BEAVER DAM LAKE MANAGEMENT DISTRICT

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS

CUMBERLAND, BARRON COUNTY, WISCONSIN

WISCONSIN PROFESSIONAL ENGINEER
DEREK R. LASH
E-40938
CRYSTAL
MN

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN

DEREK R. LASH, P.E.

REG. NO. 40938-6 DATE 8/7/2019

MY LICENSE RENEWAL DATE IS 7/31/2020

PAGES OR SHEETS COVERED BY THIS SEAL:

ALL SHEETS

LEGEND

FEATURE	EXISTING	PROPOSED
MINOR CONTOUR	1246	1246
MAJOR CONTOUR	1245	1245
WATERLINE/SHORELINE		
FENCE		
BURIED ELECTRIC LINES	E-U	
DRIVEWAY		
PROPERTY LINE		
EASEMENT		
DITCH C/L		
TREE LINE		
TREE		
BUSH		
SANITARY SEWER LINE		
SANITARY SEWER MANHOLE		
STORM SEWER LINE		
STORM SEWER MANHOLE		
STORM SEWER ROAD INLET		
STORM SEWER YARD INLET		
WATERMAIN	W	
SILT FENCE		SF
SEDIMENT LOG		
INLET PROTECTION		
TURBIDITY BARRIER		
CONSTRUCTION LIMITS		

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*THIS PLAN SET CONTAINS 26 PLAN SHEETS.

LOCATION MAP

PROJECT LOCATION

GOVERNING SPECIFICATIONS

THE 2019 EDITION OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

DIGGERS HOTLINE™

DIGGERS HOTLINE

WISCONSIN STATUE 182.0175 REQUIRES EVERY EXCAVATOR AND EVERYONE RESPONSIBLE FOR PLANNING NON-EMERGENCY EXCAVATIONS TO PROVIDE ADVANCE NOTICE OF AT LEAST **THREE** BUSINESS DAYS TO THE ONE CALL SYSTEM. SEE THE STATE STATUE FOR THE DEFINITION OF EXCAVATION. DIGGERS HOTLINE NEEDS TO BE CONTACTED PRIOR TO EXCAVATION AND PLANNING AN EXCAVATION IN ORDER TO COMPLY WITH THE STATE STATUE.

DIGGERS HOTLINE SHOULD ALSO BE USED TO OBTAIN INFORMATION ON SAFE WORKING CLEARANCES FROM OVERHEAD LINES. OSHA REQUIRES THAT YOU STAY AT LEAST 10 FEET AWAY FROM DISTRIBUTION LINES AND UP TO 16 FEET AWAY FROM TRANSMISSION LINES WITH EXCAVATORS, BACK-HOES, WHEEL LOADERS, DIGGER DERRICKS USED FOR AUGURING HOLES, AND SETTING POLES IN TELECOMMUNICATIONS AND ELECTRICAL WORK, ETC. THE 2010 OSHA CRANE STANDARD REQUIRES ADDITIONAL RESTRICTIONS FOR OTHER TYPES OF CRANES OR HOISTING DEVICES.

SEE THE EXCAVATOR'S GUIDE TO DIGGERS HOTLINE FOR ADDITIONAL INFORMATION.

CONTACTING DIGGERS HOTLINE

BY PHONE: DIGGERS HOTLINE IS AVAILABLE 24 HOURS A DAY, 7 DAYS A WEEK, 365 DAYS A YEAR BY CALLING THE THREE-DIGIT CODE **811** OR BY CALLING (800) 242-8511. TDD USERS MAY CALL (800) 542-2289.

BY EMAIL: ON THE DIGGERS HOTLINE WEBSITE, **WWW.DIGGERSHOTLINE.COM**, YOU CAN EMAIL LOCATE REQUESTS TO THE CALL CENTER. TO ACCESS THE ONLINE EMAIL FORM, GO TO DIGGERS HOTLINE WEBSITE, **WWW.DIGGERSHOTLINE.COM**.

EXISTING UTILITIES

THE LOCATION OF UNDERGROUND FACILITIES AND/OR STRUCTURES AS SHOWN ON THE PLANS ARE BASED ON AVAILABLE RECORD AT THE TIME THE PLANS WERE PREPARED AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT. THE SUBSURFACE UTILITY INFORMATION SHOWN IS UTILITY QUALITY LEVEL D, AS DETERMINED USING THE GUIDELINES OF "CI/ASCE 38-02 STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE THE EXACT LOCATION OF ALL FACILITIES AND TO PROVIDE ADEQUATE PROTECTION OF SAID UTILITIES DURING THE COURSE OF WORK.

CONSTRUCTION NOTE

CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO MAINTAIN OPERATION OF EXISTING UTILITIES THROUGHOUT THE DURATION OF THE PROJECT. IN THE EVENT THAT AN INTERRUPTION OF SERVICE IS UNAVOIDABLE IN ORDER TO COMPLETE THE WORK, CONTRACTOR SHALL PROVIDE ADEQUATE NOTIFICATION TO ALL AFFECTED BUSINESSES A MINIMUM OF 3 WORKING DAYS IN ADVANCE OF ANY INTERRUPTION.

CLIENT
BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

ENGINEER
EMMONS & OLIVIER RESOURCES, INC.
7030 6TH STREET NORTH
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Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
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1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

EOR water ecology community
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7030 6th Street North
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Tele: 651.770.8448
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CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. | CITY PROJECT NO. —

TITLE SHEET

Item No.	WISDOT Spec.	Item	UNITS	ESTIMATED QUANTITY
1	201.0115	Clearing	ACRE	0.4
2	201.0215	Grubbing	ACRE	0.4
3	204.0100	Removing Pavement (Driveway)	SY	130
4	204.0150	Removing Curb & Gutter	LF	60
5	204.0155	Removing Concrete Sidewalk (& Apron)	SY	38
6	204.0210	Removing Manholes	EACH	1
7	204.0220	Removing Inlets (Flared End Section)	EACH	2
8	204.0245	Removing Storm Sewer (12" CMP)	LF	26
9	204.0245	Removing Storm Sewer (15" RCP)	LF	30
10	204.0245	Removing Storm Sewer (18" RCP)	LF	10
11	204.0245	Removing Storm Sewer (24" RCP)	LF	10
12	205.0100	Excavation Common (Fill)	CY	680
13	350.0115	Subbase 6" - Driveway	SY	370
14	416.0512	Concrete Truck Apron (6 inch)	SY	12
15	460.5224	HMA Pavement 4 LT 58-28 S (3" Thick Driveway)	TON	23
16	601.0409	Concrete Curb & Gutter (30 inch, Type A)	LF	60
17	602.0415	Concrete Sidewalk 6-Inch	SF	230
18	606.0100	Riprap Light (W/ Filter Fabric) at F.E.S.	CY	5
19	608.0515	Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	LF	65
20	608.0518	Storm Sewer Pipe Reinforced Concrete Class V 18-Inch	LF	25
21	608.0421	Storm Sewer Pipe Reinforced Concrete Class IV 21-Inch	LF	190
22	608.0424	Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	LF	10
23	611.0410	Reconstructing Catch Basin	EACH	1
24	611.2004	Manholes 48" Diameter	EACH	1
25	619.1000	Mobilization	EACH	1
26	625.0105	Topsoil - 6" Over Disturbed Areas	CY	325
27	628.1504	Silt Fence	LF	700
28	628.1520	Silt Fence Maintenance	LF	700
29	628.2002	Erosion Mat Class I Type A	SY	570
30	628.6005	Turbidity Barriers	SY	51
31	628.6505	Soil Stabilizer Type A (Hydraulic Bonded Fiber Matrix)	ACRE	0.8
32	628.7005	Inlet Protection Type A	EACH	8
33	628.7504	Temporary Ditch Checks (Sediment Logs)	LF	210
34	628.7560	Tracking Pad	EACH	1
35	630.0110	Seeding Mixture No. 10 (1.5 lbs per 1000 sq-ft)	LB	53
36	630.0400	Seeding Nurse Crop (0.8 lbs per 1000 sq-ft)	LB	28
37	690.0250	Sawing Concrete	LF	50
38	Special	Contech CDS2025-5-C (Project 1 Location)	EACH	1
39	Special	Contech CDS3020-6-C (Project 2 Location)	EACH	1
40	Special	Contech CDS3030-6-C (Project 3 Location)	EACH	1
41	520.1015	15" Flared End Section w/ Trash Guard	EA	1

GENERAL SITE WORK NOTES

1. CONTRACTOR TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING ANY CONSTRUCTION BY CALLING DIGGERS HOTLINE 1-800-242-8511.
2. VERIFY HORIZONTAL LOCATION AND ELEVATION WHERE A CONNECTION TO EXISTING PAVEMENT, STRUCTURE, PIPE OR OTHER SITE FEATURE IS TO BE MADE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS FROM THE PLANS.
3. REFERENCE TO WISDOT SPECIFICATIONS SHALL MEAN THE 2019 SPECIFICATIONS FOR CONSTRUCTION.
4. SEE RESTORATION PLAN FOR TURF RESTORATION REQUIREMENTS.
5. CONTRACTOR SHALL INSTALL, INSPECT, MAINTAIN AND REMOVE THE NECESSARY SIGNAGE FOR LANE CLOSURES. ALL TRAFFIC CONTROL DEVICES AND SIGNAGE SHALL CONFORM TO THE WMUTCD. ALL TRAFFIC CONTROL IS INCIDENTAL TO THE CONTRACT.

GENERAL UTILITY NOTES

1. CONTRACTOR SHALL CONTACT 'DIGGERS HOTLINE' (1-800-242-8511) AT LEAST THREE BUSINESS DAYS PRIOR TO EXCAVATION/CONSTRUCTION FOR UTILITY LOCATIONS.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND INVERTS, SHOWN OR NOT SHOWN. ANY DISCREPANCY BETWEEN PLANS AND FIELD CONDITIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CUMBERLAND SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.
4. CONTRACTOR WILL BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE SEWER, WATER AND PLUMBING PERMITS FROM THE CITY OF CUMBERLAND. NONE ARE EXPECTED.
5. UTILITY TRENCHES SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D698.78 OR AASHTO T-99) FROM THE PIPE ZONE TO WITHIN THREE FEET OF THE GROUND SURFACE AND 100% STANDARD PROCTOR IN THE UPPER THREE FEET.
6. FIELD ADJUST ALL CASTINGS TO MATCH FINAL GRADES.
7. CONNECTION TO THE EXISTING STORM SEWER REQUIRES INSPECTION BY THE CITY OF CUMBERLAND.
8. CONTRACTOR SHALL NOTIFY THE CITY OF CUMBERLAND 48 HOURS IN ADVANCE OF WORKING WITHIN THE EXISTING RIGHT OF WAY. CITY INSPECTORS MUST OBSERVE ALL WORK COMPLETED WITHIN THE EXISTING RIGHT OF WAY INCLUDING REMOVAL OF EXISTING BITUMINOUS PAVEMENT, EXCAVATION OF TRENCHES, PLACEMENT OF UTILITY CONNECTIONS TO EXISTING LINES, BACKFILLING AND PLACEMENT OF BITUMINOUS PAVEMENT OR CONCRETE APRONS, SIDEWALKS, AND CURB & GUTTER.

SITE REMOVAL NOTES

1. BITUMINOUS PAVEMENT REMOVALS ARE TO BE MADE TO A VERTICAL SAW CUT OR TO A NEAT MILLED EDGE IN ACCORDANCE WITH WISDOT SPECIFICATIONS.
2. CONCRETE PAVEMENT, SIDEWALK, CURB & GUTTER AND OTHER POURED CONCRETE ITEMS ARE TO BE REMOVED TO AN EXISTING EXPANSION OR CONTRACTION JOINT. SAW CUT AS NECESSARY FOR A NEAT EDGE OF REMOVAL.
3. SALVAGED SEWER CASTINGS AND MANHOLE SECTIONS SHALL BE CLEANED AND INSPECTED FOR DAMAGE PRIOR TO REINSTALLATION.
5. ALL REMOVAL ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFIED OTHERWISE AND SHALL BE DISPOSED OF OFF-SITE IN A MANNER MEETING ALL APPLICABLE REGULATIONS.

