RHI

APR 2016

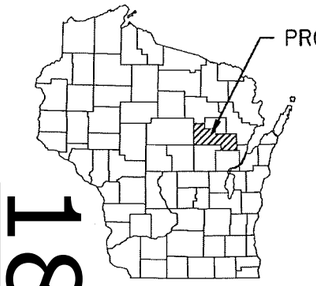
PROJECT ID: 1058-20-71

WITH: N/A

COUNTY: SHAWANO

ORDER OF SHEETS

TOTAL SHEETS = 32



18

DESIGN DESIGNATION

A.A.D.T.	2016	= 9,300
A.A.D.T.	2036	= 12,500
D.H.V.		= 1,500
D.D.		= 60/40
T.		= 8.8%
DESIGN SPEED		= 70 MPH
ESALS		= 3,518,800

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 (300'EW)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WITTENBERG - SHAWANO

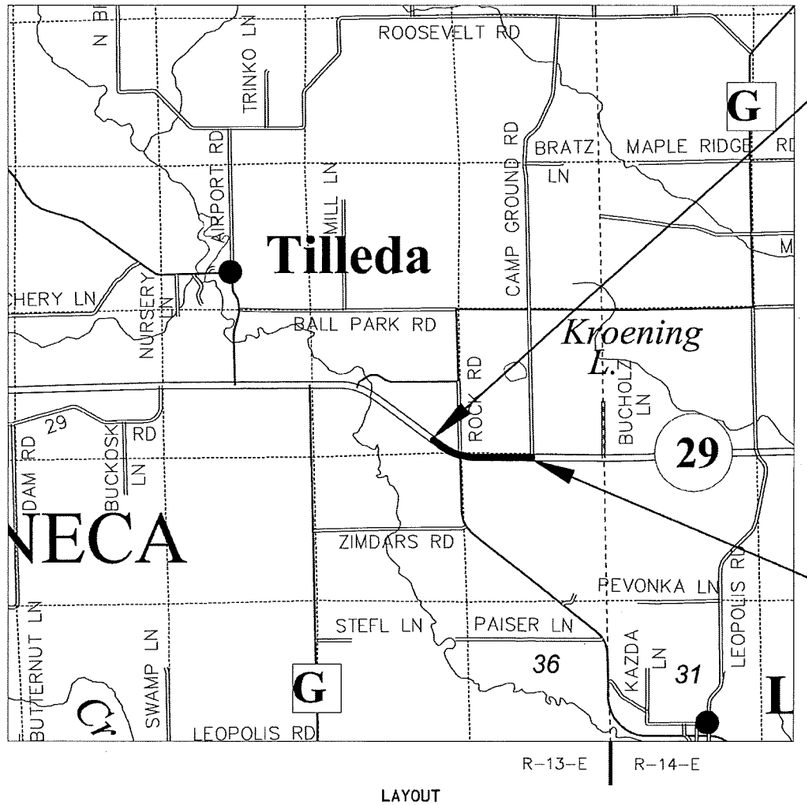
CTH D TO CAMPGROUND ROAD

STH 29

SHAWANO COUNTY

STATE PROJECT NUMBER
1058-20-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1058-20-71	WISC 2016102	1



BEGIN PROJECT 1058-20-71
STA 126+14.03
Y = 278,064.48
X = 789,212.26

END PROJECT 1058-20-71
STA 162+30.25
Y = 277,381.53
X = 792,663.64

LAYOUT SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.685 MILES

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), SHAWANO COUNTY, NAD 1983 (2011). ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (2012).

ORIGINAL PLAN PREPARED BY

BECHER HOPPE
330 Fourth Street • PO Box 8000
Wausau, WI • 54402-8000
715.845.8000 • Fax 715.845.8008
becherhoppe.com

WISCONSIN SEAN M. SPROMBERG E-37771-008 SCHOFIELD, WI PROFESSIONAL ENGINEER

10-15-2015 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	BECHER-HOPPE ASSOCIATES, INC.
Designer	BECHER-HOPPE ASSOCIATES, INC.
Project Manager	DANIEL ERVA, PE
Regional Examiner	CHERYL SIMON, PE
Regional Supervisor	MIKE WENDT, PE

APPROVED FOR THE DEPARTMENT
DATE: 10/16/15 Michael B Wendt, PE (Signature)

E

GENERAL NOTES

BEARINGS SHOWN ON THE PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES. THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

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

THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN IN THE PLANS, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE ENGINEER SHALL ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES.

SECTION 2 ORDER

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 19.9 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.8 ACRES

UTILITIES

COMMUNICATION
FRONTIER COMMUNICATIONS
26 W 12TH ST
CLINTONVILLE, WI 54929
JAMES JASKOLSKI
PHONE: (715) 823-1227
james.jaskolski@ftr.com

ELECTRIC
ALLIANT ENERGY
SUITE 1000
4902 N BILTMORE LN
MADISON, WI 53718
JASON HOGAN
PHONE: (608) 458-4871
MOBILE: (608) 395-7395
jasonhogan@alliantenergy.com

DNR CONTACT

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
JIM DOPERALSKI
PHONE: (920) 662-5119
james.doperalski@wisconsin.gov

2

CTH G

CTH G

KROENING LAKE

N

EXISTINGMAINTENANCE CROSSOVER (TO REMAIN)

110

STH 29 WB (CTH D)

STH 29 EB (CTH D)

120

EXISTING MAINTENANCE CROSSOVER (TO REMAIN)

ROCK RD

CAMPGROUND RD

BEGIN PROJECT
STA 126+14.03

Y = 278,064.48
X = 789,212.26

130

140

STH 29

150

160

170

180

EXISTING MAINTENANCE CROSSOVER (TO REMAIN)

CTH D

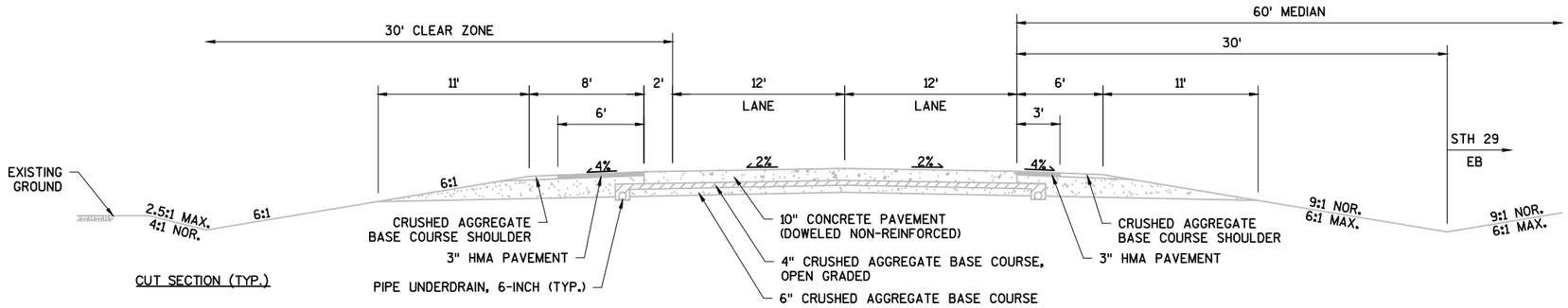
END PROJECT
STA 162+30.25

Y = 277,381.53
X = 792,663.64

NORTH BRANCH EMBARRASS RIVER

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	PROJECT OVERVIEW	SHEET 3	E

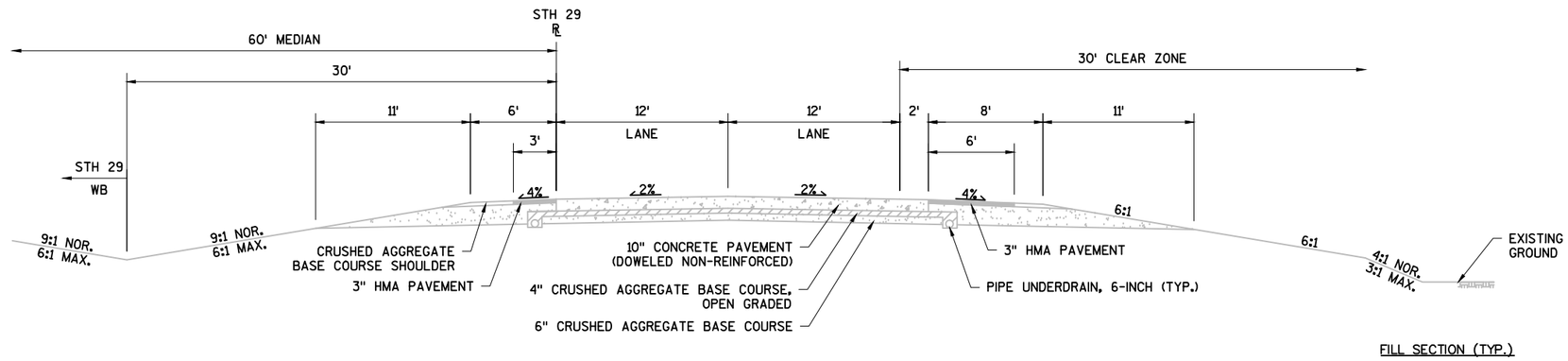
2



CUT SECTION (TYP.)

EXISTING TYPICAL SECTION - STH 29 WB

STATION 126+14.03 – STATION 162+30.25



FILL SECTION (TYP.)

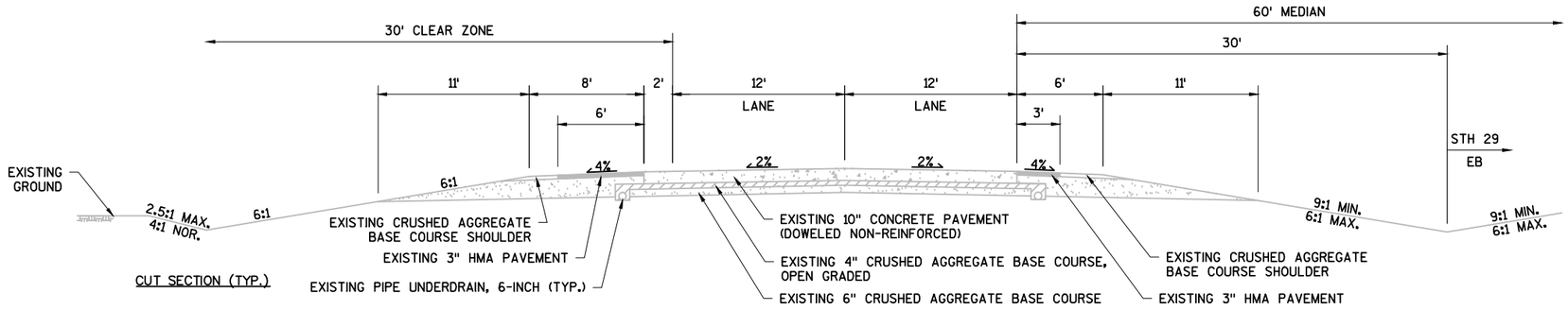
EXISTING TYPICAL SECTION - STH 29 EB

STATION 126+14.03 – STATION 162+30.25

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	TYPICAL SECTIONS	SHEET	E

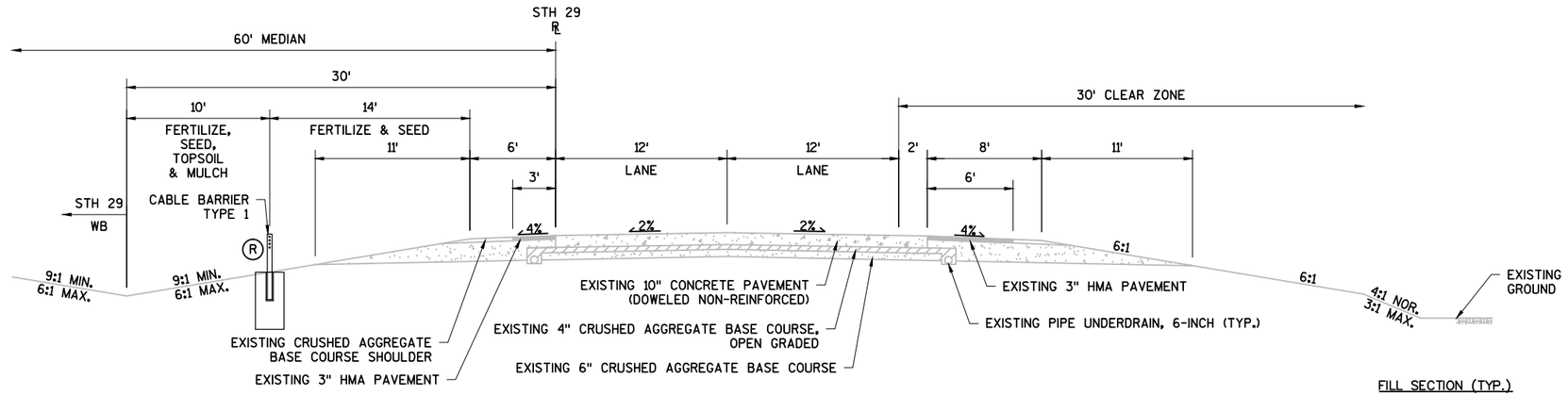
FILE NAME : P:\2015\2015.045 - WISDOT NCR - STH 29 CABLE GUARD\10582071\SHEETSPLAN\020301-TS.DWG PLOT DATE : 10/22/2015 10:19 AM PLOT BY : CHAD D. GRUNDEMANN PLOT NAME :
WISDOT/CADDS SHEET 42

