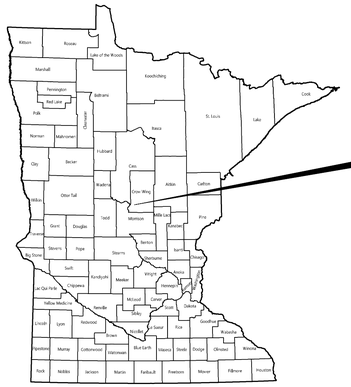
CROW WING POWER CREDIT UNION

BAXTER, MN
JUNE, 2026



PROJECT LOCATION

CITY OF BAXTER, CROW WING COUNTY, MINNESOTA



MAP SOURCE & YEAR: 2026 AUTOCAD BING MAPS
MAP DESCRIPTION: PARTIAL MAP OF BAXTER, CROW WING COUNTY, MINNESOTA

SHEET INDEX TABLE	
SHEET NUMBERS	**SHEET TITLE**
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C1.02	LEGEND SHEET
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C2.02	DETAILS
C2.03	DETAILS
C2.04	DETAILS
C2.05	DETAILS
C2.06	DETAILS
C2.07	DETAILS
C3.01	DEMOLITION & REMOVALS PLAN
C4.01	SITE PLAN
C5.01	STORM UTILITY PLAN
C5.02	SANITARY UTILITY PLAN
C5.03	WATER UTILITY PLAN
C6.01	GRADING PLAN
	THIS PLAN CONTAINS 15 SHEETS

THIS PLAN SET CONTAINS COLOR GRAPHICS. BLACK AND WHITE PRINTS ARE NOT OFFICIAL SIGNED DOCUMENTS.

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CHRISTOPHER J DAHN LIC. NO.: 58628 DATE:

DATE	REV#	REVISIONS DESCRIPTION

CROW WING POWER CREDIT UNION

TITLE SHEET

C1.01

PROJECT #: 2026-11449

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SURVEY MONUMENTS - FOUND

- FOUND CAST IRON MONUMENT
- FOUND CONTROL POINT
- FOUND IRON PIPE
- FOUND JUDICIAL LAND MONUMENT
- FOUND LATH

SURVEY MONUMENTS - STAKED

- BENCHMARK
- STAKED CAST IRON MONUMENT
- STAKED CONTROL POINT
- STAKED IRON PIPE
- STAKED JUDICIAL LAND MONUMENT

PROPERTY LINEWORK

- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- RIGHT-OF-WAY LINE
- EASEMENT LINE
- DESCRIPTION LINE
- DEEDED LOT LINE
- PLATTED LOT LINE
- BOUNDARY LINE
- SUBDIVISION LINE
- SETBACK LINE

TOPOGRAPHIC INFORMATION - EXISTING

- 1230 MAJOR CONTOURS
- 1234 MINOR CONTOURS
- 1234.56 SPOT ELEVATION

TOPOGRAPHIC INFORMATION - PROPOSED

- 1230 MAJOR CONTOURS (WITH LABEL)
- 1234 MINOR CONTOURS (WITH LABEL)
- 1234.56 SPOT ELEVATION
- +-1.23% SLOPE - PERCENT
- 1:2 SLOPE - RISE : RUN
- TBC: 1234.56 / FLW: 1234.06 SPOT ELEVATIONS @ CURB (TBC: TOP BACK CURB / FLW: CURB FLOWLINE)
- +1.23 / -3.21 SPOT ELEVATIONS, CUT/FILL (GREEN: FILL DEPTH / RED: CUT DEPTH)

VEGETATION SYMBOLS - EXISTING

- SHRUB
- STUMP
- TREE - CONIFEROUS
- TREE - DECIDUOUS
- WETLAND

VEGETATION LINEWORK - EXISTING

- EDGE OF WOODS
- EDGE OF WETLANDS

VEGETATION SYMBOLS - PROPOSED

- SHRUB
- TREE - CONIFER
- TREE - DECIDUOUS

VEGETATION LINEWORK - PROPOSED

- EDGE OF WOODS

ROADWAY/PAVEMENT LINEWORK - EXISTING

- BITUMINOUS SURFACE
- CONCRETE SURFACE
- CURB & GUTTER
- GRAVEL SURFACE
- ROADWAY/DRIVE/TRAIL CENTERLINE

ROADWAY/PAVEMENT LINEWORK - PROPOSED

- BITUMINOUS SURFACE
- CONCRETE SURFACE
- CURB & GUTTER
- GRAVEL SURFACE
- ROADWAY/DRIVE/TRAIL CENTERLINE

SITE SYMBOLS - EXISTING

- FENCE POST
- FLAG POLE
- GUARD POST (BOLLARD)
- GUY POLE
- GUY WIRE ANCHOR
- ACCESSIBLE PARKING MARKING
- MAILBOX
- SIGN - DOUBLE POST
- SIGN - SINGLE
- SIGN - FIRE #

SITE LINEWORK - EXISTING

- BUILDING
- BARB WIRE FENCE
- CHAINLINK FENCE
- WOOD FENCE
- RAILROAD
- RETAINING WALL

SITE SYMBOLS - PROPOSED

- FENCE POST
- FLAG POLE
- GUARD POST (BOLLARD)
- GUY POLE
- GUY WIRE ANCHOR
- MAILBOX
- SIGN - DOUBLE POST
- SIGN - FIRE #
- SIGN - SINGLE

SITE LINEWORK - PROPOSED

- BUILDING
- FENCE - BARB WIRE
- FENCE - CHAINLINK
- FENCE - WOOD
- RETAINING WALL

COMMUNICATION/TELECOM UTILITY SYMBOLS - EXISTING

- T TELECOM HANDHOLE
- T TELECOM MANHOLE
- T TELECOM PEDESTAL
- T TELECOM POLE
- TV TV HANDHOLE
- TV TV PEDESTAL
- SD SATELLITE DISH

COMMUNICATION/TELECOM UTILITY LINEWORK - EXISTING

- FOC UNDERGROUND FIBER OPTIC LINE
- OHT OVERHEAD TELEPHONE LINE
- UGT UNDERGROUND TELEPHONE LINE
- OHC OVERHEAD TV LINE
- UGC UNDERGROUND TV LINE

ELECTRICAL UTILITY SYMBOLS - EXISTING

- AC AC UNIT
- G GENERATOR
- GROUND LIGHT (FLOODLIGHT)
- E ELECTRIC HANDHOLE
- LIGHT POLE
- E ELECTRIC MANHOLE
- E ELECTRIC METER
- E ELECTRIC PEDESTAL
- ELECTRIC POLE
- TRAFFIC SIGNAL
- TRANSFORMER
- YARD YARD LIGHT

ELECTRICAL UTILITY LINEWORK - EXISTING

- OHE OVERHEAD ELECTRIC LINE
- UGE UNDERGROUND ELECTRIC LINE

ELECTRICAL UTILITY SYMBOLS - PROPOSED

- AC AC UNIT
- G GENERATOR
- GROUND LIGHT (FLOODLIGHT)
- E ELECTRIC HANDHOLE
- LIGHT POLE
- E ELECTRIC MANHOLE
- E ELECTRIC METER
- E ELECTRIC PEDESTAL
- ELECTRIC POLE
- TRAFFIC SIGNAL
- TRANSFORMER
- YARD YARD LIGHT

COMMUNICATION/TELECOM UTILITY SYMBOLS - PROPOSED

- T TELECOM HANDHOLE
- T TELECOM MANHOLE
- T TELECOM PEDESTAL
- T TELECOM POLE
- TV TV HANDHOLE
- TV TV PEDESTAL
- SD SATELLITE DISH

COMMUNICATION/TELECOM UTILITY LINEWORK - PROPOSED

- FOC UNDERGROUND FIBER OPTIC LINE
- UGT UNDERGROUND TELEPHONE LINE
- OHC OVERHEAD TV LINE
- UGC UNDERGROUND TV LINE

ELECTRICAL UTILITY LINEWORK - PROPOSED

- OHE OVERHEAD ELECTRIC LINE
- UGE UNDERGROUND ELECTRIC LINE

NATURAL GAS UTILITY SYMBOLS - EXISTING

- NATURAL GAS METER
- G NATURAL GAS VALVE
- PROPANE TANK

NATURAL GAS UTILITY LINEWORK - EXISTING

- GAS NATURAL GAS LINE

NATURAL GAS UTILITY SYMBOLS - PROPOSED

- NATURAL GAS METER
- G NATURAL GAS VALVE
- PROPANE TANK

NATURAL GAS UTILITY LINEWORK - PROPOSED

- GAS NATURAL GAS LINE

SANITARY SEWER SYMBOLS - EXISTING

- AR SANITARY AIR RELEASE MANHOLE
- SCO SANITARY CLEANOUT
- LS LIFT STATION WET WELL
- LSV LIFT STATION VALVE VAULT
- S SANITARY MANHOLE
- S SANITARY VALVE (FORCEMAIN)

SANITARY SEWER LINEWORK - EXISTING

- FM SANITARY FORCE MAIN
- SANITARY GRAVITY MAIN
- SS SANITARY SERVICE LINE

SANITARY SEWER SYMBOLS - PROPOSED

- AR SANITARY AIR RELEASE MANHOLE
- SCO SANITARY CLEANOUT
- LS LIFT STATION WET WELL
- LSV LIFT STATION VALVE VAULT
- S SANITARY MANHOLE
- S SANITARY VALVE (FORCEMAIN)

SANITARY SEWER LINEWORK - PROPOSED

- FM SANITARY FORCE MAIN
- SANITARY GRAVITY MAIN
- SS SANITARY SERVICE LINE

STORM SEWER SYMBOLS - EXISTING

- STORM SEWER CATCH BASIN
- DCO STORM SEWER CLEANOUT
- CULVERT APRON
- STORM SEWER INLET STRUCTURE
- ST STORM SEWER MANHOLE

STORM SEWER LINEWORK - EXISTING

- STORM SEWER GRAVITY MAIN
- DT STORM SEWER DRAINTILE

STORM SEWER SYMBOLS - PROPOSED

- ST STORM SEWER CATCH BASIN
- DCO STORM SEWER CLEANOUT
- STORM SEWER INLET STRUCTURE
- ST STORM SEWER MANHOLE

STORM SEWER LINEWORK - PROPOSED

- STORM SEWER GRAVITY MAIN
- DT STORM SEWER DRAINTILE

WATER SYMBOLS - EXISTING

- WCS CURB STOP
- W WATER HANDHOLE
- HYD FIRE HYDRANT
- YRD YARD HYDRANT
- W WATER MANHOLE
- W WATER METER
- W WATER MAIN VALVE
- W WATER WELL

WATER LINEWORK - EXISTING

- WATER MAIN LINE
- WS WATER SERVICE LINE

WATER SYMBOLS - PROPOSED

- WCS CURB STOP
- W HANDHOLE
- HYD HYDRANT
- YRD YARD HYDRANT
- W MANHOLE
- W WATER METER
- W WATER MAIN VALVE
- W WATER WELL

WATER LINEWORK - PROPOSED

- WATER MAIN PIPE
- WS WATER SERVICE PIPE

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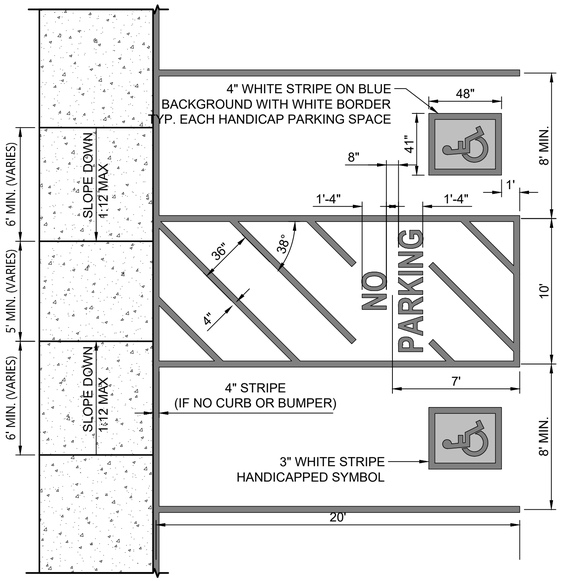
CROW WING POWER CREDIT UNION

LEGEND SHEET

C1.02

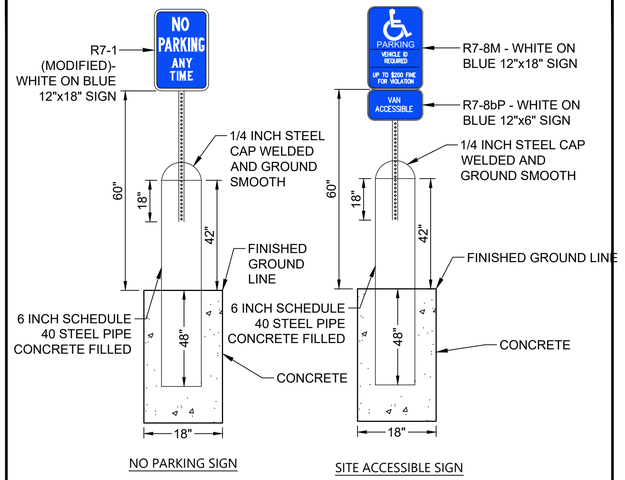
PROJECT #: 2026-11449

THIS SHEET IS ONLY VALID IF PRINTED IN COLOR



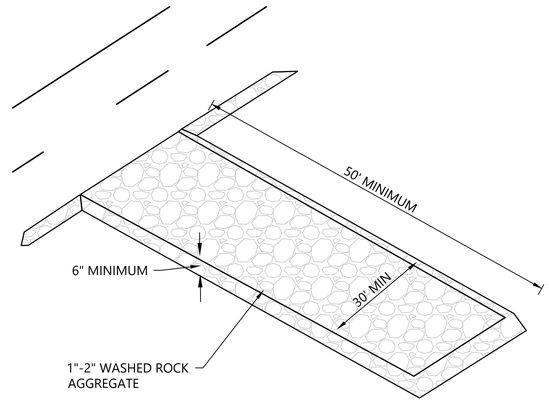
NOTE:
ALL PAINT USED FOR STRIPING SHALL CONFORM TO STANDARD MNDOT REQUIREMENTS AS OUTLINED IN MNDOT SPECIFICATION No. 3591. COLOR SHALL BE BRIGHT WHITE.