STORM SEWER NOTES

1. STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH WISDOT SPECIFICATIONS.
2. STORM SEWER SHALL BE PRECAST REINFORCED CONCRETE. CASTING SHALL BE AS SPECIFIED ON THE PLANS OR APPROVED EQUAL.
3. CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE. CASTING SHALL BE AS SPECIFIED ON THE PLANS OR APPROVED EQUAL.
4. MANHOLES SHALL BE PRECAST REINFORCED CONCRETE IN ACCORDANCE WITH ASTM C478. CASTING SHALL BE NEENAH R-1733. MANHOLES SHALL HAVE A MINIMUM OF 3 ADJUSTMENT RINGS AND MORTAR AND A MAXIMUM OF 12" OF ADJUSTMENT RINGS AND MORTAR.
5. CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE BY CORE DRILLING OR SAW CUTTING THE EXISTING MANHOLE AT THE PROPOSED INVERT ELEVATION. GROUT IN THE NEW PIPE AND REFORM THE INVERT.
6. PIPE LENGTHS ON THE PLAN INCLUDE THE APRON SECTION.
7. ALL STORM SEWER PIPE JOINTS SHALL BE TIED AT ALL SECTIONS.
8. THE CONTRACTOR WILL LOCATE THE MANHOLE OR CATCH BASIN STRUCTURE AS NECESSARY FROM REFERENCE POINTS. PIPE ALIGNMENTS ARE STAKED TO CENTER OF CASTING - CONTRACTOR WILL ADJUST THE ALIGNMENT TO FIT THE ACTUAL STRUCTURES INSTALLED.

GRADING & EROSION CONTROL NOTES

1. CONTRACTOR SHALL CONTACT 'DIGGERS HOTLINE' (1-800-242-8511) AT LEAST THREE BUSINESS DAYS PRIOR TO EXCAVATION/ CONSTRUCTION, FOR UTILITY LOCATIONS.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR VARIATIONS.
3. ENGINEER SHALL PROVIDE HORIZONTAL AND VERTICAL CONTROL BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SAID HORIZONTAL AND VERTICAL CONTROL POINTS SET BY ENGINEER AND ANY ADDITIONAL CONSTRUCTION STAKING.
4. CONTRACTOR TO ADHERE TO ALL CITY, DNR, WISDOT AND NPDES PERMIT REQUIREMENTS, EVEN IF ACQUISITION OF THE NPDES PERMIT IS NOT REQUIRED, INCLUDING THE REQUIREMENT TO MINIMIZE THE AREA DISTURBED BY GRADING AT ANY GIVEN TIME AND TO COMPLETE VEGETATION RESTORATION WITHIN THE TIME REQUIRED BY THE PERMIT AFTER COMPLETION OF GRADING OF AN AREA.
5. ALL EXPOSED SOIL AREAS WITHIN 100 FEET OF A WATER OF THE STATE OR ANY STORMWATER CONVEYANCE SYSTEM WHICH IS CONNECTED TO A WATER OF THE STATE MUST BE STABILIZED WITHIN 24 HOURS.
6. ALL CONSTRUCTION ENTRANCES SHALL BE SURFACED WITH CRUSHED ROCK ACROSS FULL WIDTH FROM ENTRANCE POINT TO 50 FEET INTO THE CONSTRUCTION ZONE. SEE DETAIL.
7. INLET PROTECTION IS TO BE USED DURING CONSTRUCTION. SEE DETAIL.
8. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CITY, COUNTY, AND STATE PERMITS.
9. CONTRACTOR SHALL PROVIDE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES AS DIRECTED BY THE ENGINEER.
10. REMOVE ALL EROSION CONTROL MEASURES AFTER VEGETATION IS ESTABLISHED, AS DIRECTED BY THE ENGINEER.
11. THE CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS, AS DIRECTED BY THE ENGINEER.
12. IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.
13. SWEEP ADJACENT STREETS AS DIRECTED BY THE ENGINEER.
14. INSPECT EROSION CONTROL DEVICES AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. IMMEDIATELY REPAIR FAILED OR FAILING EROSION CONTROL DEVICES.
15. SEDIMENT REMOVAL - SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT.
16. ANY SEDIMENT REMAINING IN PLACE AFTER THE EROSION CONTROL DEVICE IS NO LONGER REQUIRED SHALL BE GRADED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED WITH THE APPROPRIATE SEED MIX AS DIRECTED BY THE ENGINEER.
17. SUITABLE GRADING MATERIAL SHALL CONSIST OF ALL SOIL ENCOUNTERED ON THE SITE WITH EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL AND OTHER UNSTABLE MATERIAL. STOCKPILE TOPSOIL AND GRANULAR FILL AT LOCATIONS DIRECTED BY ENGINEER.
18. EXISTING GRANULAR MATERIALS SHALL BE SEGREGATED AND STOCKPILED FOR REUSE ON-SITE.
19. CONTRACTOR SHALL STRIP, STOCKPILE AND RE-SPREAD EXISTING ON-SITE TOPSOIL TO PROVIDE A UNIFORM THICKNESS, MINIMUM 6", ON ALL DISTURBED AREAS TO BE SODDED OR SEEDED.
20. SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF THE EXISTING PAVEMENT.
21. GRADES SHOWN ARE FINISHED GRADES, CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATIONS. SUBGRADE ELEVATIONS SHALL BE INSPECTED AND APPROVED PRIOR TO PLACEMENT OF FINISH MATERIALS.
22. FINAL GRADING TOLERANCES ARE ±0.1 FEET OF PLAN GRADES.
23. ALL EXCESS MATERIAL, BITUMINOUS SURFACING, CONCRETE ITEMS, ANY ABANDONED UTILITY ITEMS, AND OTHER UNSTABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS SPECIFIED OTHERWISE AND SHALL BE DISPOSED OF OFF-SITE IN A MANNER MEETING ALL APPLICABLE REGULATIONS.
24. CONTRACTOR IS RESPONSIBLE FOR GRADING AND SLOPING THE FINISHED GROUND SURFACE TO PROVIDE SMOOTH & UNIFORM SLOPES, WHICH PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING IN LOWER AREAS. CONTACT ENGINEER IF FIELD ADJUSTMENTS TO GRADING PLANS ARE REQUIRED.
25. UNDER PAVEMENTS COMPACT THE UPPER THREE FEET OF SUBGRADE TO 100% STANDARD PROCTOR DENSITY AT OPTIMUM MOISTURE CONTENT AND 95% STANDARD PROCTOR DENSITY BELOW THE UPPER THREE FEET OF SUBGRADE. OUTSIDE OF PAVEMENT AREAS COMPACT EMBANKMENTS TO 95% STANDARD PROCTOR DENSITY.

RESTORATION NOTES

1. TURF RESTORATION IS SEEDING IN ACCORDANCE WITH THE SITE RESTORATION PLAN. ALL SEEDED AREAS ARE TO RECEIVE SOIL STABILIZER (HYDRAULIC BONDED FIBER MATRIX).
2. SEED 50% OF SEEDING MIXTURE NO. 10 WITH TRACER PRIOR TO APPLICATION OF BONDED FIBER MATRIX. APPLY THE 0THER 50% OF SEED WITHIN THE BONDED FIBER MATRIX.

DIGGERS HOTLINE™ 811 Know what's below. Call before you dig.

NO	DATE	BY	REVISION
6			
5	08/20/2019	DM	ADDENDUM 1 - BID FORM CHANGES ONLY
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
7030 6th Street North
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Tele: 651.770.8448
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CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

SEQ AND NOTES

SHEET 02 OF 26 SHEETS

Plot Date: 08/20/2019
Drawing name: X:\Clients_Private\909\09909_Beaver_Dam_Lake_Assoc\0020_3rd_Ave_Jeffery_Blvd\09_GMS_ProjectName\dwg\9909-0020_ CD-Jeff-Blvd.dwg
Xrefs:, loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd

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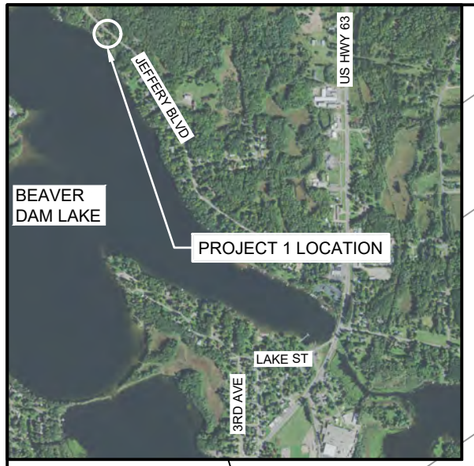
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

PROJECT OVERVIEW

SHEET 03 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_project\name\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-JeffBlvd2, 909-0020_X-Base-Jeff-Blvd



CONTRACTOR SHALL REMOVE AND REPLACE (AS NECESSARY)
CONCRETE APRON - 6 SY
CONCRETE SIDEWALK - 7 SY
CONCRETE CURB & GUTTER - 20 LF

EXISTING CATCH BASIN
RIM: 1255.79
INV (NE): 1248.49 18" RCP
INV (SW): 1248.49 18" RCP

EXISTING 12" CMP
INV: 1246.05

EXISTING 12" CMP
INV:1247.03

GRAVEL DRIVEWAY

SHED

REMOVE
EXISTING 12" CMP
26 LF

EXISTING CATCH BASIN
RIM: 1255.80
INV (NE): 1246.00 18" RCP
INV (SW): 1246.00 18" RCP

REMOVE
EXISTING FLARED END SECTION
INV (NE): 1245.73 18" RCP

2495 JEFFERY BLVD

JEFFERY BLVD

BEAVER DAM LAKE

HOUSE

EXISTING DITCH C/L

2485 JEFFERY BLVD

REMOVE
EXISTING FLARED END SECTION
INV (SW): 1238.75 21" RCP

CLEARING & GRUBBING LIMITS
0.40 ACRES

BOAT HOUSE

BOAT RAMP

30' STORM DRAIN EASEMENT

EXISTING FLARED END SECTION
INV (NE): 1231.04 21" RCP

EXISTING MANHOLE
RIM: 1239.50
INV (NE): 1235.00 21" RCP
INV (SW): 1235.00 21" RCP

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SCALE IN FEET
0 20 40 80

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STATE PROJECT NO. ---
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EXISTING CONDITIONS & REMOVALS 1

SHEET 04 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ C3-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2_ 909-0020_P-Base-JeffBlvd2_ 909-0020_X-Base-JeffBlvd

PUMP STATION

CONTRACTOR SHALL REMOVE AND REPLACE (AS NECESSARY)
CONCRETE APRON - 6 SY
CONCRETE SIDEWALK - 7 SY
CONCRETE CURB & GUTTER - 20 LF

EXISTING CATCH BASIN
RIM: 1263.74
INV (NW): 1261.54 18" RCP

EXISTING CATCH BASIN
RIM: 1254.93
INV (NW): 1252.23 18" RCP
INV (SE): 1252.23 18" RCP

EXISTING CATCH BASIN
RIM: 1263.80
INV (NE): 1258.70 18" RCP
INV (S): 1258.70 18" RCP

EXISTING CATCH BASIN
RECONSTRUCT CATCH BASIN
RIM: 1254.81
INV (NW): 1250.91 18" RCP
INV (SE): 1250.91 18" RCP

EXISTING MANHOLE
RIM: 1264.90
INV (NW): 1261.10 18" RCP
INV (SW): 1261.10 18" RCP

HOUSE

REMOVE
EXISTING PIPE FOR
STRUCTURE INSTALLATION
15" RCP - 10 LF REMOVED
18" RCP - 10 LF REMOVED
24" RCP - 10 LF REMOVED

REMOVE
BITUMINOUS DRIVEWAY
130 SY

REMOVE
EXISTING MANHOLE
RIM: 1256.54
INV (NE): 1252.00 15" RCP
INV (NW): 1250.05 18" RCP
INV (SW): 1249.60 24" RCP

1265 JEFFERY BLVD

EXISTING MANHOLE
RIM: 1251.80
INV (NE): 1247.40 24" RCP
INV (SW): 1232.30 15" RCP

30' STORM DRAIN EASEMENT

CONCRETE DRIVEWAY

HOUSE

EXISTING FLARED END SECTION
INV (NE): 1232.26 15" RCP

1261 JEFFERY BLVD

BEAVER DAM LAKE

JEFFERY BLVD

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET
0 20 40 80

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

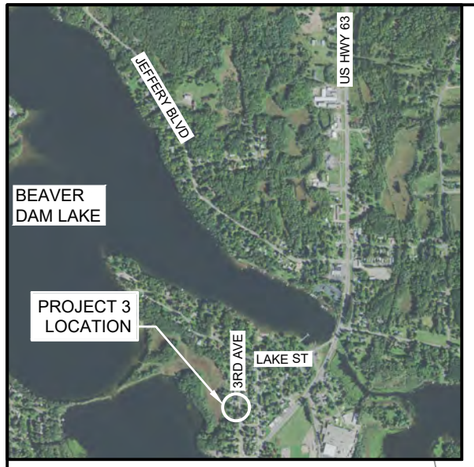
BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

EXISTING CONDITIONS & REMOVALS 2

SHEET 05 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing Name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd



1705 3RD AVE

FENCE

EXISTING CATCH BASIN
RIM: 1234.51
INV (E): 1231.01 12" RCP
INV (W): 1231.01 15" RCP

EXISTING CATCH BASIN
RIM: 1234.40
INV (W): 1231.50 12" RCP
INV (E): 1231.50 12" RCP

EXISTING FLARED END SECTION
INV (E): 1230.85 15" RCP

REMOVE
CONCRETE SIDEWALK
12 SY

CITY OF
CUMBERLAND

GARAGE

EXISTING CATCH BASIN
RIM: 1234.86
INV (W) 1233.56 12" RCP

REMOVE
CONCRETE CURB & GUTTER
20 LF

REMOVE
EXISTING PIPE FOR
STRUCTURE INSTALLATION
15" RCP - 20 LF REMOVED

CONCRETE DRIVEWAY
(CONTRACTOR NOT TO USE
DURING CONSTRUCTION)

HOUSE

1685 3RD AVE

BEAVER DAM LAKE

3RD AVE

N

Know what's below. Call before you dig.