2



FINISHED TYPICAL SECTION - STH 29 WB

STATION 126+14.03 – STATION 162+30.25

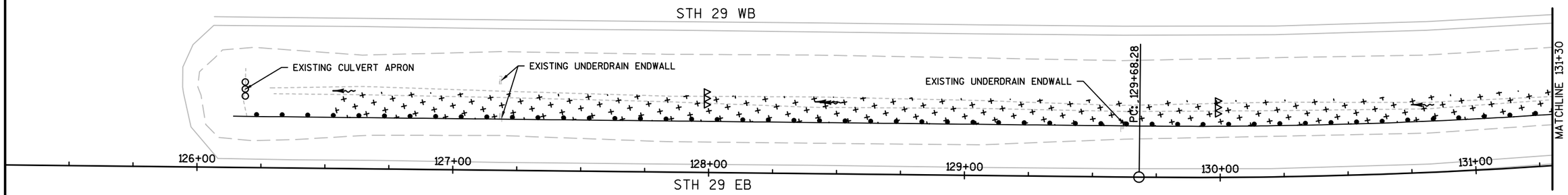


FINISHED TYPICAL SECTION - STH 29 EB

STATION 126+14.03 – STATION 162+30.25

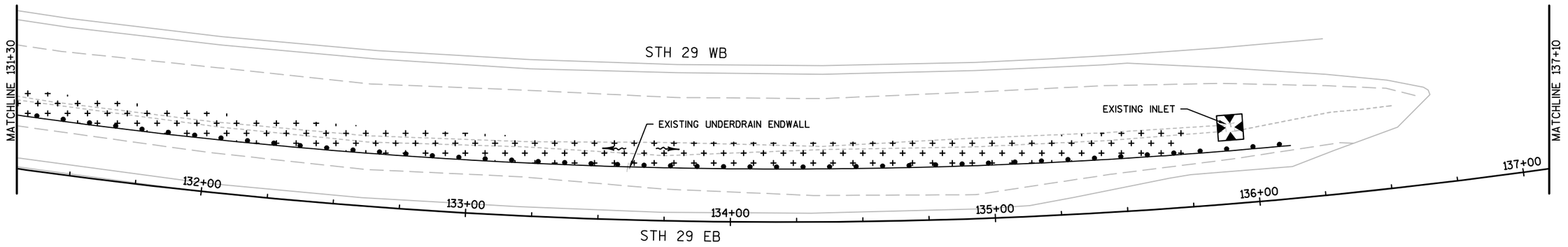
Ⓡ CABLE BARRIER TYPE 1 ON EB SIDE
STA 126+14.03 - 136+13.42
STA 137+93.77 - 162+30.25

2



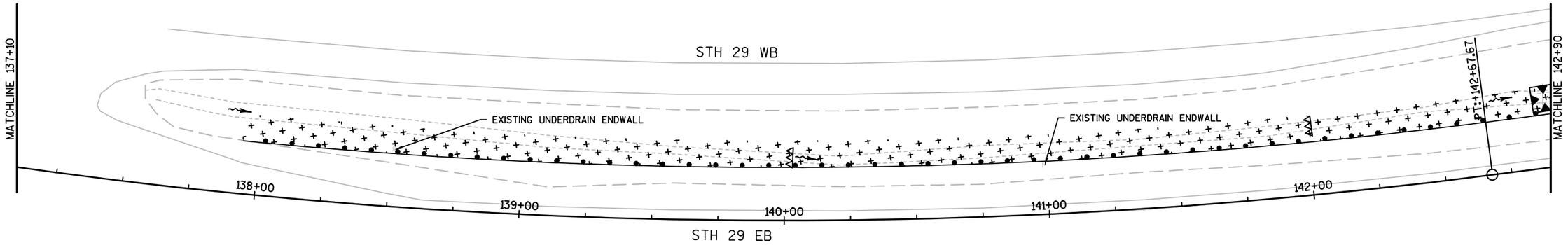
LEGEND

- TOPSOIL, SEED, FERTILIZER AND MULCH
- TEMPORARY DITCH CHECKS
- FLOW DIRECTION
- CULVERT PIPE CHECKS
- INLET PROTECTION



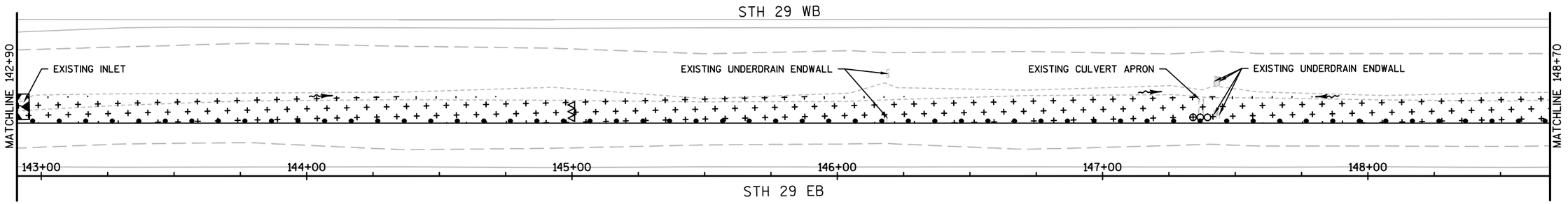
PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	EROSION CONTROL	SHEET 6	E

2



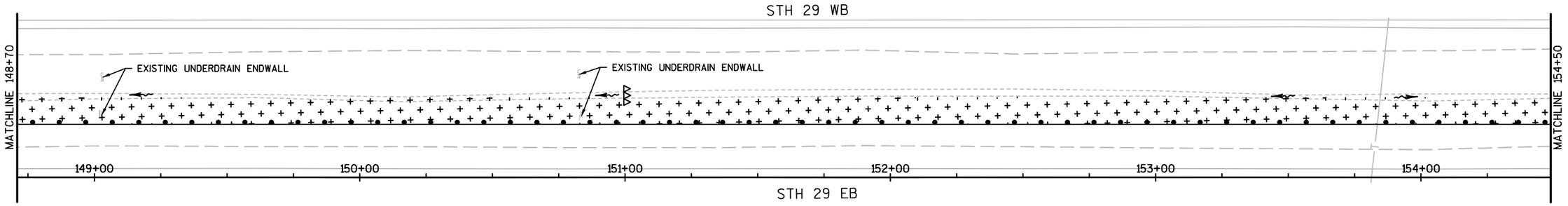
LEGEND

- TOPSOIL, SEED, FERTILIZER AND MULCH
- TEMPORARY DITCH CHECKS
- FLOW DIRECTION
- CULVERT PIPE CHECKS
- INLET PROTECTION



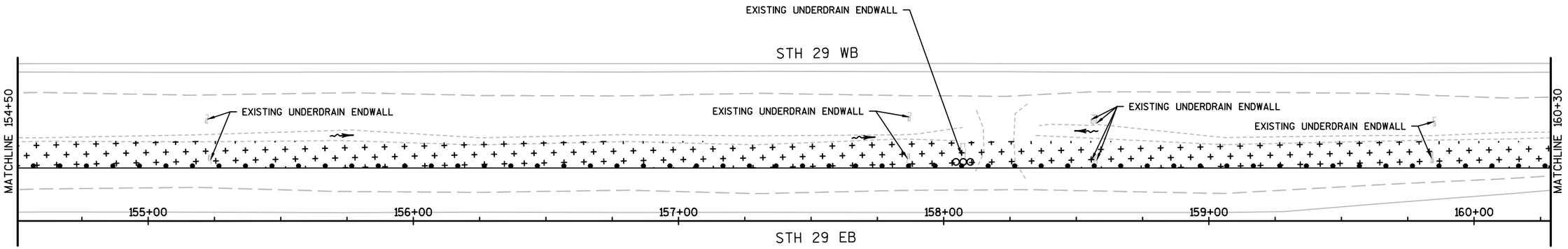
PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	EROSION CONTROL	SHEET 7	E

2



LEGEND

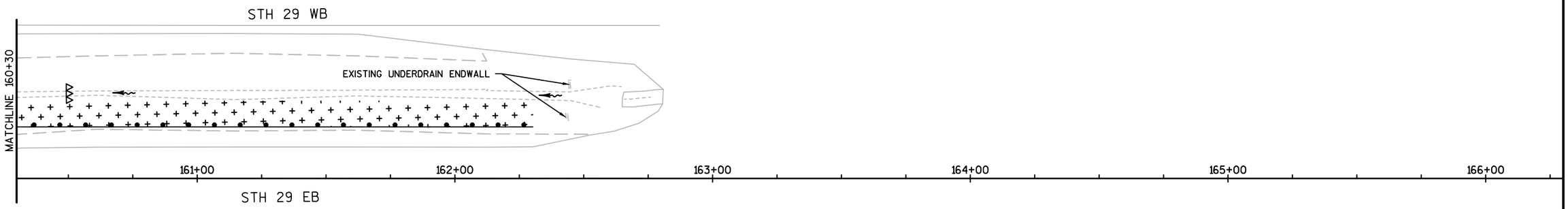
- TOPSOIL, SEED, FERTILIZER AND MULCH
- TEMPORARY DITCH CHECKS
- FLOW DIRECTION
- CULVERT PIPE CHECKS
- INLET PROTECTION



PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	EROSION CONTROL	SHEET 8	E

FILE NAME : P:\2015\2015.045 - WISDOT NCR - STH 29 CABLE GUARD\1058271\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001 (3)
PLOT DATE : 10/22/2015 10:43 AM PLOT BY : CHAD D. GRUNDEMANN PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 44

2

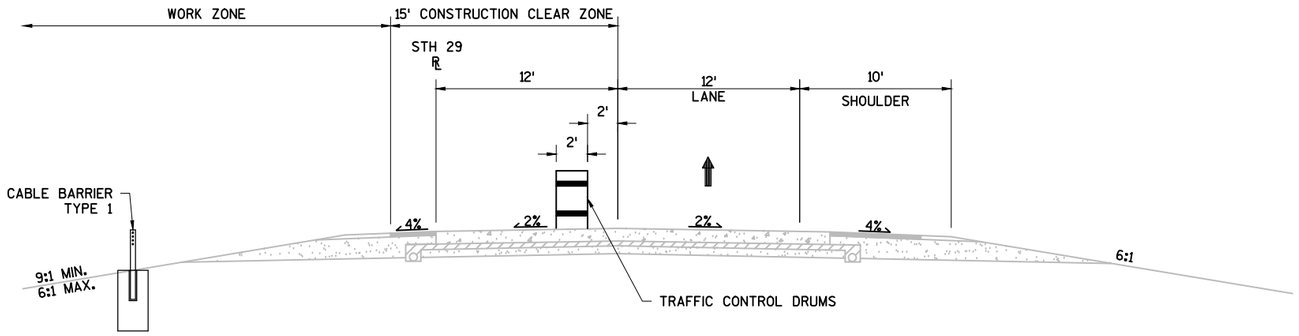


LEGEND

- TOPSOIL, SEED, FERTILIZER AND MULCH
- TEMPORARY DITCH CHECKS
- FLOW DIRECTION
- CULVERT PIPE CHECKS
- INLET PROTECTION

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	EROSION CONTROL	SHEET 9	E

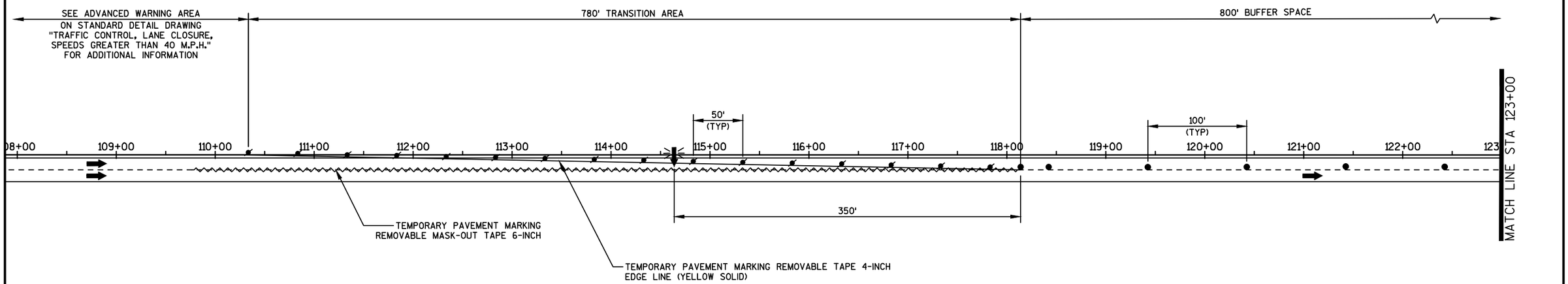
2



TRAFFIC CONTROL TYPICAL SECTION - STH 29 EB

STATION 126+14.03 – STATION 162+30.25

NOTE:
WHEN SHOULDER CLOSURES ARE NECESSARY, USE "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H."



