUIVALENT TO SURFACE WITH CLEANOUT. FIRMLY ATTACH TRACER WIRE TO PIPE WITH DUCT TAPE MATERIAL OR APPROVED EQUAL.
  - METER BOX AND COVER (FORD A-1 OR APPROVED EQUAL) SHALL BE 6" TO 12" BELOW SURFACE IN GREEN AREAS AND SHALL BE 1/4" TO 1/2" BELOW ALL PAVEMENT SURFACES.

	<b>STANDARD DETAILS</b> SANITARY SEWER SERVICE CLEANOUT	Revised	Standard Plate No.
		1/2019	SER-8



- NOTE:
- WATER SERVICE TAPPING SADDLE FOR DIP SHALL BE A FORD F1 OR APPROVED EQUAL. CITY ENGINEER SHALL PRE-APPROVE ALL TAPPING SADDLES PRIOR TO INSTALLATION.
  - THE CITY ENGINEER MUST APPROVE ALL SADDLE INSTALLATIONS. SADDLES MAY ONLY BE USED ON 3/4" TO 2" SERVICES. ANY LARGER SERVICES MUST BE CUT-INS OR WET TAPPED TO WATERMAIN.
  - TAPPING SADDLES SHALL BE USED ON ALL SERVICE TAPS INTO WATERMAIN 4 INCHES IN DIAMETER OR SMALLER AND FOR ALL TAPS LARGER THAN 1", UNLESS APPROVED BY THE CITY ENGINEER.

	<b>STANDARD DETAILS</b> TAPPING SADDLE FOR WATER SERVICE (DIP WATERMAIN)	Revised	Standard Plate No.
		1/2019	SER-10



	<b>STANDARD DETAILS</b> COVER FOR CURB STOP IN DRIVEWAY/SIDEWALK OR SEWER CLEAN OUT IN YARD	Revised	Standard Plate No.
		1/2019	SER-13

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

BY	REVISIONS DESCRIPTION	DATE	REVA	JANUARY, 2020	DATE:	2019-12702
ALS	CITY SUBMITTAL	01/17/2020	01	AS SHOWN	SCALE:	
ALS	CITY SUBMITTAL	03/03/2020	02	DRAWN BY:	CHECKED BY:	
ALS	CITY SUBMITTAL	06/09/2020	03	OWN		

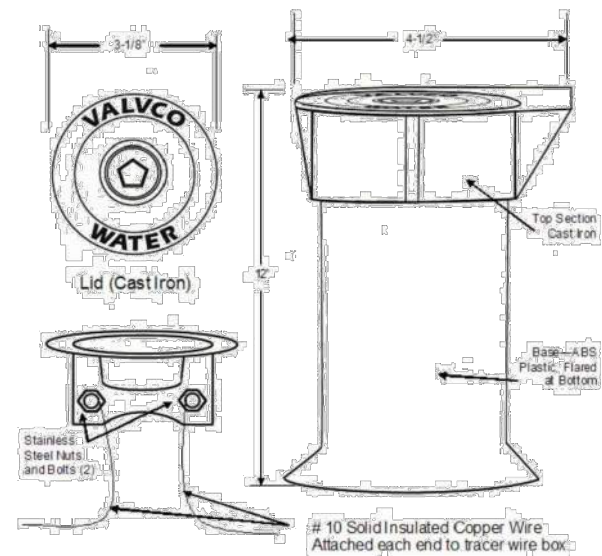
**7-21-20**

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045

**SERVICES DETAILS**

SHEET NO.  
**C2.6**





**NOTE:**

1. TRACER WIRE ACCESS BOX SHALL BE OF DOMESTIC MANUFACTURE AND BE EQUAL TO VALVCO TWAB, TSAB FOR SANITARY SEWER.
2. TRACER WIRE SHALL BE TERMINATED AT EACH END IN FLUSH MOUNT ACCESS BOX.
3. ACCESS BOX SHALL HAVE A CAST IRON LID THAT CAN BE LOCKED AND OPENED WITH A STANDARD PENTAGON HEAD KEY WRENCH.
4. TRACER WIRES SHALL BE STRIPPED AND ATTACHED TO STAINLESS STEEL SCREWS MOUNTED TO THE UNDERSIDE OF THE LID. SUFFICIENT SLACK SHALL BE LEFT IN WIRE LENGTH SO COVER CAN BE LIFTED WITH WIRE INTACT.
5. TRACER WIRE ACCESS BOX SHALL BE LOCATED DIRECTLY IN FRONT OF FIRE HYDRANTS, CURB STOPS OR WHERE INDICATED ON DRAWINGS AND BE SET TO GRADE.



**STANDARD DETAILS**  
**TRACER WIRE ACCESS BOX**  
**SPECIFICATION AND SUBMITTAL**

Revised  
 1/2019  
 Standard  
 Plate No.  
**SER-14**

<b>WIDSETH SMITH NOLTING</b> Engineering   Architecture   Surveying   Environmental					
NATURE VIEW HOMES - CHISAGO CITY, MN NATURE VIEW HOMES, LLC PO BOX 211, LINDSTROM, MN 55045 <b>SERVICES DETAILS</b>	<b>7-21-20</b>	DATE: JANUARY, 2020 SCALE: AS SHOWN DRAWN BY: ALS CHECKED BY: GWN JOB NUMBER: 2019-12702	REVISIONS DESCRIPTION 01 CITY SUBMITTAL 02 CITY SUBMITTAL 03 CITY SUBMITTAL	BY: ALS ALS ALS ALS	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.  GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 4127Z
SHEET NO. <b>Q2.7</b>					

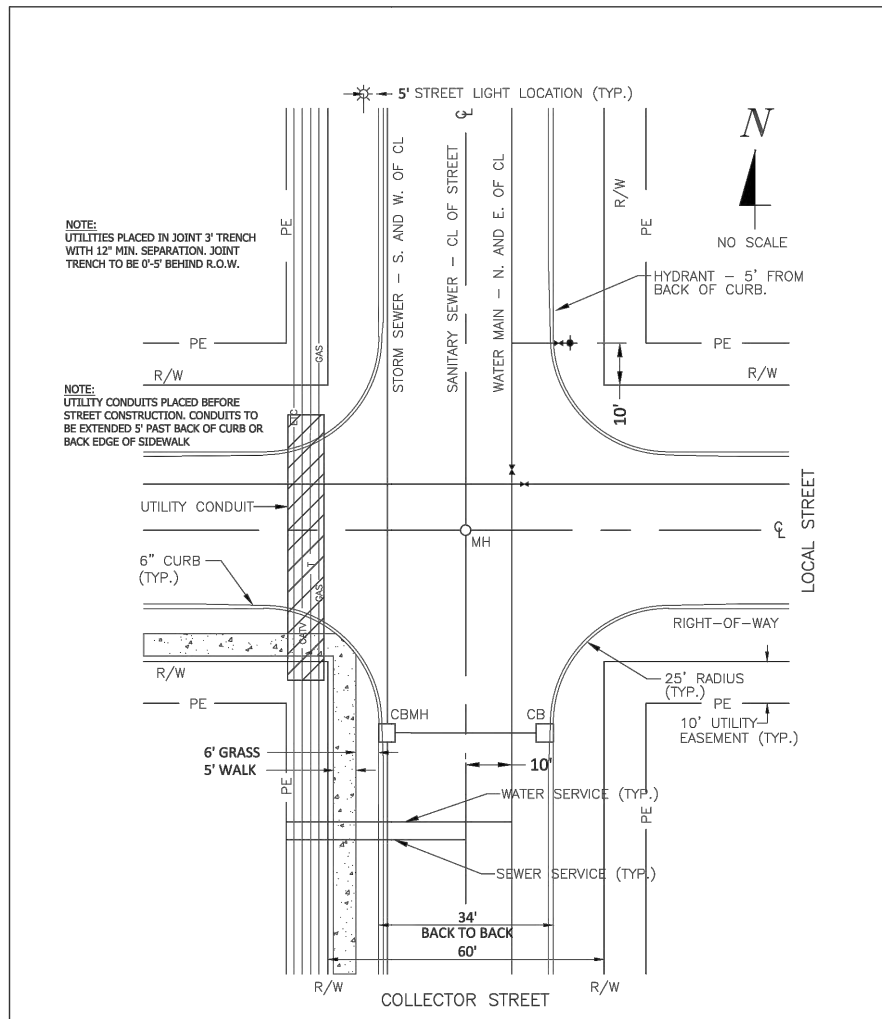


THESE CITY PLANS AND SPECIFICATIONS FOR THIS PROJECT WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
*Gregory W. Nathe*  
GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 4172

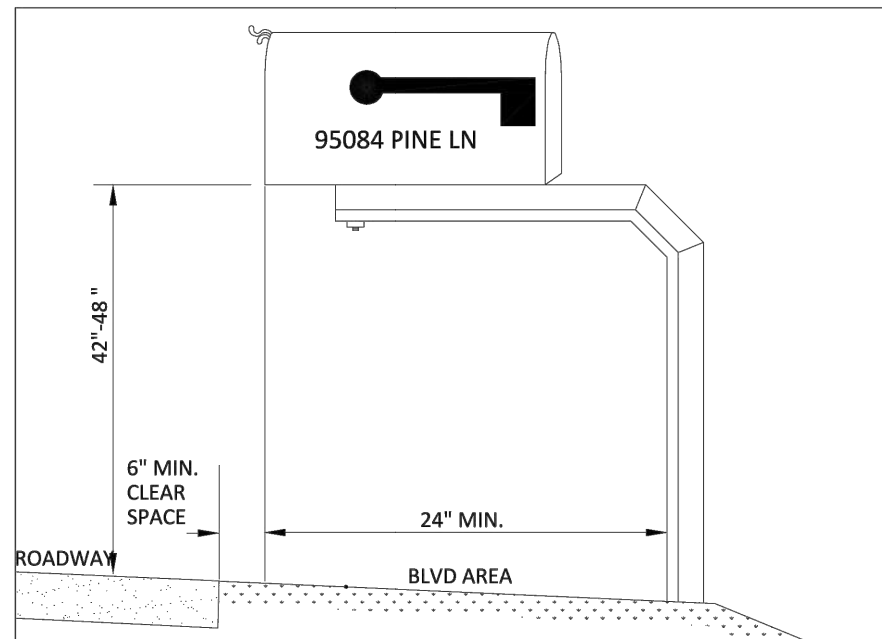
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NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
**7-21-20**  
MISCELLANEOUS DETAILS

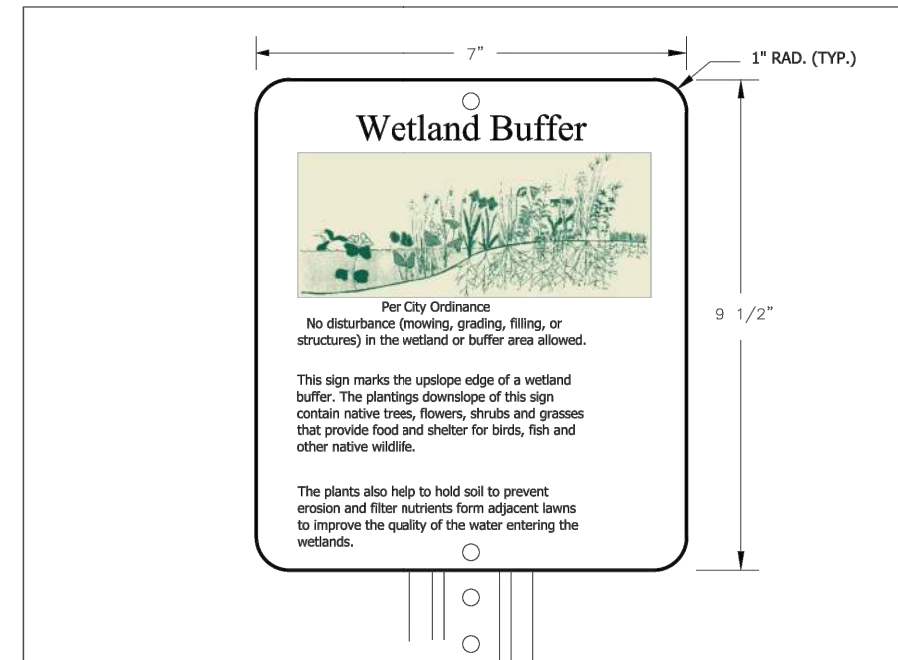


**CHISAGO CITY**  
Standard Plate No. **GEN-1**  
Revised **1/2019**  
STANDARD DETAILS  
TYPICAL UTILITY LOCATIONS  
PUBLIC AND PRIVATE



- NOTES:**
- HAVE BOX EXTEND AS FAR IN FRONT OF SUPPORT POST AS POSSIBLE (THIS IS TO PREVENT SNOW PLOW DAMAGE).
  - ADDRESS MUST BE PLACED ON SIDE OF BOX FROM WHICH THE CARRIER APPROACHES IN LETTERS A MINIMUM OF 1" HIGH (OR ON THE FRONT WHERE BOXES ARE GROUPED).
  - BOX MUST BE LOCATED SO CARRIER CAN SERVE WITHOUT LEAVING THEIR VEHICLE.
  - DIMENSIONS PER U.S. POSTAL SERVICE.
  - INSTALL BREAK AWAY MAILBOX PER MNDOT STANDARD PLATE 9350A.

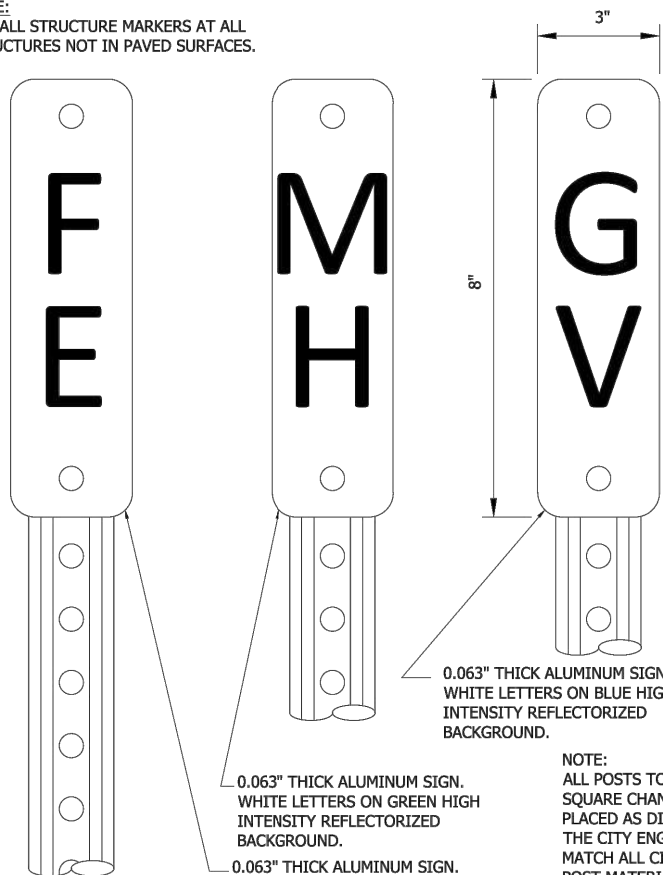
**CHISAGO CITY**  
Standard Plate No. **GEN-2B**  
Revised **1/2019**  
STANDARD DETAILS  
RURAL MAILBOX  
TYPICAL INSTALLATION



- THE SIGN MUST BE:
  - 0.063 ALUMINUM BLANK,
  - BACKGROUND PANTONE: 155 (TAN)
  - BLACK VERBIAGE AND LOGO PRINTED ONE SIDE
  - PRE-DRILL HOLES IN MIDDLE TOP AND BOTTOM (AVOID VERBIAGE)
  - TRIM TO BORDER AS SHOWN ON SIGN ARTWORK TO INSURE ROUNDED CORNERS
- THE MARKER SHALL CONSIST OF A FOUR INCH SQUARE TREATED, OR CEDAR POST, OR GREEN STEEL POST INSTALLED TO A HEIGHT OF FOUR FEET ABOVE GRADE, AND SET AT LEAST 42" INTO GROUND.
- BOLT OR SCREW SIGN TO POST.
- ONE SIGN SHALL BE PLACED PER LOT AT THE UPSLOPE EDGE OF THE REQUIRED BUFFER STRIP FOR THE WETLAND. PROPOSED LOCATIONS OF SIGNS SHALL BE SHOWN GRADING OR SITE PLAN. IN GENERAL, THE LOCATION OF SIGNS SHALL CAPTURE THE PORTION OF THE BUFFER THAT EXTENDS THE FURTHEST UPSLOPE INTO THE LOT. A PLAN THAT SHOWS THE LOCATION OF THE SIGN SHALL BE PROVIDED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.
- ARTWORK AND VERBIAGE SHALL FACE PROPOSED HOME (STRUCTURE).
- CONTACT CITY FOR POTENTIAL SIGN SOURCES.