DIGGERS HOTLINE™

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_plns_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:, loc-map_BarronWI-P2, 909-0020_P-Base-JeffBlvd2, 909-0020_X-Base-JeffBlvd

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET
0 10 20 40

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

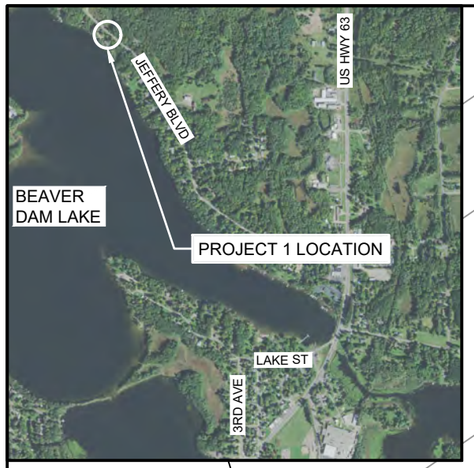
BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

EXISTING CONDITIONS & REMOVALS 3

SHEET 06 OF 26 SHEETS



01/20 TRACKING PAD

01/19 SILT FENCE 205 LF

01/26 SEDIMENT LOGS 10 LF

02/23 EROSION MAT CLASS 1, TYPE A 450 SY

01/22 INLET PROTECTION

TEMPORARY SEDIMENT LOG CHECKS SPACED EVERY 50' 200 LF TOTAL 01/26

CONSTRUCTION LIMITS

SILT FENCE 120 LF 01/19

INLET PROTECTION 01/22

01/21 TURBIDITY BARRIER 17 SY 50 LF

GRAVEL DRIVEWAY

SHED

HOUSE

BOAT HOUSE

BOAT RAMP

30' STORM DRAIN EASEMENT

12%

4%

2495 JEFFERY BLVD

2485 JEFFERY BLVD

BEAVER DAM LAKE

JEFFERY BLVD

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

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET

0 20 40 80

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

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PO BOX 232
CUMBERLAND, WI 54829

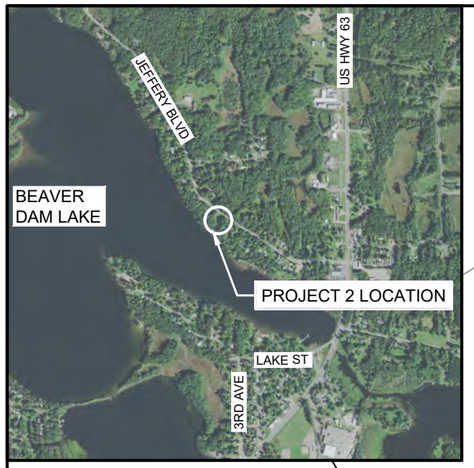
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

EROSION & SEDIMENT CONTROL PLAN 1

SHEET 07 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing Name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd



02/23 EROSION MAT CLASS 1, TYPE A 120 SY

01/19 SILT FENCE 190 LF

CONSTRUCTION LIMITS

INLET PROTECTION 01/22

SILT FENCE 105 LF 01/19

01/21 TURBIDITY BARRIER 17 SY (50 LF)

PUMP STATION

HOUSE

HOUSE

1265 JEFFERY BLVD

1261 JEFFERY BLVD

30' STORM DRAIN EASEMENT

CONCRETE DRIVEWAY

BEAVER DAM LAKE

JEFFERY BLVD

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET

0 20 40 80

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

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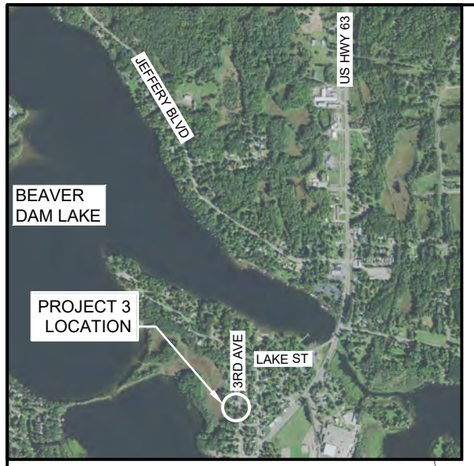
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

EROSION & SEDIMENT CONTROL PLAN 2

SHEET 08 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\909\09_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_plns_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd



1705 3RD AVE

FENCE

01/21 TURBIDITY BARRIER 17 SY (50 LF)

INLET PROTECTION 01/22

CONSTRUCTION LIMITS

CITY OF CUMBERLAND

GARAGE

HOUSE

01/19 SILT FENCE 80 LF

CONCRETE DRIVEWAY (CONTRACTOR NOT TO USE DURING CONSTRUCTION)

1685 3RD AVE

BEAVER DAM LAKE

3RD AVE

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET

0 10 20 40

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

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water ecology community
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BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

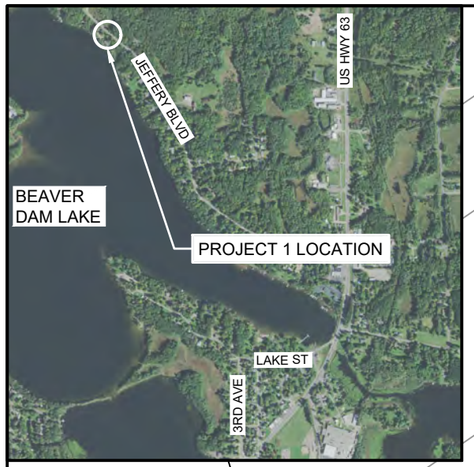
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

EROSION & SEDIMENT CONTROL PLAN 3

SHEET 09 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_grms_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: _loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0000_X-Base-Jeff-Blvd



35 LF 15" RCP CL V @ 4.37%

01 / 23 — FES 1 (15" RCP) INV: 1247.03 W/ 5 CY CLASS LIGHT RIPRAP AND GEOTEXTILE

190 LF 21" RCP CL IV @ 3.29%

CONNECT TO EXISTING STORM SEWER, INCIDENTAL — 03 / 26

GRAVEL DRIVEWAY

SHED

2495 JEFFERY BLVD

15 LF 18" RCP CL V @ 1.53%

JEFFERY BLVD

03 / 26 — CONNECT TO EXISTING STORM SEWER, INCIDENTAL

STMH 2
(CDS2025-5-C, 60" DIA.)
RIM: 1250.00
INV (NE): 1245.50 18" RCP
INV (NW): 1245.50 15" RCP
INV (SW): 1245.00 21" RCP
BOTTOM: 1238.32
— 01 / 16

HOUSE

BEAVER DAM LAKE

2485 JEFFERY BLVD

CONSTRUCTION LIMITS

BOAT HOUSE

BOAT RAMP

30' STORM DRAIN EASEMENT

STMH 3
(SDD 8B9, 48" DIA., W/ TYPE K FRAME AND NEENAH TYPE C - RADIAL GRATE)
RIM: 1242.25
INV (NE): 1238.75 21" RCP
INV (SW): 1238.65 21" RCP
— 01 / 25

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET
0 20 40 80

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

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3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

GRADING AND DRAINAGE PLAN 1

SHEET 10 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2_909-0020_P-Base-Jeff-Blvd2_909-0020_X-Base-Jeff-Blvd_

03/26 CONNECT TO EXISTING STORM SEWER, INCIDENTAL

01/17 STMH 4
(CDS3020-6-C, 72" DIA.)
RIM: 1256.00
INV (NE): 1252.00 15" RCP
INV (NW): 1250.05 18" RCP
INV (SW): 1249.60 24" RCP
BOTTOM: 1243.01

CONSTRUCTION LIMITS

STRUCTURE ADJUSTMENT RAISE
RIM TO ELEV: 1255.20

10 LF 15" RCP CL V
10 LF 18" RCP CL V
10 LF 24" RCP CL IV

1255.50

1255.75

PUMP STATION

HOUSE

HOUSE

1265 JEFFERY BLVD

1261 JEFFERY BLVD

30' STORM DRAIN EASEMENT

CONCRETE DRIVEWAY

BEAVER DAM LAKE

JEFFERY BLVD

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET
0 20 40 80

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

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BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
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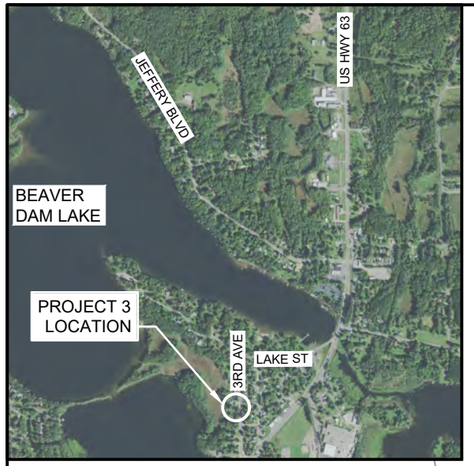
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

GRADING AND DRAINAGE PLAN 2

SHEET 11 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2_909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd



1705 3RD AVE

FENCE

CONNECT TO EXISTING STORM SEWER, INCIDENTAL

03
26

01
18

STMH 5
(CDS3030-6-C, 72" DIA.)
RIM: 1235.50
INV (E): 1230.98 15" RCP
INV (W): 1230.98 15" RCP
BOTTOM: 1222.62

20 LF 15" RCP CL V

CONSTRUCTION LIMITS

CITY OF CUMBERLAND

GARAGE

HOUSE

CONCRETE DRIVEWAY
(CONTRACTOR NOT TO USE DURING CONSTRUCTION)

1685 3RD AVE

BEAVER DAM LAKE

3RD AVE

1232 1233 1234 1235 1236

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET

0 10 20 40

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

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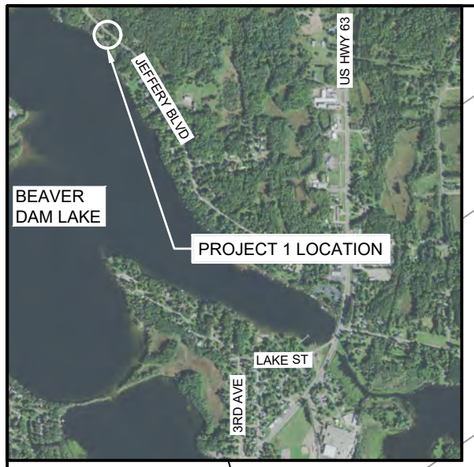
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

GRADING AND DRAINAGE PLAN 3

SHEET 12 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: _loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0000_X-Base-Jeff-Blvd



02
26

01
24

CONTRACTOR SHALL REMOVE AND
REPLACE (AS NECESSARY)
CONCRETE APRON - 6 SY
CONCRETE SIDEWALK - 60 SF
CONCRETE CURB & GUTTER - 20 LF

SEEDING & SOIL STABILIZER LIMITS
SEEDING MIXTURE #10
(1.5 LBS PER 1000 SQ-FT)
0.5 ACRES

REPAIR (AS NEEDED)
DRIVEWAY WITH 6"
SUBBASE
220 SY

GRAVEL DRIVEWAY

SHED

2495 JEFFERY BLVD

HOUSE

BOAT HOUSE

BOAT RAMP

12%

4%

2485 JEFFERY BLVD

CONSTRUCTION
LIMITS

30' STORM DRAIN EASEMENT

BEAVER DAM LAKE

JEFFERY BLVD

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET

0 20 40 80

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

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3RD AVE & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

RESTORATION PLAN 1

SHEET 13 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: _loc-map_BarronWi-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0000_X-Base-Jeff-Blvd

PUMP STATION

CONTRACTOR SHALL REMOVE AND REPLACE (AS NECESSARY)
CONCRETE APRON - 6 SY
CONCRETE SIDEWALK - 60 SF
CONCRETE CURB & GUTTER - 20 LF

02/26

01/24

SEEDING & SOIL STABILIZER LIMITS
SEEDING MIXTURE #10
(1.5 LBS PER 1000 SQ-FT)
0.2 ACRES

CONSTRUCTION LIMITS

HOUSE

REPLACE DRIVEWAY W/
6" SUBBASE (150 SY)
& 3" BITUMINOUS
COURSE (140 SY)

02/26

JEFFERY BLVD

BEAVER DAM LAKE

1265 JEFFERY BLVD

HOUSE

30' STORM DRAIN EASEMENT

CONCRETE DRIVEWAY

1261 JEFFERY BLVD

Know what's below. Call before you dig.