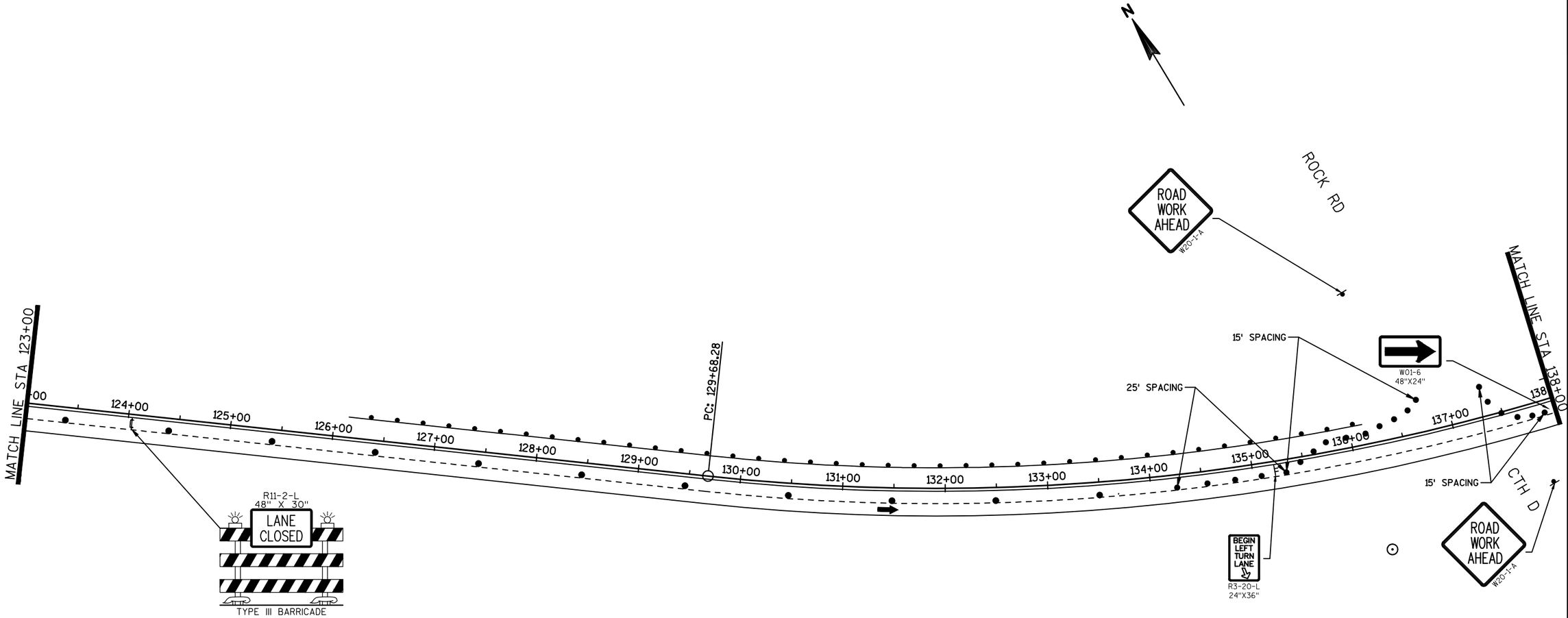
LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- CABLE BARRIER WORK AREA
- DIRECTION OF TRAFFIC
- FLAGS 16"X16" ORANGE
- TEMP PAVT MRKG REMOVABLE MASK-OUT TAPE
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	TRAFFIC CONTROL	SHEET 11	E

FILE NAME : P:\2015\2015.045 - WISDOT NCR - STH 29 CABLE GUARD\10582071\SHEETSPLAN\026001-S1.DWG
LAYOUT NAME - SHEET - (1)
PLOT DATE : 10/22/2015 10:19 AM PLOT BY : CHAD D. GRUNDEMANN PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2



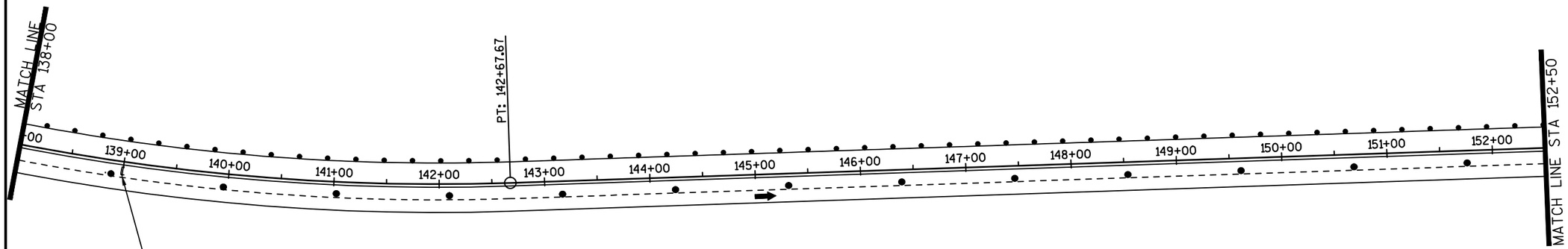
LEGEND

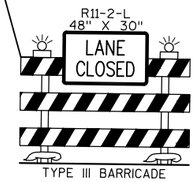
- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- CABLE BARRIER WORK AREA
- DIRECTION OF TRAFFIC
- FLAGS 16"X16" ORANGE
- TEMP PAVT MRKG REMOVABLE MASK-OUT TAPE
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	TRAFFIC CONTROL	SHEET 12	E

2

N



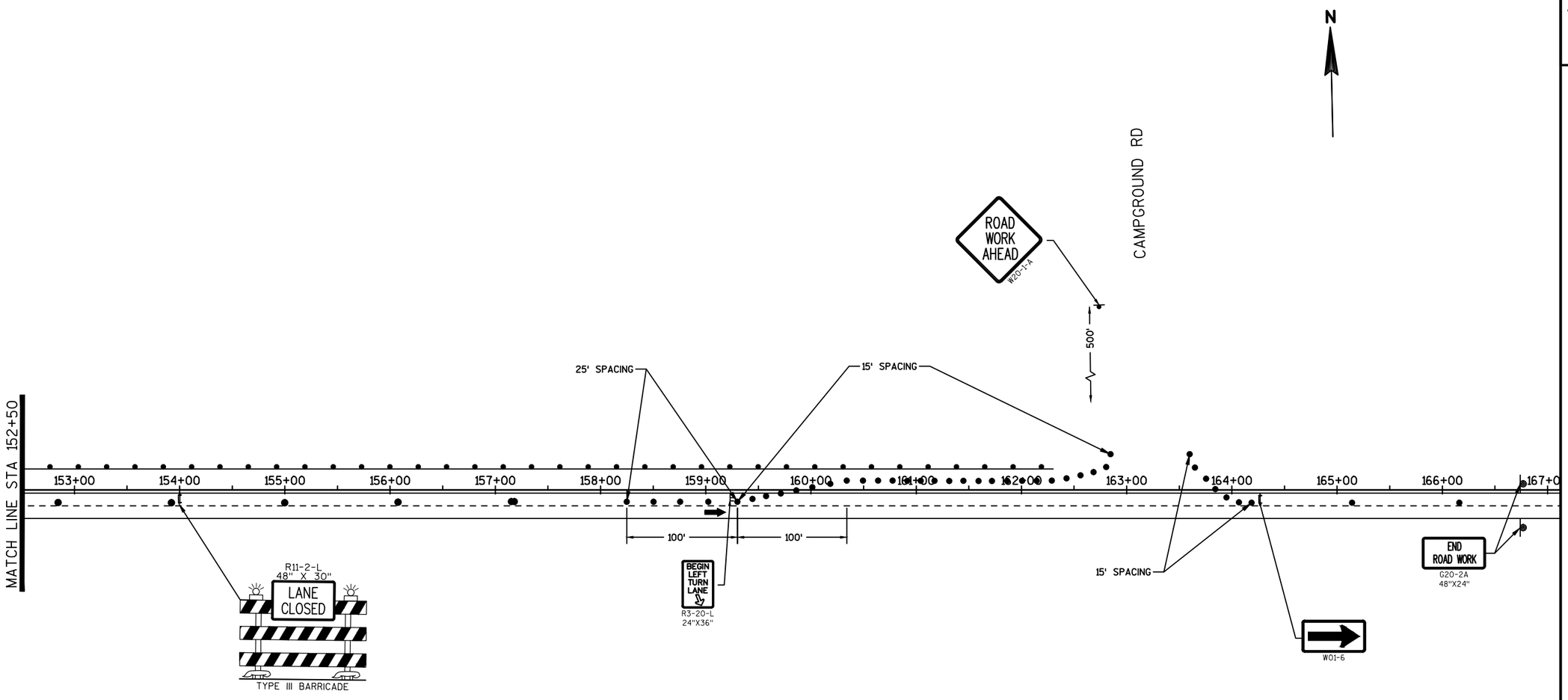


LEGEND

- TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
- FLASHING ARROW BOARD
- TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
- CABLE BARRIER WORK AREA
- DIRECTION OF TRAFFIC
- FLAGS 16"X16" ORANGE
- TEMP PAVT MRKG REMOVABLE MASK-OUT TAPE
- PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	TRAFFIC CONTROL	SHEET 13	E

2



LEGEND

↕/↕	TYPE III BARRICADE WITH/WITHOUT ATTACHED SIGN
●/●	TRAFFIC CONTROL DRUM WITH/WITHOUT TYPE C LIGHT
	FLASHING ARROW BOARD
	TRAFFIC CONTROL SIGN MOUNTED ON POST. LEFT IN-PLACE FOR DURATION OF PROJECT
——●——	CABLE BARRIER WORK AREA
→	DIRECTION OF TRAFFIC
◇ ◇	FLAGS 16"X16" ORANGE
~~	TEMP PAVT MRKG REMOVABLE MASK-OUT TAPE
--------	PAVEMENT MARKING FOR NEXT STAGE

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	TRAFFIC CONTROL	SHEET 14	E

2

N

BP: 100+00.00

BEGIN ALIGNMENT
Y = 279642.079
X = 787127.955

110

S52° 52' 41"E
2968.28'

120

PC: 129+68.28

130

CURVE 01

PT: 142+67.67

140

150

160

S88° 36' 41"E
4232.86'

170

180

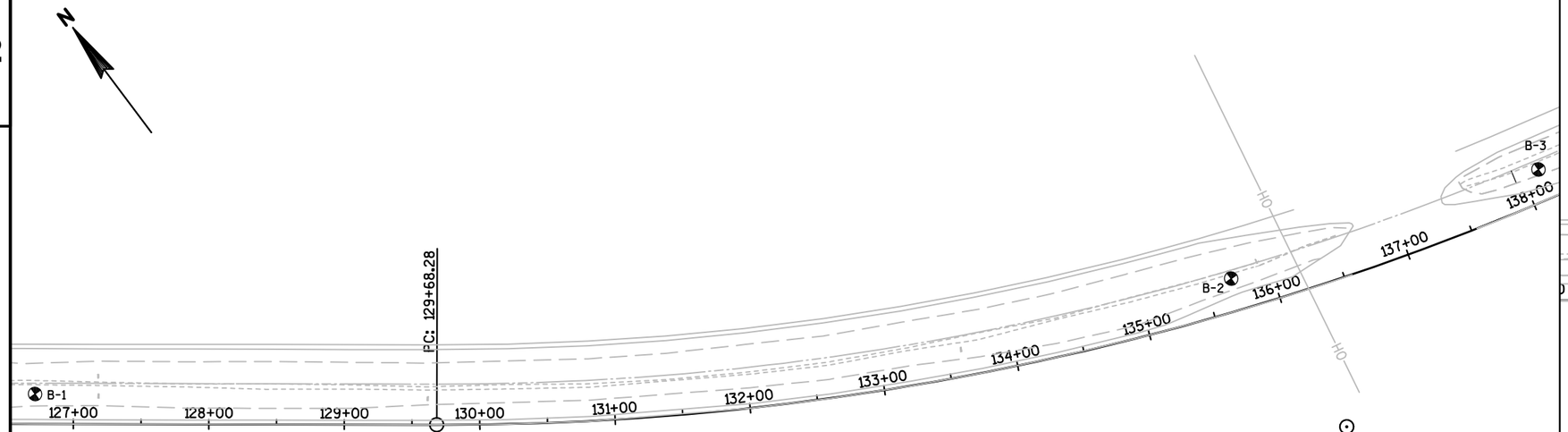
EP: 185+00.53

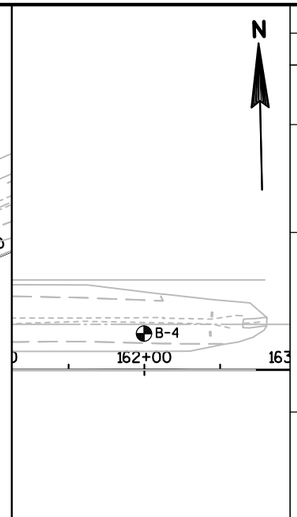
STH 29 ℄

END ALIGNMENT
Y = 277326.521
X = 794933.254

CURVE 01
PI STA = 136+39.89
Y = 277445.362
X = 790030.230
DELTA = 35°44'00"
D = 2°45'00"
T = 671.61'
L = 1299.39'
R = 2083.48'
PC STA = 129+68.28
Y = 277850.686
X = 789494.720
PT STA = 142+67.67
Y = 277429.088
X = 790701.642
BK = S52°52'41.2"E
AH = S88°36'41.5"E
SE = 5.93%