**CHISAGO CITY**  
Standard Plate No. **GEN-3**  
Revised **1/2019**  
STANDARD DETAILS  
WETLAND BUFFER SIGN

NOTE:  
INSTALL STRUCTURE MARKERS AT ALL  
STRUCTURES NOT IN PAVED SURFACES.



0.063" THICK ALUMINUM SIGN.  
WHITE LETTERS ON BLUE HIGH  
INTENSITY REFLECTORIZED  
BACKGROUND.

0.063" THICK ALUMINUM SIGN.  
WHITE LETTERS ON GREEN HIGH  
INTENSITY REFLECTORIZED  
BACKGROUND.

0.063" THICK ALUMINUM SIGN.  
BLACK LETTERS ON WHITE HIGH  
INTENSITY REFLECTORIZED  
BACKGROUND.

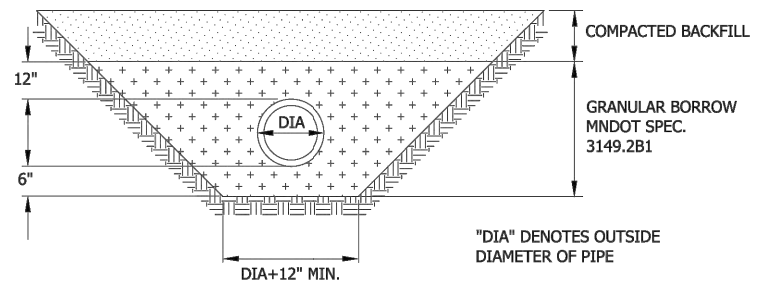
NOTE:  
ALL POSTS TO BE 2"  
SQUARE CHANNEL, 8' LONG.  
PLACED AS DIRECTED BY  
THE CITY ENGINEER.  
MATCH ALL CITY SIGN  
POST MATERIALS AND  
INSTALLATION PRACTICES,  
SEE DETAIL PLATE STR-29.



STANDARD DETAILS  
STRUCTURE MARKER SIGNS

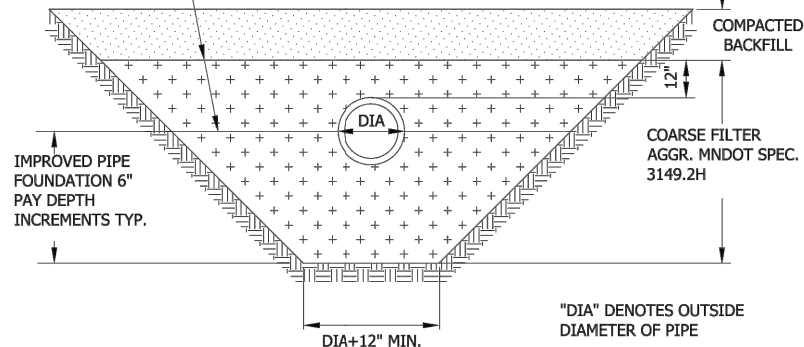
Revised  
1/2019

Standard  
Plate No.  
GEN-5



PIPE FOUNDATION & BEDDING  
GOOD SOILS

IMPROVED PIPE FOUNDATION MATERIAL (3149.2H)  
CONSIDERED INCIDENTAL TO THE SPECIFIED GRANULAR  
BORROW MATERIAL (3149.2B1) IN THIS AREA



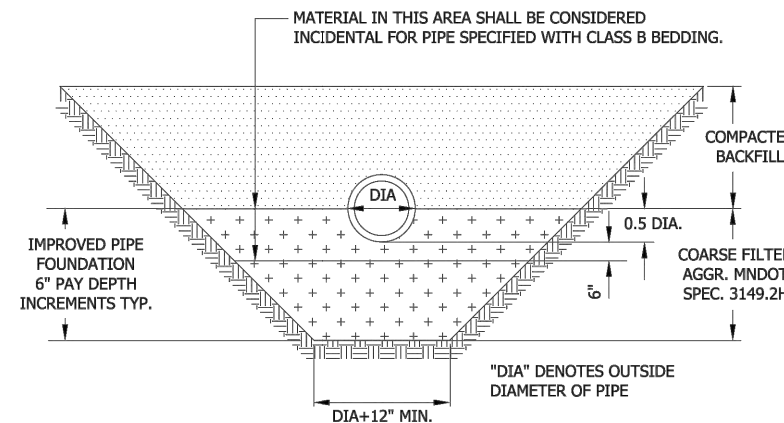
IMPROVED PIPE FOUNDATION MATERIAL  
POOR SOILS



STANDARD DETAILS  
PIPE FOUNDATION &  
BEDDING METHODS FOR PVC

Revised  
1/2019

Standard  
Plate No.  
BED-1



STANDARD DETAILS  
IMPROVED FOUNDATION  
FOR ALL PIPES

Revised  
1/2019

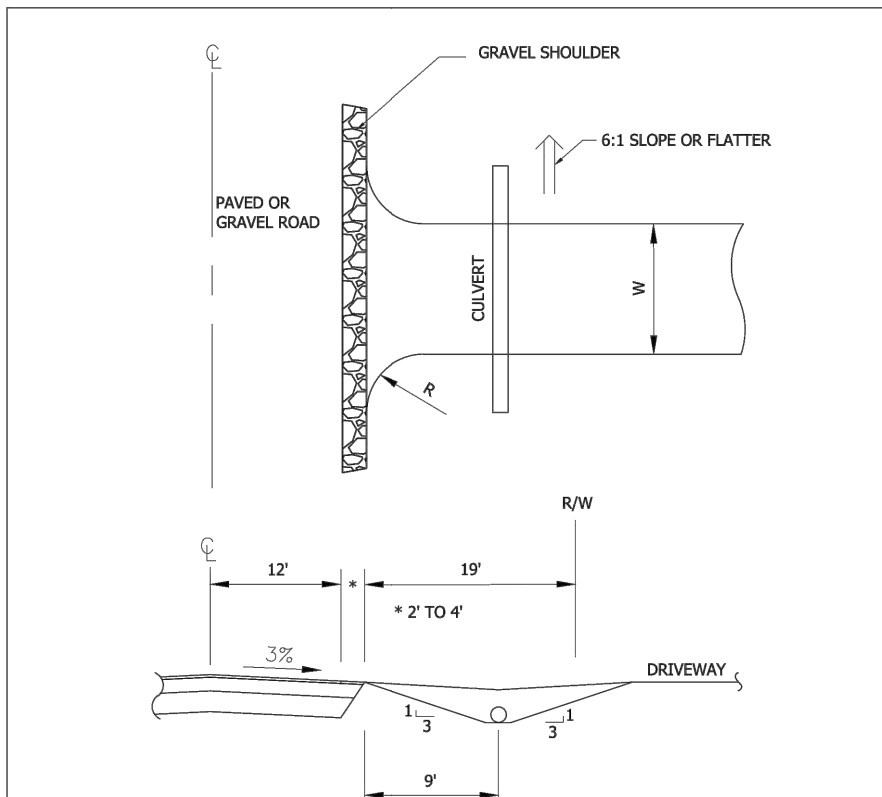
Standard  
Plate No.  
BED-3



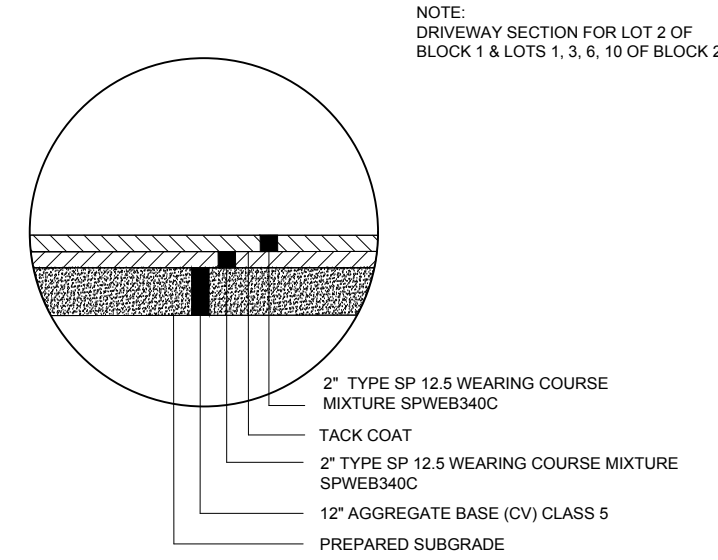
BY: GREGORY W. NOLTING  
DATE: 7-21-20  
LIC. NO. 41727

DATE	REVISION DESCRIPTION	BY
01/17/2020	01	CITY SUBMITTAL
03/03/2020	02	CITY SUBMITTAL
08/09/2020	03	CITY SUBMITTAL

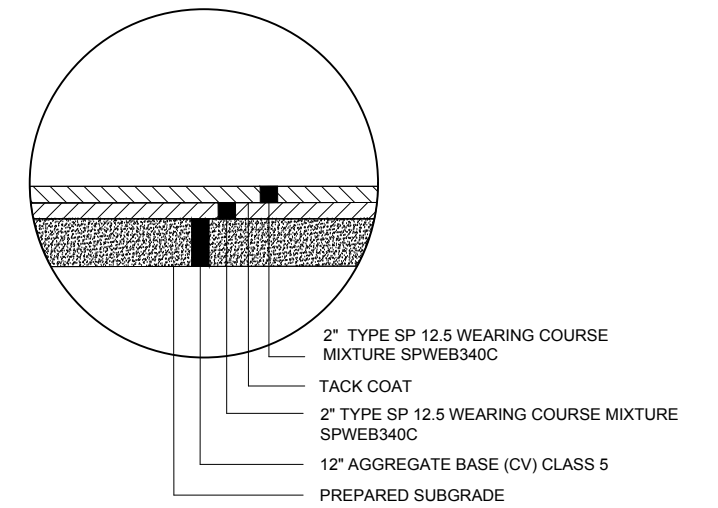
JANUARY, 2020  
AS SHOWN  
SCALE:  
DRAWN BY:  
CHECKED BY:  
OWN  
JOB NUMBER: 2019-12702



- NOTES:**
1. DRIVEWAY WIDTH (W): 12' MIN., 36' MAX.
  2. RADIUS AT CONNECTION TO STREET (R): 5' MIN., 15' MAX.
  3. CULVERT UNDER DRIVEWAY: MIN. 15" DIA., CMP OR RCP
  4. DRIVEWAY SLOPES GREATER THAN 6% SHALL BE PAVED TO PREVENT EROSION.
  5. MAINTAIN 60' MIN. CLEARANCE FROM EDGE OF DRIVEWAY TO R/W LINE OF ADJACENT STREET INTERSECTION.
  6. CULVERT FLARED ENDS ARE REQUIRED.
  7. MINIMUM 1% GRADE ON CULVERTS.
  8. HOMEOWNER IS RESPONSIBLE FOR CULVERT INSTALLATION AND ESTABLISHMENT OF VEGETATION ALONG DRIVEWAY.



**BITUMINOUS DRIVEWAY SECTION (WITH MANHOLES)**



**BITUMINOUS STREET PATCH SECTION**

NOTE:  
DRIVEWAY SECTION FOR LOT 2 OF  
BLOCK 1 & LOTS 1, 3, 6, 10 OF BLOCK 2



**STANDARD DETAILS**  
TYPICAL DRIVEWAY AND  
CULVERT INSTALLATION

Revised  
1/2019  
Standard  
Plate No.  
**STR-14**

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

BY: GREGORY W. NATHÉ  
DATE: 7-21-20  
LIC. NO. 4172

REVISION DESCRIPTION	DATE	BY
CITY SUBMITTAL	01/17/2020	ALS
CITY SUBMITTAL	03/03/2020	ALS
CITY SUBMITTAL	06/09/2020	ALS

DATE: JANUARY, 2020  
SCALE: AS SHOWN  
DRAWN BY: ALS  
CHECKED BY: OWN  
JOB NUMBER: 2019-12702

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
7-21-20  
MISCELLANEOUS DETAILS

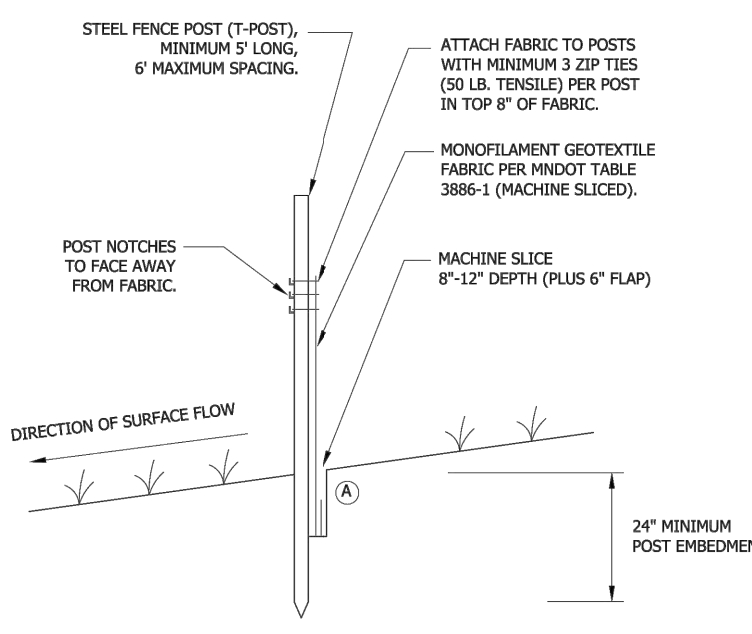
SHEET NO.  
**C2.10**



BY: GREGORY W. NOLTING, P.E. (LICENSE NO. 1000000000)  
DATE: 7-21-20  
LIC. NO. 4127Z

DATE	REVISION DESCRIPTION	BY
01/17/2020	CITY SUBMITTAL	ALS
03/03/2020	CITY SUBMITTAL	ALS
08/09/2020	CITY SUBMITTAL	ALS

JANUARY, 2020  
AS SHOWN  
SCALE: AS SHOWN  
DRAWN BY: ALS  
CHECKED BY: GWN  
JOB NUMBER: 2019-12702



STEEL FENCE POST (T-POST), MINIMUM 5' LONG, 6' MAXIMUM SPACING.

ATTACH FABRIC TO POSTS WITH MINIMUM 3 ZIP TIES (50 LB. TENSILE) PER POST IN TOP 8" OF FABRIC.

MONOFILAMENT GEOTEXTILE FABRIC PER MNDOT TABLE 3886-1 (MACHINE SLICED).

MACHINE SLICE 8"-12" DEPTH (PLUS 6" FLAP)


POST NOTCHES TO FACE AWAY FROM FABRIC.

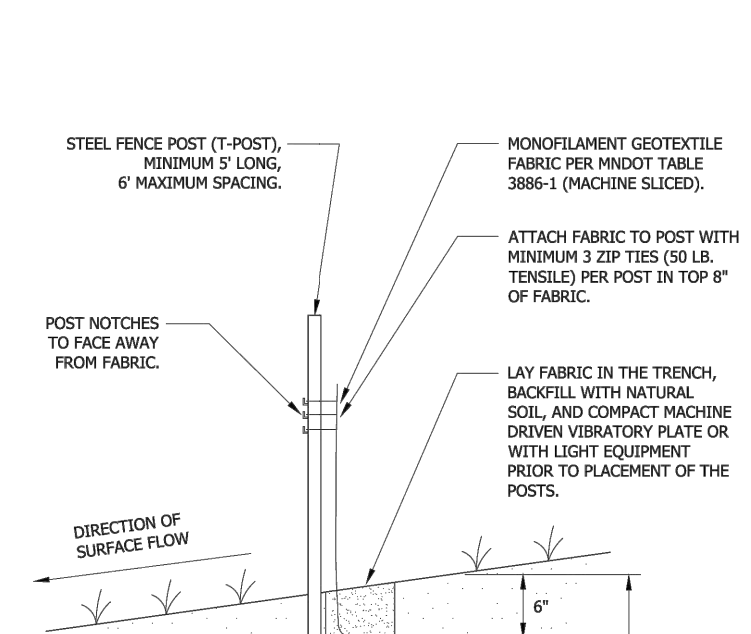
DIRECTION OF SURFACE FLOW

24" MINIMUM POST EMBEDMENT

**NOTE:**  
THE MACHINE SLICED METHOD (THIS DETAIL) IS THE STANDARD SILT FENCE INSTALLATION METHOD. HEAVY-DUTY (ERO-1B) OR STANDARD (ERO-1C) SILT FENCE INSTALLATION METHODS SHOULD ONLY BE USED WHEN APPROVED OR DIRECTED BY THE CITY.