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3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET

0 20 40 80

SUBMISSION DATE: 08/07/2019

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EOR PROJECT NO. 909-0020

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water ecology community

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PO BOX 232
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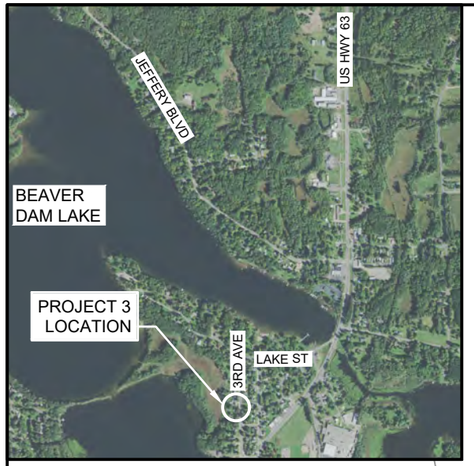
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

RESTORATION PLAN 2

SHEET 14 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2_909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd



1705 3RD AVE

FENCE

SEEDING & SOIL STABILIZER LIMITS
SEEDING MIXTURE #10
(1.5 LBS PER 1000 SQ-FT)
0.1 ACRES

REPLACE CONCRETE SIDEWALK
110 SF
02/26

REPLACE CONCRETE CURB & GUTTER
20 LF
01/24

CONSTRUCTION LIMITS

CITY OF CUMBERLAND

GARAGE

HOUSE

CONCRETE DRIVEWAY
(CONTRACTOR NOT TO USE DURING CONSTRUCTION)

1685 3RD AVE

BEAVER DAM LAKE

3RD AVE

1232 1233 1234 1235 1236

Know what's below. Call before you dig.

DIGGERS HOTLINE™

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SCALE IN FEET
0 10 20 40

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

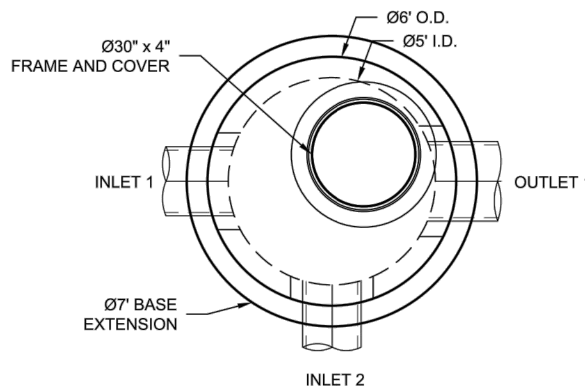
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

STATE PROJECT NO. ---- | CITY PROJECT NO. ---

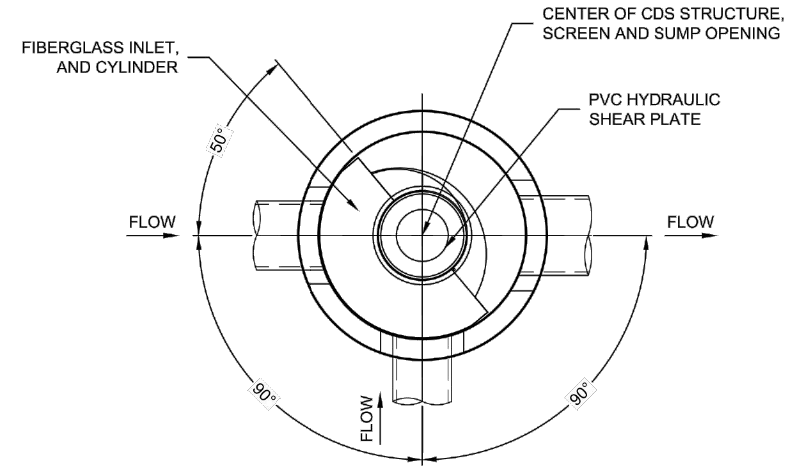
RESTORATION PLAN 3

SHEET 15 OF 26 SHEETS

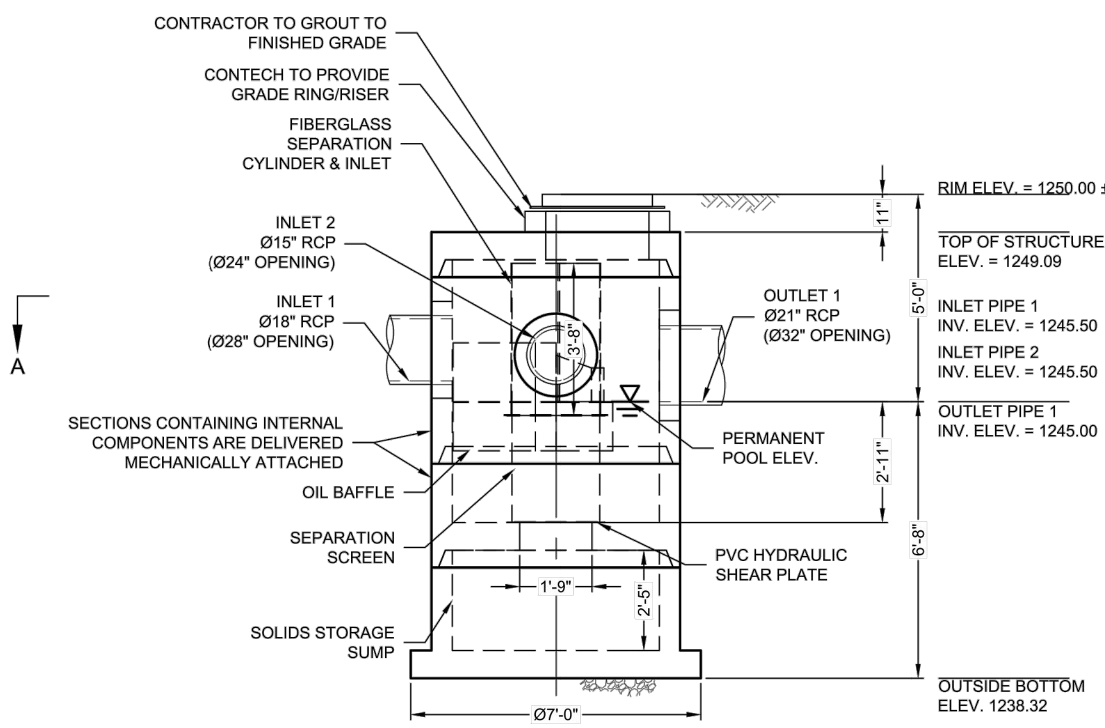
Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: _loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0000_X-Base-Jeff-Blvd



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	2400 micron, 2' O.D. x 2.58' SEP. SCREEN	CONTECH
1	3/16 INCH PVC HYDRAULIC SHEAR PLATE *	CONTECH
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	Ø30" x 4" FRAME & COVER, EJ#41600484, OR EQUIV.	CONTRACTOR

* SEE HYDRAULIC SHEAR PLATE DETAIL

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.58 CFS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 8500 LBS.
STRUCTURE IS DELIVERED IN 3 PIECES

MAX FOOTPRINT = Ø7'

CONTECH
PROPOSAL
DRAWING

WIES
LAYOUT 1A
2025-5-FGIS
5883 / 1041

MARK	DATE	REVISION DESCRIPTION	BY
1	8/6/19	PER EOR	GHH

CDS2025-5-C - 624280-10
3RD AVE. & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, WI
for SYSTEM: LOCATION 1
GOLDSMITH-BYRD

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

DATE: 07/11/19	SCALE: 1/4" = 1'-0"
DESIGNED: NRA	DRAWN: JPC
CHECKED: NRA	APPROVED: NRA
PROJECT No.: 624280	SEQUENCE No.: 10
SHEET: 1 OF 1	

\\AD.CONTECH-CPI.COM\ROOT\MERLIN\PROJECT\ACTIVE\624200\624280\624280-10-CDS\DRAWINGS\PRE-624280-10-CDS2025-5 CONFAB.DWG 8/6/2019 3:15 PM

01
16

CONTECH CDS - CDS2025 5' MANHOLE (PROJECT 1 LOCATION)

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd

SUBMISSION DATE: 08/07/2019
DESIGN BY DL — DRAWN BY DM
EOR PROJECT NO. 909-0020

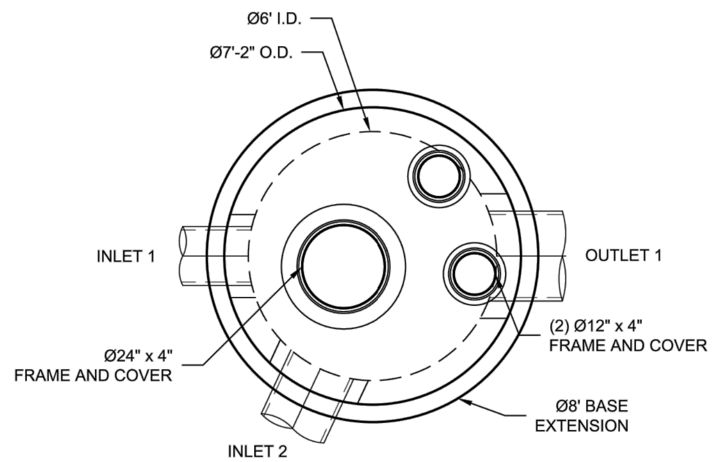
Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

BEAVER DAM LAKE
MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

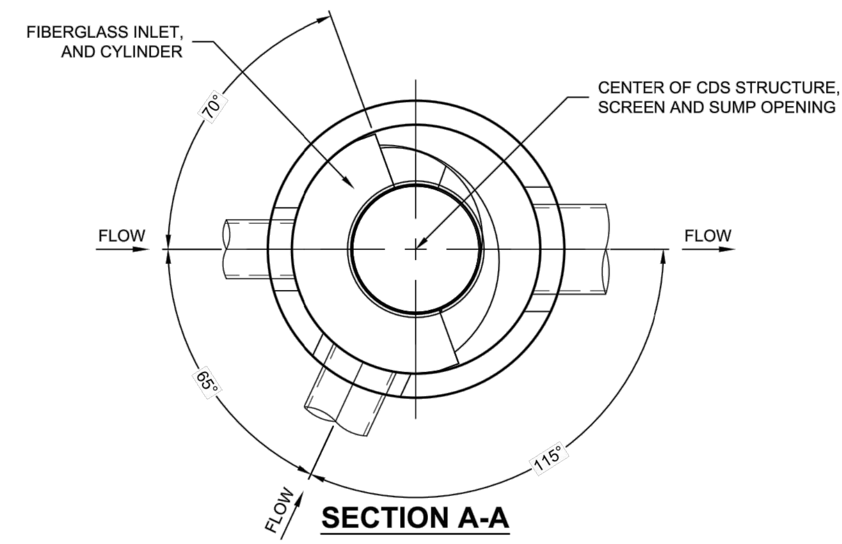
3RD AVE & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY,
WISCONSIN

STATE PROJECT NO. ---- CITY PROJECT NO. ---

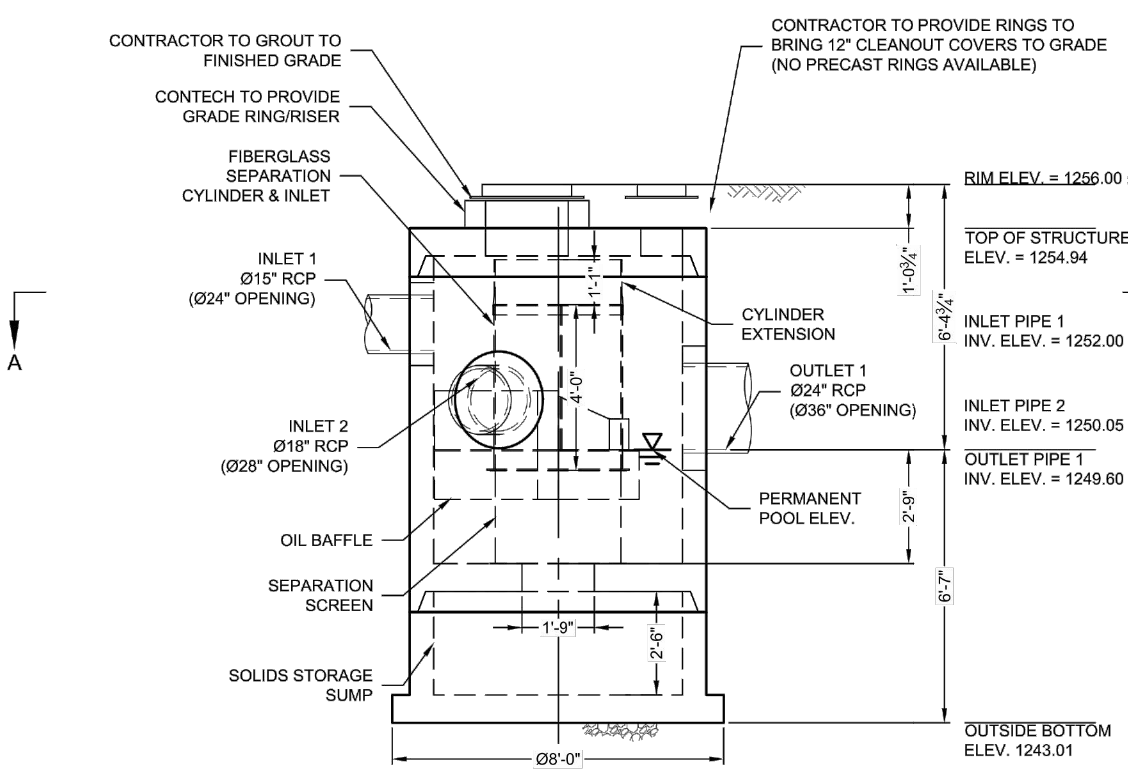
DETAILS SHEET 1



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	2400 micron, 3' O.D. x 2.25' SEP. SCREEN	CONTECH
1	CYLINDER EXTENSION	CONTRACTOR
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1 PLC	GRADE RINGS/RISERS	CONTRACTOR
1	Ø24" x 4" FRAME & COVER, EJ#41600389, OR EQUIV.	CONTRACTOR
2	Ø12" x 4" FRAME & COVER, EJ#41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	0.85 CFS