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	ALIGNMENT DIAGRAM	SHEET 15	E





STATE PROJECT NUMBER

1058-20-71

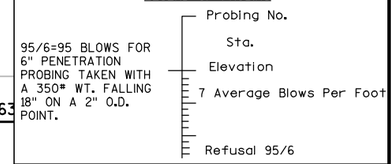
ABBREVIATIONS

F— Fine M—Medium C— Coarse
Ws— Weathered So— Sound

MATERIAL SYMBOLS

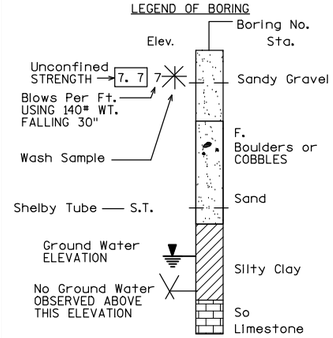
Topsoil, Silt, Sandstone
Sand, Peat, Limestone
Gravel, Clay, Igneous Rock

LEGEND OF PROBING

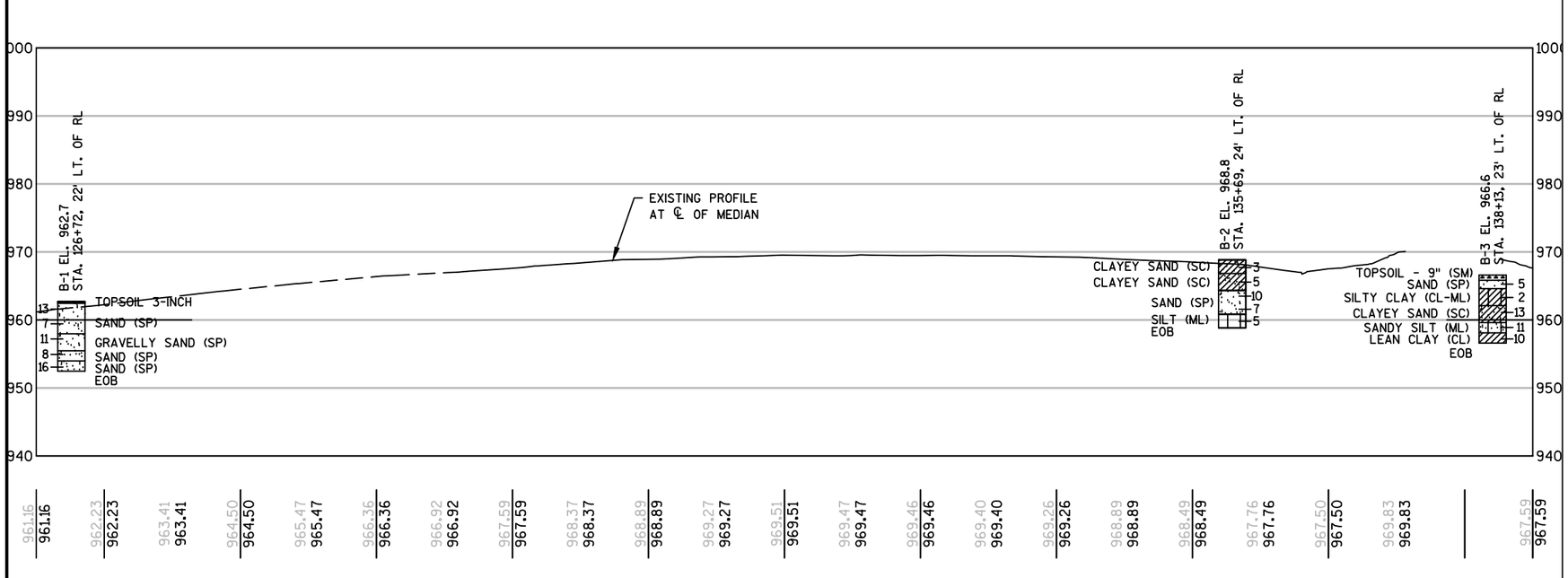


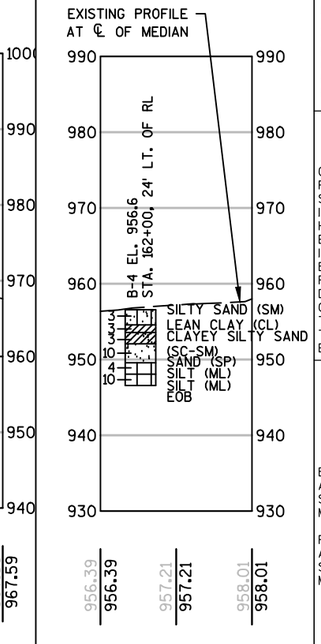
95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.





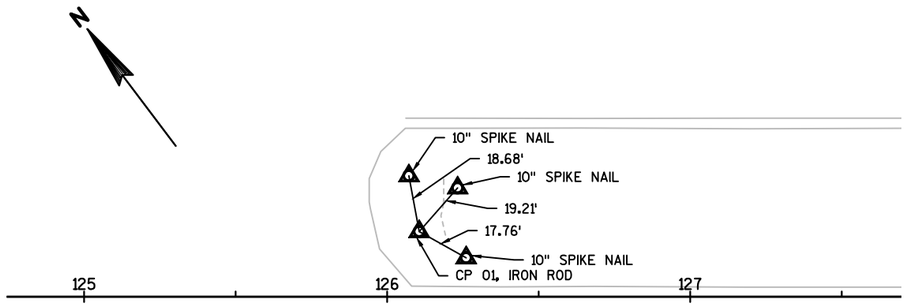
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

BORINGS TAKEN BY:
AMERICAN ENGINEERING TESTING, INC.
SCHOFIELD, WI
MARCH 8, 2012

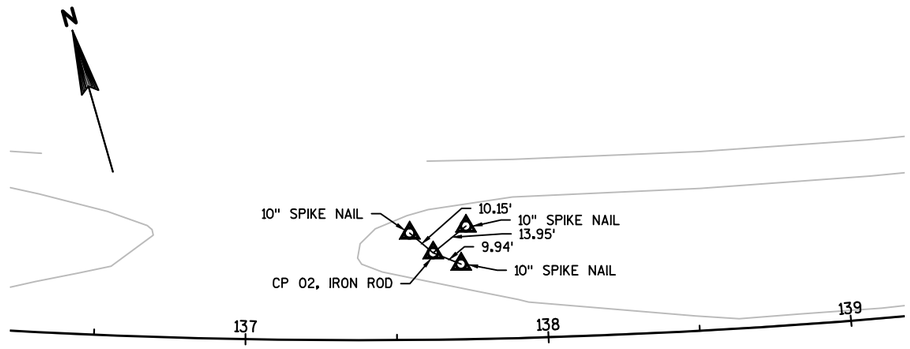
FACTUAL REPORT OF GEOTECHNICAL EXPLORATION BY:
AMERICAN ENGINEERING TESTING, INC.
SCHOFIELD, WI
MARCH 14, 2012

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	SUBSURFACE EXPLORATION	SHEET 16	E



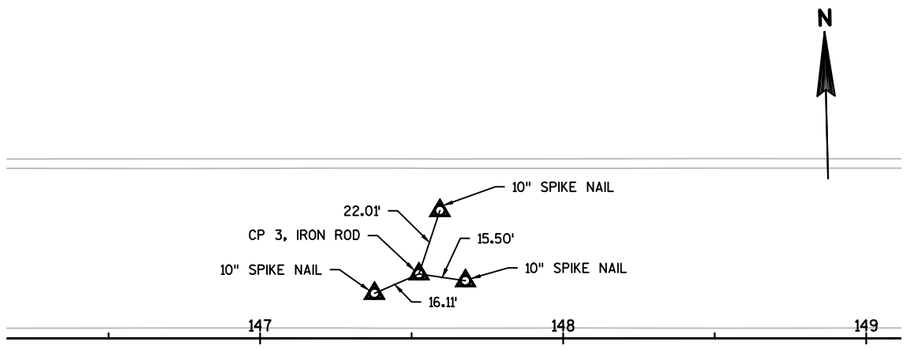
CP 01, 3/8" IRON ROD W/BHA CONTROL CAP
STA 126+10.53, 21.45'LT

Y = 278083.691
X = 789222.417



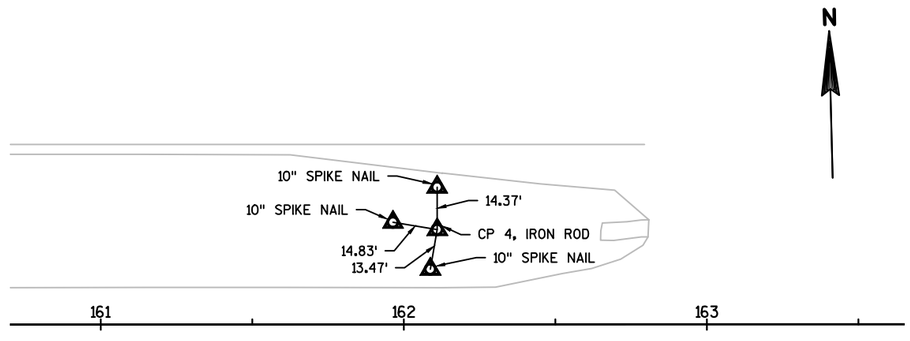
CP 02, 3/8" IRON ROD W/BHA CONTROL CAP
STA 137+62.30, 28.62'LT

Y = 277529.794
X = 790210.386



CP 03, 3/8" IRON ROD W/BHA CONTROL CAP
STA 147+52.43, 21.22'LT

Y = 277438.554
X = 791186.768



CP 04, 3/8" IRON ROD W/BHA CONTROL CAP
STA 162+11.04, 31.27'LT

Y = 277413.263
X = 792645.197

FILE NAME : P:\2015\2015.045 - WISDOT NCR - STH 29 CABLE GUARD\10582071\SHEETSPLAN\027401-CP.DWG
LAYOUT NAME - ****
PLOT DATE : 10/22/2015 10:20 AM PLOT BY : CHAD D. GRUNDEMANN PLOT NAME : PLOT SCALE : **********
WISDOT/CADDS SHEET 42

DATE 28JAN16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1058-20-71 QUANTITY
0010	213.0100	Finishing Roadway (project) 01. 1058-20-71	EACH	1.000	1.000
0020	613.1100.S	Cable Barrier Type 1	LF	3,279.000	3,279.000
0030	613.1200.S	Cable Barrier End Terminal Type 1	EACH	4.000	4.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0050	625.0100	Topsoil	SY	3,890.000	3,890.000
0060	627.0200	Mulching	SY	3,890.000	3,890.000
0070	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0080	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0090	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0100	628.7504	Temporary Ditch Checks	LF	112.000	112.000
0110	628.7555	Culvert Pipe Checks	EACH	9.000	9.000
0120	629.0210	Fertilizer Type B	CWT	5.800	5.800
0130	630.0120	Seeding Mixture No. 20	LB	250.000	250.000
0140	643.0100	Traffic Control (project) 01. 1058-20-71	EACH	1.000	1.000
0150	643.0300	Traffic Control Drums	DAY	3,328.000	3,328.000
0160	643.0420	Traffic Control Barricades Type III	DAY	182.000	182.000
0170	643.0705	Traffic Control Warning Lights Type A	DAY	312.000	312.000
0180	643.0715	Traffic Control Warning Lights Type C	DAY	416.000	416.000
0190	643.0800	Traffic Control Arrow Boards	DAY	52.000	52.000
0200	643.0900	Traffic Control Signs	DAY	572.000	572.000
0210	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	780.000	780.000
0220	649.0506	Temporary Pavement Marking Removable Mask-Out Tape 6-Inch	LF	213.000	213.000
0230	650.9910	Construction Staking Supplemental Control (project) 01. 1058-20-71	LS	1.000	1.000
0240	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0250	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0260	SPV.0090	Special 01. Construction Staking Cable Barrier Type 1	LF	3,435.000	3,435.000