**(A) COMPACTION:**  
AFTER "SLICING" IN THE FABRIC AND BEFORE INSTALLATION OF STEEL POSTS, DRIVE INSTALLATION EQUIPMENT OVER THE "SLICE" WHILE FABRIC IS LAYING ON THE GROUND. THEN INSTALL STEEL POSTS AND PULL UP FABRIC TO ATTACH AT A UNIFORM HEIGHT.

	<b>STANDARD DETAILS</b>	Revised	Standard Plate No.
	SILT FENCE - MACHINE SLICED	1/2019	ERO-1A



STEEL FENCE POST (T-POST), MINIMUM 5' LONG, 6' MAXIMUM SPACING.

MONOFILAMENT GEOTEXTILE FABRIC PER MNDOT TABLE 3886-1 (MACHINE SLICED).

ATTACH FABRIC TO POST WITH MINIMUM 3 ZIP TIES (50 LB. TENSILE) PER POST IN TOP 8" OF FABRIC.


POST NOTCHES TO FACE AWAY FROM FABRIC.

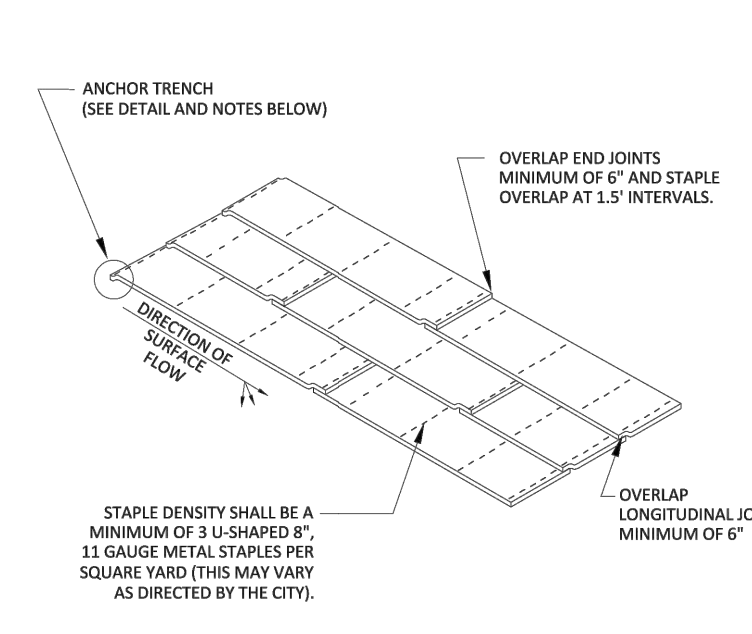
DIRECTION OF SURFACE FLOW

LAY FABRIC IN THE TRENCH, BACKFILL WITH NATURAL SOIL, AND COMPACT MACHINE DRIVEN VIBRATORY PLATE OR WITH LIGHT EQUIPMENT PRIOR TO PLACEMENT OF THE POSTS.

6"

24" MINIMUM POST EMBEDMENT

	<b>STANDARD DETAILS</b>	Revised	Standard Plate No.
	SILT FENCE - STANDARD	1/2019	ERO-1C



ANCHOR TRENCH (SEE DETAIL AND NOTES BELOW)

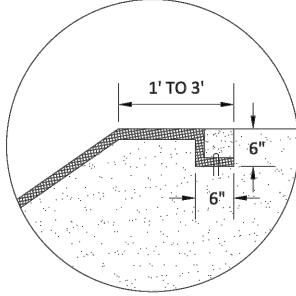
DIRECTION OF SURFACE FLOW

OVERLAP END JOINTS MINIMUM OF 6" AND STAPLE OVERLAP AT 1.5' INTERVALS.

OVERLAP LONGITUDINAL JOINTS MINIMUM OF 6"

STAPLE DENSITY SHALL BE A MINIMUM OF 3 U-SHAPED 8", 11 GAUGE METAL STAPLES PER SQUARE YARD (THIS MAY VARY AS DIRECTED BY THE CITY).


ANCHOR TRENCH  
1. DIG 6" X 6" TRENCH  
2. LAY BLANKET IN TRENCH  
3. STAPLE AT 1.5' INTERVALS  
4. BACKFILL WITH NATURAL SOIL AND COMPACT  
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH



1' TO 3'

6"

6"

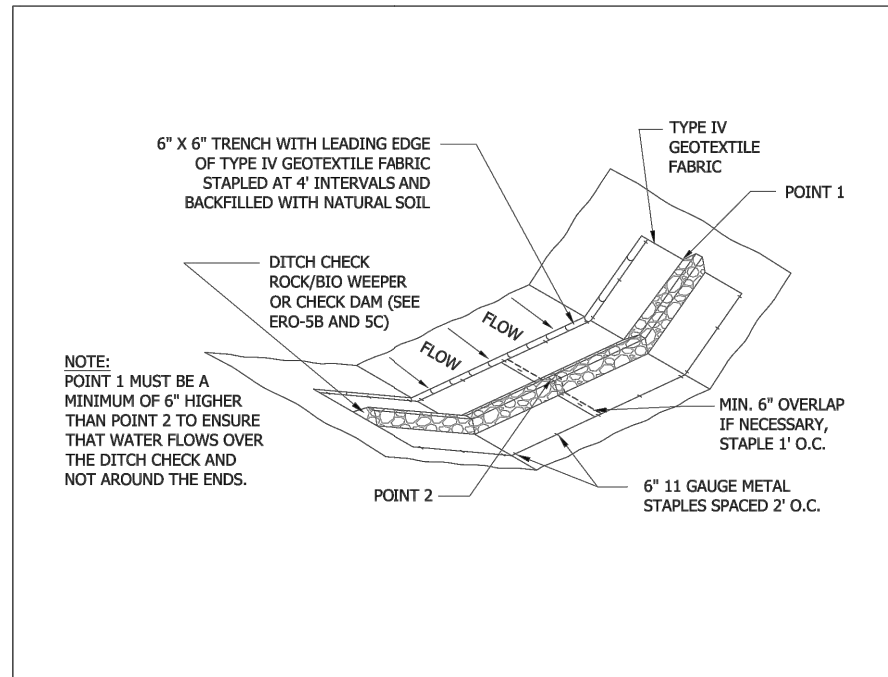
	<b>STANDARD DETAILS</b>	Revised	Standard Plate No.
	EROSION CONTROL BLANKET INSTALLATION	1/2019	ERO-2

BY: GREGORY W. NATHÉ  
 DATE: 7-21-20 LC. NO. 4172Z

REVISIONS DESCRIPTION	BY	DATE
CITY SUBMITTAL	ALS	01/17/2020
CITY SUBMITTAL	ALS	03/03/2020
CITY SUBMITTAL	ALS	06/09/2020

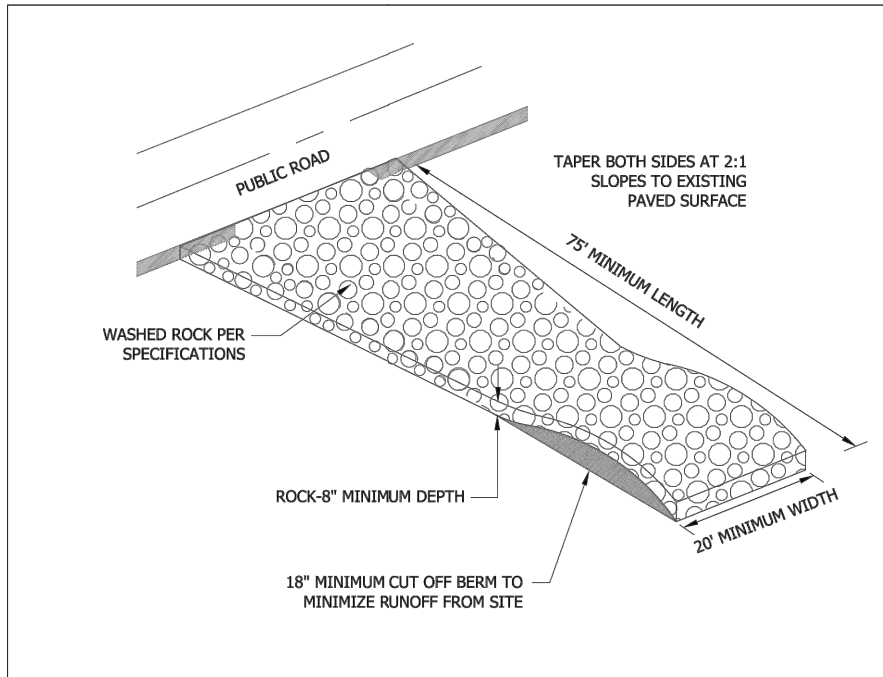
DATE: JANUARY, 2020	SCALE: AS SHOWN
DRAWN BY: ALS	CHECKED BY: OWN
JOB NUMBER: 2019-12702	

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 NATURE VIEW HOMES, LLC  
 PO BOX 211, LINDSTROM, MN 55045  
**7-21-20**  
 EROSION CONTROL DETAILS



DITCH CHECK SPACING  
 (USE FOR DETAILS ERO-5B AND 5C)

DITCH GRADE (%)	INTERVAL (FT)
2	100
4	75
6	50
8	40
10	25
10+	25



3/4" - 1" ROCK RESIDENTIAL 8" MINIMUM DEPTH  
 2" - 3" ROCK COMMERCIAL/INDUSTRIAL 8" MINIMUM DEPTH

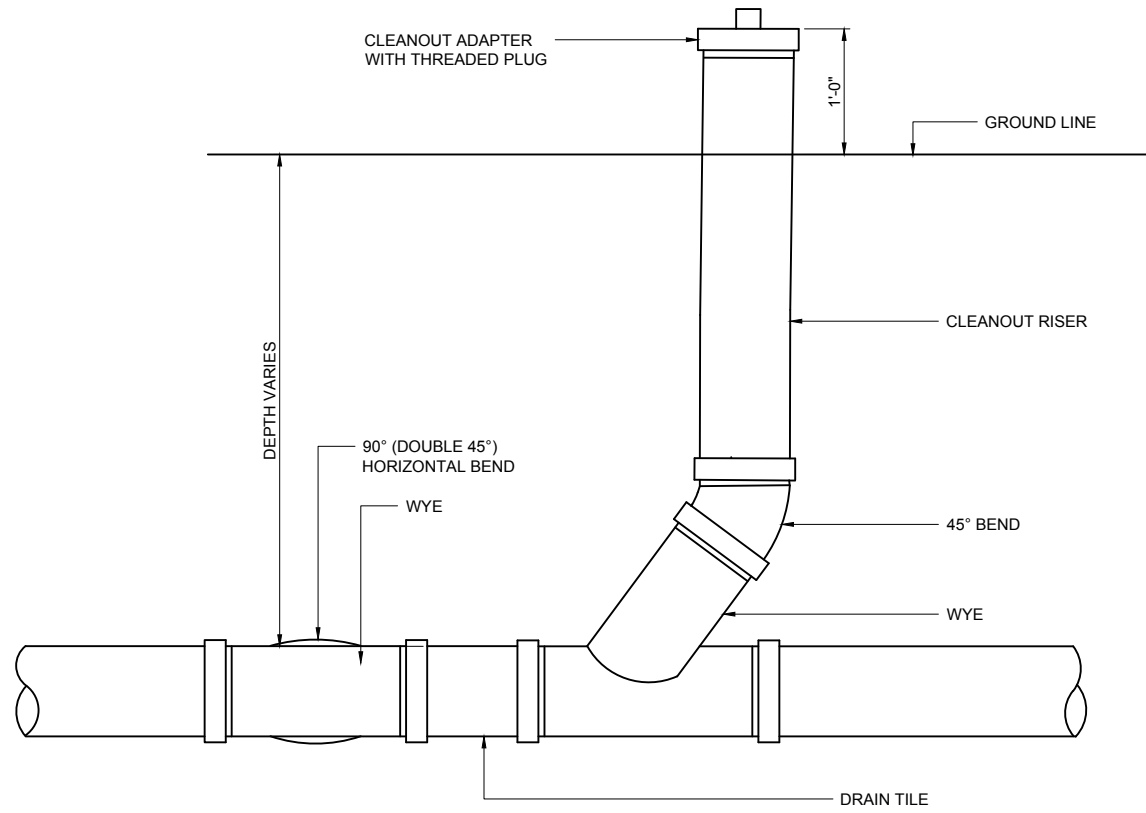
- NOTES:
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK TO STOP MUD MIGRATION THROUGH ROCK.
  2. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION ON PUBLIC ROADWAYS. FUGITIVE ROCK WILL BE REMOVED FROM ADJACENT ROADWAYS DAILY OR MORE FREQUENTLY AS NECESSARY.
  3. WOOD CHIPS WILL NOT BE ALLOWED



**STANDARD DETAILS**  
 DITCH CHECK -3D VIEW FOR 5B, 5C AND SPACING  
 Revised 1/2019 Standard Plate No. ERO-5A



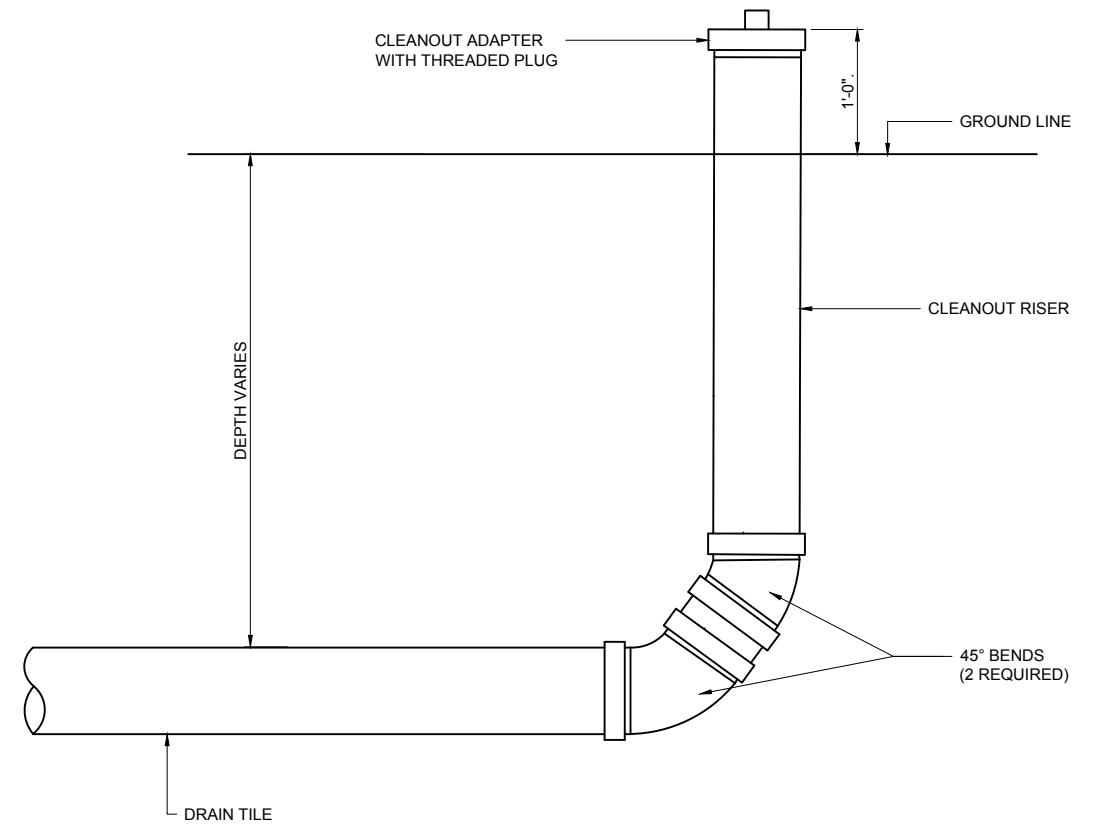
**STANDARD DETAILS**  
 ROCK CONSTRUCTION ENTRANCE  
 Revised 1/2019 Standard Plate No. ERO-7



IN-LINE POND DRAIN TILE CLEANOUT

REVISED  
---/---/---  
DETAIL NO.  
134A

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END OF THE LINE POND DRAIN TILE CLEANOUT

REVISED  
---/---/---  
DETAIL NO.  
134B

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**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