WIDSETH	ACCESSIBLE PARKING SPACE AND HANDICAP RAMP	DATE ISSUED: APRIL 2025
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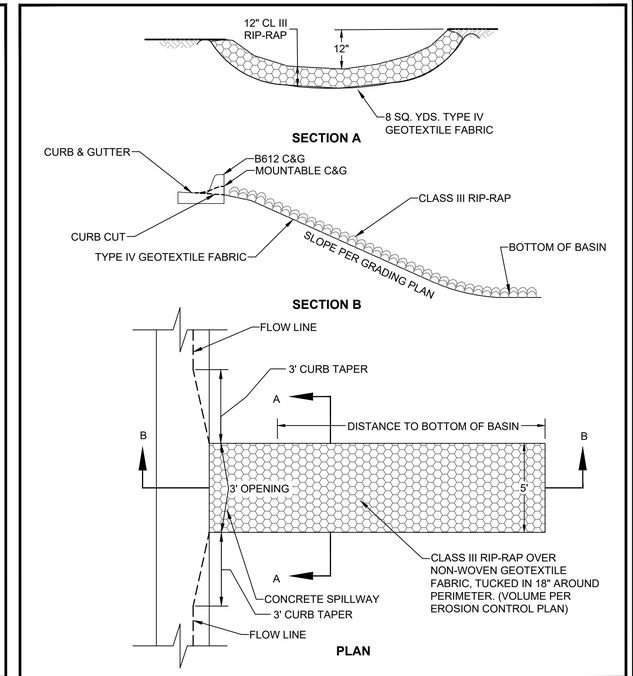


NOTE:
1. ALL POSTS AND ANCHORS SHALL BE 12 GAUGE WITH HOLES ON ALL FOUR SIDES
2. SIGNS SHALL BE IN ACCORDANCE WITH THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

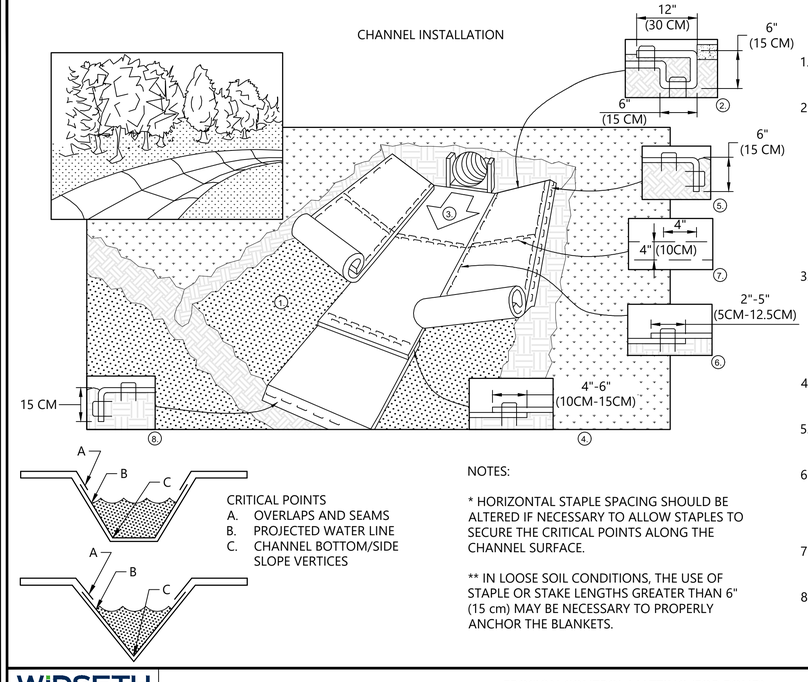
WIDSETH	SITE SIGNAGE WITH BOLLARD	DATE ISSUED: APRIL 2025
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WIDSETH	ROCK CONSTRUCTION EXIT	DATE ISSUED: JUNE 2026
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WIDSETH	CURB CUT WITH SPILLWAY	DATE ISSUED: APRIL 2026
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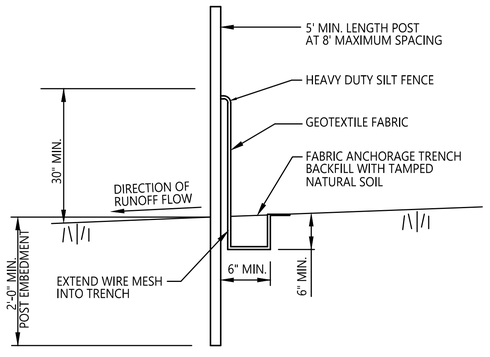
NOTES:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

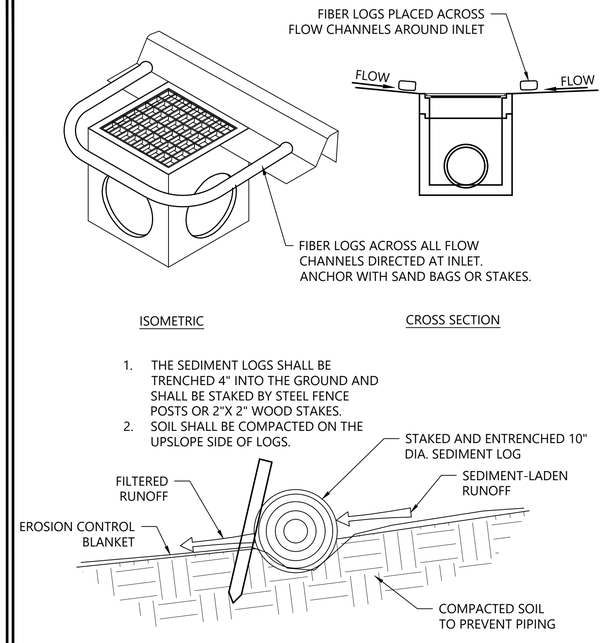
** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

1. WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS. TM
5. 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

WIDSETH	EROSION CONTROL MATTING (FOR POND)	DATE ISSUED: APRIL 2026
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WIDSETH	SILT FENCE	DATE ISSUED: APRIL 2025
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1. THE SEDIMENT LOGS SHALL BE TRENCHED 4" INTO THE GROUND AND SHALL BE STAKED BY STEEL FENCE POSTS OR 2"X 2" WOOD STAKES.
2. SOIL SHALL BE COMPACTED ON THE UPSLOPE SIDE OF LOGS.

WIDSETH	SEDIMENT LOG INSTALLATION	DATE ISSUED: APRIL 2026
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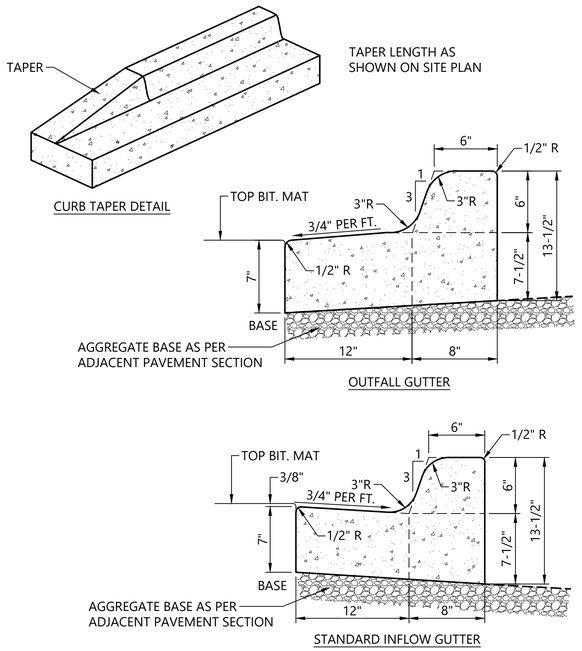
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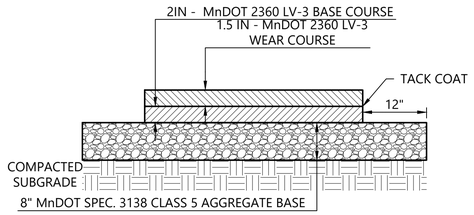
DETAILS

C2.01

PROJECT #: 2026-11449

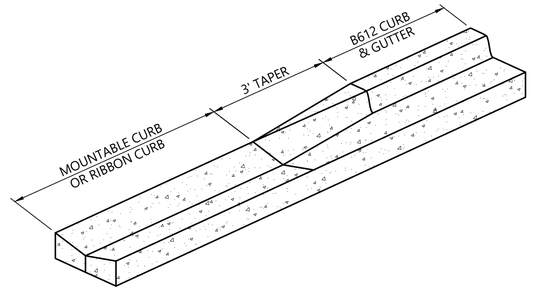


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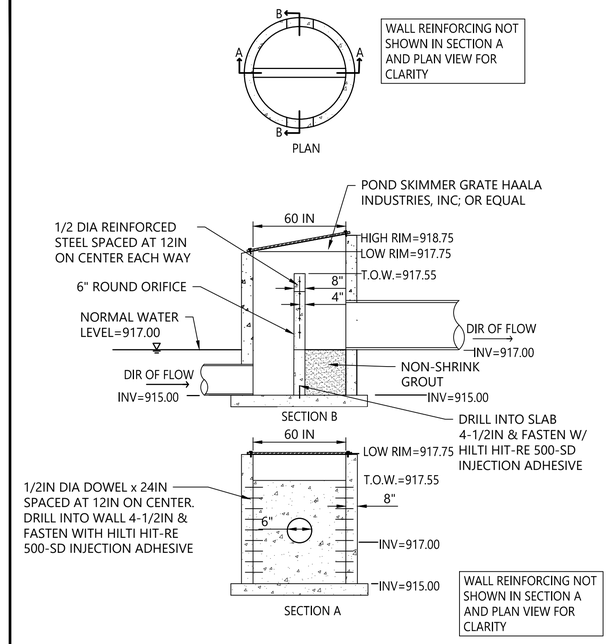


NOTE:
EXTEND SUBGRADE PREPARATION AND AGGREGATE BASE PLACEMENT 12IN BEYOND EDGE OF PAVEMENT WHEN ADJACENT TO EXISTING OR NEW TURF

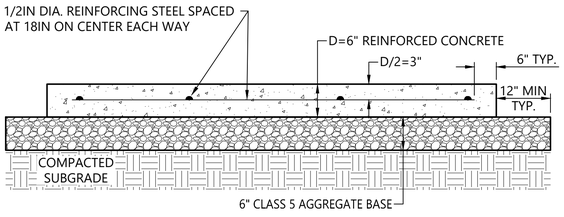
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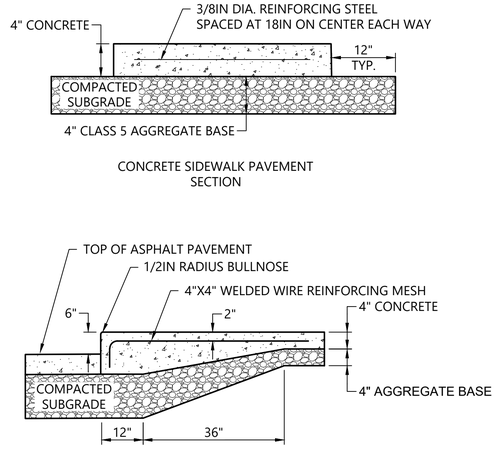


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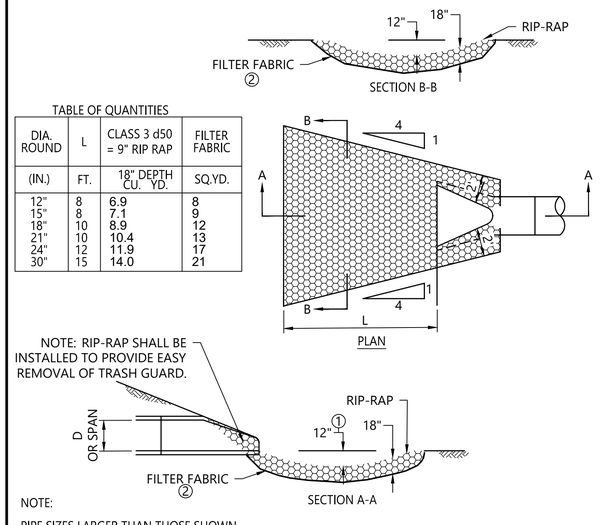
NOTE:
EXTEND SUBGRADE PREPARATION AND AGGREGATE BASE PLACEMENT 12IN BEYOND EDGE OF PAVEMENT WHEN ADJACENT TO EXISTING OR NEW TURF

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NOTE:
EXTEND SUBGRADE PREPARATION AND AGGREGATE BASE PLACEMENT 12IN BEYOND EDGE OF PAVEMENT WHEN ADJACENT TO EXISTING OR NEW TURF

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NOTE:
PIPE SIZES LARGER THAN THOSE SHOWN REQUIRE A SPECIAL DESIGN.

① FOR PIPES GREATER THAN OR EQUAL TO 30". USE 1.5'
② GEOTEXTILE FABRIC, MnDOT SPEC. 3733, SHALL COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FT.

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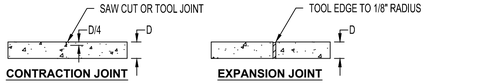
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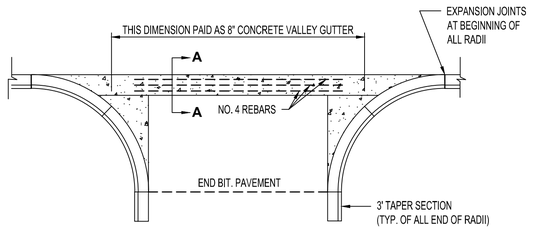
DETAILS

C2.02

PROJECT #: 2026-11449

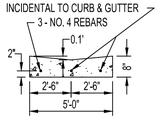


CURB & GUTTER DETAILS



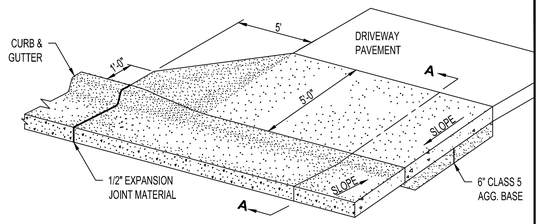
VALLEY GUTTER - PLAN VIEW

NOTES:
1. ALL REINFORCEMENT SHALL BE EPOXY COATED
2. IF REINFORCEMENT IS CUT IN THE FIELD, APPLY EPOXY TREATMENT TO THE END OF BAR

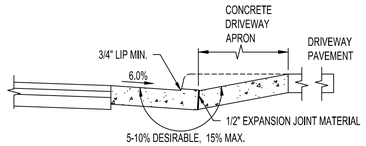


SECTION A-A

BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
CURB DETAILS AND VALLEY GUTTER
PUBLIC WORKS DEPARTMENT | RD-7

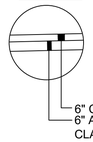


HALF PLAN PERSPECTIVE



SECTION A-A

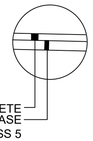
RESIDENTIAL CONCRETE DRIVEWAY



6" CONCRETE
6" AGGREGATE BASE CLASS 5

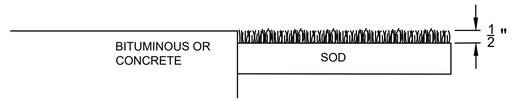
SECTION THRU DRIVEWAY

COMMERCIAL CONCRETE DRIVEWAY



8" CONCRETE
6" AGGREGATE BASE CLASS 5

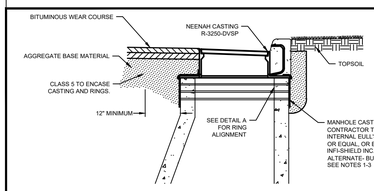
BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
CONCRETE DRIVEWAY APRON
PUBLIC WORKS DEPARTMENT | RD-9



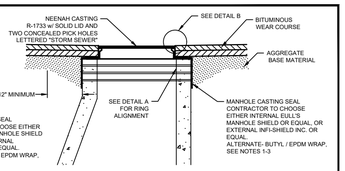
SOD PLACEMENT DETAIL

NOTE:
1. SOD TO BE PLACED ½" BELOW FINISHED HARD SURFACES.
2. NOTCH EXISTING TURF AT TIE IN WITH NEW SOD SO THERE IS NO LIP BETWEEN THE TWO.