3

EROSION CONTROL ITEMS

				625.0100	627.0200	628.1905	628.1910	628.7005	628.7504	628.7555	629.0210	630.0120	
							MOBILIZATIONS	INLET PROTECTION	TEMPORARY	CULVERT	FERTILIZER	SEEDING	
				TOPSOIL	MULCHING	MOBILIZATIONS	EMERGENCY	TYPE A	DITCH CHECKS	PIPE CHECKS	TYPE B	MIXTURE NO. 20	
STATION	TO	STATION	LOCATION	SY	SY	EACH	EACH	EACH	LF	EACH	CWT	LB	REMARKS
126+14.03	-	136+13.42	LT	1,130	1,130	-	-	-	-	-	1.7	75	
-	126+19	-	LT	-	-	-	-	-	-	3	-	-	
-	128+00	-	LT	-	-	-	-	-	16	-	-	-	
-	130+00	-	LT	-	-	-	-	-	16	-	-	-	
-	135+98	-	LT	-	-	-	-	1	-	-	-	-	
137+93.77	-	162+30.25	LT	2,760	2,760	-	-	-	-	-	4.1	175	
-	140+00	-	LT	-	-	-	-	-	16	-	-	-	
-	142+00	-	LT	-	-	-	-	-	16	-	-	-	
-	142+90	-	LT	-	-	-	-	1	-	-	-	-	
-	145+00	-	LT	-	-	-	-	-	16	-	-	-	
-	147+37	-	LT	-	-	-	-	-	-	3	-	-	
-	151+00	-	LT	-	-	-	-	-	16	-	-	-	
-	158+07	-	LT	-	-	-	-	-	-	3	-	-	
-	160+50	-	LT	-	-	-	-	-	16	-	-	-	
-	PROJECT	-	-	-	-	1	1	-	-	-	-	-	
			TOTALS	**3,890**	**3,890**	**1**	**1**	**2**	**112**	**9**	**5.8**	**250**	

CABLE BARRIER

				613.1100.S	613.1200.S
				TYPE 1	END TERMINAL TYPE 1
STATION	TO	STATION	LOCATION	LF*	EACH
126+14.03	-	126+53.43	LT	-	1
126+53.43	-	135+74.02	LT	921	-
135+74.02	-	136+13.42	LT	-	1
137+93.77	-	138+33.17	LT	-	1
138+33.17	-	161+90.85	LT	2,358	-
161+90.85	-	162+30.25	LT	-	1
			TOTALS	**3,279**	**4**

*LENGTHS FOR CABLE BARRIER TYPE 1 REFLECT AN ASSUMED END TERMINAL TYPE 1 LENGTH OF 39.4 LF.

TEMPORARY PAVEMENT MARKING

				649.0400	649.0506	
				REMOVABLE TAPE 4-INCH (YELLOW EDGE LINE)	REMOVABLE MASK-OUT TAPE 6-INCH (OVER C/L SKIPS)	
STATION	TO	STATION	LOCATION	LF	LF	COMMENT
109+64	-	118+14	RT	-	213	12.5-FT WHITE SKIPS
110+34	-	118+14	RT	780	-	TAPER EDGE LINE (YELLOW)
			TOTALS	**780**	**213**	

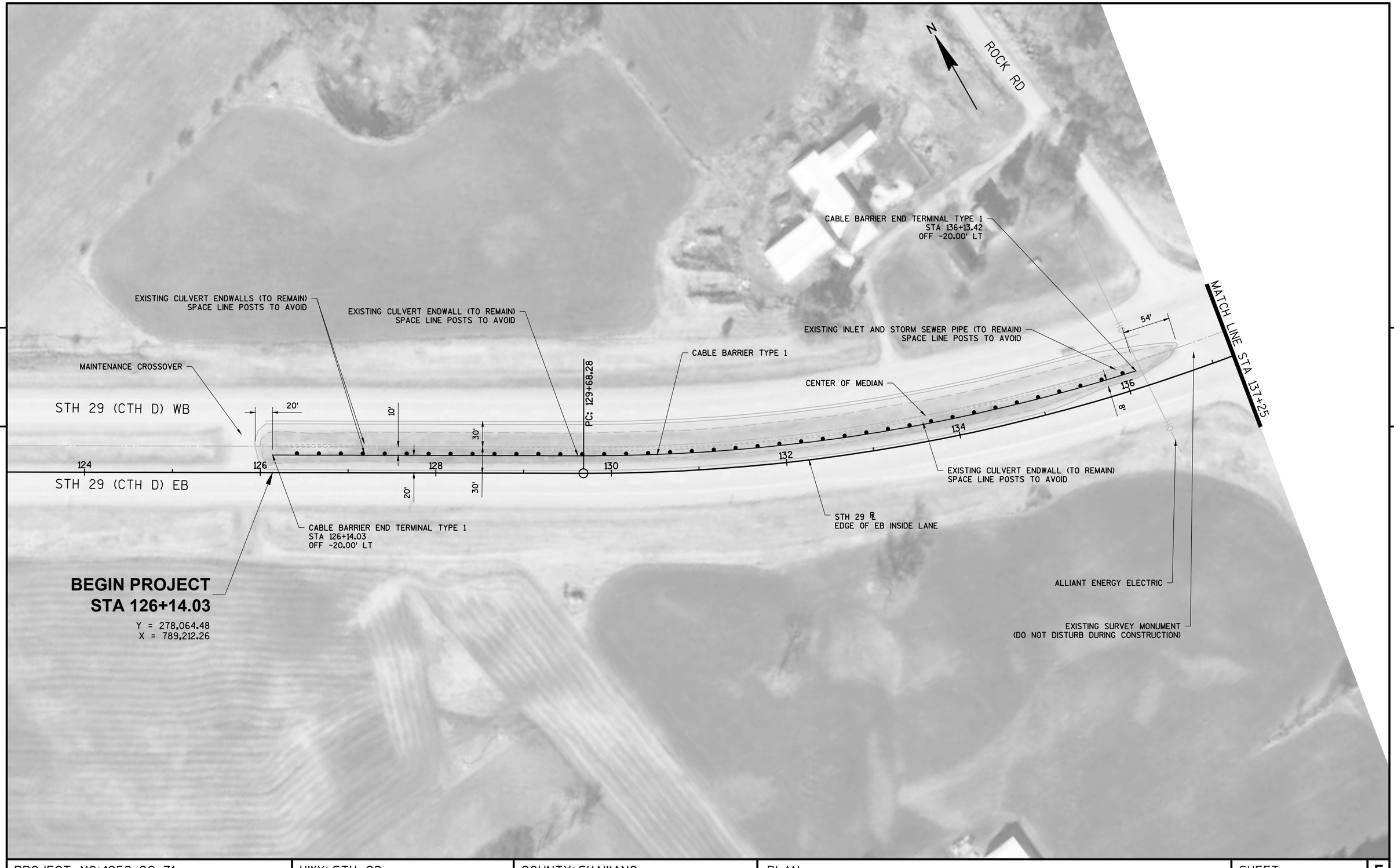
TRAFFIC CONTROL

		643.0100	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900	
		PROJECT			BARRICADES		WARNING		WARNING		ARROW			
	DURATION	(01. 1058-20-71)	DRUMS		TYPE III		LIGHTS TYPE A		LIGHTS TYPE C		BOARDS		SIGNS	
OPERATION	DAYS	EACH	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY	EACH	DAY
PROJECT 1058-20-71	26	1	128	3,328	7	182	12	312	16	416	2	52	22	572
	TOTALS	**1**		**3,328**		**182**		**312**		**416**		**52**		**572**

SPV.0090.01 CONSTRUCTION STAKING, CABLE BARRIER TYPE 1

STATION	TO	STATION	LOCATION	LF
126+14.03	-	136+13.42	LT	999
137+93.77	-	162+30.25	LT	2,436
			TOTAL	**3,435**

ALL ITEMS AND QUANTITIES ON THIS SHEET ARE CATEGORY 0010 UNLESS OTHERWISE NOTED



5

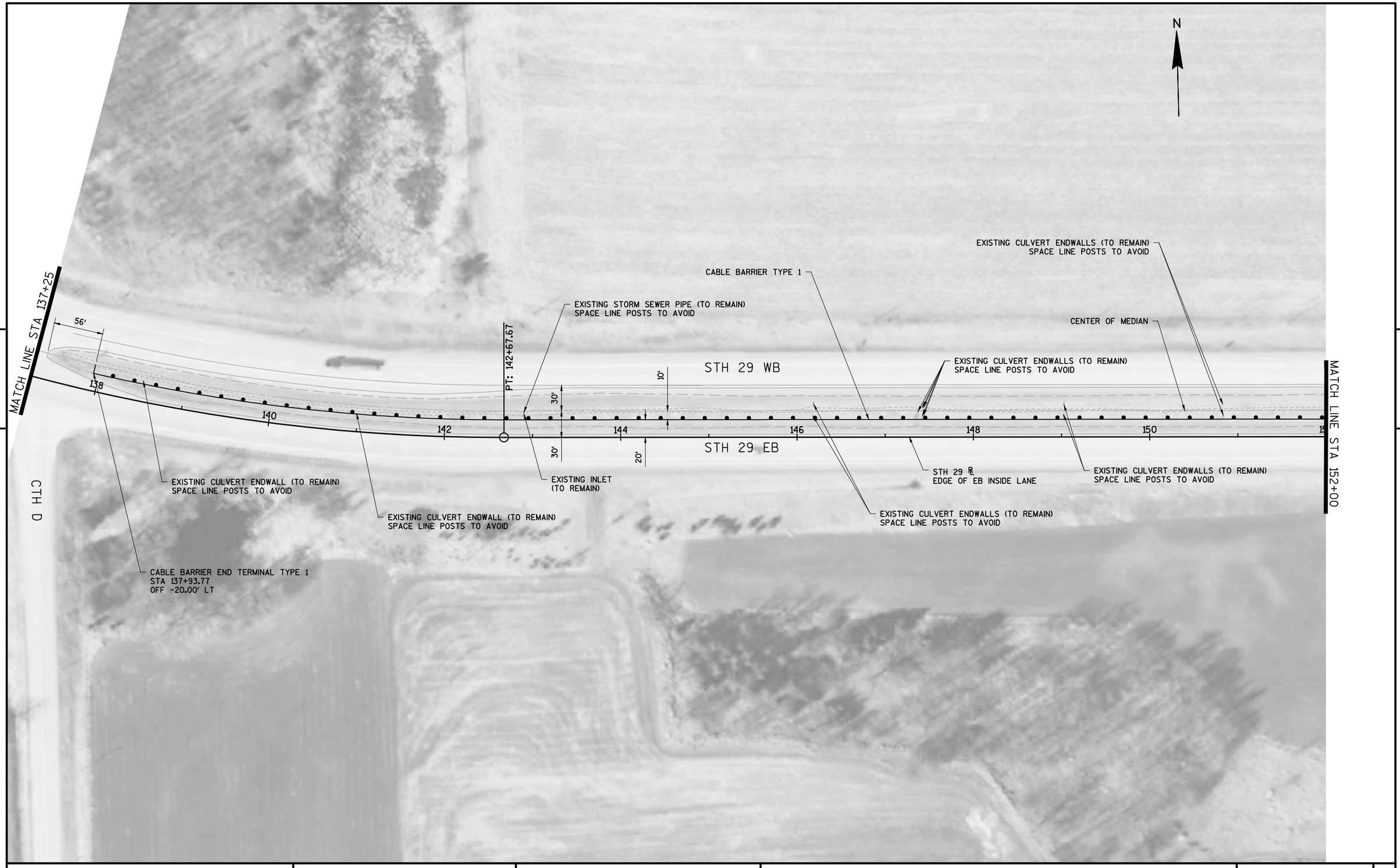
5

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	PLAN	SHEET 20	E

FILE NAME : P:\2015\2015.045 - WISDOT NCR - STH 29 CABLE GUARD\1058271\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 10/22/2015 10:21 AM PLOT BY : CHAD D. GRUNDEMANN PLOT NAME : PLOT SCALE : **********