BY: GREGORY W. NATHÉ  
DATE: 7-21-20 LC. NO. 417Z

BY: GREGORY W. NATHÉ  
DATE: 7-21-20 LC. NO. 417Z

REVISIONS	DESCRIPTION	DATE	REV#
	CITY SUBMITTAL	03/07/2020	01
	CITY SUBMITTAL	06/09/2020	03

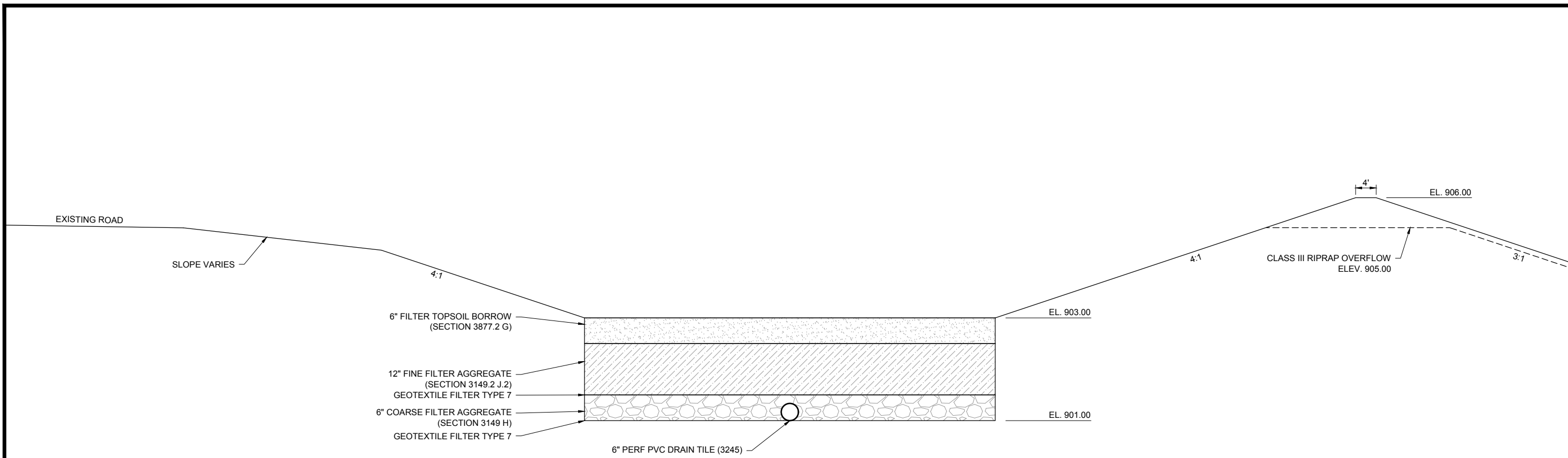
DATE:	JANUARY, 2020
SCALE:	AS SHOWN
DRAWN BY:	ALS
CHECKED BY:	OWN
JOB NUMBER:	2019-12702

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
7-21-20  
DRAINTILE DETAILS

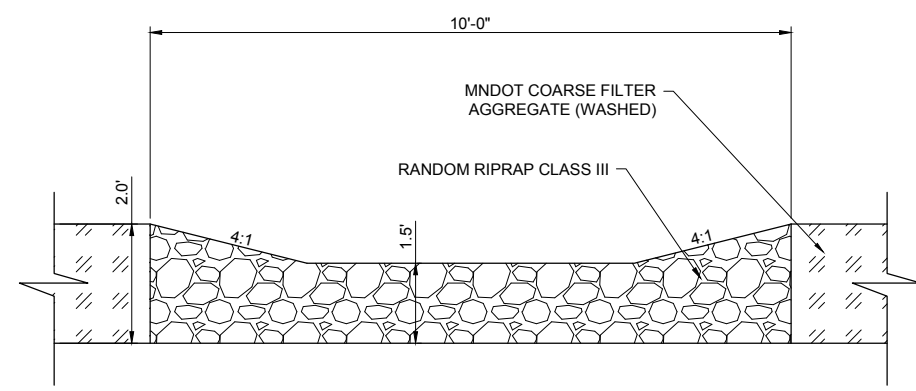
SHEET NO.  
**C2.13**



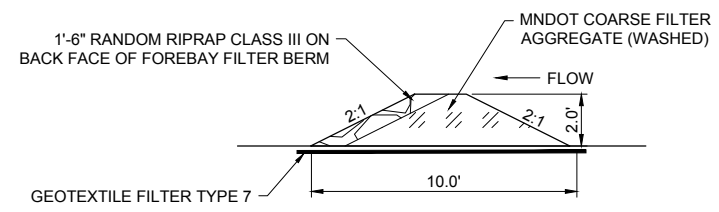
THESE DOCUMENTS AND THIS PLAN, SPECIFICATIONS, AND REPORTS  
 THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER  
 THE LAWS OF THE STATE OF MINNESOTA  
*Gregory W. Nathe*  
 GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 41272



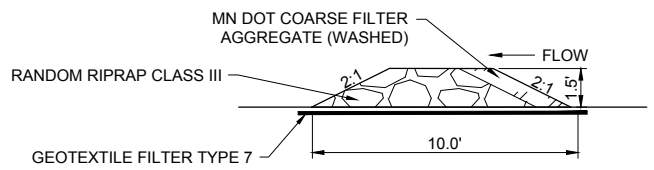
**BIOFILTRATION BASIN SECTION**



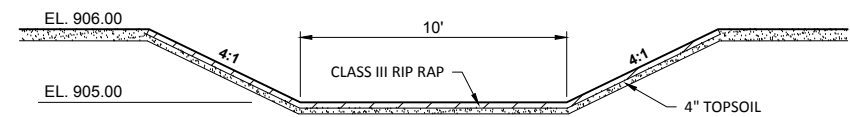
**FOREBAY FILTER BERM OVERFLOW PROFILE**  
N.T.S.



**FOREBAY FILTER BERM SECTION**  
N.T.S.



**FOREBAY FILTER BERM OVERFLOW SECTION**  
N.T.S.



**EMERGENCY OVERFLOW DETAIL**  
N.T.S.

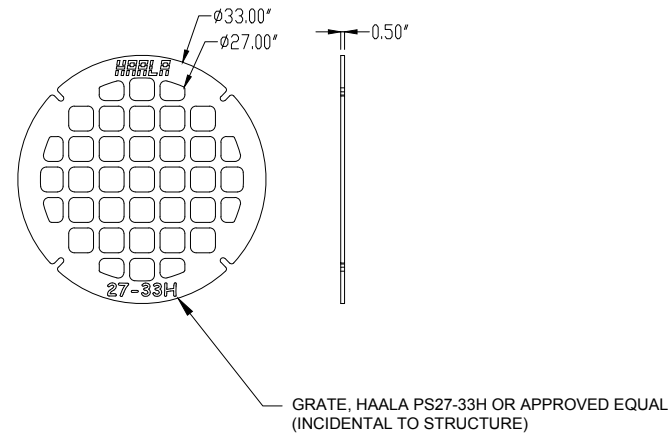
DATE	REV	REVISIONS DESCRIPTION	BY
01/17/2020	01	CITY SUBMITTAL	ALS
03/31/2020	02	CITY SUBMITTAL	ALS
06/09/2020	03	CITY SUBMITTAL	ALS

DATE:	JANUARY, 2020
SCALE:	AS SHOWN
DRAWN BY:	ALS
CHECKED BY:	OWN
JOB NUMBER:	2019-12702

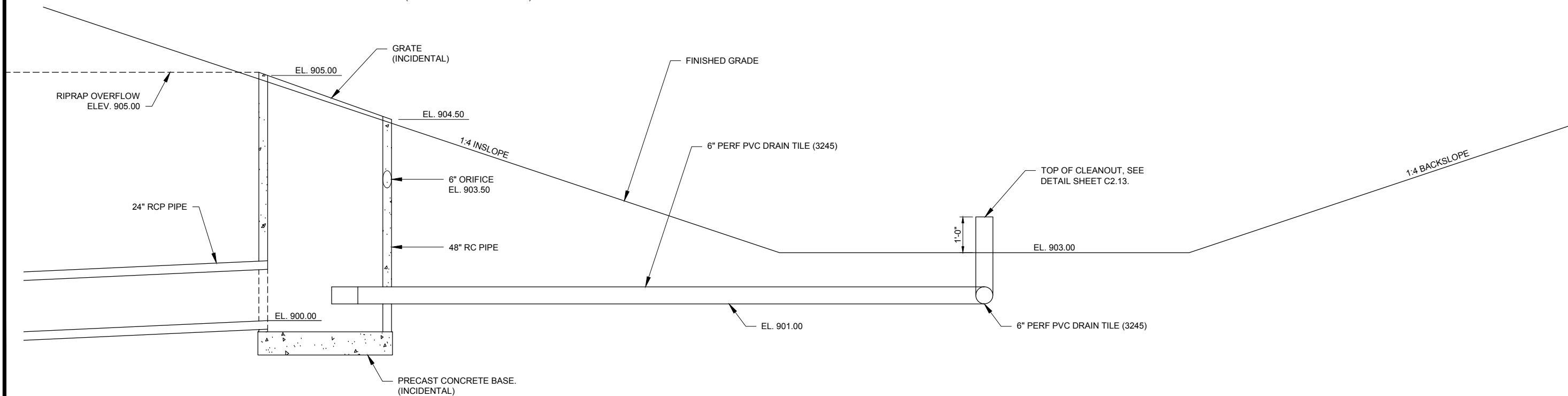
NATURE VIEW HOMES - CHISAGO CITY, MN  
 NATURE VIEW HOMES, LLC  
 PO BOX 211, LINDSTROM, MN 55045  
**7-21-20**  
**BIOFILTRATION BASIN DETAILS**



INFILTRATION BASIN SHALL BE CONSTRUCTED AND STABILIZED EARLY IN THE PROJECT SEQUENCING AND SHALL BE PROTECTED FROM COMPACTION DUE TO EARTH MOVING OPERATIONS. WHEN EXCAVATION ACTIVITIES ARE WITHIN 3' OF SUBGRADE ELEVATIONS, EQUIPMENT WITH PNEUMATIC TIRES SHALL NOT BE PERMITTED IN THE INFILTRATION BASIN AREA. CONTRACTOR MUST UTILIZE EQUIPMENT WITH MINIMAL COMPACTING ABILITY.



GRATE, HAALA PS27-33H OR APPROVED EQUAL (INCIDENTAL TO STRUCTURE)



CONTROL STRUCTURE 1 (DESIGN SPEC 2)

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

THIS REPORT, DRAWING, OR ANY PART THEREOF HAS BEEN PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

*Gregory W. Nathe*  
GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 4127Z

REVISIONS DESCRIPTION	BY	DATE	REVISIONS DESCRIPTION	BY	DATE
CITY SUBMITTAL	ALS	01/17/2020	JANUARY, 2020 AS SHOWN	ALS	2019-12702
CITY SUBMITTAL	ALS	03/31/2020	SCALE: OWN	ALS	2019-12702
CITY SUBMITTAL	ALS	06/09/2020	DRAWN BY: OWN	ALS	2019-12702
CITY SUBMITTAL	ALS		CHECKED BY: OWN	ALS	2019-12702

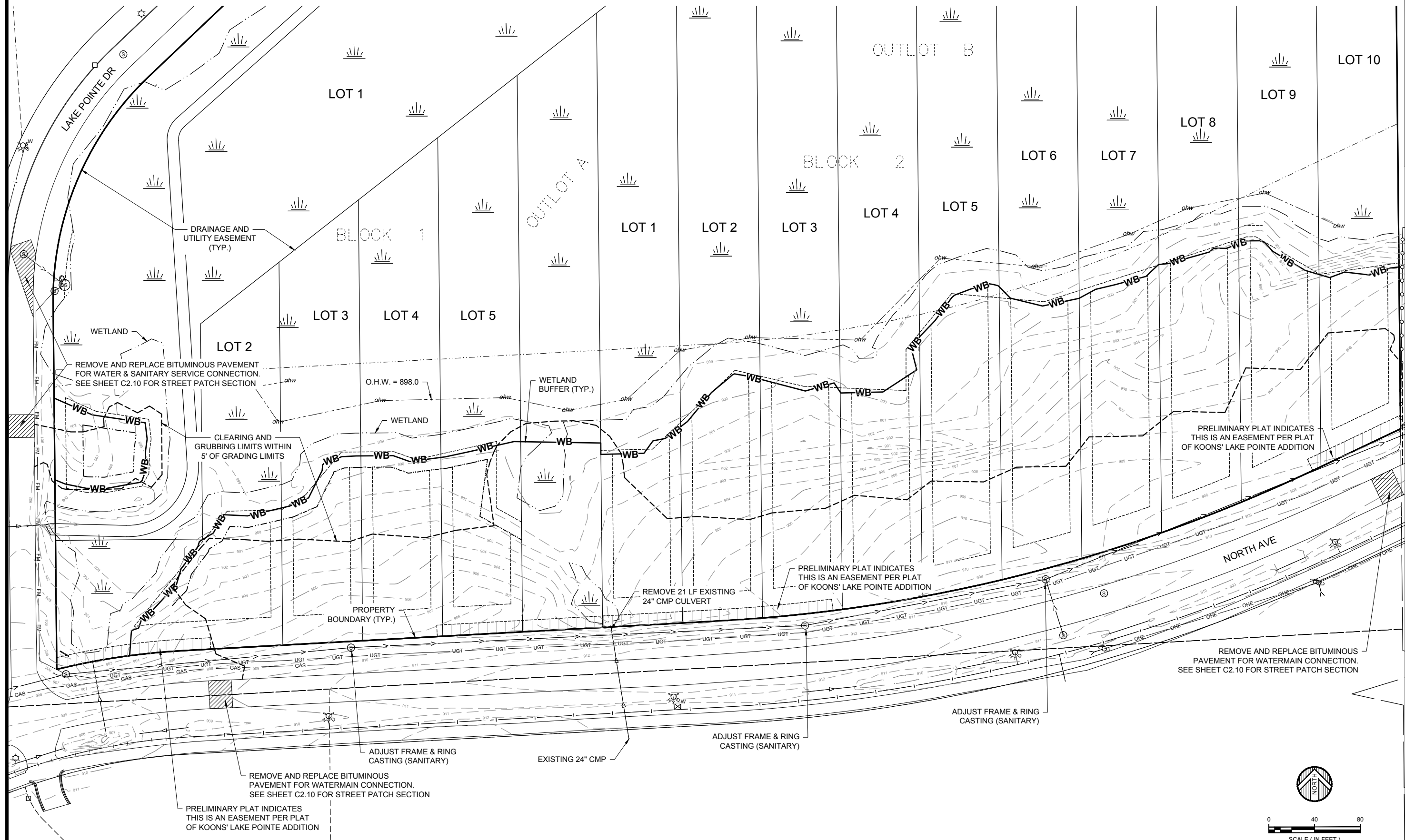
NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
**7-21-20**  
BIOFILTRATION BASIN DETAILS

SHEET NO. **C2.15**

C:\Users\Amanda.Stumpf\OneDrive - Widseth Smith Nolting\Desktop\Randy Kempenich - Nature View Homes\CADD\c-dt-2019-12702-forebay detail.dwg Plotted by Amanda Stumpf 7/20/2020 1:46:09 PM © 2020 WIDSETH SMITH NOLTING

NOTE:  
 DURING STREET REMOVALS AND INSTALLATION OF PROPOSED UTILITY CONNECTIONS, NORTH AVE IS TO BE CLOSED FOR SAFETY.  
 REFER TO MINNESOTA TEMPORARY TRAFFIC CONTROL FIELD MANUAL FOR TRAFFIC CONTROL GUIDELINES.  
 SEE "ROAD CLOSURE, 3 DAYS OR LESS, LAYOUT 32, PAGE 6K-32"

**SUBSURFACE UTILITY NOTE**  
 THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02. ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"  
**CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF ALL UTILITIES.**



**WIDSETH SMITH NOLTING**  
 Engineering | Architecture | Surveying | Environmental

NATURE VIEW HOMES - CHISAGO CITY, MN  
 NATURE VIEW HOMES, LLC  
 PO BOX 211, LINDSTROM, MN 55045

**7-21-20**

**EXISTING CONDITIONS**

DATE	REVISION	DESCRIPTION
01/17/2020	01	CITY SUBMITTAL
03/03/2020	02	CITY SUBMITTAL
06/09/2020	03	CITY SUBMITTAL
07/19/2020	04	CITY SUBMITTAL

DATE: JANUARY, 2020  
 SCALE: AS SHOWN  
 DRAWN BY: ALS  
 CHECKED BY: OWN  
 JOB NUMBER: 2019-12702

BY: GREGORY W. NOLTING  
 DATE: 7-21-20 LIC. NO. 4172

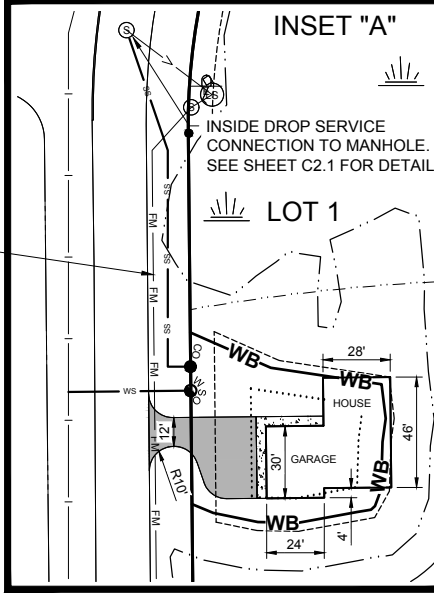
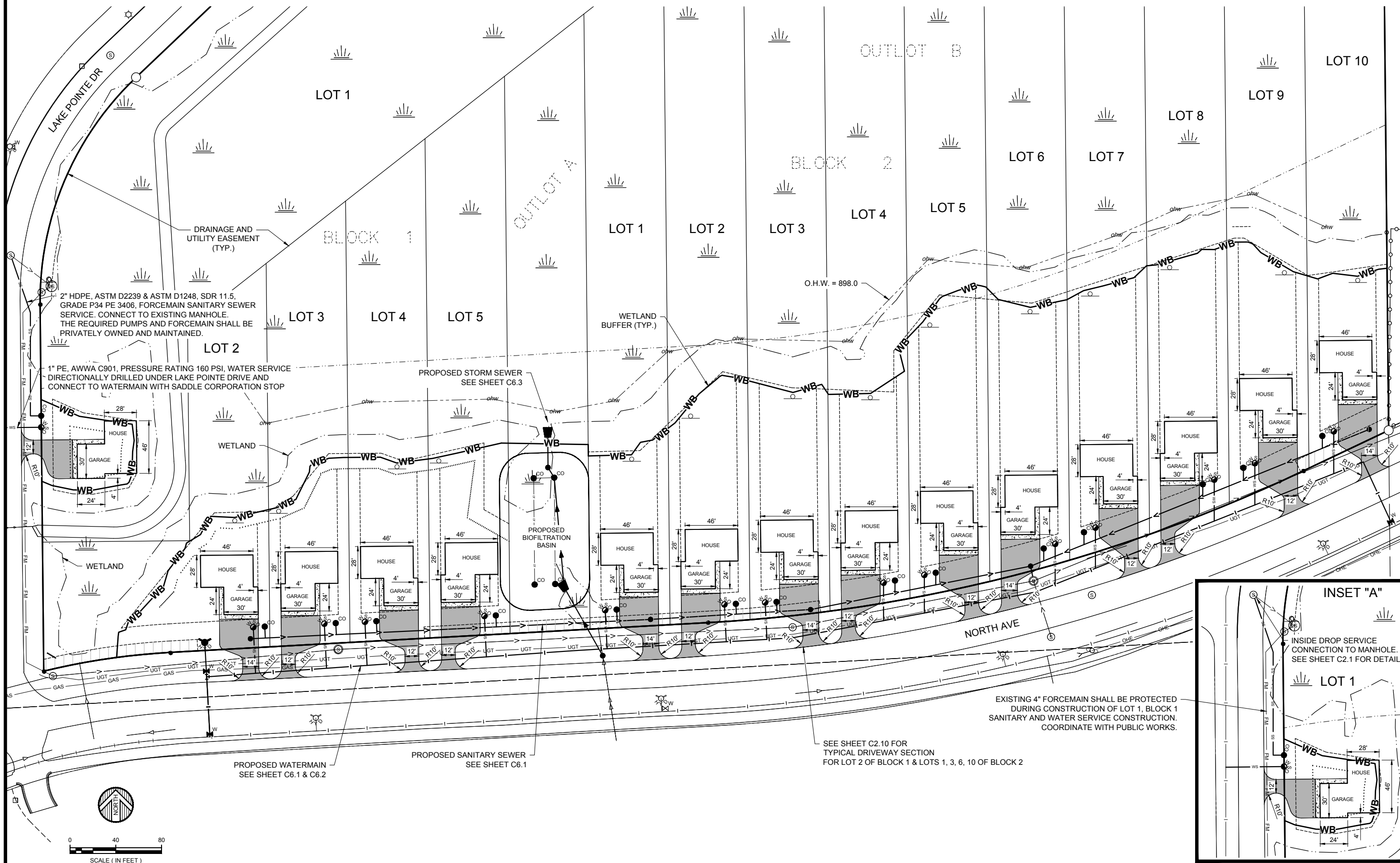
SHEET NO. **C3.1**

INDICATES WETLAND BUFFER SIGN TO BE INSTALLED ON EACH LOT. SEE SHEET C2.8 FOR DETAIL.

**LEGEND:**

BITUMINOUS PAVEMENT

4" CONCRETE WALK



**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

**NATURE VIEW HOMES - CHISAGO CITY, MN**  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045

**7-21-20**

**SITE PLAN**

SHEET NO. **C4.1**

DATE	REVISION DESCRIPTION	BY
JANUARY, 2020	AS SHOWN	ALS
01/17/2020	01	ALS
03/03/2020	02	ALS
06/09/2020	03	ALS
07/19/2020	04	ALS

DATE: 7-21-20  
LIC. NO.: 4172

BY: GREGORY W. NOLTING

FOR THE CITY OF CHISAGO CITY, MN

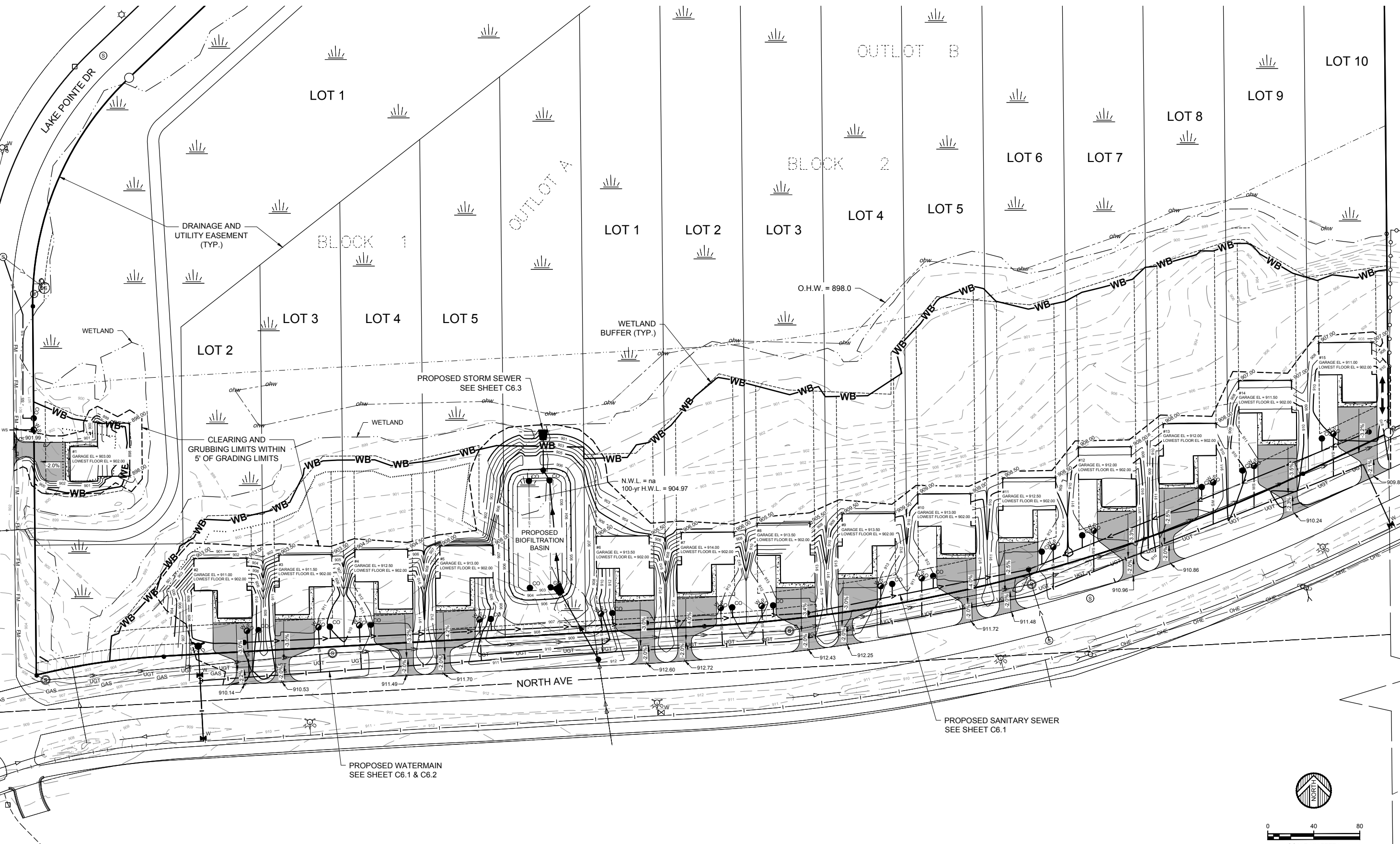
NOTE:  
CLEARING AND GRUBBING LIMITS WITHIN 5' OF GRADING LIMITS.

LOWEST FLOOR ELEVATION NEEDS TO BE 3' HIGHER THAN THE  
OHW, OR 1' HIGHER THAN THE 100-YR HWL.

**LEGEND:**

BITUMINOUS PAVEMENT

4" CONCRETE WALK



0 40 80  
SCALE (IN FEET)

**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

**7-21-20**

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
GRADING PLAN

DATE	REVISION	DESCRIPTION
JANUARY, 2020	01	AS SHOWN
01/17/2020	01	CITY SUBMITTAL
03/13/2020	02	CITY SUBMITTAL
06/09/2020	03	CITY SUBMITTAL
07/19/2020	04	CITY SUBMITTAL

CHECKED BY: GWN  
JOB NUMBER: 2019-12702

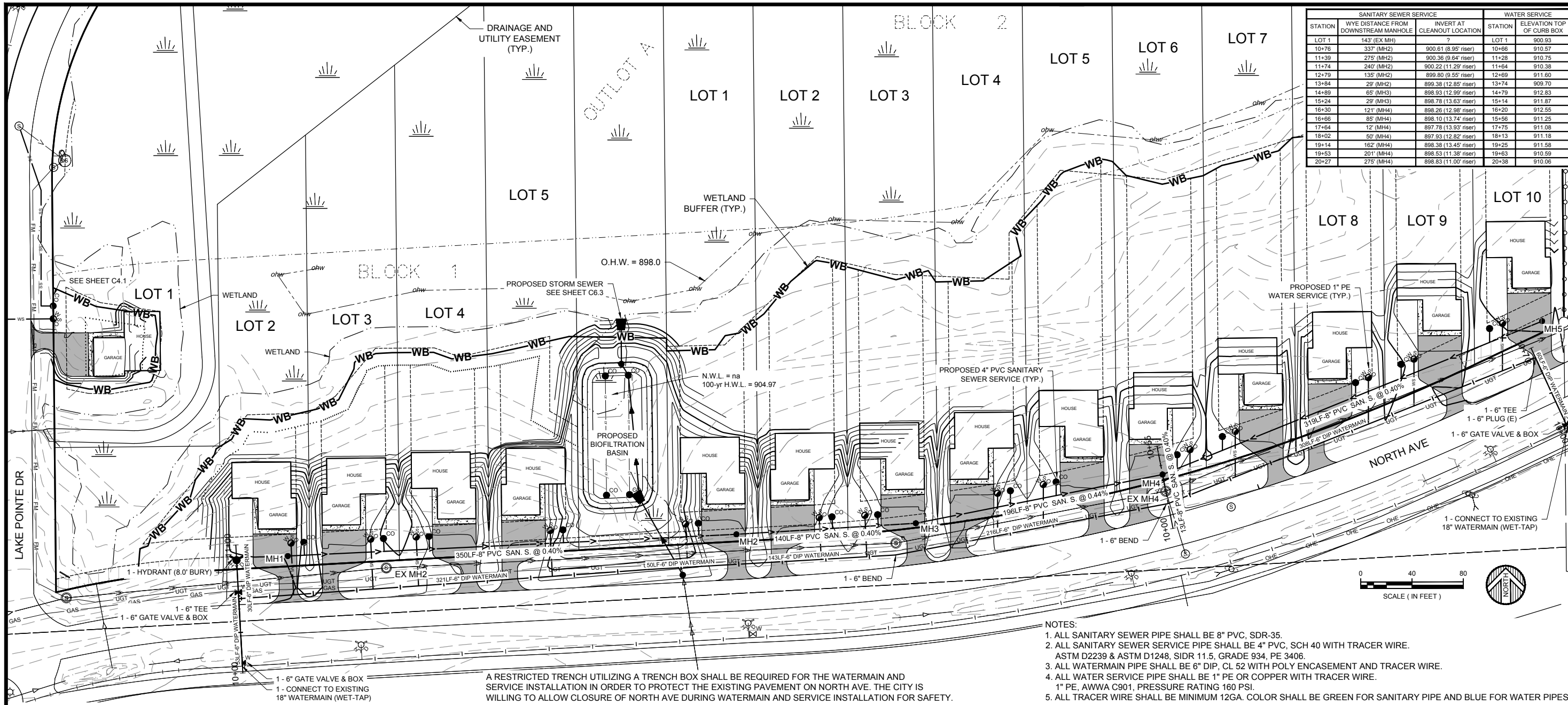
BY: GREGORY W. NOLTING  
DATE: 7-21-20  
LIC. NO. 41727

PROPERTY OWNER HAS REVIEWED THIS PLAN, SPECIFICATIONS, AND REPORT AND HAS 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  
*Gregory W. Nolting*  
GREGORY W. NOLTING

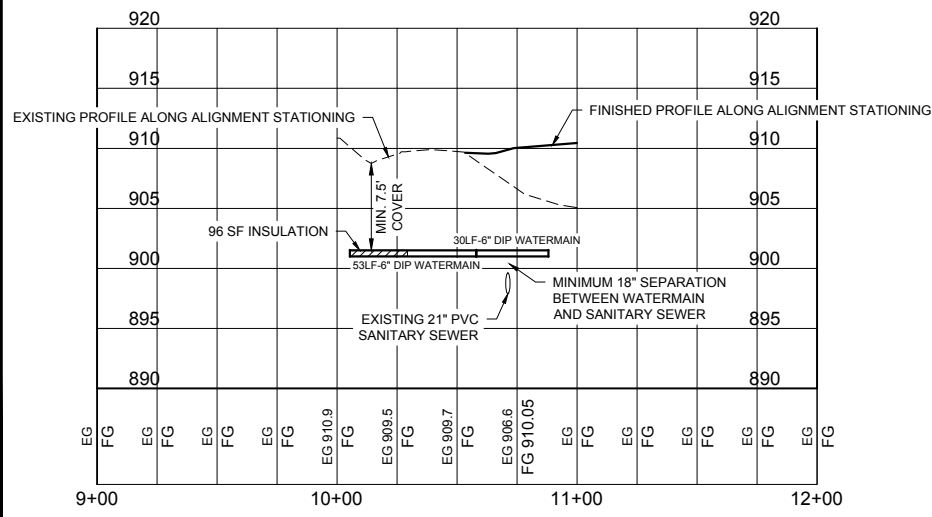
SHEET NO. **C5.1**

C:\Users\Amanda.Stumpf\OneDrive - Widseth Smith Nolting\Desktop\Randy Kempenich - Nature View Homes\CADD\c-2019-12702-grading plan.dwg Plotted by Amanda Stumpf 7/20/2020 1:50:38 PM © 2020 WIDSETH SMITH NOLTING

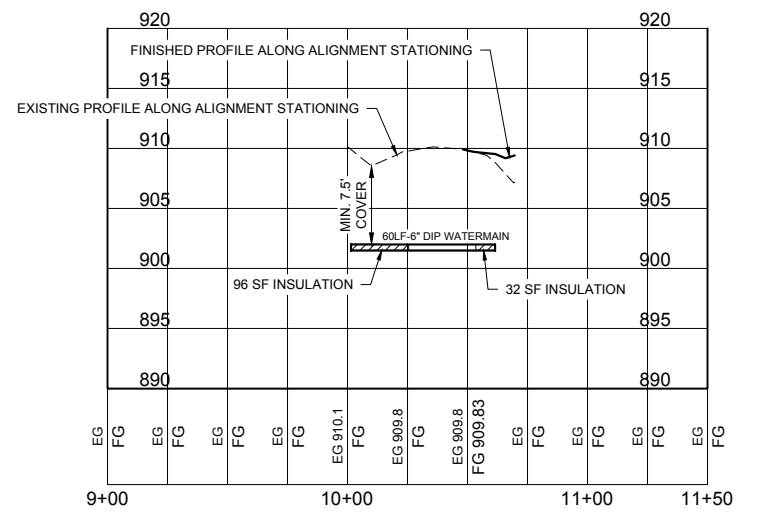




- NOTES:
1. ALL SANITARY SEWER PIPE SHALL BE 8" PVC, SDR-35.
  2. ALL SANITARY SEWER SERVICE PIPE SHALL BE 4" PVC, SCH 40 WITH TRACER WIRE. ASTM D2239 & ASTM D1248, SIDR 11.5, GRADE 934, PE 3406.
  3. ALL WATERMAIN PIPE SHALL BE 6" DIP, CL 52 WITH POLY ENCASMENT AND TRACER WIRE.
  4. ALL WATER SERVICE PIPE SHALL BE 1" PE OR COPPER WITH TRACER WIRE. 1" PE, AWWA C901, PRESSURE RATING 160 PSI.
  5. ALL TRACER WIRE SHALL BE MINIMUM 12GA. COLOR SHALL BE GREEN FOR SANITARY PIPE AND BLUE FOR WATER PIPES.



