

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 40



DESIGN DESIGNATION

A.A.D.T.	=	N/A
A.A.D.T.	=	N/A
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A
ESALS	=	N/A

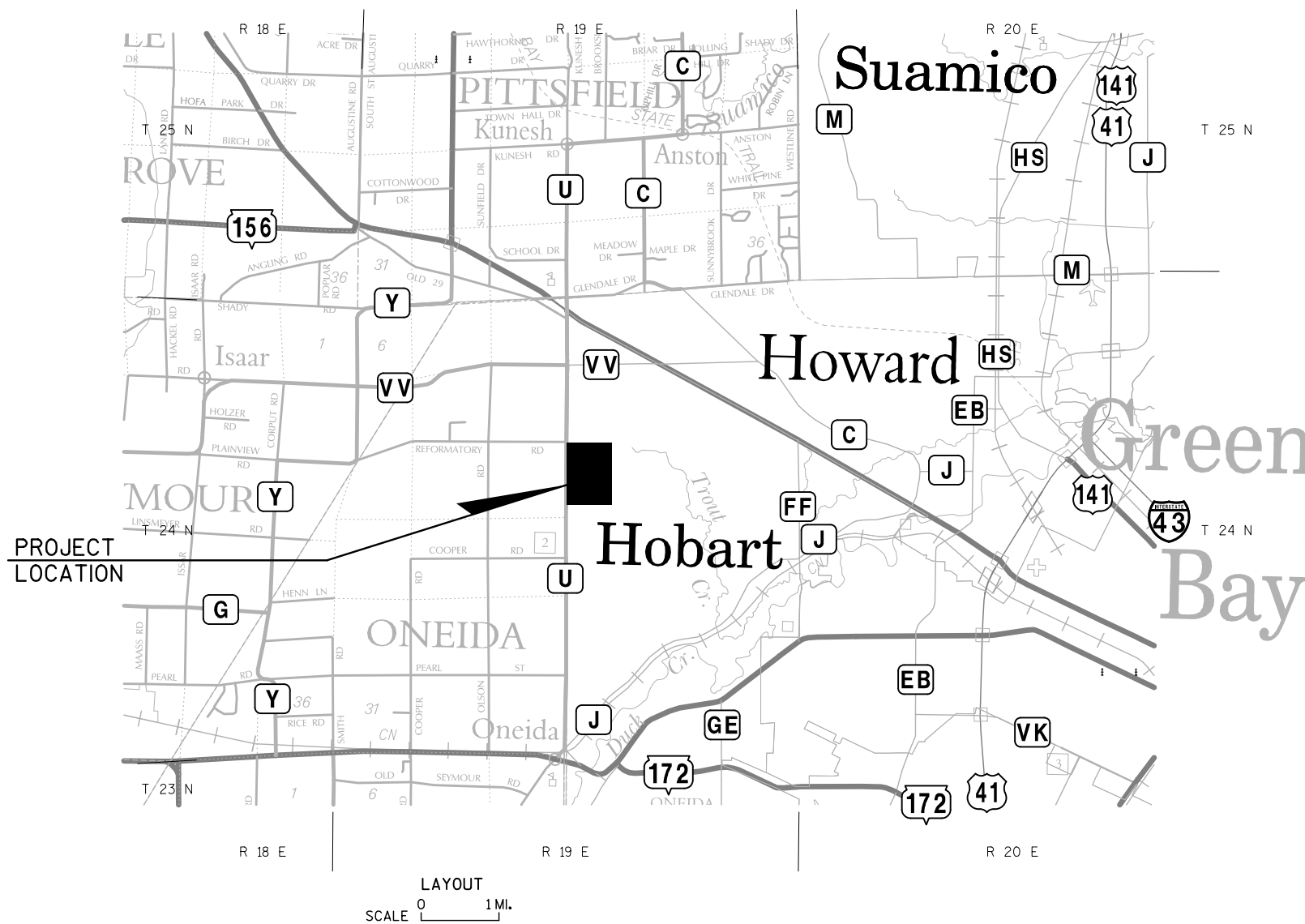
CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
ONEIDA MITIGATION BANK SITE
NORTHEAST REGION
NON HIGHWAY
BROWN COUNTY

STATE PROJECT NUMBER
1009-32-33



TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY - NAD 1983 (1991). ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1009-32-33		

ORIGINAL PLANS PREPARED BY
AECOM 342 North Water Street
7th Floor
Milwaukee, WI 53202
(414) 831-4100



(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	WISDOT
Designer	URS CORPORATION
Project Manager	JEREMY ASHAUER
Regional Examiner	
Regional Supervisor	DANIEL SERGERSTROM
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 1-27-2015 (Signature)

E

GENERAL NOTES

THE CONTRACTOR SHALL CONTACT THE UTILITIES AND HOTLINE TO LOCATE AND FIELD VERIFY UTILITIES PRIOR TO START OF WORK. THE LOCATIONS OF EXISTING AND UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE.

THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE AREA THAT ARE NOT SHOWN. ANY LOCAL, MUNICIPAL, OR UTILITY THAT IS NOT A MEMBER OF DIGGERS HOTLINE SHALL CONTACTED SEPARATELY.

EXISTING SURFACE ELEVATIONS USED TO CALCULATE PROPOSED EARTHWORK QUANTITIES ARE BASED UPON SPECIFIC DTM FOR PROJECT. FIELD CHANGES TO THESE PROPOSED DTM'S WILL NOT BE REFLECTED IN THE EXISTING DTM FOR THIS CONTRACT.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTRUBED BY ANY OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS AT THE CONTRACTOR'S EXPENSE.

PLACE SALVAGED TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED AND PLACE EROSION MAT, IF REQUIRED BY THE ENGINEER OR SHOWN IN THE EROSION CONTROL PLANS, OVER ALL AREAS 5 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL.

EROSION BALES ARE TO ONLY BE USED FOR REINFORCEMENT OF PROPOSED SILT FENCE LOCATIONS ALONG WETLANDS. ANY OTHER USE OF EROSION BALES IS PROHIBITED.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY OR FLOODPLAIN OF ANY WATERWAY.

BROKEN CONCRETE CONTAINING STEEL SHALL NOT BE USED AS RIPRAP OR HEAVY RIPRAP.

THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.

REMOVAL OF EROSION CONTROL DEVICES IS INCIDENTAL TO THE COST OF THEIR RESPECTIVE BID ITEMS.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

THE FACTOR USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 1.20.

BENCHMARK LOCATIONS SHOWN ON PLAN ARE APPROXIMATE AND SHOULD BE VERIFIED.

EXCAVATION REQUIRED FOR THE FIXED WEIR STRUCTURE IS NOT INCLUDED IN THE COMPUTER EARTHWORK AND IS INCIDENTAL TO THE WEIR STRUCTURE.

TRACKING PAD LOCATIONS TO BE DETERMINED IN THE FIELD.

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- SCHEMATIC PLAN
- CONSTRUCTION DETAILS
- EXISTING CONDITIONS & CLEARING PLAN
- GRADING PLAN
- EROSION CONTROL PLAN
- SEEDING PLAN
- PLANTING PLAN
- MISCELLANEOUS QUANTITIES

CONTACTS

WIS. DEPT. OF TRANSPORTATION
NE REGION
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GREEN BAY, WI 54304-0080
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URS CORPORATION
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414-831-4101 FAX
BILL.SCHILLING@URS.COM

WISCONSIN DEPARTMENT
OF NATURAL RESOURCES
MR. MATT SCHAEVE
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US ARMY CORPS OF ENGINEERS
JOEY SHOEMAKER
OLD FORT SQUARE
211 N. BROADWAY STREET, SUITE 221
GREEN BAY, WI 54303

UTILITIES

NORTHEAST TELEPHONE COMPANY LLC
COMMUNICATION LINE
MR. DENNIS BAER
5475 GLENDALE AVENUE
GREEN BAY, WI 54313
920-865-3162
DENNIS.BAER@NSIGHT.COM

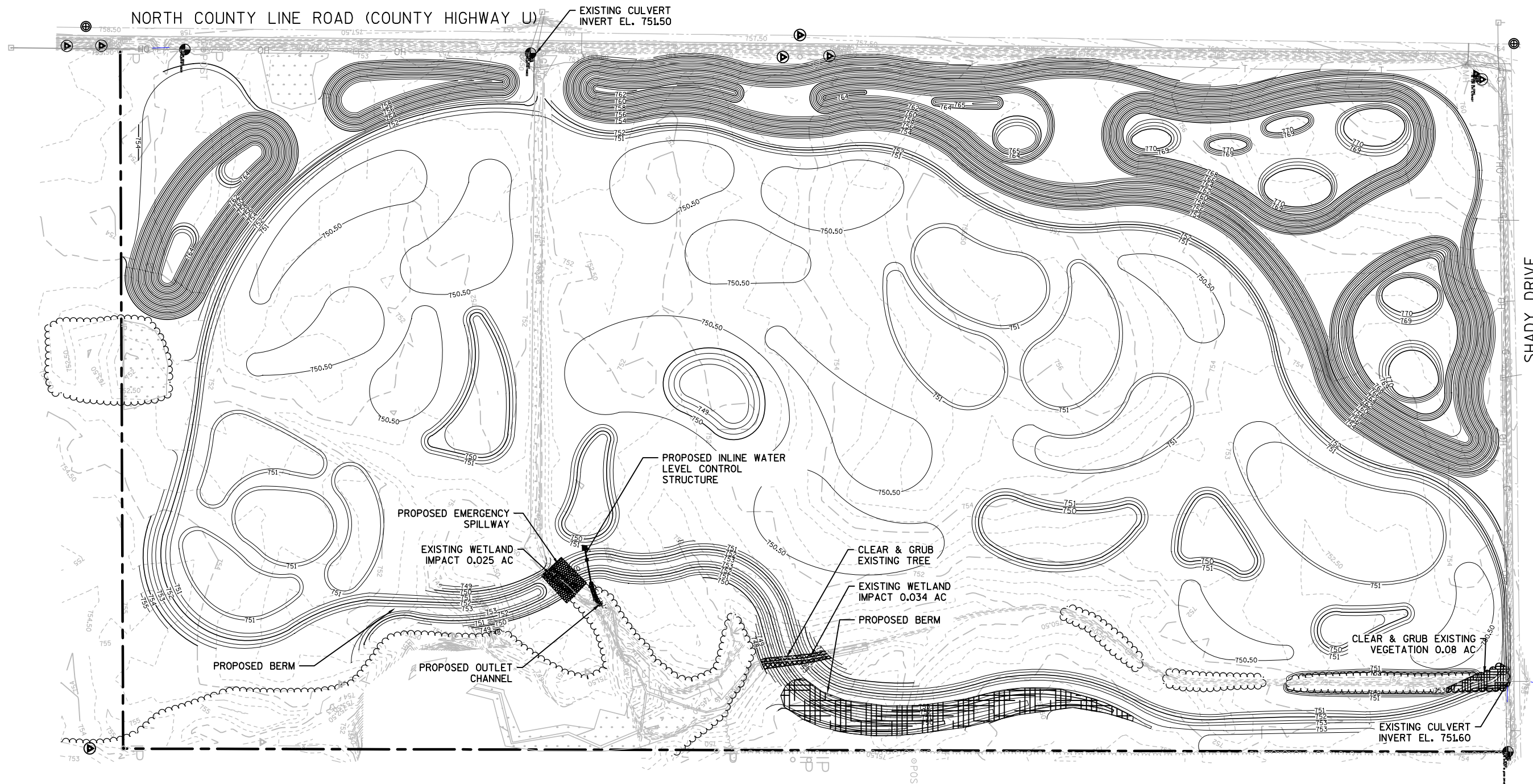
WISCONSIN PUBLIC SERVICE CORP.
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MR. RANDY STEIER
2850 S. ASHLAND AVE
PO BOX 19001
GREEN BAY, WI 54307-9001
920-617-5167
RDSTEIER@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORP.
GAS/PETROLEUM
MR. TERRY LUTTENEGGER
MR. PHIL MAUERMANN
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GREEN BAY, WI 54304
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TBLUTTENEGGER@WISCONSINPUBLICSERVICE.COM
920-617-5092 (PHIL)
PGMAUERMANN@WISCONSINPUBLICSERVICE.COM



Dial 811 or (800) 242-8511

www.DiggersHotline.com



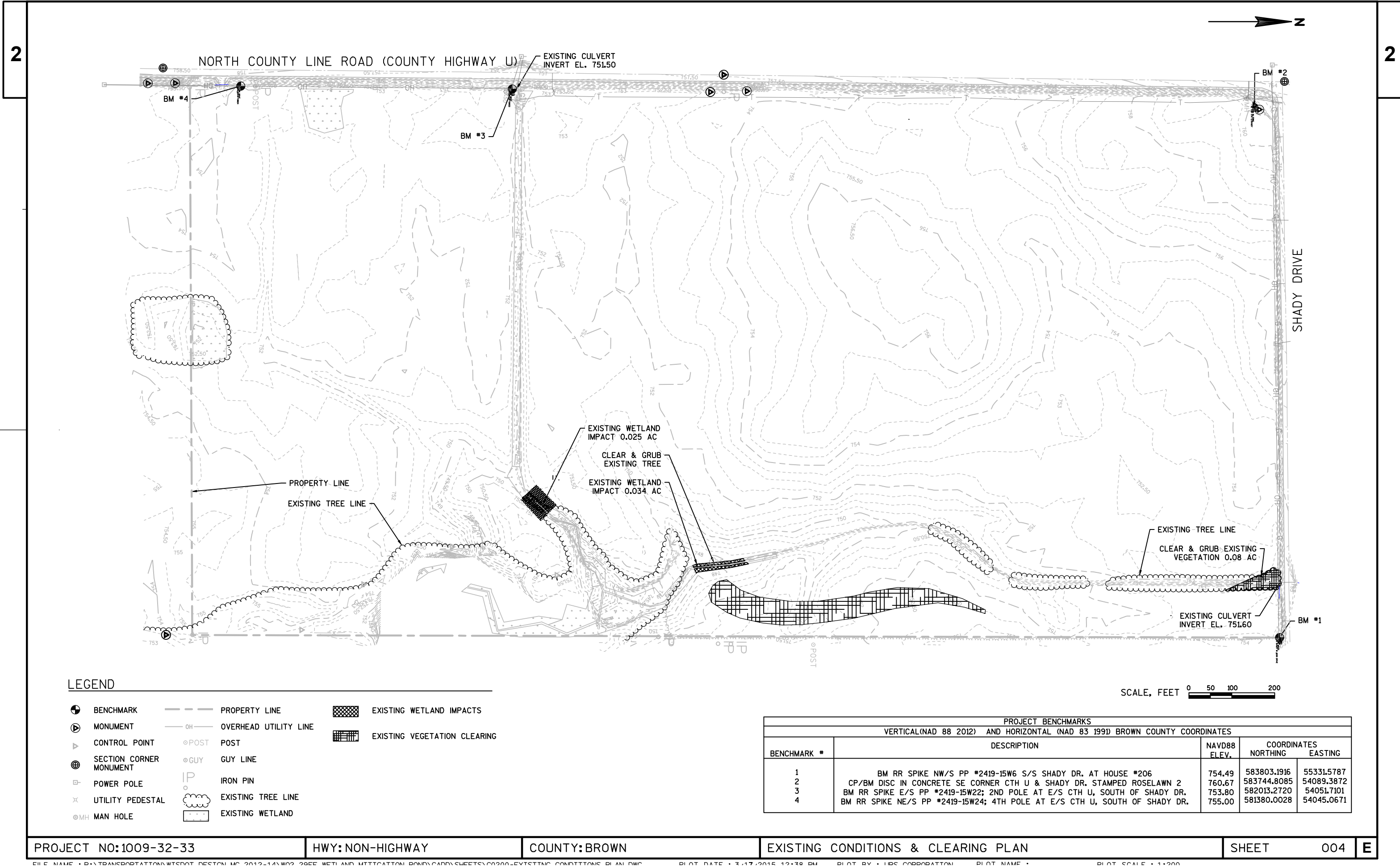
LEGEND

- | | | |
|-------------------------|-----------------------|---------------------------------------|
| BENCHMARK | PROPERTY LINE | EXISTING WETLAND IMPACTS |
| MONUMENT | OVERHEAD UTILITY LINE | EXISTING VEGETATION CLEARING |
| CONTROL POINT | POST | ARTICULATED CONCRETE REVETMENT SYSTEM |
| SECTION CORNER MONUMENT | GUY LINE | |
| POWER POLE | IRON PIN | |
| UTILITY PEDESTAL | EXISTING TREE LINE | |
| MAN HOLE | EXISTING WETLAND | |

SCALE, FEET 0 50 100 200

DESCRIPTION	AREA (ACRE)
EXISTING WETLANDS	1642
EXISTING WETLAND IMPACTS	0.059
PROPOSED WETLAND	41.40
PROPOSED WOODED WETLAND*	10.32

* WOODED WETLAND AREA IS INCLUDED IN THE PROPOSED WETLAND AREA



LEGEND

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|--|-------------------------|--|-----------------------|--|------------------------------|
| | BENCHMARK | | PROPERTY LINE | | EXISTING WETLAND IMPACTS |
| | MONUMENT | | OVERHEAD UTILITY LINE | | EXISTING VEGETATION CLEARING |
| | CONTROL POINT | | POST | | |
| | SECTION CORNER MONUMENT | | GUY LINE | | |
| | POWER POLE | | IRON PIN | | |
| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

SCALE, FEET 0 50 100 200

PROJECT BENCHMARKS				
VERTICAL(NAD 88 2012) AND HORIZONTAL (NAD 83 1991) BROWN COUNTY COORDINATES				
BENCHMARK #	DESCRIPTION	NAVD88 ELEV.	COORDINATES NORTHING	EASTING
1	BM RR SPIKE NW/S PP #2419-15W6 S/S SHADY DR. AT HOUSE #206	754.49	583803.1916	55331.5787
2	CP/BM DISC IN CONCRETE SE CORNER CTH U & SHADY DR. STAMPED ROSELAWN 2	760.67	583744.8085	54089.3872
3	BM RR SPIKE E/S PP #2419-15W22; 2ND POLE AT E/S CTH U, SOUTH OF SHADY DR.	753.80	582013.2720	54051.7101
4	BM RR SPIKE NE/S PP #2419-15W24; 4TH POLE AT E/S CTH U, SOUTH OF SHADY DR.	755.00	581380.0028	54045.0671

PROJECT NO:1009-32-33

HWY:NON-HIGHWAY

COUNTY:BROWN

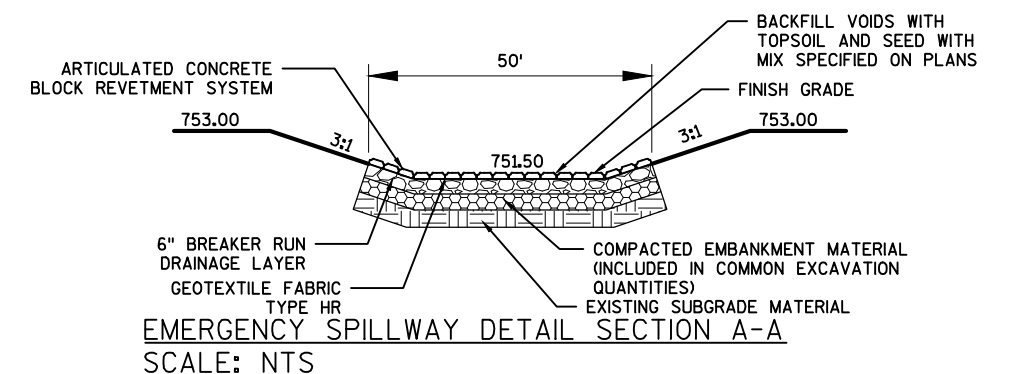
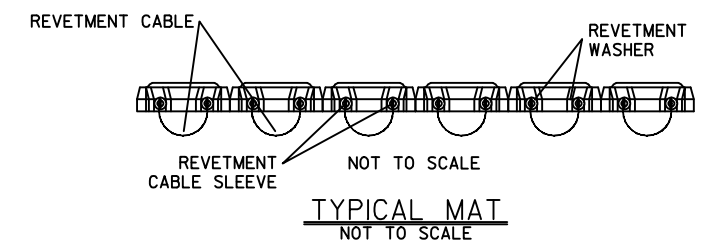
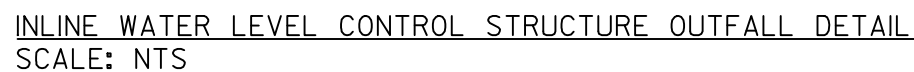
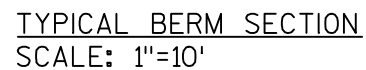
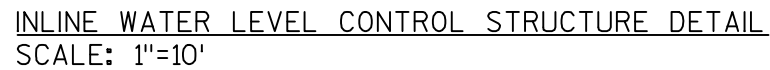
EXISTING CONDITIONS & CLEARING PLAN

SHEET

004

E

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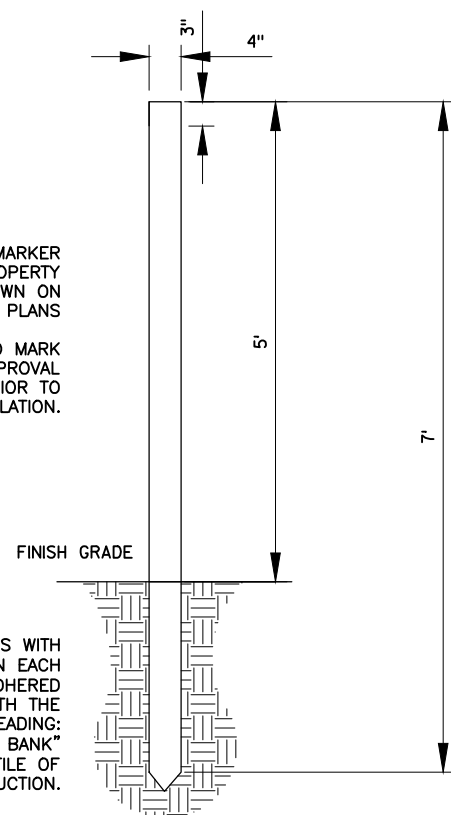


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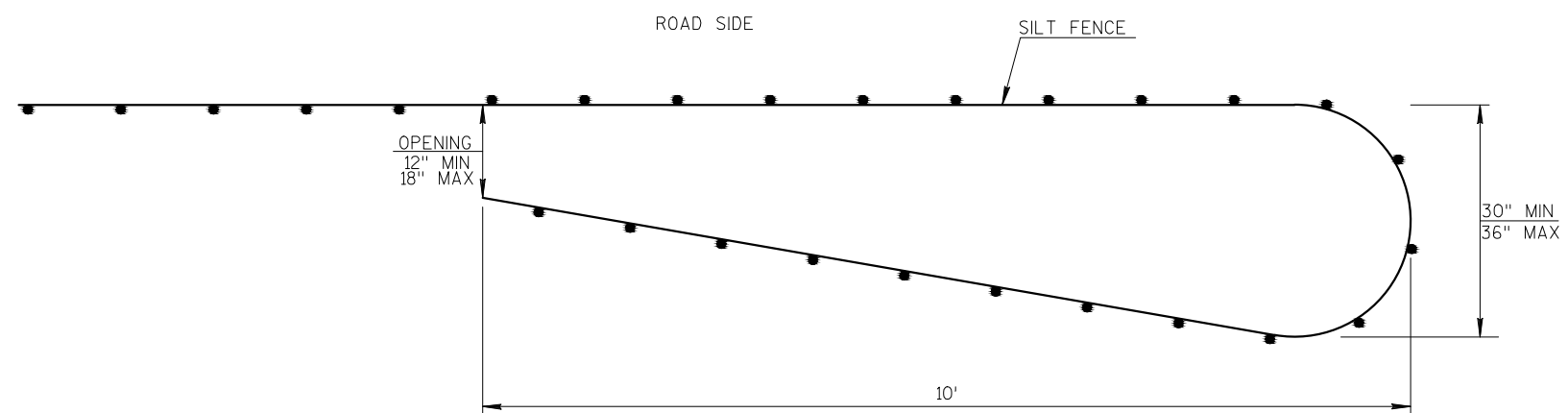
BOUNDARY MARKER
INSTALL ALONG PROPERTY
BOUNDARY AS SHOWN ON
PLANS

CONTRACTOR TO FIELD MARK
LOCATIONS FOR APPROVAL
BY ENGINEER PRIOR TO
INSTALLATION.