GENERAL NOTES

1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

STRUCTURE WEIGHT

APPROXIMATE HEAVIEST PICK = 17500 LBS.
STRUCTURE IS DELIVERED IN 3 PIECES

MAX FOOTPRINT = Ø8'

CONTECH **PROPOSAL** DRAWING

WIES
LAYOUT 1A
3020-6-FGIS
5883 / 1041

I:\MERLIN\PROJECT\ACTIVE\624200\624280\624280-20-CDS\DRAWINGS\PRE-624280-20-CDS3020-6 CONFAB.DWG 7/22/2019 12:21 PM

MARK	DATE	REVISION DESCRIPTION	BY

CDS3020-6-C - 624280-20
3RD AVE. & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, WI
for SYSTEM: LOCATION 2
CIFALDI-LUNDQUIST

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

DATE: 07/11/19	SCALE: 1/4" = 1'-0"
DESIGNED: NRA	DRAWN: JPC
CHECKED: NRA	APPROVED: NRA
PROJECT No.: 624280	SEQUENCE No.: 20
SHEET: 1 OF 1	

01 / 17 CONTECH CDS - CDS3020 6' MANHOLE (PROJECT 2 LOCATION)

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL
DRAWN BY DM
EOR PROJECT NO. 909-0020

EOR water ecology community
Emmons & Olivier Resources, Inc.
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

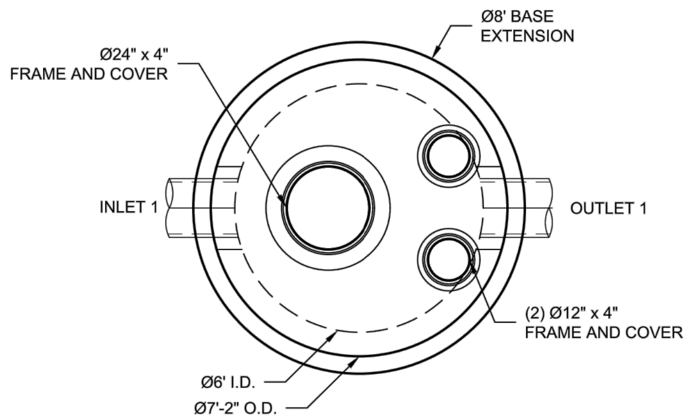
BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS CUMBERLAND, BARRON COUNTY, WISCONSIN

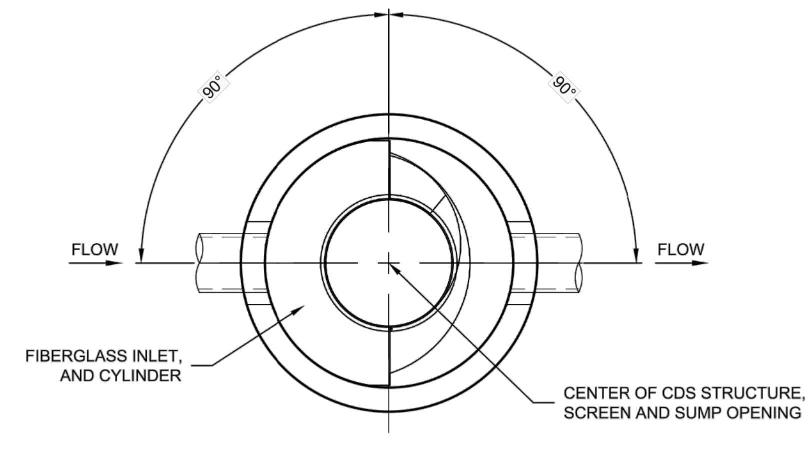
STATE PROJECT NO. ---- CITY PROJECT NO. ---

DETAILS SHEET 2

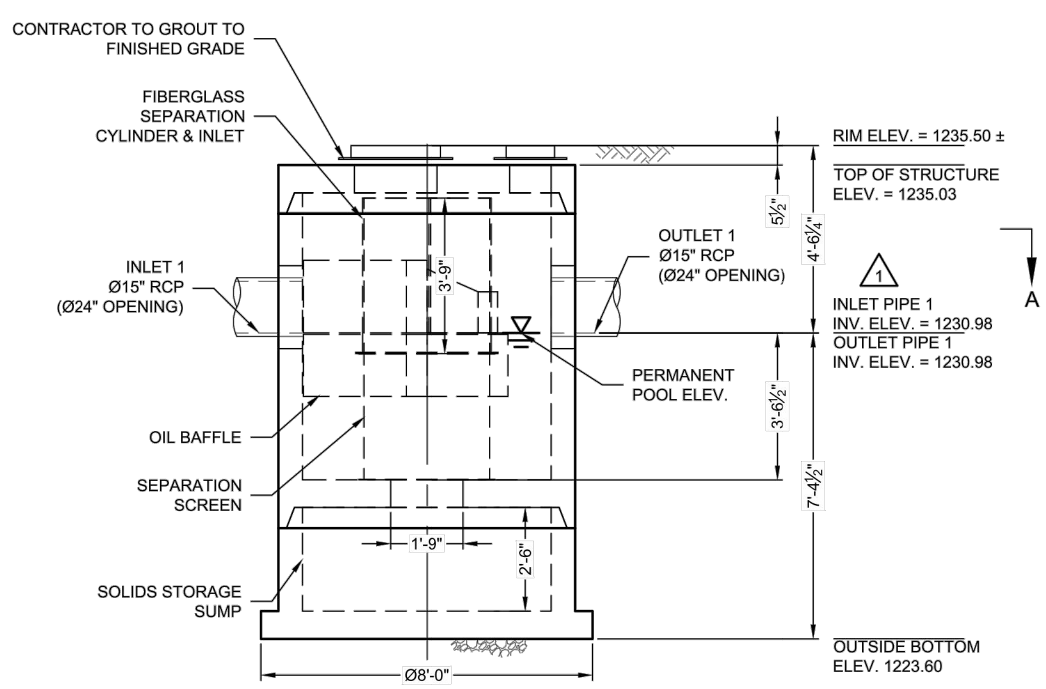
Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd



PLAN VIEW



SECTION A-A



ELEVATION VIEW

MATERIAL LIST (PROVIDED BY CONTECH)

COUNT	DESCRIPTION	INSTALLED BY
1	FIBERGLASS INLET AND CYLINDER	CONTECH
1	2400 micron, 3' O.D. x 3.04' SEP. SCREEN	CONTECH
1	SEALANT FOR JOINTS (BY PRECASTER)	CONTRACTOR
1	Ø24" x 4" FRAME & COVER, EJ#41600389, OR EQUIV.	CONTRACTOR
2	Ø12" x 4" FRAME & COVER, EJ#41610201, OR EQUIV.	CONTRACTOR

SITE DESIGN DATA

WATER QUALITY FLOW RATE	1.56 CFS

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
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6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
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STRUCTURE WEIGHT
APPROXIMATE HEAVIEST PICK = 17000 LBS.
STRUCTURE IS DELIVERED IN 3 PIECES

MAX FOOTPRINT = Ø8'

CONTECH
PROPOSAL
DRAWING

WIES
LAYOUT 1A
3030-6-FGIS
5883 / 1041

MARK	DATE	REVISION DESCRIPTION	BY
1	8/6/19	PER EOR	GHH

CDS3030-6-C - 624280-30
3RD AVE. & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, WI
for SYSTEM: LOCATION 3 - 3RD AVE

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

DATE: 07/11/19	SCALE: 1/4" = 1'-0"
DESIGNED: NRA	DRAWN: JPC
CHECKED: NRA	APPROVED: NRA
PROJECT No.: 624280	SEQUENCE No.: 30
SHEET: 1 OF 1	

I:\MERLIN\PROJECT\ACTIVE\624200\624280\624280-30-CDS\DRAWINGS\PRE-624280-30-CDS3030-6 CONFAB.DWG 8/6/2019 3:52 PM

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18
CONTECH CDS - CDS3030 6' MANHOLE (PROJECT 3 LOCATION)

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL
DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

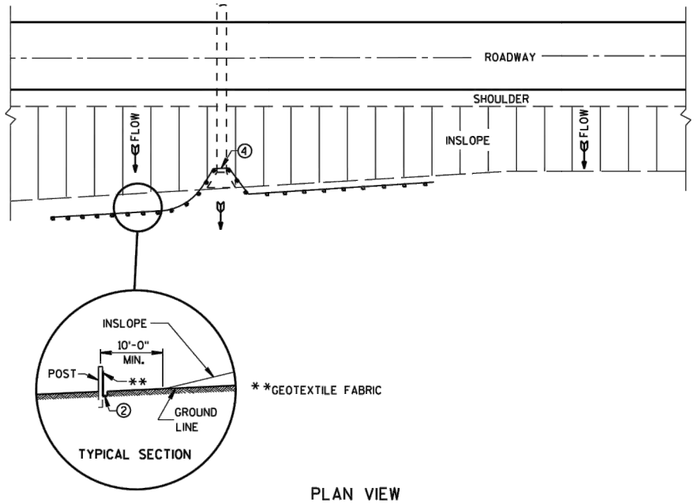
BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ----
CITY PROJECT NO. ---

DETAILS SHEET 3

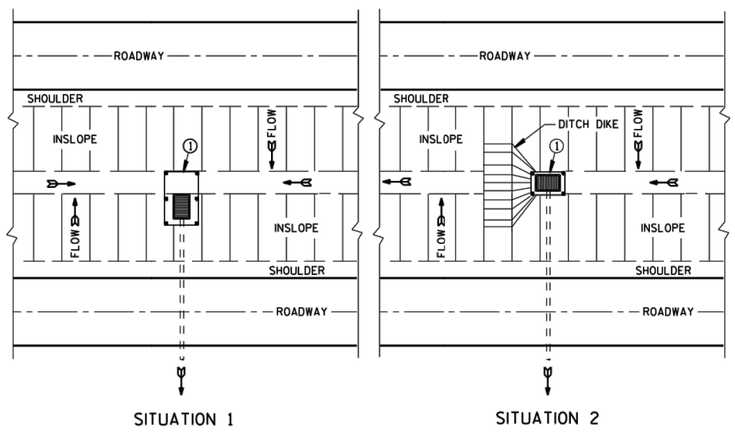
Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd

SDD 8e9 Silt Fence



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

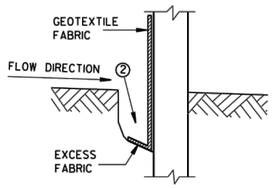
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

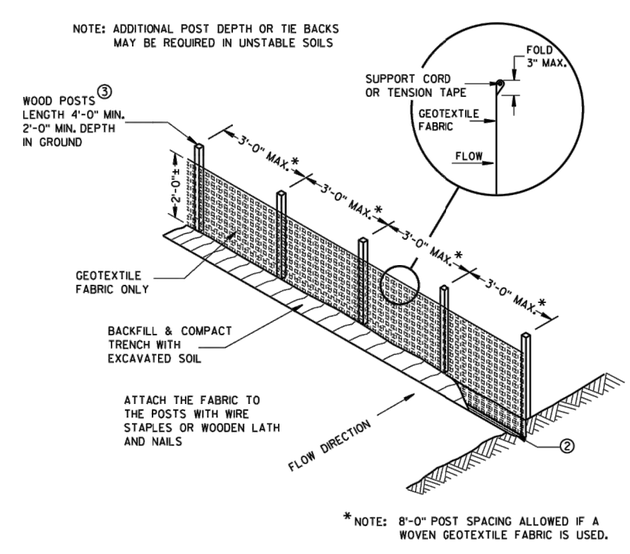
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