TOTAL 6" DIP WATERMAIN = 1181 LF



**WIDSETH SMITH NOLTING**  
 Engineering | Architecture | Surveying | Environmental

**Gregory W. Hathe**  
 LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
 LICENSE NO. 1472

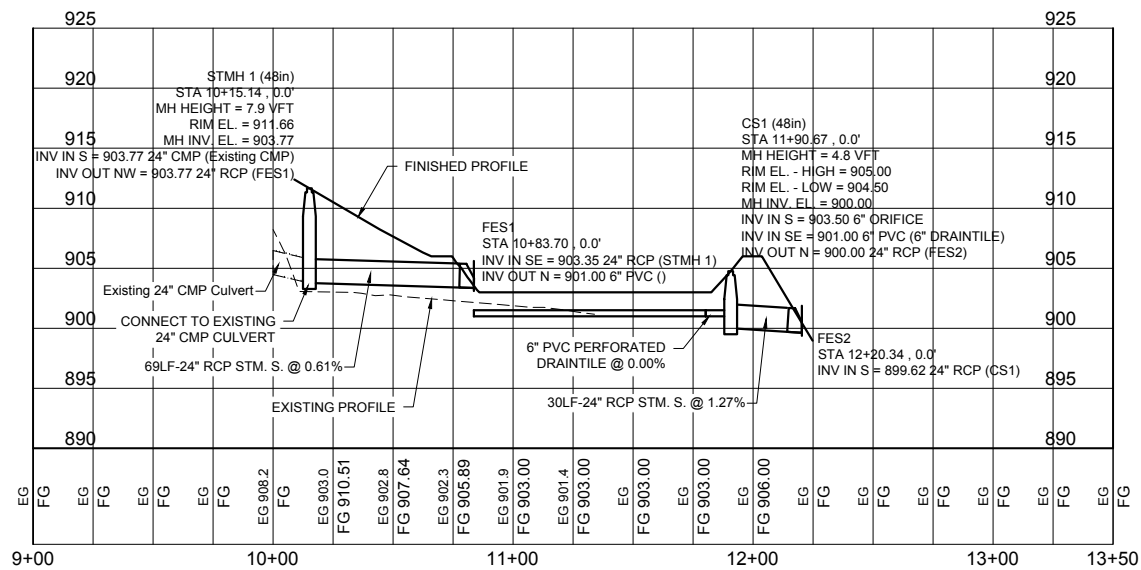
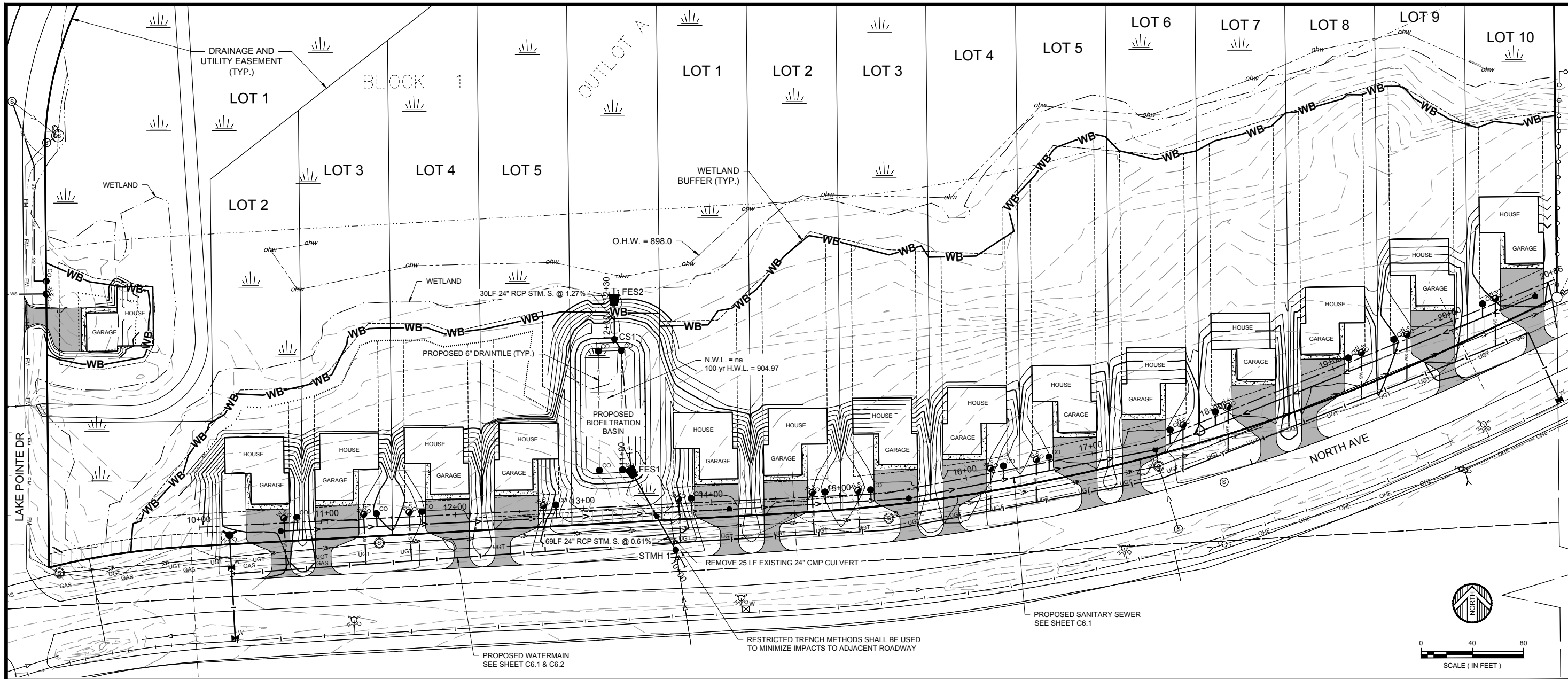
DATE: JANUARY, 2020  
 SCALE: AS SHOWN  
 DRAWN BY: GWN  
 CHECKED BY: GWN  
 JOB NUMBER: 2019-12702

NATURE VIEW HOMES - CHISAGO CITY, MN  
 NATURE VIEW HOMES, LLC  
 PO BOX 211, LINDSTROM, MN 55045

**7-21-20**

**WATERMAIN PLAN & PROFILE**

SHEET NO. **C6.2**



**WIDSETH SMITH NOLTING**  
 Engineering | Architecture | Surveying | Environmental

**REGISTRATION INFORMATION**

DATE	REVISION DESCRIPTION	BY
01/17/2020	CITY SUBMITTAL	ALS
03/31/2020	CITY SUBMITTAL	ALS
06/09/2020	CITY SUBMITTAL	ALS
07/19/2020	CITY SUBMITTAL	ALS

DATE: JANUARY, 2020  
 SCALE: AS SHOWN  
 DRAWN BY: ALS  
 CHECKED BY: GWN  
 JOB NUMBER: 2019-12702

**7-21-20**

NATURE VIEW HOMES - CHICAGO CITY, MN  
 NATURE VIEW HOMES, LLC  
 PO BOX 211, LINDSTROM, MN 55045

**STORM SEWER PLAN & PROFILE**

SHEET NO. **C6.3**

APPLICANT: RANDY KEMPENICH

PROJECT NAME: NATURE VIEW HOMES

APPLICATION DATE: TBD AND WILL BE DOCUMENTED IN THIS SWPPP NARRATIVE PRIOR TO START OF CONSTRUCTION.

NATURE OF CONSTRUCTION ACTIVITY DESCRIPTION: THE PROPOSED SITE CONSISTS OF THE FOLLOWING SOILS:

THE EXISTING AND PROPOSED DRAINAGE AREAS WILL REMAIN THE SAME FOR EXISTING AND PROPOSED CONDITIONS AND WILL UTILIZE A BIOFILTRATION SYSTEM.

RUNOFF IS WILL BE PRETREATED IN THE GRASSED WATERWAY AND THE FOREBAY PRIOR TO ENTERING THE BIOFILTRATION BASIN.

THE PROJECT WILL BE STARTED JUNE 2020, WITH CONSTRUCTION BEING COMPLETED IN NOVEMBER 2020.

\*\*\*\*\*

TOTAL ESTIMATED AREA TO BE DISTURBED BY THE PROJECT IS: ESTIMATED DISTURBED AREA = 3.18 AC

\*\*\*\*\*

NAME OF PERSON WITH BMP EXPERIENCE WHO WILL OVERSEE SWPPP IMPLEMENTATION AND COORDINATE WITH CONTRACTOR:

TBD AND WILL BE DOCUMENTED IN THIS SWPPP NARRATIVE PRIOR TO START OF CONSTRUCTION.

PERSON, ORGANIZATION, OR ENTITY RESPONSIBLE FOR LONG TERM MAINTENANCE OF PERMANENT STORMWATER TREATMENT SYSTEM:

DOCUMENTATION OF ALL TRAINED INDIVIDUALS:

SWPPP PREPARER:

COMPANY: WIDSETH SMITH NOLTING
NAME: GREG NATHE
ADDRESS: 610 FILLMORE ST
CITY, STATE ZIP: ALEXANDRIA, MN 56308
EMAIL: GREG.NATHE@WSN.US.COM
PHONE: 320-762-8149
TRAINING ORGANIZATION/SPONSOR: UNIVERSITY OF MINNESOTA
TRAINING DATE(S): JANUARY 30, 2018
TRAINING ACTIVITY/CONTENT: DESIGN OF CONSTRUCTION SWPPP
RECERTIFICATION
INSTRUCTOR(S) NAME(S): JOHN CHAPMAN / REBECCA FORMAN

INDIVIDUAL OVERSEEING IMPLEMENTATION, REVISION AND/OR AMENDMENT THE SWPPP THAT ARE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST OF MPCA:

COMPANY: \_\_\_\_\_
NAME: \_\_\_\_\_
ADDRESS: \_\_\_\_\_
CITY, STATE ZIP: \_\_\_\_\_
EMAIL: \_\_\_\_\_
PHONE: \_\_\_\_\_
TRAINING ORGANIZATION/SPONSOR: \_\_\_\_\_
TRAINING DATE(S): \_\_\_\_\_
TRAINING ACTIVITY/CONTENT: \_\_\_\_\_
INSTRUCTOR(S) NAME(S): \_\_\_\_\_

INDIVIDUAL OVERSEEING IMPLEMENTATION, REVISION AND/OR AMENDMENT THE SWPPP:

COMPANY: \_\_\_\_\_
NAME: \_\_\_\_\_
ADDRESS: \_\_\_\_\_
CITY, STATE ZIP: \_\_\_\_\_
EMAIL: \_\_\_\_\_
PHONE: \_\_\_\_\_
TRAINING ORGANIZATION/SPONSOR: \_\_\_\_\_
TRAINING DATE(S): \_\_\_\_\_
TRAINING ACTIVITY/CONTENT: \_\_\_\_\_
INSTRUCTOR(S) NAME(S): \_\_\_\_\_

INDIVIDUAL PERFORMING OR SUPERVISING THE INSTALLATION, MAINTENANCE AND REPAIR OF BMPS:

COMPANY: \_\_\_\_\_
NAME: \_\_\_\_\_
ADDRESS: \_\_\_\_\_
CITY, STATE ZIP: \_\_\_\_\_
EMAIL: \_\_\_\_\_
PHONE: \_\_\_\_\_
TRAINING ORGANIZATION/SPONSOR: \_\_\_\_\_
TRAINING DATE(S): \_\_\_\_\_
TRAINING ACTIVITY/CONTENT: \_\_\_\_\_
INSTRUCTOR(S) NAME(S): \_\_\_\_\_

INSTALLATION TIMING OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS:

EROSION AND SEDIMENT CONTROL BMP'S MUST BE INSTALLED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ONSITE.

TEMPORARY EROSION CONTROL BMPS.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE EROSION PREVENTION PRACTICES CONTAINED IN 2018 MNR100001 PERMIT 2018 SECTION 8.

EXAMPLES OF TEMPORARY EROSION CONTROL BMPS

- POLY COVER STOCKPILE OR SLOPE
• CONSTRUCTION PHASING

SEQUENCE OF CONSTRUCTION:

- 1. INSTALL STABILIZED CONSTRUCTION EXIT
2. CONSTRUCT THE DOWNGRADIENT PERIMETER SILT FENCES AND BIO LOGS ON THE SITE
3. STABILIZE AND MAINTAIN STABILIZATION OF ALL EXPOSED SOIL AREAS
4. CONSTRUCT THE UTILITIES
5. EXCAVATE THE DRIVEWAY AREA SWALE AND GRADE THE HOME BUILDING PADS
6. INSTALL DRIVEWAY CULVERTS AND GRADE DRIVEWAYS
7. SEED PERMANENT VEGETATION AND RIGOROUSLY STABILIZE THE DRIVEWAY SWALE AREA
8. EXCAVATE THE BIOFILTRATION BASIN AND CONSTRUCT OUTLET STORM SEWER
9. SEED PERMANENT VEGETATION AND RIGOROUSLY STABILIZE THE BIOFILTRATION BASIN SLOPES
10. INSTALL BIOFILTRATION TILE AND FILTER MEDIA
11. COMPLETE SEEDING OF PERMANENT VEGETATION
12. REMOVE SYNTHETIC SEDIMENT CONTROL BMPS

PHASING MUST BE IMPLEMENTED TO ENSURE THAT MORE AREA THAN CAN BE EFFECTIVELY INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE MNR100001 PERMIT IS NOT DISTURBED.

- DISC ANCHORED STRAW

MNDOT REFERENCE:

- > DISC ANCHORING MUST BE PERFORMED AS NECESSARY AND/OR ACCORDING TO THE PLAN INCLUDED IN THIS SWPPP.
> DISK ANCHOR TYPE 1, TYPE 3, OR TYPE 8 MULCHES WITH A DISK ANCHORING TOOL AS REQUIRED BY THE CONTRACT IMMEDIATELY AFTER PLACEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
> DISK ANCHORING MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.D.
• ROLLED EROSION CONTROL PRODUCTS

THE CONTRACTOR MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT THAT HAVE STEEP SLOPES (3:1 OR STEEPER). FOR STEEP SLOPED AREAS THAT MUST BE DISTURBED, THE CONTRACTOR MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES INCLUDING DRAINING AND TERRACING. SLOPES STEEPER THAN 3:1 MUST BE PROTECTED BY EROSION CONTROL BLANKETS.

MNDOT REFERENCE:

- > ROLLED EROSION CONTROL PRODUCTS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> ROLLED EROSION CONTROL PRODUCTS MUST BE EROSION CONTROL BLANKETS, TURF REINFORCEMENT MATS, OR WINTER BLANKETS, ACCORDING TO PLAN. MATERIALS MUST MEET THE REQUIREMENTS OF MNDOT SPEC. 3885.
> ROLLED EROSION CONTROL PRODUCTS MUST BE PLACED AS PER MNDOT SPEC. 2573.3.G.

- WOOD CHIPS
• VEGETATION

MNDOT REFERENCE:

- > PROTECT AND PRESERVE VEGETATION PER THE REQUIREMENTS OF MNDOT SPEC. 2572.3.A.
> BEFORE WORK BEGINS, PERMITTEES MUST DELINEATE THE LOCATION OF AREAS NOT TO BE DISTURBED.

- MULCH

MULCH EXAMPLE:

ALL DISTURBED SOIL AREAS MUST BE TEMPORARILY MULCHED WITH RAPID STABILIZATION, METHOD 3, INITIATED IMMEDIATELY, WHEN THE AREA WILL NOT ACTIVELY BE WORKED FOR 7 DAYS.
3884. STABILIZED FIBER MATRIX, PLACED AT 330 LB. PER 1000 GAL. OF SLURRY MIX.
SEED MIXTURE 22-111 PLACED AT A RATE OF 10 LB. PER 1,000 GAL. OF SLURRY MIX.
TYPE 3 SLOW RELEASE FERTILIZER 10-10-10 PLACED AT A RATE OF 50 LB. PER 1000 GAL. OF SLURRY MIX.
WATER PLACED AT A RATE OF 875 GAL PER 1,000 GAL OF SLURRY MIX.
APPLY MIXTURE AT A RATE OF 6000 GAL PER ACRE.

MNDOT REFERENCE:

- > MULCH MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> MULCH MUST BE TEMPORARY, TYPE 1, TYPE 3, TYPE 4, TYPE 5, TYPE 6, TYPE 7, TYPE 8, TYPE 9, WINTER, OR HYDRAULIC MULCH ACCORDING TO PLAN. MATERIALS MUST MEET THE REQUIREMENTS OF MNDOT SPEC. 3882 OR MNDOT SPEC. 3884.
> MULCH MUST BE APPLIED AS PER MNDOT SPEC. 2575.3.C OR MNDOT SPEC. 3575.3.E.

TEMPORARY SEDIMENT CONTROL BMPS

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE SEDIMENT CONTROL PRACTICES CONTAINED IN MNR100001 PERMIT 2018 REFERENCE 9 OF THE NPDES PERMIT. SEDIMENT CONTROL PRACTICES MUST BE INSTALLED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADE LAND DISTURBING ACTIVITIES BEGIN.

EXAMPLES OF TEMPORARY SEDIMENT CONTROL BMPS

- SILT FENCE

MNDOT REFERENCE:

- > SILT FENCE MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> SILT FENCE MUST BE PREASSEMBLED, MACHINE SLICED, HAND INSTALLED, SUPER DUTY, OR TURBIDITY BARRIER TYPE, ACCORDING TO PLAN. MATERIALS MUST MEET THE REQUIREMENTS OF MNDOT SPEC. 3886.
> SILT FENCE MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.B.

- SEDIMENT CONTROL LOGS

MNDOT REFERENCE:

- > SEDIMENT CONTROL LOGS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> SEDIMENT CONTROL LOGS MUST BE TYPE STRAW, WOOD FIBER, COIR, WOOD CHIP, COMPOST, ROCK, OR WOOD FIBER AND BLANKET SYSTEMS AND MEET THE REQUIREMENTS OF MNDOT SPEC. 3897.
> SEDIMENT CONTROL LOGS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.F.

- FILTER BERMS

SILT FENCE OR WILL BE USED AS THE PRIMARY DOWNGRADIENT SEDIMENT CONTROL. SEDIMENT CONTROL LOGS WILL BE USED AS REDUNDANT CONTROL IN AREAS WHERE A 50 FOOT NATURAL BUFFER TO A SURFACE WATER IS INFEASIBLE.

MNDOT REFERENCE:

- > FILTER BERMS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> FILTER BERMS MUST BE TYPE 1, 2, 3, 4, OR 5. MATERIALS MUST MEET THE REQUIREMENTS OF MNDOT SPEC. 3874.
> FILTER BERMS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.E.

- BALE BARRIERS

MNDOT REFERENCE:

- > BALE BARRIERS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> BALE BARRIERS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.C.

- ROCK DITCH CHECK

- SEDIMENT CONTROL LOG DITCH CHECK

- FILTER BAG INSERT INLET PROTECTION

- ROCK / COMPOST LOG INLET PROTECTION

- SILT FENCE RING AND ROCK FILTER BERM INLET PROTECTION

- SAND BAG BARRIERS

MNDOT REFERENCE:

- > SAND BAG BARRIERS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> SANDBAG BARRIERS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.D.

- SLASH MULCH, CRUSHED ROCK, OR SHEET PAD CONSTRUCTION EXIT

ROCK CONSTRUCTION EXITS MUST BE PLACED AT ALL LOCATIONS CONSTRUCTION VEHICLES WILL BE EXITING THE PROJECT AREA. IF THE CONTRACTOR CHOOSES TO ACCESS THE SITE FROM LOCATIONS OTHER THAN WHERE TEMPORARY ROCK CONSTRUCTION EXIT IS SHOWN ON THE PLAN, ADDITIONAL CONSTRUCTION EXIT CONTROLS MUST BE PLACED AT THESE LOCATIONS AS WELL.

MNDOT REFERENCE:

- > CONSTRUCTION EXIT CONTROLS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> CONSTRUCTION EXIT CONTROLS MUST BE CONSTRUCTED WITH SLASH MULCH, CRUSHED ROCK, TEMPORARY PAVING, REINFORCED GEOTEXTILE, SHEET PADS, FLOATING ROAD, TIMBER PAD, OR RUMBLE PAD.
> CONSTRUCTION EXIT CONTROLS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.K.

- RUMBLE PAD CONSTRUCTION EXIT

- CULVERT END CONTROLS

MNDOT REFERENCE:

- > CULVERT END CONTROLS MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> CULVERT END CONTROLS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.L.

- CULVERT STANDPIPE INSERT INLET PROTECTION

- STORM DRAIN INLET PROTECTION

MNDOT REFERENCE:

- > STORM DRAIN INLET PROTECTION MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> STORM DRAIN INLET PROTECTION MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.M.
• SEDIMENT CONTROL LOG WEIR CULVERT INLET PROTECTION
• GEOTEXTILE FABRIC CULVERT INLET PROTECTION
> GEOTEXTILE FABRIC CULVERT INLET PROTECTION MUST BE PLACED IN THE AREAS AS SHOWN ON THE PLAN INCLUDED IN THIS SWPPP.
> GEOTEXTILE FABRIC CULVERT INLET PROTECTION MUST MEET REQUIREMENTS OF MNDOT SPEC. 3886.
GEOTEXTILE FABRIC CULVERT INLET PROTECTION
A). CULVERT INLET PROTECTION MUST BE PROVIDED AT ALL CULVERT INLET LOCATIONS IMMEDIATELY AFTER CONSTRUCTION OF THE CULVERT. SEE PLAN INCLUDED IN THIS SWPPP FOR CULVERT INLET LOCATIONS.
B). CULVERT INLET PROTECTION MUST CONSIST OF GEOTEXTILE FABRIC WRAPPED AROUND, AND COMPLETELY COVERING THE INLET END SECTION. THE GEOTEXTILE FABRIC MUST BE THE SAME FABRIC USED IN SILT FENCE APPLICATIONS AND MEET THE REQUIREMENTS OF MNDOT SPEC. 3886.
C). THE CULVERT INLET PROTECTION MUST REMAIN IN PLACE AND ADEQUATELY MAINTAINED UNTIL PERMIT TERMINATION CONDITIONS HAVE BEEN ESTABLISHED.
D). CULVERT INLET PROTECTION MUST BE REPAIRED OR REPLACED IF DAMAGED DURING, OR AFTER, RAIN EVENTS, OR IF ACCUMULATED SEDIMENT REACHES 1/2 OF THE DIAMETER OF THE CULVERT PIPE. REPAIR OR REPLACEMENT OF CULVERT INLET PROTECTION MUST BE COMPLETED WITHIN 24 HOURS OF DISCOVERY.

- TEMPORARY SEDIMENT BASINS

CONTRACTOR MAY CONSTRUCT TEMPORARY SEDIMENTATION BASINS IN ACCORDANCE WITH MNR100001 PERMIT 2018 REFERENCE 14 OF THE NPDES PERMIT.

- TEMPORARY DIVERSION DITCH

MEASURES MUST BE TAKEN TO ENSURE THAT "CLEAN" RUNOFF FROM OFF SITE IS DIVERTED AROUND DISTURBED AREAS ON SITE. CARE SHOULD BE TAKEN THAT RE-ROUTING OFF SITE RUNOFF DOES NOT RESULT IN FLOODING OR OTHER ISSUES ON ADJACENT PROPERTIES

PERMANENT EROSION COVER METHODS FOR ALL EXPOSED SOIL AREAS:

PERMANENT EROSION COVER METHODS WILL CONSIST OF GRAVEL, CONCRETE, BITUMINOUS, RIP RAP AND PERENNIAL VEGETATIVE COVER.

PERMANENT EROSION CONTROL WILL BE ACHIEVED WITH A DENSITY OF 70% OF THE NATIVE BACKGROUND VEGETATION BY USING SEED MIXTURE 25-141 AT A RATE OF 100 LBS/AC OF PURE LIVE SEED, OR SEED MIXTURE 25-151 AT A RATE OF 100 LBS/AC OF PURE LIVE SEED, OR SEED MIXTURE 33-261 AT A RATE OF 200 LBS/AC OF PURE LIVE SEED, AND TYPE 3 FERTILIZER WITH A COMPOSITION OF 22-5-10 AT A RATE OF 350 LBS/AC, AND HYDRAULIC MATRIX, TYPE HYDRAULIC MULCH AT A RATE OF 2500 LBS/AC ON ALL DISTURBED CONSTRUCTION AREAS AS INDICATED ON THE EROSION CONTROL PLAN SHEET.

STORMWATER MITIGATION MEASURES PROPOSED AS PART OF ENVIRONMENTAL, ENDANGERED SPECIES, ARCHAEOLOGICAL OR OTHER REQUIRED LOCAL, STATE OR FEDERAL REVIEWS CONDUCTED BY THE PROJECT.

TBD AND WILL BE DOCUMENTED IN THIS SWPPP NARRATIVE PRIOR TO START OF CONSTRUCTION.

DISCHARGES TO ANY U.S. EPA APPROVED TMDL FOR THE POLLUTANTS/STRESSORS DESCRIBED IN MNR100001 PERMIT 2018 REFERENCE ITEM 23.7:

TMDL IMPLEMENTATION PLANS CURRENTLY EXIST FOR THE WALLMART LAKE WHICH IS A RECEIVING WATER FOR THIS PROJECT. WALLMART LAKE IS IMPAIRED FOR AND HAS A TMDL APPROVED FOR NUTRIENTS (NUTRIENT / EUTROPHICATION BIOLOGICAL INDICATORS).

PERMANENT STORMWATER TREATMENT SYSTEM:

THE PERMANENT STORMWATER TREATMENT SYSTEM FOR THIS SITE WILL BE A BIOFILTRATION BASIN DUE TO THE EXISTENCE OF HYDROLOGIC SOIL GROUP TYPE D WITHIN THE BIOFILTRATION AREA. PRETREATMENT WILL BE IN THE FOREBAY AND GRASSED WATERWAY.

PROCEDURES TO AMEND SWPPP:

THE GENERAL CONTRACTOR MUST AMEND THE SWPPP AS NECESSARY TO INCLUDE ADDITIONAL REQUIREMENTS, SUCH AS ADDITIONAL OR MODIFIED BMP'S, DESIGNED TO CORRECT PROBLEMS OR ADDRESS SITUATIONS IN ACCORDANCE WITH MNR100001 PERMIT 2018 REFERENCE 6 OF THE NPDES PERMIT.

AMENDMENTS TO THE SWPPP:

- 1. DATE:
2. DATE:
3. DATE:
4. DATE:
5. DATE:

METHODS TO MINIMIZE SOIL COMPACTION AND TO PRESERVE TOPSOIL:

THE GENERAL CONTRACTOR MUST DELINEATE AREAS THAT ARE NOT TO BE DISTURBED ON THE SITE. THIS MAY BE DONE WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC., AND MUST BE COMPLETED PRIOR TO THE START OF ANY GRADING OPERATIONS.

STORMWATER CONTROL DESIGN:

TBD AND WILL BE DOCUMENTED IN THIS SWPPP NARRATIVE PRIOR TO START OF CONSTRUCTION.

CHEMICAL TREATMENT SYSTEMS TO ENHANCE SEDIMENTATION:

- FLOCCULANTS

MNDOT REFERENCE:

- > FLOCCULANTS MUST BE APPLIED AS SPECIFIED ON THE PLAN INCLUDED IN THIS SWPPP.
> LIQUID, STOCK, OR GRANULAR FLOCCULANT MUST BE USED AND MEET REQUIREMENTS OF MNDOT SPEC. 3898.
> FLOCCULANTS MUST BE INSTALLED AS PER MNDOT SPEC. 2573.3.N.

IMPERVIOUS SURFACES PRE- AND POST-CONSTRUCTION:

EXISTING IMPERVIOUS = 0.08 AC
PROPOSED IMPERVIOUS AREA = 1.35 AC

INFEASIBILITY DOCUMENTATION REQUIREMENTS:

THE 50 FOOT NATURAL BUFFER TO A SURFACE WATER IS INFEASIBLE IN TWO AREAS, REDUNDANT PERIMETER SEDIMENT CONTROLS WILL BE INSTALLED.

SITE ASSESSMENTS FOR GROUNDWATER OR SOIL CONTAMINATION:

BIOFILTRATION WILL BE USED AS THE PRIMARY PERMANENT STORMWATER TREATMENT SYSTEM SO NO SITE ASSESSMENTS ARE NEEDED FOR GROUNDWATER OR SOIL CONTAMINATION.



REGISTRY NUMBER: 721-20
I.C. NO. 4727

Table with 4 columns: REVISIONS DESCRIPTION, DATE, REVISION, BY

Table with 2 columns: DATE, SCALE, CHECKED BY, JOB NUMBER

NATURE VIEW HOMES - CHISAGO CITY, MN
NATURE VIEW HOMES, LLC
PO BOX 211, LINDSTROM, MN 55045
SWPPP NARRATIVE



**TABULATED QUANTITIES:**

ITEM QUANTITY	ESTIMATED
SILT FENCE, TYPE MS	1439 LF
SEDIMENT CONTROL LOG	709 LF

**CONSTRUCTION ACTIVITY REQUIREMENTS:**

**EROSION PREVENTION MEASURES**

- EXPOSED SOILS (INCLUDING STOCKPILES) MUST HAVE EROSION PROTECTION/COVER INITIATED IMMEDIATELY AND COMPLETED WITHIN 7 DAYS PER SECTION 23.
- FOR DNR PUBLIC WATERS WITH "WORK IN WATERS RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, STABILIZATION MUST BE COMPLETED FOR ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF THE WATER'S EDGE, AND DRAINING TO THE WATER, WITHIN 24 HOURS DURING THE RESTRICTION PERIOD.
- THE WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF DITCHES MUST BE STABILIZED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER OR PROPERTY LINE.
- TEMPORARY OR PERMANENT DITCHES OR SWALES THAT ARE BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION MUST BE STABILIZED WITHIN 24 HOURS AFTER NO LONGER BEING USED AS A SEDIMENT CONTAINMENT SYSTEM.
- PIPE OUTLETS MUST HAVE ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER OR PERMANENT STORMWATER TREATMENT SYSTEM.
- MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE, OR SIMILAR EROSION PREVENTION PRACTICES CANNOT BE USED WITHIN THE NORMAL WETTED PERIMETER OF DRAINAGE DITCHES OR SWALE SECTIONS WITH A CONTINUOUS SLOPE GREATER THAN 2%.

**SEDIMENT CONTROL MEASURES**

- SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON DOWNGRADIANT PERIMETERS AND UPGRADIANT OF ANY BUFFER ZONES.
- SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED AT THE BASE OF STOCKPILES ON THE DOWNGRADIANT PERIMETER.
- STOCKPILES MUST BE LOCATED OUTSIDE OF NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES (E.G., CURB AND GUTTER SYSTEMS) UNLESS THERE IS A BYPASS.
- INLET PROTECTION BMPS MUST BE INSTALLED ACCORDING TO PLAN.
- VEHICLE TRACKING BMPS MUST BE ESTABLISHED WHERE VEHICLES ARE EXITING THE SITE TO MINIMIZE STREET TRACKING. SEDIMENT TRACKED ONTO A PUBLIC STREET MUST BE REMOVED WITHIN 24 HOURS.
- TOPSOIL MUST BE PRESERVED UNLESS INFEASIBLE.
- SOIL COMPACTION MUST BE MINIMIZED.
- DISCHARGES FROM BMPS MUST BE DIRECTED TO VEGETATED AREAS, UNLESS INFEASIBLE.
- 50-FOOT NATURAL BUFFERS MUST BE PRESERVED OR (IF MAINTAINING BUFFER IS INFEASIBLE) REDUNDANT SEDIMENT CONTROLS MUST BE PROVIDED WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND DRAINS TO THE SURFACE WATER.