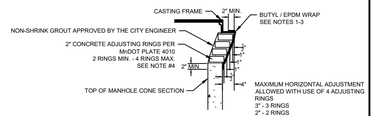
BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
SOD PLACEMENT
PUBLIC WORKS DEPARTMENT | M-11



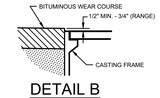
ADJUSTING RING AND SEAL
STORM SEWER CATCH BASIN AT CURB



ADJUSTING RING AND SEAL
MANHOLES IN ROADWAYS



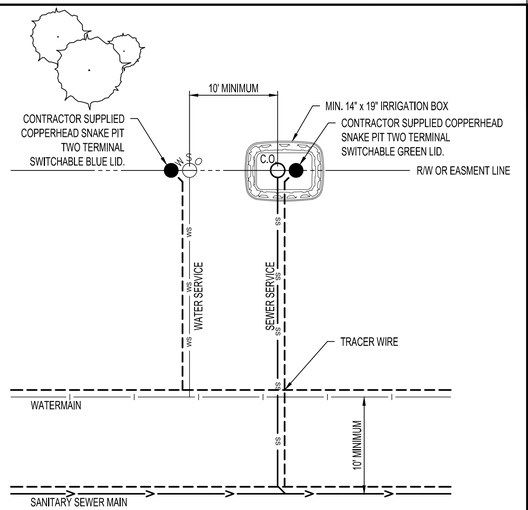
DETAIL A
ADJUSTING RING OFFSET



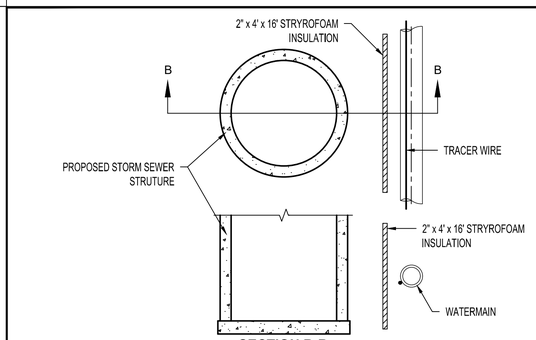
DETAIL B
CASTING / COVER RECESS

NOTES:
1. BUTYL (.030") / EPDM (.045") WRAP PLACED AROUND CONCRETE RINGS. LAP HORIZONTAL JOINTS 1½" MIN. AND FOLD OVER ONTO CASTING FRAME 2" MIN.
2. ON FLAT COVER STRUCTURES, MATERIAL SHALL ALSO BE EXTENDED ONTO PRECAST TOP 2" MIN.
3. BUTYL / EPDM WRAP IS INCIDENTAL TO STRUCTURE CONSTRUCTION.
4. PRECAST SHOP DRAWINGS SHALL UTILIZE STRUCTURE HEIGHTS TO ALLOW 0.5' (2 RINGS) MINIMUM TO 1.0' (4 RINGS) MAXIMUM BUILD HEIGHT PLUS ACTUAL FRAME / CASTING HEIGHT.
5. CONTRACTOR SHALL FIELD ADJUST STRUCTURE AND PIPE TO MAINTAIN MAXIMUM RING OFFSET DIMENSIONS PER DETAIL. HORIZONTAL ADJUSTMENT SHALL NOT EXCEED 1" BETWEEN RINGS AS SHOWN IN DETAIL A.
6. METAL ADJUSTMENT RING / BAND SHALL BE FIELD WELDED TO FRAME IF UTILIZED BY CONTRACTOR.

BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
STORM SEWER ADJUSTING RING AND SEAL
PUBLIC WORKS DEPARTMENT | ST-1

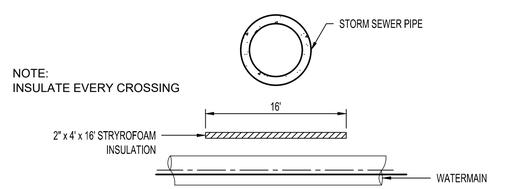


BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
TYPICAL WATER AND SEWER SERVICE SPACING
PUBLIC WORKS DEPARTMENT | W-1



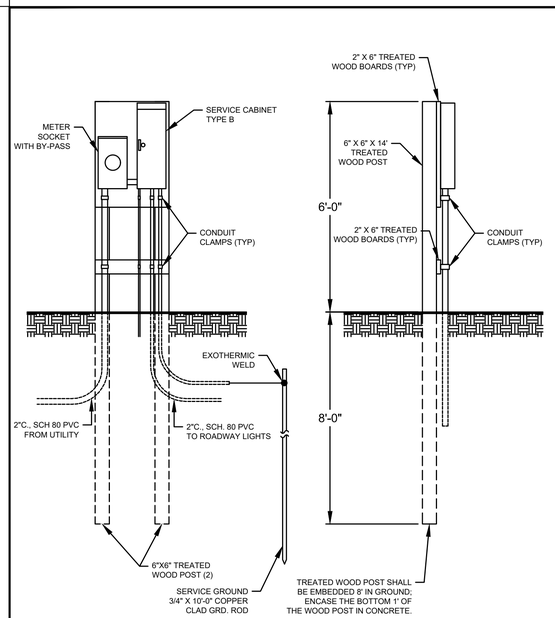
SECTION B-B

TYPICAL WATERMAIN INSULATION AROUND STORM SEWER STUCTURE



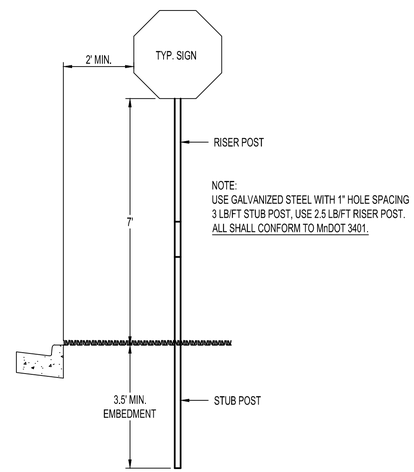
WATERMAIN / STORM SEWER CROSSING TYPICAL INSULATION DETAIL

BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
WATERMAIN / STORM SEWER INSULATION
PUBLIC WORKS DEPARTMENT | W-8



BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
METER BASE AND DISCONNECT SETUP
PUBLIC WORKS DEPARTMENT | M-8

NOTE:
WHEN MORE THAN ONE SIGN IS INSTALLED ON A POST, A ONE INCH GAP SHALL BE MAINTAINED BETWEEN SIGNS.



BAXTER | CITY OF BAXTER, MINNESOTA | REV. 3-25
TYPICAL URBAN SIGN INSTALLATION
PUBLIC WORKS DEPARTMENT | M-1

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WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

DRAWN BY: PMP
CHECKED BY: CJD

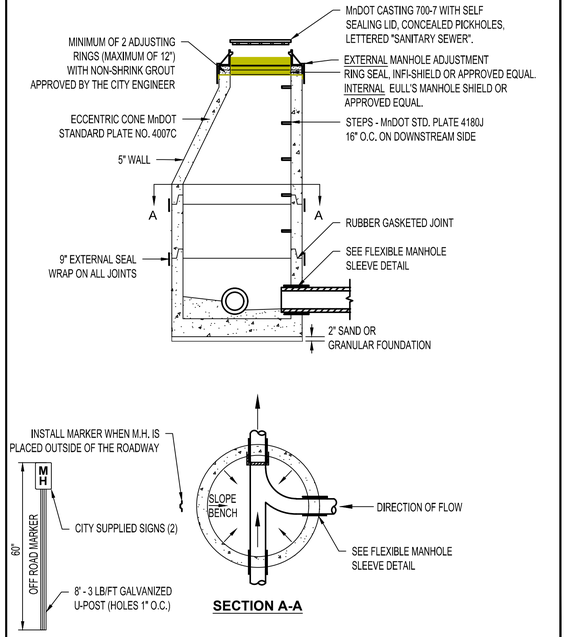
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

CHRISTOPHER J DAHN LIC. NO.: 58628 DATE:

DATE	REV#	REVISIONS DESCRIPTION

CROW WING POWER CREDIT UNION
DETAILS

C2.03
PROJECT #: 2026-11449



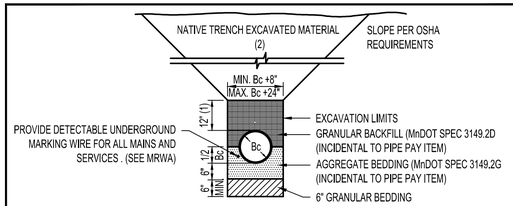
SECTION A-A

BAXTER

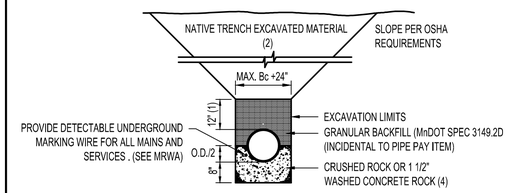
CITY OF BAXTER, MINNESOTA | REV. 3-25

STANDARD SANITARY MANHOLE

PUBLIC WORKS DEPARTMENT | S-1



TYPICAL SEWER PIPE BEDDING DETAIL



SPECIAL PIPE BEDDING DETAIL FOR TRENCH STABILIZATION WHERE REQUIRED

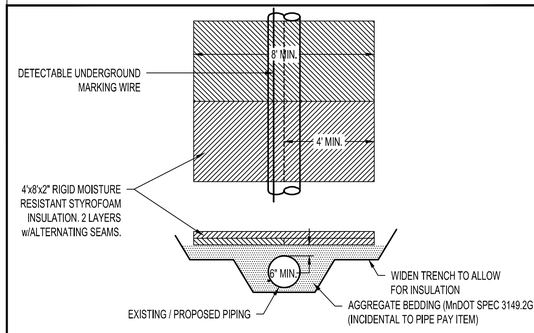
NOTES:
(1) IF THIS DIMENSION DECREASES THE BEDDING CONDITIONS WILL CHANGE. A HIGHER LEVEL BEDDING CONDITION SHALL BE SOLELY AT THE CONTRACTORS EXPENSE.
(2) IN AREAS WHERE EXISTING MATERIAL IS NOT SUITABLE AS BACKFILL, THE ENGINEER MAY DIRECT THE PLACEMENT OF GRANULAR BACKFILL. GRANULAR BACKFILL WILL BE PAID AND MEASURED AS GRANULAR BACKFILL (LV). DISPOSAL OF EXCESS EXCAVATED MATERIAL SHALL BE CONSIDERED INCIDENTAL TO GRANULAR BACKFILL (LV).
(3) FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHOULD BE OVER EXCAVATED A MINIMUM OF 6" & REFILLED WITH GRANULAR MATERIAL. THIS ITEM WILL BE ELIGIBLE FOR EXTRA PAYMENT, IF REQUIRED.
(4) THIS PROCEDURE IS NOT INTENDED TO REPLACE DEWATERING SYSTEMS IN WET CONDITIONS.
(5) IF CRUSHED OR WASHED ROCK BEDDING IS USED, INSTALL A 10' LONG SAND SECTION AROUND ENTIRE PIPE SECTION APPROXIMATELY HALFWAY BETWEEN EACH MANHOLE RUN. THE INTENT OF THE SAND IS TO ACT AS A COLLAR TO PREVENT WATER FROM TRAVELING PIPE RUN.

BAXTER

CITY OF BAXTER, MINNESOTA | REV. 3-25

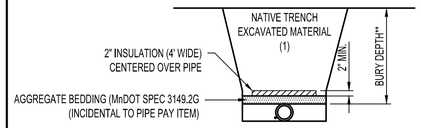
SEWER PIPE BEDDING

PUBLIC WORKS DEPARTMENT | S-5



SHALLOW PIPING INSULATION DETAIL

PIPES WITH LESS THAN 4' COVER UNDER GREEN SPACE OR PIPES WITH LESS THAN 6' UNDER HARD SURFACE



MEDIUM DEPTH PIPING INSULATION DETAIL

**PIPES WITH MORE THAN 4' COVER BUT LESS THAN 6' COVER UNDER GREEN SPACE OR PIPES WITH MORE THAN 6' OF COVER BUT LESS THAN 8' UNDER HARD SURFACE

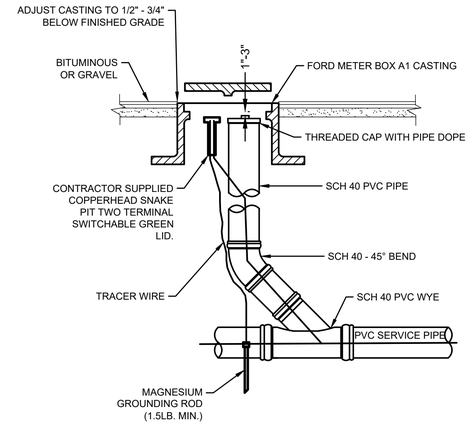
NOTES:
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BAXTER

CITY OF BAXTER, MINNESOTA | REV. 3-25

SANITARY SEWER PIPE INSULATION

PUBLIC WORKS DEPARTMENT | S-6



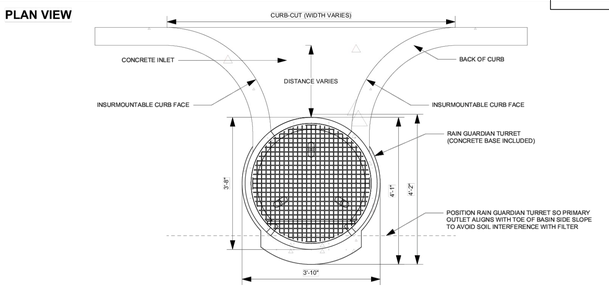
BAXTER

CITY OF BAXTER, MINNESOTA | REV. 3-25

SANITARY SEWER CLEANOUT (HARD SURFACE)

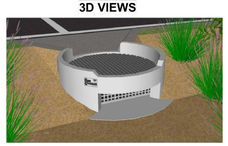
PUBLIC WORKS DEPARTMENT | S-9

PLAN VIEW



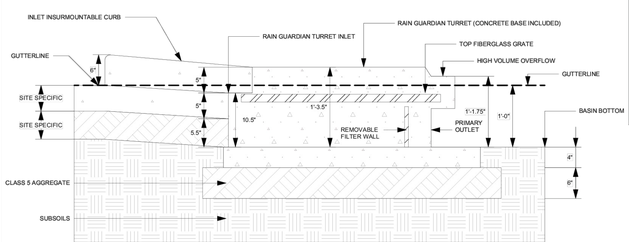
PLAN VIEW NOTES
1. INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN TURRET MAY VARY WITH SITE CONDITIONS.
2. CONCRETE BASE EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN TURRET TO SERVE AS A SPLASH DISSIPATOR.