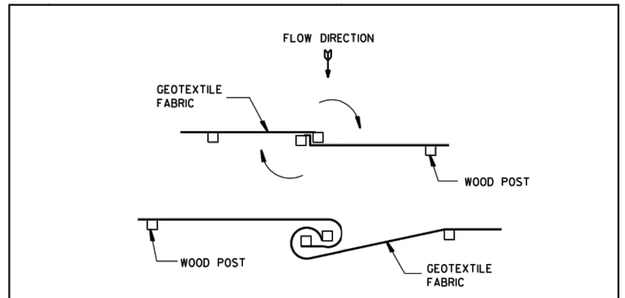
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



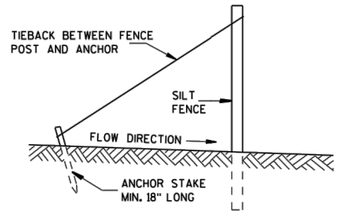
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-29-05 DATE
/S/ Beth Connestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

6

01
19

SILT FENCE

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
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BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 4

SHEET 19 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing Name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2_909-0020_P-Base-Jeff-Blvd2_909-0020_X-Base-Jeff-Blvd

SDD 8e14 Tracking Pad

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

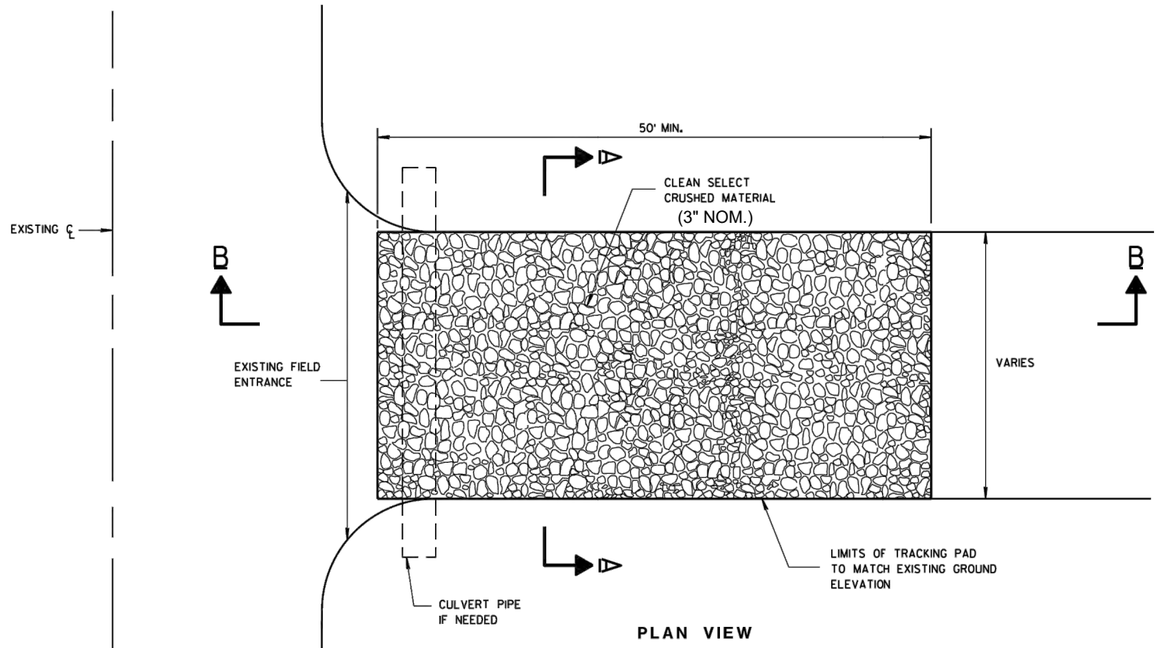
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

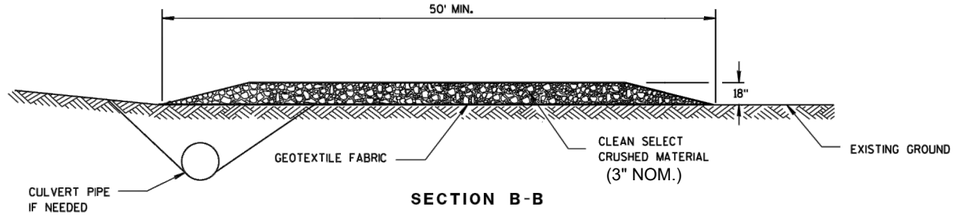
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

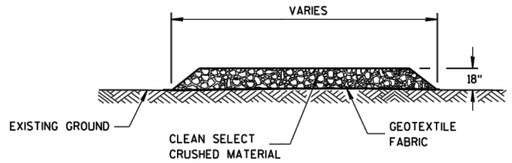
THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



PLAN VIEW



SECTION B-B



SECTION A-A

TRACKING PAD

S.D.D. 8 E 14-1

TRACKING PAD
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 3-24-2011 (DATE) — /S/ Jerry H. Zogg (ROADWAY STANDARDS DEVELOPMENT ENGINEER) FHWA

S.D.D. 8 E 14-1

01
20

TRACKING PAD

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
www.eorinc.com

BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

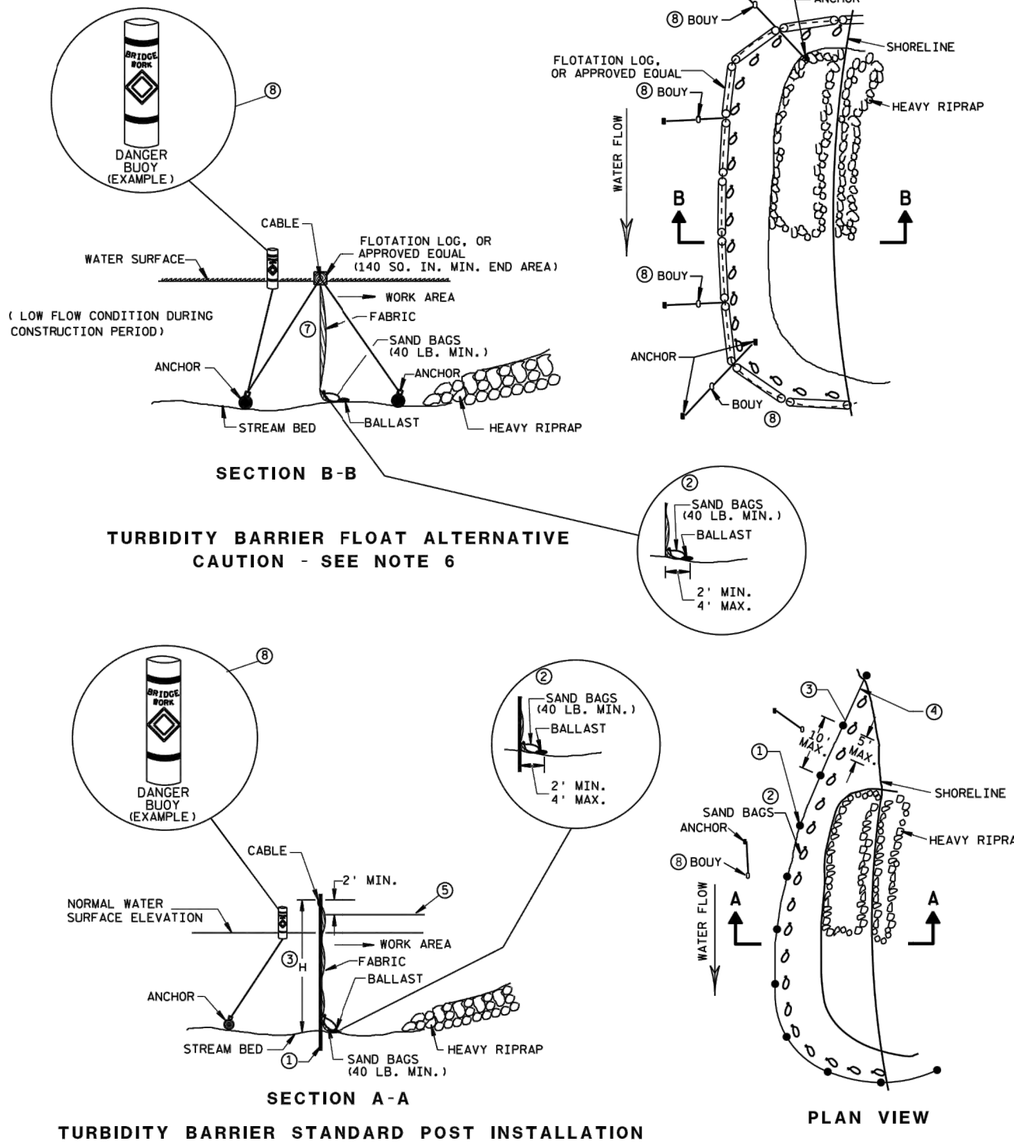
3RD AVE & JEFFERY BLVD
STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 5

SHEET 20 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2, 909-0020_P-Base-JeffBlvd2, 909-0020_X-Base-Jeff-Blvd

SDD 8e11 Turbidity Barrier



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

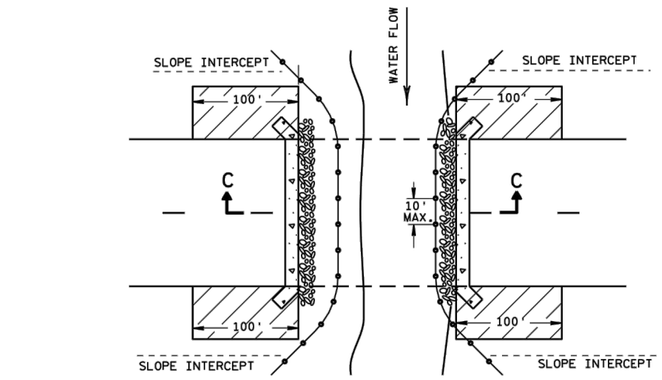
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-04-02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2

01
21
TURBIDITY BARRIER

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL DRAWN BY DM
EOR PROJECT NO. 909-0020

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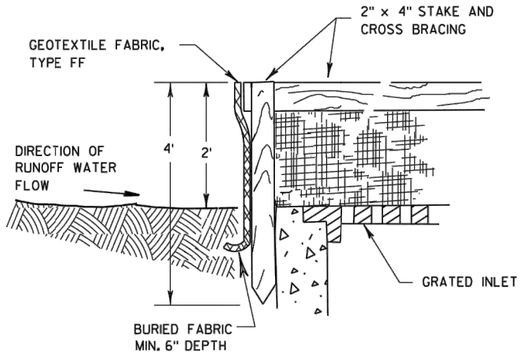
CUMBERLAND, WI 54829

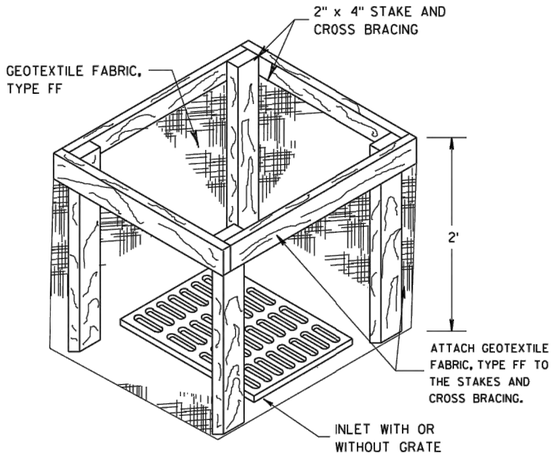
3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ----
CITY PROJECT NO. ---

DETAILS SHEET 6
SHEET 21 OF 26 SHEETS

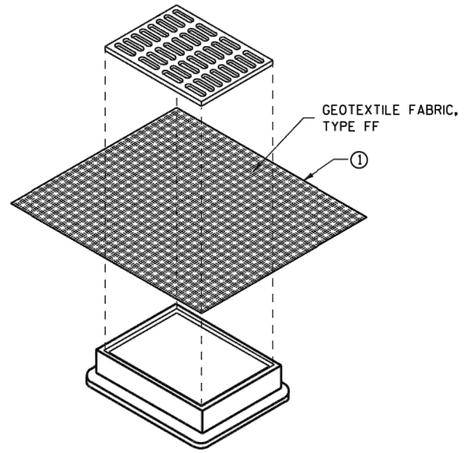
Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2_909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd

SDD 8e10 Inlet Protection Type A, B, C and D



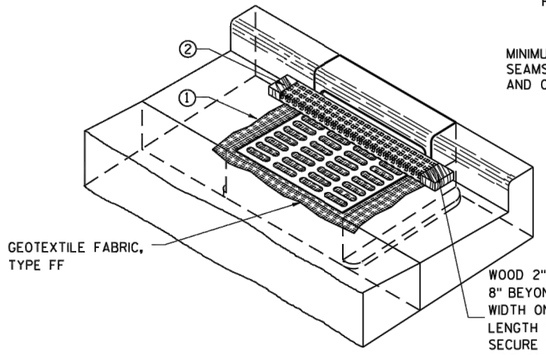


INLET PROTECTION, TYPE A

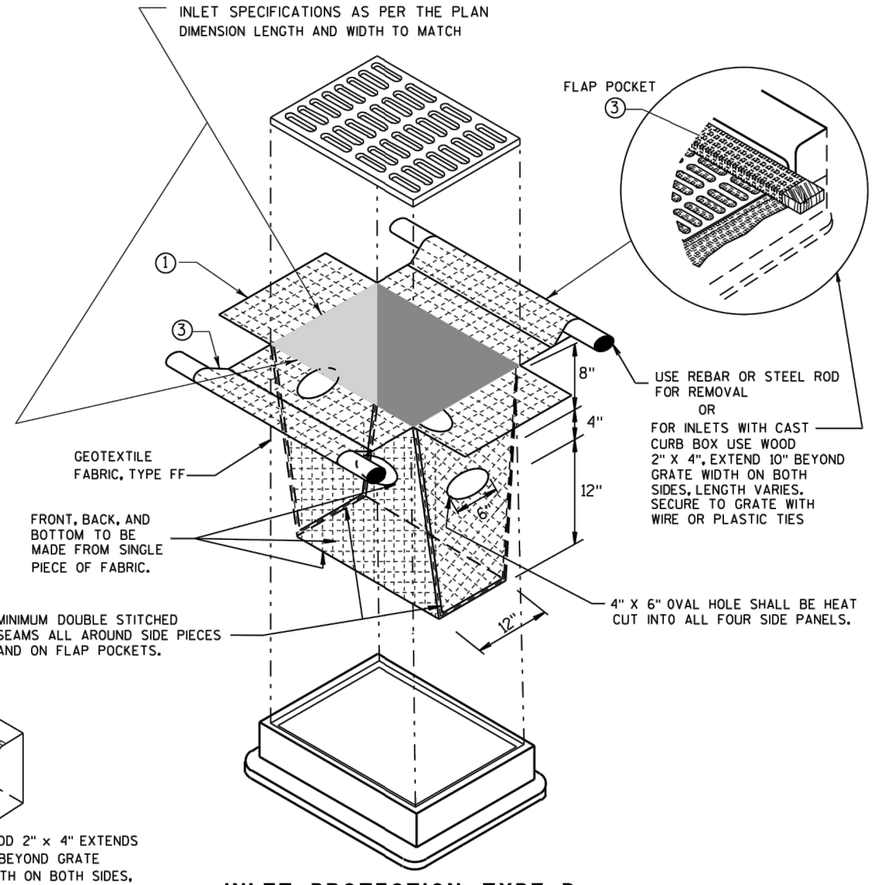


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-02 (DATE)
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

S.D.D. 8 E 10-2

S.D.D. 8 E 10-2

01
22

INLET PROTECTION

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

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Oakdale, MN 55128
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CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 7

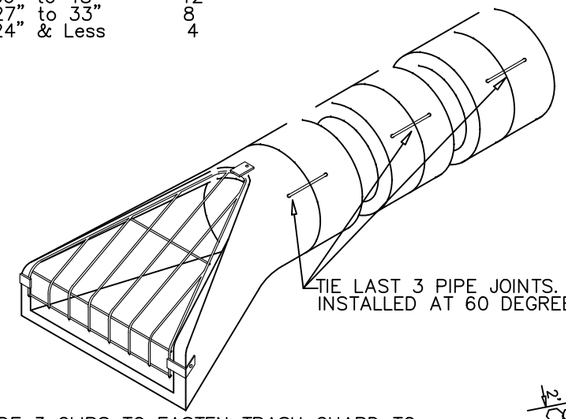
SHEET 22 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: loc-map_BarronWI-F2, 909-0020_P-Base-JeffBlvd2, 909-0020_X-Base-JeffBlvd

SEE DWGS FOR QTY
OR
RIPRAP REQUIRED

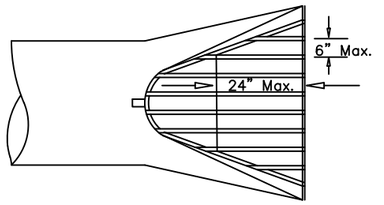
SIZE OF PIPE	CU.YD.
54" & Over	16
36" to 48"	12
27" to 33"	8
24" & Less	4

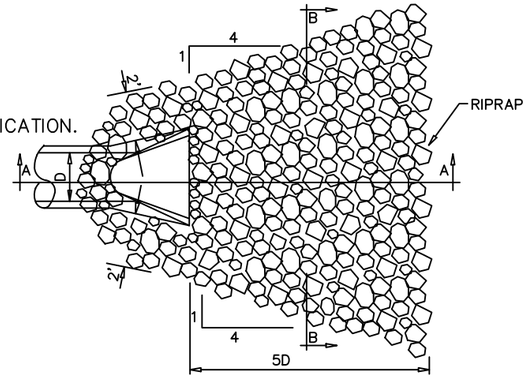
THESE QUANTITIES AND CLASS OF RIP-RAP SHOULD VARY ON VELOCITY.



TIE LAST 3 PIPE JOINTS. USE 2 TIE BOLT FASTENERS PER JOINT INSTALLED AT 60 DEGREES FROM TOP OR BOTTOM OF PIPE

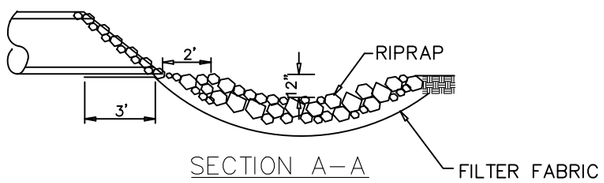
PROVIDE 3 CLIPS TO FASTEN TRASH GUARD TO FLARED END. HOT DIP GALVANIZE AFTER FABRICATION.



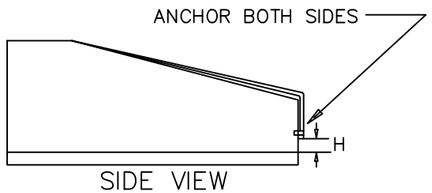


PLAN

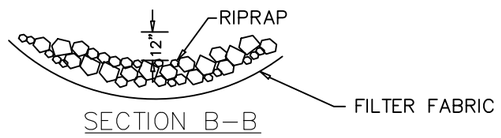
SIZE OF BARS	"H"	BOLTS	
15-18"	3/4"	4"	5/8"
21" to 42"	1"	6"	3/4"
48" to 72"	1 1/4"	12"	1"



SECTION A-A



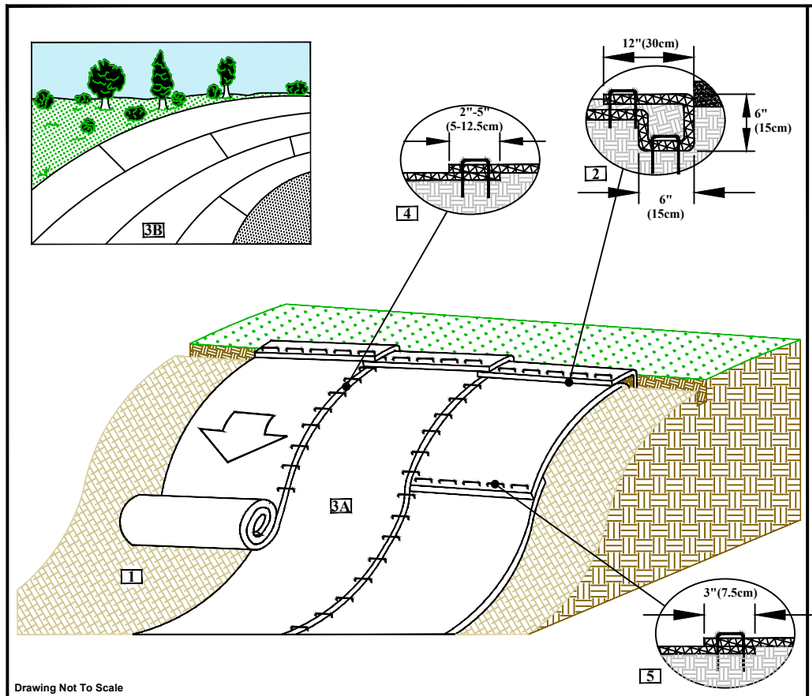
SIDE VIEW



SECTION B-B

01
23

FLARED END SECTION & RIPRAP DETAIL



Drawing Not To Scale

SLOPE INSTALLATION DETAIL

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed.
2. Begin at the top of the slope by anchoring the RECPs in a 6"(15cm) deep X 6"(15cm) wide trench with approximately 12" (30cm) of RECPs extended beyond the up-slope portion of the trench. Anchor the RECPs 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 the compacted soil and fold the remaining 12"(30cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes spaced approximately 12"(30cm) apart across the width of the RECPs.
3. Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
4. The edges of parallel RECPs must be stapled with approximately 2" - 5" (5-12.5cm) overlap depending on the RECPs type.
5. Consecutive RECPs spliced down the slope must be end over end (Shingle style) with an approximate 3"(7.5cm) overlap. Staple through overlapped area, approximately 12"(30cm) apart across entire RECPs width.

*NOTE:
In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

Tensar. NORTH AMERICAN GREEN®
5401 St. Wendel - Cynthiana Rd.
Poseyville, IN 47633
PH: 800-722-2040
www.nagreen.com

Disclaimer:
The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.

Drawn on: 3-16-11

02
23

EROSION CONTROL MAT DETAIL

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
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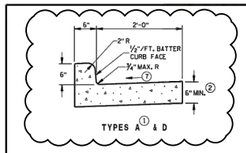
CUMBERLAND, BARRON COUNTY, WISCONSIN

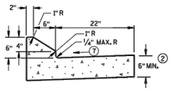
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 8

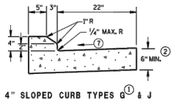
SHEET 23 OF 26 SHEETS

SDD 8d1-a Concrete Curb, Concrete Curb & Gutter



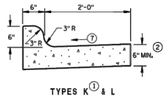


6" SLOPED CURB TYPES G 1 & J



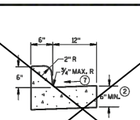
4" SLOPED CURB TYPES G 1 & J

TYPES K 1 & L
(OPTIONAL CURB SHAPE)



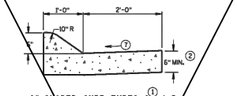
TYPES K 1 & L

CONCRETE CURB & GUTTER 30"



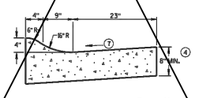
TYPES A 1 & D

CONCRETE CURB & GUTTER 18"



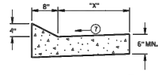
6" SLOPED CURB TYPES A 1 & D

4" SLOPED CURB TYPES A 1 & D



4" SLOPED CURB TYPES R 1 & T 5

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT 1

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

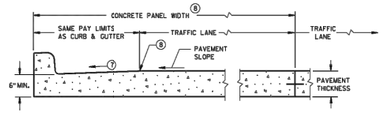
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

1. TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
3. USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
4. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
5. THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
6. WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
7. USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
8. INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

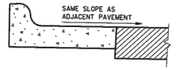


PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

* BIKE LANE IS NOT SHOWN.