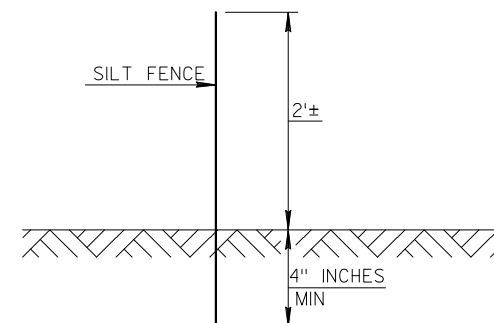
MARKER TO BE TO BE $\frac{1}{8}$ " THICK FIBER GLASS WITH
A MINIMUM OF A 3" SMOOTH SURFACE ON EACH
SIDE TO WHICH A DECAL CAN BE EASILY ADHERED
THE MARKER SHOULD BE BROWN WITH THE
ADHERED LABEL READING:
"ONEIDA INDIAN NATION WETLAND MITIGATION BANK"
CONTRACTOR TO BE PROVIDED DIGITAL FILE OF
DECAL DESIGN FOR REPRODUCTION.



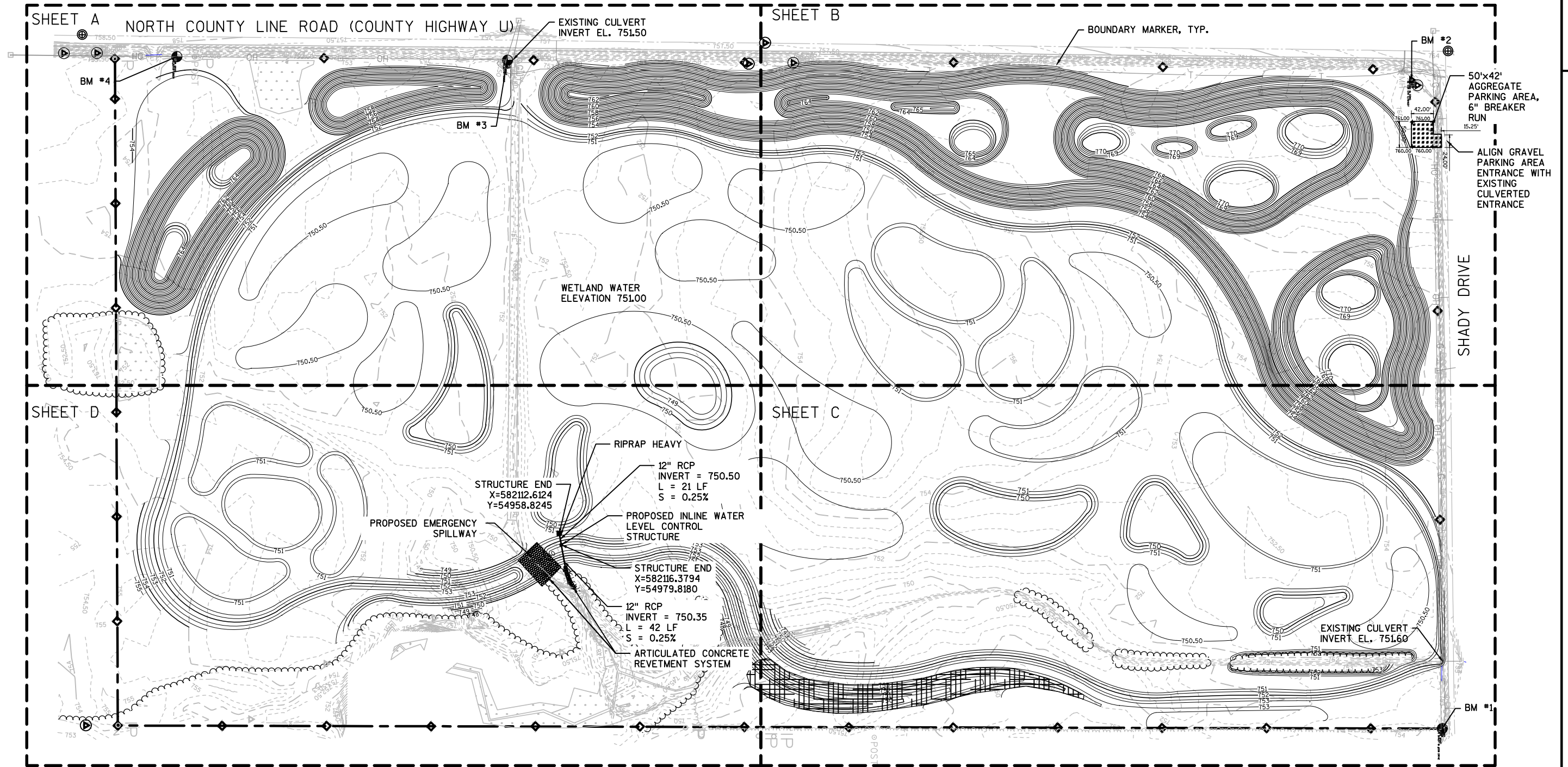
BOUNDARY MARKER DETAIL
SCALE: NTS



PLAN VIEW



TEMPORARY SILT FENCE TURTLE TURN-AROUND DETAIL
SCALE: NTS



LEGEND

	BENCHMARK		PROPERTY LINE		BOUNDARY MARKER
	MONUMENT		OVERHEAD UTILITY LINE		ARTICULATED CONCRETE REVETMENT SYSTEM
	CONTROL POINT		POST		
	SECTION CORNER MONUMENT		GUY LINE		
	POWER POLE		IRON PIN		
	UTILITY PEDESTAL		EXISTING TREE LINE		
	MAN HOLE		EXISTING WETLAND		

SCALE, FEET 0 50 100 200

NOTES:

- IT IS THE INTENT OF THE GRADING PLAN TO CREATE GRADED AREAS WHICH ARE SMOOTHLY CURVED TO SIMULATE ORGANIC AND NATURAL LANDFORMS.
- EMBANKMENT MOUNDS AROUND WEST AND NORTH PERIMETER OF THE PROJECT ARE INTENDED TO CONTAIN ON SITE ALL EXCAVATED SOIL.
- SPREAD 6" OF STOCKPILED TOPSOIL OVER WETLAND AND MOUNDS.

SHEET A

SHEET B

NORTH COUNTY LINE ROAD (COUNTY HIGHWAY U)

EXISTING CULVERT
INVERT EL. 751.50

BM #3

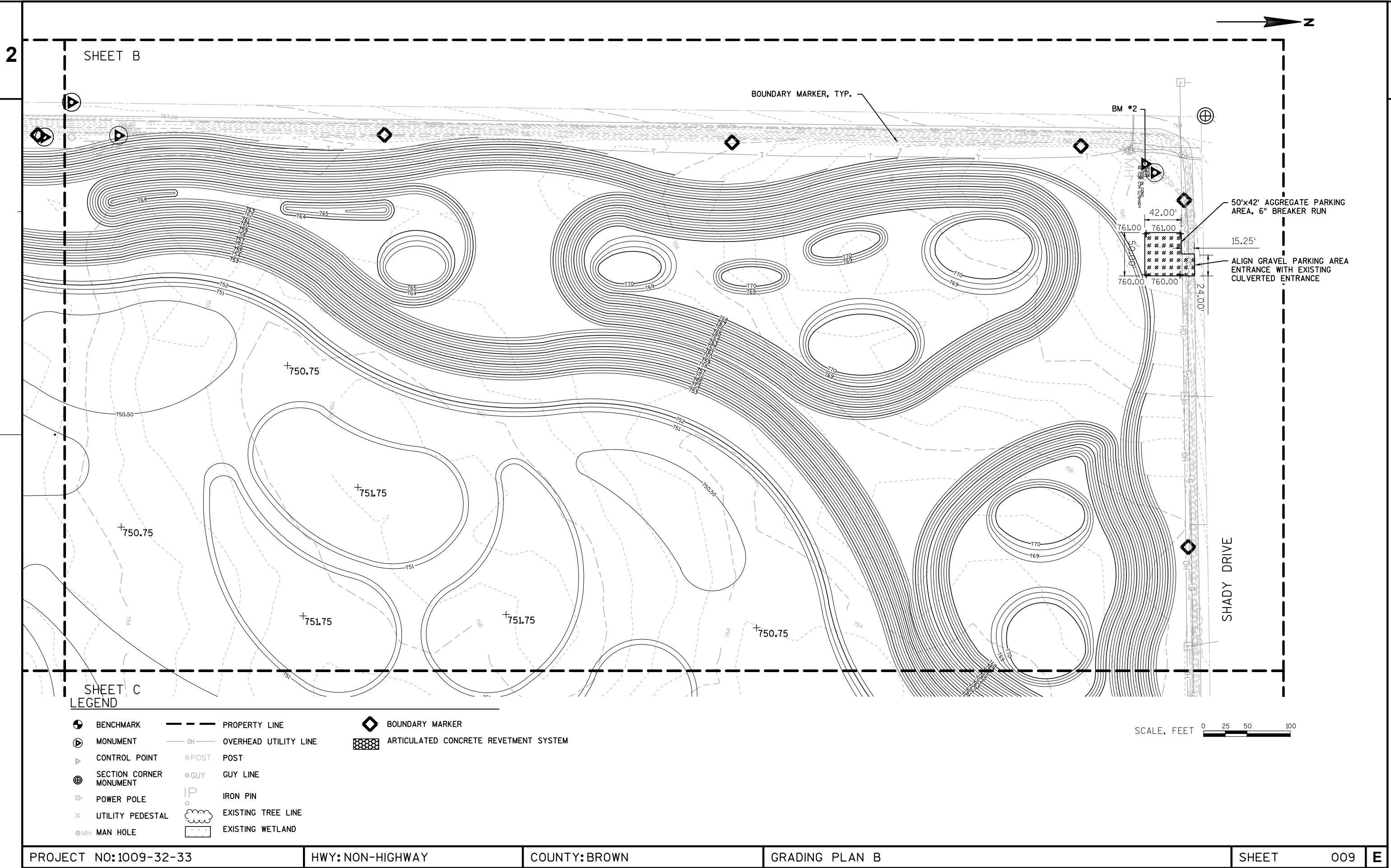
BM #4

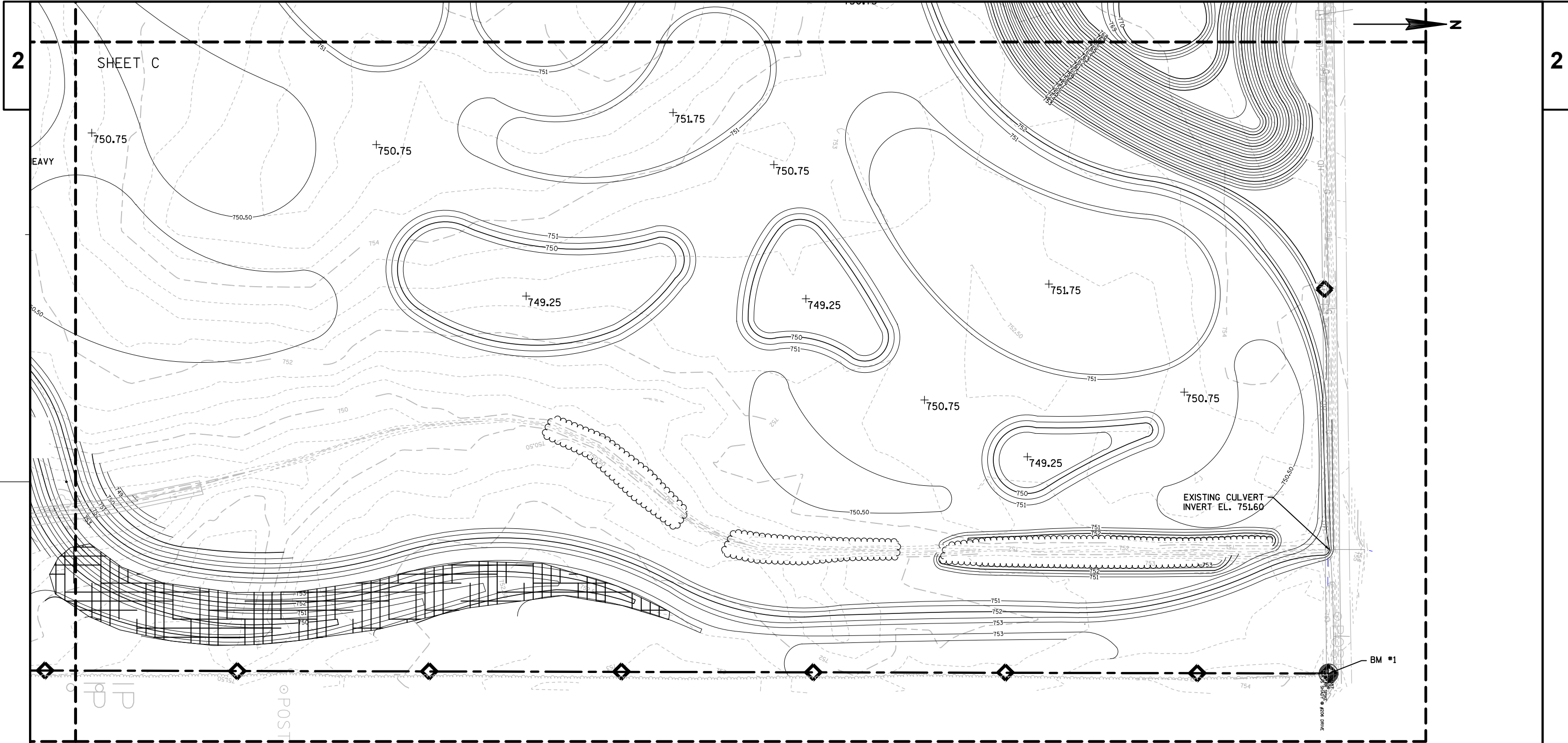
SHEET D
LEGEND

SHEET C

- | | | | | | |
|--|-------------------------|--|-----------------------|--|---------------------------------------|
| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | ARTICULATED CONCRETE REVETMENT SYSTEM |
| | CONTROL POINT | | POST | | |
| | SECTION CORNER MONUMENT | | GUY LINE | | |
| | POWER POLE | | IRON PIN | | |
| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

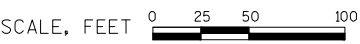
SCALE, FEET 0 25 50 100

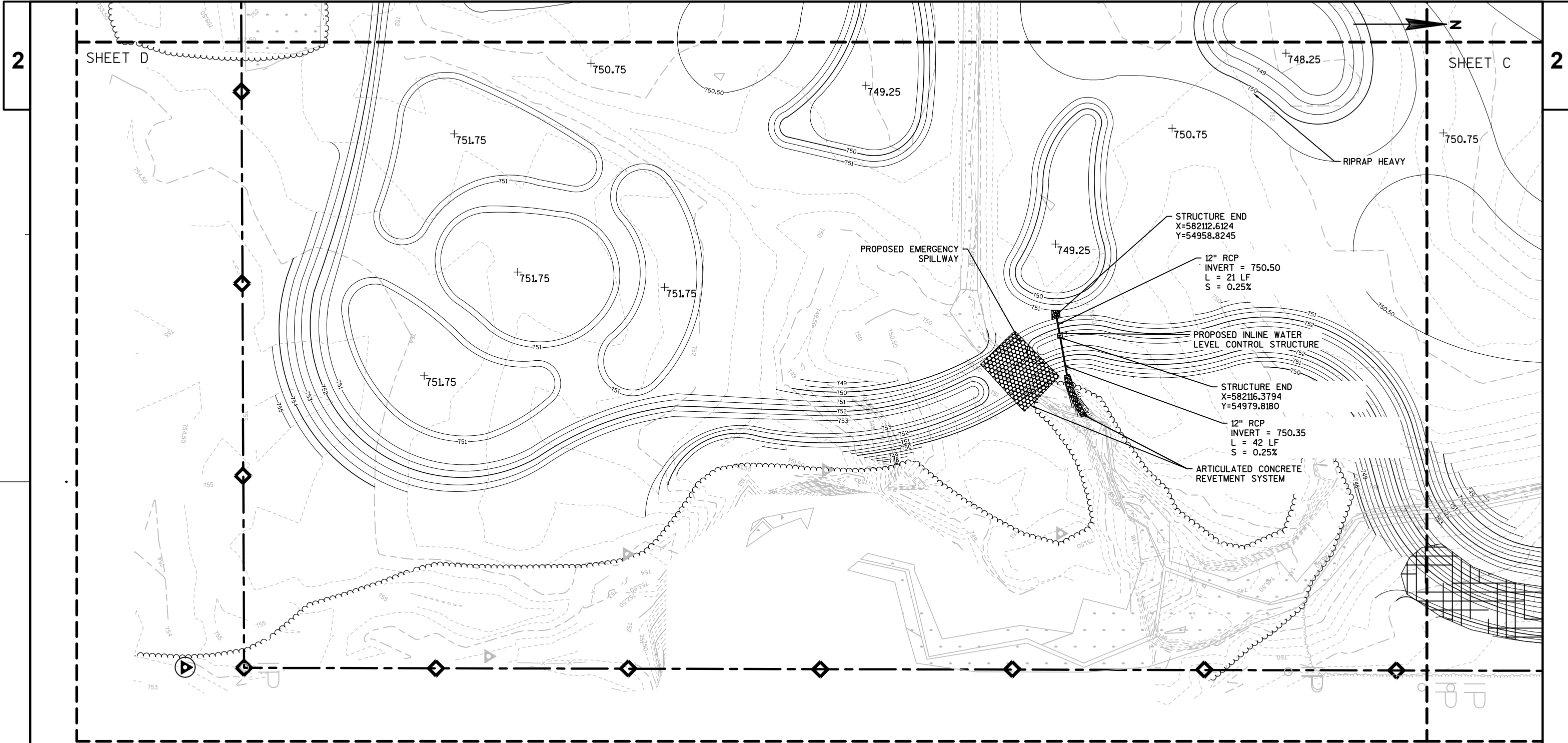




LEGEND

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|--|-------------------------|--|-----------------------|--|---------------------------------------|
| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | ARTICULATED CONCRETE REVETMENT SYSTEM |
| | CONTROL POINT | | POST | | |
| | SECTION CORNER MONUMENT | | GUY LINE | | |
| | POWER POLE | | IRON PIN | | |
| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