3D VIEWS





ELEVATION VIEW



ELEVATION VIEW NOTES
1. THE TOP OF THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION.

SPECIFICATIONS

1. STEEL REINFORCED, COLD JOINT SECURED MONOLITHIC CONCRETE STRUCTURE (1,030 LBS). CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 28 DAYS. CONCRETE AIR ENTRAINED (5% TO 8.5% BY VOLUME). MANUFACTURED AND DESIGNED TO ASTM C858.

2. THREE-POINT PICK USING RECESSED LIFTING POCKETS WITH A STANDARD HOOK.

3. FIBERGLASS TOP GRATE (32 LBS, 1-1/2" THICK) - 1,760 LB CONCENTRATED LOAD OR 409 LB/SQ-FT UNIFORM LOAD.

INSTALLATION NOTES

1. INSTALL THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR). THE DISTANCE FROM THE BACK OF THE CURB MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN TURRET. POSITION RAIN GUARDIAN TURRET SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. EXCAVATE 1' 10" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 1' PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" RAIN GUARDIAN TURRET BASE (INCLUDED). THEREFORE, THE TOP OF THE CLASS 5 COMPACTED BASE IS PRECISELY 1' 4" BELOW THE GUTTERLINE ELEVATION. THE INLET TO THE RAIN GUARDIAN TURRET WILL BE 10-1/2" ABOVE THE TOP OF THE CONCRETE BASE AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN TURRET.

2. SET RAIN GUARDIAN TURRET ON THE PREPARED CLASS 5 BASE.

3. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN TURRET AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN TURRET ON THE BIORETENTION SIDE.

4. INSTALL EXPANSION/CONTRACTION JOINT MATERIAL OR A SHEET OF POLY TO SERVE AS A BOND BREAK BETWEEN RAIN GUARDIAN TURRET AND CONCRETE INLET BEFORE POURING INLET.

5. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.

6. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC ON THE INTERIOR SIDE OF THE RAIN GUARDIAN TURRET.

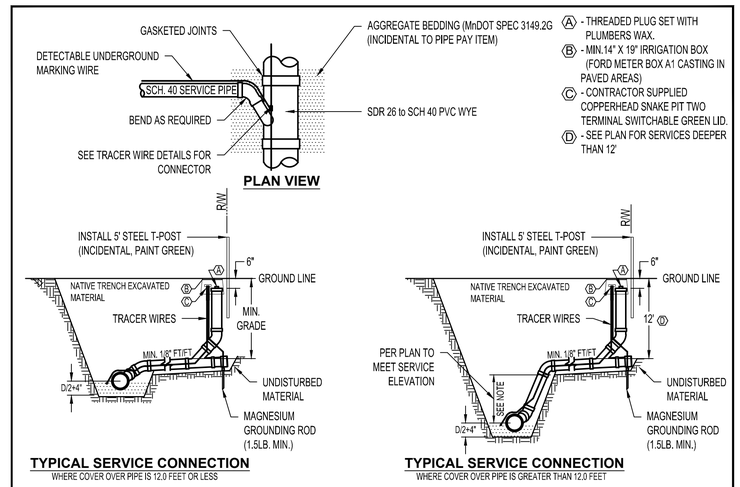
RAIN GUARDIAN U.S. PATENT NOS. 8,501,016 AND 8,858,804
PRETREATMENT FOR BIORETENTION
Rain Gardens • Swales • Filtration Basins • Infiltration Basins
www.RainGuardian.biz

RAIN GUARDIAN TURRET
PRETREATMENT CHAMBER
BIORETENTION PONDING DEPTH: 1'
TYPICAL DETAIL

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
A	MDH	11/16/2022	TURRET - 1'
SCALE		VARIABLE	
U.S. PATENT NOS.		8,501,016 AND 8,858,804	

DEVELOPED BY: ANOKA CONSERVATION DISTRICT
MANUFACTURED BY: Stoneworks ARCHITECTURAL PRECAST / CAST STONE
NATIONAL PRECAST CONCRETE ASSOCIATION CERTIFIED PLANT



BAXTER

CITY OF BAXTER, MINNESOTA | REV. 3-25

SANITARY SEWER SERVICE CONNECTION

PUBLIC WORKS DEPARTMENT | S-7

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WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

DRAWN BY: PMP
CHECKED BY: CJD

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.

CHRISTOPHER J DAHN LIC. NO.: 58628 DATE:

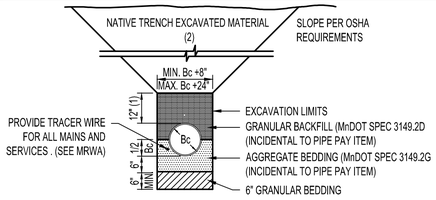
DATE	REV#	REVISIONS DESCRIPTION

CROW WING POWER CREDIT UNION

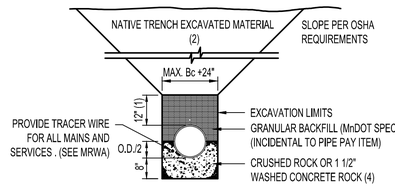
DETAILS

C2.04

PROJECT #: 2026-11449



TYPICAL WATERMAIN PIPE BEDDING DETAIL



SPECIAL PIPE BEDDING DETAIL FOR TRENCH STABILIZATION WHERE REQUIRED

NOTES:

(1) IF THIS DIMENSION DECREASES THE BEDDING CONDITIONS WILL CHANGE. A HIGHER LEVEL BEDDING CONDITION SHALL BE SOLELY AT THE CONTRACTORS EXPENSE.

(2) IN AREAS WHERE EXISTING MATERIAL IS NOT SUITABLE AS BACKFILL, THE ENGINEER MAY DIRECT THE PLACEMENT OF GRANULAR BACKFILL. GRANULAR BACKFILL WILL BE PAID AND MEASURED AS GRANULAR BACKFILL (LV). DISPOSAL OF EXCESS EXCAVATED MATERIAL SHALL BE CONSIDERED INCIDENTAL TO GRANULAR BACKFILL (LV).

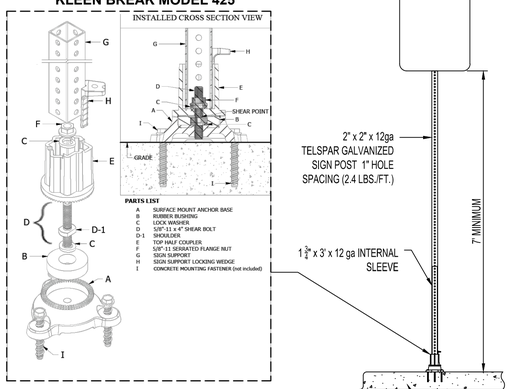
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(4) THIS PROCEDURE IS NOT INTENDED TO REPLACE DEWATERING SYSTEMS IN WET CONDITIONS.

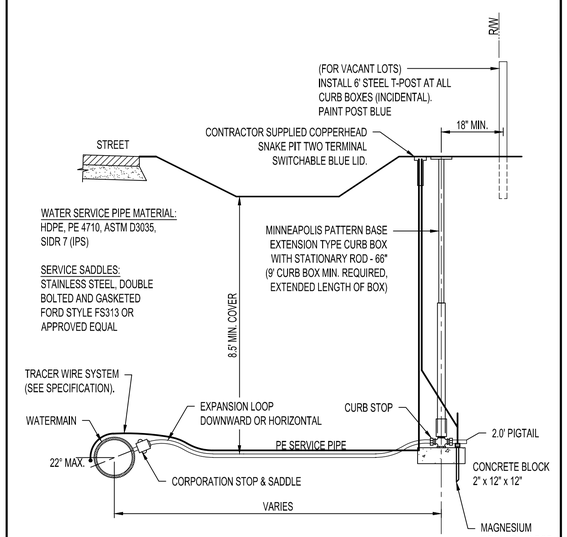
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BAXTER	CITY OF BAXTER, MINNESOTA	REV. 3-25
	WATERMAIN PIPE BEDDING	
	PUBLIC WORKS DEPARTMENT	W-5

KLEEN BREAK MODEL 425



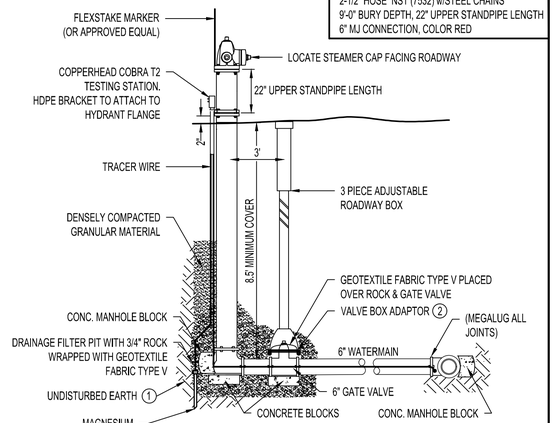
BAXTER	CITY OF BAXTER, MINNESOTA	REV. 3-25
	STREET SIGN MOUNTED IN CONCRETE	
	PUBLIC WORKS DEPARTMENT	M-2



WATER SERVICE SIZE	CORP STOP	CURB STOP	CURB BOX
1"	74701B-3Q	76104-3Q	AY MCDONALD 5622A (1 1/2" UPPER STAND PIPE)
1.5"	74701B-33	76104-33	AY MCDONALD 5622A (1 1/2" UPPER STAND PIPE)
2"	74701B-33	76104-33	AY MCDONALD 5622A (1 1/2" UPPER STAND PIPE)

BAXTER	CITY OF BAXTER, MINNESOTA	REV. 3-25
	TYPICAL WATER SERVICE	
	PUBLIC WORKS DEPARTMENT	W-2

HYDRANTS SHALL BE WATEROUS WB-67-250
#5 PENTAGON OP. NUT (LEFT,C.C.W. TO OPEN)
DDP NOZZLE CONFIGURATION, 4-1/2 " NST (40524)
2-1/2" HOSE NST (7532) w/STEEL CHAINS
9'-0" BURY DEPTH, 22" UPPER STANDPIPE LENGTH
6" MJ CONNECTION, COLOR RED



NOTES:

1 IN IMPERVIOUS SOIL, SUCH AS CLAY, EXCAVATE A DRAINAGE PIT 2' IN DIAMETER, 3' IN DEPTH BELOW HYDRANT BASE AND FILL WITH FILTER AGGREGATE. COMPACT UNDER AND AROUND HYDRANT BASE UP TO 6" ABOVE WASTE DRAIN. PLUG DRAIN HOLES IF WATER TABLE IS ABOVE BOTTOM OF HYDRANT. ATTACH METAL TAG TO HYDRANT INDICATING DRAIN HOLES ARE PLUGGED.

2 ALL VALVE BOXES SHALL BE INSTALLED UPON THE GATE VALVE WITH THE USE OF A GATE VALVE ADAPTOR AS MANUFACTURED BY ADAPTOR INC. OR APPROVED EQUAL. THE GATE VALVE ADAPTOR SHALL BE INCIDENTAL TO VALVE AND BOX INSTALLATION.

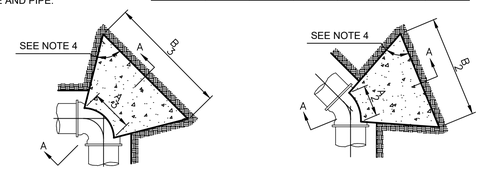
3 TOUCH UP PAINT REQUIRED AFTER INSTALLATION.

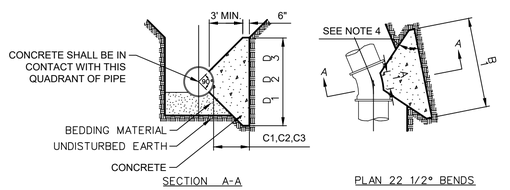
BAXTER	CITY OF BAXTER, MINNESOTA	REV. 3-25
	TYPICAL HYDRANT AND GATE VALVE	
	PUBLIC WORKS DEPARTMENT	W-3

NOTES:

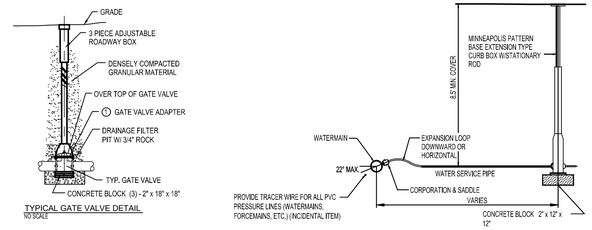
1. SHAPE OF BACK BUTTRESS MAY VARY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH.
2. DIMENSION C1,C2,C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE θ EQUAL TO OR LARGER THAN 45°.
3. DIMENSION A1,A2,A3 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS.
4. 45° MINIMUM.
5. PLACE POLYETHYLENE BETWEEN CONCRETE AND PIPE.

BUTTRESS DIMENSIONS						
PIPE SIZE	22 1/2° BEND		45° BEND		90° BEND	
	B_1	D_1	B_2	D_2	B_3	D_3
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"





BAXTER	CITY OF BAXTER, MINNESOTA	REV. 3-25
	THRUST BLOCKING	
	PUBLIC WORKS DEPARTMENT	W-4B



NOTES:

1 ALL VALVE BOXES SHALL BE INSTALLED UPON THE GATE VALVE WITH THE USE OF A GATE VALVE ADAPTER AS MANUFACTURED BY ADAPTER INC. OR APPROVED EQUAL. THE GATE VALVE ADAPTER SHALL BE INCIDENTAL TO VALVE AND BOX INSTALLATION

BAXTER	CITY OF BAXTER, MINNESOTA	REV. 3-25
	TYPICAL FIRE & WATER SERVICE	
	PUBLIC WORKS DEPARTMENT	W-9

© 2026 WIDSETH FILE: W:\PROJECTS\CROW WING POWER CREDIT UNION-51882\2026-11449\04 DESIGN\CIVIL\CADD\C-DT-2026-11449.DWG PLOTTED BY: PHIL PEDERSON, August 7, 2026

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

DRAWN BY: PMP
CHECKED BY: CJD

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.

CHRISTOPHER J DAHN LIC. NO.: 58628 DATE:

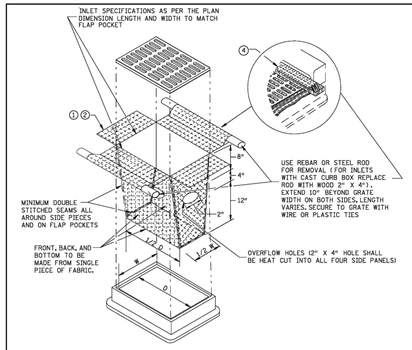
DATE	REV#	REVISIONS DESCRIPTION

CROW WING POWER CREDIT UNION

DETAILS

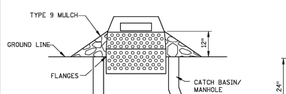
C2.05

PROJECT #: 2026-11449



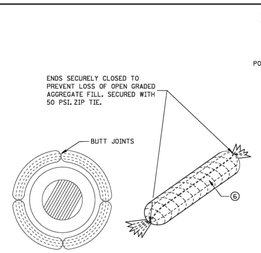
FILTER BAG INSERT ③

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX)

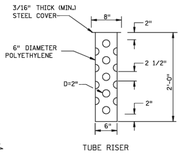


SEDIMENT CONTROL INLET HAT

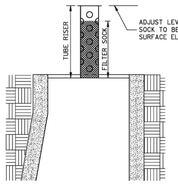
NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE, HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION, HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.



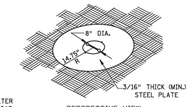
ROCK LOG/COMPOST LOG



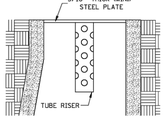
TUBE RISER



SECTION
(UP POSITION)

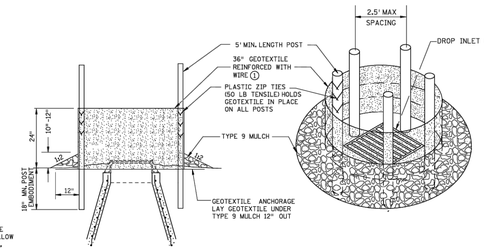


PERSPECTIVE VIEW



SECTION
(DOWN POSITION)

POP-UP HEAD



SILT FENCE RING AND ROCK FILTER BERM
USE WHERE INLET DRAINS IN AN AREA WITH SLOPES AT 1:3 or LESS

NOTES:
SEE SPECS. 2573, 3137, & 3886.

DEVICES MUST BE ADJUSTED ACCORDINGLY AS TO NOT CAUSE FLOODING ON ROADWAY THAT WOULD IMPEED TRAFFIC FLOW.

① ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.

② FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

③ INSTALLATION NOTES:
DO NOT PLACE FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 INCHES, MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE PLACED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3 INCHES BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG USING PLASTIC ZIP TIES, TO ACHIEVE THE 3 INCH SIDE CLEARANCE.

④ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 INCH X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE FLAP POCKETS.

⑤ SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION TO CAUSE FLOODING OF THE ROADWAY.

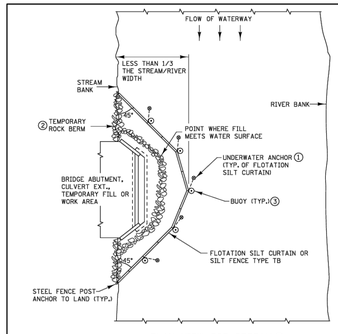
⑥ GEOTEXTILE SOCK BETWEEN 4-10 FEET LONG AND 4-6 INCH DIAMETER. SEAM TO BE JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR PROVIDE A HEAT BONDED SEAM (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137-1; CA-3 GRADATION.

REVISION:
APPROVED: 2-28-2017
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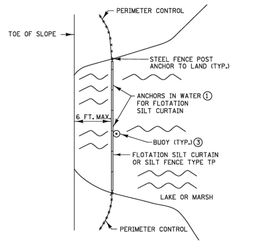
MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
STATE DESIGN ENGINEER
APPROVED: 2-28-2017

TEMPORARY SEDIMENT CONTROL
STORM DRAIN INLET PROTECTION

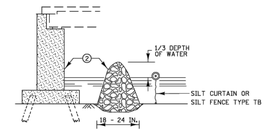
STANDARD PLAN 5-297.405 | 4 OF 8



PLAN VIEW FOR STREAM ⑤



PLAN VIEW FOR LAKE OR MARSH ⑤

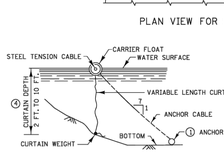


TEMPORARY ROCK BERM
FOR SEDIMENT CONTROL

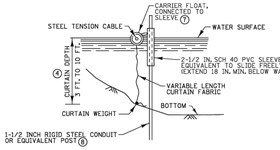
INSTALLATION GUIDELINES
SILT FENCE TYPE TB
MINIMUM WATER DEPTH: 1 FT.
MAXIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.

INSTALLATION GUIDELINES ④
FLOTATION SILT CURTAIN
TYPE: STILL WATER
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER DEPTH: 10 FT.
MAXIMUM WATER VELOCITY: 2 FT./SEC.
MAXIMUM WAVE HEIGHT: 1 FT

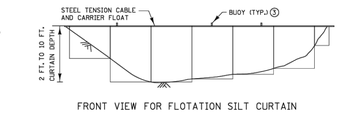
INSTALLATION GUIDELINES ④
FLOTATION SILT CURTAIN
TYPE: MOVING WATER
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER DEPTH: 10 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.
MAXIMUM WAVE HEIGHT: 2 FT.



FLOTATION SILT CURTAIN



ALTERNATE FLOTATION SILT CURTAIN



FRONT VIEW FOR FLOTATION SILT CURTAIN

NOTES:
SEE SPECS. 2573, 3886, 3887 & 3893.

① FOR ANCHOR SPACING AND WEIGHT REQUIREMENTS, SEE SPEC. 2573.

② IN AREAS WHERE THE PLAN CALLS FOR RIPRAP AT A BRIDGE, CULVERT, OR SLOPE, A TEMPORARY ROCK BERM CONSTRUCTED FROM THE RIPRAP CAN BE USED TO PROVIDE ADDITIONAL PROTECTION. WHEN THE WORK IS COMPLETE THE RIPRAP CAN THEN BE MOVED TO THE PERMANENT LOCATION INDICATED IN THE PLANS. THE TEMPORARY ROCK BERM IS INCIDENTAL.

③ ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.

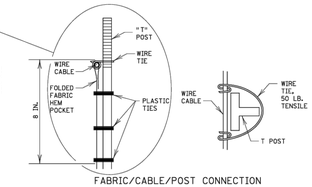
④ MINIMUM WATER DEPTH APPLIES TO THE DEEPEST POINT ALONG THE FLOTATION SILT CURTAIN OR SILT FENCE TYPE TB FOR DETERMINING APPLICABILITY OF FLOTATION SILT CURTAIN OR SILT FENCE TYPE TB.

⑤ SILT CURTAIN SHOULD BE REMOVED WHEN THE AREA CONTRIBUTING DIRECT RUNOFF HAS BEEN TEMPORARILY OR PERMANENTLY STABILIZED. SILT CURTAIN SHOULD ALSO BE REMOVED BEFORE WINTER IF ICE UP OR ICE FLOW IS ANTICIPATED.

⑥ EMBED POST INTO BOTTOM A MINIMUM OF 40% OF THE WATER DEPTH (INCLUDING WAVE HEIGHT), BUT IN NO CASE SHALL EMBEDMENT BE LESS THAN 2 FEET.

⑦ ANCHOR FLOAT MUST BE CONNECTED SECURELY TO SLEEVE WITH A MINIMUM TENSILE STRENGTH OF 100 LBS. CONNECTION METHOD MUST ALLOW FOR SLEEVE TO MOVE FREELY ON POST.

⑧ PROVIDE SUFFICIENT NUMBER OF POST ANCHORS TO MAINTAIN SILT CURTAIN POSITION.



SILT FENCE TYPE TB ⑥

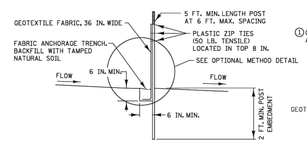
FABRIC/CABLE/POST CONNECTION

REVISION:
APPROVED: 2-28-2017
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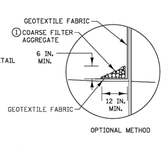
MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
STATE DESIGN ENGINEER
APPROVED: 2-28-2017

TEMPORARY SEDIMENT CONTROL
SILT CURTAIN OR SILT FENCE TYPE TB

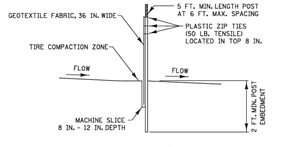
STANDARD PLAN 5-297.405 | 1 OF 8



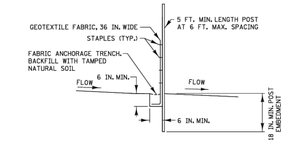
SILT FENCE TYPE HI ②
(HAND INSTALLED)



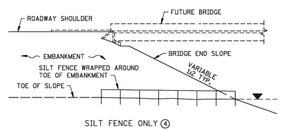
OPTIONAL METHOD



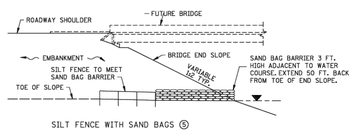
SILT FENCE TYPE MS ②
(MACHINE SLICED)



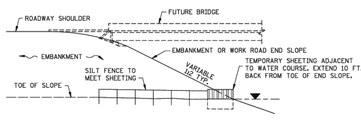
SILT FENCE TYPE PA ③
(PREASSEMBLED)



SILT FENCE ONLY ④

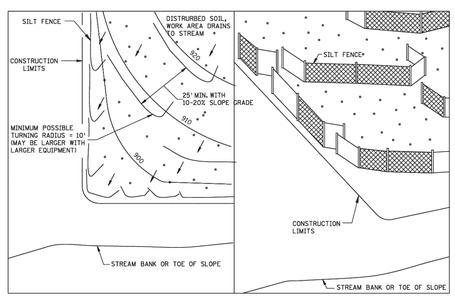


SILT FENCE WITH SAND BAGS ⑤



SILT FENCE WITH SHEETING ⑥

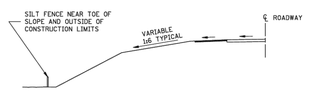
INSTALLATION AT BRIDGE EMBANKMENT ADJACENT TO WATER



PLAN VIEW

PERSPECTIVE VIEW

J-HOOK INSTALLATION



LOCATION AT TOE OF ROADWAY EMBANKMENT

NOTES:
SEE SPECS. 2573, 3149 & 3886.

① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.

② TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

③ TO PROTECT AREAS FROM SHEET FLOW. MAXIMUM CONTRIBUTING AREA: 0.25 ACRE.

④ WATER COURSE FLOW VELOCITY: STANDING. CONTRIBUTING SLOPE AREA: 1/2 ACRE.

⑤ WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC. CONTRIBUTING SLOPE AREA: 1 ACRE.

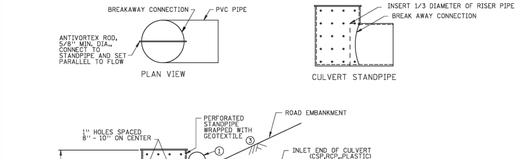
⑥ WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC. CONTRIBUTING SLOPE AREA: 3 ACRES.

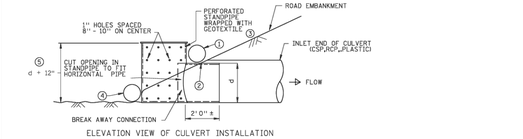
REVISION:
APPROVED: 2-28-2017
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
STATE DESIGN ENGINEER
APPROVED: 2-28-2017

TEMPORARY SEDIMENT CONTROL
SILT FENCE

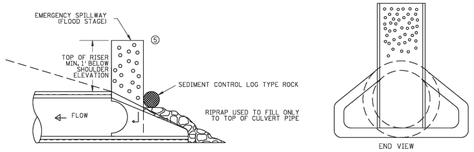
STANDARD PLAN 5-297.405 | 6 OF 8





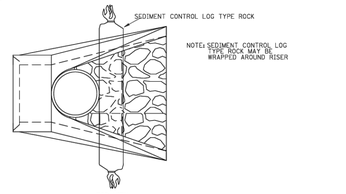
ELEVATION VIEW OF CULVERT INSTALLATION

CULVERT STANDPIPE INSERT (D-RISER)
d= CULVERT SIZE: 12"-36"



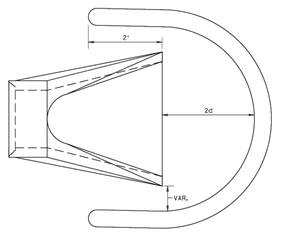
LONGITUDINAL SECTION

END VIEW

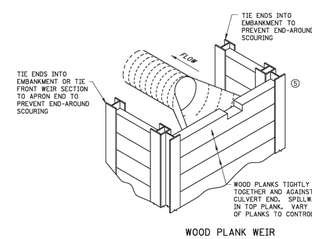


TOP VIEW

CULVERT STANDPIPE INSERT (D-RISER)



SEDIMENT CONTROL LOG WEIR
(COMPOST, WOOD CHIP, OR ROCK)
d = CULVERT SIZE: 12"-36"



WOOD PLANK WEIR

NOTES:
SEE SPECS. 2573, 3891 & 3893.

FOR USE WHEN TEMPORARY PONDING IS NEEDED IN DITCH SECTIONS FOR SEDIMENT CONTROL.

MANUFACTURED ALTERNATIVES LISTED ON MNDOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED AT NO ADDITIONAL COST.

① ROCK LOG OR SANDBAG TO HOLD STANDPIPE AND ACT AS A SEAL BETWEEN RISER PIPE AND CULVERT.

② PLACE CULVERT APRON AND SLIDE TEMPORARY STANDPIPE INTO CSP OR RCP CULVERT.

③ ALL GEOTEXTILE USED FOR CULVERT PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886 FOR MACHINE SLICED.

④ ROCK LOG OR RIP RAP TO HOLD STANDPIPE AND ACT AS A FILTER BETWEEN RISER PIPE AND CULVERT.

⑤ HEIGHT OVERFLOW NOT TO CAUSE FLOODING OF ROAD OR ADJACENT PROPERTIES.