REVERSE SLOPE GUTTER 6
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 8 D 1-20a

SDD 8d1-b Concrete Curb Ties and Curb & Gutter Applications

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

1. TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
2. THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
9. REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

DETAIL OF CURB AND GUTTER AT INLETS
(TYPE H INLET COVER SHOWN)

TYPES A 1 & D

TYPES G 1 & J

CONCRETE CURB

END SECTION CURB & GUTTER

SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

TYPICAL TIE BAR LOCATION 1

DRIVEWAY ENTRANCE CURB 9
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

S.D.D. 8 D 1-20b

01
24

CONCRETE CURB & GUTTER

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019

DESIGN BY DL | DRAWN BY DM

EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
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BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN

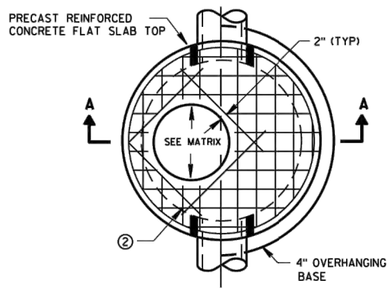
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 9

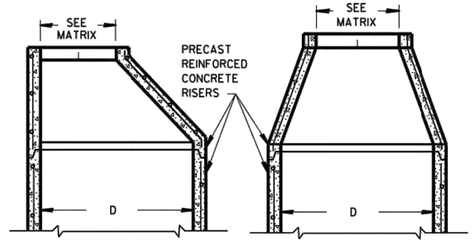
SHEET 24 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_plrms_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: toc-map, BarronWI-F2, 909-0020_P-Base-JeffBlvd2, 909-0020_X-Base-JeffBlvd

SDD 8b9 Manholes 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, and 8-FT Diameter

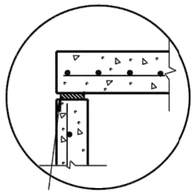


PLAN VIEW CIRCULAR OPENING



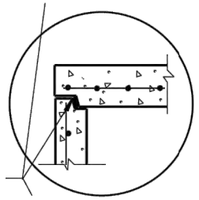
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

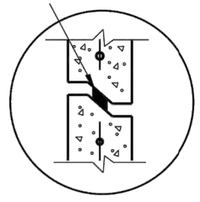


TOP WITH PLAIN END JOINT

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

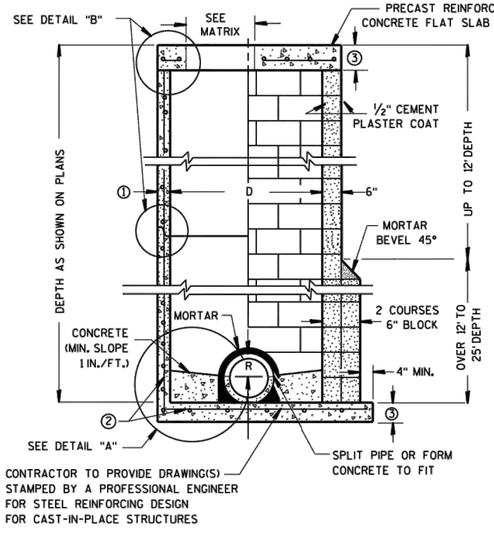


TOP WITH TONGUE AND GROOVE JOINT



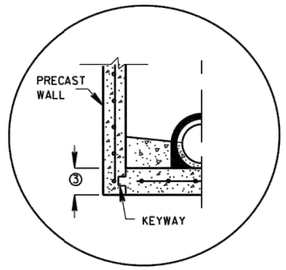
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

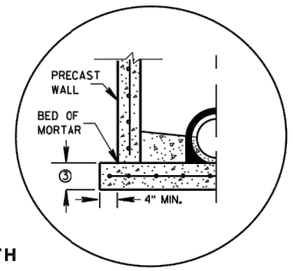


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

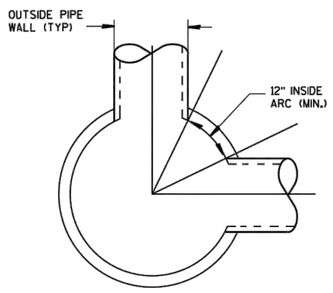


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST ~~6 INCHES IN DEPTH,~~ WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

12" INCHES IN DEPTH + GEOGRID OR GEOTEXTILE

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

S.D.D. 8 B 9-2

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

01 / 25 MANHOLE DETAIL

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019
DESIGN BY DL | DRAWN BY DM
EOR PROJECT NO. 909-0020

Emmons & Olivier Resources, Inc.
water ecology community
7030 6th Street North
Oakdale, MN 55128
Tele: 651.770.8448
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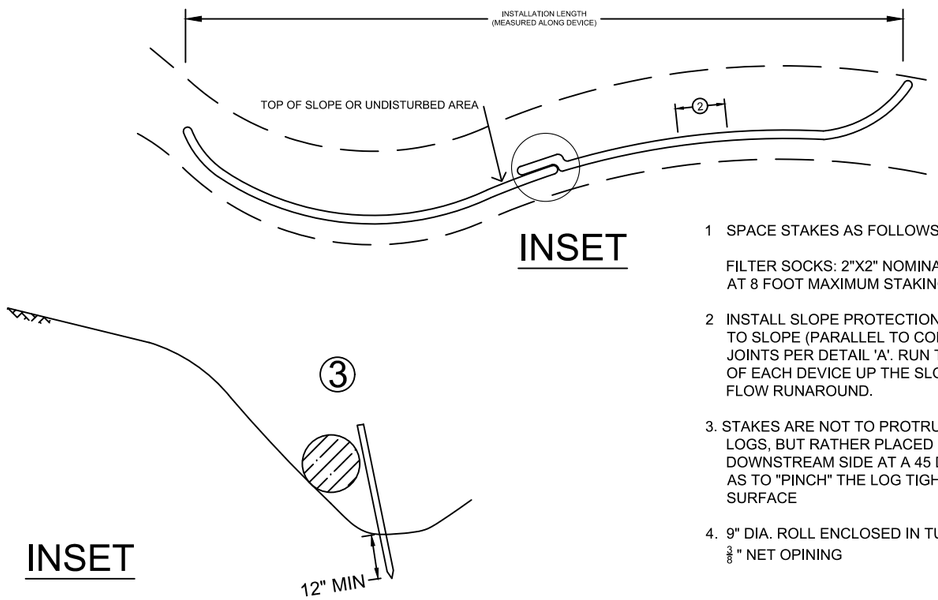
BEAVER DAM LAKE MANAGEMENT DISTRICT
PO BOX 232
CUMBERLAND, WI 54829

3RD AVE & JEFFERY BLVD STORMWATER IMPROVEMENTS
CUMBERLAND, BARRON COUNTY, WISCONSIN
STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 10

SHEET 25 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_plms_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs: _loc-map_BarronWi-Fr2_909-0020_P-Base-Jeff-Blvd2, 909-0000_X-Base-Jeff-Blvd



1 SPACE STAKES AS FOLLOWS:

FILTER SOCKS: 2"X2" NOMINAL WOOD STAKES AT 8 FOOT MAXIMUM STAKING.

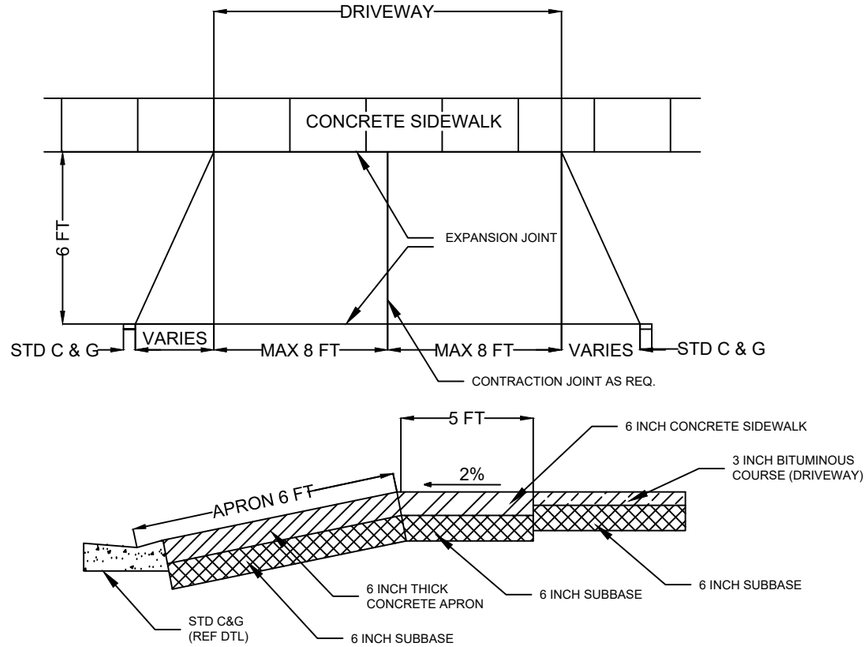
2 INSTALL SLOPE PROTECTION PERPENDICULAR TO SLOPE (PARALLEL TO CONTOURS). OVERLAP JOINTS PER DETAIL 'A'. RUN THE LAST 10 FEET OF EACH DEVICE UP THE SLOPE TO PREVENT FLOW RUNAROUND.

3. STAKES ARE NOT TO PROTRUDE THROUGH LOGS, BUT RATHER PLACED ON THE DOWNSTREAM SIDE AT A 45 DEGREE ANGLE SO AS TO "PINCH" THE LOG TIGHT TO THE GROUND SURFACE

4. 9" DIA. ROLL ENCLOSED IN TUBE W/ MAXIMUM OF $0.50 in^2$ " NET OPINING

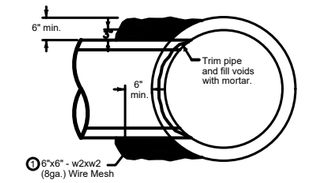
01
26

SEDIMENT LOGS

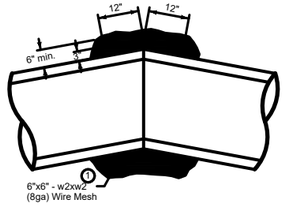


02
26

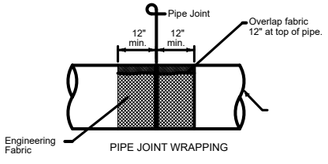
CONCRETE APRON, SIDEWALK & DRIVEWAY



TYPE PC-1 CONCRETE COLLAR CONNECTION

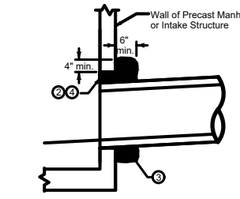


TYPE PC-2 CONCRETE COLLAR CONNECTION

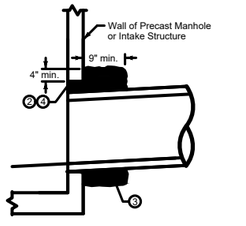


PIPE JOINT WRAPPING

PIPE TO PIPE CONNECTION



CONCRETE COLLAR FOR PIPES 12" AND SMALLER



CONCRETE COLLAR FOR PIPES GREATER THAN 12"

PIPE TO STRUCTURE CONNECTION

1 Lap ends of wire mesh a minimum of 6 inches.

2 Concrete collar is required when annular space between the outside of the pipe and the wall of the structure is 2 inches or greater.

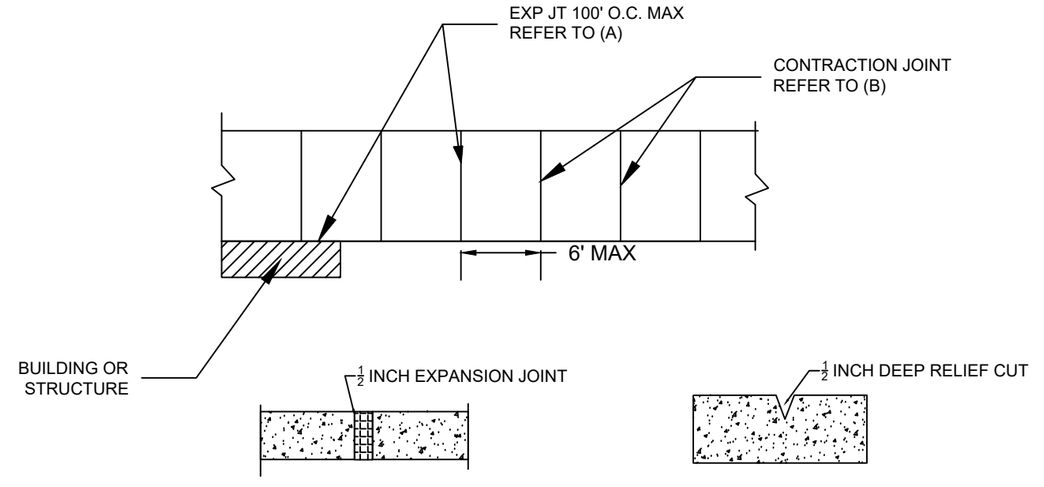
3 Provide two #4 hoop bars in concrete collar. Lap bars a minimum of 6 inches.

4 Trowel concrete flush with inside wall of structure.

NOTE
CONNECTIONS TO EXISTING PIPE AND STRUCTURES MUST INCLUDE BUT NOT LIMITED TO THE FOLLOWING BELL & SPIGOT, GASKET, TIES & GEOTEXTILE FABRIC, MORTAR & REBAR, FLEXSEAL OR SIMILAR WATER INTRUSION SEAL

03
26

CONNECTION TO EXISTING STORM SEWER



A - EXPANSION JOINT

B - CONTRACTION JOINT

04
26

JOINT FREQUENCY

NO	DATE	BY	REVISION
6			
5			
4	08/07/2019	DL	BID SET
3	07/23/2019	DM	95% DESIGN PLANS
2	07/03/2019	DM	90% DESIGN PLANS
1	06/26/2019	DM	60% DESIGN PLANS

SUBMISSION DATE: 08/07/2019

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STATE PROJECT NO. ---- | CITY PROJECT NO. ---

DETAILS SHEET 11

SHEET 26 OF 26 SHEETS

Plot Date: 08/07/2019
Drawing Name: X:\clients_private\00909_beaver_dam_lake_assoc\0020_3rd_ave_jeffery_blvd\09_gims_projectname\dwg\909-0020_ CD-Jeff-Blvd.dwg
Xrefs:_loc-map_BarronWI-F2, 909-0020_P-Base-Jeff-Blvd2, 909-0020_X-Base-Jeff-Blvd