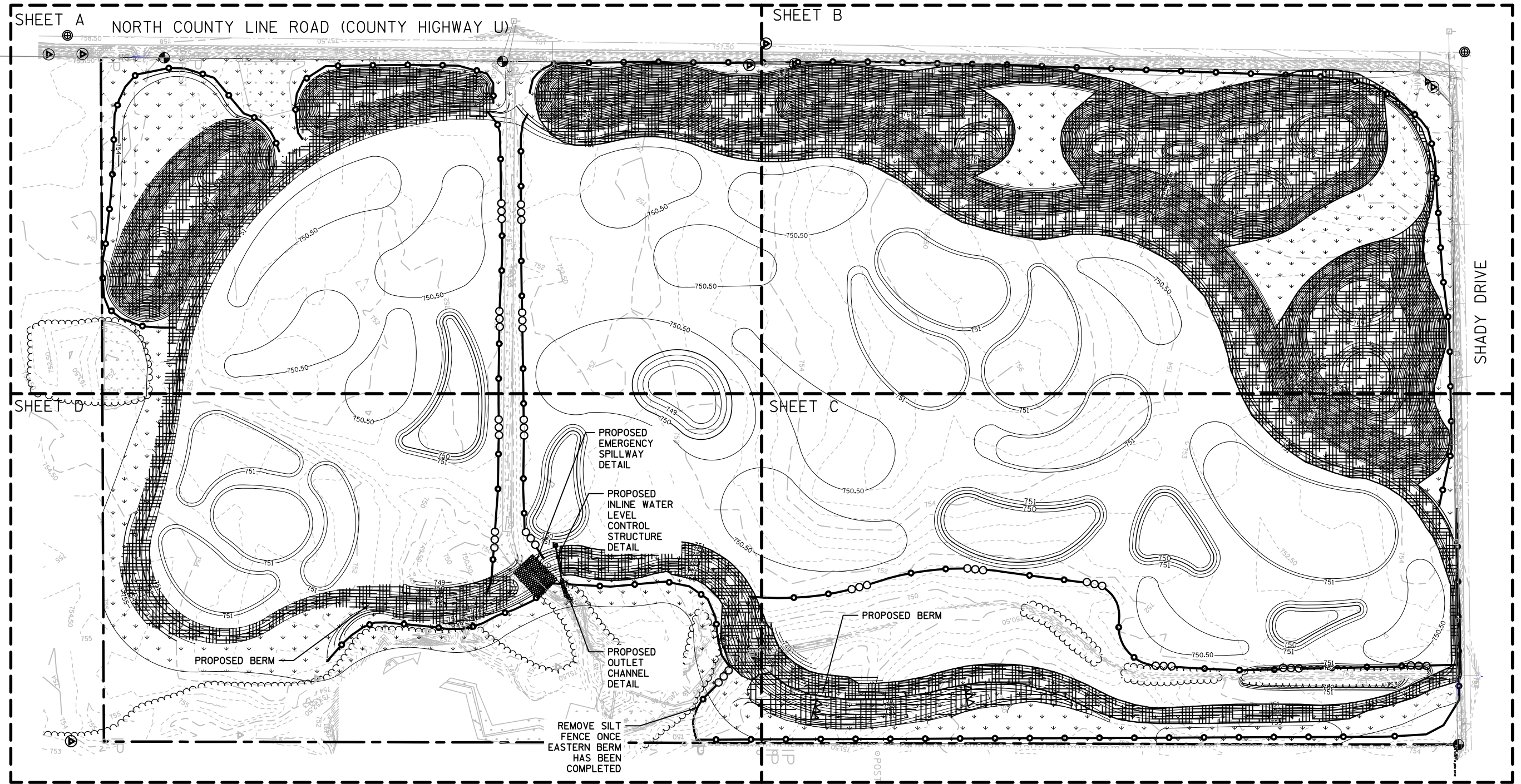




LEGEND

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|--|-------------------------|--|-----------------------|--|---------------------------------------|
| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | ARTICULATED CONCRETE REVETMENT SYSTEM |
| | CONTROL POINT | | POST | | |
| | SECTION CORNER MONUMENT | | GUY LINE | | |
| | POWER POLE | | IRON PIN | | |
| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

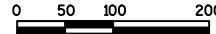
SCALE, FEET 0 25 50 100



LEGEND

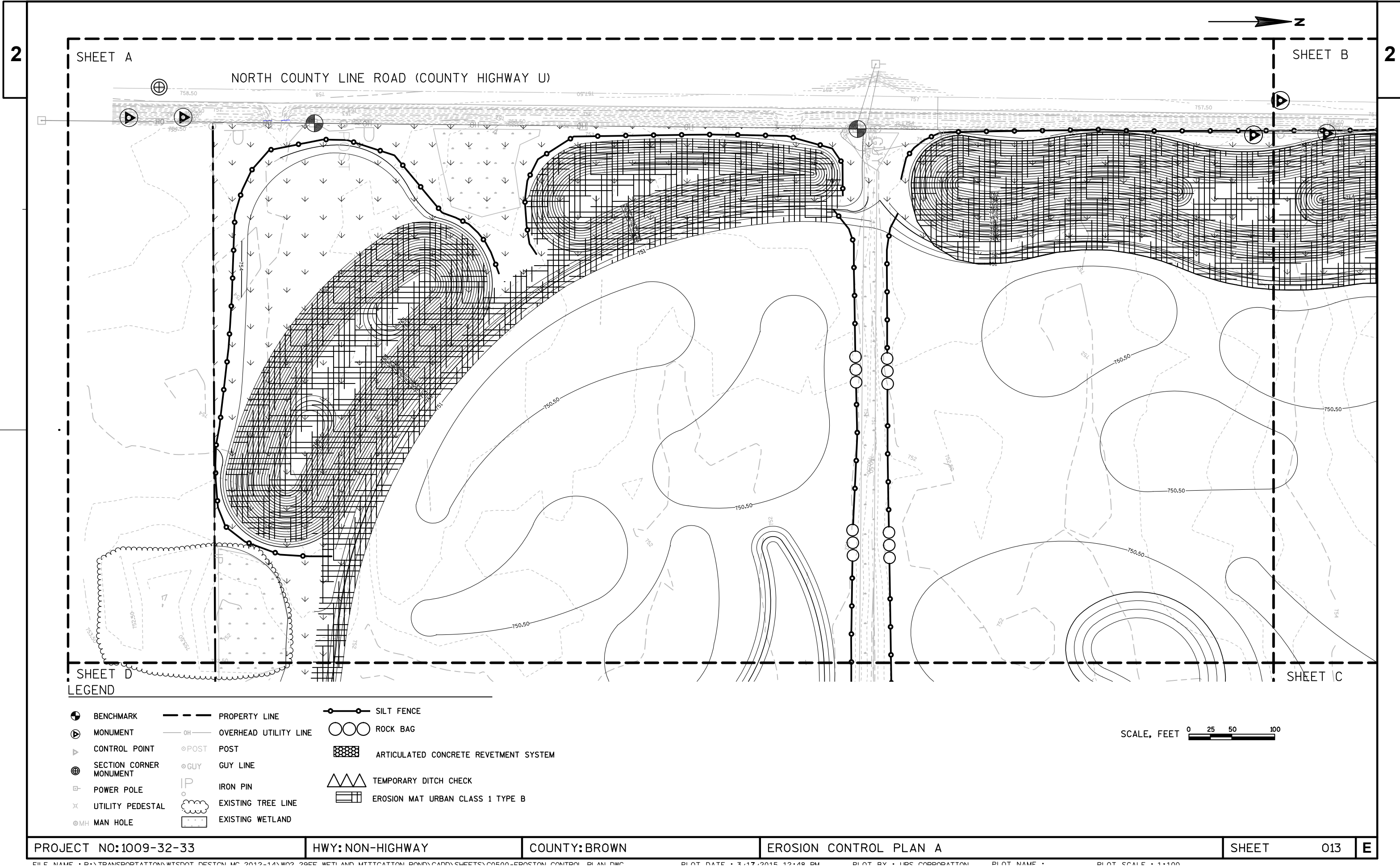
	BENCHMARK		PROPERTY LINE		SILT FENCE
	MONUMENT		OVERHEAD UTILITY LINE		ROCK BAG
	CONTROL POINT		POST		ARTICULATED CONCRETE REVETMENT SYSTEM
	SECTION CORNER MONUMENT		GUY LINE		TEMPORARY DITCH CHECK
	POWER POLE		IRON PIN		EROSION MAT URBAN CLASS 1 TYPE B
	UTILITY PEDESTAL		EXISTING TREE LINE		
	MAN HOLE		EXISTING WETLAND		

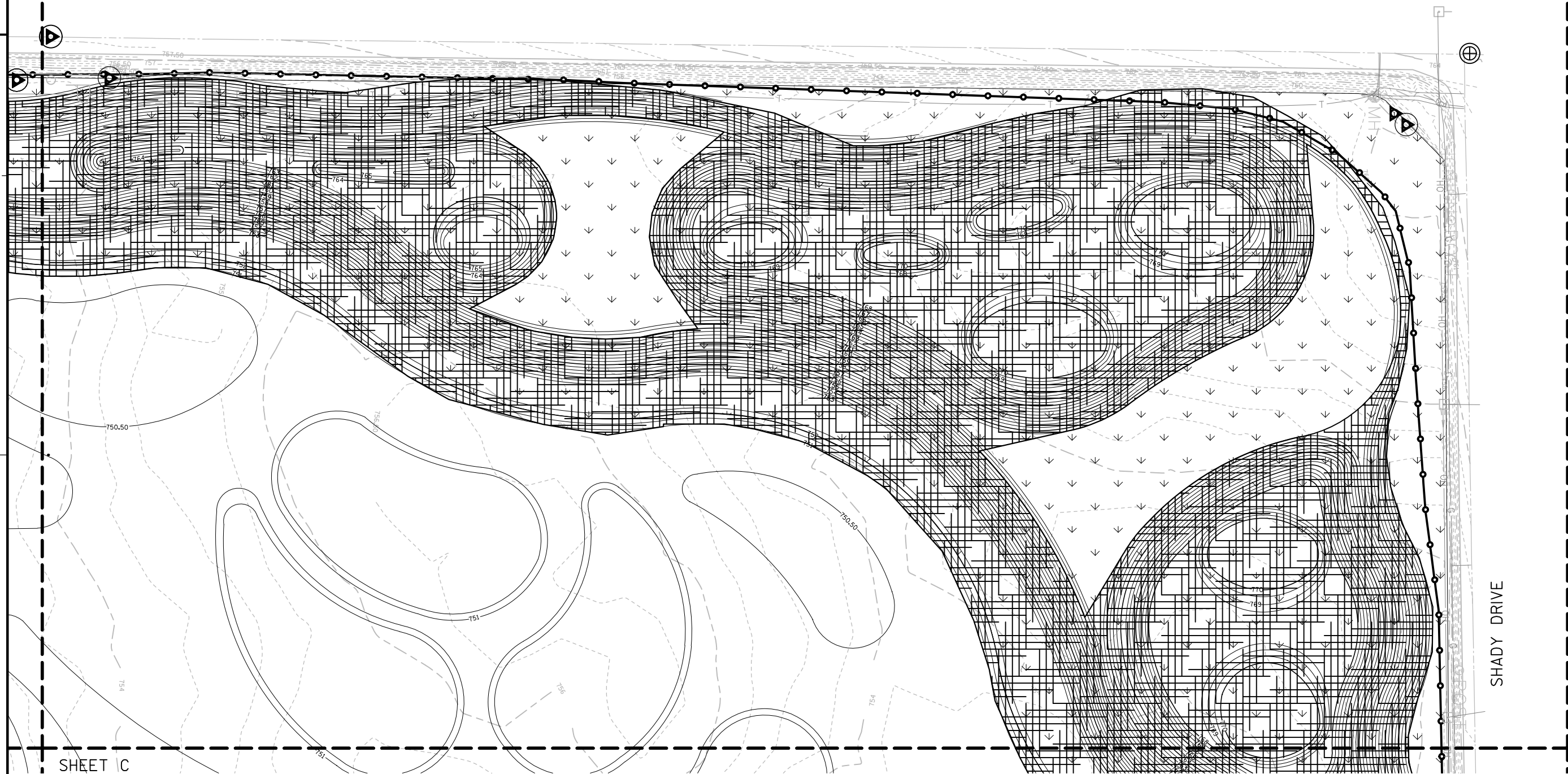
SCALE, FEET



EROSION CONTROL NOTES:

- CONSTRUCTION SEQUENCING IS TO FOLLOW THE PROVIDED ORDER OF TASKS
1. INSTALL SILT FENCE
 2. INSTALL BOUNDARY MARKERS
 3. PERFORM CLEARING AND GRUBBING
 4. STRIP AND STOCKPILE TOPSOIL
 5. INSTALL TEMPORARY SEED ON TOPSOIL STOCKPILE
 6. EXCAVATE AS PER PLAN
 7. EXCAVATE DEEP MARSH POOLS
 8. CONSTRUCT EARTHEN EMBANKMENTS AS PER PLAN
 9. INSTALL DRAINAGE STRUCTURES
 10. SPREAD TOPSOIL FROM STOCKPILES
 11. REMOVE SEDIMENT FROM DEEP MARSH POOLS
 12. INSTALL PLANTING AND SEEDING AS PER PLAN
 13. REMOVE SILT FENCE UPON SATISFACTORY ESTABLISHMENT OF PERMANENT SEEDING



SHEET C
LEGEND

	BENCHMARK		PROPERTY LINE		SILT FENCE
	MONUMENT		OVERHEAD UTILITY LINE		ROCK BAG
	CONTROL POINT		POST		ARTICULATED CONCRETE REVETMENT SYSTEM
	SECTION CORNER MONUMENT		GUY LINE		TEMPORARY DITCH CHECK
	POWER POLE		IRON PIN		EROSION MAT URBAN CLASS 1 TYPE B
	UTILITY PEDESTAL		EXISTING TREE LINE		
	MAN HOLE		EXISTING WETLAND		

SCALE, FEET 0 25 50 100



LEGEND

- | | | |
|-------------------------|-----------------------|---------------------------------------|
| BENCHMARK | PROPERTY LINE | SILT FENCE |
| MONUMENT | OVERHEAD UTILITY LINE | ROCK BAG |
| CONTROL POINT | POST | ARTICULATED CONCRETE REVETMENT SYSTEM |
| SECTION CORNER MONUMENT | GUY LINE | TEMPORARY DITCH CHECK |
| POWER POLE | IRON PIN | EROSION MAT URBAN CLASS 1 TYPE B |
| UTILITY PEDESTAL | EXISTING TREE LINE | |
| MAN HOLE | EXISTING WETLAND | |

SCALE, FEET 0 25 50 100

PROJECT NO:1009-32-33

HWY:NON-HIGHWAY

COUNTY:BROWN

EROSION CONTROL PLAN C

SHEET

015

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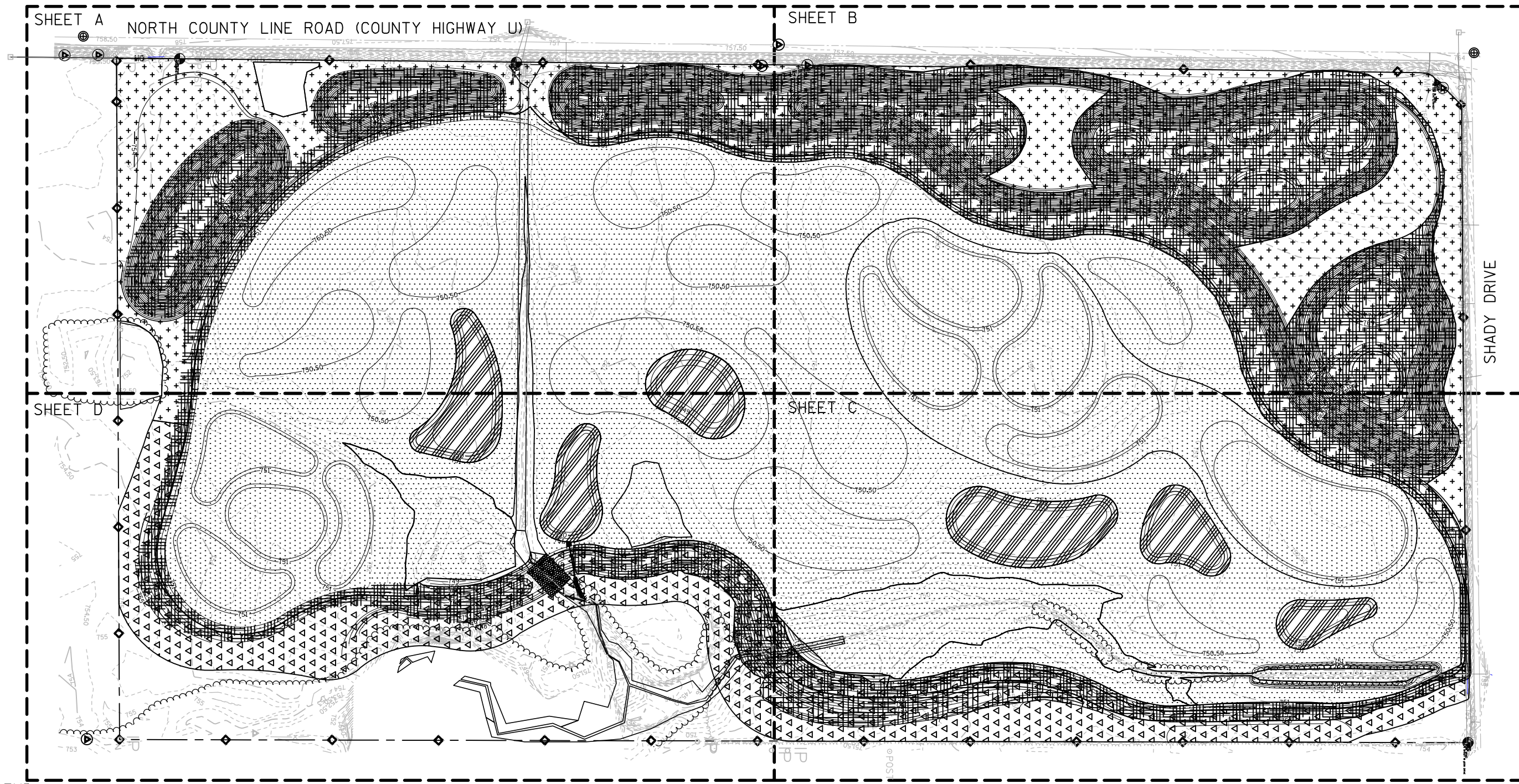
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PLOT DATE : 3/17/2015 12:48 PM

PLOT BY : LBS CORRODATION

PLOT NAME :

PLOT SCALE : 1:100



LEGEND

- | | | |
|---------------------------|------------------------------|---|
| ⊕ BENCHMARK | — — — PROPERTY LINE | ◆ BOUNDARY MARKER |
| ⊙ MONUMENT | — OH — OVERHEAD UTILITY LINE | ▨ ARTICULATED CONCRETE REVETMENT SYSTEM |
| ▽ CONTROL POINT | ⊙ POST POST | |
| ⊕ SECTION CORNER MONUMENT | ⊙ GUY GUY LINE | |
| ⊕ POWER POLE | IP IRON PIN | |
| ⊕ UTILITY PEDESTAL | ☁ EXISTING TREE LINE | |
| ⊕ MH MAN HOLE | | |

SCALE, FEET 0 50 100 200

SEEDING KEY

- | | |
|---|-----------------------------|
| ⊕ | UPLAND BUFFER MIX |
| ▨ | SEEDING MIXTURE NO. 60 |
| ⊕ | WET MEADOW/SALLOW MARSH MIX |
| ▨ | DEEP MARSH ROOT STOCK/SEED |