REVISION:
APPROVED: 2-28-2017
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
STATE DESIGN ENGINEER
APPROVED: 2-28-2017

TEMPORARY SEDIMENT CONTROL
CULVERT END CONTROLS

STANDARD PLAN 5-297.405 | 8 OF 8

WIDSETH
ARCHITECTS ▪ ENGINEERS ▪ SCIENTISTS ▪ SURVEYORS

DRAWN BY: PMP
CHECKED BY: CJD

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CHRISTOPHER J DAHN LIC. NO.: 58628 DATE:

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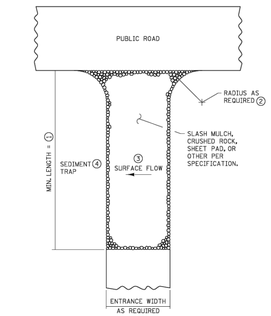
CROW WING POWER CREDIT UNION

DETAILS

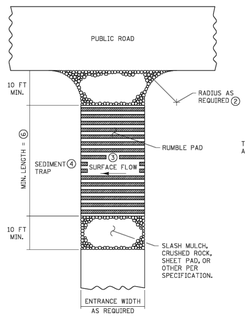
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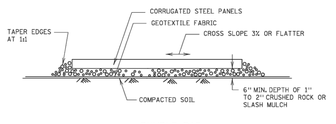
© 2026 WIDSETH FILE: W:\PROJECTS\CROW WING POWER CREDIT UNION-51882\2026-11449\04 DESIGN\CIVIL\CADD\C-DT-2026-11449.DWG PLOTTED BY: PHIL PEDERSON, August 7, 2026



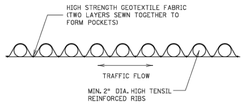
SLASH MULCH, CRUSHED ROCK, OR SHEET PAD CONSTRUCTION EXIT (5)(7)



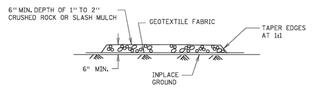
RUMBLE PAD CONSTRUCTION EXIT (5)(7)



RUMBLE PAD



SHEET PAD



SLASH MULCH OR CRUSHED ROCK

NOTES:
SEE SPECS. 2573 & 3882.

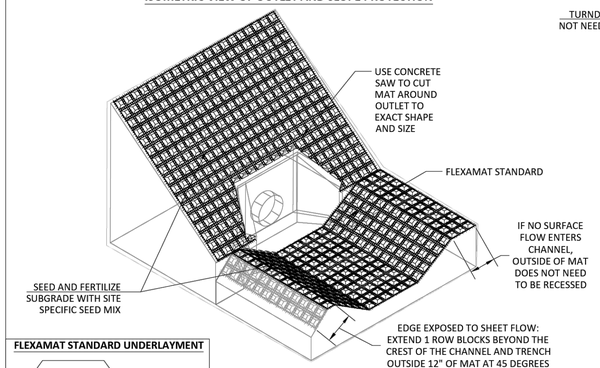
1. MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 5 TIRE ROTATIONS ON THE PROVIDED PAD. MINIMUM LENGTH SHALL BE CALCULATED USING THE LARGEST TIRE WHICH WILL BE USED IN TYPICAL OPERATIONS.
2. PROVIDE RADIUS OR WIDEN PAD SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF PAD WHEN LEAVING SITE.
3. IF RUNOFF FROM DISTURBED AREAS FLOWS TOWARD CONSTRUCTION EXITS, PREVENT RUNOFF FROM DRAINING DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR SLOPING TO ONE SIDE. IF SURFACE GRADING IS INSUFFICIENT, PROVIDE OTHER MEANS OF INTERCEPTING RUNOFF.
4. IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE SEDIMENT TRAP WITH STABILIZED OVERFLOW.
5. IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH WATER TO A SEDIMENT TRAP.
6. MINIMUM LENGTH OF RUMBLE PAD SHALL BE 20 FEET, OR AS REQUIRED TO REMOVE SEDIMENT FROM TIRES. IF SIGNIFICANT SEDIMENT IS TRACKED FROM THE SITE, THE RUMBLE PAD SHALL BE LENGTHENED OR THE DESIGN MODIFIED TO PROVIDE ADDITIONAL VIBRATION. WASH-OFF LENGTH SHALL BE AS REQUIRED TO EFFECTIVELY REMOVE CONSTRUCTION SEDIMENT FROM VEHICLE TIRES.
7. MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REDUCED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND CLEANING THE MATERIALS OR PLACING ADDITIONAL MATERIAL (SLASH MULCH OR CRUSHED ROCK) OVER SEDIMENT FILLED MATERIAL TO RESTORE EFFECTIVENESS.

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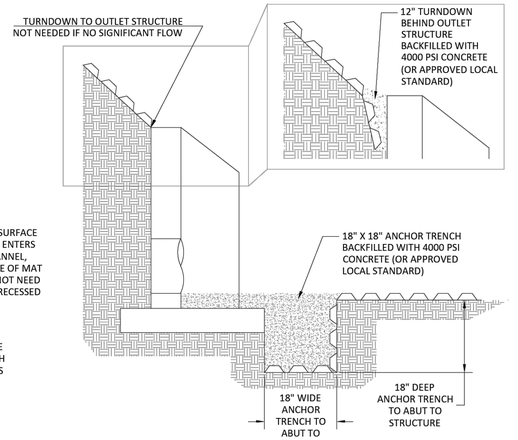
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REVISED:
STATE DESIGN ENGINEER
APPROVED: 2-28-2017

TEMPORARY SEDIMENT CONTROL
STABILIZED CONSTRUCTION EXIT
STANDARD PLAN 5-297.405 | 5 OF 8

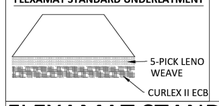
ISOMETRIC VIEW OF OUTLET AND SLOPE PROTECTION



PROFILE VIEW OF ANCHOR TRENCHES



FLEXAMAT STANDARD UNDERLAYMENT



FLEXAMAT STANDARD - OUTLET ARMORING

CONSTRUCTION NOTES:

1. GRADE CHANNEL SO THAT WATER WILL FLOW DOWN CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND. THE PREPARED SURFACE SHALL PROVIDE A FIRM UNYIELDING FOUNDATION FOR THE MATS.
2. PRIOR TO FLEXAMAT STANDARD INSTALLATION, SEED AND FERTILIZER SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
3. INSTALL FLEXAMAT ROLLS. AVAILABLE WIDTHS ARE 4', 5.5', 8', 10', 12', AND 16' AVAILABLE IN CUSTOM LENGTHS. FOR WIDTHS WIDER THAN 16', INSTALL 15.5' WIDE MAT WITH 12" GEOGRID EXTENSION AND 6" UNDERLAYMENT EXTENSION.
   - 3.1. WHERE POSSIBLE AVOID LONGITUDINAL ABUTMENT SEAMS IN CHANNEL BOTTOM.
   - 3.2. FOR OUTLET PROTECTION WIDER THAN 16' SEE CHANNEL PARALLEL TO FLOW INSTALLATION DETAIL.
   - 3.3. FOR OUTLET PROTECTION THAT REQUIRES MORE THAN 1 MAT IN LENGTH TO COVER CHANNEL SEE CHANNEL PARALLEL TO FLOW INSTALLATION DETAIL.
4. AT THE BEGINNING OF CHANNEL, THE INITIAL LEADING EDGE OF FLEXAMAT EXPOSED TO CONCENTRATED FLOW SHALL BE EMBEDDED 18" VERTICALLY INTO ANCHOR TRENCH. THE TRENCH SHALL BE FILLED WITH 4,000 PSI CONCRETE.
5. AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 18" IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH A COHESIVE FILL.

GUIDANCE TABLE FOR STORMWATER OUTFALL PROTECTION

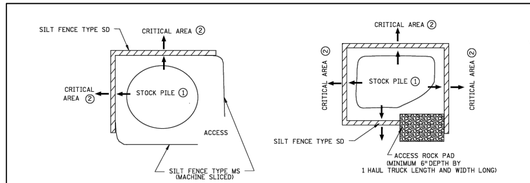
PIPE DIAMETER		FLEXAMAT WIDTH	FLEXAMAT LENGTH (*MIN)
12"	8 CFS	5.5'	5'
18"	20 CFS	8'	8'
24"	30 CFS	8'	10'
36"	75 CFS	12'	16'
48"	100 CFS	16'	20'
60"	150 CFS	20'	25'

*CONSULT MANUFACTURER FOR GUIDANCE IF DESIGN DISCHARGE VARIES SIGNIFICANTLY FROM VALUES LISTED IN TABLE.
*LENGTH OF PROTECTION WILL VARY ON THE LENGTH OF THE SLOPE, DEGREE OF SLOPE, OR IF IT IS DISCHARGING ONTO A FLAT AREA. OUTFALLS DISCHARGING ONTO SLOPES, IT IS RECOMMENDED TO EXTEND FLEXAMAT PLUS THE LENGTH OF THE SLOPE AND 3' PAST THE TOE.

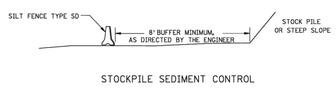
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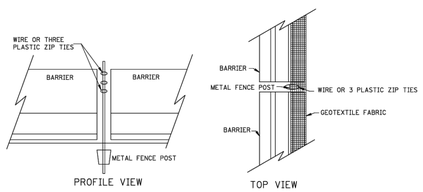
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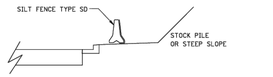
STOCK PILE CONTAINMENT



STOCKPILE SEDIMENT CONTROL



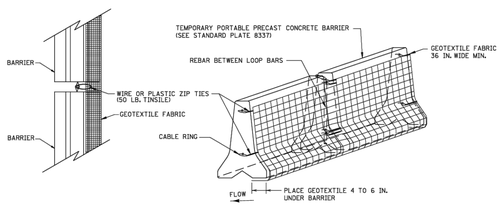
SILT FENCE TYPE SD (SUPER DUTY) BARRIER WITHOUT LOOP BARS



CURB AND GUTTER PROTECTION SYSTEM



DITCH PROTECTION SYSTEM



SILT FENCE TYPE SD (SUPER DUTY) BARRIER WITH LOOP BARS

NOTES:
SEE SPECS. 2533, 2573 & 3886.

SILT FENCE TYPE SD USED TO PROTECT CRITICAL AREAS FROM SHEET FLOW, AND AREAS WHERE OTHER SILT FENCES CANNOT BE PLACED. MAXIMUM CONTRIBUTING AREA: 1 ACRE.

PLACE SILT FENCE TYPE SD ALONG A CONSTANT ELEVATION.

SILT FENCE TYPE SD CAN UTILIZE EITHER A CONCRETE, OR WATER FILLED, TEMPORARY MEDIAN BARRIER.

(1) PLACING STOCK PILES NEXT TO AN ENVIRONMENTALLY SENSITIVE AREA IS NOT RECOMMENDED. WHEN THERE ARE NO FEASIBLE ALTERNATIVES, PLACE SILT FENCE SD AS SHOWN OR AS DIRECTED BY THE ENGINEER.

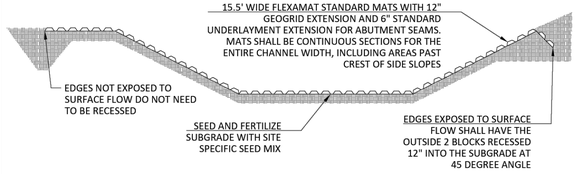
(2) CRITICAL AREAS INCLUDE WETLANDS, JUDICIAL DITCHES, STREAMS, WATER BODIES, AND OTHER AREAS REQUIRING PROTECTION.

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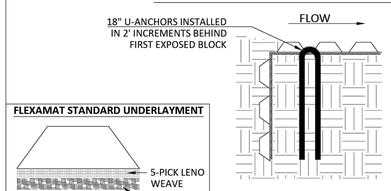
MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISED:
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APPROVED: 2-28-2017

TEMPORARY SEDIMENT CONTROL
SUPER DUTY SILT FENCE
STANDARD PLAN 5-297.405 | 7 OF 8

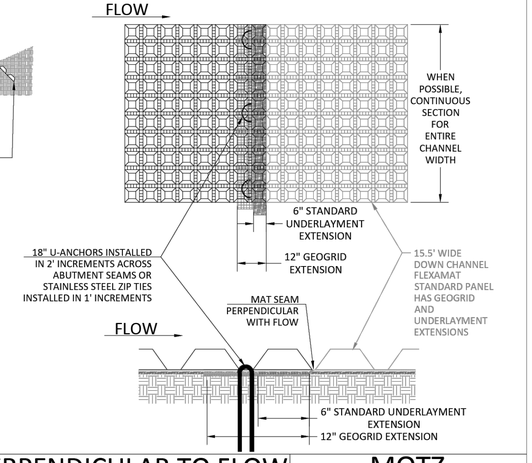
METHOD FOR TREATING EDGES EXPOSED TO SURFACE SHEET FLOW



LEADING AND ENDING ANCHOR TRENCH



ABUTMENT METHOD FOR SEAMS PERPENDICULAR WITH FLOW



FLEXAMAT STANDARD - CHANNEL LAYOUT PERPENDICULAR TO FLOW

CONSTRUCTION NOTES:

1. AN AUTHORIZED MANUFACTURERS REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. GRADE CHANNEL SO THAT WATER WILL FLOW DOWN CENTER OF THE CHANNEL AND BE CONTAINED TO THE CHANNEL. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. PRIOR TO FLEXAMAT STANDARD INSTALLATION, SEED AND FERTILIZE SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
4. INSTALL FLEXAMAT STANDARD ROLLS THAT ARE 15.5' WIDE WITH A 12" GEOGRID EXTENSION AND 6" STANDARD UNDERLAYMENT EXTENSION.
   - 4.1. INSTALL MATS SO THAT THE MATTING EXTENDS PAST THE CREST OF EITHER SIDE SLOPE FOR SLOPES STEEPER THAN 2:1, EMBED EDGE IN A 12" VERTICAL ANCHOR TRENCH. MATS SHALL BE CONTINUOUS SECTIONS ACROSS THE CHANNEL, INCLUDING AREAS PAST CREST OF SIDE SLOPES.
   - 4.2. FOR SLOPES LESS THAN 2:1, OUTSIDE LONGITUDINAL EDGES SHALL BE EMBEDDED IN A 12" 45 DEGREE ANCHOR TRENCH, ONLY IF EXPOSED TO SURFACE FLOW.
   - 4.3. INSTALLATION STARTS AT THE DOWN CHANNEL END AND MOVES UP THE CHANNEL, TOWARDS THE START OF CHANNEL OR OUTLET STRUCTURE. INSTALL UP CHANNEL MATS OVER THE GEOGRID AND UNDERLAYMENT EXTENSIONS OF DOWNSTREAM MATS. ENSURE EXTENSIONS ARE LAYING FLAT ON SUBGRADE AND UNDER ADJACENT MAT.
5. INSTALL 18" U-ANCHORS IN 2' INCREMENTS BEHIND ANCHOR TRENCH AND ACROSS MAT ABUTMENT SEAMS. INSTALL U ANCHORS PERPENDICULAR TO FLOW DIRECTLY BEHIND FIRST BLOCK OF PERPENDICULAR TO FLOW AND ENCOMPASS A MINIMUM OF THREE CORDS OF GRID OF EITHER MAT AT ABUTMENT SEAMS.
6. AT THE INITIAL LEADING EDGE OF THE ARMORED CHANNEL, EMBED MAT 18" IN A VERTICAL ANCHOR TRENCH. FILL AND COMPACT ANCHOR TRENCH WITH SUITABLL FILL. AT ENDING EDGE OF

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DEMOLITION & REMOVAL LEGEND

- REMOVE ITEM (CALLOUT FOR ITEM TYPE)
- PROTECT ITEM (CALLOUT FOR ITEM TYPE)
- RELOCATE ITEM (CALLOUT FOR ITEM TYPE)
- SALVAGE ITEM (CALLOUT FOR ITEM TYPE)
- CLEARING AND GRUBBING (ACRE)
- CLEARING AND GRUBBING (EACH)
- REMOVE CONCRETE CURB AND GUTTER
- REMOVE BITUMINOUS PAVEMENT (SY)
- SAWING BITUMINOUS PAVEMENT (FULL DEPTH) (LF)
- PROTECT SANITARY SERVICE PIPE (EACH)
- PROTECT WATER SERVICE PIPE (EACH)

GENERAL DEMOLITION & REMOVAL PLAN NOTES

- 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".
- PRIVATE UTILITY LOCATES ARE TO BE COORDINATED WITH THE ENGINEER. THE PRIVATE LOCATES WILL BE DONE BY GOPHER STATE ONE CALL. ALL EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN ARE TO BE IN PLACE PRIOR TO BEGINNING REMOVALS.
- CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, TREES, CONCRETE PAVEMENT, BITUMINOUS PAVEMENT, BUILDINGS, LIGHT POLES & BASES, ETC. NOT NOTED FOR DEMOLITION & REMOVAL DURING REMOVALS. ANY DAMAGED STRUCTURES TO REMAIN SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER.
- ALL SAWCUT EDGES IN CONCRETE WALK, CONCRETE PAVEMENT AND BITUMINOUS PAVEMENT SHALL BE PROTECTED AFTER REMOVALS THROUGH THE DURATION OF THE PROJECT. PAYMENT FOR SAWCUTTING WILL BE MADE ONLY ONCE. ADDITIONAL SAWCUTTING TO MAINTAIN A CLEAN SAWCUT EDGE WILL BE AT THE EXPENSE OF THE CONTRACTOR.
- ALL MATERIALS IDENTIFIED FOR REMOVAL SHALL BE DISPOSED OFF SITE IN ACCORDANCE WITH STATE AND LOCAL LAWS.
- THE CONTRACTOR SHALL VERIFY THE ELEVATIONS AT PROPOSED CONNECTIONS TO EXISTING UTILITIES PRIOR TO COMPLETING ANY DISCONNECTIONS AND/OR REMOVALS OF UTILITIES.

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SCALE IN FEET

N

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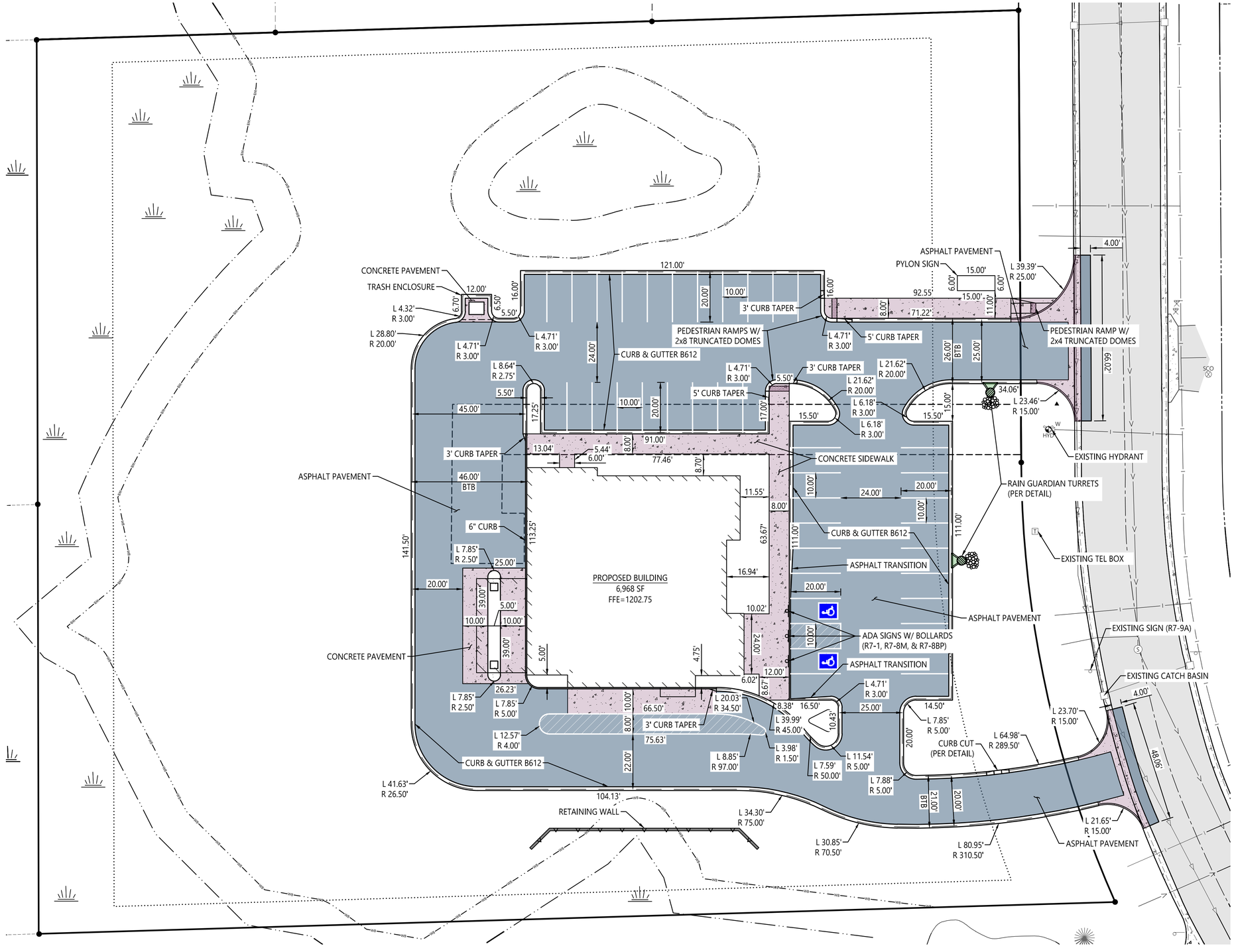
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DEMOLITION & REMOVALS PLAN

C3.01

PROJECT #: 2026-11449

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PROPOSED LEGEND

- BITUMINOUS SURFACE
- CONCRETE SURFACE
- CURB & GUTTER
- BUILDING
- RETAINING WALL
- SIGN - SINGLE

GENERAL SITE PLAN NOTES

- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38.2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".
- CONTRACTOR SHALL CALL GOPHER STATE ONE CALL PRIOR TO BEGINNING REMOVALS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY OWNER AND ENGINEER OF ANY DIFFERENCES BETWEEN THE FIELD AND PLAN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL AND SHALL BE IN COMPLIANCE WITH THE MINNESOTA UNIFORM TRAFFIC CONTROL DEVICES MANUAL AND TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS FIELD MANUAL. THE TRAFFIC CONTROL SHALL BE APPROVED BY THE CITY PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL RECEIVE THE NECESSARY PERMISSION/PERMITS FOR ALL WORK LOCATED OUTSIDE OF THE MUNICIPAL RIGHT-OF-WAY AND PROPERTY LIMITS.
- ALL CONCRETE RAMPS, SIDEWALKS AND ACCESSIBLE HANDICAPPED PARKING STALLS TO CONFORM TO CURRENT A.D.A. REQUIREMENTS.
- ALL CURB RADII SHOWN ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
- ALL PAVEMENT MARKING DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY OWNER OF ANY DIFFERENCES BETWEEN THE FIELD AND PLAN.
- UNLESS OTHERWISE NOTED, ALL MATERIALS, CONSTRUCTION TECHNIQUES AND TESTING SHALL CONFORM TO THE 2023 EDITION OF THE "STANDARD SPECIFICATIONS FOR TRENCH EXCAVATION AND BACKFILL/SURFACE RESTORATION, WATERMAIN AND SERVICE LINE INSTALLATION AND SANITARY SEWER AND STORM SEWER INSTALLATION" AS PUBLISHED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA AND THE "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS PUBLISHED BY THE MINNESOTA DEPARTMENT OF TRANSPORTATION, 2020 EDITION. THE CONTRACTOR SHALL REQUIRE ALL PROCEDURES AS OUTLINED BY THE LOCAL AGENCY.
- THE CONTRACTOR SHALL RECEIVE THE NECESSARY PERMISSION/PERMITS FOR ALL WORK LOCATED OUTSIDE OF THE MUNICIPAL RIGHT-OF-WAY AND PROPERTY LIMITS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING INVERT LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING CONSTRUCTION.

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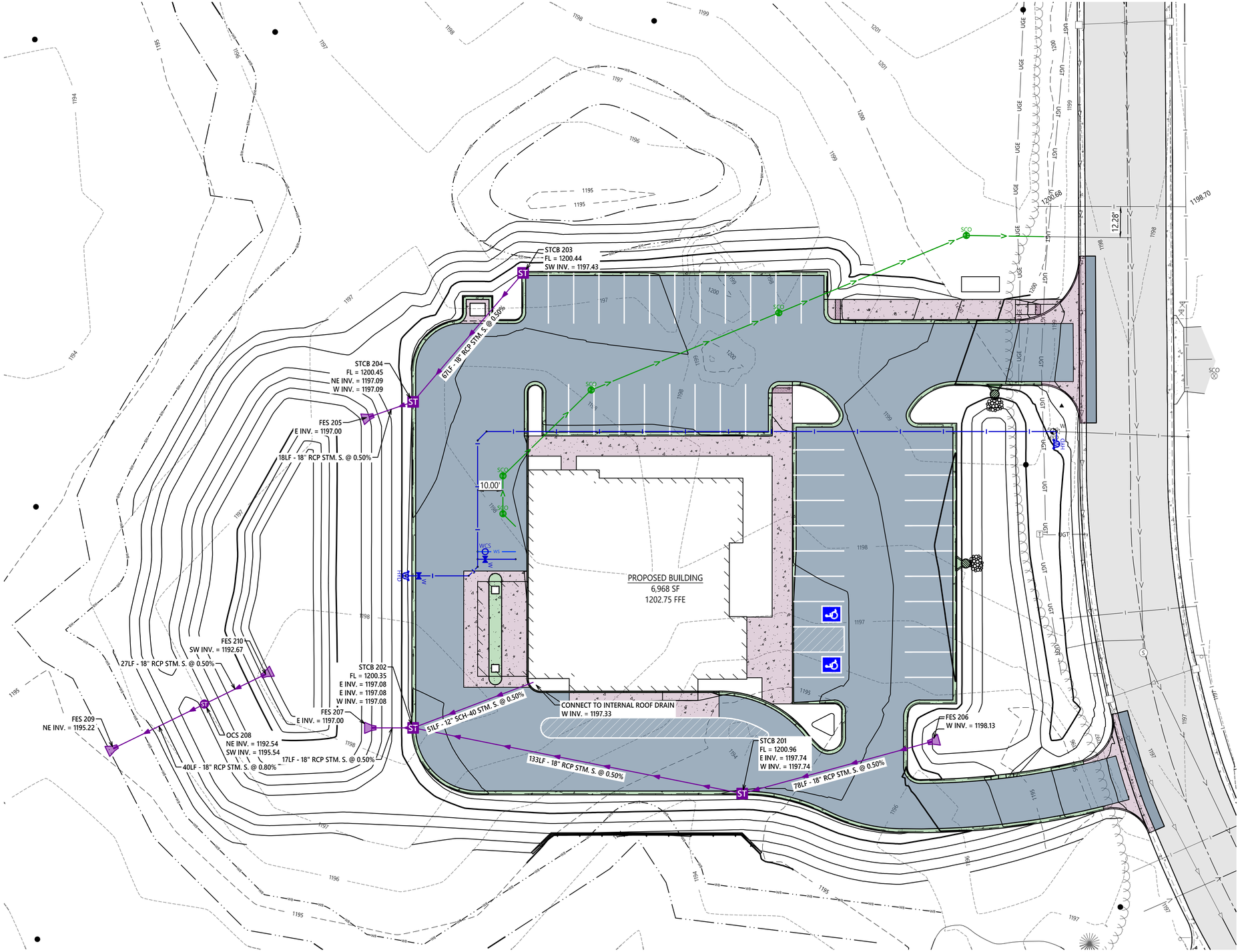
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SITE PLAN

C4.01

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PROPOSED UTILITIES LEGEND

- SANITARY CLEANOUT
- SANITARY GRAVITY PIPE
- HYDRANT
- WATER MAIN VALVE
- WATER MAIN PIPE
- STORM SEWER CATCH BASIN
- STORM SEWER MANHOLE
- STORM SEWER GRAVITY MAIN
- WATER SERVICE PIPE

GENERAL UTILITIES PLAN NOTES

1. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS 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".
2. THE CONTRACTOR SHALL BE REQUIRED TO FOLLOW ALL PROCEDURES AS OUTLINED BY THE LOCAL AGENCY AND THE MINNESOTA PLUMBING CODE, LATEST VERSION.
3. THE ENGINEER HAS MADE AN ATTEMPT TO SHOW ALL PUBLIC UTILITIES WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT. PUBLIC UTILITIES SHOWN ON THIS PLAN WERE DRAWN USING FIELD SURVEY INFORMATION AND MAPS PROVIDED TO THE ENGINEER BY THE UTILITY COMPANIES AS A RESULT OF A GOPHER STATE ONE CALL DESIGN LOCATE REQUEST. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THESE LOCATIONS PRIOR TO CONSTRUCTION.
4. PRIVATE UTILITY LOCATES ARE TO BE COORDINATED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION LOCATES AND SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES AT LEAST 48 HOURS BEFORE CONSTRUCTION.
5. WATER LINES SHALL BE INSTALLED WITH A MINIMUM OF 8.5 FEET OF COVER.
6. UTILITY SERVICES TERMINATE 5 FEET OUTSIDE THE BUILDING WALL UNLESS OTHERWISE STATED. SEE ARCHITECTURAL PLAN OR MECHANICAL PLAN FOR EXACT LOCATION AND CONSTRUCTION DETAILS FROM BUILDING WALL TO 5 FEET OUTSIDE BUILDING WALL. COORDINATE SERVICE LOCATION ENTRIES WITH THE MECHANICAL ENGINEER.
7. ALL MATERIALS AND FITTINGS SHALL MEET MINNESOTA PLUMBING CODE, LATEST VERSION. SANITARY GRAVITY PIPE SEWER SHALL BE PVC SCHEDULE 40 MEETING ASTM F794. WATERMAIN SHALL BE PVC C900 MEETING AWWA C900 AND ASTM F1784.

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SCALE IN FEET

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CHRISTOPHER J DAHN LIC. NO.: 58628 DATE:

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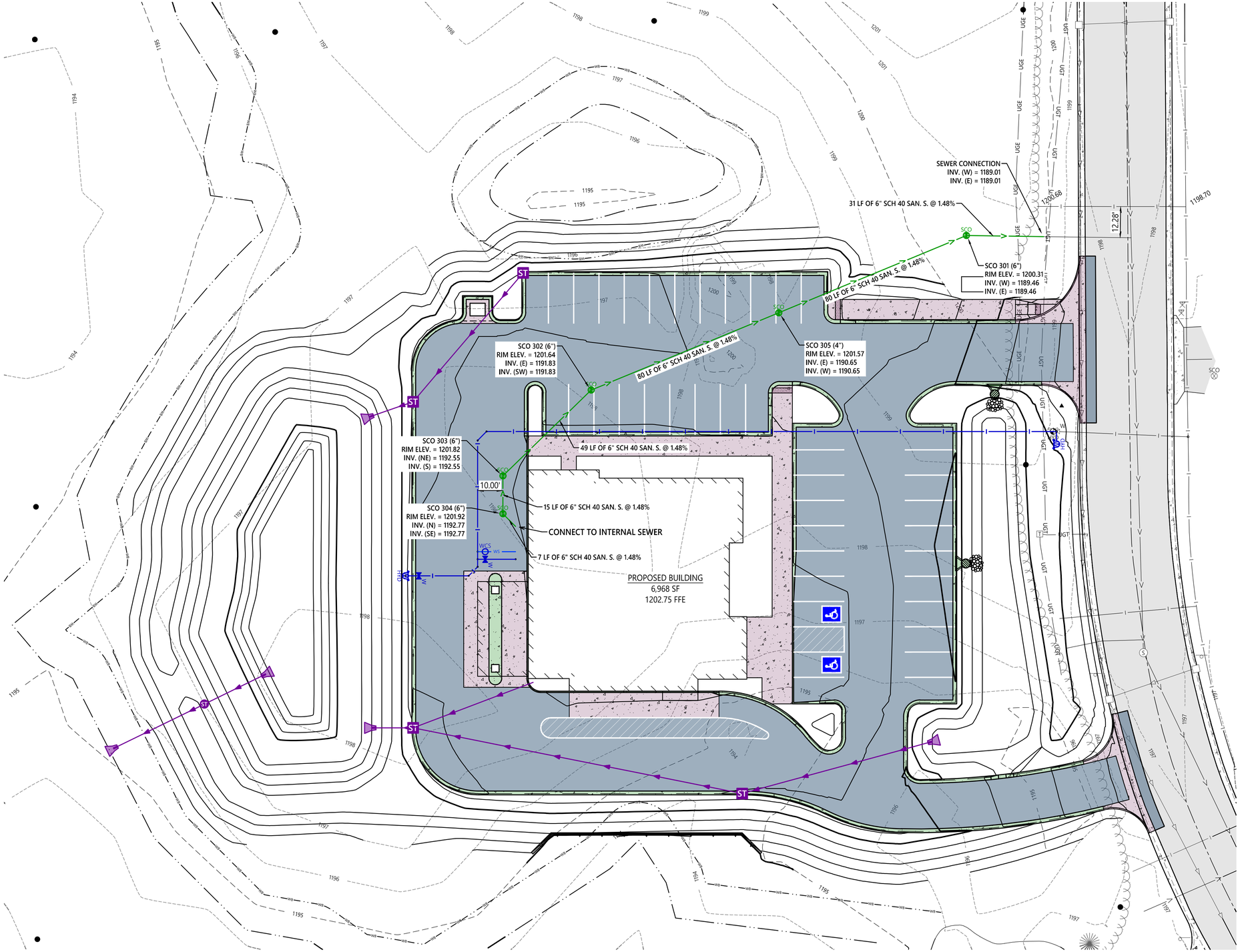
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STORM UTILITY PLAN

C5.01

PROJECT #: 2026-11449

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PROPOSED UTILITIES LEGEND

- SCO — SANITARY CLEANOUT
- SANITARY GRAVITY PIPE
- HYD — HYDRANT
- W — WATER MAIN VALVE
- WATER MAIN PIPE
- ST — STORM SEWER CATCH BASIN
- ST — STORM SEWER MANHOLE
- STORM SEWER GRAVITY MAIN
- WS — WATER SERVICE PIPE

GENERAL UTILITIES PLAN NOTES

1. THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS 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".
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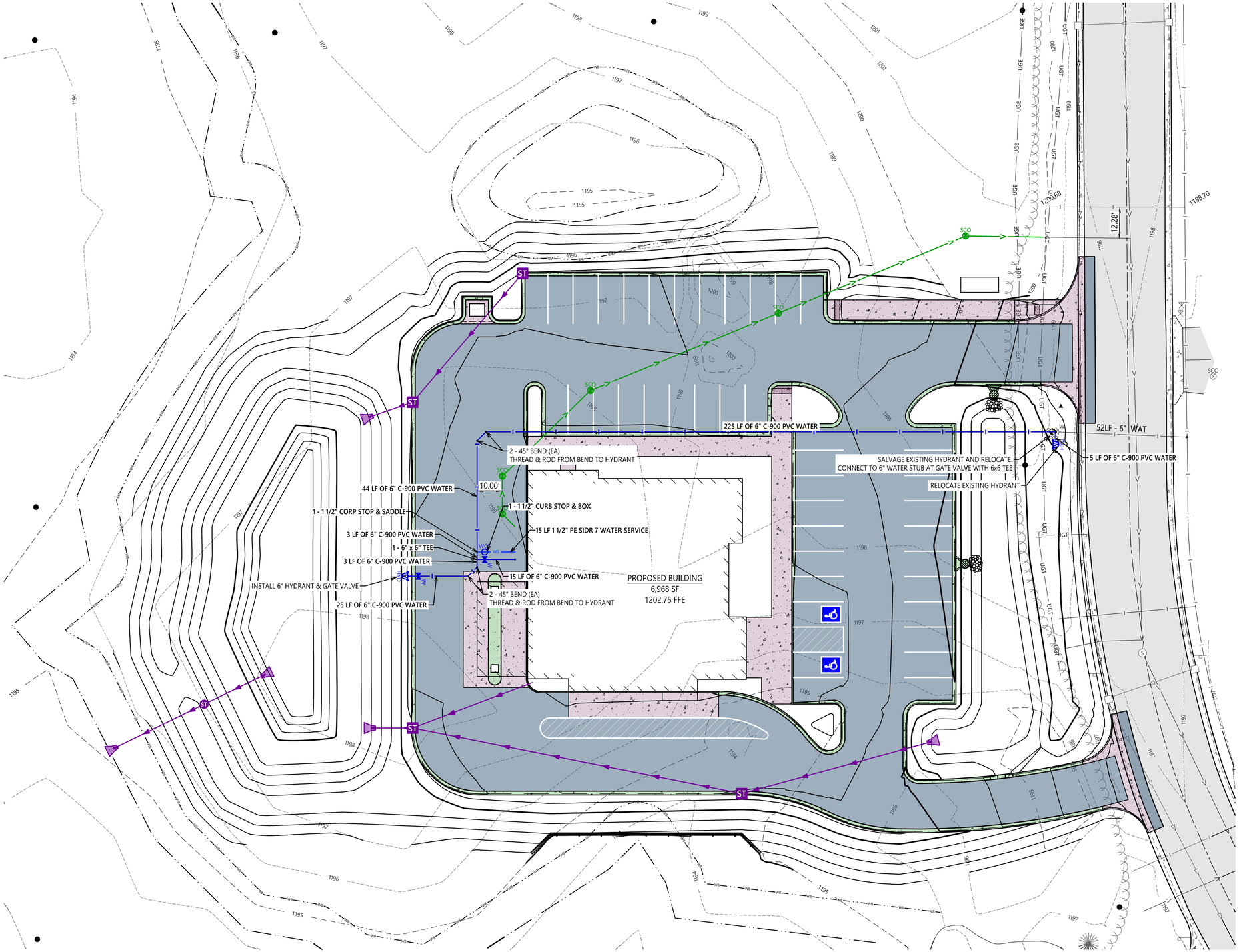
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SANITARY UTILITY PLAN

C5.02

PROJECT #: 2026-11449

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PROPOSED UTILITIES LEGEND

- SCO — SANITARY CLEANOUT
- SANITARY GRAVITY PIPE
- HYD — HYDRANT
- W — WATER MAIN VALVE
- WATER MAIN PIPE
- ST — STORM SEWER CATCH BASIN
- ST — STORM SEWER MANHOLE
- STORM SEWER GRAVITY MAIN
- WS — WATER SERVICE PIPE

GENERAL UTILITIES PLAN NOTES

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WATER UTILITY PLAN

C5.03

PROJECT #: 2026-11449

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PROPOSED POND P-2
1-YR: 1196.45
2-YR: 1196.58
10-YR: 1196.92
100-YR: 1197.29
NWL: 1196.00
EOF: 1198.50
WQ ELEV: 1196.54

PROPOSED BUILDING
6,968 SF
1202.75 FFE

TOPOGRAPHIC INFORMATION - PROPOSED

- 1230 — MAJOR CONTOURS (WITH LABEL)
- 1234 — MINOR CONTOURS (WITH LABEL)
- 1196.86 — WQ CONTOUR @ 1196.86
- 1234.56 — SPOT ELEVATION
- +-1.23% — SLOPE - PERCENT
- 1:2 — SLOPE - RISE : RUN
- CONSTRUCTION LIMITS

TOPOGRAPHIC INFORMATION - EXISTING

- 1230 — MAJOR CONTOURS
- 1234 — MINOR CONTOURS
- + 1234.56 — SPOT ELEVATION

GENERAL GRADING NOTES

- THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-.2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".
- ALL CONSTRUCTION SHALL CONFORM TO LOCAL, STATE, AND FEDERAL REGULATIONS INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
- SPOT ELEVATIONS SHOWN INDICATE FINISHED PAVEMENT ELEVATIONS, GUTTER FLOW LINE OF CURB GUTTER (FL), BACK OF CURB ELEVATIONS (TC), TOP OF SIDEWALK (TW), AND FINISHED SURFACE GRADE, UNLESS OTHERWISE NOTED.
- ALL SLOPES SHALL BE GRADED TO 3:1 OR FLATTER, UNLESS OTHERWISE NOTED ON THE PLANS.
- THE CONTRACTOR SHALL NOTE ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD REPRESENTED WITHIN THE PLANS AS SHOWN AND ALERT THE ENGINEER BEFORE BIDDING THE PROJECT AND BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL LOCATE AND VERIFY ALL UTILITIES WHICH MAY AFFECT THIS WORK AND NOTIFY THE OWNER OF ANY CHANGES. CONTACT LOCAL UTILITY COMPANIES FOR EXACT LOCATIONS PRIOR TO BIDDING THE PROJECT AND COMMENCING WORK.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT SILT AND DEBRIS RUN-OFF DURING GRADING OPERATIONS (I.E. SILT FENCE, STRAW BALES, ETC.).
- CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS TO ENSURE CONFORMANCE WITH GRADING PLAN, PARTICULARLY WITH EXISTING STRUCTURES AND/OR PAVEMENTS TO REMAIN. MEET EXISTING GRADES ALONG STREETS, PROPERTY LINES, AND DRIVEWAY ENTRANCES. RESTORE ALL PAVEMENTS THAT REMAIN TO THEIR ORIGINAL IF NOT BETTER CONDITION. NOTIFY OWNER OF ANY CONFLICTS PRIOR TO BIDDING THE PROJECT.
- 6.PROPOSED SPOT ELEVATIONS ARE TO THE TOP OF CURB UNLESS NOTED OTHERWISE. ELEVATION OF FLOW LINE IS 6" BELOW TOP OF CURB UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING QUANTITIES OF CUT, FILL AND WASTE MATERIALS TO BE HANDLED, AND FOR AMOUNT OF GRADING TO BE DONE IN ORDER TO COMPLETELY PERFORM ALL WORK INDICATED ON THE DRAWINGS. IMPORT SUITABLE MATERIAL AND EXPORT UNSUITABLE / EXCESS / WASTE MATERIAL AS REQUIRED. ALL COSTS ASSOCIATED WITH IMPORTING AND EXPORTING MATERIALS SHALL BE INCIDENTAL TO THE CONTRACT.
- IT IS INTENDED THAT EARTHWORK (CUT VS. FILL) **WILL NOT** BALANCE ON SITE. THE CONTRACTOR SHALL SUBMIT THE QUANTITY OF MATERIAL AND AMOUNT OF ANTICIPATED GRADE ADJUSTMENT FOR REVIEW BY THE ENGINEER A MINIMUM OF FOUR WEEKDAYS PRIOR TO MAKING ADJUSTMENTS. ALL GRADE ADJUSTMENTS MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR WORK ASSOCIATED WITH GRADING ADJUSTMENTS, INCLUDING, BUT NOT LIMITED TO, EARTHWORK OPERATIONS, STORM SEWER PIPING AND STRUCTURE ADJUSTMENTS, CONSTRUCTION SURVEYING FOR ADJUSTING FEATURE LOCATIONS ACCORDINGLY, SILT FENCE, ETC.
- CONTRACTOR SHALL MAINTAIN DRAINAGE FROM EXISTING & NEW BUILDING AT ALL TIMES. PROVIDE TEMPORARY STORM SEWER (INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, MANHOLES, PIPING, ETC.) AS REQUIRED. EXISTING STORM SEWER SHALL NOT BE REMOVED UNTIL TEMPORARY OR PERMANENT STORM SEWER IS INSTALLED AND FUNCTIONAL. COORDINATE ALL REMOVALS WITH APPROPRIATE TRADES (SITE UTILITY CONTRACTOR, MECHANICAL CONTRACTOR, ETC.) AS REQUIRED.
- SEE PLAN LEGEND FOR A COMPLETE LIST OF HATCHES AND SYMBOLS USED FOR GRADING.

CUT/FILL VOLUME TABLE

ITEM	VALUE
CUT VOLUME (UNADJUSTED)	1103 CU.YD.
FILL VOLUME (UNADJUSTED)	8791 CU.YD.
CUT FACTOR	1.0
FILL FACTOR	1.0
ADJUSTED CUT VOLUME[1]	1103 CU.YD
ADJUSTED FILL VOLUME[2]	8791 CU.YD.
TOTAL CUT/FILL VOLUME[3]	7689 CU.YD.

[1] ADJUSTED CUT VOLUME = CUT VOLUME x CUT FACTOR

[2] ADJUSTED FILL VOLUME = FILL VOLUME x FILL FACTOR

[3] NEGATIVE NUMBER (-123, ETC.) DENOTES VOLUME OF MATERIAL TO BE REMOVED FROM THE SITE; POSITIVE (123, ETC.) DENOTES VOLUME OF MATERIAL TO BE DELIVERED TO THE SITE.

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GRADING PLAN

C6.01

PROJECT #: 2026-11449