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	PLAN	SHEET 21	E

5

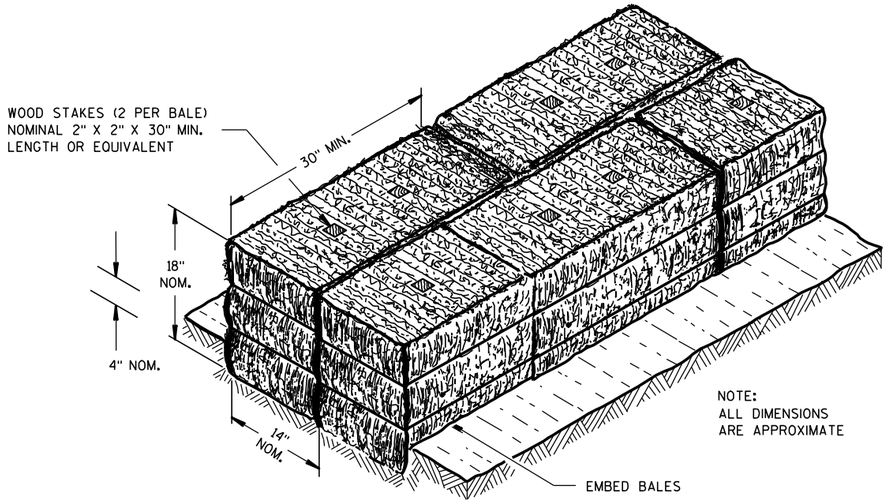
5

PROJECT NO: 1058-20-71	HWY: STH 29	COUNTY: SHAWANO	PLAN	SHEET 22	E

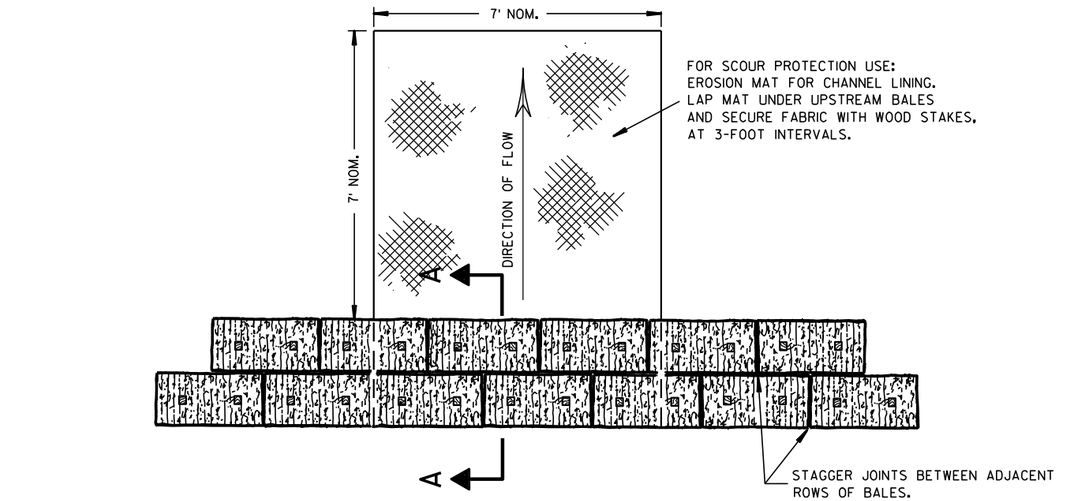
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E10-02	INLET PROTECTION TYPE A, B, C AND D
14B52-01A	CABLE BARRIER TYPE 1 LAYOUT
14B52-01B	CABLE BARRIER TYPE 1 LAYOUT
15D12-05A	TRAFFIC CONTROL, LANE CLOSURE
15D21-03	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

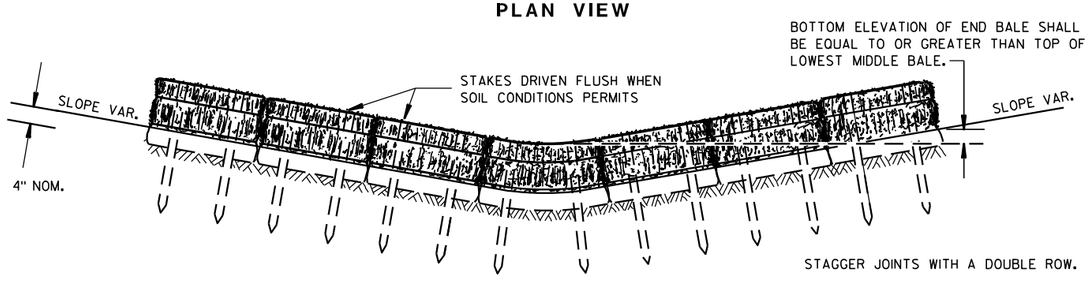
6



SECTION A-A



PLAN VIEW



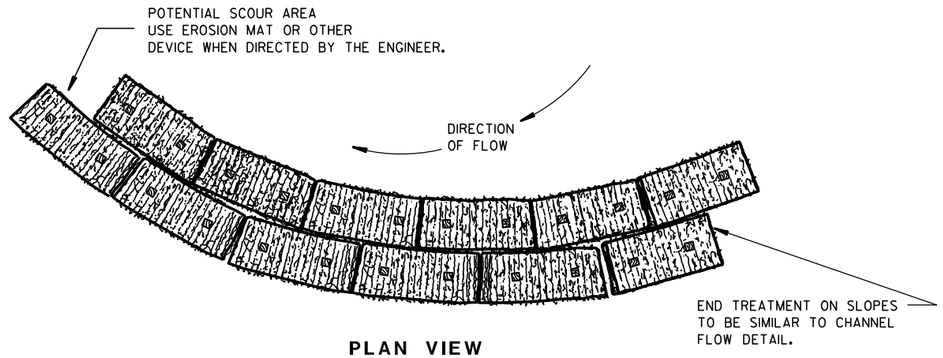
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

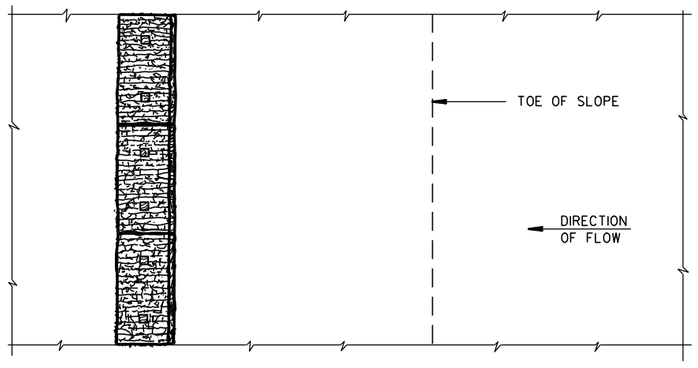
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

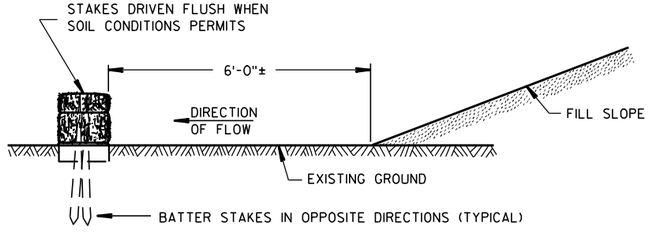


PLAN VIEW

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

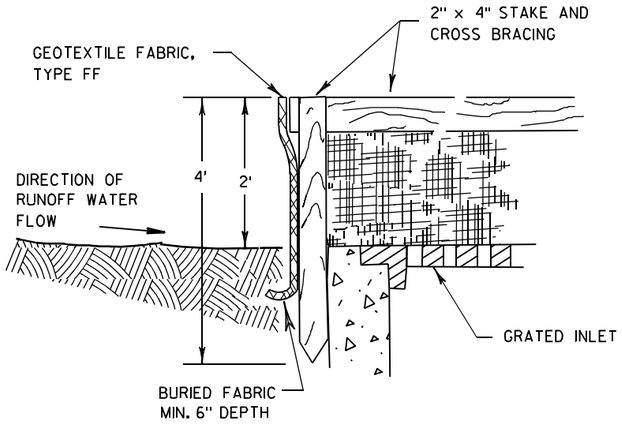
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

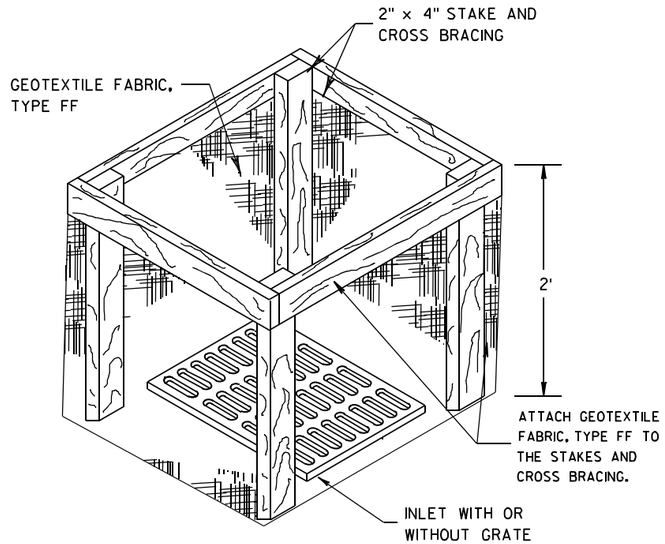
6

S.D.D. 8 E 8-3

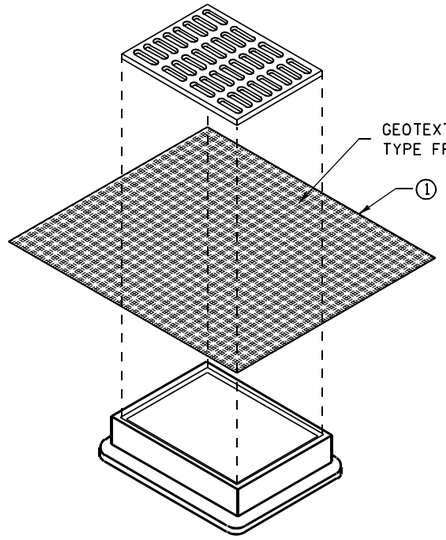
6

S.D.D. 8 E 8-3



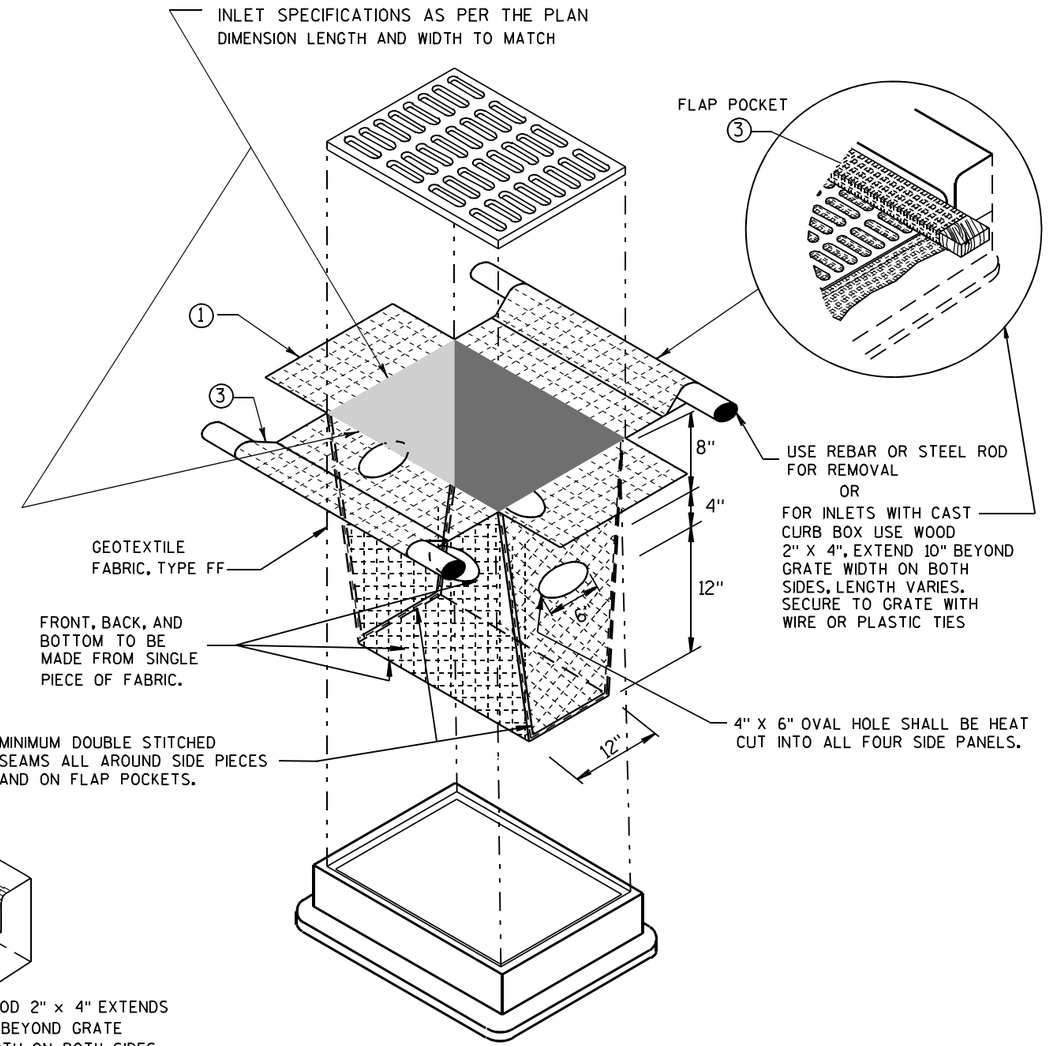


INLET PROTECTION, TYPE A



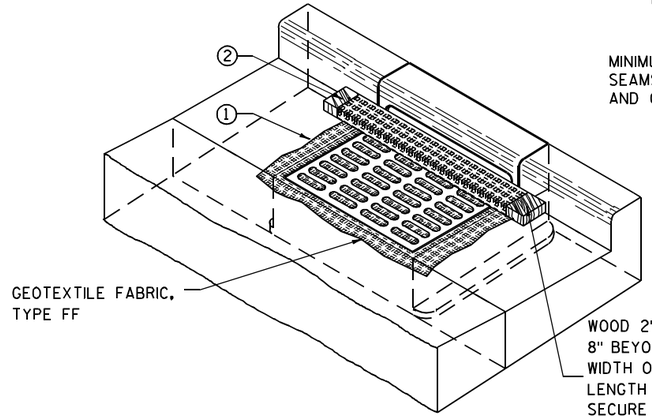
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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