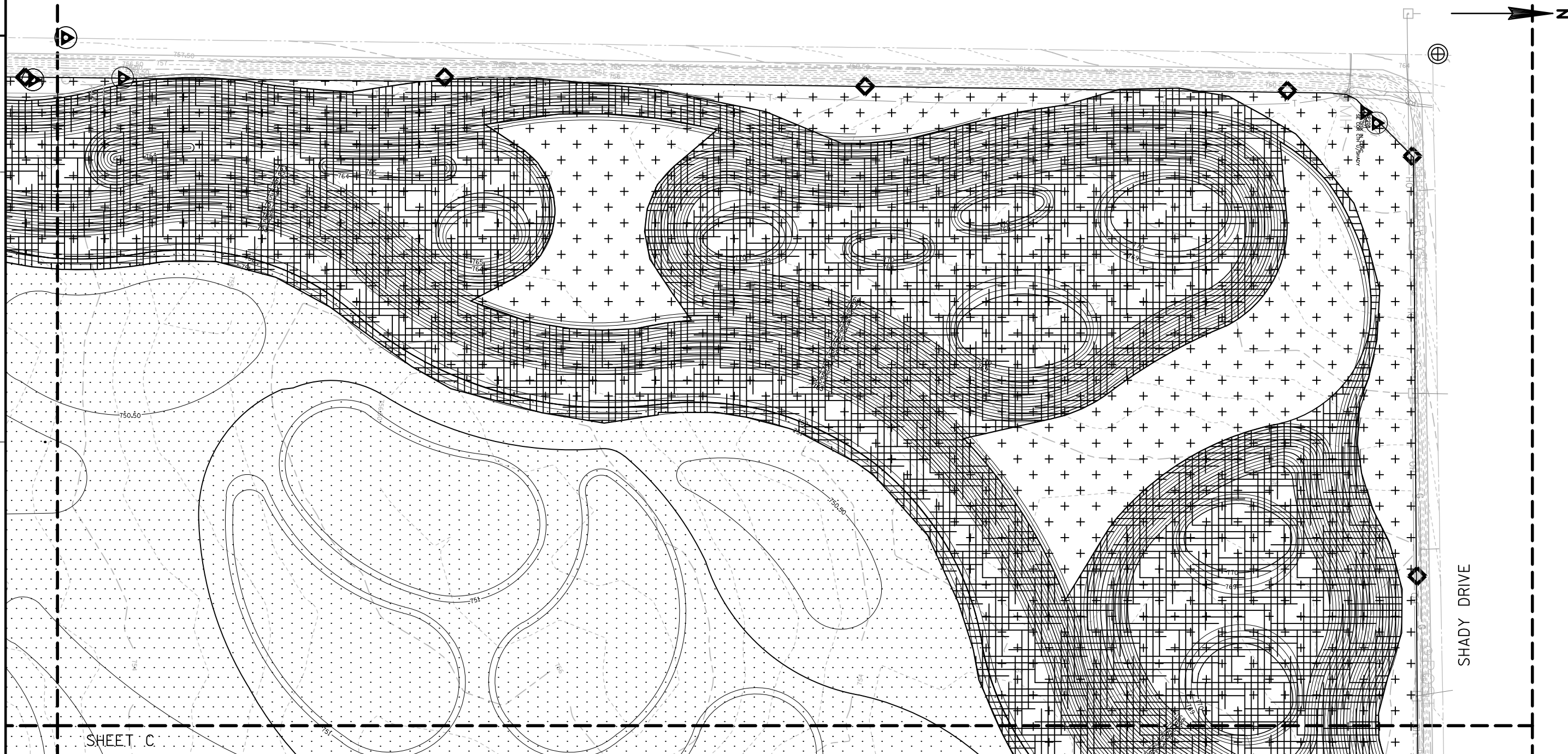


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|---|-------------------------|---|-----------------------|---|---------------------------------------|
|  | BENCHMARK |  | PROPERTY LINE |  | BOUNDARY MARKER |
|  | MONUMENT |  | OVERHEAD UTILITY LINE |  | ARTICULATED CONCRETE REVETMENT SYSTEM |
|  | CONTROL POINT |  | POST | | |
|  | SECTION CORNER MONUMENT |  | GUY LINE | | |
|  | POWER POLE |  | IRON PIN | | |
|  | UTILITY PEDESTAL |  | EXISTING TREE LINE | | |
|  | MAN HOLE | | | | |

SCALE, FEET 

SEEDING KEY

- | | |
|---|------------------------------|
|  | UPLAND BUFFER MIX |
|  | SEEDING MIXTURE NO. 60 |
|  | WET MEADOW/SHALLOW MARSH MIX |
|  | DEEP MARSH ROOT STOCK/SEED |



SHEET C

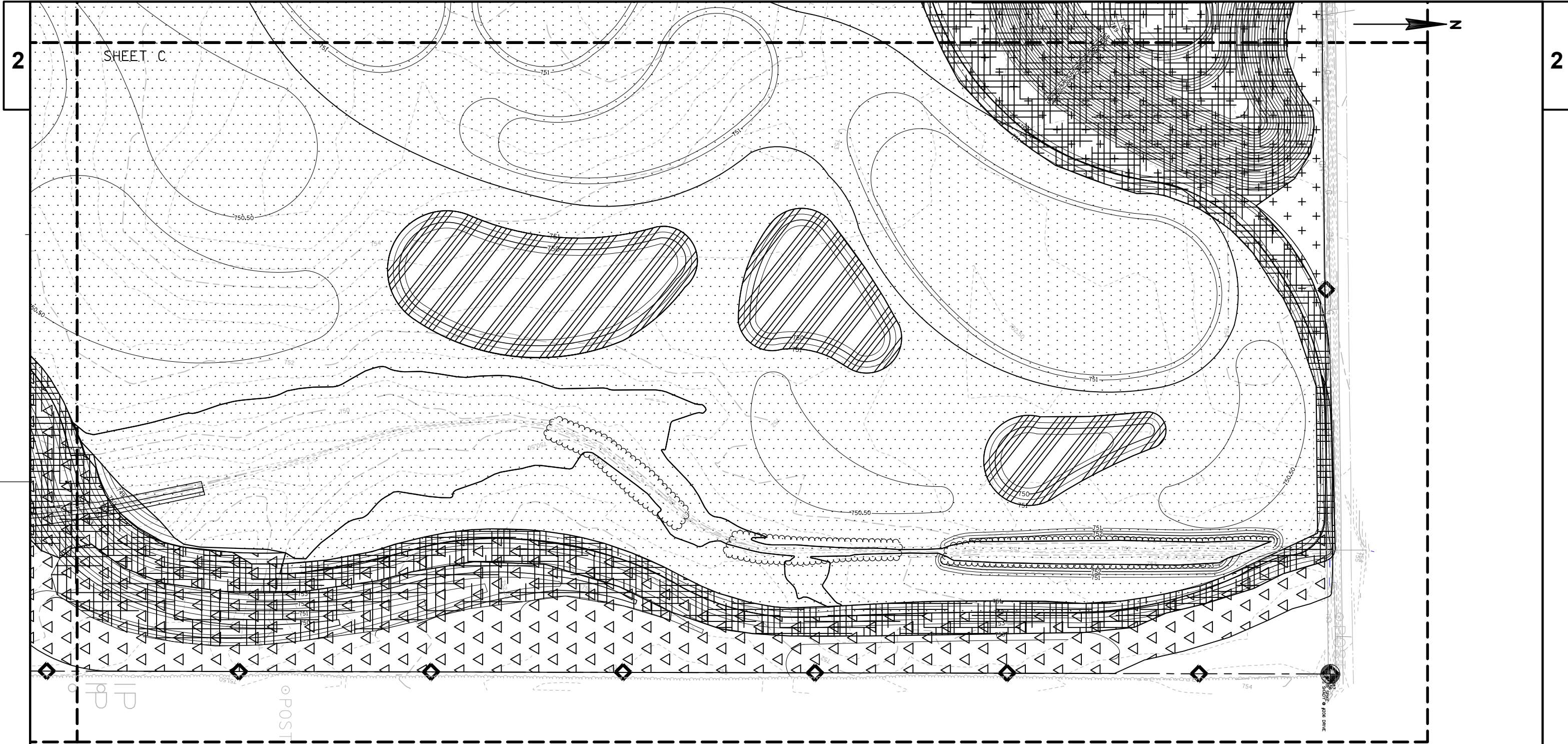
LEGEND

	BENCHMARK		PROPERTY LINE		BOUNDARY MARKER
	MONUMENT		OVERHEAD UTILITY LINE		ARTICULATED CONCRETE REVETMENT SYSTEM
	CONTROL POINT		POST		
	SECTION CORNER MONUMENT		GUY LINE		
	POWER POLE		IRON PIN		
	UTILITY PEDESTAL		EXISTING TREE LINE		
	MAN HOLE				

SCALE, FEET 0 25 50 100

SEEDING KEY

	UPLAND BUFFER MIX
	SEEDING MIXTURE NO. 60
	WET MEADOW/SHALLOW MARSH MIX
	DEEP MARSH ROOT STOCK/SEED



LEGEND

- | | | |
|---------------------------|------------------------------|---|
| ⊕ BENCHMARK | — — — PROPERTY LINE | ◊ BOUNDARY MARKER |
| ⊙ MONUMENT | — OH — OVERHEAD UTILITY LINE | ▨ ARTICULATED CONCRETE REVETMENT SYSTEM |
| ▼ CONTROL POINT | ⊙ POST POST | |
| ⊕ SECTION CORNER MONUMENT | ⊙ GUY GUY LINE | |
| ⊕ POWER POLE | IP IRON PIN | |
| ⊕ UTILITY PEDESTAL | ☁ EXISTING TREE LINE | |
| ⊕ MH MAN HOLE | | |

SCALE, FEET 0 25 50 100

SEEDING KEY

- | | |
|---|-----------------------------|
| ⊕ | UPLAND BUFFER MIX |
| ▨ | SEEDING MIXTURE NO. 60 |
| ⊕ | WET MEADOW/SALLOW MARSH MIX |
| ▨ | DEEP MARSH ROOT STOCK/SEED |

PROJECT NO:1009-32-33

HWY:NON-HIGHWAY

COUNTY:BROWN

SEEDING PLAN C

SHEET

020

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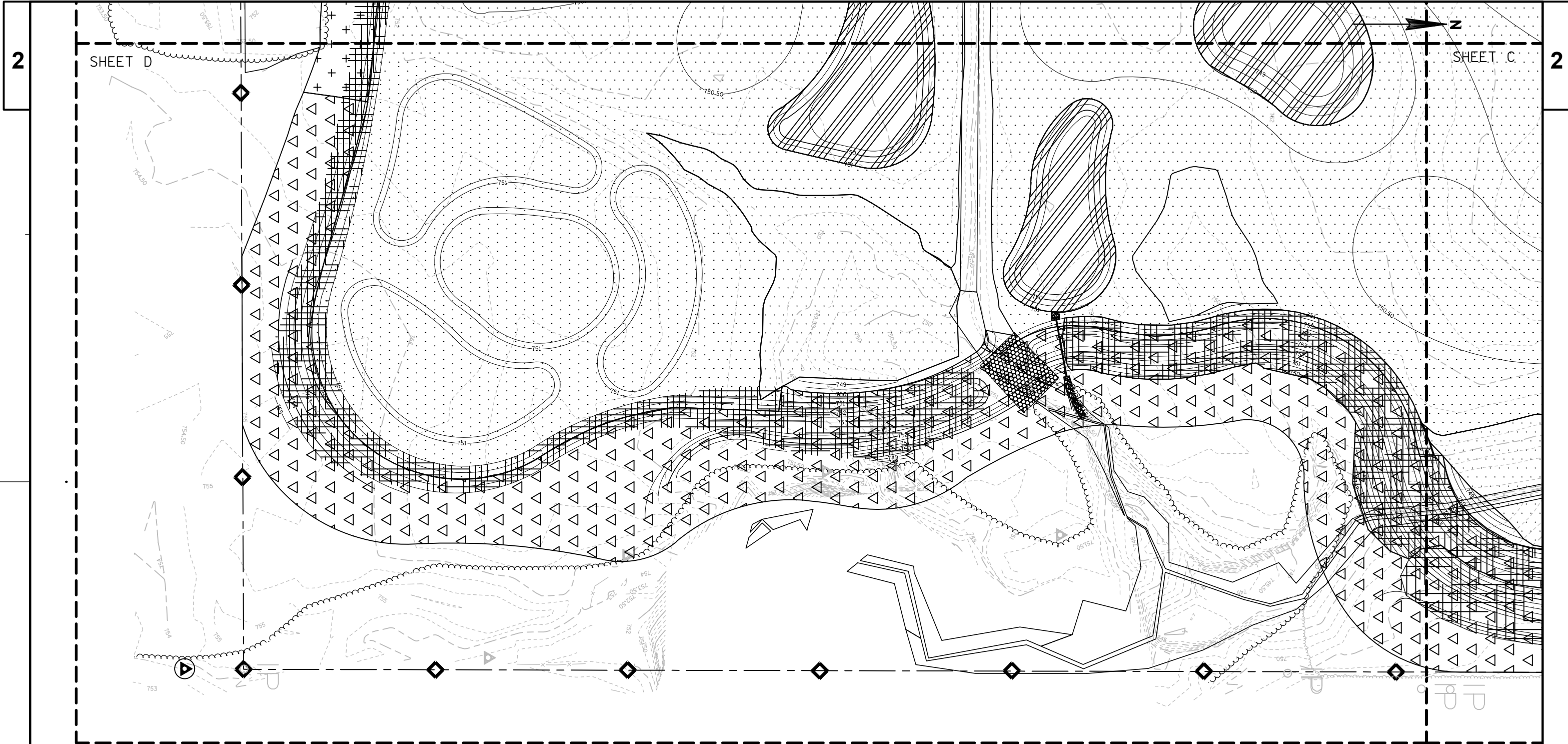
FILE NAME : D:\TRANSPORTATION\WATERDOT\DESIGN\MC 2012-14\W02 2000 WETLAND MITIGATION\BROWNCAD\SWEEETS\1009-2014-SEEDING PLAN.DWG

PLOT DATE : 3.17.2015 12:25 PM

PLOT BY : HCS CORROBATTON

PLOT NAME :

PLOT SCALE : 1:100 VSEE



LEGEND

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|--|-------------------------|--|-----------------------|--|---------------------------------------|
| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | ARTICULATED CONCRETE REVETMENT SYSTEM |
| | CONTROL POINT | | POST | | |
| | SECTION CORNER MONUMENT | | GUY LINE | | |
| | POWER POLE | | IRON PIN | | |
| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

SCALE, FEET 0 25 50 100

SEEDING KEY

- | | |
|--|-----------------------------|
| | UPLAND BUFFER MIX |
| | SEEDING MIXTURE NO. 60 |
| | WET MEADOW/SALLOW MARSH MIX |
| | DEEP MARSH ROOT STOCK/SEED |

PROJECT NO:1009-32-33

HWY:NON-HIGHWAY

COUNTY:BROWN

SEEDING PLAN D

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FILE NAME : D:\TRANSPORTATION\WATERDOT DESIGN\MC 2012-14\W02 20EE WETLAND MITTIGATION BOND/CADD\SHEETS\1009-2014-SEEDING PLAN.DWG

PLOT DATE : 3/17/2015 12:25 PM

PLOT BY : HPS CORROBATTONI

PLOT NAME :

PLOT SCALE : 1"=100' VEE

PLANT LIST

PLANT LIST AREA '1'											
QTY	SYM	COMMON NAME	SCIENTIFIC NAME	SIZE	ROOT ZONE MODE	HOLE DIA.	HOLE DEPTH	BRACE/GUY	FERT UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAM.
40	ACNE2	BOX ELDER	ACER NEGUNDO	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	ACRU	RED MAPLE	ACER RUBRUM	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	ACSA2	SILVER MAPLE	ACER SACCHARINUM	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	ALINR	SPECKLED ALDER	ALNUS INCANA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	BENI	RIVER BIRCH	BETULA NIGRA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	BEAL2	YELLOW BIRCH	BETULA ALLEGHANIENSIS	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	LALA	TAMARACK	LARIX LARICINA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	QUBI	SWAMP WHITE OAK	QUERCUS BICOLOR	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	SANI	BLACK WILLOW	SALIX NIGRA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
40	ULAM	AMERICAN ELM	ULMUS AMERICANA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"

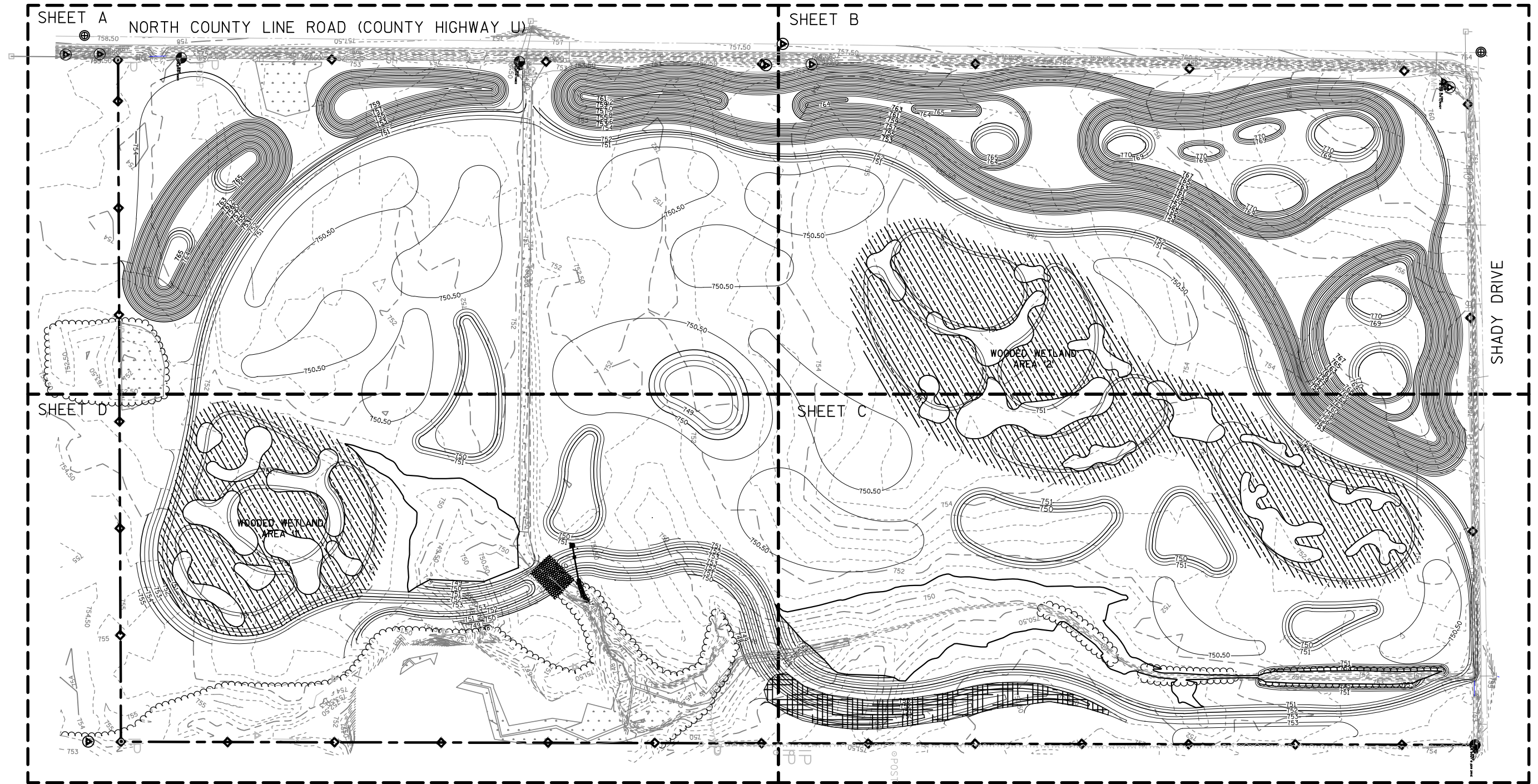
PLANT LIST AREA '2'											
QTY	SYM	COMMON NAME	SCIENTIFIC NAME	SIZE	ROOT ZONE MODE	HOLE DIA.	HOLE DEPTH	BRACE/GUY	FERT UNITS REQ'D	RODENT PROTECTION REQ'D	MULCH RING DIAM.
84	ACNE2	BOX ELDER	ACER NEGUNDO	1' CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	ACRU	RED MAPLE	ACER RUBRUM	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	ACSA2	SILVER MAPLE	ACER SACCHARINUM	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	ALINR	SPECKLED ALDER	ALNUS INCANA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	BENI	RIVER BIRCH	BETULA NIGRA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	BEAL2	YELLOW BIRCH	BETULA ALLEGHANIENSIS	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	LALA	TAMARACK	LARIX LARICINA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	QUBI	SWAMP WHITE OAK	QUERCUS BICOLOR	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	SANI	BLACK WILLOW	SALIX NIGRA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"
84	ULAM	AMERICAN ELM	ULMUS AMERICANA	1" CAL.	CG	SEE TREE PLANTING DETAIL			3	YES	12"

PLANTING NOTES:

1. THE GOAL FOR THE TREE PLANTING LAYOUT IS TO CREATE A MINIMUM OF 10 ACRES OF WOODED WETLAND AREA.
2. PLANT A TOTAL OF 1,240 TREES IN WOODED WETLAND AREA '1' AND 548 TREES IN WOODED WETLAND AREA '2'.
3. PLANT TREES ACCORDING TO THE DESIGNATED QUANTITIES ON THE RESPECTIVE AREA PLANT LISTS..
4. PLANT TREES AT APPROXIMATELY 20' O.C.; PLANTINGS TO BE STAGGERED IN NATURALISTIC AND ORGANIC FORMS, DO NOT PLANT IN A GRID.
5. PLANT WOODED WETLAND AREAS WITH OPEN AREAS IN ACCORDANCE WITH THE LANDSCAPE PLANS. ENSURE THAT THE OPEN AREAS EXTEND TO THE OUTER EDGE OF THE WOODED WETLAND AREAS.
6. PLANT LIST SYMBOLS ARE BASED OFF OF USDA NRCS.

SEEDING NOTES:

1. ALL UPLAND AREAS (ABOVE CONTOUR 752) WILL BE SEEDED ACCORDING THE SEED MIXES INDICATED ON PLANS.
2. ALL AREAS WITHIN THE WETLAND ZONE (BELOW CONTOUR 752) WILL BE SEED ACCORDING THE THE MIXES INDICATED ON THE PLANS.
3. REFER TO SPECIAL PROVISION FOR SEED MIX AND RATE.