**DEWATERING AND BASIN DRAINING:**

- IF DEWATERING IS REQUIRED ON THE SITE, THERE MUST BE A PLAN IN PLACE TO PREVENT NUISANCE CONDITIONS, EROSION, AND INUNDATION OF WETLANDS.  
DEWATERING RELATED TO THE CONSTRUCTION ACTIVITY MUST COMPLY WITH MNR100001 PERMIT 2018 REFERENCE 10 OF THE NPDES PERMIT. DEWATERING DISCHARGE THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE AND BMP'S MUST BE IMPLEMENTED TO PREVENT WATER CONTAINING SEDIMENT OR OTHER POLLUTANTS FROM BEING DISCHARGED TO SURFACE WATERS OR DOWNSTREAM PROPERTIES.
- IF USING FILTERS WITH BACKWASH WATER, BACKWASH WATER MUST BE HAULED AWAY FOR DISPOSAL, RETURNED TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATED INTO THE SITE IN A MANNER THAT DOES NOT ERODE INTO RUNOFF.

**INSPECTION REQUIREMENTS:**

- THE SWPPP MUST IDENTIFY THE TRAINED PERSON (AS IDENTIFIED IN ITEM 21.2.B) WHO WILL CONDUCT INSPECTIONS.
- INSPECTIONS MUST BE PERFORMED ONCE EVERY 7 DAYS.
- INSPECTIONS MUST BE PERFORMED WITHIN 24 HOURS OF A RAIN EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.
- INSPECTION AND MAINTENANCE RECORDS SHOULD INCLUDE:
  - DATE AND TIME OF INSPECTION.
  - NAME OF PERSON(S) CONDUCTING INSPECTIONS.
  - ACCURATE FINDINGS OF INSPECTIONS, INCLUDING

THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED.

- CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES).
- DATE AND AMOUNT OF RAINFALL EVENTS GREATER THAN 0.5 INCH IN 24 HOURS.
- RAINFALL AMOUNTS MUST BE OBTAINED BY A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE, OR BY A WEATHER STATION THAT IS WITHIN ONE MILE OR BY A WEATHER REPORTING SYSTEM.
- REQUIREMENTS TO OBSERVE ANY DISCHARGE THAT MAY BE OCCURRING DURING THE INSPECTION. DISCHARGE SHOULD ALSO BE DESCRIBED AND PHOTOGRAPHED.

**MAINTENANCE REQUIREMENTS:**

- ALL NONFUNCTIONAL BMPS MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW.
- PERIMETER CONTROL DEVICES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN NONFUNCTIONAL OR SEDIMENT REACHES ONE-HALF THE HEIGHT OF THE DEVICE.
- TEMPORARY AND PERMANENT SEDIMENT BASINS MUST BE DRAINED, AND SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED REACHES ONE-HALF STORAGE VOLUME.
- ALL SEDIMENT DEPOSITS AND DELTAS MUST BE REMOVED FROM SURFACE WATERS (INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS) AND THE REMOVAL AREAS RESTABILIZED WITHIN SEVEN DAYS.
- SEDIMENT ON PAVED SURFACES (E.G., SEDIMENT TRACKED FROM VEHICLES) MUST BE REMOVED WITHIN ONE CALENDAR DAY OF DISCOVERY.
- PERMANENT STORMWATER TREATMENT BMPS MUST BE INSPECTED AND MAINTAINED.  
LONG TERM MAINTENANCE OF THE PERMANENT STORM WATER MANAGEMENT SYSTEM WILL BE BY THE CITY OF LINDSTROM. THE INFILTRATION FOREBAY AND INFILTRATION BASIN MUST BE INSPECTED ANNUALLY. THE INFILTRATION BASIN MUST BE CLEANED AND RESTORED TO DESIGN GRADE AFTER ONE HALF OF THE STORAGE VOLUME HAS BEEN FILLED WITH SEDIMENT. THE OUTLET MUST BE MONITORED AND REPAIRED FOR ANY EROSION OR DEFECTS THAT MAY DEVELOP.

**POLLUTION PREVENTION MANAGEMENT MEASURES:**

- PROPER STORAGE, HANDLING, AND DISPOSAL OF CONSTRUCTION PRODUCTS, MATERIALS, AND WASTES IS REQUIRED.  
HAZARDOUS MATERIALS AND TOXIC WASTE (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) MUST BE STORED IN WATERPROOF CONTAINERS WITH SECONDARY CONTAINMENT. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH MPCA REGULATIONS. RUNOFF CONTAINING SUCH MATERIAL MUST BE COLLECTED, REMOVED FROM THE SITE, TREATED, AND DISPOSED AT AN APPROVED SOLID WASTE OR CHEMICAL DISPOSAL FACILITY. BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS AND PESTICIDES, FERTILIZERS, TREATMENT CHEMICALS AND LANDSCAPE MATERIALS MUST BE UNDER COVER BY PLASTIC SHEETING OR TEMPORARY ROOFS TO PREVENT DISCHARGE OR PROTECTED BY SIMILAR EFFECTIVE MEANS TO PREVENT CONTACT WITH STORMWATER.
- ADDRESS FUELING AND MAINTENANCE OF EQUIPMENT OR VEHICLES AND SPILL PREVENTION AND RESPONSE.  
SPILL CLEANUP MATERIALS MUST BE AVAILABLE ON SITE. MATERIAL MUST INCLUDE BUT NOT LIMITED TO BROOMS, MOPS, RAGS, GLOVES, ABSORBENT MATERIAL, SAND PLASTIC AND METAL CONTAINERS. SPILLS GREATER THAN 5 GALLONS THAT REACH STORM WATER CONVEYANCE SYSTEMS CONNECTED TO A WATER OF THE STATE MUST BE IMMEDIATELY REPORTED TO THE MPCA STATE DUTY OFFICER.
- LIMIT EXTERIOR VEHICLE AND EQUIPMENT WASHING TO A DEFINED AREA OF THE SITE.  
EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES MUST BE LIMITED TO A DEFINED AREA OF THE SITE. RUNOFF MUST BE CONTAINED, AND WASTE PROPERLY DISPOSED OF.
- DESCRIBE OF THE CONTAINMENT FOR CONCRETE AND OTHER WASHOUT WASTES.  
CONCRETE WASHOUT SITE: ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH THE MPCA REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
- PORTABLE TOILETS MUST BE POSITIONED SO THAT THEY ARE SECURE.  
A LICENSED SANITARY WASTE MANAGEMENT HANDLER MUST DISPOSE OF SANITARY WASTE.

**PERMIT TERMINATION CONDITIONS:**

- PERMANENT UNIFORM PERENNIAL VEGETATIVE COVER MUST BE ESTABLISHED AT MINIMUM 70% DENSITY OF ITS EXPECTED FINAL GROWTH.
- THE PERMANENT STORMWATER TREATMENT SYSTEM IS CONSTRUCTED, MEETS ALL REQUIREMENTS, AND IS OPERATING AS DESIGNED.
- ALL TEMPORARY SYNTHETIC EROSION PREVENTION AND SEDIMENT CONTROL BMPS MUST BE REMOVED AND THE SURROUNDING AREA MUST BE RESTORED TO AS DESIGNED.
- CLEAN OUT SEDIMENT FROM CONVEYANCE SYSTEMS AND PERMANENT STORMWATER TREATMENT SYSTEMS (RETURN TO DESIGN CAPACITY).
- FOR RESIDENTIAL SITES, INSTALL TEMPORARY EROSION PROTECTION AND DOWNGRADIANT PERIMETER CONTROL AND DISTRIBUTE THE MPCA'S HOMEOWNER FACT SHEET.
- SUBMIT A NOTICE OF TERMINATION (NOT) TO THE MPCA.

**RECORD RETENTION REQUIREMENTS:**

- PERMITTEES MUST KEEP THE SWPPP, INCLUDING ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS AT THE SITE DURING NORMAL WORKING HOURS BY PERMITTEES WHO HAVE OPERATIONAL CONTROL OF THAT PORTION OF THE SITE.  
THE SWPPP AND ASSOCIATED RECORDS MUST BE STORED AND MAINTAINED BY AN EMPLOYEE OR REPRESENTATIVE OF THE OWNER FOR 3 YEARS AFTER THE SUBMISSION OF THE NOTICE OF TERMINATION (NOT). RESPONSIBILITY FOR OVERSEEING THE RECORDS WILL BE TRANSFERRED TO ANOTHER EMPLOYEE OR REPRESENTATIVE SHOULD THE CURRENT PERSONNEL BECOME UNINVOLVED WITH THE PROJECT OR OWNER. THESE RECORDS MUST INCLUDE THE FOLLOWING:
  - THE FINAL SWPPP
  - ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT
  - RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION
  - ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT-OF-WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE
  - ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.



THESE RECORDS HAVE BEEN 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  
*Gregory W. Nathe*  
GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 41732

DATE	REVISION DESCRIPTION	BY
01/17/2020	CITY SUBMITTAL	ALS
03/31/2020	CITY SUBMITTAL	ALS
06/09/2020	CITY SUBMITTAL	ALS
07/19/2020	CITY SUBMITTAL	ALS

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
**7-21-20**  
SWPPP NARRATIVE



# STORM WATER POLLUTION PREVENTION PLAN SUPPLEMENT

EROSION CONTROL TABULATION	UNIT	QUANTITY
SILT FENCE, TYPE MS	LF	1439
SEDIMENT CONTROL LOG	LF	709

BASIS OF ESTIMATED QUANTITIES	
SEED MIXTURE 33-261	= 35 LBS /ACRE
SEED MIXTURE 25-141	= 59 LBS /ACRE
FERTILIZER, TYPE 3 (22-5-10)	= 350 LBS /ACRE
HYDRAULIC MATRIX, TYPE HYDRAULIC MULCH	= 2500 LBS /ACRE

LAND FEATURE CHANGES	AREA
TOTAL AREA DISTURBED	3.18 AC
EXISTING PERVIOUS	3.10 AC
EXISTING IMPERVIOUS	0.08 AC
PROPOSED PERVIOUS	1.83 AC
PROPOSED IMPERVIOUS	1.35 AC



 IMPAIRED LAKES - WALLMART DOWNSTREAM OF PROJECT  
 ONE MILE AERIAL RADIUS - PROJECT

NOTE:  
ALL ESTIMATED QUANTITIES INCLUDED ON THIS SHEET ARE FOR CONSTRUCTION STORMWATER PERMIT PURPOSES ONLY. CONTRACTOR SHALL DETERMINE QUANTITIES FOR LUMP SUM TEMPORARY EROSION CONTROL AND TURF ESTABLISHMENT PAY ITEMS BASED ON CONSTRUCTION METHODS.

## QUADRANGLE MAP



**WIDSETH SMITH NOLTING**  
Engineering | Architecture | Surveying | Environmental

THESE QUANTITIES WERE OBTAINED FROM A SURVEY AND/OR A REPORT THAT 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

*Gregory W. Nathe*  
GREGORY W. NATHE DATE: 7-21-20 LIC. NO. 4172

DATE	REVISION	DESCRIPTION
01/17/2020	01	CITY SUBMITTAL
03/03/2020	02	CITY SUBMITTAL
06/09/2020	03	CITY SUBMITTAL
07/19/2020	04	CITY SUBMITTAL

DATE: JANUARY, 2020 AS SHOWN  
SCALE: AS SHOWN  
DRAWN BY: ALS  
CHECKED BY: OWN  
JOB NUMBER: 2019-12702

NATURE VIEW HOMES - CHISAGO CITY, MN  
NATURE VIEW HOMES, LLC  
PO BOX 211, LINDSTROM, MN 55045  
SWPPP SUPPLEMENT

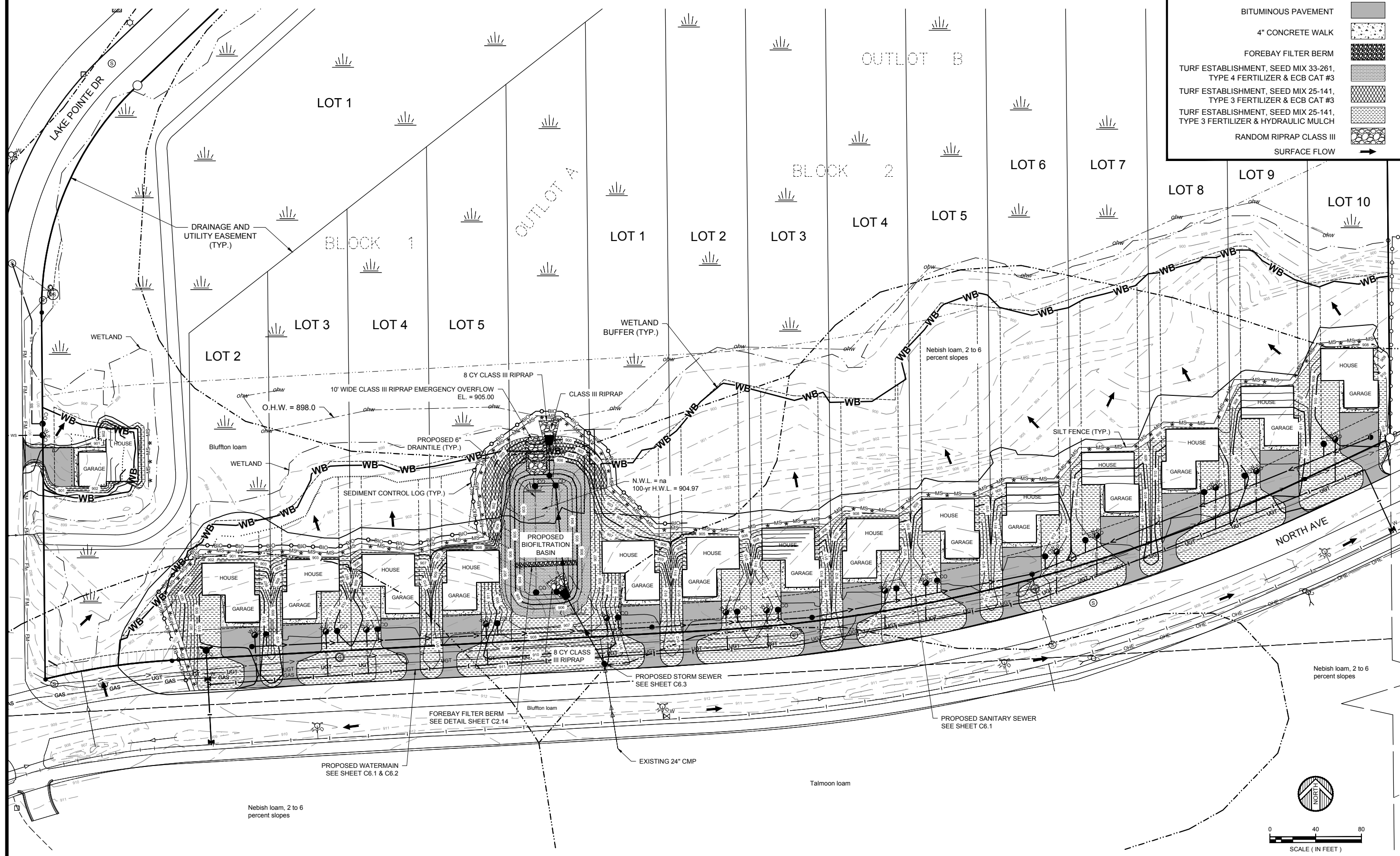
**7-21-20**

SHEET NO.  
**C7.3**

NOTE: STREET SWEEPING WITH COLLECTION MUST BE USED WITHIN 24 HOURS IF SEDIMENT IS TRACKED ONTO PUBLIC ROADS.

**LEGEND:**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- SILT FENCE TYPE MS
- SEDIMENT CONTROL LOG
- BITUMINOUS PAVEMENT
- 4" CONCRETE WALK
- FOREBAY FILTER BERM
- TURF ESTABLISHMENT, SEED MIX 33-261, TYPE 4 FERTILIZER & ECB CAT #3
- TURF ESTABLISHMENT, SEED MIX 25-141, TYPE 3 FERTILIZER & ECB CAT #3
- TURF ESTABLISHMENT, SEED MIX 25-141, TYPE 3 FERTILIZER & HYDRAULIC MULCH
- RANDOM RIPRAP CLASS III
- SURFACE FLOW



**WIDSETH SMITH NOLTING**  
 Engineering | Architecture | Surveying | Environmental

BY: GREGORY W. NOLTING  
 DATE: 7-21-20  
 LIC. NO. 41727

DATE	REVISION DESCRIPTION
01/17/2020	01 CITY SUBMITTAL
03/13/2020	02 CITY SUBMITTAL
06/09/2020	03 CITY SUBMITTAL
07/19/2020	04 CITY SUBMITTAL

DATE: JANUARY, 2020  
 SCALE: AS SHOWN  
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**7-21-20**

NATURE VIEW HOMES - CHISAGO CITY, MN  
 NATURE VIEW HOMES, LLC  
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**EROSION AND SEDIMENT CONTROL PLAN**

SHEET NO. **C7.4**