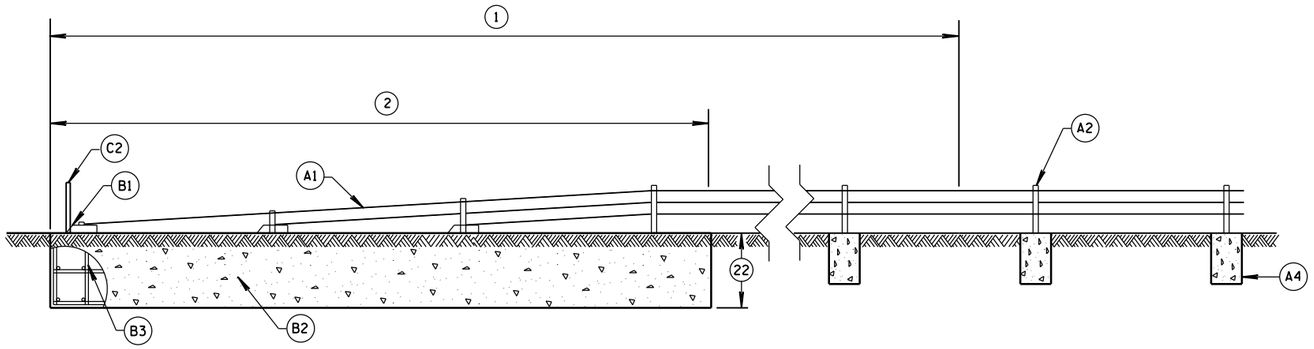
FHWA

6

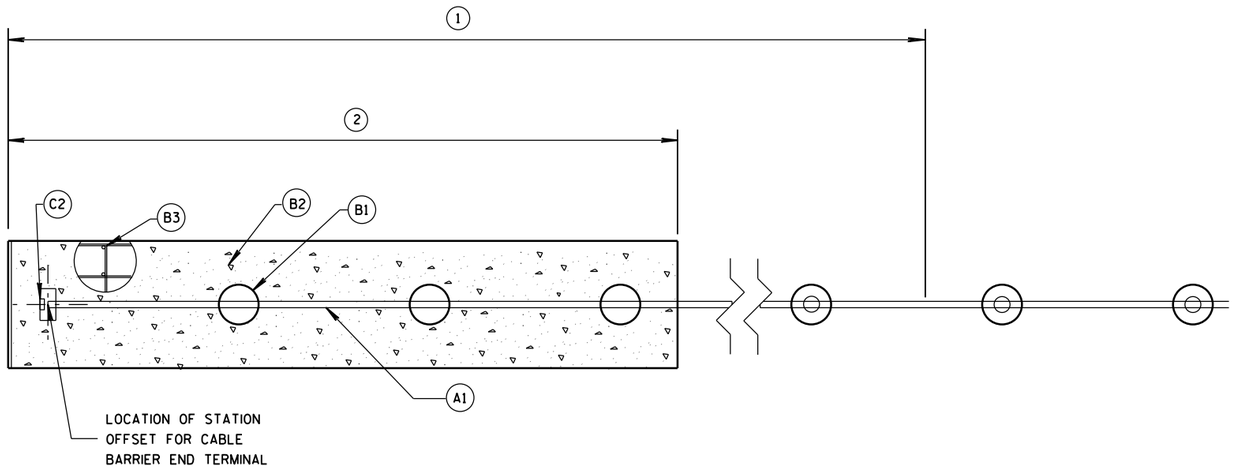
S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2

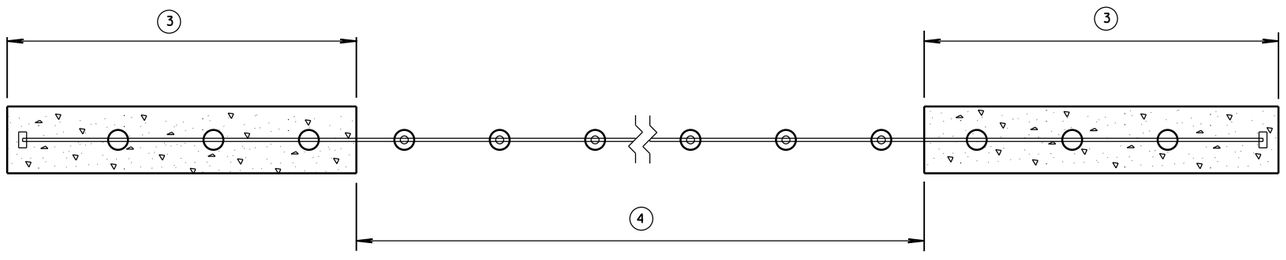


PROFILE VIEW



PLAN VIEW

TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POST PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICTED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

PROVIDE A WISCONSIN PROFESSIONAL ENGINEERS STAMPED ANALYSIS THAT THE LINE POST AND CABLE BARRIER END TERMINAL FOOTINGS ARE DESIGNED FOR THE SOIL CONDITIONS PRESENT. THE WISCONSIN P.E. STAMP ANALYSIS IS TO INCLUDE, BUT IS NOT LIMITED TO: DESIGN IMPACT LOADS, FOUNDATION DEISGN METHODOLOGY USED, FACTORS OF SAFETY, SOIL TYPE, SOIL CONDITIONS, AND TEMPERATURE RANGES.

DESIGN LINE POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A TL-3 SMALL CAR.

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	3/4" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	ASTM A741 MIN. BREAKING STRENGTH 39,000 LBS.
			AASHTO M30 TYPE 1 CLASS A (GALVANIATION).
			MINIMUM WIRE ROPE MODULUS OF ELASTICITY OF 19,000 PSI ACCORDING TO ISO 12067-202 WIRE ROPE MODULUS OF ELASTICITY "INITIAL" (AS MANUFACTURED), WITH NO BEDDING OR PRESTRECHING OF THE ROPE PERMITTED DURING TESTING.
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED METAL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
			ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
			SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
			MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE.
			TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2.
			STANDARD SPECIFICATION 716 OMP FOR CLASS II ANCILLARY CONCRETE.
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVE PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN.

(1) LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(2) PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)

(3) CABLE BARRIER END TERMINAL

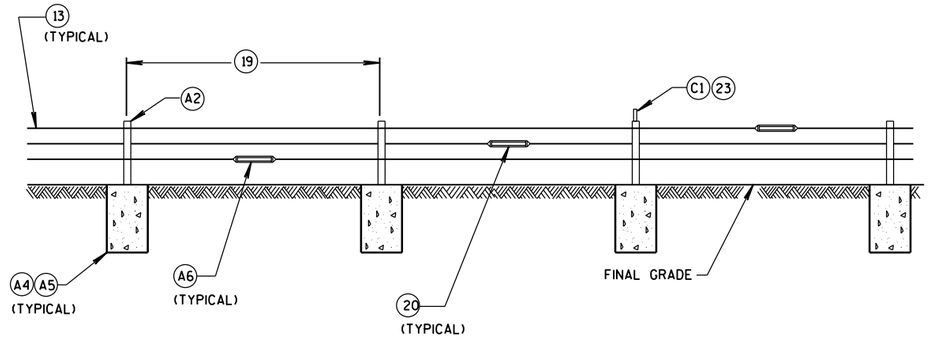
(4) CABLE BARRIER AND LINE POSTS

CABLE BARRIER TYPE 1 LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

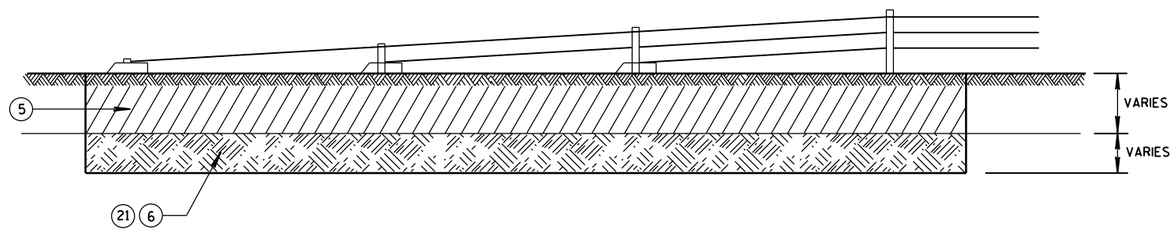
6

S.D.D. 14 B 52-1a



PROFILE VIEW

LINE POST INSTALLATION



CABLE BARRIER END TERMINAL ROCK EXCAVATION DETAIL

(5) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(6) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES).

(7) SOIL TO BE EXCAVATED FOR LINE POST (VARIES).

(8) ROCK TO BE EXCAVATED FOR LINE POST (VARIES).

(9) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.

(10) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.

(11) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURER'S INFORMATION.

(12) MINIMUM DEPTH OF LINE POST FOOTING IS 48 INCHES IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.

(13) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURER'S INFORMATION.

(14) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURER'S INFORMATION.

(15) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.

(16) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(17) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.

(18) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.

(19) MAXIMUM POST SPACING IS 15 FEET.

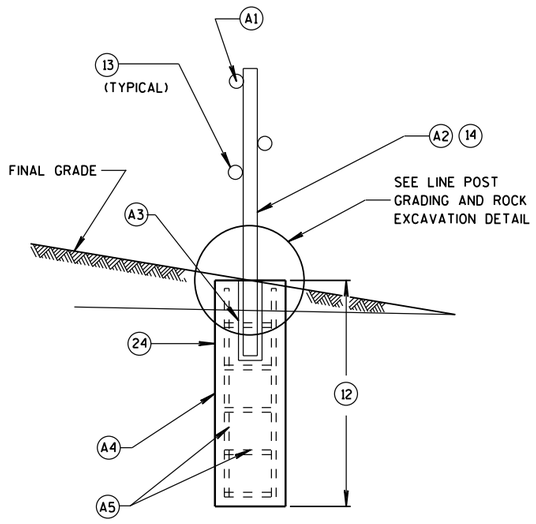
(20) STAGGER TURNBUCKLES (TYPICAL).

(21) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.

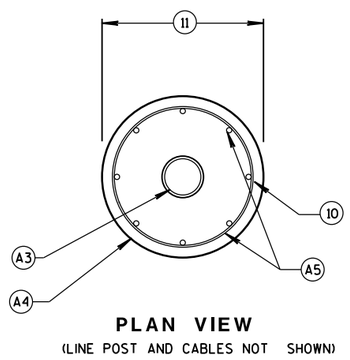
(22) IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENATION ARE ACCEPTABLE.

(23) LINE POST DELINEATOR SPACING IS 100 FEET.

(24) LINE POST FOOTINGS ARE REQUIRED TO HAVE LESS THAN 1 INCH OF MOVEMENT WHEN LINE POST IS IMPACTED BY A NCHRP 350 SMALL CAR UNDER TL-3 TEST CONDITIONS.