LEGEND

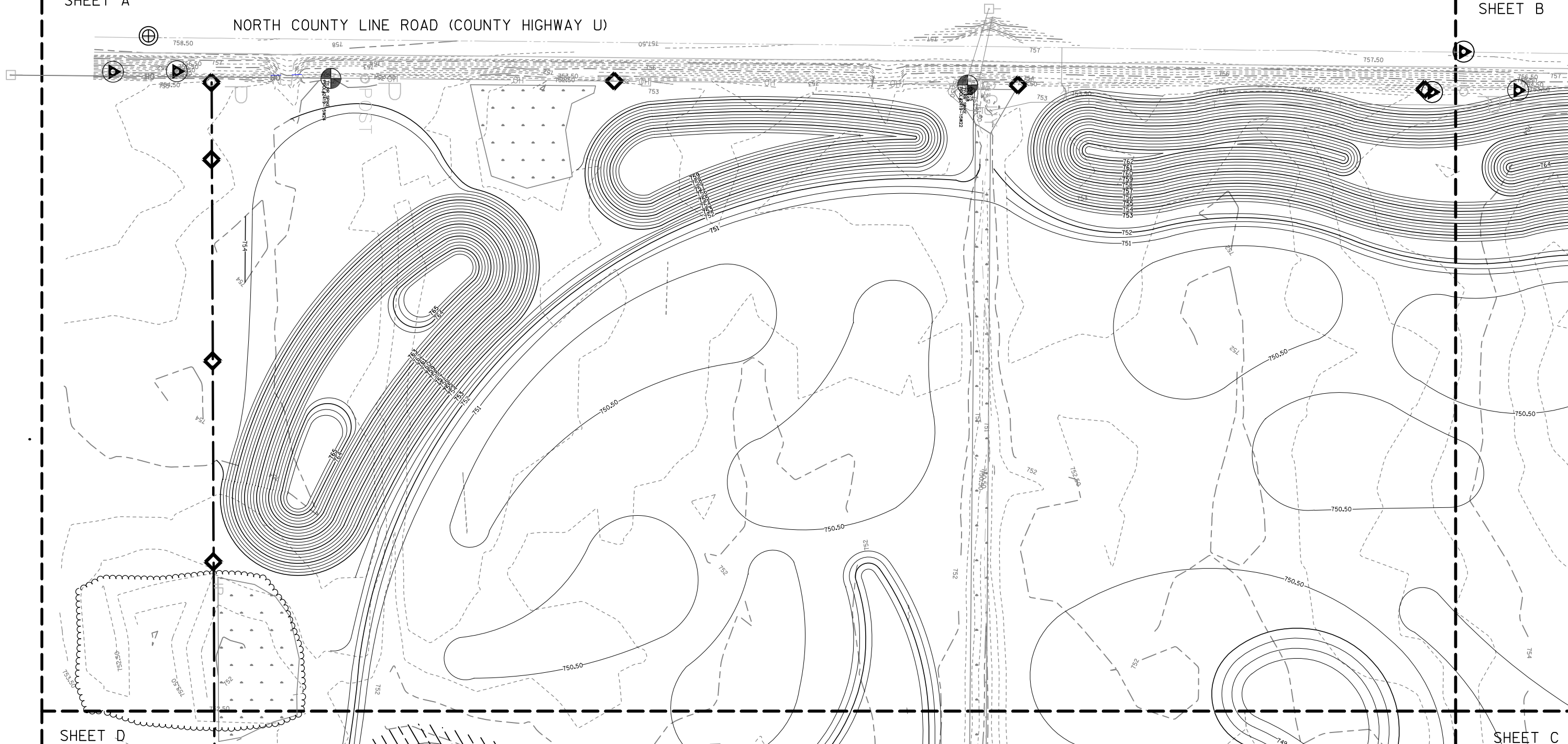
	BENCHMARK		PROPERTY LINE		BOUNDARY MARKER
	MONUMENT		OVERHEAD UTILITY LINE		WOODED WETLAND AREA
	CONTROL POINT		POST		
	SECTION CORNER MONUMENT		GUY LINE		
	POWER POLE		IRON PIN		
	UTILITY PEDESTAL		EXISTING TREE LINE		
	MAN HOLE		EXISTING WETLAND		

SCALE, FEET 0 50 100 200

SHEET A

SHEET B

NORTH COUNTY LINE ROAD (COUNTY HIGHWAY U)



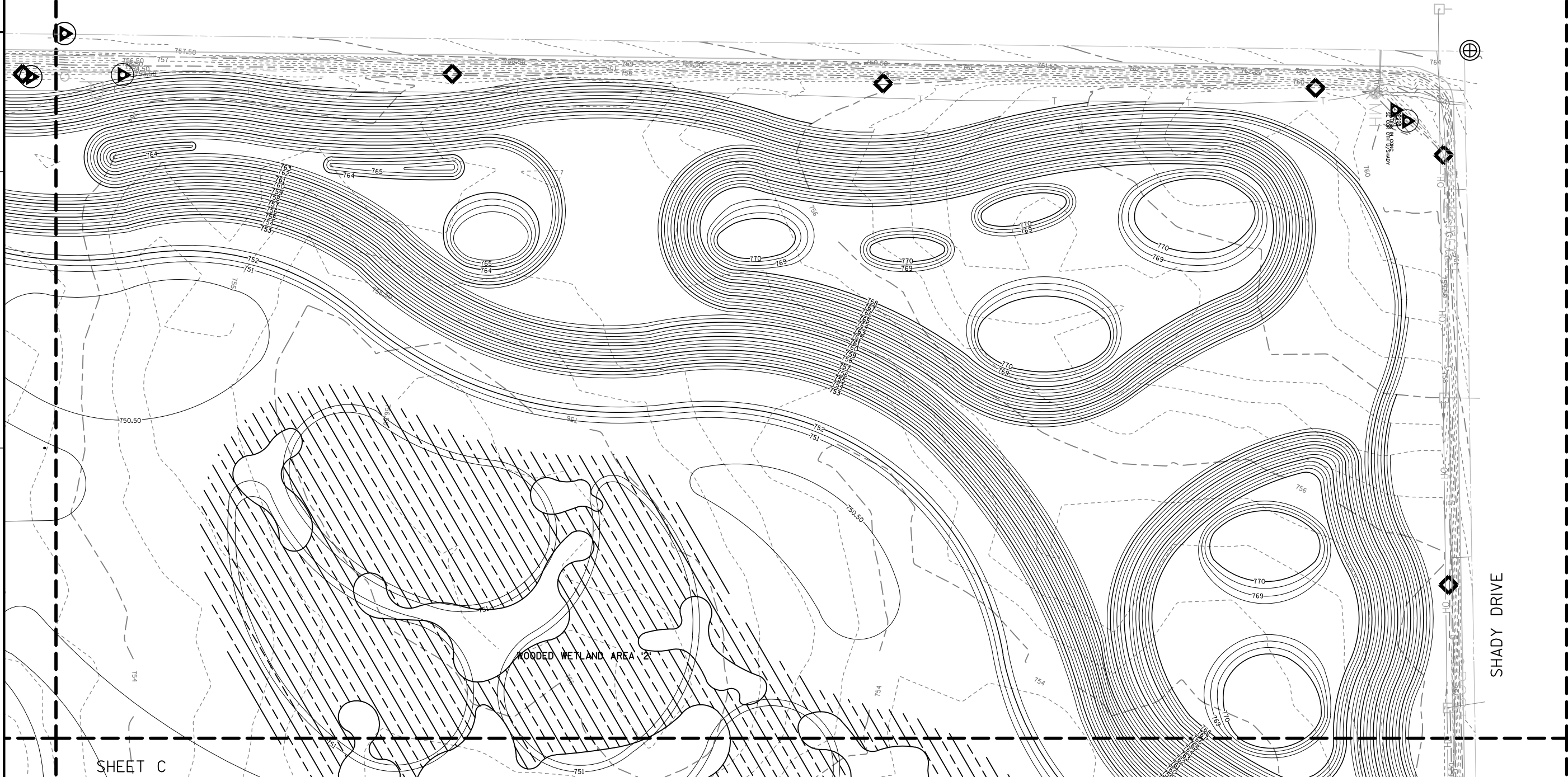
SHEET D

SHEET C

LEGEND

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| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | WOODED WETLAND AREA |
| | CONTROL POINT | | POST | | |
| | SECTION CORNER MONUMENT | | GUY LINE | | |
| | POWER POLE | | IRON PIN | | |
| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

SCALE, FEET 0 25 50 100



SHEET C
LEGEND

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| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | WOODED WETLAND AREA |
| | CONTROL POINT | | POST | | |
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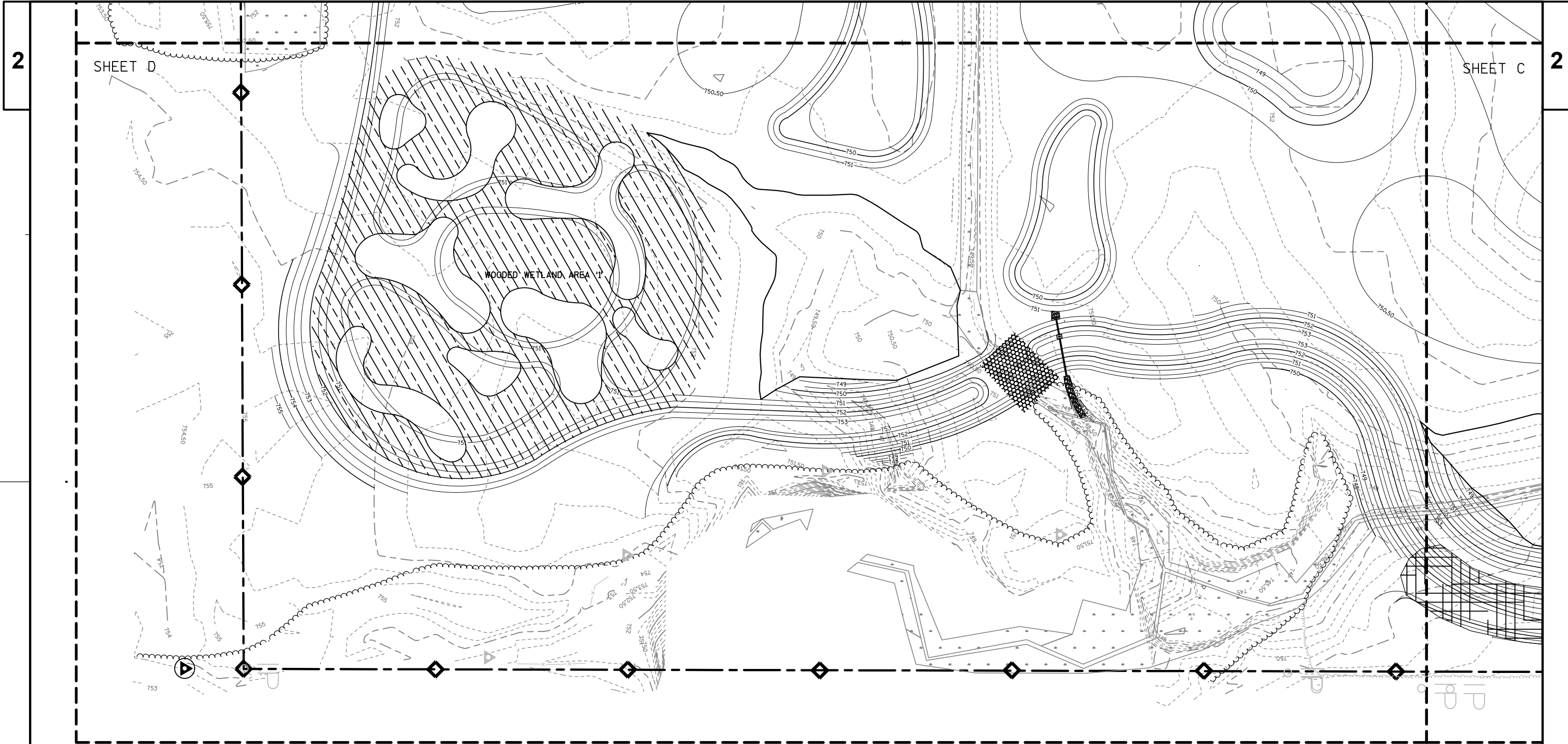
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| ⊕ BENCHMARK | — — — — — PROPERTY LINE | ◇ BOUNDARY MARKER |
| ⊙ MONUMENT | — OH — OVERHEAD UTILITY LINE | ▨ WOODED WETLAND AREA |
| ▲ CONTROL POINT | ⊙ POST POST | |
| ⊕ SECTION CORNER MONUMENT | ⊙ GUY GUY LINE | |
| ⊕ POWER POLE | IP IRON PIN | |
| ✕ UTILITY PEDESTAL | ☁ EXISTING TREE LINE | |
| ⊙ MH MAN HOLE | ▨ EXISTING WETLAND | |

SCALE, FEET 0 25 50 100



LEGEND

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|--|-------------------------|--|-----------------------|--|---------------------|
| | BENCHMARK | | PROPERTY LINE | | BOUNDARY MARKER |
| | MONUMENT | | OVERHEAD UTILITY LINE | | WOODED WETLAND AREA |
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| | UTILITY PEDESTAL | | EXISTING TREE LINE | | |
| | MAN HOLE | | EXISTING WETLAND | | |

SCALE, FEET 0 25 50 100

DATE 18MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE		1009-32-33			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0115	Clearing	ACRE	0.090	0.090
0020	201.0215	Grubbing	ACRE	0.090	0.090
0030	205.0100	Excavation Common	CY	119,100.000	119,100.000
0040	311.0115	Breaker Run	CY	105.000	105.000
0050	522.0112	Culvert Pipe Reinforced Concrete Class III 12-Inch	LF	55.000	55.000
0060	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	2.000	2.000
0070	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1009-32-33	EACH	1.000	1.000
0080	619.1000	Mobilization	EACH	1.000	1.000
0090	624.0100	water	MGAL	1,676.000	1,676.000
0100	625.0500	Salvaged Topsoil	SY	222,000.000	222,000.000
0110	627.0200	Mulching	SY	124,300.000	124,300.000
0120	628.1504	Silt Fence	LF	10,650.000	10,650.000
0130	628.1520	Silt Fence Maintenance	LF	1,065.000	1,065.000
0140	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0150	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0160	628.2008	Erosion Mat Urban Class I Type B	SY	87,374.000	87,374.000
0170	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0180	628.7560	Tracking Pads	EACH	2.000	2.000
0190	628.7570	Rock Bags	EACH	375.000	375.000
0200	630.0160	Seeding Mixture No. 60	LB	460.000	460.000
0210	630.0200	Seeding Temporary	LB	3,500.000	3,500.000
0220	632.0101	Trees (species) (size) (root) 01. Acer Negundo, Cg, 1" Cal.	EACH	124.000	124.000
0230	632.0101	Trees (species) (size) (root) 02. Acer Rubrum, Cg, 1" Cal.	EACH	124.000	124.000
0240	632.0101	Trees (species) (size) (root) 03. Acer Saccharinum, Cg, 1" Cal.	EACH	124.000	124.000
0250	632.0101	Trees (species) (size) (root) 04. Alnus Incana, Cg, 1" Cal.	EACH	124.000	124.000
0260	632.0101	Trees (species) (size) (root) 05. Betula Nigra, Cg, 1" Cal.	EACH	124.000	124.000
0270	632.0101	Trees (species) (size) (root) 06. Betula Alleghaniensis, Cg, 1" Cal.	EACH	124.000	124.000
0280	632.0101	Trees (species) (size) (root) 07. Larix Laricina, Cg, 1" Cal.	EACH	124.000	124.000
0290	632.0101	Trees (species) (size) (root) 08. Quercus Bicolor, Cg, 1" Cal.	EACH	124.000	124.000
0300	632.0101	Trees (species) (size) (root) 09. salix Nigra, Cg, 1" Cal.	EACH	124.000	124.000
0310	632.0101	Trees (species) (size) (root) 10. ulmus Americana, Cg, 1" Cal.	EACH	124.000	124.000
0320	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	15.000	15.000
0330	633.5200	Markers Culvert End	EACH	4.000	4.000
0340	642.5201	Field Office Type C	EACH	1.000	1.000
0350	645.0120	Geotextile Fabric Type HR	SY	400.000	400.000
0360	650.6000	Construction Staking Pipe Culverts	EACH	4.000	4.000
0370	650.9910	Construction Staking Supplemental Control (project) 01. 1009-32-33	LS	1.000	1.000
0380	SPV.0060	Special 01. Boundary Marker	EACH	32.000	32.000
0390	SPV.0060	Special 02. Deep Marsh Root Stock/Seed	EACH	15,180.000	15,180.000
0400	SPV.0060	Special 03. ANTI-SEEP COLLAR	EACH	2.000	2.000
0410	SPV.0085	Special 01. Seeding Upland Buffer Mix	LB	150.000	150.000

DATE 18MAR15		E S T I M A T E O F Q U A N T I T I E S			
LINE		1009-32-33			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0420	SPV.0085	Special 02. Seeding Wet Meadow And Shallow Marsh Mix	LB	175.000	175.000
0430	SPV.0105	Special 01. In Line Control Structure	LS	1.000	1.000
0440	SPV.0120	Special 01. Water For Seeded Areas	MGAL	6,705.000	6,705.000
0450	SPV.0180	Special 01. Interlocking Concrete Block Revetment System	SY	407.000	407.000

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CLEARING & GRUBBING <table><tr><td></td><td>201.0115</td><td>201.0215</td></tr><tr><td></td><td>CLEARING</td><td>GRUBBING</td></tr><tr><td></td><td>ACRE</td><td>ACRE</td></tr><tr><td>LOCATION</td><td></td><td></td></tr><tr><td>PROJECT</td><td>0.09</td><td>0.09</td></tr><tr><td>TOTAL</td><td>0.09</td><td>0.09</td></tr></table>		201.0115	201.0215		CLEARING	GRUBBING		ACRE	ACRE	LOCATION			PROJECT	0.09	0.09	TOTAL	0.09	0.09	MARKERS <table><tr><td></td><td>SPV.0060.01</td><td>633.5200</td></tr><tr><td></td><td>BOUNDARY</td><td>MARKERS</td></tr><tr><td></td><td>MARKER</td><td>CULVERT END</td></tr><tr><td></td><td>EACH</td><td>EACH</td></tr><tr><td>LOCATION</td><td></td><td></td></tr><tr><td>PROJECT</td><td>32</td><td>4</td></tr><tr><td>TOTAL</td><td>32</td><td>4</td></tr></table>		SPV.0060.01	633.5200		BOUNDARY	MARKERS		MARKER	CULVERT END		EACH	EACH	LOCATION			PROJECT	32	4	TOTAL	32	4	BREAKER RUN <table><tr><td></td><td>311.0115</td></tr><tr><td></td><td>BREAKER</td></tr><tr><td></td><td>RUN</td></tr><tr><td></td><td>CY</td></tr><tr><td>LOCATION</td><td></td></tr><tr><td>SPILLWAY</td><td>65</td></tr><tr><td>PARKING</td><td>40</td></tr><tr><td>TOTAL</td><td>105</td></tr></table>		311.0115		BREAKER		RUN		CY	LOCATION		SPILLWAY	65	PARKING	40	TOTAL	105	CONSTRUCTION STAKING <table><tr><td></td><td>650.9910</td><td>650.6000</td></tr><tr><td></td><td>CONSTRUCTION</td><td>CONSTRUCTION</td></tr><tr><td></td><td>STAKING</td><td>STAKING</td></tr><tr><td></td><td>SUPPLEMENTAL</td><td>PIPE</td></tr><tr><td></td><td>CONTROL</td><td>CULVERTS</td></tr><tr><td></td><td>1009-32-33</td><td></td></tr><tr><td>LOCATION</td><td>LS</td><td>EACH</td></tr><tr><td>PROJECT</td><td>1</td><td>4</td></tr><tr><td>TOTAL</td><td>1</td><td>4</td></tr></table>		650.9910	650.6000		CONSTRUCTION	CONSTRUCTION		STAKING	STAKING		SUPPLEMENTAL	PIPE		CONTROL	CULVERTS		1009-32-33		LOCATION	LS	EACH	PROJECT	1	4	TOTAL	1	4	TRACKING PADS <table><tr><td></td><td>628.7560</td></tr><tr><td></td><td>TRACKING</td></tr><tr><td></td><td>PADS</td></tr><tr><td></td><td>EACH</td></tr><tr><td>LOCATION</td><td></td></tr><tr><td>PROJECT</td><td>2</td></tr><tr><td>TOTAL</td><td>2</td></tr></table>		628.7560		TRACKING		PADS		EACH	LOCATION		PROJECT	2	TOTAL	2							
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	628.1905	628.1910																																																																																																									
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	SPV.0120.01	632.9101																																																																																																									
	WATER	LANDSCAPE																																																																																																									
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PROJECT	6,705	15																																																																																																									
TOTAL	6,705	15																																																																																																									

TOPSOIL		SEEDING						EROSION CONTROL						
625.0500 SALVAGED TOPSOIL		630.0160 SEEDING MIXTURE NO.60	SPV.0060.02 DEEP MARSH ROOT STOCK /SEED	SPV.0085.01 SEEDING UPLAND BUFFER	SPV.0085.02 SEEDING WET MEADOW AND SHALLOW MARSH	627.0200		628.1504 SILT FENCE	628.1520 SILT FENCE MAINTENANCE	628.7570 ROCK BAGS	628.2008 EROSION MAT URBAN CLASS 1 TYPE B	628.7504 TEMPORARY DITCH CHECKS	645.0120 GEOTEXTILE FABRIC TYPE HR	
LOCATION	SY	LOCATION	LB	EACH	MIX LB	MIX LB	MULCHING SY	LOCATION	LF	LF	EACH	SY	LF	SY
PROJECT	222,000	PROJECT	460	15,180	150	175	124,300	PROJECT	10,650	1,065	375	87,374	50	400
TOTAL	222,000	TOTAL	460	15,180	150	175	124,300	TOTAL	10,650	1,065	375	87,374	50	400

DRAINAGE					
	SPV.0180.01 INTERLOCKING CONCRETE BLOCK REVTMENT SYSTEM	SPV.0105.01 IN LINE CONTROL STRUCTURE	SPV.0060.03 ANTI- SEEP COLLAR	522.0112 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH
LOCATION	SY	LS	EACH	LF	EACH
PROJECT	407	1	2	55	2
TOTAL	407	1	2	55	2

TREES										
	632.0101.01 TREES ACER NEGUNDO CG 1" CAL.	632.0101.02 TREES ACER RUBRUM CG 1" CAL.	632.0101.03 TREES ACER SACCHARINUM CG 1" CAL.	632.0101.04 TREES ALNUS INCANA CG 1" CAL.	632.0101.05 TREES BETULA NIGRA CG 1" CAL.	632.0101.06 TREES BETULA ALLEGHANIENSIS CG 1" CAL.	632.0101.07 TREES LARIX LARICINA CG 1" CAL.	632.0101.08 TREES QUERCUS BICOLOR CG 1" CAL.	632.0101.09 TREES SALIX NIGRA CG 1" CAL.	632.0101.10 TREES ULMUS AMERICANA CG 1" CAL.
LOCATION	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
PROJECT	124	124	124	124	124	124	124	124	124	124
TOTAL	124	124	124	124	124	124	124	124	124	124

EARTHWORK																	
Division	From/To Station	Location	Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Marsh Excavation (6)	Reduced Marsh In Fill (8)	Reduced EBS In Fill (9)	Expanded Marsh Backfill (10)	Expanded EBS Backfill (11)	Expanded Rock (12)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Comment:
			Cut (2)	EBS Excavation (3)			(Item #205.0500)	Factor 0.60	Factor 0.80	Factor 1.50	Factor 1.30	Factor 1.10		Factor 1.20			
	PROJECT		119100	0	0	119100	0	0	0	0	0	0	0	0	119100		
Division 1 Subtotal			119100	0	0	119100	0	0	0	0	0	0	0	0	119100		
Grand Total			119100	0	0	119100	0	0	0	0	0	0	0	0	119100	0	
				Total Common Excavation (CY)		119100											

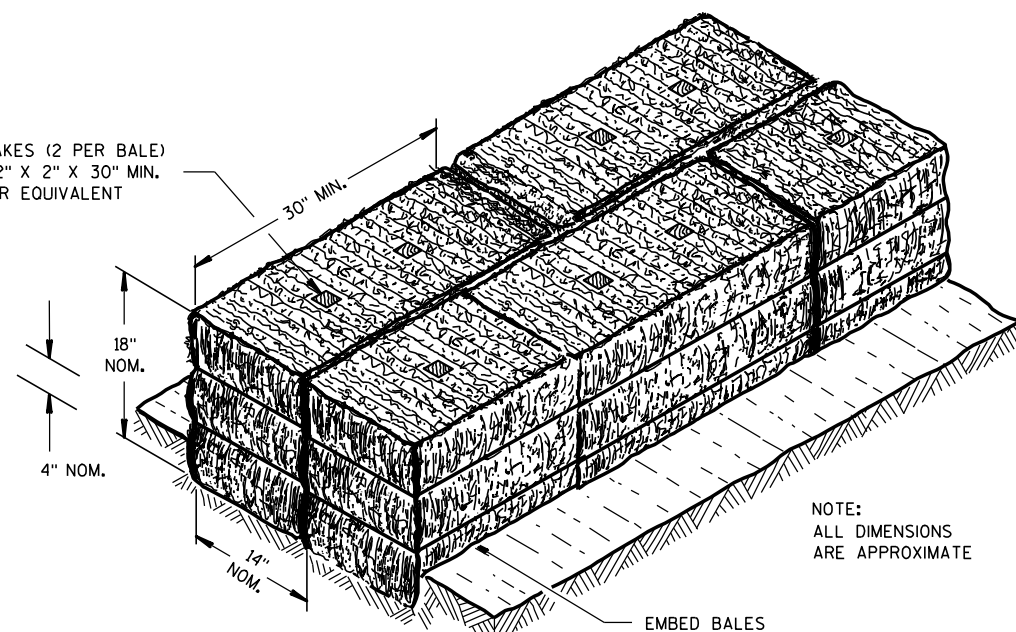
ALL QUANTITIES ARE CATEGORY 0010 UNLESS NOTED

PROJECT NO:1009-32-33	HWY:NON-HIGHWAY	COUNTY:BROWN	MISCELLANEOUS QUANTITIES	SHEET	E
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Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END

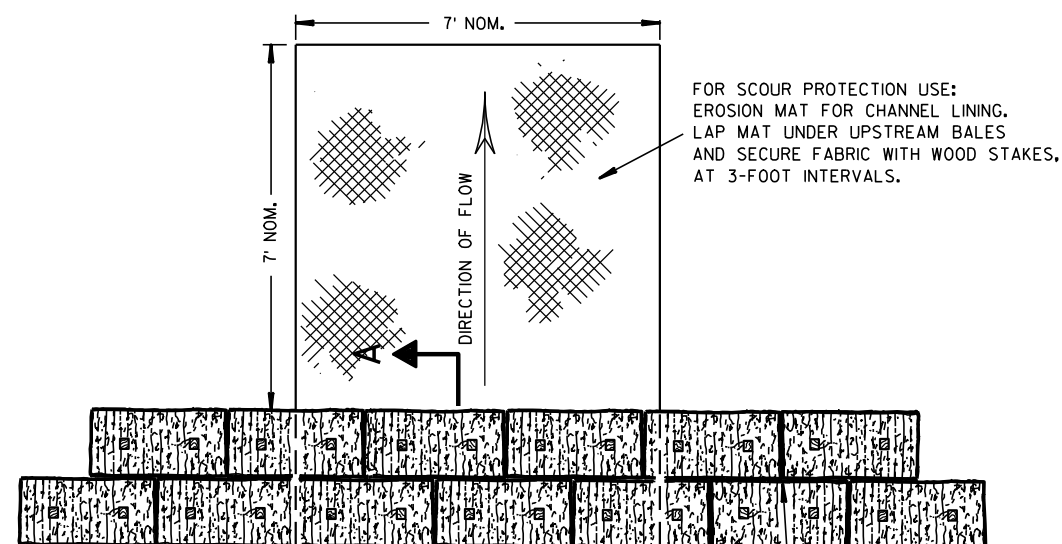
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

SECTION A-A

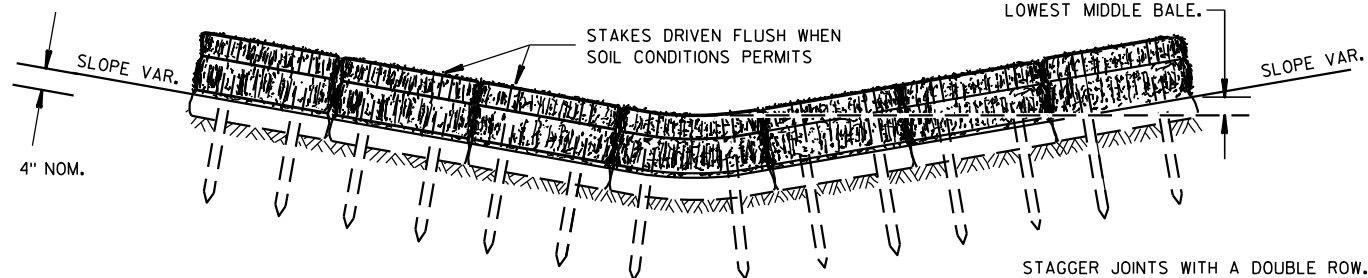


FOR SCOUR PROTECTION USE:
EROSION MAT FOR CHANNEL LINING.
LAP MAT UNDER UPSTREAM BALES
AND SECURE FABRIC WITH WOOD STAKES,
AT 3-FOOT INTERVALS.

PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



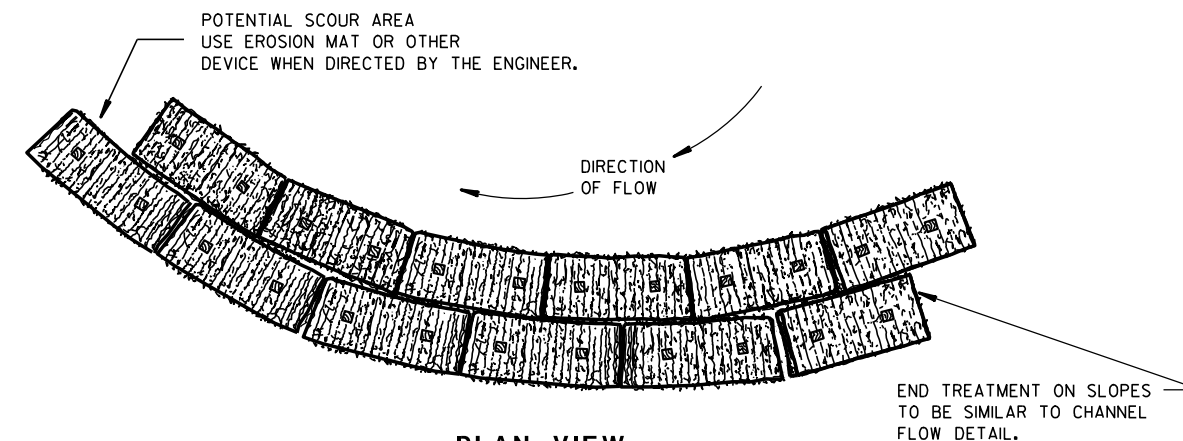
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

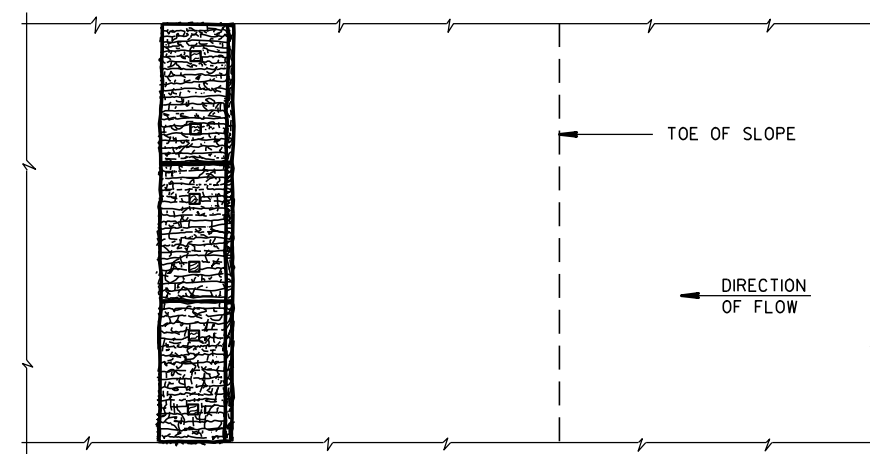
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

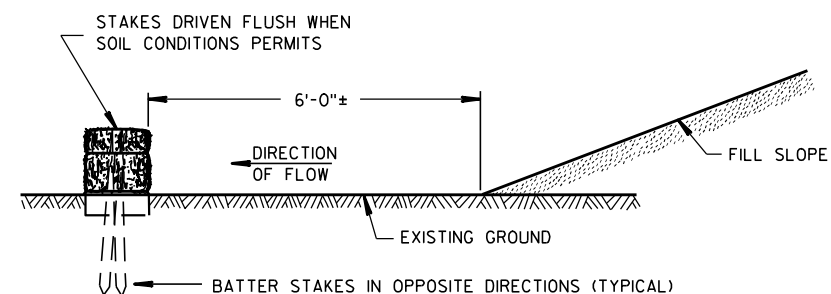


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

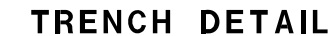
6/04/02
DATE

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

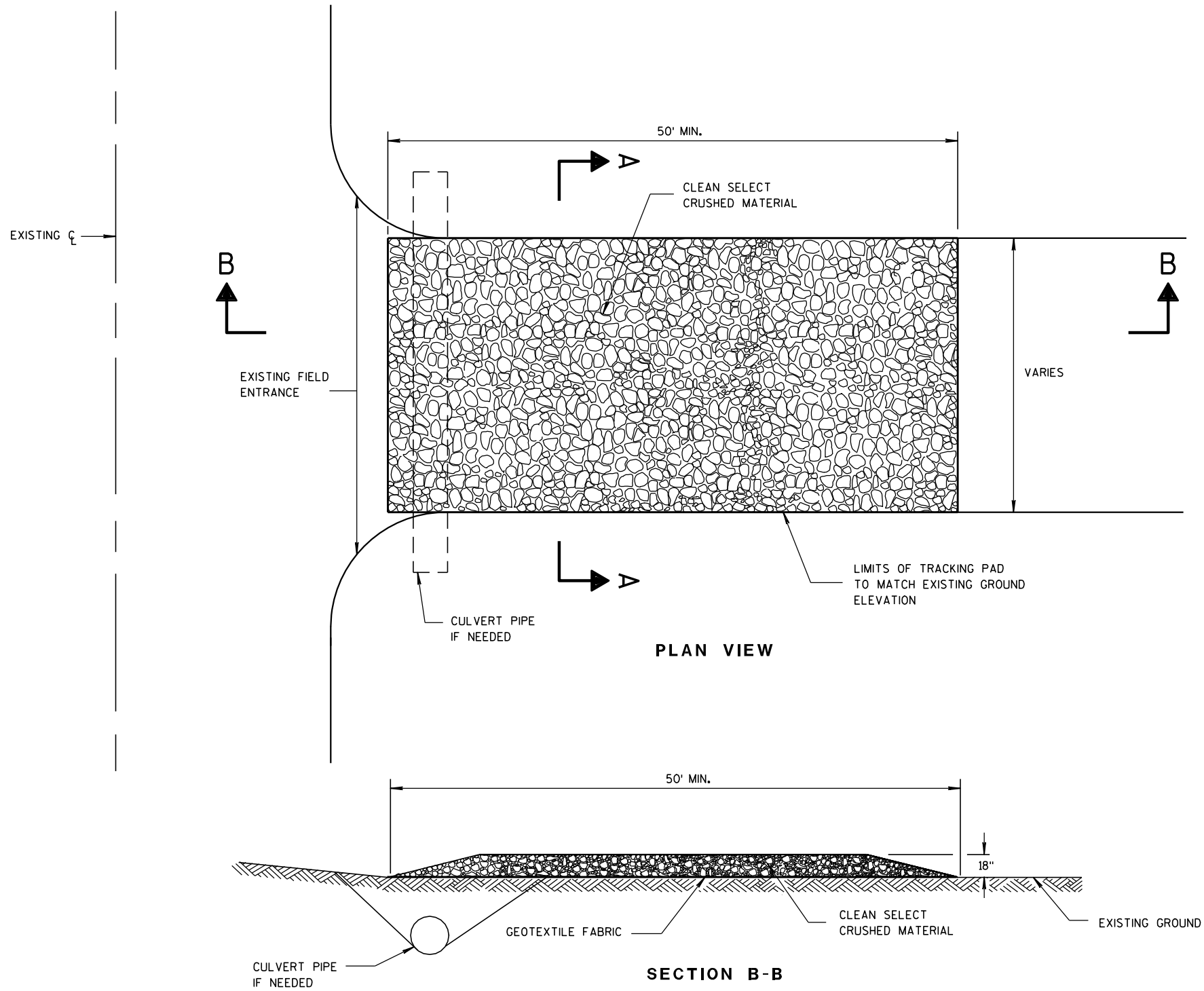
FHWA



- 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 1½" X 1½" 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.



SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED <u>4-29-05</u> <u>DATE</u>	<u>/S/ Beth Canestra</u> CHIEF ROADWAY DEVELOPMENT ENGINEER



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.

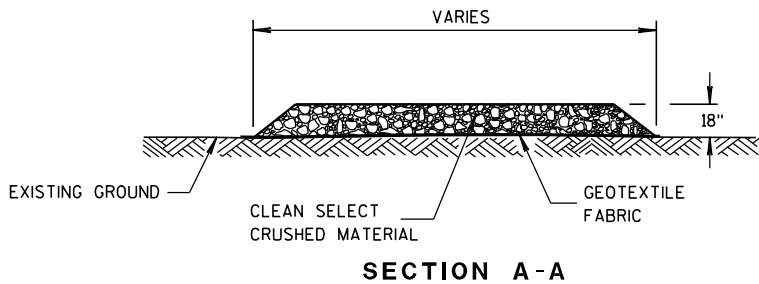
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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.



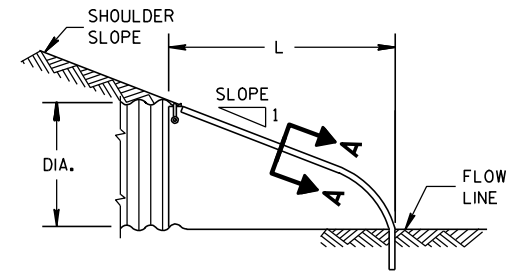
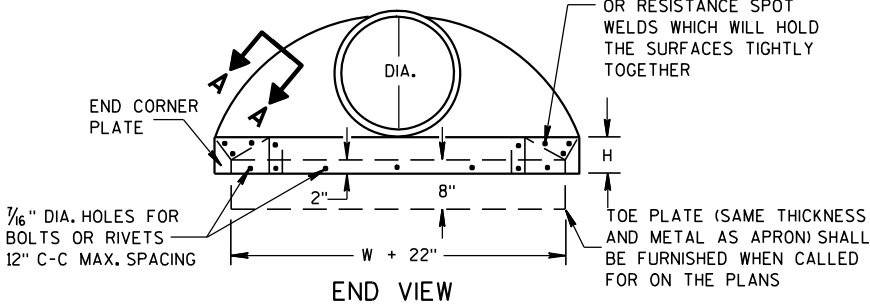
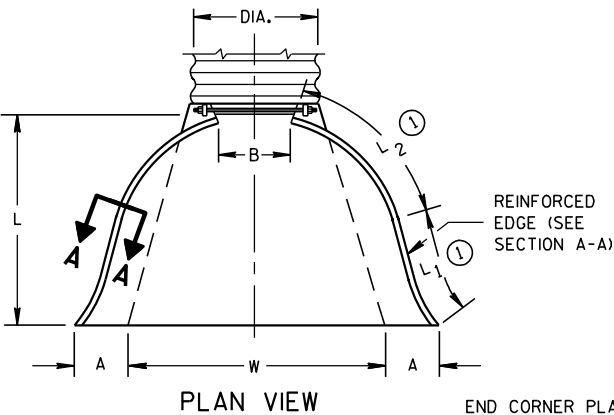
TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ①	L ₂ ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.	

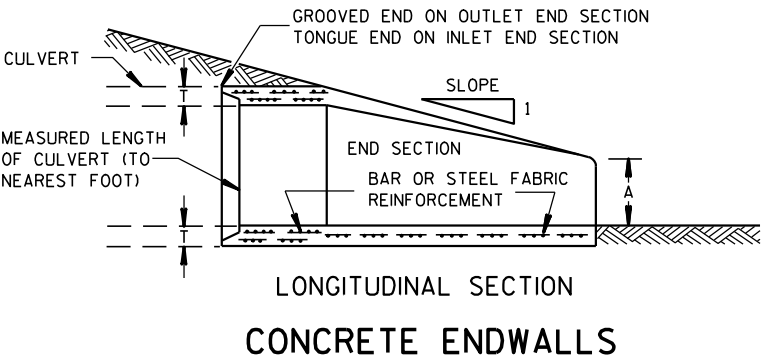
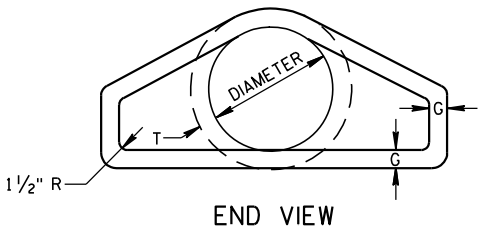
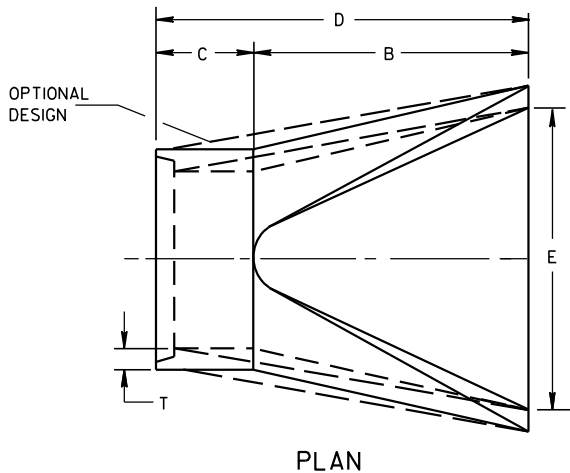
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

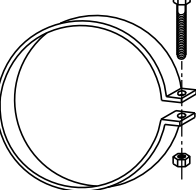
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ² / ₂	9	27	46	73	36	2 ² / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43 ¹ / ₂	30	73 ¹ / ₂	48	3	3 to 1
27	3 ¹ / ₄	10 ¹ / ₂	49 ¹ / ₂	24	73 ¹ / ₂	54	3 ¹ / ₄	3 to 1
30	3 ¹ / ₂	12	54	19 ³ / ₄	73 ¹ / ₂	60	3 ¹ / ₂	3 to 1
36	4	15	63	34 ³ / ₄	97 ³ / ₄	72	4	3 to 1
42	4 ¹ / ₂	21	63	35	98	78	4 ¹ / ₂	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 ¹ / ₂	27	65	^{**} 33 ¹ / ₄ - ^{**} 35	^{**} 98 ¹ / ₄ - ^{**} 100	90	5 ¹ / ₂	2 ⁵ / ₈ to 1
60	6	^{**} 30- ^{**} 35	60	39	99	96	5	2 to 1
66	6 ¹ / ₂	^{**} 24- ^{**} 30	^{**} 72- ^{**} 78	^{**} 21- ^{**} 27	99	102	5 ¹ / ₂	2 to 1
72	7	^{**} 24- ^{**} 36	78	21	99	108	6	2 to 1
78	7 ¹ / ₂	^{**} 24- ^{**} 36	78	21	99	114	6 ¹ / ₂	2 to 1
84	8	36	90 ¹ / ₂	21	111 ¹ / ₂	120	6 ¹ / ₂	1 ¹ / ₂ to 1
90	8 ¹ / ₂	41	87 ¹ / ₂	24	111 ¹ / ₂	132	6 ¹ / ₂	1 ¹ / ₂ to 1

*MINIMUM
**MAXIMUM

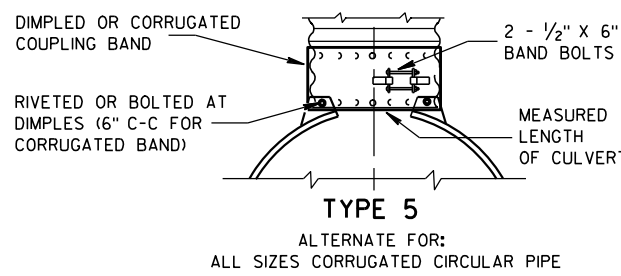
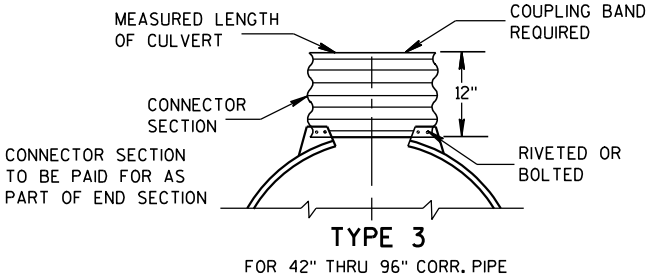
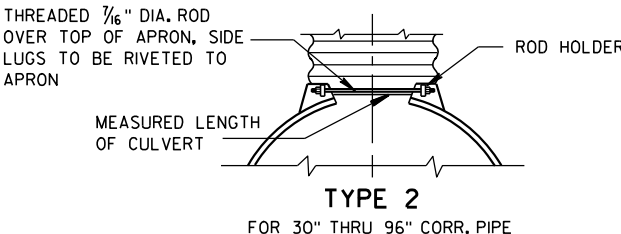
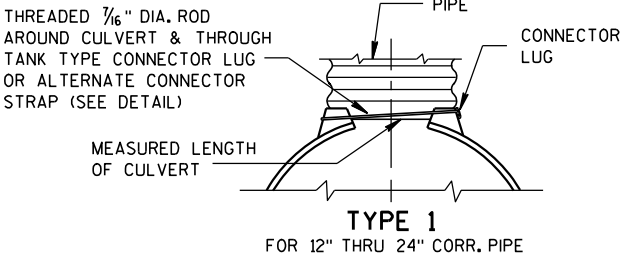


LONGITUDINAL SECTION
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



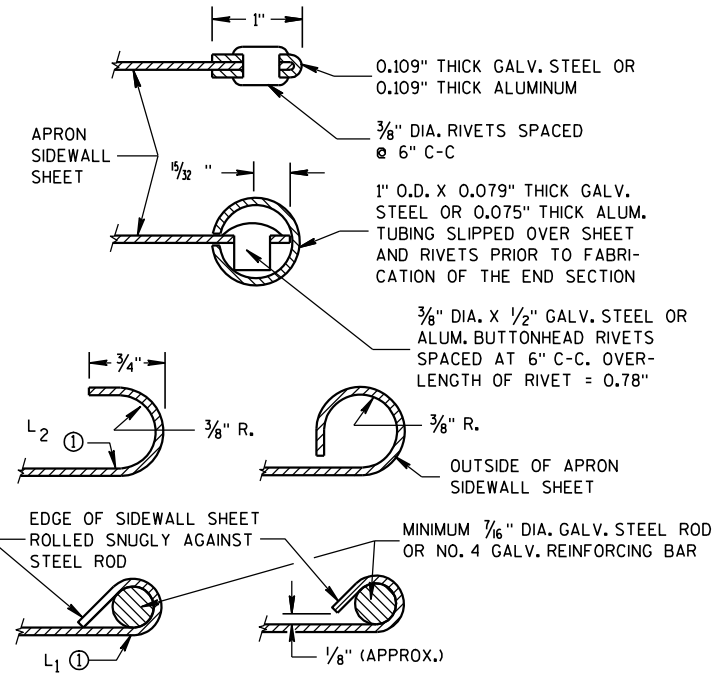
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

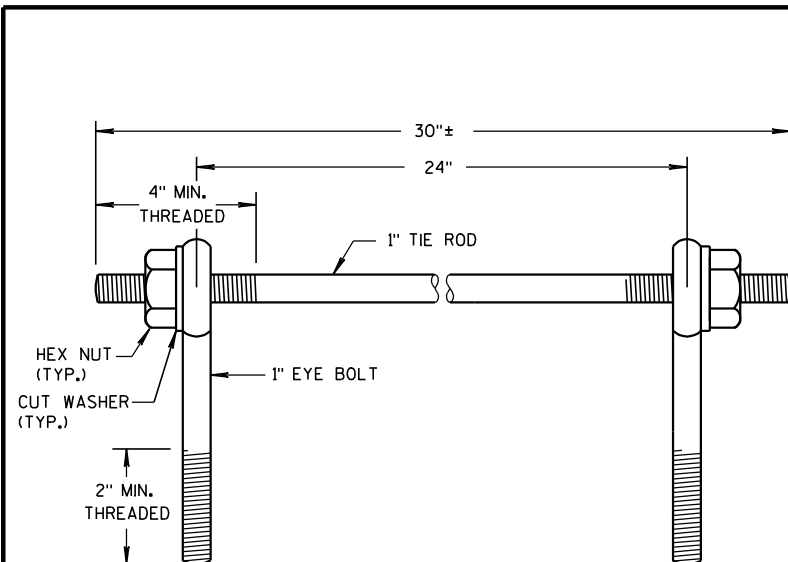
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

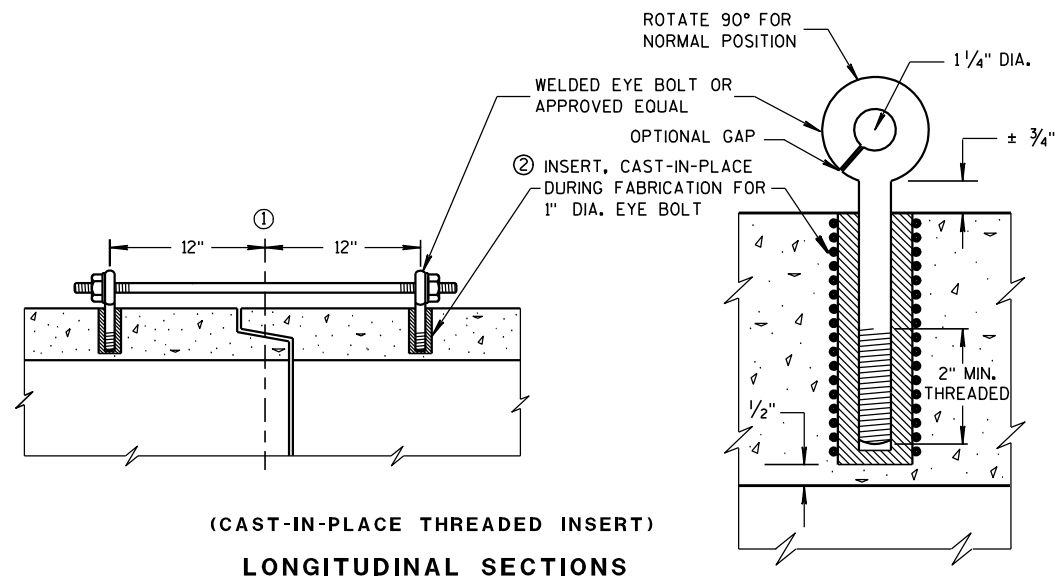
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

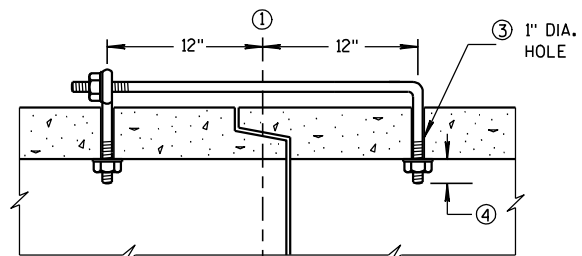
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

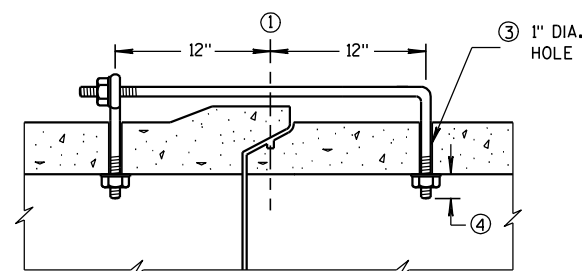
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN $\frac{1}{2}$ INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

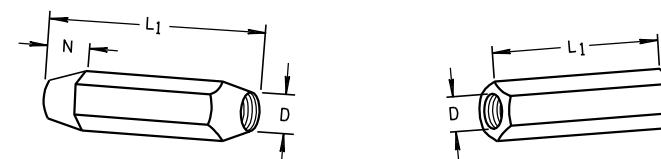
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

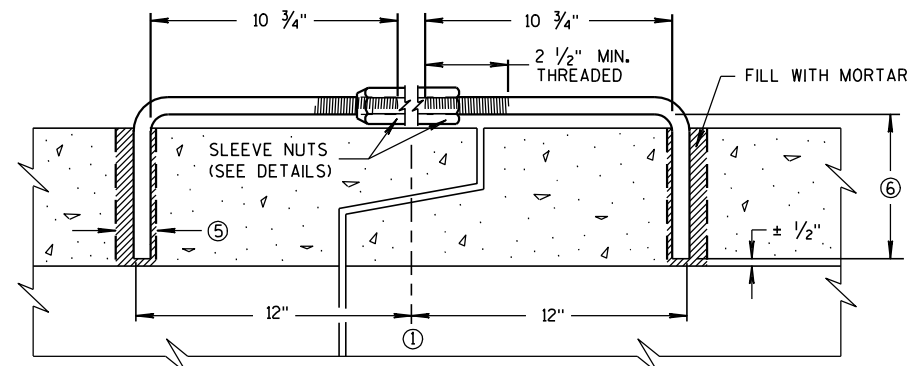


TAPERED

PLAIN

RIGHT AND LEFT THREADS

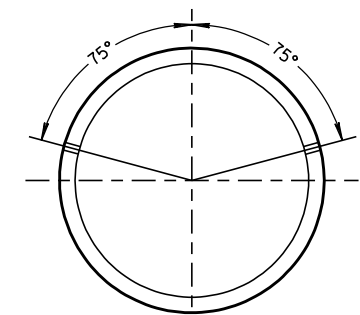
SLEEVE NUTS



LONGITUDINAL SECTION

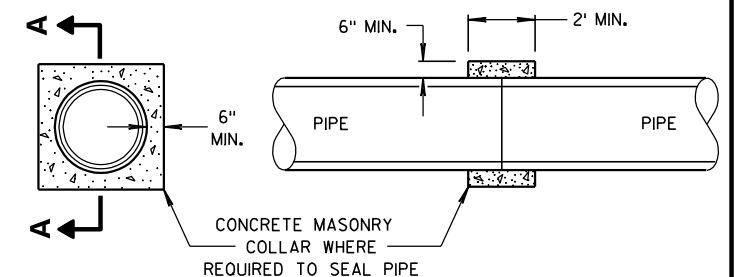
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE
PIPE AND CONCRETE
COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

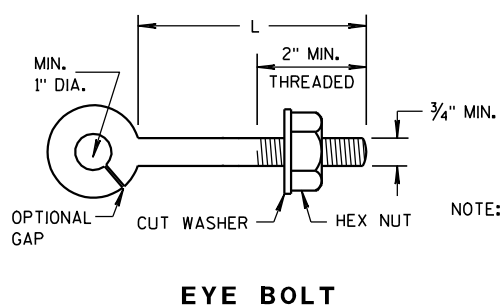
APPROVED

6/5/2012

DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

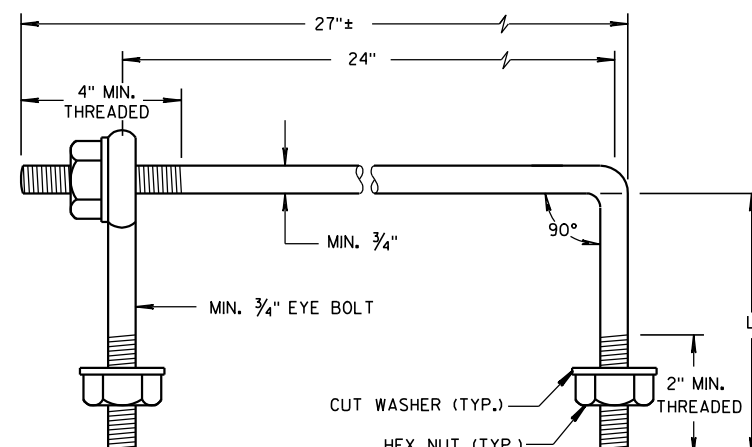


EYE BOLT

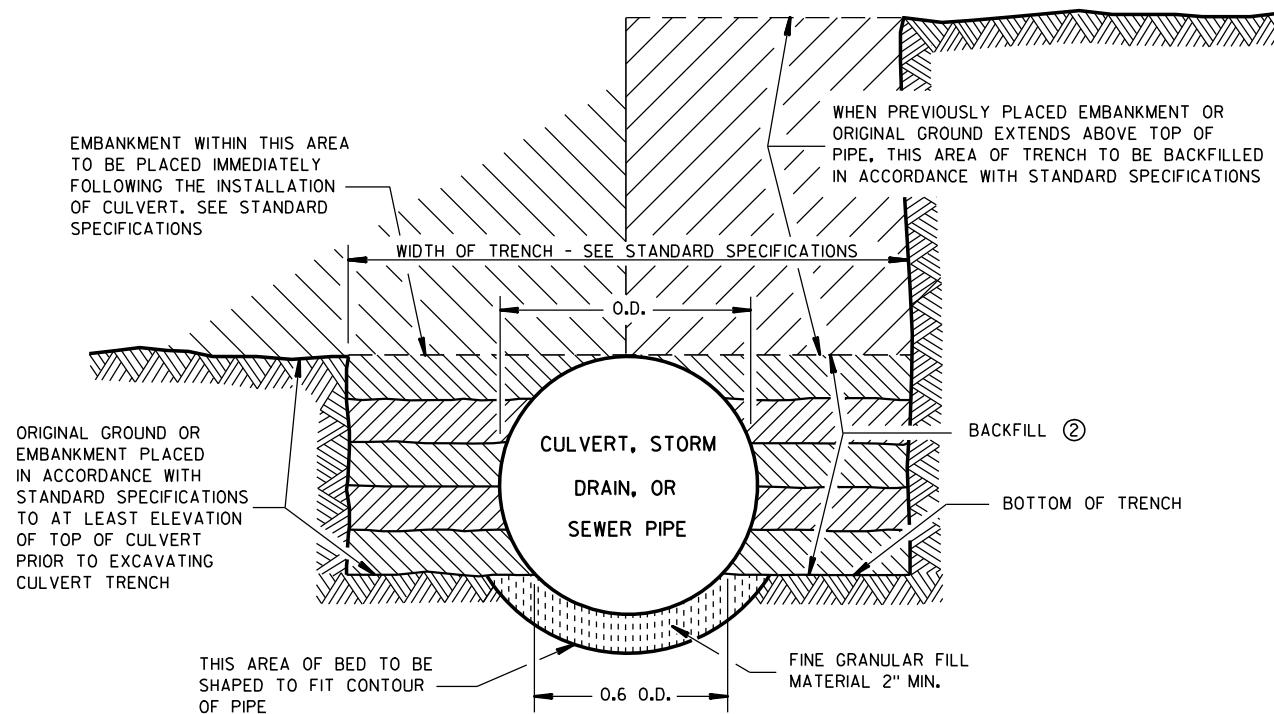
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

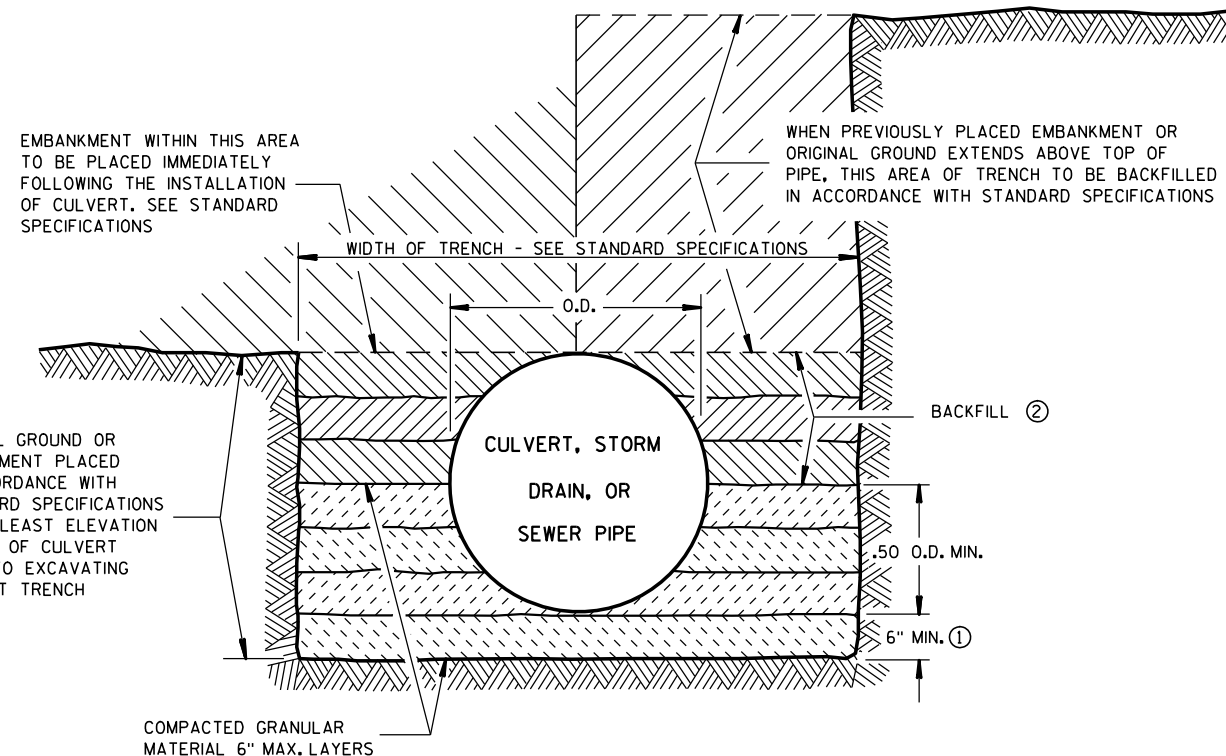
EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



EYE BOLT AND TIE ROD



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



GRANULAR FOUNDATION

GENERAL NOTES

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

THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

- ① WHERE ROCK, HARD PAN OR FRAGMENTED MATERIAL IS ENCOUNTERED, THE TRENCH SHALL BE EXCAVATED BELOW THE BOTTOM OF THE PIPE AN AMOUNT EQUAL TO $\frac{1}{2}$ INCH PER FOOT OF PROPOSED EMBANKMENT ABOVE THE TOP OF THE PIPE, BUT NOT LESS THAN 6 INCHES.
- ② TRENCH SHALL BE BACKFILLED AS REQUIRED BY STANDARD SPECIFICATIONS; SECTION 520 FOR PIPE CULVERTS AND SECTION 607 FOR STORM SEWERS.

CLASS "B" BEDDING

CLASS "B" BEDDING FOR
CULVERT PIPE OR STORM SEWER

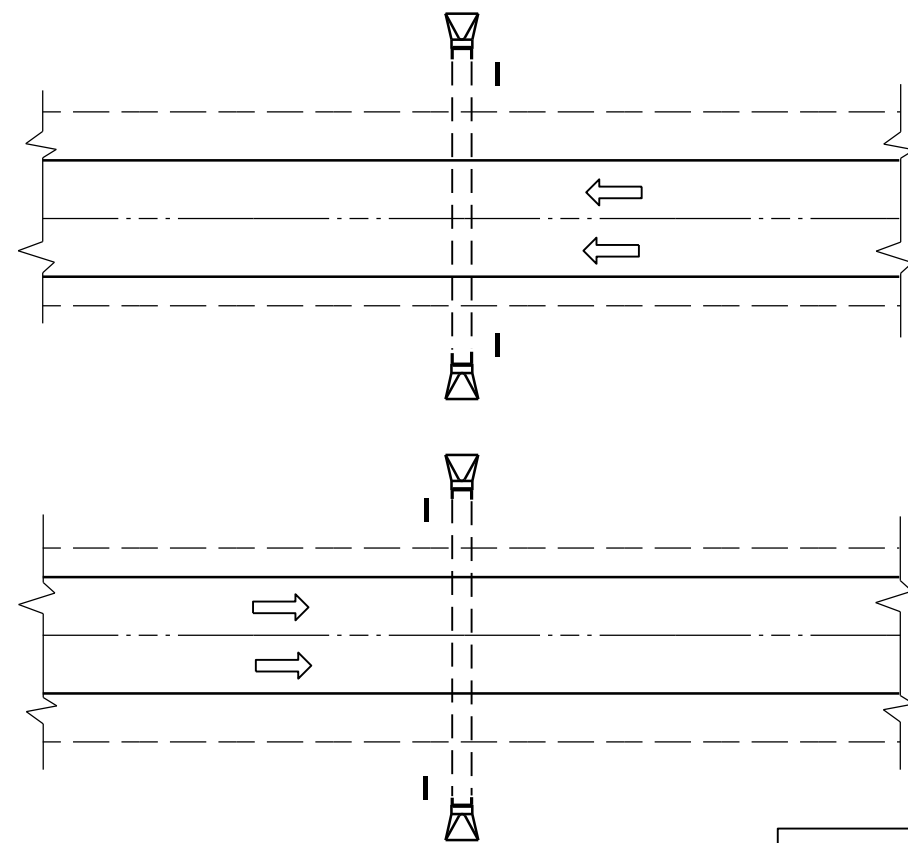
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

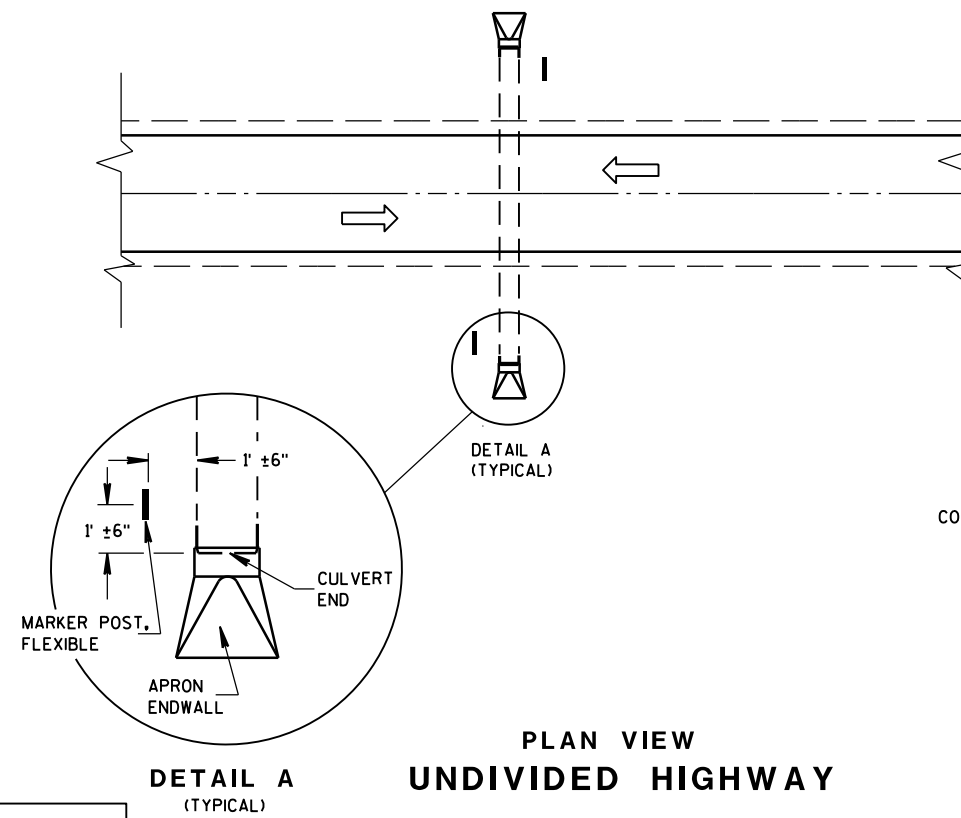
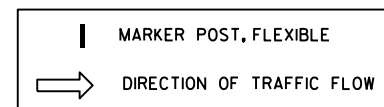
4/7/83
DATE

/S/ D.L. Strand
STATE DESIGN ENGINEER FOR HWYS

FHWA



PLAN VIEW
DIVIDED HIGHWAY

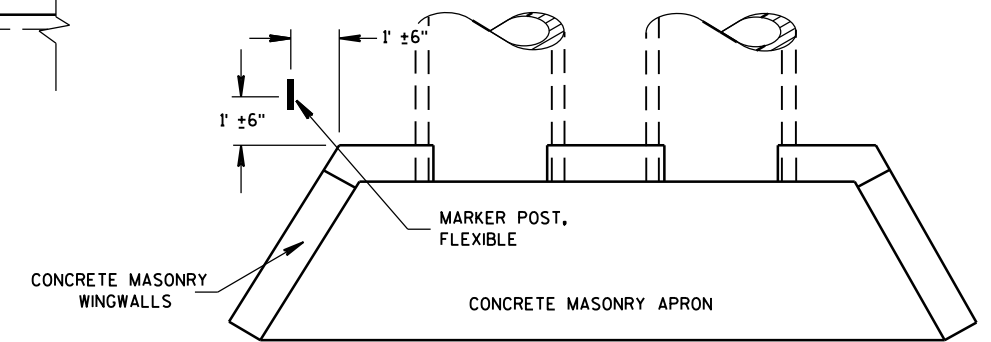


PLAN VIEW
UNDIVIDED HIGHWAY

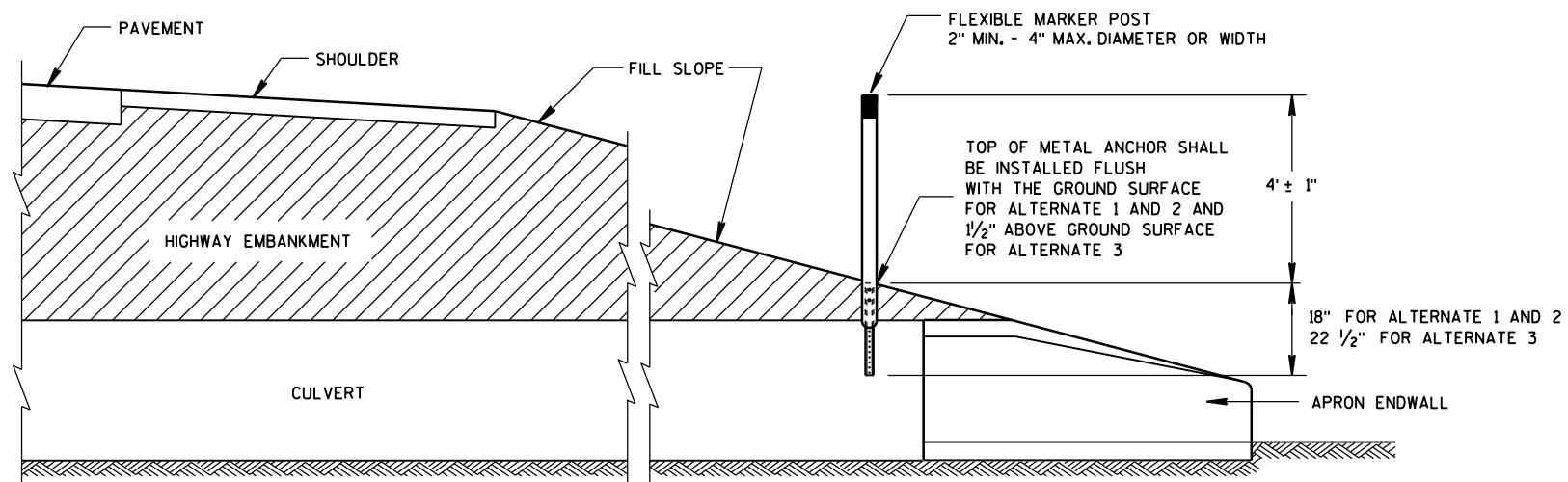
FLEXIBLE MARKER POST LOCATION

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.



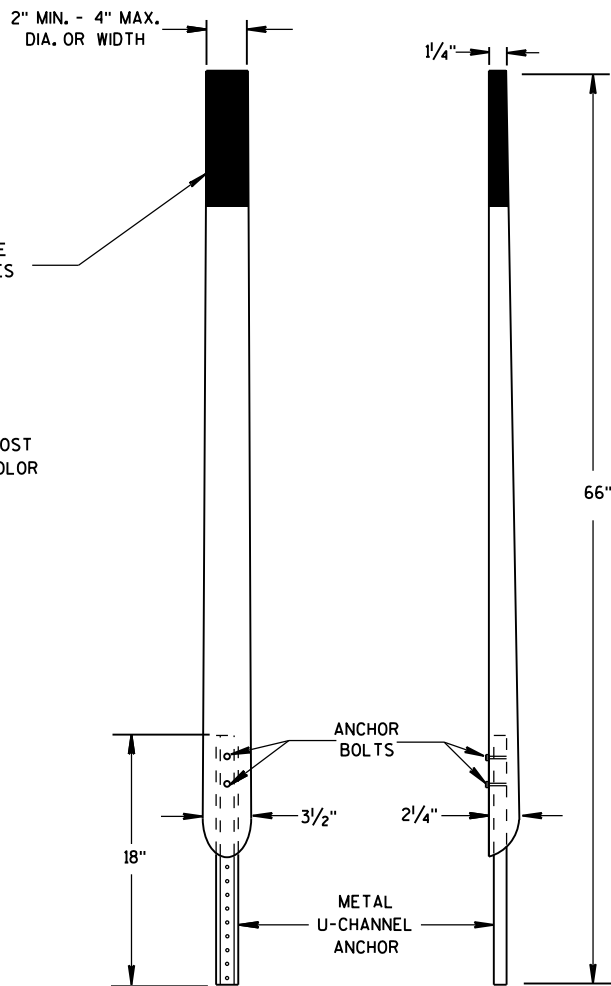
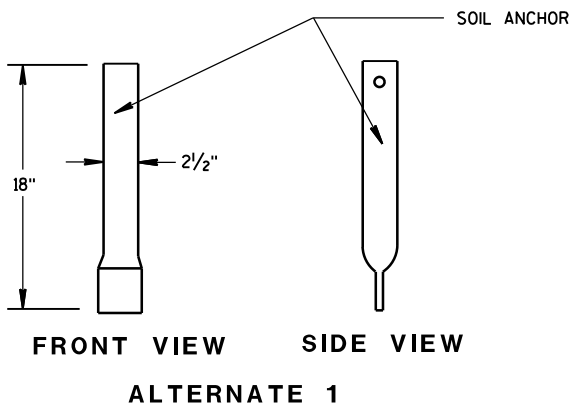
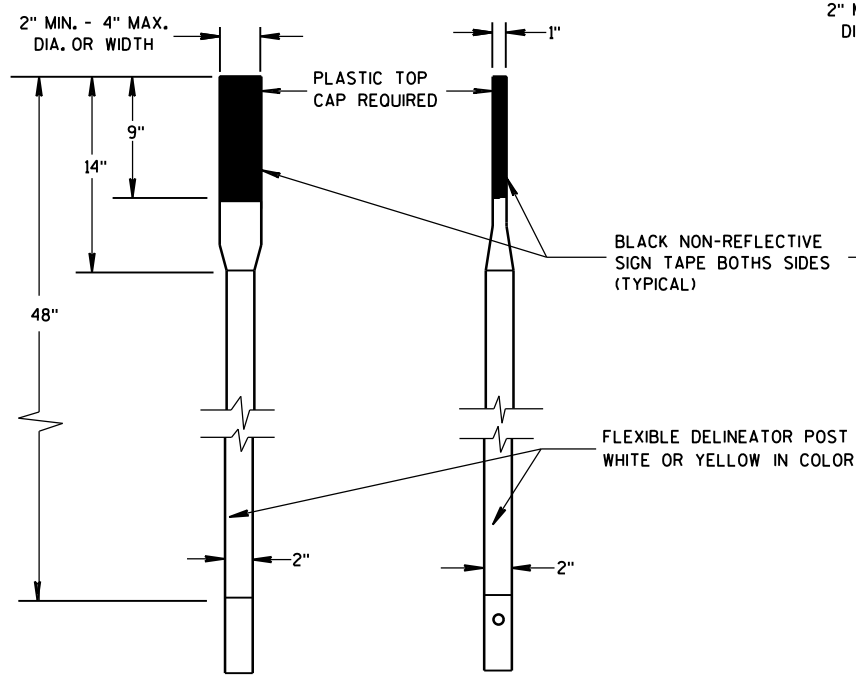
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

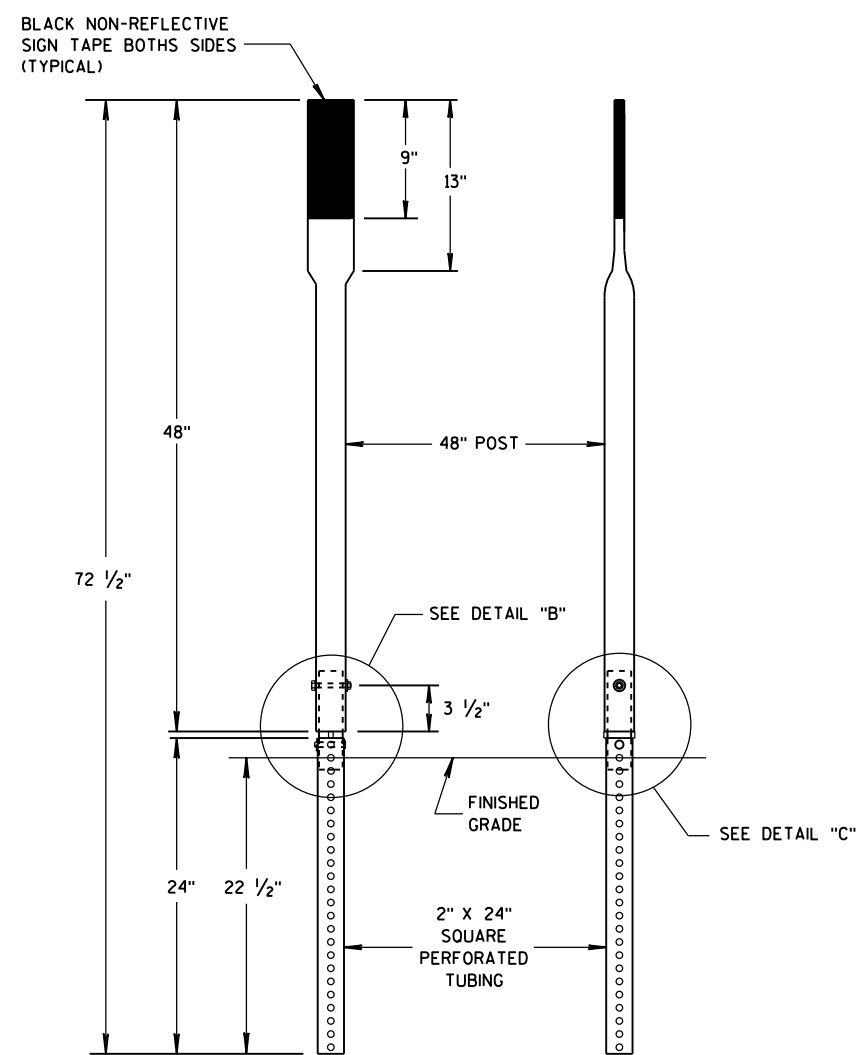
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

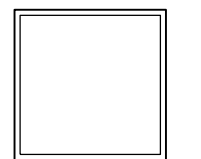


FRONT VIEW SIDE VIEW
ALTERNATE 2

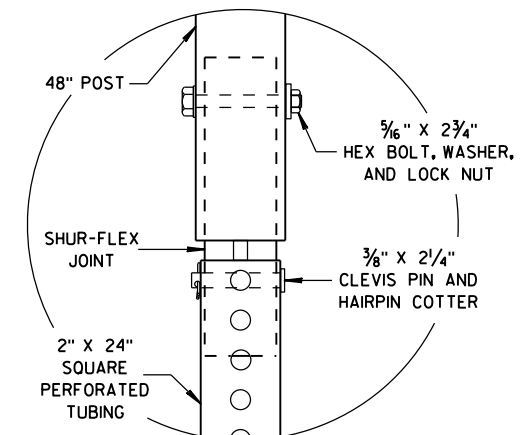
FLEXIBLE MARKER POSTS



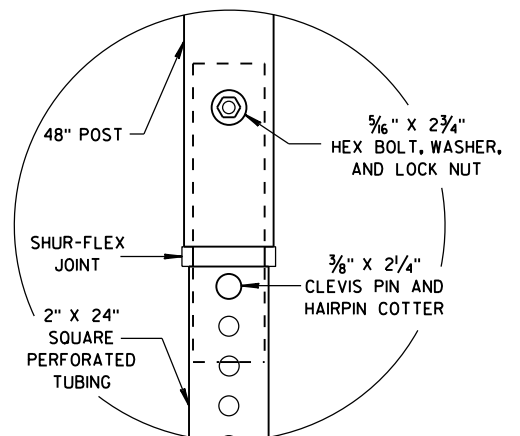
FRONT VIEW SIDE VIEW
ALTERNATE 3



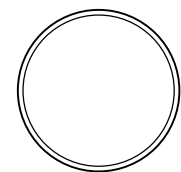
SECTION C-C



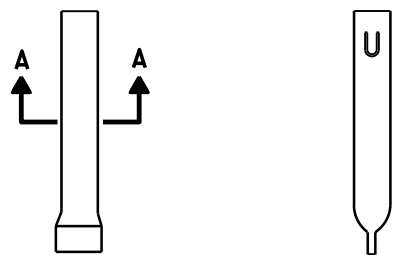
DETAIL B



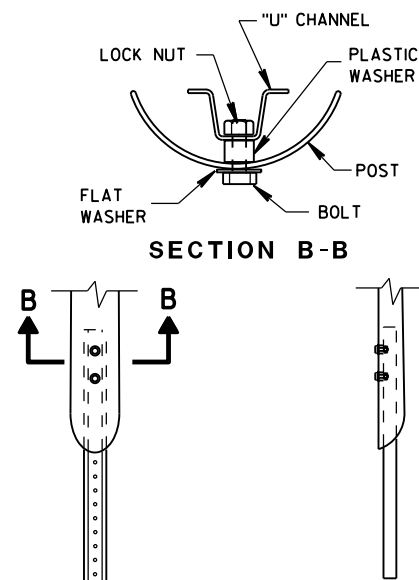
DETAIL C



SECTION A-A

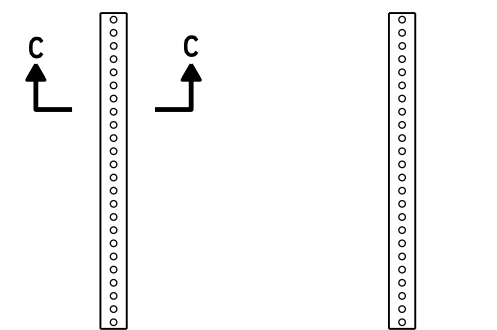


FRONT VIEW SIDE VIEW
ALTERNATE 1



FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE MARKER POST ANCHORS

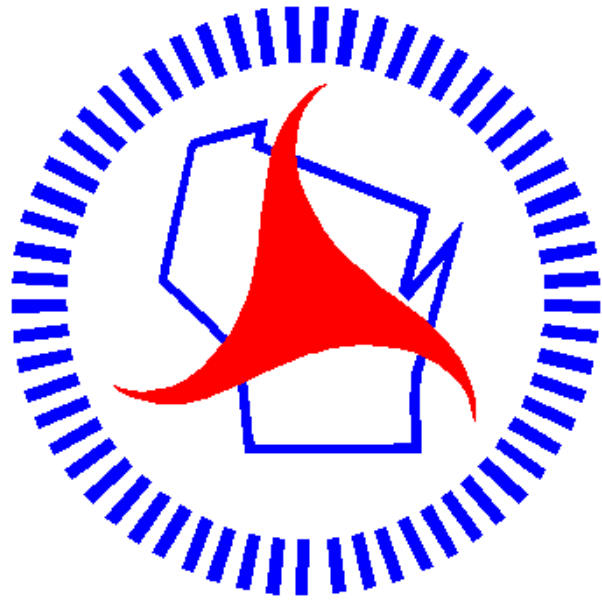


FRONT VIEW SIDE VIEW
ALTERNATE 3

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>