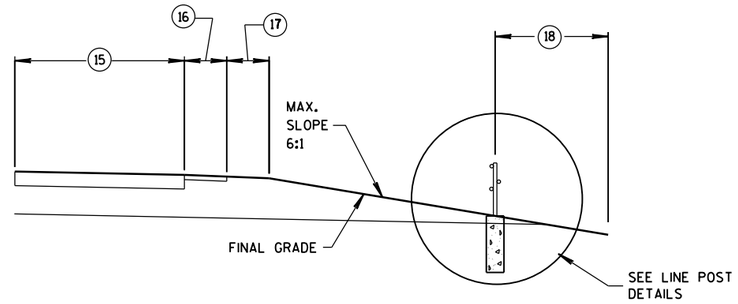


CROSS SECTION

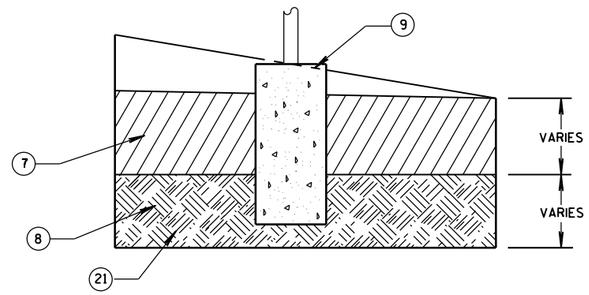


PLAN VIEW
(LINE POST AND CABLES NOT SHOWN)

LINE POST DETAILS



CABLE BARRIER OFFSET FROM DITCH LINE



LINE POST GRADING AND ROCK EXCAVATION DETAIL

CABLE BARRIER TYPE 1
LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June. 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 52-1b

6

S.D.D. 14 B 52-1b

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

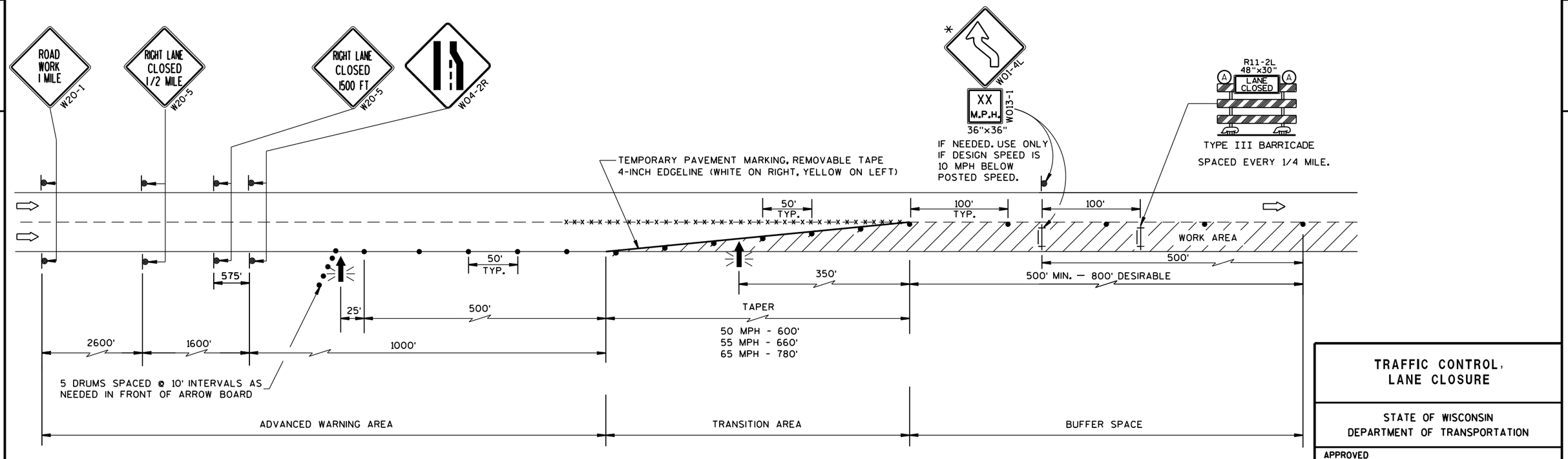
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



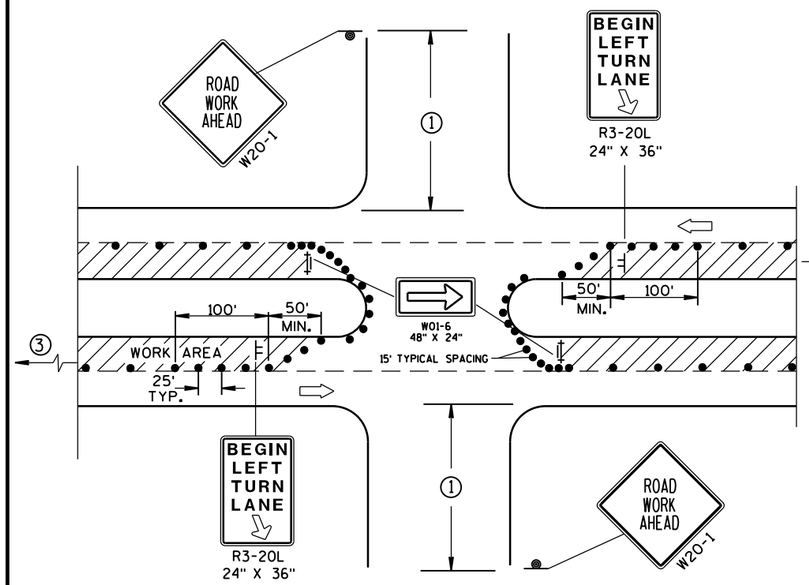
TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

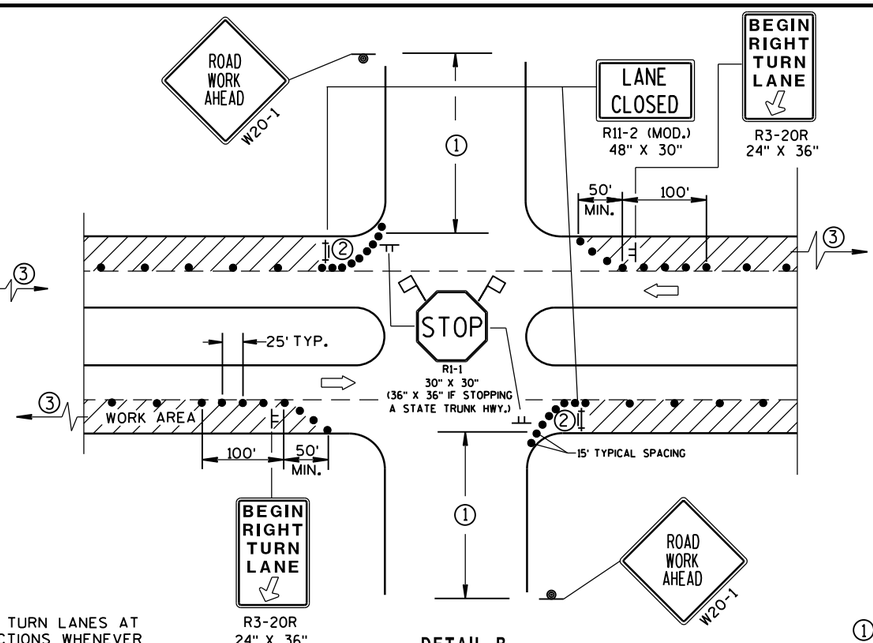
S.D.D. 15 D 12-5a



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

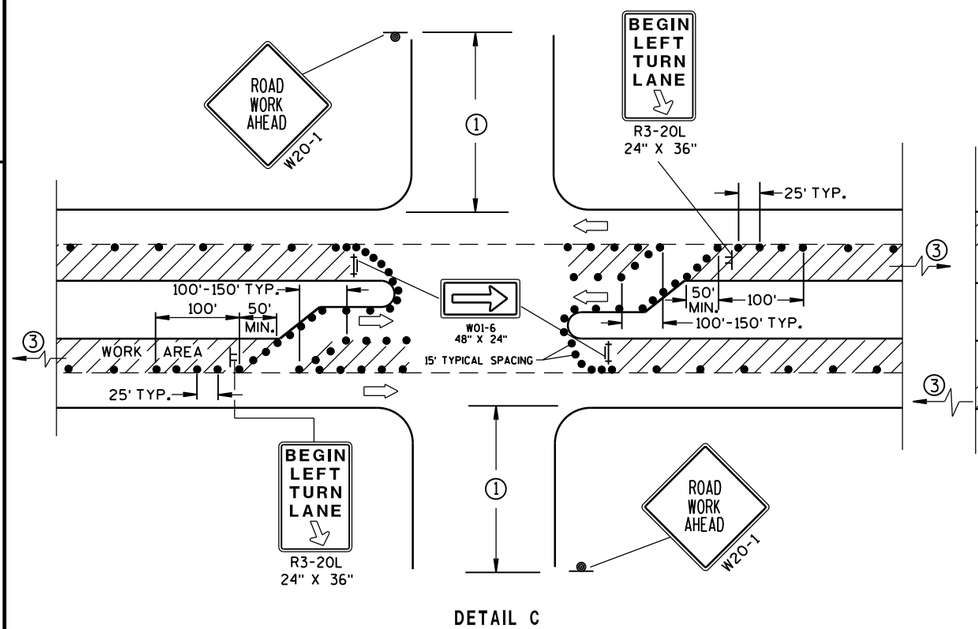
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

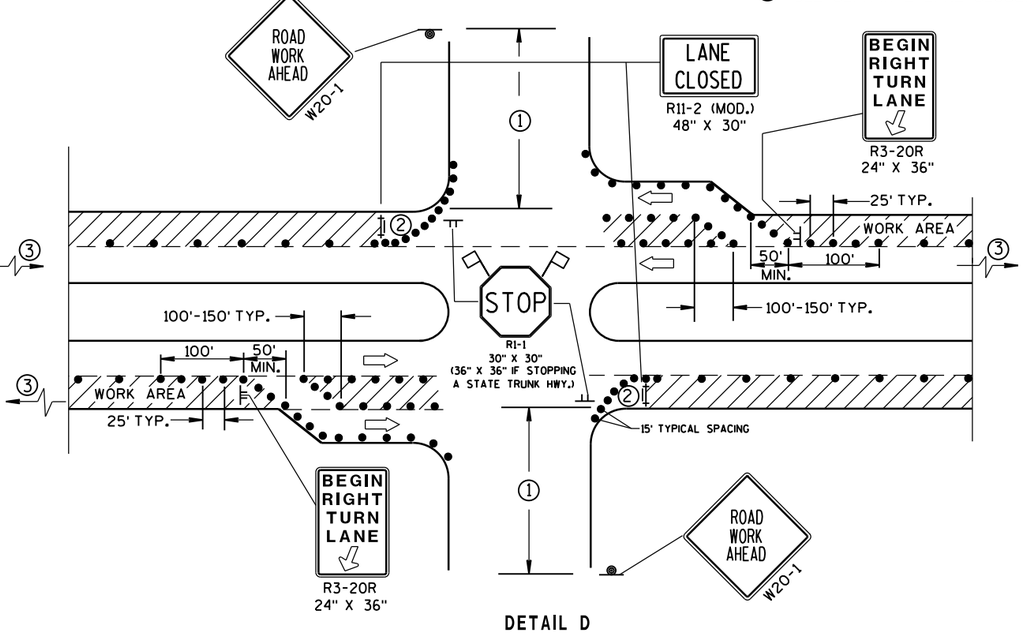
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Nov. 2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 21-3

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

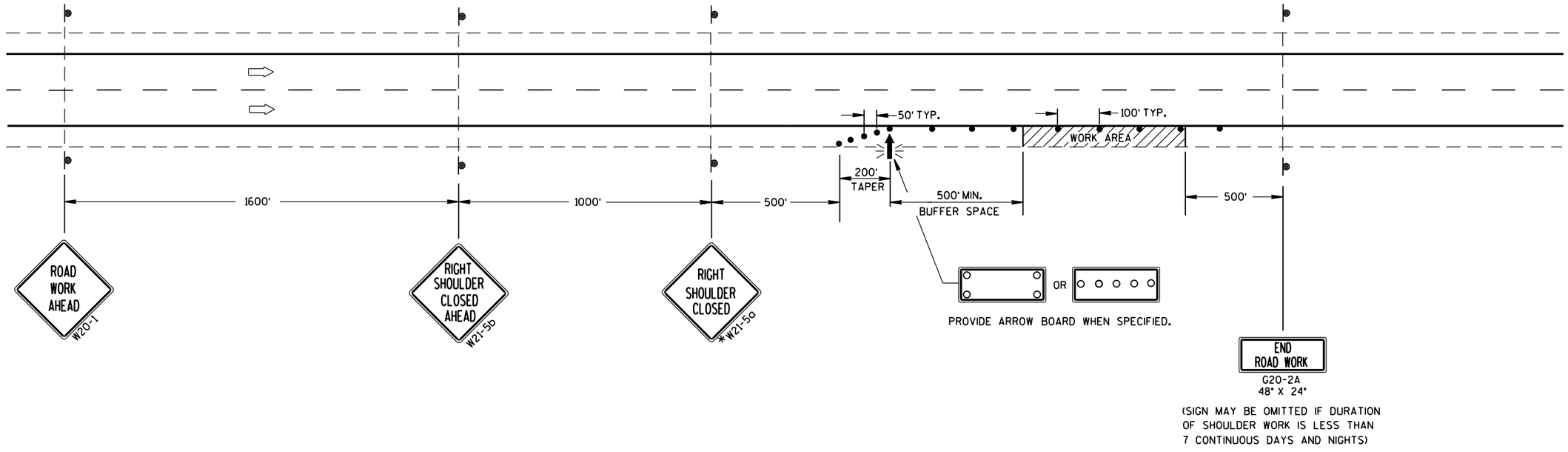
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 27-2

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov